



# Restoration



Exterior  
Rehabilitation  
and Restoration  
Design Experts  
Specializing  
in Masonry,  
Roofing and  
Waterproofing

## 233 Broadway - Woolworth Building New York City

The Witkoff Group (Owner)

Since 1987, FMD professionals have been responsible for exterior condition surveys as well as the identification and analysis of all conditions affecting deterioration of this famous New York landmark. Such surveys have been undertaken from the ground, from the roofs, and from swing scaffolding, and have led to the preparation of necessary construction documents for all on-going restoration work.

Throughout this period, the FMD Team has coordinated all bidding and filing processes, site meetings with owners and contractors, and has performed periodic visits to the site throughout the construction phases. FMD Team professionals have handled necessary replacement of original deteriorated terra



cotta cladding and ornament with new cast concrete and GFRC panels to match as closely as possible the original building appearance. Restoration has included stabilization pinning of original terra cotta cladding, in place wherever possible, re-setting of original terra cotta stones,

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## Restoration



### Woolworth Building

New York City

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## Facade Maintenance Design, PC

re-pointing of mortar joints, patching of original terra cotta glaze material and repair and replacement of corroded structural steel as required, in addition to the repair and replacement of copper and bituminous roofing wherever necessary. FMD also designed unique flashing and anchorage details and restored missing ornamentation and color schemes.

### Unique Historic Structure:

A Local and National landmark structure, The Woolworth Building was designed by architect Cass Gilbert and was the tallest building in the world at the time of its completion in 1913. FMD has been the professional of record for all exterior work since 1987, including continuous, on-going restoration and preservation assignments.





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**330 West 42nd Street  
McGraw Hill Building  
New York City**

Deco Tower Associates (Owner)

This local and National landmark structure, designed by architect Raymond Hood in the International Style for McGraw Hill Publishing in 1931. Prior to FMD's work, the building was surrounded by sidewalk bridging over a period of several years, to protect the public from falling terra cotta fragments. Several previous projects which had involved the use of inappropriate materials caused substantial additional deterioration.

Owners commissioned FMD to conduct a Survey of exterior walls, from the ground, from roofs, and from swing scaffolding, and to perform identification and analysis of deteriorated conditions, leading to the preparation of construction documents for restoration work. FMD professionals were responsible for design of new substructure for parapet walls, to allow proper aeration and provide concealed waterproofing, and to support replacement terra cotta blocks extruded specifically for this project. Steel railings, duplicating the original appearance but updated to new code requirements, were also added.



The FMD Team coordinated bidding and filing processes, as well as site meetings with the owner and contractor, and performed periodic visits to the site during the construction phase.

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**"W" Hotel – Union Square**  
New York City

The Related Group (Developer)  
Structure Tone (Construction Manager)

Building owners commissioned FMD to conduct a survey of specific problem areas of exterior walls, from the ground and from swing scaffolding, and to perform identification and analysis of all deteriorated conditions, leading to the preparation of construction documents for necessary restoration work. Despite a limited budget and schedule, FMD was able to design a simple and effective repair program to address serious conditions found and to assist the contractor in implementing the approved design. FMD professionals assisted in the bidding and filing processes, and performed periodic visits to the site during construction.



The FMD team coordinated stabilization pinning and the resetting of displaced original limestone ornament, in the replacement of cracked and displaced original face brick, and in the repair and waterproofing of corroded original structural steel.

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*Restoration*



**Exterior**

**40 West 86th Street**  
New York City

Rudin Management Company  
(Owner/Manager)

**Rehabilitation  
and Restoration**

Owners of this local landmark structure commissioned FMD to conduct a survey of exterior walls, from the ground, from roofs and swing scaffolding, and to perform identification and analysis of deteriorated conditions, leading to the preparation of construction documents for necessary restoration work. The resulting FMD design focused on visible deterioration in exterior walls and on the correction of interior leakage problems.

**Design Experts**

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**Waterproofing**

FMD professionals coordinated bidding and filing processes, site meetings with the contractors and owners and performed periodic visits to the site during the construction phase. FMD administered a restoration program which included the replacement of cracked and displaced face brick, replacement of deteriorated roofing and replacement of terrace waterproofing systems including new perimeter flashing buried within the masonry walls. In addition the FMD team replaced original deteriorated ornamental terra cotta panels with new cast concrete panels to match the building's original appearance.



