# HISTORIC STRUCTURE REPORT THEODORE ROOSEVELT BIRTHPLACE NATIONAL HISTORIC SITE

28 EAST 20TH STREET NEW YORK, NY

PREPARED FOR

## NATIONAL PARK SERVICE NORTHEAST REGION

CONTRACT NO. 1443CX2000 PMIS 16068

PREPARED BY

JOHN MILNER ARCHITECTS, INC CHADDS FORD, PA

SUB-CONSULTANTS TO

HDR ENGINEERING, INC PEARL RIVER, NY

MAY 2008

## HISTORIC STRCUTURE REPORT THEODORE ROOSEVELT BIRTHPLACE NATIONAL HISOTRIC SITE

CONTRACT NO. 1443CX2000, PMIS 16068

PREPARED FOR

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## TABLE OF CONTENTS

#### Page

List of Figures	1
EXECUTIVE SUMMARY	4
Administrative Data	5

## PART 1. DEVELOPMENTAL HISTORY

1.1.	Historical Background and Context	7
1.2.	Chronology of Development and Use	14
1.3.	Physical Description	32
1.4.	Character Defining Features	47
1.5.	Architectural/Landscape Condition Assessment	62
1.6	HVAC/Electrical/Fire Suppression (Prepared by Leo A. Daly)	158
1.7	Structural Assessment (Prepared by WJE, Engineers & Architects)	.161

## PART 2. TREATMENT AND USE

2.1.	Treatment and Use	.230
2.2.	Requirements for Treatment	.232
2.3.	Alternatives for Treatment	.234
2.4.	Assessment of Effect for Recommended Treatment	.239
2.5.	Hazardous Materials and HVAC Considerations	.239

## APPENDICES

- B. Historic Photographs
- C. Current Building Drawings
- D. Historic Building Drawings
- E. Historic Materials Analysis
- F. National Register Nomination
- G. Timeline of Construction and Building History
- H. Hazardous Materials Analysis
- I. Structural System Historical Research

## List of Figures

## Figure 1

Theodore Roosevelt at four years from Theodore Roosevelt Collection, Harvard CollegeLibrary. <www.theodoreroosevelt.org>

## Figure 2

Theodore Roosevelt as a Harvard Senior, from Theodore Roosevelt, the Citizen, 1904 by Jacob A. Riis (1849-1914). <a href="http://www.bartleby.com/206/P1.html">http://www.bartleby.com/206/P1.html</a>

## Figure 3

Theodore Roosevelt as President of the United States, from Theodore Roosevelt, the Citizen, 1904 by Jacob A. Riis (1849-1914). <a href="http://www.bartleby.com/206/P1.html">http://www.bartleby.com/206/P1.html</a>

## Figure 4

Board members of the WRMA with Eleanor Roosevelt, 1923. (THRB archives)

## Figure 5

The O'Rourkery, side view, photograph by Nicholas Simon. <a href="http://www.valinet.com/~smithash/theodate/Ch03.html">http://www.valinet.com/~smithash/theodate/Ch03.html</a>

## Figure 6

The Popes at Hill-stead, photograph by Gertrude Kasebier, c. 1902 from The Hill-Stead Museum, Farmington, CT. <a href="http://www.valinet.com/~smithash/theodate/Ch04.html">http://www.valinet.com/~smithash/theodate/Ch04.html</a>

## Figure 7

Avon Old Farms, House of the Headmaster, photograph by Simeon D. Smith. http://www.valinet.com/~smithash/theodate/Ch10.html

## Figure 8

Theodate Pope Riddle and clients on steps of Roosevelt House. (Hill-Stead Museum Archives)

## Figure 9

28 East 20th Street prior to demolition in 1916. (THRB Archives)

## Figure 10

Commercial building constructed at 28 East 20th Street, photo circa 1918. (THRB Archives)

## Figures 11 & 12

Copy of insurance maps showing the evolution of the block on 20th street East of Broadway between1849-1879. (NPS, 1962)

## Figure 13 & 14

Copy of insurance maps showing the evolution of the block on 20<sup>th</sup> street east of Broadway between1895-1812. (NPS, 1962)

## Figure 15

Schematic Drawing of Second Floor Plan, Theodate Pope Riddle, 1920. (THRB Archives)

## Figure 16

Dedication of Roosevelt House and laying of cornerstone, January 6, 1921. (THRB Archives)

**Figure 17** Roosevelt house under construction, circa 1922. (THRB Archives)

**Figure 18** Parlor, circa 1924. (THRB Archives)

**Figure 19** Library , circa 1924. (THRB Archives)

**Figure 20** Bedroom, circa 1924. (THRB Archives)

**Figure 21** Roosevelt House, opening to the public October, 1923. (THRB Archives)

**Figure 22** Dedication of flagstaff, 1924. (THRB Archives)

**Figure 23** Library, Circa 1928. (THRB Archives)

**Figure 24** Fluorescent lights installed during the 1950's relighting campaign. (THRB Archives)

**Figure 25** Jahn mortar patches on the entrance brownstone stairs, January 2007.

**Figure 26** Front elevation, January 2007.

**Figure 27** Detail of Front Handrail, April 2007.

**Figure 28** View of Front Elevation, Library and Museum Complex, April 2007.

**Figure 29** Exterior Rear of Building Complex, January 2007.

**Figure 30** Museum, circa 1926. (THRB Archives)

**Figure 31** Auditorium, circa 1927. (THRB Archives)

## Figure 32

Wallpaper advertisement showing Colonial Gothic pattern used in Dining Room. (THRB Archives)

## Figure 33

M. H. Birge & Sons advertisement article published after the company was given exclusive rights by WRMA in a letter on April 14, 1923. (THRB Archives)

#### **EXECUTIVE SUMMARY**

The National Park Service intends provide improved HVAC operations at the Theodore Roosevelt Birthplace National Historic Site located at 28 East 20th Street in New York, New York. The improvement aims to protect the facility and its collections by minimizing extreme fluctuations in temperature. As a basis for the planning and design of the project, the National Park Service has commissioned the preparation of this Historic Structure Report (HSR) by HDR Engineering, Inc. with sub-consultant, John Milner Architects, Inc. (Task Order #1443CX2000, PMIS 16068, Rehabilitate HVAC and Protect Collections, Prepare Historic Structure Report).

The following primary tasks were carried out in preparing the HSR:

- 1. Archival research to retrieve information related to the significance and developmental history of the building and site.
- 2. Architectural investigations to retrieve and document physical evidence of the construction chronology of the building, to assess existing conditions and to formulate the scope of proposed preservation and conservation work.
- 3. Statement of recommended treatment philosophy consistent with the appropriate period of significance and proposed use for the building.
- 4. Statement of recommended treatment, use(s) and interpretation of the property.
- 5. Statement of treatment priorities.

Architectural investigations revealed extensive physical evidence in support of the construction chronology and subsequent upgrades. This evidence is presented in the form of detailed descriptions, annotated photographs and annotated existing-conditions drawings.

#### **ADMINISTRATIVE DATA**

- **RESOURCE:** Theodore Roosevelt Birthplace National Historic Site
- LOCATION: 28 East 20th Street New York, New York

#### VICINITY MAP:



Detailed map of Manhattan, NY in vicinity of Theodore Roosevelt Birthplace National Historic Site as provided by Google Maps, November, 2006. Approximate location of the Theodore Roosevelt Birthplace National Historic Site is indicated in red.

#### SITE PLAN:



#### NATIONAL REGISTER OF HISTORIC PLACES STATUS:

Status: Building Number: Date Listed: Date Entered: Significance: Listed 79002319 October 15, 1966 December 7, 1976 National

#### NATIONAL HISTORIC SITE STATUS:

Date Authorized:

July 25, 1962

#### **PRIOR STUDIES:**

Harrison, Lawrence S., "Relighting of Theodore Roosevelt House" (unpublished), Scarsdale, N.Y., December 1, 1954.

"A Report on the Historic Housekeeping Course, Sponsored by the National Trust for Historic Preservation and the New York State Historical Society: As it applied to the needs aims and need of the Theodore Roosevelt Association", Cooperstown, New York, September 18-24, 1955.

Allen, Arthur C., "Interpretive Prospectus, Theodore Roosevelt Birthplace, National Historical Site, New York" (unpublished). U.S. Department of the Interior National Park Service, 1971.

Mahoney, Robert and John Lancos, Mark Drucker, John Martini, and Louis Venuto, "Fiscal Year 1988 Interpretive Prospectus, Theodore Roosevelt Birthplace National Historical Site", U.S. Department of the Interior National Park Service, 1988. PART I – DEVELOPMENTAL HISTORY

### 1.1 HISTORICAL BACKGROUND AND CONTEXT

The Theodore Roosevelt Birthplace National Historical Site (Theodore Roosevelt Birthplace), as it is currently known, is a reconstruction of the townhouse where Theodore Roosevelt (1858-1919), the 26<sup>th</sup> President of the United States, lived from the time he was born until he was fourteen. The significance of the property is largely due to the Roosevelt family's occupation of the building that once stood on the site. The building is also significant for its architect Theodate Pope Riddle (1867-1946), as well as in the building form itself, being one of the first monumental building reconstructions dedicated to the memory of an American President. The building was given National Register status for two periods of significance, both the 19<sup>th</sup> and 20<sup>th</sup> centuries, thus giving tribute to the chosen period of reconstruction and the period of construction.

#### **Theodore Roosevelt**

Theodore Roosevelt (1858-1919) shaped America not only as a President, but also as a world leader, war hero, conservationist, author, legislator, explorer, rancher, husband and father of six children. His many avid interests and pursuits were a testament to his conscious quest for the "strenuous life," which he advocated for himself and Americans (The Smithsonian Institute, 2004).

Theodore Roosevelt was born on October 27, 1858 to Theodore Roosevelt, Sr. and Martha Bulloch (The Smithsonian Institute, 2004). His father was a prosperous glassware merchant, and was one of the wealthy old Knickerbocker class, whose Dutch ancestors settled Manhattan in the 17th century (The Smithsonian Institute, 2004). Though his family was wealthy, Theodore Roosevelt did not have an easy childhood and struggled with his health. Theodore Roosevelt was asthmatic and frequently sick; his father built a home gym, so that Theodore Roosevelt could strengthen his body.

At age eighteen, Theodore Roosevelt entered Harvard College and excelled in academics and sports, graduating magna cum laude (Haberman, 1972). He was married in 1881 to Alice Hathaway, who died two days after the birth of their daughter Alice in 1884, on the same day of his mother's death (Jeffries, 2005). Theodore Roosevelt grieved and retreated to Medora, North Dakota where he had inherited a cattle ranch, and spent the next two years as a ranch hand (Haberman, 1972). It is likely that he gained his appreciation for nature and hunting in North Dakota, as well as an interest in conservation of land as the nation expanded. He created a legacy of National Parks, National Forests, sanctuaries and monuments (Jeffries, 2005).



Figure 1: Theodore Roosevelt at four years. (Theodore Roosevelt Collection)



**Figure 2**: Theodore Roosevelt as a Harvard Senior. (Jacob A. Riis)

He returned to politics in New York City, after he married his childhood friend Edith Carow in December of 1886 (Freidel and Sidney, 2006). For the next ten years he concentrated on building his political career, and joined President McKinley's administration as Secretary of the Navy in 1897. During the Spanish American War he served as lieutenant colonel of the Rough Rider Regiment, and was given recognition as a war hero for his efforts (Freidel and Sidney, 2006). In 1898 he was elected governor of New York, and rather than run for reelection in 1900, he joined the Republican Party ticket for the presidential race as Vice President to William McKinley (Haberman, 1972). After the assassination of President McKinley in 1901, Theodore Roosevelt became the nation's youngest president; he was reelected in 1904 (Haberman, 1972).

As President, Theodore Roosevelt broadened the scope of executive power to watchdog economic issues, namely influencing anti-trust legislation (Freidel and Sidney, 2006). Theodore Roosevelt also expanded the presence of the United States in world politics, and won the Nobel Peace Prize in 1906 for mediating the Russo-Japanese war



**Figure 3**: Theodore Roosevelt as President of the United States. (Jacob A. Riis)

(Freidel and Sidney, 2006). In addition, he wrote the corollary to the Monroe Doctrine that kept Western European powers out of the Americas, and organized the construction of the Panama Canal (Freidel and Sidney, 2006). He also took initiative to first use the International Court of Arbitration at The Hague in 1902, three years after it was created, and influenced its subsequent use by other world powers (Haberman, 1972).

In 1909, Theodore Roosevelt left the Presidency for a yearlong safari he had planned for himself and his son Kermit. Theodore Roosevelt consulted the Smithsonian Institute and several scientists while planning this safari and scientific exploration (The Smithsonian Institute, 2004). Though he had retired from politics, Theodore Roosevelt decided to run for presidency in 1912 on the Progressive ticket, but was outpolled by Woodrow Wilson. In 1919, he died in his sleep at age sixty. Shortly after his death, a growing number of local and national organizations were established to memorialize his life and work. Two such groups were the Women's Roosevelt Memorial Association and their male counterpart the Roosevelt Memorial Association.

## Women's Roosevelt Memorial Association

The Women's Roosevelt Memorial Association (WRMA) was incorporated by New York State on January 29, 1919. The established mission of this organization was "to commemorate the life

of Theodore Roosevelt by establishing and maintaining a permanent memorial in the City of New York." (WMRA, register) As such, work began to raise awareness and funds to purchase the site of Theodore Roosevelt's Birthplace and develop plans for its reconstruction. According to the by-laws of the Association, the group was managed by a board of directors composed of forty members. The elected executive committee was comprised of a president, five vice presidents, a secretary and a treasurer. The executive committee was responsible for implementing the goals created by the Association. The objectives established by the WRMA to which the Roosevelt House was dedicated are as follows (WRMA, register):

- 1) To rebuild the childhood home of Theodore Roosevelt.
- 2) To establish a national center of Americanism for all with Theodore Roosevelt as the model example.

The first goal was realized in the spring of 1920, when the women's group purchased the properties at 26 and 28 East 20<sup>th</sup> Street. The executive committee of the WMRA chose the architect Theodate Pope Riddle to design and implement the project. The plan was to use half of the site as a museum and the other half to recreate a replica of Roosevelt's childhood home. The WMRA was able to raise \$255,000.00 for the construction of the birthplace and furnishing of the interior. The cornerstone was laid on January 6, 1921, the second anniversary of Roosevelt's death (WRMA, register). The group also made an effort to research and acquire some of the original and period pieces to furnish the site.

In addition to the educational component of the Roosevelt Birthplace, the WMRA fulfilled their other mission goals by creating essay contests, scholarships, and disseminating information through educational plays and exhibits. The Theodore Roosevelt Scholarships allowed students to compete throughout the nation with an annual contest for the best essay on Theodore Roosevelt. The WRMA published a number of publications that often included winning contest essays, upcoming events related to the Theodore Roosevelt Birthplace, and any other pertinent news or information (WMRA, register). Some of the publications



Figure 4: Board members of the WRMA with Eleanor Roosevelt, 1923. (THRB archives)

include: Roosevelt Quarterly published from 1923 to 1939, Roosevelt House Bulletin published three times a year from 1919 to 1949 (last documented issue), Roosevelt House Review published from 1940 to 1949, and Roosevelt House Annual published in 1950.

In July of 1922 the WRMA Board of Directors met to discuss sharing the newly designed space with the Roosevelt Memorial Association. The "Men have offered to turn over to our association their third objective, namely, to perpetuate the ideals of Theodore Roosevelt," (WMRA, register). This entitled the WRMA to have custody of their memorabilia and library collection and undertake the search for additions to the collection. The Men's association also donated

\$150,000 to be used towards the securing of a mortgage and completion of the facility (Hammond, June 28, 1922). This donation led to the subsequent agreement in 1924 for the WMRA to provide rent free space in the Theodore Roosevelt Birthplace to the RMA for nine hundred and ninety nine years. The WRMA owned and operated the Roosevelt Birthplace until 1956 when they merged with the Roosevelt Memorial Association to form the Theodore Roosevelt Association (WMRA, register).

## **Roosevelt Memorial Association**

The Roosevelt Memorial Association (RMA) was created by an Act of Congress on May 31, 1920 by the Roosevelt National Committee, a non-partisan committee formed three days after the death of President Roosevelt to secure a fitting national memorial (TRA, register). The RMA mission was threefold.

- 1) To create a monumental memorial in Washington, DC
- 2) To create a park in the memory of Theodore Roosevelt at Oyster Bay, NY
- 3) "The establishment of an incorporated society for the development and application of the policies and ideals of Theodore Roosevelt for the benefit of the American people," (TRA, register).

In addition to the Theodore Roosevelt Birthplace, the Roosevelt Memorial Association, and later the Theodore Roosevelt Association, established further memorials to the twenty-sixth President. Carrying out one of the RMA's original goals, the Theodore Roosevelt Memorial Park in Oyster Bay, New York, was opened in 1928, and donated to the Town of Oyster Bay in 1942. In 1931 the RMA purchased what was then Analostan Island, an 88-acre piece of wilderness in the Potomac River in Washington, D.C., and gave the site as "Theodore Roosevelt Island" to the federal government. In addition the RMA purchased Sagamore Hill, TR's summer home during his presidency, and dedicated it as a national shrine in 1953 (TRA, register). The first goal was accomplished when the statue of Theodore Roosevelt was erected on Theodore Roosevelt Island in 1967.

The RMA went beyond their mission goals to create awards and educational publications. In 1923 they established the Roosevelt Medal for Distinguished Service for those who serviced the United States in the spirit of Theodore Roosevelt. This award continued until 1969 (TRA, register). The RMA also initiated a project to publish books about Theodore Roosevelt, including eight volumes of Collected Letters of Theodore Roosevelt published between 1951 and 1954. After many years of cooperative effort, the two Roosevelt memorial groups merged in 1956 to form the Theodore Roosevelt Association (TRA).

Today the Theodore Roosevelt Association provides programs and activities ranging from the prestigious Theodore Roosevelt® Police Awards, given in New York, Dallas, Boston, and other cities to police officers who have overcome handicaps and continue to render outstanding service, to the Theodore Roosevelt® Teddy Bear program, which each year gives a Teddy Bear to hospitalized children in New York City during the December holiday season. The TRA also

conducts many historical and educational programs, such as essay and public speaking contests for students, and helps public sites dedicated to TR.

## Theodate Pope Riddle

Theodate Pope Riddle (1867-1946) was born in Cleveland, Ohio to Alfred Atmore Pope and Ada Pope. She was christened Effie Pope in honor of her aunt, and at the age of 19 exchanged it for Theodate, the name of her paternal Quaker grandmother. She attended Mittleberger's school in Cleveland before studying at Miss Porter's School in Farmington, Connecticut between 1886-1888, where she grew attached to the local landscape and its collection of seventeenth and eighteenth century buildings. During the late 19<sup>th</sup> and early 20<sup>th</sup> centuries there was a large colonial revival movement within the northeast United States. It was her exposure to this movement that greatly impacted Theodate Pope Riddle's career path.

