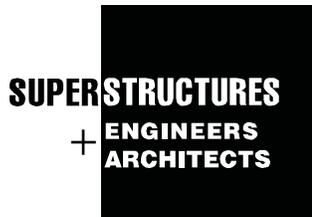


The New York Landmarks Conservancy
Lucy G. Moses Preservation Awards
Submittal



Jefferson Market Library
425 Avenue of the Americas
New York New York

Exterior Renovation



32 Avenue of the Americas
New York, NY 10013
Tel 212 505 1133
www.superstructures.com



Jefferson Market Courthouse in the early 1900s (from the National Park Service Office of Archeology and Historic Preservation's Historic American Buildings Survey of 1968)

Renewing “the Best Loved of all Village Landmarks”¹

The Jefferson Market Branch of the New York Public Library is one of the most recognizable and beloved buildings in Greenwich Village. It is widely thought to be one of the finest Victorian Gothic buildings in the United States. In 1885 a panel of American architects sponsored by *American Architect and Building News* voted it the fifth best building in America.

Today the building is prized not only as an outstanding example of civic design, but also as the site of one of the earliest adaptive re-use projects in the United States -- a transformative event in the preservation movement. Given this context, the current exterior restoration project sought to preserve both these stages of the building's evolution as being historically important.

Built originally as the Third Judicial District Courthouse from 1874 to 1877, the structure was designed by architect Frederick Clarke Withers of the firm of Vaux and Withers. At one time it was part of a larger complex of buildings which filled the block, but now only the former Courthouse remains.



425 Avenue of the Americas prior to restoration

The recent exterior restoration, completed in 2013, was overseen by the New York City Department of Design and Construction. Funding was provided through the New York City Capital Budget and appropriations by the New York City Council and The Office of the Mayor. The scope of work had to be adjusted several times over the course of the project owing to the recessionary state of the economy, but the end result was an integral step in revitalizing and protecting an architectural treasure. A wide range of building elements was addressed as part of this restoration including:

- pressed brick masonry
- Ohio sandstone ornamentation
- copper and slate roofing
- copper gutters and leaders
- the iconic tower's balcony railings and clock faces
- structural issues

The project is further detailed in the pages which follow. As a result of the DDC's informed stewardship, and the efforts of a team of capable professionals, the architectural and community heritage embodied in the Jefferson Market Branch has been preserved and enhanced for the benefit of library patrons, the Greenwich Village community, and the many visitors to this world-renowned historic district.

Sources: New York Public Library website; Wikipedia; New York Times, "The Jefferson Market Courthouse; A Stopped Clock Sired the Preservation Movement; National Park Service, Office of Archeology and Historic Preservation's Historic American Buildings Survey of 1968; SUPERSTRUCTURES' Exterior Investigation Report dated December 1, 2008; The Municipal Engineers Journal, Volume II/III, 1995, "Jefferson Market Library Restoration."

(1) Greenwich Village Society for Historic Preservation, 1995

RESTORATION ITEM LEGEND:

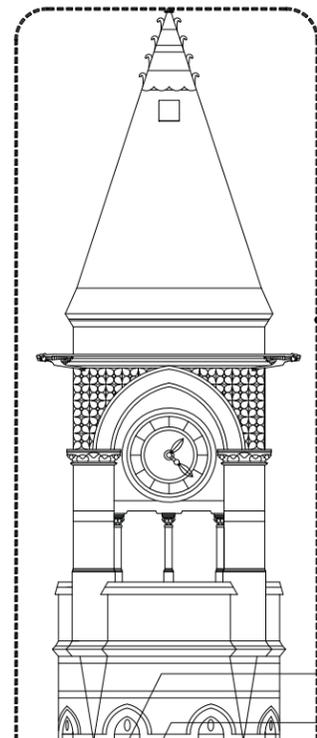
RAD CODE	RESTORATION ITEM	LEGEND
COA 02	WATER REPELLENT COATING: SANDSTONE	N.A.
CLN 01	GENERAL CLEANING: SANDSTONE	N.A.
CLN 01A	GENERAL CLEANING: BRICK MASONRY	N.A.
CLN 02	REMOVAL OF EFFLORESCENCE	[Pattern]
CLN 03	REMOVAL OF BIOGROWTH	[Pattern]
CLN 04	REMOVAL OF STAINING	[Pattern]
CLN 05	REMOVAL OF PREVIOUS COATING	[Pattern]
CLK 01	TOWER CLOCK DIAL ANCHORAGE REPLACEMENT	N.A.
FIN 01 TO 03	IRON FINIAL RESTORATION: AT GABLES	N.A.
FIN 04	IRON FINIAL RESTORATION: AT COPPER ROOF CAPS	N.A.
FIN 05	SANDSTONE/CAST STONE FINIAL RESTORATION	N.A.

RAD CODE	RESTORATION ITEM	LEGEND
JNT 01	JOINT SEALANT REPLACEMENT	N.A.
JNT 02	SKYJOINT SEALANT INSTALLATION	N.A.
JNT 04	LEAD WEATHER CAP INSTALLATION	N.A.
LTL 01	STEEL PLATE REPLACEMENT: TOWER	[Pattern]
LTL 02	LINTEL RESTORATION: BELOW CLOCK TOWER	[Pattern]
LUV 01	STORM-RESISTANT LOUVER INSTALLATION: SPIRE	N.A.
MAS 01	BRICK MASONRY REPLACEMENT	[Pattern] OR [Pattern]
PNT 01	BRICK MASONRY POINTING	[Pattern]
PNT 02	SANDSTONE MASONRY POINTING	[Pattern]
STN 01&01A	SANDSTONE CRACK RESTORATION	[Pattern]
STN 02&02B	SANDSTONE PATCH RESTORATION	[Pattern]