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Restoration



Exterior

153 Halsey Street  
Newark, New Jersey

Hartz Mountain Associates  
(Co-Owner/Manager)

Rehabilitation  
and Restoration

Design Experts

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in Masonry,

Roofing and

Waterproofing

This local landmark structure, which houses state and local offices and courts, had experienced long-standing problems with fragments falling from the deteriorated facade, posing major issues for the owners, which include the State of New Jersey.

FMD, acting in conjunction with former parent company DeSimone Consulting

Engineers, was commissioned to conduct a survey of exterior walls, from the ground, from roofs and swing scaffolding, and to perform identification and analysis of deteriorated conditions, leading to the preparation of construction documents for necessary restoration work.

FMD professionals coordinated bidding and filing processes, site meetings with the contractors and owners and performed periodic visits to the site during the construction phase.



The FMD Team administered patching and replacement of the original limestone cladding and ornament, as well as the repair and waterproofing of original steel spandrel panels, pointing of deteriorated mortar joints and repair of corroded structural steel, performing within budget, on schedule and in adherence with the security concerns of the owners.

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**The Newark Museum**  
Newark, New Jersey

Through their project architect, owners of this local landmark structure engaged FMD to conduct a survey of specific, problem areas of exterior walls, from the ground and from pipe staging and to identify and analyze deteriorated conditions, leading to the preparation of construction documents for necessary restoration work.

The FMD Team assisted in bidding and filing processes, and performed periodic visits to the site during construction.



Michael Graves Associates (Architect)



The restoration program included FMD professional evaluation of long-standing problems and design of simple yet effective repairs, as well as the coordination of stabilization pinning of cracked and displaced original face brick and the repair of corroded structural steel.



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## *Rehabilitation*



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**One Whitehall Street  
New York City**

Rudin Management Company  
(Owner/Manager)

Owners commissioned FMD to conduct a survey of exterior walls, including metal and glass curtain walls, from the ground and from swing scaffolding, and to perform Identification and analysis of deteriorated conditions, leading to the preparation of construction documents for necessary rehabilitation work.

Utilizing its expertise in rehabilitation of curtain wall structures, as well as all other forms of facade structures, The FMD Team developed a successful repair program including replacement of cracked and displaced face brick to match the original, patching of spalled veneer stone, and replacement of deteriorated joint sealant at windows and curtain walls.

FMD professionals coordinated the bidding and filing processes, and performed periodic visits to site during construction.



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# Rehabilitation



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**200 West 57th Street - Sidewalk**  
New York City

200 West 57th Street Associates  
(Owner)

## Sidewalk Replacement

The FMD Team conducted a survey of sidewalk pavement and supporting vault structure, as well as research of Transit Authority records regarding the subway station mezzanine beneath portions of this building. FMD provided coordination of extensive filing and bidding processes, and coordination of all parties as the owner's representative during construction. FMD professionals evaluated the vault structure and administered waterproofing and pavement subgrade preparations for a

new poured concrete sidewalk.

NYC Transit did not want to repair portions of the city-owned deteriorated structure that was leaking into building basement. FMD designed a cost-effective stainless steel liner in the basement to prevent water leakage from the city-owned vault and foundation walls into the building, eliminating the the necessity for extensive owner-financed repairs to the city-owned structure.



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*Analysis*



Exterior

**New Amsterdam Theater**  
New York City

The Walt Disney Company  
(Owner)

Rehabilitation  
and Restoration

Building owners commissioned FMD to prepare an analysis report of exterior conditions at this landmark building site.

Design Experts

FMD professionals conducted a survey of exterior walls, from the ground, from setback roofs and from swing scaffolding, and performed Identification and analysis of deteriorated conditions. The required analysis report was then filed with the NYC Department of Buildings, in accordance with NYC Local Law 11/98

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## *Restoration*



**Exterior**

**40 Park Avenue**  
New York City

Rudin Management Company  
(Owner/Manager)

**Rehabilitation  
and Restoration**

Following partial failure of a large section of balcony masonry, owners commissioned FMD to conduct a survey of exterior walls, from the ground, from setback roofs and from swing staging, and to perform identification and analysis of deteriorated conditions, leading to the preparation of construction documents for the necessary restoration work. FMD professionals conducted extensive renovation on the damage resulting from partial failure of face brick during routine maintenance, researching the original construction and developing simple and effective solutions to repair these deteriorated conditions.