The Colonial Revival was a movement that attempted to memorialize the society of pre-Revolutionary America. The revival was not only a movement dedicated to reconstructing the physical fabric of colonial America, but also embodied pre-revolutionary forms of writing, art, music, and social activities, creating the atmosphere of colonial life. The Colonial Revival coincided with the beginning of the Preservation Movement in America and both were fostered by the efforts of wealthy individuals and women's organizations such as the Daughters of the American Revolution, the Colonial Dames of America, and the Mount Vernon Ladies' Association.

At the age of 23, Theodate Pope Riddle settled in Farmington and, without any formal training in architecture, entered into the first of many architectural projects-the recreation of an early eighteenth century building she called the "O'Rourkery." She completed the building shortly thereafter. It was commonplace for revivalists to interpret a historic space based on local memories and disseminated traditions, rather than substantial research. Therefore, Theodate Pope Riddle took liberties in choosing colors and furniture that would accentuate the colonial atmosphere of the O'Rourkery. It was, however, during this first project that she began to communicate her designs and better understand how craftspeople interpreted and realized her drawings.

Her first large-scale design project was Hill-Stead, a country house for her parents, situated on a hilltop within the Farmington landscape. Although Theodate Pope Riddle had the vision for this house, she required the technical assistance of an architecture firm. In 1898 she approached the New York architectural firm of McKim, Mead, & White, requesting assistance from



Figure 5: The O'Rourkery, side view, photograph by Nicholas Simon.



**Figure 6**: The Popes at Hill-stead, photograph by Gertrude Kasebier, c. 1902 (The Hill-Stead Museum)

one of their architects to prepare construction documents based on her design sketches. Although this was a collaborative effort, Theodate Pope Riddle made it clear at the beginning of the project that she would "expect to decide on the more important questions of plan that may arise (in the design process). In other words, it will be a Pope house, instead of a McKim, Mead, and White house," (Riddle, September 17, 1898). The house was completed in 1901, but alterations were made by Theodate Pope Riddle shortly thereafter which changed the style of the house from a late nineteenth century colonial revival country house to a grander Mount Vernon-Style manor house. After her father's death in 1913, her mother moved away leaving Hill-Stead to Theodate Pope Riddle's charge.

Theodate Pope Riddle established her professional practice as an architect in 1905 and opened a small New York City office in 1906. She entered into a number of residential and institutional projects, which she designed and for which she oversaw construction. Three of her most well known institutional projects included the Westover School in Middlebury, CT, The Hopbrook School in Naugatuck, CT, and Avon Old Farm School, in Avon, CT. Each of these projects represented the same Colonial Revival and traditional ideas that had influenced her at "O'Rourkery".

In February 1920 Theodate Pople Riddle was offered the commission to design the reconstruction of Theodore Roosevelt's Birthplace (Riddle, September 17, 1898). The Women's Roosevelt Memorial Association had that year purchased the property of the birthplace which had been demolished in 1916 and replaced with a commercial building. Between 1920 and 1923 she designed, on the original site, a reconstruction of the townhouse at 28 East 20<sup>th</sup> Street (as it had appeared in 1865) and a new adjacent building to serve as a library and museum. The facade of the adjacent building was designed to visually distinguish it from the reconstruction. Theodate Pope Riddle made changes in the plans in 1922 to accommodate an exhibition room for Roosevelt memorabilia, offices, and an auditorium. Originally on the basement level, Theodate Pope Riddle planned a long rectangular, woodpaneled club room with a large fireplace.



**Figure 7**: Avon Old Farms, House of the Headmaster (photograph by Simeon D. Smith)



Figure 8: Theodate Pope Riddle and clients on steps of Roosevelt House (Hill-Stead Museum Archives)

Theodate Pope Riddle and the WRMA utilized all available technology and resources to ensure that the Theodore Roosevelt Birthplace accurately portrayed the construction and interior finishes of the late 19<sup>th</sup> century childhood home of Theodore Roosevelt. She exercised her creative license through the design of the modern 1920s museum building that strove to effectively display the immense collection of Theodore Roosevelt memorabilia and documents. After construction Theodate Pope Riddle still offered her professional assistance to the organization on a pro-bono basis. She served on the board of directors for the Roosevelt house until 1924, when she closed her New York office and dedicated her time to the design and construction of Avon Old Farms School. Theodate Pope Riddle died in 1946.

The building's status on the National Register was finalized in December of 1976. The National Register nomination documents the areas of significance as political and historical, associating the building's importance mainly with Theodore Roosevelt. The specific dates are given in two different ranges, from 1858-1873, the period of reconstruction of the period museum of Theodore Roosevelt's childhood home, and 1901-1909, the period of Roosevelt's presidency. In addition to the building's association with Theodore Roosevelt, Theodate Pope Riddle's design and the physical building form are two more important aspects of the site.

## 1.2 CHRONOLOGY OF DEVELOPMENT AND USE

#### Historical Precedence 1847-1919

The two brownstone structures at No. 32 and 33 East 20<sup>th</sup> Street (the addresses until the year 1866) were constructed between 1847 and 1848 by contractor, James Foster. The original four storey townhouse and it sister building were purchased in 1849 by Cornelius Van Schaak Roosevelt, Theodore Roosevelt's paternal Grandfather. Although the survey maps of 1852 show them owned by Sialas Weir Roosevelt and James A. Roosevelt, two of Cornelius V. S. Roosevelt sons, they were ultimately given to his two other sons, Theodore Sr. and Robert, as wedding gifts.

Theodore Roosevelt's family lived at No. 32 East 20<sup>th</sup> Street until 1872, when they moved to 6 West 57<sup>th</sup> Street. During their ownership the Roosevelts made a variety of changes to the building including redecorating the interior and adding a fourth floor with a slate mansard roof and dormers. It was in this house that Theodore Roosevelt was born and spent the majority of his formidable years.

After the Roosevelts sold the property the building underwent a series of alterations to make it more accommodating for commercial use (Figure 9). A three story bay storefront was added and the fourth floor mansard roof was changed to include more windows. The building at 26 E. 20th Street which had belonged to Theodore Roosevelt's Uncle Robert was also altered during this period to facilitate commercial use. The building at 28 E. 20<sup>th</sup> was eventually demolished in 1916 to make way for a more contemporary commercial building (photo). After Theodore Roosevelt's death in 1919 the Women's Roosevelt Memorial Association was formed and purchased both no. 26 and No. 28 E. 20<sup>th</sup> Street. The existing commercial building and townhouse were demolished in 1919 to make way for the Theodore Roosevelt Birthplace (formerly referred to as Roosevelt House) project.



Figure 9: 28 East 20th Street prior to demolition in 1916. (THRB Archives)



**Figure 10:** Commercial building constructed at 28 East 20th Street, photo circa 1918. (THRB Archives)



Figure 11 & 12: Copy of insurance maps showing the evolution of the block on 20<sup>th</sup> street east of Broadway between1849-1879. (NPS, 1962)



Figure 13 & 14: Copy of insurance maps showing the evolution of the block on 20<sup>th</sup> street east of Broadway between1895-1812. (NPS, 1962)

## **Design and Construction**, 1920-1923

In October of 1919 Theodate Pope Riddle received the commission to design the reconstruction of Theodore Roosevelt Birthplace that included a period house museum and an adjacent museum and library. Her first set of drawings and sketches was submitted to the Executive Committee of the WRMA on January 27 (Appendix D). She executed her work via her New York City office. Two of her staff architects working on this project included A. E. Ives and Leland Hubell Lyon. Theodate Pope Riddle instructed her staff architects to survey the building at 26 E 20th street. This building had belonged to Robert Roosevelt, Theodore Roosevelt's uncle, and was built at the same time as the original Roosevelt house at No. 28. Although this building had been altered to accommodate commercial use, it was helpful in gaining an understanding of the size and scale of interior spaces. Because No. 26 was a mirror image of No. 28, the floor plan was then flipped and used as a baseline for proportioning and designing the period rooms.

The design goals of the project were twofold: 1) to create period rooms that would most accurately represent the atmosphere in which Theodore Roosevelt spent his early formative years, and 2) to create a center that would serve to interpret his life's work and assist in perpetuating his ideals of service.

To create a physical distinction between these two goals and give more emphasis to the reconstruction, Theodate designed the facility to appear from the exterior as two separate buildings. The portion of the building to serve as museum and library was designed to be more monolithic in scale with the façade recessed behind the plane of the reconstructed brownstone. In this more modern portion the rooms were to be outfitted with built-in display cases. In the reconstructed house the period rooms were to be adorned with finishes and furniture of the Victorian style. She also designed more utilitarian spaces including a kitchen, caretaker's quarters, and office space for the WMRA, an auditorium for lectures, and a roof deck for events. She had created an impressive amount of space hidden behind the adjacent façades.

In May of 1920, the WRMA voted to begin receiving proposals for construction. Tide-Water Construction Company won the contract for the project in July of that same year, and construction of the facility began in late winter of 1921. Purchase orders began being approved by the WRMA, and by July of 1921 the footings of the concrete foundation walls, basement



**Figure 15:** Schematic Drawing of Second Floor Plan, Theodate Pope Riddle, 1920. (THRB Archives)

steelwork and brickwork had been completed (Appendix G). "Due to the conditions of the soil and of the foundation walls of the adjoining buildings, it was necessary to carry the foundation walls a little lower than was at first contemplated," (Lyon, July 21, 1921) despite certain changes during the initial building phases, the architect reported "good progress and excellent workmanship."

Authorization was given to the Building Committee to initially spend up to \$75,000. However, by October of 1921 they had spent \$93,574. The superstructure had been completed and the WRMA was at an impasse in regards to releasing more funds for completing the building.



Figure 16: Dedication of Roosevelt House and laying of cornerstone, January 6, 1921. (THRB Archives)

The work at Roosevelt House has now reached such a point that it will soon be necessary to take another step toward the completion, or to close down the work. We (Tide-Water Construction) have carried out the first instructions by the Women's Roosevelt Memorial Association (and) in order to make further progress the next step should be to install the piping systems. We would, therefore recommend the Association authorize the work to proceed. (Napier, October 10, 1921)

By December of 1921 the WRMA had released the necessary funds and spent an additional \$16,640 to pay for the sub-contractors, contractor's payroll, plus 7½% interest. It was at this time that Tide-Water estimated it would take an additional \$120,000 to complete the project, excluding painting. By July 1923 the cost of the project, including the land, had reached \$312,611.63 with a final estimated cost of \$473,000.00 (Riddle, July 3, 1923).

Certain alterations were required during the two years of construction. In June of 1922, the men's Roosevelt Memorial Association donated \$150,000 to assist with the construction costs and relinquished their collection of memorabilia to the WRMA. In exchange the RMA would be allowed to share space in the new facility. The design of the museum room was altered slightly after this exchange and the cases were redesigned to "afford considerable space for books and memorabilia....and yet does not change the shape or spoil the effect of the room," (Lyon, July 21, 1922). By early October 1923 the building structure with all interior



**Figure 17:** Roosevelt House under construction, circa 1922. (THRB Archives)

woodwork, plaster and fixtures had been completed. It was at this time that the wallpaper, carpets and furniture were being installed throughout the house.

The design and decoration of Theodore Roosevelt Birthplace was a daunting task and took on new dimensions as the project progressed. Many decisions were involved in choosing the most appropriate finishes throughout the house including paint color, carpet and wallpaper design. All aspects of decorating and furnishing the were performed by the WRMA and the architect. A. E. Ives from the New York Office of Theodate Pope Riddle, visited Valentine's Manuel, a New York City retail shop, to look at several prints of Victorian Interiors to review and assist in interpreting the period rooms. (Office of Theodate Pope Riddle,



Figure 18: Parlor, circa 1924. (THRB Archives)

Ives, June 29, 1923) Theodore Roosevelt's sisters, Mrs. William Sheffield Cowles and Mrs. Douglas Robinson, helped in the interpretation by recounting their memories of their childhood home. They were interviewed in 1920 and recorded some of these interviews courtesy of the Victor Talking Machine Company in 1922.

Mrs. Cowles remembers the gas chandelier (in the parlor) decorated with a great number of cut glass prisms. (She) remembers the Library as a warm, red, cheerful room in the evening when the fire was lighted, and the gas burning, though it was dark in the daytime. The four children would sit on the long sofa with their father when he read to them and Theodore particularly loved the little tassel chair. The nursery was seldom used in the daytime, as the children played on the sunny porch which opened out of it. (She) remembers how she and Corinne would climb up on the Wisteria vine from the yard below. There were parallel bars, dumb bells and other gymnastic appurtenances here. (Lambert, March 19, 1920)

In order to make an accurate representation of the period, research was conducted both on the Roosevelts' original interiors and typical interiors démodé. In a letter to Mrs. Lambert of the WMRA, A. E. Ives enclosed a copy of a description of the house on 20th Street, in the words of Mr. Roosevelt, for his autobiography:

The front room, the parlor, seemed to us children to be a room of much splendor, but was open for use only on Sunday evening or on rare occasions when there were parties. The ornaments of that parlor I remember now, including the gas chandelier decorated with a great quantity of cut glass prisms. My drawing room strongly resembles the warehouse of an ideal cabinet maker. Every whim of table, every caprice of chair and sofa is satisfied in these rooms. There are curtains like rainbows and carpets as if the curtains had dripped all over the floor. There are heavy cabinets of walnut, such as belong in the heavy rooms of old palaces, set against my last French patter of wall paper. There are lofty chairs like the throne of the Archbishop in Gothic Cathedral, standing by the side of elaborately gilded frames of mirrors. Marble statues of Venus and Apollo support my mantels upon which Louis the XIV clocks ring the hours. In all possible places there are statues, statuettes, vases, plates, teacups, and liquor cases. The wood work, when white, is elaborated with moresco carving, when oak and walnut, it is heavily moulded. The contrasts are rather sudden. (A. E. Ives, July 25, 1923, with enclosure excerpt from Theodore Roosevelt, Potiphar Papers)

Although it was decided that the majority of the painted elements in the house were to be white, it was very important to the architect that the most appropriate shade was chosen. One such discussion involved the shade of white paint to be used in the Parlor.

We spoke about the color of the paint for the parlor, and after inquiring a great deal, found that it was a very cold white with just a bit of lavender or blue in it and was a flat finish. This matter is still being discussed. (Office of Theodate Pope Riddle, Ives, July 24, 1923)

Another challenge was choosing appropriate carpets for the period rooms. The carpet was ordered by the Architect from W. & J. Sloane, NYC, in March of 1923. A Wilton Carpet was chosen for the library and a special pattern Karnak Wilton Carpet for the Parlor. Original carpet for the two upstairs bedrooms, including passage, and Dining Room were made by Torrey, Bright & Capen Co., Boston and was an English Brussels pattern. The carpet chosen for the Dining Room was an English Wilton pattern.

The wallpapers within the period rooms were specifically hand picked and designed for these spaces based on etchings and discontinued patterns. All wallpaper was ordered by the Architect and Chairman of Building Committee from H. H. Birge & Sons Co. The papers were provided free of charge to the WRMA and in return the Birge Company was given the exclusive privilege and "right to produce and offer them, through the usual channels, to the many friends and admirers of Theodore Roosevelt throughout the country." (April 14, 1923)

The majority of the period furniture and built-in fixtures were received as donations to the Roosevelt House by patriotic citizens and members of the Roosevelt Family. Toward the completion of the building in



Figure 19: Library , circa 1940. (THRB Archives)



Figure 20: Bedroom, circa 1924. (THRB Archives)

early 1923, donations of period furniture and objects were being received on a fairly regular basis. It was at this point that the decoration and furnishing of the building became contentious between the WTRA and the architect. The building and decorating committee was having difficulty laying out a concise plan with this influx of material. Feeling that her design vision was being compromised by this confusion, Theodate Pope Riddle asserted her design authority and addressed the building committee.

In reference to the decorations of Roosevelt House, I beg to advise that I agreed to pass on all selections of furniture and materials for the decoration of Roosevelt House, and to take full and

final responsibility for the results, if my suggestions were carried out, and if all items were presented to me to be passed upon, before going into the building. It is my understanding that, after talking over various details with you and your committee, my judgment of same will be final.

This arrangement will enable you to put all gifts of furniture and decorations up to me for acceptance or rejection and will thus assure you of a harmonious and correct interior...It would give me great pleasure to give my services without charge in the capacity of furnisher and decorator of Roosevelt House. (Pope Riddle, February 8, 1923)

Discussions of this sort took place well after Theodore Roosevelt Birthplace opened its doors for operation. When asked by Mrs. Ellen C. Lambert if she would approve additional donations of furniture Theodate Pope Riddle responded:

I would not dream of accepting the sofa, no matter how fine it is, because the parlor is furnished now and we certainly need no other lounge in the library. This is the kind of thing that will come up constantly and should not trouble you, because you will have to be very firm in rejecting offers, or we shall have a "Chamber of Horrors" in those restored rooms. Because, as I said before, every family in the country almost has some furniture of that period and it looks detestable in a modern house, and thousands of people would like to "acquire merit" by giving their cast-off Victorian furniture to Roosevelt House and be publicly credited with that fact. This is what we must stand out against." (Riddle, April 21, 1924)

Theodore Roosevelt Birthplace was opened to the public on October 27, 1923, and became the headquarters for both the RMA and Woman's RMA. There the associations maintained a house museum with period rooms, extensive exhibits of artifacts relating to Theodore Roosevelt's life, and a research library and archives. It has been mentioned that Roosevelt himself would have approved of this memorial "As you know, I am greatly interested in the project to buy and preserve as a memorial the house in Rome in which Keats died, a project which was first called to my attention by John Hay, who felt the liveliest sympathy for it. The associations of the building are such as to make it peculiarly fitting that it should be purchased, and that therein should be established a permanent memorial in honor of Keats and Shelly. I am glad that the movement to establish this memorial, both in the form of a memorial library and in the form of providing for the perpetual care of the graves of the poets, should have been set on foot by our countrymen." (Roosevelt, 1906)



**Figure 21:** Theodore Roosevelt Birthplace open to public October, 1923. (THRB Archives)

#### **Theodore Roosevelt Birthplace, 1923-1962**

Between 1923 and 1962 the Theodore Roosevelt Birthplace was owned and operated by the WRMA and later by the TRA after the merger of the WRMA and RMA in 1956. During this period Theodore Roosevelt Birthplace was referred to as Roosevelt House.

Operating interventions were performed on a regular basis to both the exterior and interior of the facility during the first three decades after construction, to keep up with general wear and tear. The elevator, being one of the most frequently used systems in the house, received regular maintenance with new cables installed every two years. Door knobs were beginning to show wear in the early 1930's and were re-nickeled. The carpet had been worn through where the tacks were holding it down. Brass rods for two flights of stairs were installed to hold the carpet runners. Similarly in February 1931 the central bronze handrail was installed on the 3rd to 4th floor staircase for the "accommodation of the old people" and extended to the last three steps at the 3rd floor. In 1940, the cork tile floors in the library, workroom, and the hall adjoining the workroom were repaired and refinished. Work performed on the roof entailed re-cementing the deck, waterproofing the casement, and fabrication and installation of new copper covers. One of the more note worthy additions to the front facade came in 1924 with the donation of the wooden flag staff. The staff and its perpetual maintenance were given to the site by the Auxiliary, a group of United Spanish War Veterans.