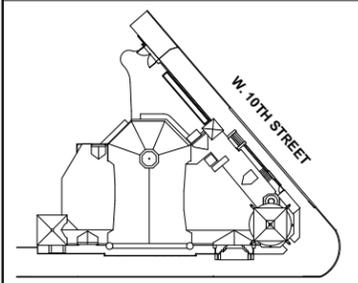
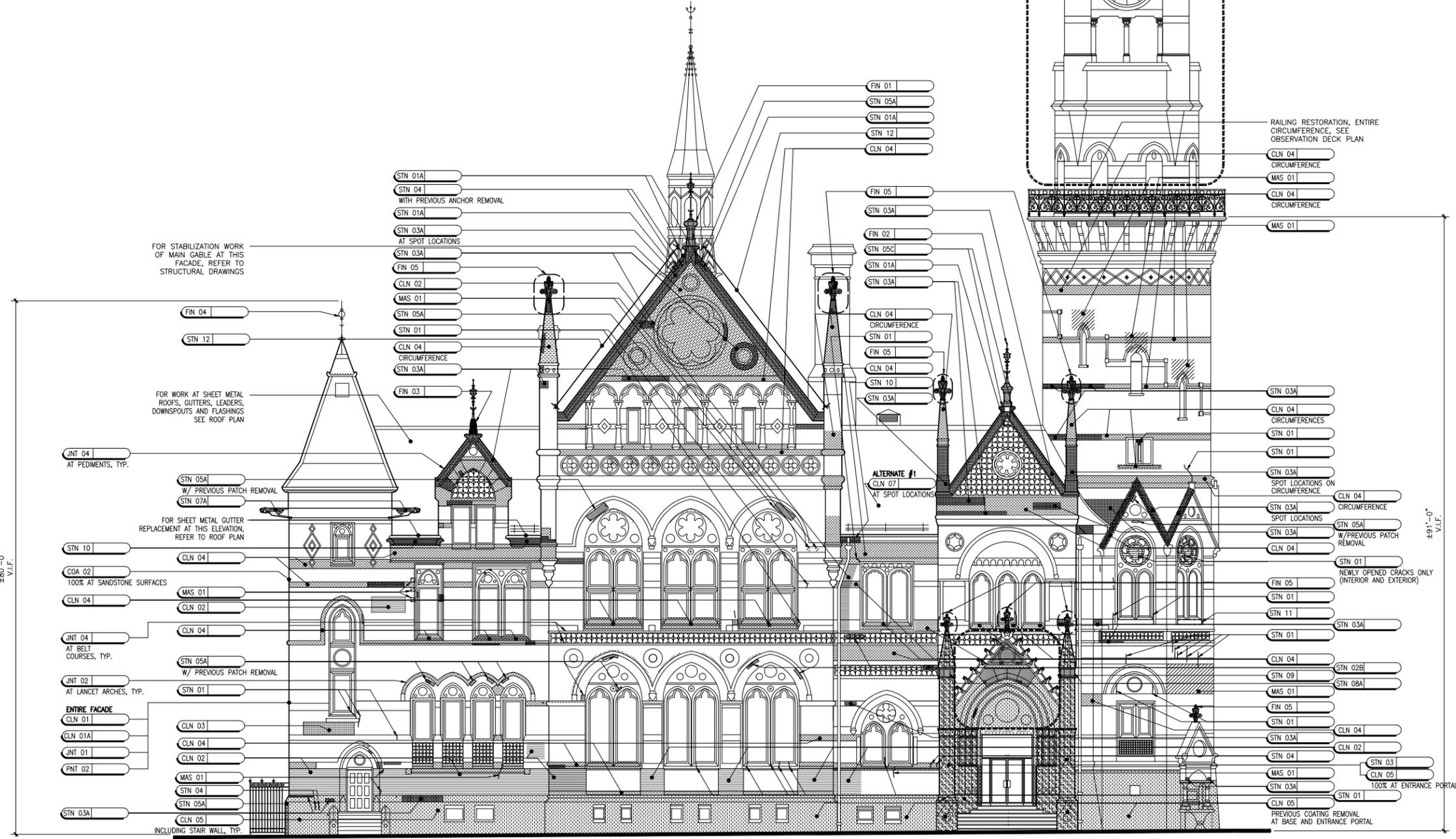
RAD CODE	RESTORATION ITEM	LEGEND
STN 03	SANDSTONE SURFACING HONING: ENTRANCE PORTAL	[Pattern]
STN 03A	SANDSTONE FLAKING REMOVAL	[Pattern]
STN 04	SANDSTONE PLUG RESTORATION	[Pattern]
STN 05A TO 05C	SANDSTONE DUTCHMAN RESTORATION	[Pattern]
STN 06	SANDSTONE DUTCHMAN RESTORATION: BAND COURSE	[Pattern]
STN 07A	SANDSTONE RECARVING	N.A.
STN 08&08A	SANDSTONE UNIT REPLACEMENT	[Pattern]
STN 09	SANDSTONE PEDIMENT RESTORATION: ENTRANCE PORTAL	N.A.
STN 10	SANDSTONE CORNICE DUTCHMEN RESTORATION	[Pattern]
STN 11	SANDSTONE RESTORATION: VANCET ARCHED WINDOW SILL	[Pattern]
STN 12	SANDSTONE COPING RESTORATION: MAIN GABLE	N.A.