**Design Experts**

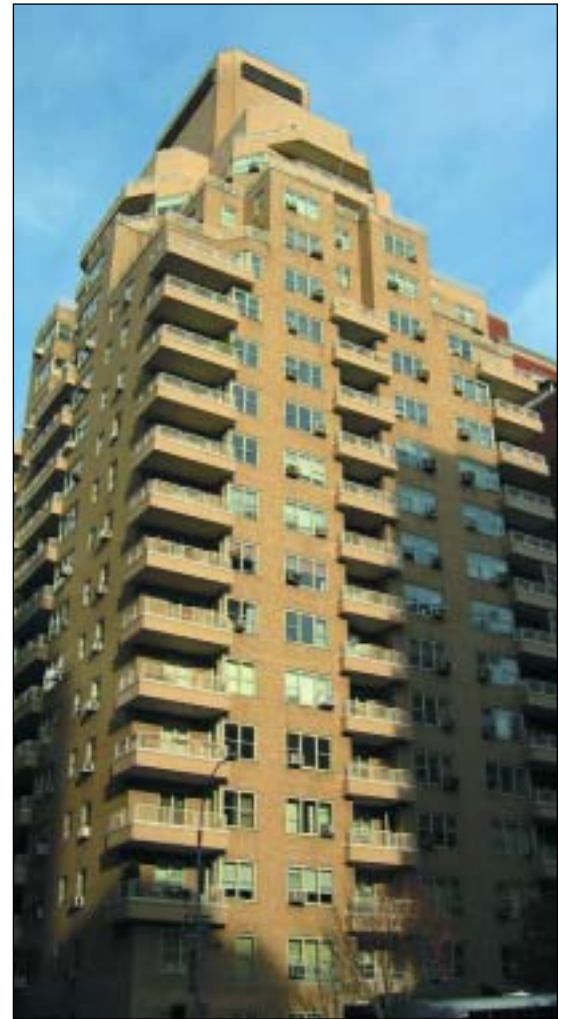
**Specializing**

**in Masonry,**

**Roofing and**

**Waterproofing**

The FMD Team was responsible for the coordination of bidding and filing processes, and performance of periodic visits to the site during construction, in addition to administration of replacement of cracked and displaced face brick, replacement of deteriorated roofing and balcony waterproofing systems, the



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replacement of the deteriorated balcony railing system, pointing of deteriorated mortar, and the repair of corroded structural steel.



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Exterior

**452 Fifth Avenue**  
New York City

HSBC Bank (Owner)

Rehabilitation  
and Restoration

Owners of this local landmark building and flagship structure of HSBC USA, commissioned the FMD Team to conduct an emergency survey of projecting ornamental copper detailing where a small section had fallen to the street. FMD professionals evaluated the copper and supporting armature and recommended repairs, but also found extensive deterioration in the slate-clad mansard roof. FMD then conducted a survey of exterior walls and roofs, from the ground, from the roof and from pipe scaffolding, and performed Identification and analysis of deteriorated conditions, leading to the preparation of construction documents for restoration work. FMD professionals administered replacement of cracked and displaced face brick, replacement of ornamental copper at projecting water tables and cornice, replacement of the slate mansard roof, and pointing of deteriorated mortar.

Design Experts

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FMD performed periodic visits to the site during construction as well as handling

coordination of filing and bidding of designed repairs and coordination of meetings with owner and contractors.

During implementation of the extensive restoration program, the building remained fully occupied by senior bank executives. Most of the ornamental copper was repaired in place, effecting a substantial savings in time and money.



# Restoration



Exterior

**500 Fifth Avenue**  
New York City

Newmark & Company Real Estate  
(Managers)

Rehabilitation  
and Restoration

Owners of this unusually tall (57-story) solid-wall brick masonry building located at the extremely exposed corner of Fifth Avenue and 42nd Street, commissioned FMD to conduct a survey of exterior walls, from the ground, from setback roofs and from swing scaffolding, and to perform Identification and analysis of deteriorated conditions, leading to the preparation of construction documents for necessary restoration work.

Design Experts

Specializing  
in Masonry,

Roofing and

Waterproofing

FMD professionals were asked to perform an evaluation of all windows, leading to design of replacement aluminum double-hung windows, while at the masonry walls, FMD matched a multi-color pallet of face brick for corner replacement, and designed cast concrete replacement units for deteriorated original "art-deco" style terra cotta.

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The FMD Team administered replacement of cracked and displaced face brick, replacement and stabilization of existing terra cotta ornamentation with new GFRC



and cast stone to match the original appearance of the building, pointing of deteriorated mortar, and repair of corroded structural steel.