**Figure 22:** Dedication of flagstaff, 1924. (THRB Archives)

Periodic upgrades of building systems were also performed to meet the needs of visitors, staff, and compliance with updated building code. Safety hooks were attached on the north elevation in 1937 to facilitate window cleaning and to comply with state laws. In an attempt to lower annual insurance costs and thwart attempts of theft, the WRMA had Holmes Protective Co. installed a Time Clock and security system, in 1934.

The most costly operational expenses during this period tended to be electric bulbs and winter coal for the boiler. In 1933 the iron boiler which fed the Peerless Water Radiators was reportedly leaking, and was replaced with a copper boiler. The original hot water heater was subsequently replaced in 1943. Heating and cooling the facility seems to have been an issue since the site opened for operation. In June of 1931, Westinghouse Electric Fans were installed in the auditorium to keep the air circulating and provide some solace from the summer heat.

One of the larger upgrades to the facility occurred in December of 1930 when the New York Edison Company changed the electrical system from alternating current (AC) to direct current (DC). The whole building was upgraded except in locations where machinery required AC such as the dumbwaiter, elevator, vacuum cleaner, the pump in the cellar, and auditorium where they operated the "motion picture machine" and exhaust fan (Lambert, December 12, 1930). This work was paid for by the New York Edison Company in association with their comprehensive plan to upgrade New York City buildings to accommodate more up-to-date methods of transmission and distribution of electricity.

Two major re-lighting campaigns took place during this period, the first of which occurred in 1936. The WRMA sought consultation from the New York Edison Company to determine if the interior lighting was sufficient enough for the spaces and their designed use. "Light meter tests indicate that the present general lighting, as well as the illumination desks, is inadequate for office work and is poorly distributed throughout the office...It is an established fact that

inadequate illumination has an injurious affect on the working personnel by causing eye strain and nervous fatigue, thus lowering their efficiency." The Vice President of the New York Edison Co. also made recommendations for new fixtures and supplied information on brands and types of indirect lighting that would provide more light. One such fixture was the "Magnalux" light (catalogue no. 788617) manufactured by Westinghouse or similar type of lighting. Although a prompt unsigned response from the Director of the WMRA confirms the acceptance of the recommended lighting and replacement of necessary wiring, it is still unclear where these new fixtures were installed.



Figure 23: Library, Circa 1928. (THRB Archives)

Although the majority of the rooms in the building remained as they did after construction, a few alterations were made. There is evidence that the superintendent's apartment was redecorated in 1928 to make it more accommodating for the occupant. It also appears that four of the built-in bookcases in the library, which appear in the construction drawings, were removed. One of these bookcases was removed prior to opening, as the physical evidence suggests that the alteration was performed by the original installer. The other "three hunky bookcases" were removed in the summer of 1955. The space was being used by Mr. Hagedorn (RMA) and after their removal it was remarked, "The room is a howling success, wonderful for a party!" (See section 1.5 Condition Assessment).

Surface finishes throughout the house were re-applied on a regular basis and on the occasion when damage occurred. One such maintenance task was painting of the woodwork and the re-application of calcimine to ceilings. In 1940 the walls in the first floor hall were re-calcimined and re-papered with supplies left over from construction. In the winter of 1941, a water pipe broke and flooded "one side of the house." It is unclear what the extent was of the damage caused by the flooding, or whether it was isolated to a particular floor; however during the summer of 1941 the house, "from top to bottom, was renovated". All of the woodwork and plaster in the period rooms and in the basement were repainted. Three of the period rooms were re-papered, and all the ceilings were calcimined. It was during this renovation that the wallpaper, left over from construction, was exhausted. In 1949 some of the electric wires in the basement needed to be replaced after they were found to have been damaged as a result of the flooding. (HCR, Spring 1949)

#### 1954-1955 Renovation

Theodore Roosevelt Birthplace was closed in the summer of 1955 for an extensive renovation that began the previous year (Miss Dorothy Mathews, September 6, 1955). The majority of this work involved upgrading interior lighting conditions and repairing and refreshing interior finishes.

The second re-lighting campaign was the first step in the 1954-1955 renovation. WMRA hired The Laurence S. Harrison, Consulting Engineer, to analyze the current lighting and design a more effective lighting system for the site. The written report was accompanied by detailed drawings of the lighting plan for each floor. His recommendations included new ceiling lights for museum display cases that would be more stable and aid in conservation of the museum collection. He also recommended that the WMRA look into proper conservation techniques for the care of exhibit specimens. He found that the circuit wiring for the



Figure 24: Fluorescent lights installed during the 1950's relighting campaign. (THRB Archives)

building was not up to code, and suggested branch circuit wiring. When the electrical system was changed from DC to AC, the feeders were not correctly altered and the new plan would include fixing this problem prior to installation of new fixtures. It was at this time that fluorescent and flood lights, along with dimmer switches, were introduced to the site. To enhance the interpretative aspect of the museum rooms, flood lights were installed outside and above the windows to simulate sunlight. Further alterations to lighting were performed in 1956 by Albin Gustafson Company Electrical Contractors, who installed flood light fixtures outside of the board room on the fourth floor.

Although the renovation was successful, it did not progress without problems. Tropical storm Diane, the costliest hurricane in United States history until it was surpassed by Hurricane Betsy in 1965, made its way through the northeast in mid-August 1955 causing flooding throughout Manhattan and at the Roosevelt House. The storm caused telephone lines to fail and hampered communication between the site administrators and Mrs. Sherman Haight, the Executive Director of the WRMA. In the absence of the executive director's input, prompt decisions needed to be made. Extensive plaster repairs were performed before repainting the many ceilings and walls. The trim colors planned in the period rooms were changed to off-white as the issue arose that wallpaper of the early Victorian period was usually not accompanied by colored trim. With the new lighting campaign finished, the appearance of the wallpaper in the Parlor was not up to par. The WRMA investigated having the paper cleaned but it was determined that it was "too far gone" and needed to be replaced. (August 26, 1955)

The majority of the finish work was performed by O'Connell Co., Builders. They painted most of the interior spaces, removed current wall paper and prepared walls for re-hanging. As the original source of wallpaper was exhausted it became increasingly difficult to locate a source for the restoration efforts. Miss Dorothy Mathews, Executive Secretary of the WRMA, contacted contemporary wallpaper manufacturers to determine if the original wallpaper was still in production. Representatives of the The Birge Company, of Buffalo, NY, indicated that these original patterns may have been hand printed from woodblocks and were not available at the present time. However The Birge Company thought that some papers might still be in circulation, and it is documented that they eventually reproduced 40 rolls of the Colonial Pope Pattern for the hallway. An advertising article by M. H. Birge & Sons Co. from an unknown year indicates that the designs for the nursery, front bedroom and library were reproduced for the "restoration", along with special colorings of the patterns of the original wallpapers present in historic photographs and those that currently hang in the house. The cost of the total renovation was approximately \$28,269.00.

## **Theodore Roosevelt Birthplace, 1962-Present**

In 1962 National Park Service took over ownership and operational responsibilities of Theodore Roosevelt Birthplace. The site received National Historic Site status on July 26, 1962 and was renamed Theodore Roosevelt Birthplace National Historical Site. The site was listed on the National Register of Historic Places in October 1966 as a site of national significance; however the nomination form was not submitted until December of 1976. The documentation of changes made to the building during this period focuses on the interpretation of Theodore Roosevelt Birthplace, rather than the material conservation and preservation of the architecture and interiors.

## 1963 Master Plan and Drawings

After taking control of the site in 1963, National Park Service completed a Master Plan with a set of as-built drawings. It appears that very few of the proposed changes included in the Master Plan were initiated. The interior spaces are generally organized the same as they were in 1923; however minor changes did occur in a few locations. For instance, work spaces originally dedicated for use of the WRMA and RMA, including the file room and vault on the fifth floor, began being used for collection storage. Bathrooms on the fifth floor lobby were renovated resulting in replacement of older fixtures such as toilets and sinks and installation of new wall tile.

## 1971 Interpretive Plan

In 1971 a report was produced which focused on interpretation and proposed exhibition changes. The report critiqued the current interpretive program and presented a series of recommendations that, if implemented, would aid in communicating the themes of Theodore Roosevelt's childhood life.

One such recommendation was the need to more closely examine the neighborhood conditions through the exercise of another master plan study. The 1963 Master Plan was referenced, however, "this Master Plan did not concern itself greatly with anything exterior of the building,"

(National Park Service, 1971). The immediate environment was a concern for the National Park Service, as the neighborhood had become increasingly commercial since the construction of the facility and there was insufficient parking for visitors. It was proposed that the area of influence be expanded to the entire block of East 20th Street, and to make it visually apparent to visitors that the structure was once two homes which belonged to Theodore Roosevelt, Sr. and Theodore Roosevelt's uncle Robert Roosevelt. Another suggestion was to create a neighborhood gymnasium for local children dedicated to Theodore Roosevelt. Physical improvements were recommended such as creation of a No-Parking Zone in front the building, replacement of the concrete sidewalk, and installation of curbside tree planting throughout the block.

The report proposed changes to several rooms and re-organization of interpretive elements. It was noted that the display cases and exhibits were originally designed for adults, and that the topics were too broad for younger visitors to absorb. National Park Service recommended physical changes to interior spaces which would organize the museum collection and facilitate exhibits geared toward children. In order to communicate a more simplistic interpretation of the site, National Park Service proposed to change the current main exhibit collection and create child-friendly display cases. It was also recommended that the number of exhibit specimens be reduced so that a more direct connection could be made with Theodore Roosevelt's child and contemporary adult lives. Suggested methods of improving interpretation included adding a triggered short continuous audio-visual program in the "Tea Room". This renovation was given the highest priority of all the proposed changes.

This interpretive plan, if executed, would have involved the removal of the central exhibit island from the ground level museum and reinstallation of these fixtures in the first floor museum. To develop child-friendly displays the wall cases in the ground level Museum would have been renovated utilizing the lower sections. National Park Service may have decided not to perform this particular alteration based on comments in the 1963 Master Plan which noted that the display cases are significant as they are of the period and match the wall paneling. "The remaining exhibit cases shall be rehabilitated to meet National Park Service operational standards, but their basic forms should be retained in consideration of the architectural integrity of the various interiors," (National Park Service, 1963).

Additional suggestions were made for improving interpretation in other areas of the facility. One idea included turning one of the third floor work spaces, then used for New York City group staff, into an exhibition room using display cases taken from the lower level museum. National Park Service recognized that the auditorium had potential for providing an audio visual component to the site; however this would have required hiring an audiovisual specialist, installing a new projector, and upgrading the sound system. Yet another suggestion, low on the list of priorities, was the implementation of a self-guided tour to keep up with increasing visitation and potential reduction in personnel.

Although it appears that few of the suggestions presented in this report were realized, it is at this time that some interior and exterior improvements were made. The information and sales area was "modified to better display the available publications," (National Park Service, 1971). The "attractive browsing rack (was) installed adjacent to the existing counter to invite people to pick up, leaf through, and perchance purchase" publications (National Park Service, 1971). During the period after this report, the tree plantings were improved in front of the building. It also appears that the exterior window frames and shutters, originally black, were painted

beige/brown. Similarly, the exterior color of the front door was changed from black to "Essex" dark green. Exhibition changes implemented as a result of this report also include a portable audiovisual projection booth in the auditorium, a self-guided tour in the lower museum, and a political cartoon gallery in the main entry hallway.

## 1988 Interpretive Plan

In 1988 another interpretive prospectus was issued by National Park Service. The general condition of the neighborhood improved during the 1980s and included the addition of an "off Broadway" theatre and renovations of several historic buildings. General improvements recommended for the East 20th Street block were implemented and "are still in evidence today". Prior to the publication of this report (1984) National Park Service signed a cooperative agreement with the TRA to aid in funding, promote National Park Service programs, and to "improve the surrounding area and make the public aware of the Birthplace and other historical and cultural resources nearby," (National Park Service, 1988).

This report provided an analysis of the interpretive issues at Theodore Roosevelt Birthplace as well as recommendations for expanding the interpretation. One suggestion included expanding the interpretation of the site to include areas of interest other than Theodore Roosevelt's life. It was hoped that more information about the building, the establishment of the museum, and Victorian Society would be incorporated into the program.

Prior to this report, climate controls were installed in the Lower Museum and lion's room (Upper Museum). Environmental monitoring in the period rooms and exhibit cases was being conducted by curatorial and interpretive staff. National Park Service "extensively renovated these areas and returned them to their original 1923 look, which is how they are being maintained today," (National Park Service, 1988). There were no additional preservation issues or recommendations for the period rooms at that time. Areas of concern in other areas of the facility included conserving the animal skins and heads in the lion's room and adding captions to the political cartoon gallery. The animal skin conservation was a topic being researched by site curators at that time.

General priority recommendations included marketing and researching early site history. The annual "Teddy Bear Campaign" had been implemented in 1971, after the report, and was noted as a successful marketing program. The report also points out the need for a more comprehensive administrative history, including the building of the site and early history under the WRMA, and adding "Victorian New York Society" to the exhibit topics (National Park Service, 1971). Another recommendation was to make the museum more ADA compliant. At that time the audio visual material did not have captions for the hearing impaired, and there was not a recorded tour for the sight impaired. The only noted publications available to visitors at that time included "Following Teddy's Footsteps" a self-guided tour of the neighborhood created in 1983 for Theodore Roosevelt's 125th birthday, and National Park Service's site brochure.

## Exterior Masonry Stabilization and Repair 2006

The written final report for the work conducted during this restoration was prepared by the Architectural Preservation Division of National Park Service. They were responsible for creating the specifications and selected the contractor to perform all exterior conservation work.

The proposed work included a general condition survey, selective demolition, brownstone masonry stabilization and repair, selective raking and re-pointing of deteriorated brownstone mortar joints, masonry cleaning, and installation of flashing and sheet metal. Puente Construction Enterprises, Inc.'s bid of \$248,000 was selected and the company was awarded the contract. "The project objective was to stabilize the façade, improve its water-shedding capabilities," (Puente, June 2006). The façade consists of a sandstone veneer and blocks of the same stone comprising the cornice and trim elements. In November 2004 a piece of cornice fell to the ground, a subsequent inspection of the façade revealed numerous unstable areas. Stabilization and repair included some of the following: retooling, grouting and pinning, and loss compensation using dutchmen, cast stone, or patching compounds," (Puente, June 2006). Specifications identified itemized tasks and quantities A - O; Puente revised estimated quantities for each task and added task letters O and P after their survey and inspection of the exterior:

TASK	DESCRIPTION
Α	Epoxy injection repair of cracks (estimated quantity: 6 lf)
В	Repair of stone drip edge profiles (estimated quantity: 0 lf/unit stone )
С	Restoration of stone moldings and profiles (estimated quantity: 111 lf/unit stone)
D	Honing of stone surfaces (estimated quantity: 135 sf)
E	Patching of stone (estimated quantity: 36 cu. ft.)
F	Grout injection repair of stone units (estimated quantity: 48 stone units)
G	Treatment of metal cramp stone anchors (estimated quantity: 2 locations)
Η	Removal of existing anchors (estimated quantity: 11 locations)
Ι	Fabrication and installation of replacement face stone (estimated quantity: 0 cu. ft.)
J	Dutchman repair of stone (estimated quantity: 1 cu. ft.)
K	Restoration of replacement brownstone building elements (with patching material): window/door jamb/molding (estimated quantity: 55 lf)
L	Fabrication and installation of replacement brownstone building elements: window sill unit (estimated quantity: 0 units)
М	Raking and pointing of brownstone mortar joints (estimated quantity: 1, 000 lf)
N	Rake out existing brick reglet mortar joint to allow for new metal counter- flashing installation & re-point reglet joint after counter-flashing installation is complete (estimated quantity: 60lf)
0	Rake and patch non-structural cracks and fissures (quantity: 30 lf)
Р	Remove roofing asphalt at parapet and surrounding stones (quantity: 100 sq. ft.)

Repair and cleaning were also recorded during the conservation work. Puente chose Jahn M-70 as the patching mortar for the brownstone and for non-structural cracks and fissure repairs. Jahn M-70 is a pre-pigmented cementitious repair mortar formulated to match the color and texture of the brownstone. Puente also specified Jahn M-30 #32 Micro Injection Adhesive for Brick and Soft Stone, a premixed cementitious injection grout, for structural crack repairs. Asphalt removal was an additional task not intended by National Park Service. Puente used a handheld electrical heating gun to soften the roofing asphalt and then remove it with a putty knife; residual asphalt was removed with mineral spirits (or a petroleum distillate solvent of equal quality) and an inert absorbent poultice media.

Most materials were not changed from the original National Park Service specifications. During raking and repointing, the brownstone pointing mortar formula in National Park Service specifications was:



**Figure 25:** Jahn mortar patches on the entrance brownstone stairs, JMI, January 2007.

SPECIFIED POINTING MORTAR
Cement (Type N): 1 part by volume, Type I Portland, white or grey to
Lime: 1-1/4 parts by volume, hydrated, type S to
Sand: 7 to 9 parts by volume.
Water: As required to achieve a workable mix.
Dry pigment: If needed, add small amount to dry mortar mix in such
proportion as determined to achieve the desired color match, not to exceed
10% weight of binder. Mix thoroughly to disperse pigment prior to
addition of water.

The granite pointing mortar was a similar ratio, but used Type S cement, and decreased sand to 4 - 5 parts by volume. Specified epoxy adhesives included Akepox A-283 and Akepox Transparent Flowing both from Akemi Plastics, Inc. Non-oily clay was chosen as an example of a non-staining material for the sealer. Stainless steel threaded anchors were specified as AISI Type 304 with 13/16 inch diameter, of necessary length, and non-staining lead, stainless steel or plastic shims were specified to set stones. Triton X-100 biodegradable nonionic surfactant detergent manufactured by Rohm & Hass was specified along with soft-fibered natural bristle masonry brushes for the water cleaning.

An additional contract modification was added to the Scope of Work on June 19, 2006 (revised August 25, 2006). The additional work included asbestos abatement and removal, including safe disposal. Asbestos was identified in five exterior locations including: asphalt-coated metal flashing and counter flashing, asphalt-coated built-in metal gutter system, asphalt coating in areas of brownstone parapet walls, asbestos-containing asphalt on brownstone adjacent to metal roofing, and asbestos-containing asphalt coating on existing flat seam metal roofing at dormers.