NOTES:

- 1 - RAKE OUT AND REPOINT ALL EXISTING STONE JOINTS INCLUDING WINDOW SILLS, AS PER DETAIL PNT 02, TYP. UNLESS OTHERWISE SPECIFIED IN THE DRAWINGS.
- 2 - INSTALL JOINT SEALANT AT ALL JOINTS BETWEEN METAL WINDOWS AND WINDOW SURROUNDINGS AS PER DETAIL JNT 01, TYP.
- 3 - RAKE OUT EXISTING MORTAR AND INSTALL JOINT SEALANT AT ALL EXISTING STONE SKYJOINTS AT LANCET ARCHES AS PER DETAIL JNT 02, TYP.
- 4 - RAKE OUT EXISTING MORTAR AND PROVIDE LEAD WEATHER CAP AT ALL EXISTING SKYJOINTS AT BELT COURSES AND PEDIMENTS TYP.
- 5 - REMOVE ABANDONED ANCHORS AT SANDSTONE UNITS AND PLUG HOLES TO MATCH EXISTING SANDSTONE AS PER ALLOCATION ITEM STN 04, TYP.
- 6 - EXTENT OF CLN 01 AND CLN 02 WORK IS ALL FACADES MASONRY INCLUDING RETURNS AND PROJECTIONS, THROUGHOUT. APPLY AFTER COMPLETION OF CLN 02-05 WORK.
- 7 - APPLY WATER REPELLENT COATING AT ALL SANDSTONE SURFACES AS PER DETAIL COA 02, TYP.
- 8 - REMOVE AND REPLACE BIRD DETERRENTS AS PER SPECIFICATIONS.
- 9 - EXISTING IRON FENCES AT BUILDING PERIMETER ARE NOT SHOWN FOR CLARITY.



FOR SCOPE OF WORK, REFER TO PARTIAL TOWER ELEVATIONS



KEY PLAN

REVISIONS

NO.	REVISION DESCRIPTION	DATE
4	Final Compliance Submission	03-30-09
3	100% Construction Documents Submission	12-15-08
2	75% Construction Documents Submission	09-22-08
1	Design Development Submission	07-25-08



30-30 THOMSON AVENUE
LONG ISLAND CITY, NY 11101

CAPIS ID NUMBER
LNC3JMADA(3)

PROJECT NAME:
Jefferson Market Branch Library
Exterior Restoration
425 Sixth Avenue
New York, NY 10011

FOR THE:
New York Public Library

**EAST ELEVATION
FACING 6TH AVENUE**

JOB NO. : 4026R01/R02	CONTRACT NO. : 20040024468
DRAWN BY : CC/SL/LC	CHECKED BY : SJ/JMG/RDM
SCALE : AS NOTED	DATE : 03-30-2009

DRAWING NUMBER:
A-004.00

DRAWING NUMBER
8 OF 42

ELEVATION 01
EAST ELEVATION FACING 6TH AVENUE

Stone Ornamentation

One of the glories of the Library's façade is the extensive Ohio sandstone ornamentation. The sandstone was found to be crumbling in many places due to age, weathering, and pollution. Though the condition of the stone varied widely, with some in perfect condition after 140 years, even some of the sandstone that did not appear deteriorated crumbled away when tapped. The goal was to keep the original material wherever possible, so extensive re-carving was done in place by skilled artisans to match the original as much as possible and preserve the sense of definition. Where stone replacement was deemed necessary, for instance the City seal, replacement pieces were carved out of the same Ohio sandstone used originally.

Top left: Deteriorated stone before restoration. Bottom left: Stone ornament after re-carving. Top right: Re-carving stone in place. Bottom center: Deteriorated stone before. Bottom right: Newly carved stone ornament replaces highly eroded original carving.



Stone Ornamentation (continued)

Retooling and honing addressed the prevalent flaking of ashlar stone. Dutchmen were used where spalling was more substantial. Dozens of cleaning techniques were tested for removing the existing staining on the building's stonework. On analysis the staining was determined to be a combination of ferrous oxide leaching (rusting) from the interior of the stone, staining from pollutants and possibly previous conservation treatments. Much of the staining was removed but it was not possible to remove all of it.

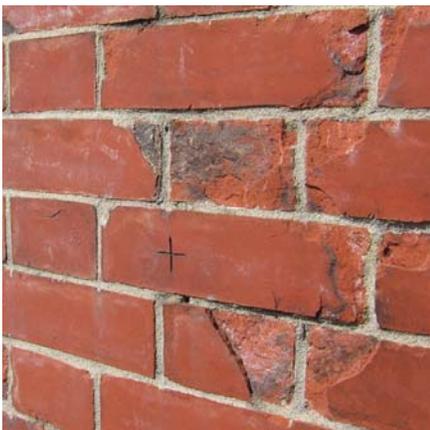
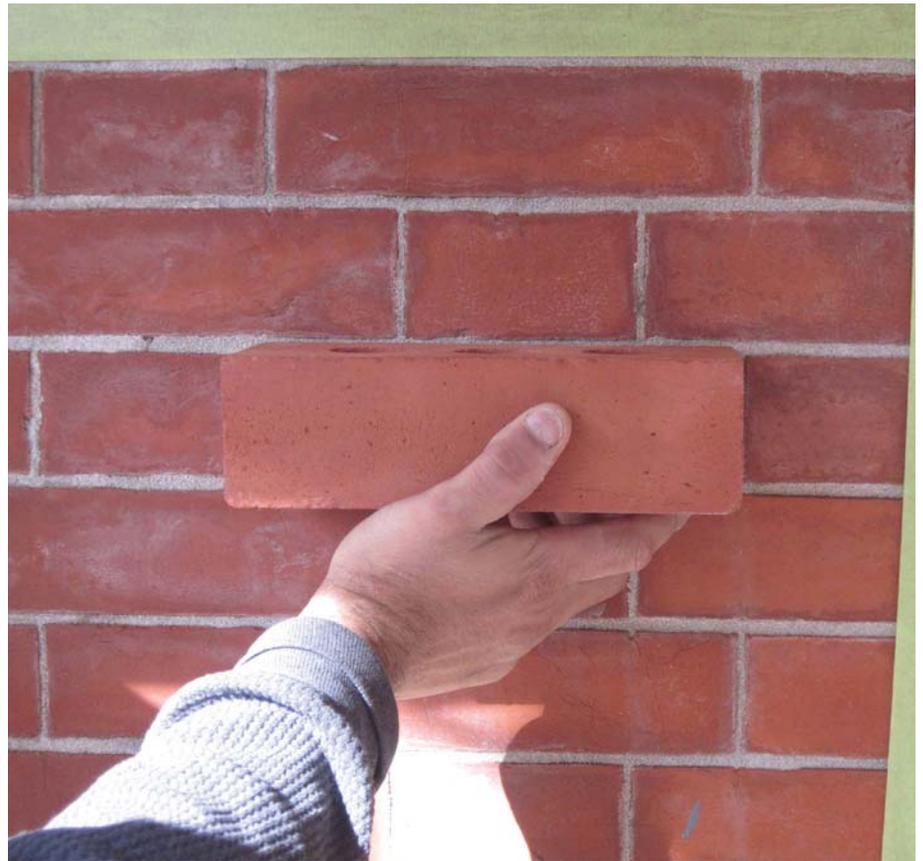
Top left: Worn sandstone gable ornament before. Top right: Replacement sandstone gable ornament. Bottom left: Matching tooled sandstone. Bottom center: Sandstone ornament before. Bottom left: Sandstone ornament after.