FMD assisted in detailing for the new construction at the top of the building as well as assisting in the bidding and filing processes and performing periodic visits to the site during construction.



*Restoration*



**Exterior**

**2411 Tratman Avenue**  
Bronx, NY

Verizon Communications (Owner)  
Tishman Corp. (Construction Manager)

**Rehabilitation  
and Restoration**

**Restoration, Window Replacement**

As one of more than 25 Verizon buildings evaluated and restored by FMD within the past three years, this structure required a program that would provide simple yet effective restoration and repairs that could be performed while telephone operations continued inside the buildings.

**Design Experts**

**Specializing**

**in Masonry,**

**Roofing and**

**Waterproofing**

FMD professionals conducted a survey of exterior walls, from the ground, from setback roofs and from swing scaffolding, and performed Identification and analysis of deteriorated conditions, leading to the preparation of construction documents for restoration work. The FMD Team was responsible for the design of replacement aluminum-framed double-hung windows as well as for the design of rehabilitation repairs to deteriorated interior finishes.



The FMD Team was responsible for replacement of cracked and displaced face brick, partial replacement of displaced parapet walls, patching and replacement of deteriorated limestone ornamentation, pointing of deteriorated mortar, the replacement of corroded structural steel, and repair of deteriorated structural concrete at the sidewalk vault structure.

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*Restoration*



Exterior

**770 Park Avenue**  
New York City

Brown Harris Stevens Inc. (Manager)

Rehabilitation  
and Restoration

**Restoration, Roofing & Waterproofing**

FMD coordinated the bidding and filing processes, as well as meetings with owners contractors, and management, and performed periodic visits to the site during the construction phase.

Design Experts

Management of this local landmarked cooperative residence commissioned FMD to conduct a survey of exterior walls, from the ground, from setback roofs and from swing scaffolding, and to perform Identification and analysis of deteriorated conditions, leading to the preparation of construction documents for restoration work. The phased restoration program developed by the FMD Team allowed for work to be performed with minimal disturbance to the building's staff and tenants, within the anticipated budget and on schedule.

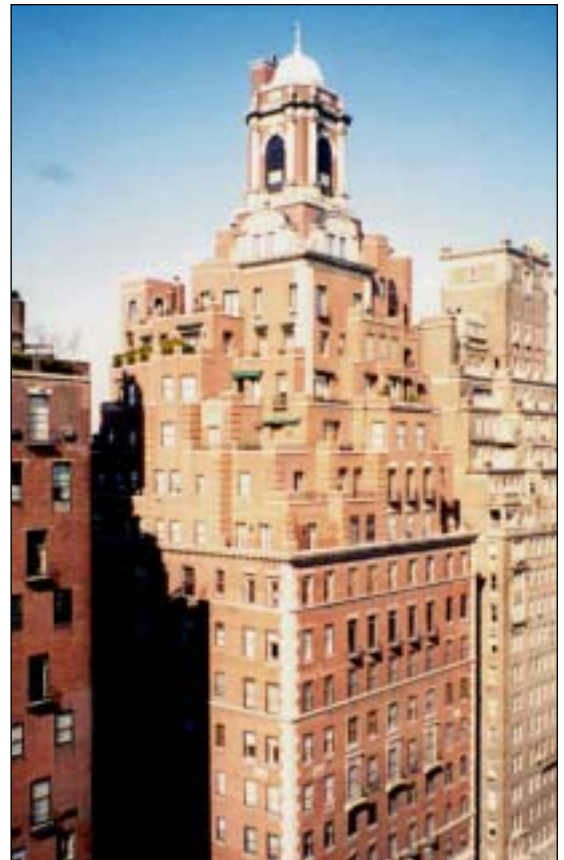
Specializing

in Masonry,

Roofing and

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FMD professionals administered the replacement of cracked and displaced face brick, the partial replacement of displaced and deteriorated parapet walls, the replacement of deteriorated roofing and terrace waterproofing systems, the patching of deteriorated limestone ornamentation, and the pointing of deteriorated mortar.



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*Restoration*



Exterior

**944 Fifth Avenue**  
New York City

Insignia Residential Group (Manager)

Rehabilitation  
and Restoration

**Restoration, Roofing & Waterproofing  
and Window Rehabilitation**

Work was performed in accordance with FMD's construction documents, with minimal disturbance to building staff and tenants of this local landmarked cooperative residence, completing the assignment within the anticipated budget and on schedule.