The contract modification also added roof repairs to the scope of work. Roof repairs included replacing the parapet coping copper flashing in kind, raking and re-installing sealant at counter

flashing reglet joints, installing fluid-applied membrane roofing (ARS-2, M25XT reinforced membrane system by Acrymax technologies) over the existing asphalt coated metal roofing. An additional coating of Acrymax "AF-127" Asphalt and Transite Sealer was also to be applied. On the mansard roof area, the additional scope called for replacement in kind of the slate shingles, and in kind new metal roofing and flashings.

All masonry stabilization and repairs were completed in January of 2007.

## **Current Condition and Use**

The building is still used for its originally intended purpose, and has experienced minimal modifications in use and appearance with the change of ownership from the TRA to the National Park Service in 1962. The period museum rooms appear very much the same as they did when the museum was opened in 1923. There has been an active effort to keep the same wallpapers and color scheme over time, evidenced by the documented correspondence during the 1954-1955 renovation. The museum rooms also appear as they did historically, but are not considered to be as successful as the period museum. The tour has changed, and the period museum rooms are the only part of the tour that is still guided. The tour no longer ends with a video shown in the auditorium and the visitor experiences a self-guided tour of the collection museum. The auditorium is still used for scheduled lectures, but is no longer an integral part of the visitor's experience. The library is another space that has more limited access. Presently, it is only used by National Park Service employees and scheduled visitors with granted permission. The fourth floor office space is still used for office space, though it is occupied by National Park Service, as they are now the stewards of the site. The TRA does not have as much of a social presence or relationship with the site. The apartment designed for a caretaker has also changed to service National Park Service employees. Various bathrooms appear to no longer be functioning, particularly in room 111 and behind the auditorium. Various spaces that were once used for administration have changed to service National Park Service as storage space, notably rooms 407 through 410.

Recent work has been completed on the building's exterior façade and roof, which have been stabilized and treated. During the room-to-room condition survey (see section 1.5 – Condition Assessment), there were many areas documented with damaged finishes. Much of the noted deterioration is likely caused by problems with moisture and water ingress and thermal movement in materials. The most notable problem is the water and humidity accumulation from the current HVAC system in room 010 in the basement. There are also significant areas of deteriorated finishes around the perimeter of skylights, indicating that they are not water tight. Areas of previous repairs indicate that water ingress has also been a problem in the past. Thermal movement is likely the cause of the numerous noted cracks and splitting in many of the wood panels. General signs of wear are noted on various surfaces, such as the wallpaper and nickel-plated hardware.

New plans are being designed to improve HVAC operations for the museum and its collections. NPS hired the firm Leo A. Daly to rehabilitate the HVAC system and protect the museum collection. The firm completed a Predesign Document in 2006. In addition to making mechanical and electrical updates, the proposal entails designing a more accessible rear entrance and designing a fire protection system. During an initial assessment by Leo A. Daly, the environment monitors recorded that the interior temperatures can range as much as 40% in one

day, and 24-94% annually (Leo A. Daly, 2006). The uncomfortable range in temperatures is due in part to the hot water heating system that does not have any temperature controls (Leo A. Daly, 2006). In addition, the only cooling system is through window units, "While the site visit for this report occurred in November, the staff stated that visitors will cut their tours and staff will be sent home because the space conditions are unbearable," (Leo A. Daly, 2006). Recently the HVAC system was completely shut off because of a break in the service between the building and city lines.

Leo A. Daly also found that the existing electrical system is original to the 1923 construction and is an ongoing fire hazard, and that the building is not compliant with life safety codes, as it lacks sufficient exit routes and accessible locations, and a fire protection sprinkler system (Leo A. Daly, 2006). Leo A. Daly's proposal for modifications to the HVAC system total \$1.85 million in FY 2009 funding and the estimate to correct current code deficiencies is \$4.21 million in FY 2009 funding (Leo A. Daly, 2006).

In addition to the investigation and proposal by Leo A. Daly, there is also a hazardous materials (HAZMAT) survey for asbestos-containing materials, lead-based paint, radon and universal wastes was conducted by Environmental Planning Management, Inc., a subcontractor to HDR Engineering, Inc., under contract to National Park Service.

## **1.3 PHYSICAL DESCRIPTION**

The property known as Theodore Roosevelt Birthplace National Historical Site is located at 28 East 20<sup>th</sup> Street, in New York County, New York. The lot commences at a point 200.3' east of Broadway and measures 92' x 50'. The building complex is located on the south side of the street facing north. The Roosevelt Quarterly from the fall of 1923 describes the site as, "this fine memorial building is, as a matter of fact, not one house but two... Both were acquired that ample room might be provided for the varied activities to be carried on by the Roosevelt House."

The five story complex is comprised of two distinct components; the brownstone townhouse reconstruction and the adjacent museum and library. These two components accommodate spaces that serve a variety of functions, including period rooms, museum, research library, administrative offices, auditorium, visitor services, staff services, roof terrace, storage, and mechanical. The Roosevelt Quarterly from the fall of 1923 describes how the interior spaces were designed for and designated to certain tasks. "In the western half of the house the library of the Roosevelt Memorial Association and the memorabilia, exhibited in part last winter at the New York Public Library, will be placed, and the staff of the Bureau of Roosevelt Research and Information will have its guarters. The fifth floor of the both buildings will be given over to an auditorium, where the school children of the city will have an opportunity through speech and pictures to become acquainted with Roosevelt's life and work." A brief description of the exterior and interior spaces is included in this section. More detailed descriptions can be found in Section 1.5, Condition Assessment.

## EXTERIOR

The foundation and superstructure of both sections of the building are constructed of reinforced concrete. The exterior front façade is a fine-grained brown sandstone veneer that is anchored to the concrete structure. The cornice and decorative trim on the "period house museum" east side are constructed from similar sandstone. The first floor is accessed by an



Figure 26: Front elevation montage, JMI, 2007.



Figure 27: Front cast iron and bronze handrail, JMI, 2007.
exterior sandstone staircase with a decorative bronze and cast iron railing. The entry door, framed by decorative sandstone trim, has a recessed green painted wood frame and painted wood panel double entry doors. The facade of the three bay mansard roof house on the east side has brownstone decorative sills and lintels for the 6/6 cream/tan painted wood sash windows and window frames on the first three floors. Exterior painted louvered shutters flank each window. The mansard slate roof on the top floor has three similar 6/6 sash windows with dormers.

The Empire style house is a stark contrast to the simple two-bay museum structure on the west side that is set slightly back from the house facade. The right side building implements early design principals of the international style with punched window openings and no ornamentation. A central flat slightly projecting element runs the height of the building between the windows. There are 6/6 sash windows with frames, similar to those in the eastern "period" town house. that are simply set into the first three stories of the brownstone facade. The top floor differs in design from the other floors with slimmer 2/2 sash windows. On the far west, there is a stairwell to the ground floor that is used as the main entrance today.

The primary function of the rear of the building is to bring light to the interior spaces and to serve as an emergency exit for the entire building. The façade is faced with brick laid in common bond with a row of headers every fifth course. The windows on this facade consist of both wood sash and metal casements with limestone lintels and sills. The one story flat roof ground floor rear wings are capped with skylights that provide natural illumination into the museum and caretakers rooms. The children's porch, located to the south of the nursery, is afforded privacy by a post and lattice screen. The entire facade is cantilevered at the fourth floor to provide additional space for the administrative offices and auditorium above. The iron fire escape is painted black and services the entire building, including the roof level. The roof level is comprised of a terra cotta terrace with parapet walls and service spaces (east south and west) with flat roofs.



**Figure 28:** North Elevation Exterior of Museum and Library portion of complex, JMI, 2007.



Figure 29: Exterior Rear of Museum and Library portion, JMI, 2007.

### INTERIOR

### **Exhibit Museum and Operation Spaces**

In the 1971 Interpretive Prospectus, there is reference to the 1963 Master Plan report that declared the museum spaces significant in their own right, as a representation of 1920's museum technology (NPS, 1971). These spaces are all finished with oak paneling stained to a warm brown appearance. The stained oak exhibit cases, bookcases and cabinet doors all match the interior wall paneling. White painted plaster ceilings are located in all of the rooms.

In reference to the plasterwork, L. L. Calvert of the Tide-Water Building Company wrote a proposal to Leland Lyon that stated, "these proposals are based on the installation of the



Figure 30: Museum, circa 1926. (THRB Archives)

old rosettes from the Renwick house and the use as models of the samples of cornice from the same building." Although, it is not certain which property the proposal references, it is possible that the Renwick house was built by James Renwick, Jr. (1818-1895), a prominent 19th century American architect.

The glass and oak display cases are consistently designed throughout the space and complement the wall paneling, cabinets, and bookcases. The display lights and cases have been changed to make them more conducive to conserving the museum collections.

### Auditorium

Leland Hubell Lyon worked in the architectural office of Theodate Pope Riddle and assisted with the design of the building and its interior spaces. In a letter written on January 21, 1923, he describes the auditorium to Mr. Kieffer, who donated a record cabinet to the museum.

"The style of the room is simple Georgian. The panels project about  $2\frac{1}{2}$ " from the face of the styles. All moldings are simple and heavy. The order of the room is a very simple Ionic containing double and fluted pilasters at each side of the stage opening and a modillion cornice with a concave frieze.



Figure 31: Auditorium, circa 1927. (THRB Archives)

The entablature and pilasters furnish the only wall ornamentation in the room. The ceiling is a heavily ornamented plaster ceiling with an antique ivory finish. The room will be lighted by four

Georgian brass chandeliers with etched glass globes. The floor of the room will be of herringbone oak and at the base of the room is a five inch polished black marble base." Aside from alterations to the ceiling lighting, the room remains as it did when it was constructed.

# **Period Rooms**

The majority of the interior wall finishes are comprised of paint or wallpaper. The majority of the painted woodwork and plasterwork is painted white, while most of the metal doors are painted white or red, and in some cases faux grained to appear as wood. The finishes in the period rooms reflect early Victorian interiors. During the latter half of the nineteenth century, prices in wallpapers dropped making this form of decoration more accessible and increasingly popular (Lynn, 1980). Advances in technology increased the variety in wallpaper patterns and schemes, "The wallpaper industry had triumphed in making its product the universally preferred wall finish," (Lynn, 1980). In a letter from D. Heine of The Birge Company, Inc. to Miss Matthews of the WMRA he wrote that, "It was our historians opinion that these papers (in the Theodore Roosevelt Birthplace) were all hand-blocks with the exception of the hall wallpaper," (Heine, 1955). Without samples of the original papers, it is not possible to confirm this hypothesis; however, it is also possible that the original papers in the period rooms may have been machine printed.

Machine printed papers were introduced in the mid-nineteenth century and were characterized by smaller repeating patterns, smaller areas of single colors, and a less uniform and more transparent transfer of color, when comparing these papers to block printed papers. Since the papers chosen in the 1920's were selected because they appeared similar to those of the 1850's, it is likely that the chosen paper designs may have been a combination of machine printed and block printed papers. Wall paper printing technology in the 1920s was advanced, and did not have the same undesirable effects of earlier machine printed papers. Most manufacturers sold machine-printed papers. Since most the papers in the period rooms currently are from the 1955 renovation, it is safe to assume that the papers are machine-printed.

The Birge Company, Inc. provided the information below in a letter dated May 19, 1955 which stated that all of the firm's manufactured papers are machine printed. A subsequent letter from Dorothy Matthews to Mr. Warren on August 12, 1955 documents the ordering of papers for most spaces, except the parlor. The letter also changes the order from single to double rolls.

ROOM	FINISH		
Library	Cooperstown #599 WW 578 @ \$2.55 per roll.		
Dining	New England-Colonial Gothic, 30 single rolls of your new		
Room	Smithsonian paper on putty color. The number of the sample in		
	your color book is 30 PG 517. Approximately \$3.55 per roll.		
Bedroom	24 single rolls Memphis #597 WR 484 @ \$2.40 per roll.		
Nursery	24 single rolls of #32 WW 909 @ \$2.55 per roll.		

In an August 17, 1955 letter from D. W. Heine of The Birge Company, Inc. Miss Matthews. Mr. Heine to describes and sends a pattern of the Colonial Pope reprinted paper designated for the Theodore Roosevelt Birthplace hallway. He also writes that he will save some of the paper in his warehouse. A letter from Mrs. Sherman Post Haight, President WMRA, to D. W. Heine gives thanks to the company for its gift of the hall papers (Colonial Pope) on August 31, 1955.

A post-renovation article describes "the papers were all donated to the Women's Roosevelt Memorial Association by this firm and three of the designs, notably the nursery, front bedroom and library, were all reproduced especially for this purpose, as well as special colorings of the patterns used in the dining room and hall." The firm is advertised as M. H. Birge & Sons, Co. (M. H. Birge & Sons article, post renovation). It is unclear if the advertised "renovation" refers to the 1923 recreation of Theodore Roosevelt's childhood home. or the actual 1955 renovation of the If the latter is true, this site. information indicates that there may



**Figure 32:** 1920 Wallpaper advertisement showing Colonial Gothic pattern used in Dining Room. (THRB Archives)



Figure 33: Birge & Sons advertisement, circa 1955. (THRB Archives)

have been a change of heart by the company that earlier indicated they could not locate some of the patterns for reproduction. Another possibility is that the article was printed after the site was created in 1923, since the papers were all documented as free of charge and the company was given exclusive rights to the papers in a letter from E. Jeffe, WMRA to M. H. Birge & Sons Company in August of 1923. It is also possible to date the article to the earlier date since the name of the company is M. H. Birge & Sons, rather than The Birge Company.

The specific use of different types of papers for certain areas evolved with the greater variety of available papers. Architectural papers and ones simulating stone or wood were preferred for halls, "Papers simulating stone surfaces were described in Bumstead's circular of 1853. It featured marble and granite adding: 'These, cut into large or small blocks, are much used in halls, entries,'" (Lynn, 1981). The vestibule does not appear to have been re-papered in the 1954-1955 restoration, and the paper is currently in the poorest condition of all the wallpapers. It is hard to discern the pattern of the marble, but it is not in a recognizable repeating pattern and

may be a 1920s machine or block-printed paper, reproducing an earlier block printed nineteenth century paper imitating stonework.

Usually the most ornate and fine papers were reserved for parlors, as they were rooms in which to entertain (Lynn, 1981). The bedroom wallpaper has a small repeating pattern, and the colors do not quite match up in the central design motif, perhaps a recreation of an early machine printed paper from the mid-nineteenth century. The parlor paper is more intricate with a wide variety of colors and shapes, and could be a reprint of a more expensive block printed mid-nineteenth century design. The mid-nineteenth century was also characterized by, "Small scenic vignettes, self-contained little views that were descended from the landscape figures of early-nineteenth-century wallpapers, were freed from the confines of geometric frameworks and ordered only by the mechanical necessities of machines that repeated the same elements at regular intervals," (Lynn, 1981). In a 1924 article, Mr. and Mrs. Glen Gould, write about recognizing characteristics of Victorian design, in particular reference to wallpaper:

Here are a few characteristics of Victorian, or more accurately American nineteenth century design, that an alert salesman can use in selling: Good proportion and balance; careful working out of all details; a fondness for shading, especially to imitate plain or curved and scrolled fancy mouldings in floral or foliage patterns; shadows on the background, indicating that the ornament or design stands out at some distance from the ground work as in the masonry and building motifs and details as in the elaborate Gothic window framing and geometrical compartments. These characteristics, together with a fondness for browns and greys and olive greens in shadings, give a recognizable quality to these designs and distinguish from both earlier and later ornament.

In the later part of the 19<sup>th</sup> century tastes changed to prefer English papers and design principles over French. This change in taste was described by more geometric and abstract patterns, and started to included dado and frieze papers (Lynn, 1981). The 1924 article is also a source for vivid descriptions of the Theodore Roosevelt Birthplace period rooms after the opening of the museum in 1924.

Front Parlor

"The central floral group is massed in the center with a heavier bunch of grapes pendant and delicate sprays of forget-me-nots and wheat sheaves edging the motif above and on the sides... The nicety of spacing and finish of the compartment of scroll work, and placing of blossoms in exact balance give a quietness and poise which accompanies the best type of nineteenth century design." (Gould, 1924) (Photograph, JMI, 2006)





### Family Parlor

"The library (Family Parlor) paper owes its inspiration to plaster work, the moldings and ornaments of which it clearly imitates. This type of plaster work, in its turn, imitated the stone work ornamentation of Italian and French buildings." (Gould, 1924). (Photograph, JMI, 2006)





# Dining Room

"The dining room paper has a Gothic Inspiration, as seen in the arched compartment, but has the gay addition of French ribbon bow knots and ivy festoons." (Gould, 1924). (Photograph, JMI, 2006)





# <u>Bedroom</u>

"The bed room paper is distinctly a chintz or spotted design, although placed on a delicately toned unobtrusive compartment background." (Gould, 1924). (Photograph, JMI, 2006)





#### Nursery

"The scenic paper in the nursery has the charm of earlier days...The nursery paper is printed in many colors and is rather dark – the water blush green, green trees and grass; browns, tans and creams are used... The carpet in the room is a dark olive green with a small dot pattern." (Gould, 1924)



The article also points out that this particular design dates a bit before the Victorian era. (Photograph, JMI, 2006)



Vestibule

"This type of paper, outlined in large or small blocks to represent masonry, is very much used today... In this case a photograph of a block of Escalette marble, quarried in the Pyrenees between France and Spain, was carefully reproduced... When the blocks are decorated, as in Roosevelt House, they are effective in a hall, emphasizing the unavoidable angularity of the narrow hallway in a city house." (Gould, 1924). (Photograph, JMI, 2006)





# First & Second Floor Hall

"The rectangular banding outlining the blocks contrasts carefully with the scrolled outline. Nothing is left at hazard but the designer has made what he considered a "completed design" and in the hallway in Roosevelt House this fact seems established." (Gould, 1924). (Photograph, JMI, 2006)





#### STATEMENT OF SIGNIFICANCE

The Theodore Roosevelt Birthplace National Historic Site is significant both for its association with Theodore Roosevelt and for the use of his reconstructed birthplace as a means to commemorate and interpret the unique personality, family history, political life and remarkable accomplishments of the 26<sup>th</sup> President of the United States. By combining, under one roof, a recreation of the Roosevelt family's mid-nineteenth century brownstone residence with a finely crafted contemporary museum, the influences on Theodore Roosevelt's personal development contribute directly to an understanding of his multi-faceted and heralded career as a conservationist, war hero, world leader and father of six.

Theodore Roosevelt Birthplace is both an exhibit museum and period house museum under one structure. The brownstone portion of the building complex was designed based on documentary and physical evidence of the brownstones previously owned by Theodore Roosevelt Sr. and Robert Roosevelt. The site was created to honor Theodore Roosevelt after his death in 1919 and although many other sites have been established to honor American Presidents, most of these sites used existing properties once owned by the person. These sites, though similar in mission, pay homage to Presidents during their prime and are usually vast estates. As a museum and recreation of a Presidential childhood home, set in the urban context of Manhattan Island, the Theodore Roosevelt Birthplace is a unique site.