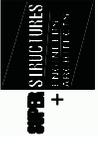


Brick Masonry

One of the signature design elements on the façade of the Library is the deep-red Philadelphia brick which provides appealing contrast with the light-colored sandstone ornamentation. Brick masonry restoration included spot repointing and cleaning of the brick. Badly deteriorated bricks were replaced in kind.

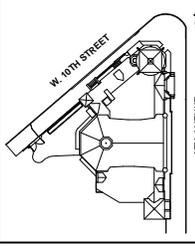
Top left: Deteriorated brick before. Top right: Matching brick in kind. Bottom left: Brick spalling. Bottom center: Brick on tower during replacement. Bottom right: Brick after.





82 AVENUE OF THE AMERICAS | NEW YORK, NY 10013
 TEL: 212 512 1333
 FAX: 212 505 1750

NOTE:
 Drawings shall not be scaled; existing building dimensions given for reference only and shall be verified in field by bidder and contractor



REVISIONS

NO.	REVISION DESCRIPTION	DATE
1	Final Construction Submittals	03-20-09
2	100% Construction Documents Submission	12-10-08
3	75% Construction Documents Submission	09-22-08
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30-30 THOMSON AVENUE
 LONG ISLAND CITY, NY 11101

OWNER: LINCINNADA(3)
 PROJECT NAME: Jefferson Market Branch Library Restoration
 425 Sixth Avenue
 New York, NY 10011

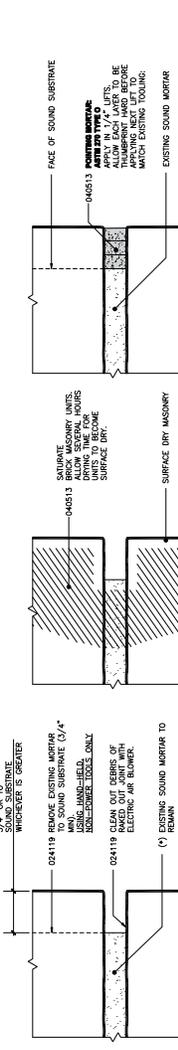
FOR THE: New York Public Library
 DRAWING NAME:

BRICK MASONRY RESTORATION DETAILS

JOB NO. - 030401003 CONTRACT NO. - 1304000000
 DRAWN BY - 020200000 CHECKED BY - 1504000000
 SCALE - AS NOTED DATE - 03-20-2009
 DRAWING NUMBER:

A-018.00

DATE PLOTTED: 03/20/09

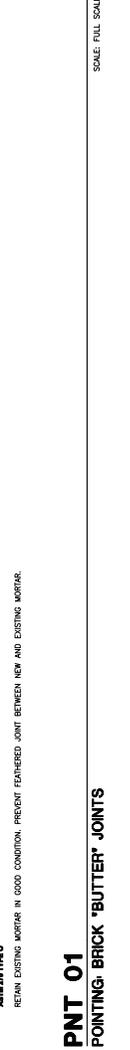


PNT 02
POINTING: SANDSTONE

FOR BRICK MASONRY WITH THIN "BUTTER" JOINTS, REMOVE MORTAR USING NON-POWER HAND TOOLS ONLY. APPLICATION OF POINTING MORTAR AS SHOWN IN DETAIL PNT 02.

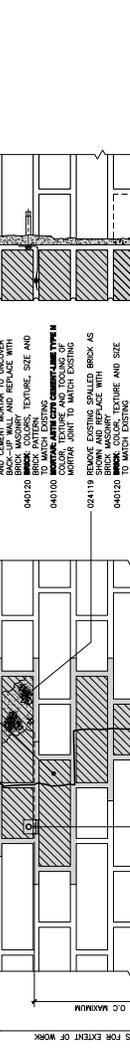
POINTING MORTAR: TYPE D

RETAIN EXISTING MORTAR IN GOOD CONDITION. PREVENT FEATHERED JOINT BETWEEN NEW AND EXISTING MORTAR.