Design Experts

FMD conducted a survey of exterior penthouse walls from roof, evaluation of existing roofing and penthouse terrace waterproofing systems, and design of rehabilitation for selected original wood-framed windows. FMD prepared and filed construction documents for restoration and replacement work, and coordinated bidding and filing processes, in addition to performing periodic visits to the site during construction.

Specializing

in Masonry,

Roofing and

Waterproofing

FMD coordinated replacement of cracked and displaced face brick, replacement of deteriorated roofing and terrace waterproofing systems, including perimeter flashing secured inside masonry walls, partial replacement of deteriorated parapet walls, pointing of deteriorated mortar, and design of new decorative pavement system.

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### Gould Memorial Library Bronx, NY

Gould Memorial Library, formerly part of the NYU Uptown Campus, designed by Stanford White of noted architecture firm McKim, Mead and White in the 1890's, is a local interior and exterior landmark and is listed on the National Register of Historic Places. FMD led and worked with conservation professionals and specialized contractors to analyze and implement restoration and repairs which are expected to increase the life of the windows and ceiling of this spectacular building into the next century.

FMD professionals conducted a survey and analysis of the guastavino tile dome and roofs, performed historic research and restoration of interior plaster cracks and



### Dormitory Authority, State of New York



finishes at the dome and barrel vaults, designed minimally invasive reattachment of life-sized hollow plaster statues, as well as analyzed and restored wood and stained glass windows by Tiffany & Company, and interior plaster finishes.

The FMD Team performed identification and analysis of deteriorated conditions,  
*Continued on following page*

## Restoration



### Gould Memorial Library

Bronx, NY

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leading to the preparation of construction documents for restoration work, including resetting of the grand granite steps and design and installation of ADA compliant bronze handrails which were designed and engineered with structural aluminum cores to meet both structural and aesthetic requirements.



## Facade Maintenance Design, PC

Cracks at the plaster ceiling were adhered with a specially formulated adhesive to retain the original plaster. Plaster statues were re-adhered in-situ through 1-inch holes at the base via an articulating borescope and adhesive injector. Plaster finishes were restored with appropriate colors and materials based on chemical and microscopic analysis. Large stained glass windows are an extremely rare three-dimensional design by Tiffany and Company. The windows were removed, cleaned and re-leaded, and once again reveal their original brilliant colors to the library interior.

FMD obtained approvals for work related to landmark status, recommended the contractors for bidding and performed periodic visits to site during the restoration work.



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**Ritz Carlton Hotels**  
Boston, MA; New York, NY;  
New Orleans, LA

Millennium MDA (Developer)  
Millennium Partners (Developer)  
Le Triomphe Property Group (Developer)

In Boston, FMD conducted a survey of exterior walls, from the ground, from roofs, from pipe staging and swing scaffolding, identifying and analyzing deteriorated conditions and leading to the preparation of construction documents for restoration work. FMD professionals administered replacement of the original poor quality cast concrete detail stones with high



quality cast concrete ornamental panels, matching the original appearance.

Boston's Local landmark building had been deemed unsafe due to loose fragments on exterior walls and had massive sidewalk bridging in place for several years prior to this project. Previous recommendations had included removing all face brick from the building and installing additional substructure which would have required replacement of all interior finishes. The FMD Team developed a simple testing process to show that the existing wall structure was suitable for minor upgrading and pinning of the existing face brick in

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## Restoration

## Facade Maintenance Design, PC



### Ritz Carlton Hotels

Boston, MA; New York, NY; New Orleans, LA

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place, resulting in substantial cost savings to the owner.

In New York, FMD conducted a survey of exterior walls, from ground, setback roofs and swing scaffold to identify and analyze deteriorated conditions, leading to the preparation of construction documents for restoration work. FMD also assisted in detailing for new construction at the top of the building, assisted in bidding and filing processes, and performed periodic visits to the site during construction.

FMD professionals administered extensive renovation and modernization of this

structure, originally the St. Moritz Hotel, including the replacement of cracked and displaced face brick, the replacement and stabilization of existing terra cotta ornamentation with new GFRC and cast stone to match the original, pointing of deteriorated mortar, and repair of corroded structural steel.

Where previous developers had been frightened off by the visible cracking and reportedly poor condition of the existing masonry and ornamentation, FMD analysis indicated a repairable condition of existing masonry walls within the owner's project parameters.



In New Orleans, FMD performed similar investigative and analytical services leading to construction documents detailing recommended repairs to the locally-beloved former Maison Blanche department store.