Theodore Roosevelt Birthplace has the benefit of offering visitors an extensive collection of Roosevelt memorabilia and information along with a visual recreation of Theodore Roosevelt's upper class Victorian home. Some of the furniture included in the period rooms was owned by the Roosevelt family including the Rosewood bedroom set. All of the furnishings are early Victorian to ensure a cohesive representation of the period. The museum appears to be deceivingly small from the outside; however vast interior spaces serve a variety of functions. The site has five floors dedicated to the museum and its operation, including a basement, primarily used for mechanical equipment and related utility space, and a roof floor for a large terrace, mechanical systems and additional storage. The east half of the complex comprises the period childhood home. The period rooms are located on the first two traditional floors with five rooms as the focal point. The layout includes a front parlor, family parlor, dining room and two bedrooms. Additional spaces such as hallways and closets are also integrated into the period spaces. The west half of the complex comprises two floors of exhibition space with two large galleries dedicated to the life's work of Theodore Roosevelt. The exhibit spaces appear as they were at the time of construction in 1923 and are significant as early 20<sup>th</sup> century museum design. Additionally, there is large auditorium on the top floor spanning most of the width and length of the entire complex. The space was originally used to provide audio visual information about museum related topics for visitors, and is currently used less frequently for scheduled lectures.

The significance of the Theodore Roosevelt Birthplace unquestionably lies in its association with Theodore Roosevelt and his role as a popular and influential American leader. Furthermore, the creation of Theodore Roosevelt Birthplace honors the appreciation that Theodore Roosevelt had for historic preservation via memorials. In a letter to Dr. Robert Underwood Johnson in 1906, he wrote, "As you know, I am greatly interested in the project to buy and preserve as a memorial the house in Rome in which Keats died, a project which was first called to my attention by John Hay, who felt the liveliest sympathy for it." (Evening Telegram, New York January 15, 1923).

Theodore Roosevelt was present at a number of memorial site dedications, including the dedication of the Abraham Lincoln Birthplace National Historical Site in 1909.

Theodore Roosevelt Birthplace is also significant as a representative example of Victorian Society in New York City. The site not only interprets Roosevelt's childhood, but also upper middle class family life in the mid-to-late nineteenth century. Although the neighborhood around the site, known as Gramercy Park, contains a mixed commercial and residential zone, (small retail businesses, light industrial firms and wholesale jobbers), the site itself exemplifies the interior and exterior of the area when it was a mid-nineteenth century residential district. The Victorian interior made quite a stir when the museum was finished in 1923, which was a time when the Victorian style and aesthetic was not generally appreciated.

The opening of Roosevelt House, the birthplace of Theodore Roosevelt, 28 East 20<sup>th</sup> Street, New York City, caused many persons to reconsider their wholesale condemnation of things Victorian, while critics raised again their outcry against Victorian design. The difficulties of the architect and decorator in rebuilding and furnishing Roosevelt House were legion, but the result of the work has met with cordial approval in many quarters and with real appreciation from those whose memory actually recalls just the type of courtesy, good manners, and elegance that was current in American "parlors" of the day. (Gould, 1924)

In summary, the significance of the Theodore Roosevelt Birthplace National Historical Site is multifaceted: as a recreation of a President's childhood home, as an early 20<sup>th</sup> century reconstruction and memorial to a historic national figure, and as a representative example of New York's upper middle class Victorian society.

### **1.4 CHARACTER DEFINING FEATURES**

Theodore Roosevelt Birthplace is essentially two conjoined adjacent buildings under one roof, a reconstructed mid-nineteenth century house and an early-twentieth century museum, both completed in 1923. Designed by architect Theodate Pope Riddle, the house represents an historically sensitive recreation of the Roosevelt family's 1840s brownstone, updated later with Second Empire details, and the museum represents a restrained and subservient neighbor designed in an interpretation of the International Style. The interior spaces reflect the dual function of the building as an historic house and a contemporary museum. The building's features are considered to be "character defining" if they are essential to convey both the architect's original design intent and the site's interpretative mission. Identifying these features is critical to current and future planning efforts for projects involving restoration, conservation, adaptation, mechanical and electrical systems upgrades, accessibility improvements and maintenance.

The front (north) façade is, in its totality, character defining. All of its materials and features, described in detail in Section 1.5 of this Historic Structure Report, collectively contribute to the public image of the Theodore Roosevelt Birthplace National Historic Site. Preservation and conservation of this façade, in its present and original form, is a priority. Future modifications may be necessary to accommodate ADA requirements, and these should be undertaken with great care and be, to the maximum extent possible, reversible.

The rear (south) façade is not a part of the visitors' experience and largely concealed from public view. The materials and features, also described in detail in Section 1.5, do not contribute to the public image of the site. Modifications that may be required to improve the building's function could be undertaken, consistent with the preservation of original fabric and reversibility.

The primary focus of this Historic Structure, with respect to the identification of character defining features, is the interior of the building. In view of the current project to rehabilitate the building's HVAC system, clear parameters must be established to inform the design of HVAC improvements to insure that original character defining features will be respected and preserved. In addition, additional project/scope development is needed for fire protection, mechanical, plumbing and electrical systems, as well as compliance with ADA regulations. These types of future improvements could impact character defining features.

The following is a list of the interior features that contribute to the architectural quality and interpretative value of Theodore Roosevelt Birthplace.

#### INTERIOR FEATURES

**Decorative Plaster Ceilings**: Many of the plaster ceilings are decorated with medallions and cornices. The medallions are likely applied cast plaster elements, and the cornices are likely to have been "run in place". They are representative of details found in upper class residences and formal public spaces of the mid-nineteenth century.

**Plaster Ceiling Grilles**: The white painted decorative plaster grilles are unique to the auditorium space and served to mask metal return air grilles.

**Skylights:** Theodate Pope Riddle designed skylights in the caretaker's rooms, museum tea room and attic stairwell to admit natural light.

**Period Ceiling Lighting**: The chandeliers in the period rooms and museum spaces are an integral part of the overall interior décor. The crystal chandelier in the parlor is representative of an upper class Victorian residential interior.

**Moldings**: The use of white and off-white painted moldings is characteristic of the early Victorian style. During the later 19<sup>th</sup> century, it became fashionable to have more colorful decorative schemes for moldings, often to match or accentuate the designs in wallpapers. The simple color choice is important in defining the interior period spaces as early Victorian (Miller, 1987). The moldings are both painted plaster and wood in the period rooms, and stained to match the woodwork in the wood-paneled rooms.

**Wood paneling**: Oak paneling, stained to a rich medium brown, is used throughout the museum and public spaces, and not in the period rooms.

**Beaded Board Walls**: The painted beaded board walls are unique to room 308.

**Wallpaper**: Wallpaper is used throughout the Theodore Roosevelt Birthplace period rooms and was widely used in the 19<sup>th</sup> century. The style of wallpapers chosen for the spaces reflects the upper class Victorian childhood home of Theodore Roosevelt.

**Tile Walls**: Off-white ceramic tiles with a crazed glaze finish are used in restroom and janitorial spaces.

**Cabinets and Display Cases**: The early 20<sup>th</sup> century display cases are representative of museum technology and installations in the 1920s. The stained wood and glass display cases complement the wood paneled walls and cornices in the museum spaces and library. The recessed wall cabinets under the museum display cases and in the study room were designed to create a storage space, concealed behind doors that resemble wood paneling.

**Stucco Wall:** Scored stucco is used in the lower entrance vestibule. The stucco is scored and painted to look like cut stone masonry laid in an ashlar pattern. The painted faux finish was popular in the Victorian and Revival periods.

**Marble baseboards**: Black marble baseboards are located throughout the interior, and are often used to complement wood paneled spaces.

**Marble floors**: The white and black marble floors in the entrance vestibule and halls are characteristic of an upper class residence of the mid-nineteenth century. Black marble floors are located in museum vestibules and are an elegant entry into these public spaces.

**Terrazzo floor**: The decorative mosaic stone floor, installed in a variety of spaces (not including the period rooms) was a popular material at the time Theodate Pope Riddle designed the Theodore Roosevelt Birthplace.

**Parquet Floor**: The herringbone parquet oak floors in the museum spaces and auditorium were selected to complement the oak paneled walls and display cases.

**Cork Floor:** There are cork tile floors in some of the museum spaces that were part of the original interior design scheme.

**Covered Hardwood Floor**: Some of the current office spaces have original hardwood floors, covered by carpet.

**Carpet**: The floors in the period rooms are covered with decorative carpets that are consistent with interpretation of the spaces as a mid-nineteenth century upper class residence. During the second half of the nineteenth century, carpeting of this type was more widely available for American residences (Miller, 1987).

**Concrete Floor**: The poured concrete floor is unique to the space that is now used as collection storage.

**Pocket Doors**: The white painted wood pocket doors in the partitions separating the parlors and dining room on the first floor have elaborate colored and frosted glass.

**Hardware**: The nickel-plated hardware on the doors in the period rooms was a part of the overall design intent of the architect to recreate formal spaces that existed in the upper class childhood home of Theodore Roosevelt. Decorative brass and ceramic knobs are also found in the museum and service spaces.

**Finished Doors**: Many of the metal doors are finished with faux graining to match the wood paneling. These finishes are distinctive to the space. There are also other unique finishes on other doors, including the leather swinging doors into the library.

**Fireplaces**: The decorative marble, wood and patinaed brass fireplaces throughout the building are significant. In the period rooms the fireplaces are white marble with elaborate mantle shelves and decorative metal grates, distinctive to the period. The black marble fireplaces complement the design of the museum and office spaces.

Wall Sconces: There are decorative wall sconces in the period rooms and the auditorium.

**Shutters**: Interior shutters were incorporated in many fine quality American residences of the late eighteenth, nineteenth and early twentieth centuries. (Miller, 1987). The white painted louvered interior shutters in the period rooms are recessed into pockets in the jambs.

**Installed Equipment:** The wall-mounted fans in the auditorium were installed shortly after the building opened. The stage and remaining associated equipment are no longer functioning, but reflect the technology in place at the time of construction. The elevator and vaults are also characterized as installed equipment, and are character defining features.

**Installed Appliances:** Several kitchen appliances remain in the building, but are no longer in use. These include a Vulcan stove, icebox and dumbwaiter. They are representative of the time period.

Installed Fixtures: Original bathroom and kitchen fixtures remain in a number of spaces.

Installed Marble: The marble stalls and details in the bathrooms are part of the original design.

**Stair Details:** The stairwells in the museum spaces have important details including stained oak banisters and handrails. In the stairwell leading to the auditorium level there is a patinated brass decorative handrail that is particularly unique. Slate treads are in place in the stairwell leading from behind the stage on the fourth floor to the roof level.

### RATING SYSTEM FOR INTERIOR SPACES

To facilitate a clear understanding of the relative significance of each space in the building, in terms of the need to preserve character defining features, a rating system has been developed. This system assigns each space to one of four specific categories of significance, based on the number and type of character defining features existing in that space. Each category is color-coded from red for Very Significant to yellow for Non-Contributing. The categories, with their color codes, are shown below, followed by a chart rating the interior spaces.

Rating	Code	Definition
1		VERY SIGNIFICANT. A majority of the surfaces are character
1		defining and should not be altered.
		SIGNIFICANT. Most surfaces are composed of character defining
2		features and should not be altered, but areas/features not mentioned may
		be altered using extreme sensitivity
		CONTRIBUTING. Some surfaces are composed of character defining
3		features and should not be altered, but areas/features not mentioned can
		be altered.
		NON-CONTRIBUTING. Most of the surfaces are not considered
4		character defining features (except those noted), and may be considered
		for alteration.

The Rated Interior Spaces chart below lists each of the 75 separate spaces in the building, and identifies the character defining features existing in each space. Based on this information, a color code has been assigned to each space, with those colors applied to the floor plans that follow.

# **RATED INTERIOR SPACES**

Room #	Use	Defining Features	Rating	Code
B-01	Storage		4	
B-02	Mechanical Room		4	
B-03	Restroom		4	
B-04	Safe	Installed Equipment	1	
B-05	Storage Area	Tile Wall, Finished Door	4	
B-06	Elevator Room	Installed Equipment	2	
B-07	Hallway	Finished Door	3	
B-08	Inaccessible		4	
B-09	Inaccessible		4	
B-10	Boiler Room	Installed Equipment, Installed Appliances	4	
B-11	Boiler Room		4	
G-01	Vestibule	Decorative Plaster Ceiling, Stucco Wall	3	
G-02	Hall	Decorative Plaster Ceiling, Period Lighting, Wood Paneling, Marble Baseboards, Terrazzo Floor, Finished Door, Hardware	1	
G-03	Staff Office	Wood Paneling, Marble Baseboard, Terrazzo Floor, Finished Door, Pocket Door, Hardware	2	
G-04	Ladies Room	Period Lighting, Wood Paneling, Marble Baseboard, Terrazzo Floor, Finished Door, Hardware	2	
G-05	Toilet	Tile Walls, Installed Fixtures, Installed Marble	3	
G-06	Toilet	Tile Walls, Installed Fixtures, Installed Marble	3	
G-07	Mens Room	Period Lighting, Wood Paneling, Marble Baseboard, Terrazzo Floor, Finished Door, Hardware	2	
G-08	Service Hall		4	
G-09	Kitchen (including vestibule)	Skylight, Tile Wall, Moldings, Finished Door, Hardware, Installed Appliance, Terrazzo Floor	2	
G-10	Caretaker's Room	Skylight, Moldings	3	
G-11	Caretaker's Bathroom	Skylight, Tile Wall	3	
G-12	Caretaker's Closet		4	
G-13	Caretaker's Living Room	Skylight, Moldings, Fireplace, Finished Door	3	
G-14	Tea Room	Skylight, Wood Paneling, Cabinets and Display Cases, Marble Baseboard, Marble Floor, Terrazzo Floor, Finished Door, Hardware,	1	

Room #	Use	Defining Features	Rating	Code
		Pocket Accordion Door		
G-15	Museum	Wood Paneling, Cabinets and Display Cases, Marble Baseboard, Marble Floor, Terrazzo Floor, Finished Door, Hardware	1	
SO	Stairway 0		3	
FS1	Fire Stairway 1		4	
<b>S</b> 1	Stairway 1	Wallpaper, Moldings, Wood Paneling, Carpet, Stair Details	2	
101	Vestibule	Decorative Ceiling, Period Lighting, Moldings, Wallpaper, Marble Floor, Hardware	1	
102	Hall	Decorative Ceiling, Period Lighting, Moldings, Wallpaper, Marble Floor, Finished Door, Hardware	1	
103	Front Parlor	Decorative Ceiling, Period Lighting, Moldings, Wallpaper, Fireplace, Carpet, Pocket Door, Hardware	1	
104	Family Parlor	Decorative Ceiling, Period Lighting, Moldings, Wallpaper, Carpet, Fireplace, Pocket Door, Hardware	1	
105	Dining Room	Decorative Ceiling, Period Lighting, Molding, Wallpaper, Carpet, Pocket Door, Hardware	1	
106	Dining Closet 1	Installed Appliance, Moldings, Hardware	3	
107	Dining Closet 2	Moldings Hardware	4	
108	Museum	Decorative Ceiling, Period Lighting, Wood Paneling, Moldings, Fireplace, Cabinets and Display Cases, Parquet Floor, Finished Door, Hardware	1	
S2	Stairwell 2	Wallpaper, Carpet, Stair Details	2	
201	Curator's Room	Moldings, Cork Floor, Hidden Door, Hardware	2	
202	Hall	Decorative Ceiling, Moldings, Wallpaper, Sconce, Marble Floor, Carpet	1	
203	Bedroom	Moldings, Wallpaper, Decorative Ceiling, Shutters, Fireplace, Carpet, Hardware	1	
204	Closet/Bathroom	Moldings, Wallpaper, Installed Marble, Hardware, Carpet	2	
205	Closet			

Room #	Use	Defining Features	Rating	Code
206	Janitor's Closet	Tile Wall, Installed Fixtures, Hardware, Marble Floor	3	
207	Nursery	Decorative Ceiling, Wallpaper, Moldings, Sconces, Fireplace, Hardware, Carpet	1	
208	Study Room	Decorative Ceiling, Period Lighting, Wood Paneling, Cabinets and Display Cases, Cork Floor, Pocket/Casement Door	1	
209	Outdoor Gymnasium		3	
210	Library	Decorative Ceiling, Period Lighting, Wood Paneling, Cabinets and Display Cases, Cork Floor, Marble Floor, Hidden Door, Pocket Door, Hardware	1	
<b>S</b> 3	Stairway 3	Wallpaper, Wood Paneling, Marble Baseboard, Stair Details, Carpet	2	
301	Office	Wood Paneling, Period Lighting, Covered Hardwood Floor	3	
302	Office	Period Lighting, Wood Paneling, Cabinets and Display Cases, Fireplace, Finished Door, Covered Hardwood Floor	3	
303	Lobby	Decorative Ceiling, Period Lighting, Wood Paneling, Marble Baseboard, Terrazzo Floor, Hardware	1	
304	Bathroom	Installed Marble, Installed Fixtures	3	
305	Bathroom	Installed Marble, Installed Fixtures	3	
306	Office	Decorative Ceiling, Wood Paneling, Parquet Floor, Fireplace, Cabinets and Display Cases, Finished Door	1	
307	Artifact Storage	Wood Paneling, Cabinets and Display Cases, Fireplace, Hardware, Cork Floor	2	
308	Collection Storage	Decorative Ceiling, Wood Paneling, Cork Floor, Marble Floor, Finished Door, Hardware	2	
309	File Room	Cabinets and Display Cases, Installed Equipment, Concrete Floor, Beaded Board Walls	3	
310	Artifact Storage	Decorative Ceiling, Fireplace, Cork Floor	2	
S4	Stairway 4	Wall Paneling, Period Lighting, Hardware, Stair Details	2	
401	Dressing Room	Installed Equipment, Period Lighting	4	

Room #	Use	Defining Features	Rating	Code
402	Bathroom	Installed Fixtures, Tile Walls, Installed Marble	3	
403	Serving Kitchen	Period Lighting, Finished Door, Installed Appliances	3	
404	Storage		4	
405	Auditorium and Stage	Decorative Ceiling, Plaster Ceiling Grilles, Wood Paneling, Parquet Floor, Sconces, Installed Equipment	1	
406	Bathroom	Tile Walls, Installed Fixtures, Installed Marble	3	
407	Dressing Room		4	
408	Dressing Room		4	
409	Motion Picture Room	Installed Equipment	4	
410	Film Storage		4	
S5	Stairway 5	Skylight, Stair Details	3	
S6	Stairway 6	Installed Fixtures	4	
501	Janitor's Room		4	
502	Roof Service Room		4	
503	Vent Room	Installed Equipment, Tile Walls	3	
504	Roof Deck	Exterior brickwork	1	





DRAWING NO. 391 25,052A PKG. NO. 198 91 -0F

. IOE











# 1.5 ARCHITECTURAL/LANDSCAPE CONDITION SURVEY

#### GENERAL BUILDING ASSESSMENT

The Theodore Roosevelt Birthplace is in generally good condition; however, there are certain conditions, addressed in this section, which are affecting the stability of architectural elements. Typical exterior conditions include: leaking skylights above the ground floor extensions on the south elevation, deterioration of exterior wood and metal features, soiled limestone and brick elements, incompatible repairs to brownstone units, and deteriorated landscaping on the north facade. The mortar joints on both the north and south facades appear to be in good condition. Typical interior conditions are related to moisture and water ingress, thermal movement in materials, and general wear and tear. These include: deteriorated finishes around the perimeters of skylights, condensation (from the current heating system), dramatic daily changes in temperature, and abraded architectural finishes. If left untreated, these conditions and their effects will affect the performance of interrelated architectural materials and will compromise the functionality of the building as a whole.