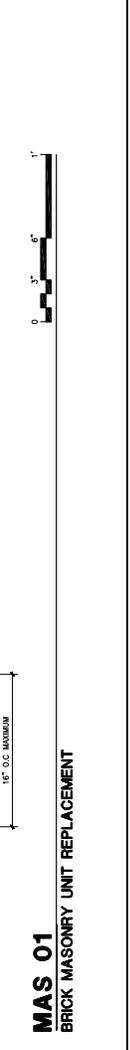
PNT 01
POINTING: BRICK 'BUTTER' JOINTS

EXISTING BRICK MASONRY TO REMAIN AND TO BE PROTECTED. LINE OF CRACK SHOWN DIAGNOSTICALLY TO BE RECONSTRUCTED WHEN RECONSTRUCTION OF SURROUNDING BRICK MASONRY AND CEILING MORTAR TO UNCOVER BRICK MASONRY AND REPLACE WITH BRICK MASONRY. TEXTURE, SIZE AND TO MATCH EXISTING. 024119 BRICK MASONRY TO MATCH EXISTING. 040100 BRICK MASONRY TO MATCH EXISTING. 024119 SHOVE AND BED JOINT MORTAR JOINT TO MATCH EXISTING. 040100 BRICK MASONRY TO MATCH EXISTING. 040100 BRICK MASONRY TO MATCH EXISTING. 040100 BRICK MASONRY TO MATCH EXISTING. 040319 METAL ANCHOR AT 16\"/>



MAS 01
BRICK MASONRY UNIT REPLACEMENT

EXISTING BRICK MASONRY TO REMAIN AND TO BE PROTECTED. LINE OF CRACK SHOWN DIAGNOSTICALLY TO BE RECONSTRUCTED WHEN RECONSTRUCTION OF SURROUNDING BRICK MASONRY AND CEILING MORTAR TO UNCOVER BRICK MASONRY AND REPLACE WITH BRICK MASONRY. TEXTURE, SIZE AND TO MATCH EXISTING. 024119 BRICK MASONRY TO MATCH EXISTING. 040100 BRICK MASONRY TO MATCH EXISTING. 024119 SHOVE AND BED JOINT MORTAR JOINT TO MATCH EXISTING. 040100 BRICK MASONRY TO MATCH EXISTING. 040100 BRICK MASONRY TO MATCH EXISTING. 040319 METAL ANCHOR AT 16\"/>



SEE ELEVATIONS FOR EXTENT OF WORK

16" O.C. MINIMUM

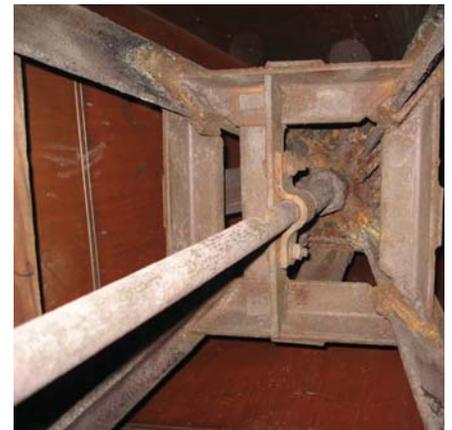
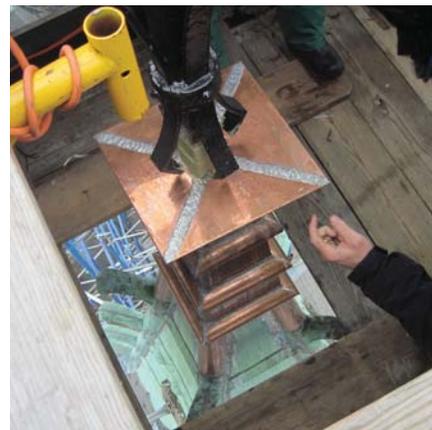
16" O.C. MINIMUM

0 3' 6'

Structural Engineering

The project addressed several structural issues. Among them was the main tower's finial which, due to structural deterioration, was not properly supported to resist wind loads. In order to secure it, copper cladding at the top of the slate roof had to be opened up so that the finial could be tied back to the tower substructure. Accessing the work was its own design challenge: an elaborate pipe scaffolding was erected around the top of the tower, supported by the tower itself.

Top left: Tower cap during restoration. Top right: Scaffolding allowing work to be done on tower cap and finial. Bottom left and center: Newly fabricated copper finial on tower cap during restoration. Bottom left: Interior of tower cap.



Structural Engineering (continued)

The main gable at the east elevation had displaced over time. Stone anchors and tension rods were installed to ensure the gable's and roof diaphragm's structural stability. The entryway gable had also displaced over time due to lack of proper ties to the building substructure. The scope included rebuilding the displaced stonework and installing structural ties.

Top left: Main gable being strapped to substructure. Top right: Main gable after stabilization. Bottom left and bottom center: Entry gable during reconstruction.

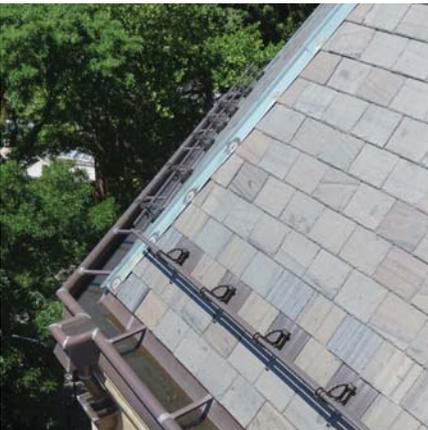


Roofs and Finials

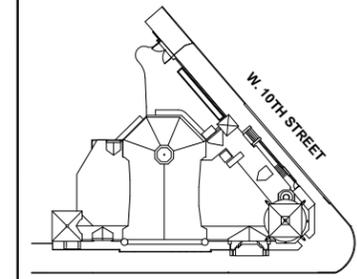
Spot repairs to the slate roof were performed, including replacing missing and broken slates throughout. The existing flat sheet metal roof was replaced with a new flat-seam copper roof.

The finial bases were spalling and breaking up because of the corrosion of the finial ironwork. New stone blocks were installed and the finials were re-set. Finials were restored as necessary off site. The drawing on the following page details additional repairs to sandstone and iron elements of various of the many finials on the building.