### **EXTERIOR-NORTH ELEVATION**

<u>MASONRY:</u> The masonry on the north façade consists of fine grained Portland brownstone, originating from quarries in Portland, Connecticut. Although this material typically experiences high levels of deterioration when laid vertical to the bedding plan, in this instance it has performed relatively well. There is evidence of recent repairs to the brownstone, but the individual units are in generally good condition.

WINDOWS: The windows throughout this facade consist of wood sash windows and French doors (the French doors function as first floor windows on the eastern half of the building). The windows are currently painted and have reached an accelerated level of deterioration. Much of the paint has begun to flake and the wood has begun to rot in isolated areas. On the ground level the windows are covered with bronze and ferrous metal grilles. The decorative bronze grilles show signs of minor deterioration. The ferrous metal grilles are painted black, and set directly into the brownstone window lintel and sill. Although the paint on the ferrous grilles appears to be sound at this time, future maintenance may be required to inhibit corrosion that could cause damage to the adjacent brownstone elements.



Detail of previous brownstone repairs, JMI, 2006.



Detail of deteriorated wood and paint, JMI, 2006.

<u>SHUTTERS:</u> The eight sets of wood shutters on the period house museum are painted and have reached an accelerated level of deterioration on the finish and wood substrate.

DOORS: There are four exterior doors on the ground level and one set of double doors on the first floor level. The easternmost door on the ground floor is a flush metal fire door, incised to match coursing in the adjacent brownstone. This door provides access to the service hall and is in good condition. The two doors that provide entrance to the museum lobby are located on either side of the main north elevation stair, and are comprised of decorative bronze in a lattice pattern with glass backing. These doors show signs of minor corrosion, but are in generally good condition. The westernmost door is a wood Dutch door that provides access to the ground floor museum. Although the wood and paint on this door seem to have been maintained, the accumulation of paint poses an issue for future maintenance. The main set of double doors at the first floor level is accessed by the formal brownstone staircase. The doors, frame and transom are comprised of wood, and have deteriorated to a state which requires attention on areas of all elements. Conditions include flaking and lost paint, and evidence paint loss and isolated areas of wood deterioration.

<u>SIGNAGE:</u> There are several exterior signs composed of both bronze and wood. Two plaques are mounted above the two lobby entrances on the ground floor level, and a dedication plaque is located above the transom of the formal first floor entrance. These bronze plaques date to the period of construction, and show signs of general deterioration. The wood National Park Service sign, located between the ground floor windows of the eastern period house museum, is in good condition and requires no attention at this time.

<u>METAL RAILINGS:</u> There are three distinct metal railings on the north façade, located at the formal entrance stair, the first floor balcony of the period house museum, and at the sidewalk in front of the site. These railings consist of cast iron balusters with a brass handrail. The paint on the cast iron elements is flaking in isolated areas, and the brass is slightly corroded. The hinged gates at the sidewalk railings have been removed.



Detail of flaking and lost paint on the formal entrance door frame, JMI, 2006.



Detail of the bronze dedication plaque, JMI, 2006.



Collection of the metal railings, JMI, 2006.

<u>FLAG POLE:</u> The flag pole, located above the formal entrance between the second floor and third floor windows, consists of a wood shaft supported by a wall-mounted bronze eagle bracket. This bronze eagle bracket appears to be stable with minor areas of deterioration, while the wood shaft is characterized by overall loss of paint and isolated areas of wood rot.

<u>SLATE ROOF:</u> The blue/grey scalloped slate that covers the mansard roof appears to be in good condition. Although the source of this slate is unknown, it appears to be typical of slate quarried in Vermont. Slate of his quality typically has a serviceable lifespan of one hundred years.



Flag pole on the north elevation, JMI, 2006.

<u>LIGHTING:</u> There are two sconce lanterns located adjacent to the ground floor lobby entrances. These lights appear to date from the period of construction, and are intended to replicate period lamps of the 1860s. Although still functional, they have come loose from their fittings, and require attention to secure them to the masonry.



Light fixtures on the north elevation, JMI, 2006.

#### ADDITIONAL CONDITION PHOTOS:



Detail of deteriorated brownstone units on the museum portion of complex of the north elevation, JMI, 2006.



Detail of the entrance signage on the north elevation, JMI, 2006.



Detail of previous patches to brownstone steps on the north elevation, JMI, 2006.



Detail of the ground floor Dutch door on the north elevation, JMI, 2006.



Detail of the bronze window grilles on the north elevation, JMI, 2006.

### **EXTERIOR-SOUTH ELEVATION**

MASONRY: The masonry on the south facade consists almost entirely of brick with interspersed limestone and concrete elements. The brick is laid in common bond with a row of headers every fifth course. The brick is characterized by several areas of heavy staining, soiling and efflorescence deposits beneath window sills. The limestone lintels and sills throughout this elevation are discolored as a result of an accumulation of atmospheric soiling. The sills in particular exhibit significant deterioration and show signs of weathering. The reinforced concrete lintel which spans the outdoor gymnasium (Room 308) contains many cracks, efflorescence and ferrous staining as a result of water infiltration. As mentioned before, the mortar joints throughout this elevation are in sound condition and require minimal attention.



Areas of efflorescence under the window sill, JMI, 2006.

WINDOWS: The windows on this elevation are of both metal casement and wood sash construction. The metal casement windows are located primarily on the lower levels of the museum and library portion of the complex while the wood sash windows exist almost exclusively on the period house museum and the top levels of the museum and library portion of the The metal casement windows are in complex. generally good condition; however there are isolated areas of deterioration on both the window units and hardware. The wood sash windows associated with the period rooms are six over six lights with float glass, while the wood sash windows on the upper levels are one over one light with wire glass.

<u>SKYLIGHTS:</u> The skylights on the south elevation are perhaps the most problematic element of the entire exterior. The three sets of skylights consist of both interior and exterior glazing assemblies. They were originally designed to provide natural light to both the museum (tea room) and the caretaker's apartment. However, poor maintenance of these and adjacent components, such as terracotta roofing decking, has prevented the skylights from operating properly. As a result, water infiltration has caused damage to interior plaster ceilings and walls. These elements require immediate attention, not only to protect the elements themselves, but to prevent further deterioration of interior elements.



Wood sash window showing areas of heavy soiling on the lintel and weathering on the sill, JMI, 2006.

<u>EXTERIOR LIGHTING:</u> As part of the 1950s relighting project, pole-mounted floodlights were installed outside of the windows of the period rooms to simulate natural light. Although these lights appear to be functional, the ferrous metal elements are severely corroded. The efficacy of this lighting and its current infrastructure should be evaluated.

<u>FIRE ESCAPE</u>: The fire escape on the south elevation provides the egress from all levels of the building. This element is in generally poor condition, and is characterized by significant areas of severe metal corrosion and paint loss. In one location, near the bottommost landing, a stair tread is missing. These conditions pose a potential safety hazard that should be addressed.



Rusted exterior light fixtures, JMI, 2006.

#### ADDITIONAL SOUTH ELEVATION PHOTOS:



Detail of the corroded skylight and deteriorated mortar joints around terracotta pavers, JMI, 2006.



Detail of cracking, iron staining, and efflorescence on the reinforced concrete lintel (Room 308), JMI, 2006.



Missing tread from the exterior fire escape on the south elevation, JMI, 2006.

LANDSCAPE: The landscape on the north facade consists of two distinct zones: the sidewalk area and the area within the building set-back. These areas are comprised of paving materials, trees, and earth beds.



Exterior landscape of Theodore Roosevelt Birthplace, JMI, 2006.

The paving on the sidewalk is comprised entirely of brick pavers and extends the entire width of the property from the street curb to the edge of the property. The pavers are in good condition overall, however there are a few broken units along the street curb. There are two trees located within the field of the brick pavers, measuring approximately 25 feet in height.



Exterior landscape plan of Theodore Roosevelt Birthplace north facade, JMI, 2006.

The paving within the building set-back is comprised of brownstone stair treads and pavers as well as composite cementitious materials. The brownstone steps have been significantly patched throughout and are currently in good condition. The slate pavers which flank the main stair have been damaged in the past and replaced with poured-in-place concrete.
There are two soil beds, one in front of each building section. These beds have periodically been planted with vegetation, but are currently void of plantings. The western bed also contains a concrete slab which is in good condition; however the purpose of this slab is unclear. The slab and soil within the bed are sloped towards the building. The western and the eastern bed appear to have no means of proper drainage and may be contributing to interior moisture issues at the basement level.



Concrete pad and soil bed on west side of Theodore Roosevelt Birthplace north facade, JMI, 2006.



Brownstone and concrete tiles on west entrance. Inoperable coal shoot at top left JMI, 2006.



Soil bed on east side of Theodore Roosevelt Birthplace north facade, JMI, 2006.



Detail of brownstone steps and brick sidewalk pavers, JMI, 2006.

#### S0 / STAIRWAY 0

This stairway connects the basement level to the ground level.

<u>FLOOR:</u> The stair treads and landing are composed of concrete in a metal frame. The treads have been painted red with high gloss epoxy resin paint. Both treads and stair frame appear to be in good condition

<u>WALLS:</u> The walls in this stairway are composed of concrete and are painted white. There is an 8" concrete baseboard which is painted red. Both the wall and the baseboard are in fair condition, and are characterized by isolated areas of flaking paint. A wood handrail is mounted on the east wall and shows signs of wear.

<u>DOOR:</u> The paneled metal fire door leading into hallway G-02 is also painted red, as is the door jamb. Both door and jamb appear to be in good condition.

<u>CEILING</u>: The ceiling is composed of unpainted and painted (white) reinforced concrete and appears to be in good condition.

<u>UNITS IN PLACE</u>: Equipment for two different fire alarm systems is installed in the landing of the stairway: [Aero Automatic Fire Alarm] and [Automatic Fire Alarm Co]. One wall mounted wood hand rail exhibits some wear.

<u>LIGHTING</u>: There is one ceiling light in this stairway. It appears to be in good condition and is functioning properly



Detail of the fire alarm systems, JMI, 2006.



Detail of the metal paneled fire door, the metal and concrete staircase, and the wood hand rail, JMI, 2006.



## FS0 / FIRE STAIR 0

This fire stairway connects the basement level to the ground level.

<u>FLOOR:</u> The stair treads and landing consist of concrete in a metal frame. The treads have been painted red with high gloss epoxy resin paint. Both treads and stair frame appear to be in good condition

<u>WALLS:</u> The walls in this stair are constructed of concrete and painted white. There is an 8" concrete baseboard which is painted red. Both the wall and the baseboard are in fair condition, and are characterized by isolated areas of flaking paint. Metal handrails are mounted on the north and south walls and shows in good condition.

<u>DOOR</u>: The paneled metal fire door leading into hallway G-08 is also painted red as is the door jamb. Both door and jamb appear to be in good condition. The metal fire door that separates this room from room G-08 has a weighted closer which appears to operate effectively.

<u>CEILING</u>: The ceiling is composed of partially reinforced concrete, and appears to be in good condition.

UNITS IN PLACE: The wall mounted electrical outlets are surrounded by many loose wires.

<u>LIGHTING</u>: There is one ceiling light and one wall light in the space, both of which are functioning properly.



View of the metal paneled fire door, the metal and concrete staircase, and the metal hand rails, JMI, 2006.



Detail of the weighted automatic fire door mechanics, JMI, 2006.



## **B-01 / STORAGE**

This room is attached to the boiler room by a hallway, and is currently used to store inoperable wood shutters, damaged decorative picture frames and other miscellaneous items. There is a shaft way adjacent to this room which contains rusted equipment.



<u>FLOOR</u>: The floor in this room is constructed of concrete and appears to be in fair condition; however there is a pool of standing water in the middle of the room, most likely caused by the leaking boiler in room B-10.

<u>WALLS</u>: The walls in this room are constructed of brick and mortar while the shaftway walls are constructed of reinforced concrete. Both materials appear to be in sound condition and exhibit no visible deterioration.

<u>CEILING</u>: The ceiling is constructed of unpainted reinforced concrete and appears to be in good condition.

<u>UNITS IN PLACE</u>: There are various pieces of equipment housed in the access shaft, including a winch which once opened a bulkhead in front of the North Elevation.

<u>LIGHTING:</u> There is one functioning light suspending from the ceiling.



Various architectural elements stored in Room B01, JMI, 2006.



Mechanical equipment in the shaftway adjacent to Room B01, JMI, 2006.

#### **B-02 / MECHANICAL ROOM**

This room currently houses electrical breaker boxes with sub panels for each floor.



<u>FLOOR:</u> The floor in this room is constructed of concrete and appears to be in good condition.

<u>WALLS:</u> The walls in this room are constructed of brick and mortar as well as reinforced concrete. Both materials appear to be in sound condition and exhibit no visible deterioration.

<u>CEILING</u>: The ceiling is composed of unpainted reinforced concrete and appears to be in good condition.

<u>UNITS IN PLACE</u>: There are several metal breaker boxes located in this room. These breakers control the main power to the building as well as power for each floor.

<u>DOORS</u>: A metal fire door separates this room from Room FS0. The door is painted red and is marked [W. C. Co's; 20 lbs; Fire door special].

LIGHTING: There is one functioning light suspending from the ceiling.



Main electrical AC breaker and sub breakers, JMI, 2006.

# **B-03 / RESTROOM**

This room is divided into two spaces and was designed to function as a restroom (lavatory and toilet); however it is currently used as storage.



FLOOR: The floor in this room is constructed of concrete and appears to be in good condition.

<u>WALLS:</u> The walls in this room are constructed of reinforced concrete and painted white. The walls are in fair condition, and are characterized by areas of flaking paint.

<u>CEILING</u>: The ceiling is composed of reinforced concrete painted white. The ceiling is in fair condition, and is characterized by large areas of discoloration and flaking paint.

<u>UNITS IN PLACE</u>: There is a mounted porcelain sink in the northeast corner of the lavatory space as well as wall mounted shelving on the south wall. On the east wall there a wood stall door which swings into the toilet space (note: the toilet has been removed).

DOORS: A red sheet metal fire door separates this room from B-07.

LIGHTING: There is one light suspended from the ceiling that is missing the globe and bulb.



Detail of deteriorated ceiling finishes and rusted fixture, JMI, 2006.



Detail of inoperable sink, JMI, 2006.

## **B-04 / SAFE**

This room was designed as a vault but currently is used to store promotional material for the site.



<u>FLOOR:</u> The floor in this room is constructed of concrete and appears to be in good condition.

<u>WALLS:</u> The metal vault is enclosed with brick and mortar masonry walls. These walls appear to be in good condition.

<u>CEILING:</u> The ceiling is composed of reinforced concrete painted white, and exhibits no visible signs of deterioration.

<u>UNITS IN PLACE:</u> The vault itself was manufactured by Halls Safe Co.; Cincinnati OH and appears to be functioning properly. Additional signage on the door indicates that the safe was at one time serviced by Greenwich Locksmith; 24 hour emergency service; 56 7<sup>th</sup> Avenue South; New York, NY 10014; 212 645-2858.







Detail of manufacture's hallmark on the vault door, JMI, 2006.

## **B-05 / STORAGE AREA**

This area may have been designed as a service passage but is currently used as a workshop and for storage of unused architectural elements and objects. This space includes a small passageway beneath Fire Stair 0.



FLOOR: The floor in this room is constructed of concrete and appears to be in good condition.

<u>WALLS</u>: The majority of the walls are of brick and mortar construction and appear to be in good condition; however the walls of the passageway beneath Fire Stair 0 are constructed of terracotta tile laid with mortar. The terracotta is stamped [AMMESS]. All walls are in good condition.

<u>CEILING</u>: The ceiling is composed of unpainted reinforced concrete and exhibits some visible signs of deterioration. On the northwest corner of the room there is one area of exposed metal lath and rebar. The exposed metal exhibits minimal corrosion.

<u>UNITS IN PLACE:</u> Metal and wood shelves are located along the wall surfaces of this room. Plumbing and electrical conduit occupies the majority of the overhead space.

<u>DOORS</u>: There are five doors associated with this room, however only one is discussed in this section. (The other doors relate to other rooms). The door between the main body of this room and the passageway beneath Fire Stair 0 is a green metal fire door stamped [UNDERWRITER'S LABORATORIES, INC.; INSPECTED FIRE DOOR; NO. 47879].



Area of the exposed metal lath and reinforcement at concrete ceiling, JMI, 2006.



View toward passageway beneath Fire Stair 0, JMI, 2006.



View south toward NPS work station, JMI, 2006.



Detail of the terracotta wall below Fire Stair 0, JMI, 2006.

#### **B-06 / ELEVATOR ROOM**

This room currently serves its original function as the mechanical space for the Otis Elevator equipment.



<u>FLOOR:</u> The floor in this room is constructed of concrete and appears to be in good condition.

WALLS: The walls are of brick and mortar construction and appear to be in good condition.

<u>CEILING</u>: The ceiling is composed of unpainted reinforced concrete and exhibits no visible signs of deterioration.

<u>UNITS IN PLACE</u>: The Otis elevator motor appears well maintained and is inspected once a month. (Machine No. 62790, Motor No. 602057, Size: 1 <sup>1</sup>/<sub>2</sub>, Type: D/C, 280 volts, 800, RPM)

<u>DOORS</u>: There is a sliding sheet metal fire door on the north wall which provides access to this room from Room B05. The door is painted red and appears to be well maintained.

LIGHTING: There is one functioning light suspended from the ceiling of this room.



Detail of elevator mechanical equipment, JMI, 2006.



Rear view of elevator mechanical equipment, JMI, 2006.



View of elevator mechanical equipment, JMI, 2006.

## B-07 / HALLWAY

This space includes the hall in at the bottom of Stair S-0 and the closet beneath Stair S-0.

<u>FLOOR:</u> The floor in this room is constructed of concrete and appears to be in good condition.

<u>WALLS:</u> The walls are of brick and mortar construction, and are in good condition.

<u>DOORS:</u> There are two hinged sheet metal fire doors stamped [American Fire Door Stock; 20 pounds coating; Keystone (symbol); Copper Steel]. The metal closet door is also painted red.