Top left: Slate roof before. Bottom left: Slate roof after. Bottom center: Finial before restoration. Bottom right: Restored finial base. Top right: Finial after.



NOTE:
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KEY PLAN

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30-30 THOMSON AVENUE
LONG ISLAND CITY, NY 11101

CAPIS ID NUMBER
LNC3JMADA(3)
PROJECT NAME:
Jefferson Market Branch Library
Exterior Restoration
425 Sixth Avenue
New York, NY 10011

FOR THE:
New York Public Library

FINIAL RESTORATION DETAILS

JOB NO. : 4026R01/R02	CONTRACT NO. : 20040024468
DRAWN BY : CC/SL/LC	CHECKED BY : SJ/JMG/RDM
SCALE : AS NOTED	DATE : 03-30-2009

DRAWING NUMBER:
A-016.00

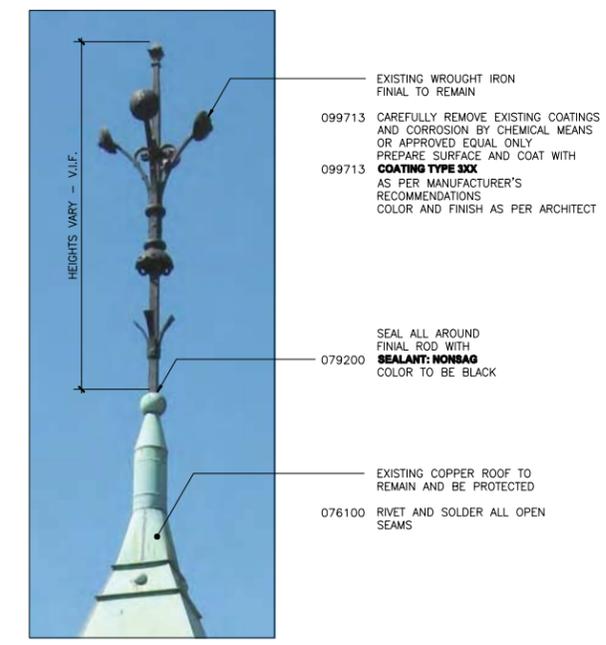
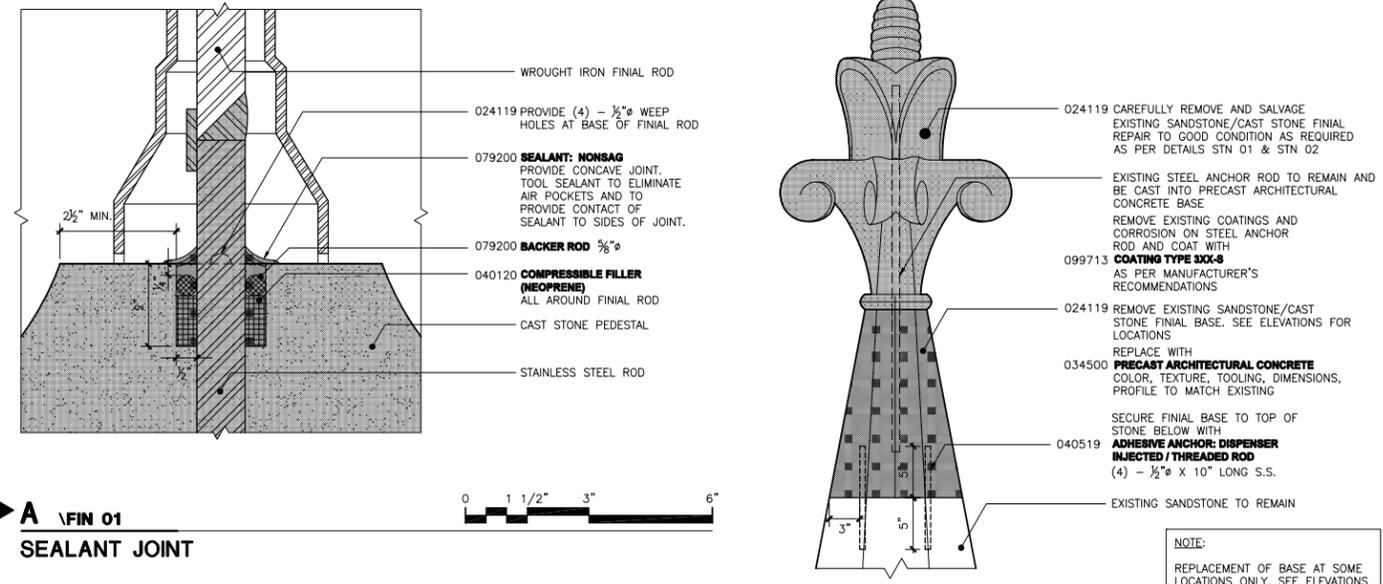