<u>UNITS IN PLACE</u>: There are two sets of fire alarm equipment mounted to the east and west walls of this room. One currently services the building while the other is inoperable and is part of an earlier system.





Detail of inoperable fire alarm system, JMI, 2006.



View of control panel for the current fire alarm system, JMI, 2006.



View looking into storage area beneath Stair S0, JMI, 2006.

#### B-08 & B-09 / CRAWL SPACE

These rooms are accessible by a door on the south wall of Room B-05. The floors, walls, and ceiling in the crawl spaces are reinforced concrete. Plumbing runs overhead in these crawl spaces.





Craw space accessible from the upper rear wall in Room B-05, JMI, 2006.



View of B-08 looking west into crawl space B-09, JMI, 2006.



View into crawl space B-08 looking south, JMI, 2006.

## **B-10 / BOILER ROOM STORAGE**

This was designed for, and continues to function as, a Mechanical Room for the associated heating components. The space also contains a variety of inoperable mechanical systems.



**FLOOR:** The floor in this room is constructed of concrete and appears to be in good condition; however, there is standing water on the floor below the boiler.

<u>WALLS:</u> The walls in this room are constructed of painted and unpainted reinforced concrete. The walls are in fair condition and, in painted areas, are characterized by major areas of flaking paint. The walls closest to the boiler have signs of water staining and paint loss.

**<u>CEILING</u>**: The ceiling is composed of unpainted reinforced concrete and exhibits no visible signs of deterioration.

**UNITS IN PLACE:** The room contains a boiler, hot water heater, steam conversion apparatus, and antiquated vacuum pump. The boiler is stamped Bell & Gossett Co; Factory No. (ABF-12 size 3). Water and steam are leaking from the equipment, resulting in very high temperature and humidity levels. The Trerice thermometer in the room marked the temperature at 123 degrees Fahrenheit. A water heater [AO Smith Water Heater] is also located in this room and appears to have been installed within the last ten years. In the opposite corner of the room there is a vacuum pump [Arco Wand Vacuum cleaner; American Radiator Company; Chicago, IL] that attached to the internal vacuum system but is no longer in use. Although the system appears to be in fair condition, it is unclear if this machinery is still operable.

**DOORS:** There is a sliding sheet metal fire door on the east wall which provides access to this room from room B-07. The door is painted red and appears to be well maintained.

**LIGHTING:** There are two functioning lights suspended from the ceiling of this room.



View of the boiler room looking south, JMI, 2006.



Detail of steam conversion apparatus, JMI, 2006.



Detail of additional equipment in boiler room, JMI, 2006.



View of the entry door to the boiler room, JMI, 2006.



Detail of water heater in boiler room, JMI, 2006.



Detail of vacuum pump, JMI, 2006.

# **B-11 / BOILER ROOM STORAGE**

This room is located north of room B-10 and is currently used for storage.

FLOOR: The floor is covered in 10 x 10 dark green and white

linoleum tiles. The linoleum is in fair condition and characterized by scratches and general wear.

<u>WALLS:</u> The walls are constructed of both reinforced concrete and brick. The walls are painted white and are generally in good condition.

<u>CEILING</u>: The ceiling is composed of reinforced concrete. It is painted white and exhibits no visible signs of deterioration.

<u>UNITS IN PLACE</u>: There are a number of various stored items, boxes and cabinets in the room. A fan and smoke detectors are mounted on the ceiling.

<u>DOORS:</u> There is a sliding sheet metal fire door on the east wall which provides access to this room from Room B-10. The door is painted red and appears to be well maintained.

LIGHTING: This area is lit with fluorescent lights mounted to the ceiling.



Detail of checkered linoleum floor, JMI, 2006.



View of the storage area looking north, JMI, 2006.

## G-01 / VESTIBULE

This vestibule is the primary entrance for visitors to the site.

<u>FLOOR:</u> The cement floor in this vestibule has a recessed metal grate to capture soiling from visitors' shoes. Except for six holes containing remnants of corroded ferrous metal, the floor is in good condition.

<u>WALLS</u>: The stucco is scored in an ashlar stone masonry pattern and is in fair to poor condition. There are many small areas of paint and plaster loss as well as accelerated deterioration of the plaster at the base. Evidence around these areas of deterioration suggests that there have been numerous improvement campaigns implemented in the vestibule. The wood partition wall to the south has unfinished door trim and is uniformly painted tan. There are top coats of white paint that suggest another campaign is being considered for the area.

<u>CEILING:</u> The vaulted ceiling is also stucco in an ashlar stone pattern and painted tan. Both the ceiling stucco and paint are in good condition.

<u>DOORS:</u> There are two exterior bronze doors and two interior wood doors. Both bronze doors consist of an exterior layer of metal lattice work with an interior layer of glass. The southernmost interior wood door is painted tan, has four glass lights, and provides access to room G-02. The northernmost wood door is painted dark green and





Entry door (foreground) and metal lattice and glass exterior doors (background), JMI, 2006.

provides access to a crawlspace beneath the formal brownstone entry steps.

<u>LIGHTING</u>: There is one ceiling light and one wall sconce in this vestibule. The ceiling light appears to be in good condition and is functioning properly, while the wall sconce is missing portions of the fixture.



Detail of damaged paint and stucco at base of the walls in the entrance vestibule, JMI, 2006.



Detail of the metal floor grate and corroded ferrous remnants, JMI, 2006.

# G-02 / HALL

This entrance hall is currently used to receive visitors and display publications and promotional items related to the site and/or the life of Theodore Roosevelt. The hall also serves as a gallery for the collection of political cartoons.



<u>FLOOR:</u> The terrazzo floor is in generally fair condition, but has a large crack that runs through 7 individual floor panels and spans from the main entrance to the elevator.

<u>WALLS</u>: The wall paneling and moldings in this room consist largely of American oak with black marble baseboards. Both the woodwork and the marble baseboards are in good condition with minimal wear.

<u>CEILING</u>: The flat plaster ceiling has a simple plaster cornice. The ceiling has been painted in the past with white calcimine paint. The majority of the ceiling surface is in good condition, but there are isolated areas of severe deterioration at the south end of the hall. This deterioration appears to have been caused by a roof leak which has been repaired.

<u>UNITS IN PLACE</u>: There are brass vacuum outlets located in the baseboard on the west wall near the elevator. On the walls there are 6 brass air vents, 2 sets of fire alarms [Aero Automatic on patent no. 15233, other patent no. 15021] and a brass wall-mounted thermostat. Hand painted signs, which appear to date from the time of construction, mark the entrance to the restrooms. Two bookcases on the east wall have been added near the front entrance to display site related materials that are for sale.

<u>DOORS</u>: There is a metal paneled door that leads to the basement (S0). The hall side of this door is painted in a decorative faux graining to imitate the appearance of the surrounding oak panels. The door and all of its associated hardware appear in good working order.

<u>WINDOWS</u>: There is one six over six sash window on the north wall which appears to be in fair condition with minor areas of deterioration.

<u>LIGHTING:</u> There is one brass wall sconce, one brass ceiling light and six modern ceiling fixtures in the space. All of the lights appear to be in good condition and are functioning properly.



Detail of a major crack in the terrazzo floor extending the length of the hall, JMI, 2006.



Detail of the central vacuum outlet located in the black marble baseboard, JMI, 2006.



Detail of a hand painted sign located adjacent to the mens and womens rooms, JMI, 2006.



Detail of a ceiling light fixture that was likely installed in the 1950s relighting campaign, JMI, 2006.



View of ceiling paint and plaster deterioration at the south end of the hall outside of room 109, JMI, 2006.



View of the ground floor entry hall outside of the first floor museum, JMI, 2006.

## G-03 / STAFF OFFICE

This space was designed to serve as a ticket/reception area and although it still serves that purpose, modifications have been made to facilitate its use as a desk for National Park Service.



FLOOR: The terrazzo floor is in fair condition overall exhibiting minor cracks in isolated areas.

<u>WALLS:</u> The wall paneling and moldings in this room consist largely of American oak panels. Both the oak paneling and the black marble baseboard are in good condition with minimal wear.

<u>CEILING</u>: The flat plaster ceiling has been painted in the past with white calcimine paint. Both the plaster and paint are in good condition

<u>UNITS IN PLACE</u>: The front desk and radiator cover are constructed from American oak and are in good condition with only minor abrasions. The brass radiator grille located in the window sill is slightly corroded.

<u>DOORS</u>: The metal paneled door on the east side of the room provides access to room G-08 and is painted in a decorative faux graining to imitate the appearance of the surrounding oak panels. In addition there are three wooden closet doors with brass knobs. These doors and their associated hardware appear to be in good working order.

<u>WINDOWS</u>: There is one six over six wood sash window on the north wall which appears to be in fair condition with minor areas of deterioration.

<u>LIGHTING:</u> In addition to the brass ceiling fixture and decorative brass wall sconce, there are three contemporary track lights mounted above the front desk. All of the lights appear to be in good condition and are functioning properly.



View of room G-03 looking north from the entry hall, JMI, 2006.



View of the closet doors on the south side of room G-03, JMI, 2006.



Detail of track lighting, JMI, 2006.

## G-04 / LADIES ROOM

The original and current use of this room is as a lobby for the ladies room. Very few modifications have been made to this space since the period of construction.



<u>FLOOR</u>: The terrazzo floor is in good overall condition with only minor cracks in isolated areas, including one small crack on a corner panel.

<u>WALLS</u>: The paneled walls and moldings in this room consist largely of American oak panels. The woodwork and black marble baseboards are in good condition and characterized by minimal damage that includes one missing molding and wear on the door frame near the baseboard.

<u>CEILING</u>: The flat plaster ceiling has been painted in the past with white calcimine paint. Both the plaster and paint are in good condition

<u>UNITS IN PLACE</u>: There is a built-in coat rack on the east wall. The rack is constructed from American oak and appears to be in good condition.

<u>DOORS</u>: The metal paneled door to G-02 is painted on both sides in a decorative faux graining to imitate the appearance of the surrounding oak panels. The outside surface of the door includes the word "WOMEN" painted by hand with bronze powder paint. The door and associated brass hardware appear to be in good condition and functioning properly; however, locks have been removed from the door.

<u>LIGHTING:</u> There is one decorative brass ceiling fixture which appears to be in good condition and is functioning properly.



Detail of damage to the wood paneling around the door to room G-05, JMI, 2006.



Detail of a missing molding in the wall paneling, JMI, 2006.



Detail of hand painted signage on the faux grained metal door, JMI, 2006.

## G-05 / TOILET

The original and current use of this room is as a women's restroom. Very few modifications have been made to this space since the period of construction.



<u>FLOOR</u>: The  $\frac{1}{2}$ " square white ceramic tile floor, white marble threshold, and associated grout joints are in good condition.

<u>WALLS</u>: The walls consist of 5"x 5" off-white ceramic tiles characterized by general crazing of the kiln fired glazing. Three repair holes (six total holes) are present above each sink and represent evidence of previous fixtures. There are two ceramic framed mirrors above each sink and built-in ceramic toilet paper dispensers. The walls are generally in good condition aside from minimal cracks around the toilets.

<u>CEILING:</u> The flat plaster ceiling has been painted in the past with white calcimine paint. Both the plaster and paint are in good condition, as are the painted metal vent and fan.

<u>UNITS IN PLACE</u>: There are two single-peg pedestal porcelain sinks with replacement faucets, and two porcelain toilets in the space. Both bathroom stalls are constructed of white marble with grey veining and are cracked in several locations. The original marble stall doors have been replaced with painted wood units. These wood doors are hinged with brass hardware stamped [BOMMER].

<u>DOORS</u>: The wood paneled door to G-05 has brass hardware, contains two vent grilles in the upper panels, and is varnished on the exterior and painted white on the interior. The marble door trim is in good condition, although there is one isolated area of incised graffiti.

<u>LIGHTING:</u> There is one wall sconce and one ceiling light, both of which appear to be in good condition and functioning properly.



View of sinks, mirrors, and wall tile, JMI, 2006.



Detail of cracks and staining along wall of the marble stall, JMI, 2006.



Detail of a toilet showing staining and deteriorated seal around the base, JMI, 2006.

## G-06 / TOILET

The original and current use of this room is a mens restroom. Very few modifications have been made to this space since the period of construction.



<u>FLOOR</u>: The  $\frac{1}{2}$ " square white ceramic tile floor, white marble threshold, and associated grout joints are in good condition.

<u>WALLS</u>: The walls consist of 5"x 5" off-white ceramic tiles characterized by general crazing of the kiln fired glazing. Three repair holes (six total holes) are present above each sink and represent evidence of previous fixtures. There are two ceramic framed mirrors above each sink and built-in ceramic toilet paper dispensers. The walls are generally in good condition aside from minimal cracks around the toilets.

<u>CEILING:</u> The flat plaster ceiling has been painted in the past with white calcimine paint. Both the plaster and paint are in good condition, as are the painted metal vent and fan.

<u>UNITS IN PLACE</u>: There is one single-peg pedestal porcelain sink with a replacement faucet, porcelain toilet with a replacement seat cover and three porcelain urinals. The bathroom stall is constructed of white marble with grey veining and is cracked in several locations. The original marble stall doors have been replaced with painted wood units. These wood doors are hinged with brass hardware stamped [BOMMER].

<u>DOORS</u>: The wood paneled door to G-05 has brass hardware, contains two vent grilles in the upper panels, and is varnished on the exterior and painted white on the interior. The marble door trim is in good condition.

<u>LIGHTING</u>: There is one wall sconce which appears to be in good condition and is functioning properly.



View of urinals and stained wall and floor tiles, JMI, 2006.



Detail of a toilet with a replacement seat, JMI, 2006.



View of the single-peg pedestal sink, JMI, 2006.

# G-07 / MENS ROOM

The original and current use of this room is as a lobby for the men's room. Very few modifications have been made to this space since the period of construction.



FLOOR: The terrazzo floor is in good condition overall.

<u>WALLS:</u> The wall paneling and moldings in this room consist largely of American oak. The woodwork and black marble baseboards are in good condition.

<u>CEILING</u>: The ceiling is constructed of non-decorative plaster and has been painted in the past with white calcimine paint. Both the plaster and paint are in good condition.

<u>UNITS IN PLACE</u>: There is a built-in coat rack on the east wall. The rack is constructed from American oak and appears to be in good condition.

<u>DOORS</u>: The metal paneled door to G-02 is painted on both sides in a decorative faux graining to imitate the appearance of the surrounding oak panels. The outside surface of the door includes the word "MEN" painted by hand with bronze powder paint. The door and associated brass knob hardware appear to be in good condition and functioning properly; however, locks have been removed from the door.

<u>LIGHTING</u>: There is one decorative brass ceiling fixture which appears to be in good condition and is functioning properly.



View of the door to room G-06, JMI, 2006.



View of black marble baseboards and paneled walls with a built-in coat rack, JMI, 2006.



View of faux grained door to room G-02, JMI, 2006.

# G-08 / SERVICE HALL

This space was and continues to function as an emergency passageway leading from the service rooms and fire escape on the south facade of the building to the exit on the north façade.



<u>FLOOR:</u> The floor in this room is composed of concrete with a red epoxy paint finish and appears to be in good condition, with only minor abrasions.

<u>WALLS:</u> The walls in this room are constructed of reinforced concrete with scored plaster. Both materials appear to be in sound condition and exhibit no visible deterioration.

<u>CEILING</u>: The ceiling is composed of unpainted reinforced concrete and appears to be in good condition.

<u>UNITS IN PLACE</u>: There is a recessed radiator unit on the east wall as well as a wall mounted motion sensor located on the south wall above the fire door.

<u>LIGHTING</u>: There are two ceiling fixtures which appear to be in good condition and are functioning properly.



View looking north down the service hall, JMI, 2006.



View looking south down the service hall, JMI, 2006.

# G-09 / KITCHEN

The room was originally designated to serve as a kitchen to facilitate catered events and still houses the old kitchen equipment that is no longer in use. The room currently serves as a staff break-room.



FLOOR: The terrazzo floor is in good condition overall exhibiting only minor cracks.

<u>WALLS</u>: The lower two thirds of the walls are covered with white glazed subway tile that is in fair condition. There are broken quarter-round subway tiles by the dumbwaiter, and approximately one dozen cracks throughout various tile units. The upper portions of the walls are plastered and painted white as are the wood door trim and moldings.

<u>CEILING</u>: The flat plaster ceiling contains two six-light and three four-light wood skylights. The skylights are generally in poor condition and a few of the lights have been replaced with glass that does not match the original. The majority of the ceiling surface is in poor condition characterized by areas of severe deterioration, particularly around the skylights, and appears to be associated with an ongoing untreated moisture infiltration issue.

<u>UNITS IN PLACE</u>: There is a Vulcan stove body [patent May 29, 1923, patent no. 1456822, and 1456823] and door [May 3, 1970 and May 29, 1970] with black vent hood above [Wm Crane Fume Hood], both of which appear to be in good condition although inoperable. On the east wall there is an ice box [The Lorillard; Madison Avenue; at 48<sup>th</sup> ST. NY], hardware latches [Decanio, Nov. 10, 1908] which is in fair condition and characterized by loose hardware and wear around latches. The dumbwaiter and associated control box are located just south of the icebox on the east wall [Electric Dumbwaiter, capacity 500 lbs.]. There is minor deterioration of protective finishes on some of the metal dumbwaiter components.

A white porcelain double basin sink with new faucet hardware and copper drains is attached to the south wall of this room and is flanked by wooden drain boards. The sink is in generally good condition; however, some of the drain boards are loose and worn, and there is a broken wooden pull on the drawer below. There is a single basin enamel sink located on the north wall adjacent to the stove, is fitted with a patinated brass faucet. This sink no longer appears to be functional as it has a major crack running through the body of the basin. In addition to the plumbing fixtures and appliances, there are wall-mounted wooden cabinets with glass paned wood doors and porcelain pulls. These cabinets appear to be in good condition.

<u>DOORS</u>: There is a metal fire exit door on the north wall which is painted white and has replacement hardware. The door is in good condition; however, there are cracks in the painted surface. In addition there is also a wood pantry door which is also painted white. The door has porcelain knobs and both door and associated hardware are in good condition.

<u>LIGHTING:</u> There are two single ceiling lights and one wall light which appear to be in good condition and are functioning properly.

<u>PANTRY</u>: The pantry is located adjacent to the south wall of the kitchen. It is characterized by painted plaster walls and ceiling, terrazzo floor, two built-in painted wood units and one ceiling light.



View of the inoperable Vulcan stove and fume hood on the north wall of the kitchen, JMI, 2006.



General view of the kitchen looking south, JMI, 2006.



View of the icebox no longer in use, JMI, 2006.



Detail of dumbwaiter hardware, JMI, 2006.

## G-09A / KITCHEN VESTIBULE

There is a small vestibule space that leads into the kitchen from G-02 and includes a closet with utility sink. The room was originally intended as a janitor area and is still used as such.



FLOOR: The terrazzo floor and white marble threshold are in good condition.