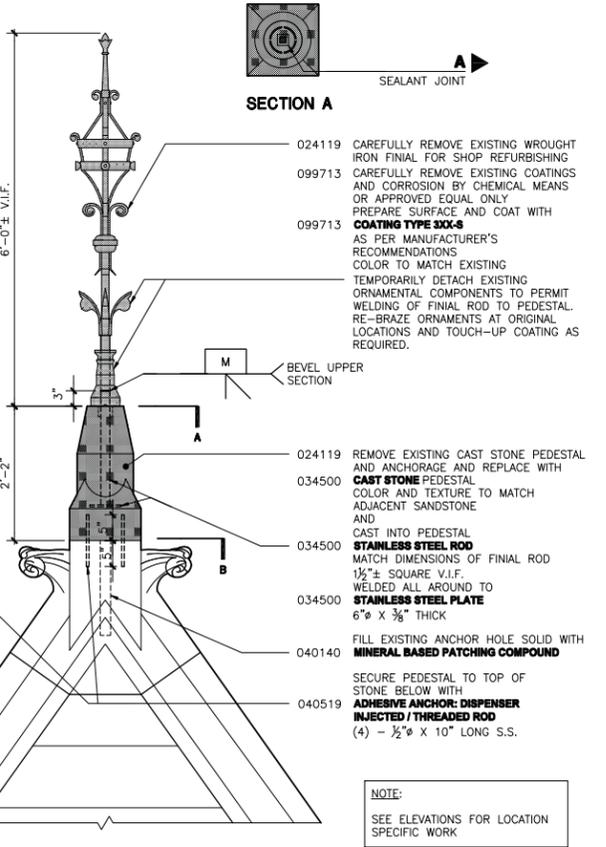
PHOTO: IRON FINIAL AT COPPER ROOF CAPS

FIN 04
IRON FINIAL RESTORATION: AT COPPER ROOF CAPS
NOT TO SCALE



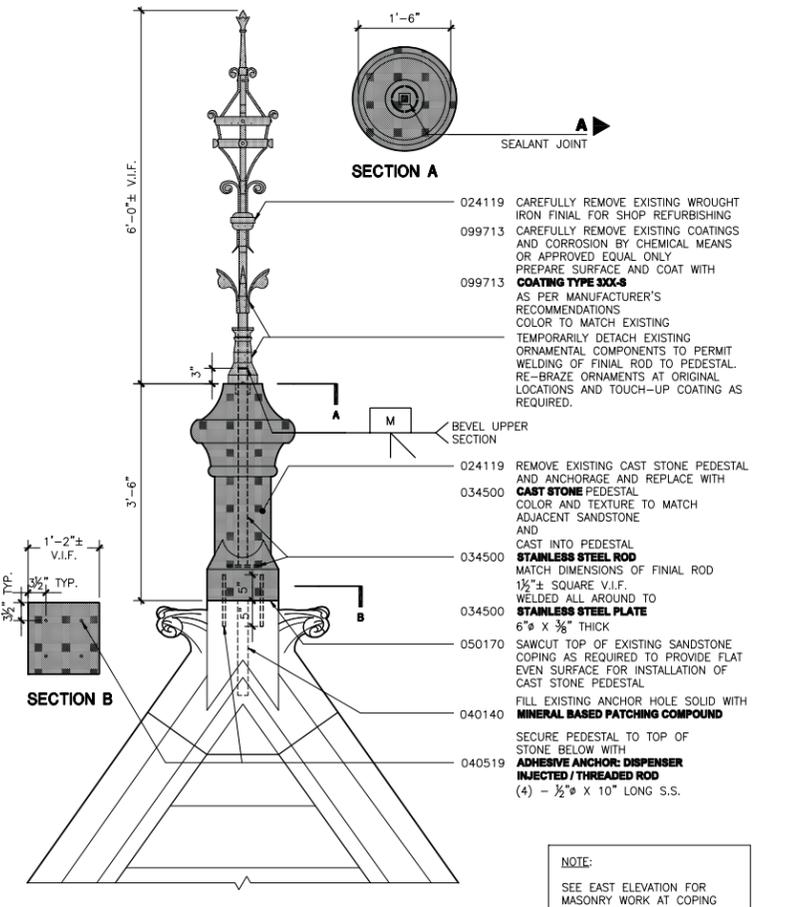
NOTE:
REPLACEMENT OF BASE AT SOME LOCATIONS ONLY. SEE ELEVATIONS FOR LOCATIONS.

FIN 05
SANDSTONE FINIAL RESTORATION: ENTRANCE PORTAL



NOTE:
SEE ELEVATIONS FOR LOCATION SPECIFIC WORK

FIN 03
IRON FINIAL RESTORATION: TYPICAL

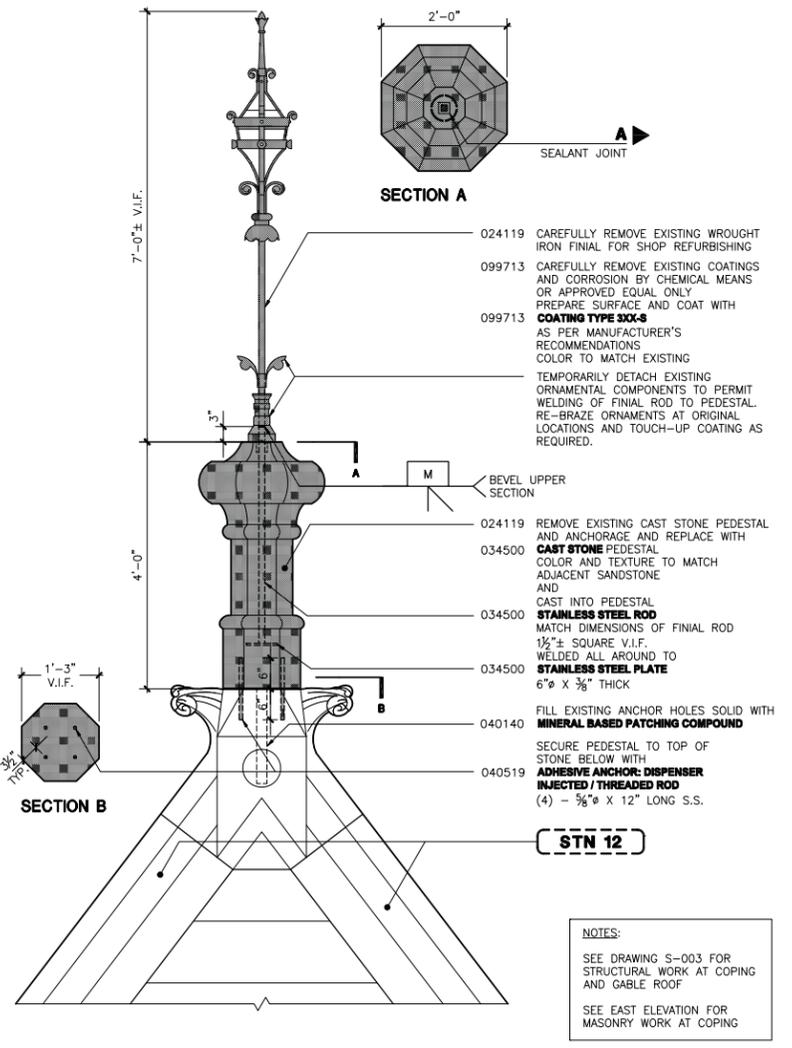


NOTE:
SEE EAST ELEVATION FOR MASONRY WORK AT COPING

FIN 02
IRON FINIAL RESTORATION: LOWER GABLE

FINIAL RESTORATION NOTES

1. NOTIFY ARCHITECT TO SCHEDULE INSPECTION OF EXPOSED FINIAL AND FINIAL BASE ANCHORAGE CONDITIONS DURING REMOVAL AND PROVIDE ACCESS FOR ARCHITECT'S HANDS-ON INSPECTION
2. DRAWING IS NOTATIONAL. CONTRACTOR SHALL VERIFY PROFILES, SHAPES, SIZES, REINFORCEMENT AND ANCHORAGE IN FIELD.
3. CLEANING OF WROUGHT IRON TO BE BY CHEMICAL MEANS OR APPROVED EQUAL ONLY.
4. PROVIDE DETAILED SHOP DRAWINGS SHOWING ALL DIMENSIONS AND REINFORCING OF CAST STONE FOR REVIEW AND APPROVAL BY ARCHITECT PRIOR TO FABRICATION OF MOLDS.
5. CAST STONE TO BE SENT TO WROUGHT IRON SHOP FOR WELDING & TOUCH UP



NOTES:
SEE DRAWING S-003 FOR STRUCTURAL WORK AT COPING AND GABLE ROOF
SEE EAST ELEVATION FOR MASONRY WORK AT COPING

FIN 01
IRON FINIAL RESTORATION: MAIN GABLE

Tower Railing and Clock Faces

The wrought iron balcony railing on the tower was removed and repaired offsite by an ironworker and then remounted.

Restoration and repair of the clock faces was carried out by a specialist in clock restoration. In the 1960s it was a campaign to get the clock running again which initiated the eventually successful movement to save the building itself.

Top left: Detail of clock face interior before restoration. Top right: Clock face after restoration. Bottom left: Deteriorated wrought iron railing. Bottom center: New supports in restored railing. Bottom right: Railing after.



Gutters and Leaders

The existing gutters and leaders (downspouts) were highly deteriorated. They were replaced in kind with new copper. In some cases the interior leaders were experiencing ongoing leaking and were deteriorating the building's interior stonework, so leaking leaders were removed to the outside of the building.

Top left and bottom left: Gutters and leaders before. Bottom center and right: New copper gutters during installation. Top right: Gutter and leader after.



Windows

The building's aluminum frame windows represent significant alterations that were made to the building in the 1960s by architect Giorgio Cavaglieri when he converted the building from a derelict courthouse building to a branch of the NYC Public Library. The intent of the current restoration was to preserve the windows rather than replace them. Some maintenance was required on several of these very large, substantial, solidly built windows to restore operability, as they had not been rehabilitated in quite some time. At the basement level aluminum windows were replaced to match the existing. Stained glass windows affected by the stone mullion repairs were removed, restored off site and reinstalled at completion of stone restoration work.

Top left: Stained glass windows after restorations. Top right, bottom left and center: Aluminum windows dating from the 1960s were repaired as necessary.



Credits

New York City's Department of Design and Construction, which managed the restoration project, wishes to acknowledge the following individuals:

New York City Department of Design and Construction

- DDC Commissioner: David J. Burney, FAIA
- DDC Assistant Commissioner for Structures: Sergio Silveira
- DDC Program Director, Libraries Unit: Frank Conner
- DDC Deputy Director, Libraries Unit: Michael Minuto
- DDC Senior Project Manager, Libraries Unit: Joseph Deluca
- DDC Senior Project Manager, Libraries Unit: Anthony Mayer
- DDC Project Director, Libraries Program Unit, Structures Division: Flora Tashibi
- DDC Design Liaison, Design Quality: Faith Rose
- DDC A&E Team Leader: Joseph Le Pique
- DCC Structural Engineer: Sye Yi Liou
- DDC Electrical Engineer: William Riker
- DDC Director of Estimating: Romeo Zamudio
- DDC Project Manager, Hazmat Unit: John De Lacruz
- DDC Program Director, Constructability: Nick Peluso

New York Public Library:

- NYPL Vice President, Plant Management and Construction: Joanna Pestka
- NYPL Senior Project Manager, Plant Management and Construction: Pat Konecky
- NYPL Project Manager, Capital Planning and Construction: Steven Torrenti
- NYPL Project Director, Capital Planning and Construction: Gennaro Oliva
- Librarian, Jefferson Market Library: Frank Collierius
- Building Superintendent, Jefferson Market Library: Mariusz Mrzyk

The SUPERSTRUCTURES team members providing preservation architecture, structural engineering and conservation services for this project were:

- Paul Millman, PE, RA, LEED AP
- John Galetta, RA, LEED AP
- Richard Moses, RA
- Seok Jung, RA
- John Grande, PE
- Niraj Rawal
- Joan Berkowitz
- Amel Chabbi
- Charu Chaudhry
- Laurentin Ciufecu
- Stephen Gottlieb
- Shamil Lallani



Jefferson Market Library, January 3, 2014