<u>WALLS</u>: The lower two thirds of the walls are covered with white glazed subway tile that is in fair condition with only few cracked units. The upper portions of the walls are plastered and painted white, as are the wood door trim and moldings.

<u>CEILING</u>: The flat plaster ceiling has been painted in the past with white calcimine paint. Both the plaster and paint are in good condition

UNITS IN PLACE: The enameled cast iron sink is in good condition.

<u>DOORS</u>: The metal paneled door to G-09a is painted on both sides: the interior surface is painted white and the outside surface is painted in a decorative faux graining to imitate the appearance of the surrounding oak panels. The associated brass hardware appears to be in good condition and functioning properly; however, the paint is in poor condition and exhibits flaking and loss.

<u>LIGHTING:</u> There is one two-bulb light which appears to be in good condition and is functioning properly.



View of the kitchen vestibule looking south, JMI, 2006.



Detail of paint loss to faux graining on the metal door, JMI, 2006.

## G-10 / CARETAKER'S ROOM

The room was intended to serve as the bedroom for the fulltime livein caretaker, and now serves as a staff locker room for National Park Service personnel.



<u>FLOOR:</u> Although the hardwood floor is in fair condition, some of the boards need to be replaced, particularly in areas around the radiator pipes which have become water damaged.

<u>WALLS</u>: The walls are painted plaster and are accompanied by a wood cornice (ogee profile) and wood baseboard, painted white to match the plaster. The walls are in fair condition, although there are large areas of peeling paint and superficial water staining on the east wall near the skylight.

<u>CEILING</u>: The flat plaster ceiling contains three four-light wood louvered skylights. The skylights are in generally poor condition although all panels in the skylights have original glass. The majority of the ceiling surface is in poor condition, and is characterized by areas of severe deterioration particularly around the skylights. This deterioration appears to be associated with an ongoing untreated moisture infiltration issue.

<u>UNITS IN PLACE</u>: There is a radiator located on the east wall of the room and, although it appears to be functioning properly, there is evidence of previous leaks.

<u>DOORS</u>: There is a wood door which is painted white and provides access to Room G-09. This door and its associated brass hardware appear to be in good condition and are functioning properly.

<u>LIGHTING</u>: There are two wall sconces which appear to be in good condition and are functioning properly.



Deteriorated paint and plaster ceiling to the right of the ajar skylight, JMI, 2006.



View of the northeast corner showing deteriorated plaster and paint, JMI, 2006.

## G-11 / CARETAKER'S BATHROOM

The room was intended to serve as the bathroom for the fulltime live-in caretaker and now is a non-functional bathroom with minimal usage by National Park Service personnel.



<u>FLOOR:</u> The 1/2" square white ceramic floor tiles and white marble threshold are in good condition.

<u>WALLS:</u> The lower two thirds of the walls are covered with white glazed subway tile that is in fair condition with approximately ten cracked units. The upper portions of the walls are plastered and painted white, as are the wood door trim and cornice moldings. The plaster is in generally fair condition except for areas of deterioration below the skylight. The wood door trim is in good condition.

<u>CEILING</u>: The flat plaster ceiling contains two four-light wood louvered skylights. The skylights are in generally poor condition as is the majority of the ceiling surface. The plaster is characterized by areas of severe deterioration particularly around the skylights. This deterioration appears to be associated with an ongoing untreated moisture infiltration issue.

<u>UNITS IN PLACE</u>: The porcelain bathtub and toilet have new faucets and are inoperable. The wall mounted enameled cast iron sink [American Standard] has a new faucet and is in good condition. Above the sink is a built-in painted metal medicine cabinet with a mirrored door and interior glass shelves.

<u>DOORS</u>: There is a wood door which is painted white and provides access from Room G-10. This door and its associated porcelain hardware appear to be in good condition and are functioning properly.

<u>LIGHTING:</u> One light fixture in this room is wall mounted, and the other is ceiling mounted. Both are missing components, but otherwise appear to be in good condition.



Detail of the east wall showing deteriorated paint and plaster, JMI, 2006.



View of the non-functioning toilet and bathtub, JMI, 2006.



View of the built-in medicine cabinet, sink and walls, JMI, 2006.

# G-12 / CARETAKER'S CLOSET

The original and current use for the space is a closet.

FLOOR: The hardwood floor and threshold are in good condition.

<u>WALLS:</u> The plaster walls are painted white and appear to be in fair condition, although there are isolated cracks in the painted surface.

<u>CEILING:</u> The flat plaster ceiling is in generally good condition.

DOORS: The wood door is painted white and is missing a doorknob.

<u>LIGHTING</u>: There are two ceiling lights, both of which are missing associated elements, but otherwise appear to be in good condition and are functioning properly.



View of the closet which is currently in use by NPS staff, JMI, 2006.



General view of room G-12, JMI, 2006.



# G-13 / CARETAKER'S LIVING ROOM

The room was designed to serve as the full-time live-in caretaker's living room, and is currently used as an office/private area for staff members.



FLOOR: The hardwood floor and threshold are in good condition.

<u>WALLS</u>: The walls are painted plaster and are accompanied by a wood cornice (ogee profile) and wood baseboard. All of these wall elements are painted white to match the plaster. The walls are in fair condition, although there are large areas of peeling paint on the north wall. The interior closet walls are also painted plaster and appear to be in good condition.

<u>CEILING</u>: The flat plaster ceiling contains three six-light wood louvered skylights. The skylights are generally in good condition. The majority of the ceiling surface is in good condition and is characterized by isolated areas of minor deterioration, particularly around the skylights.

<u>UNITS IN PLACE</u>: There is a decoratively painted slate fireplace positioned on the south wall. This feature and its associated mirrored metal summer grille are in good condition. A space heater has been added adjacent to the radiator on the west wall.

<u>DOORS</u>: The east door to room G-10 is missing. There are two painted wood closet doors with brass knobs, and a paneled metal fire door painted off white. The metal door is currently painted shut and exhibits signs of previous repairs and current paint loss.

<u>LIGHTING</u>: There are two ceiling lights both of which appear to be in good condition and are functioning properly.



View of room G-13 looking west, JMI, 2006.



Detail of deteriorated paint on the north wall, JMI, 2006.



View of the slate fireplace with a faux marble finish, JMI, 2006.

# G-14 / TEA ROOM

This space was originally intended to serve as a tea room for visitors to the Theodore Roosevelt Birthplace. Its function changed during the original design phase and it became part of the museum space.



<u>FLOOR:</u> Although in good condition, the black marble steps connecting the Tea room with room G-15 contain a residue on the stair treads (possibly from a previous adhesive tape or tread protection). The terrazzo throughout this room is in good condition, exhibiting only one crack which extends from the built-in cabinetry.

<u>WALLS:</u> The wall paneling and moldings in this room consist largely of American oak. The woodwork and black marble baseboards are in good condition with minimal wear.

<u>CEILING:</u> The ceiling consists of both white non-decorative painted plaster and a large wood and glass skylight. Both the plaster and wood/glass skylight are in good condition.

<u>UNITS IN PLACE</u>: The radiators are enclosed in wood paneling with brass air vents (10) in the lower part of the display cabinet. The built-in American oak display cabinets have black marble baseboards and interior track lights. There are condensation lines noted in the interior walls of the some of the display cabinets.

<u>DOORS</u>: There is one faux grained metal door with a metal handle on the east wall. Large accordion doors with brass handles and recessed hardware provide the opportunity for separation between rooms G-14 and G-15.

<u>LIGHTING</u>: There are two ceiling lights: one decorative wall sconce, and one track light in the doorway to room G-15. They appear to be in good condition and are functioning properly.



View looking north through the entry into room G-15, JMI, 2006.



Detail of stained condensation lines inside the exhibit cases, JMI, 2006.



General view of the exhibit cases, JMI, 2006.

# G-15 / MUSEUM

This room was originally designed to function as a formal museum space and continues to be used for the same purpose. The majority of the artifacts once stored below the glass cases have been removed.



<u>FLOOR</u>: The terrazzo floor is in fair condition, and has two large cracks on two panels extending out from the built-in display cases. The museum vestibule floor consists of black marble floor and steps that are in good condition.

<u>WALLS:</u> The paneled walls and moldings in this room consist largely of American oak. The woodwork and black marble baseboards are in good condition with minimal wear.

<u>CEILING</u>: The flat plaster ceiling is painted white and is in generally good condition.

<u>UNITS IN PLACE</u>: Built-in features include: a black slate fireplace, two built-in benches to encase radiators, freestanding and built-in oak display cabinets with black marble baseboards. The east and west walls contain floor to ceiling display cases with locking glass doors. All of the locks on the cabinets were manufactured by Best. The hardware is in generally good condition, however some of the brass display knobs and pulls are missing. The interiors of the lower storage cabinets have metal shelves and wooden collection drawers on rollers. The locks have been removed from many of the lower cabinet doors. The interiors of the glass cases are illuminated by florescent lights. Many of the lower cabinets house radiator units and contain brass grilles near the floor. Although the cabinets are in good condition there are isolated areas of wear throughout.

<u>DOORS</u>: The room is accessed from Room G-02 by two painted metal entrance fire doors with brass knobs. The exterior entrance wood Dutch door with brass hardware has a window. Both doors are in good condition. In the Museum vestibule there are wood paneled walls including a wall access panel.

<u>WINDOWS</u>: There is one single light sash window on the north wall which appears to be in fair condition with minor areas of deterioration. The lower sash has been removed to facilitate installation of an A/C window unit.

<u>LIGHTING:</u> There are two eight-light chandeliers and recessed track lights. All lights appear to be in good condition and are functioning properly.



View of the central and wall exhibit cases, JMI, 2006.



Wood collection drawers below the exhibit cases, JMI, 2006.



View of radiator grilles set into cabinetry, JMI, 2006.



Metal collection drawers below exhibit cases, JMI, 2006.



Detail of a chandelier, JMI, 2006.



View of room G-15 looking north, JMI, 2006.

## FS1 / FIRE STAIRWAY

This area is the fire stairway and landings between the ground and first floor.

FLOOR: The concrete floor is in good condition.

WALLS: The white plaster walls are in fair condition with some areas of paint deterioration.

CEILING: The flat plaster ceiling is painted white and is generally in good condition.

DOORS: There is a six panel metal door painted white on the interior and faux grained on the exterior side of room G-02. Both the door and associated brass knobs and lock covers are in good condition.

LIGHTING: There is one primary light fixture

and an emergency light fixture. Both appear to be in good condition and are functioning properly.





# S1 / STAIRWAY 1

This stairway provides access between the ground level and first floor level, and is used by both visitors and National Park Service staff.



<u>FLOOR:</u> The stairs are constructed of white oak and are covered by a decorative carpet runner. The wood treads and risers appear in to be in good condition, however the carpet is experiencing areas of wear. At the top of the stairs there is a white marble threshold which is in good condition.

<u>WALLS:</u> The wall paneling and moldings in this room consist largely of American oak. The woodwork and baseboard are in good condition and exhibit minimal wear.

<u>CEILING:</u> The plaster ceiling in this space is the underside of Stairway 2. The plaster is painted white and is in good condition with isolated areas of cracking near wood moldings.

<u>UNITS IN PLACE</u>: There are two wood handrails and a balustrade both of which appear to be in good condition.

<u>LIGHTING</u>: On the north wall there is one decorative wall sconce which appears to be in good condition and is functioning properly.



View of the stairway between floors 1 and 2, JMI, 2006.



Detail of wall sconce lighting the stairway, JMI, 2006.

#### **101 / VESTIBULE**

The designed and current interpreted use is a vestibule.

<u>FLOOR:</u> The black and white marble floor and white marble threshold are in fair condition; however water staining is present near the exterior set of entrance doors.

<u>WALLS:</u> The lower half of the wall and decorative cornice are constructed of plaster and painted white; they appear to be in good condition. The wood baseboard and door trim in this room are in good condition and are painted off-white. The wallpaper on the upper half of the wall shows signs of previous repairs in which damaged areas have been in-painted. The original wallpaper is in fair condition with isolated areas of detachment.

<u>CEILING</u>: The flat plaster ceiling incorporates a decorative central medallion and crown molding. The ceiling features appear to be in good condition with no visible signs of deterioration.





Area of previous repairs to wallpaper, JMI, 2006.

<u>DOORS</u>: The double entrance wood doors are painted dark green with nickel-plated knobs and lock covers. There are isolated areas of paint deterioration near the floor as well as tarnishing of the hardware. Otherwise the doors and associated hardware are in generally good condition.

<u>LIGHTING:</u> There is one decorative light fixture suspended from the ceiling. This fixture appears to be in good condition and is functioning properly.



Detail of flaking paint and wear on the nickel plated door hardware, JMI, 2006.



Detail of staining on the marble floor, JMI, 2006.
## 102 / HALL

This space represents the original "side" hallway of the Roosevelt's family residence, and provides discrete access to the contemporary museum to the west. Theodate Pope Riddle designed the building so that the contemporary museum's presence would not compromise the visitor's appreciation of the midnineteenth century house.



 $\underline{FLOOR:}$  The floor consists entirely of square white marble tiles with small black marble tiles inlaid at the corners. The floor is in good condition and exhibits general wear and the accumulation of surfaces finishes.

<u>WALLS:</u> The decorative wallpaper covering the walls is in fair condition and exhibits some water damage and abrasions. The door trim and baseboard are painted off-white. There is paint loss and wood abrasion on one of the door frames.

<u>CEILING</u>: The plaster ceiling incorporates two decorative plaster medallions and a plaster crown molding. The ceiling features appear to be in good condition with no visible signs of deterioration.

<u>UNITS IN PLACE</u>: There is one brass decorative vent on the wall which is in good condition, although it is unclear whether this feature is strictly part of the interpretative plan or whether it at one time was functional.

<u>DOORS</u>: There is an off white painted metal door that lacks hardware on the exterior side, and a pair of double entrance painted wood doors with nickel-plated hardware and arched windows.

<u>LIGHTING</u>: There are two brass single-light chandeliers. They are suspended from each ceiling medallion, and are in good condition and functioning well.



View of Hall looking north, JMI, 2006.



View of Hall looking south, JMI, 2006.

## 103 / FRONT PARLOR

This room represents the original principal front parlor in the Roosevelt family's residence.



<u>FLOOR:</u> The floor is covered in its entirety with decorative blue carpeting which is in good condition.

<u>WALLS:</u> The walls are covered with decorative wallpaper. The baseboard and door trim are painted off-white, and the cornice is painted white. All elements are in good condition except for a small area of damage on the baseboard near the fireplace.

<u>CEILING</u>: The plaster ceiling is painted white and incorporates a central plaster medallion and decorative crown molding. All elements are in good condition.

<u>UNITS IN PLACE</u>: The east wall features a white marble fireplace mantelpiece with a marble hearth and decorative metal grate. Above the fireplace is a large over mantle mirror with a decorative gilded frame; the frame has a sign plate indicating that it was presented by New York State Division NSUS Daughters of 1812. There is also one mounted brass curtain rod adjacent to the pocket doors leading to the adjacent family parlor.

<u>DOORS</u>: The paneled metal entrance door with brass knobs leads to room 102. There are two painted wood pocket doors with decorative frosted glass panes and nickel plated hardware that lead to Room 104. The decorative glass is configured with six lights, ten half-lights and four small square lights. The pocket doors are in good condition, although there is a minimal amount of paint spatter on the glass. There are two pairs of painted and glazed French doors with glazed transoms on the north side of the room, each with interior storm doors. Although these doors are generally in good condition, the interior of the wood frame exhibits isolated deterioration.

<u>LIGHTING:</u> There is one decorative crystal six-light chandelier, suspended from the ceiling medallion, which appears to be in good condition and is functioning properly.



View of the decorative carpet, JMI, 2006.



Detail of the crown molding, JMI, 2006.



View of the decorative marble fireplace, JMI, 2006.



Detail of the over mantle mirror, JMI, 2006.



View of north east corner of the front parlor, JMI, 2006.



View of the pocket doors that lead into the family parlor, JMI, 2006.

## 104 / FAMILY PARLOR

This room represents the original family parlor of the Roosevelt family's residence.

<u>FLOOR:</u> The decorative red and black pattern carpeting is in fair condition, with worn areas on the edges at the dining room entrance.

<u>WALLS:</u> The walls are covered with decorative wallpaper. The wood door trim and baseboard are painted off-white. The baseboard and trim are painted off-white. All elements are in good condition.

<u>CEILING:</u> The plaster ceiling is painted white and incorporates a central plaster medallion and plaster crown molding. All elements are in good condition.

<u>UNITS IN PLACE</u>: The east wall features a white marble fireplace mantelpiece and hearth with a decorative metal insert. A metallic fixture is located near the floor adjacent to the fireplace and may be associated with adjusting the chimney flue. It is unclear whether this feature is strictly part of the interpretative plan or whether it was functional at one time. All elements are in good condition.

<u>DOORS</u>: The two wood pocket doors leading into the dining room are painted white and contain decorative red and frosted glass lights and nickel plated hardware. The glass lights are arranged in



View of a wall mounted flue control next to the fireplace, JMI, 2006.

the same pattern as the doors to room 103. The doors are in fair condition. One set of hardware is missing and there is paint loss and wear on the pocket door frame. The painted metal door leading to room 102 is equipped with nickel plated knobs and lock covers and is in good condition.

<u>LIGHTING:</u> The decorative four-light chandelier, suspended from the ceiling medallion, appears to be in good condition and is functioning properly.



Decorative red carpet is in good condition, JMI, 2006.



Detail of the crown molding, JMI, 2006.





Detail of the decorative chandelier, JMI, 2006.



View of the marble fireplace, JMI, 2006.



View of the southwest corner, JMI, 2006.



Detail of the decorative glass in the pocket doors, JMI, 2006.

# 105 / DINING ROOM

This room represents the original dining room in the Roosevelt family's residence. Meals were prepared in the kitchen below, and delivered to the dining room by means of a dumbwaiter concealed in the right hand closet on the east wall.



FLOOR: The floor is fully covered with decorative green carpeting that is in good condition.

<u>WALLS:</u> The walls are covered with decorative wallpaper. The wood door and window trim are painted off-white. The alcove on the east wall is framed by the two closets and features a decorative plaster arch supported by plaster corbels. Although all elements are in good condition, there is wear and loss of material in isolated areas of the wallpaper.

<u>CEILING</u>: The plaster ceiling is painted white and incorporates a central plaster medallion and plaster crown molding. All elements are in good condition.

<u>UNITS IN PLACE</u>: The fireplace surround, hearth, and mantel, on the west wall, are made from white marble with variegated grey veining. The decorative metal grate and marble are in generally fair condition; however, there are two cracks in the marble fireplace surround.

<u>WINDOWS:</u> There are three six over six wooden sash windows that are in poor condition. Significant areas of wood rot and paint deterioration are present throughout the sills. An air condition unit has been placed in one of the windows.

<u>LIGHTING:</u> There is one decorative six-light chandelier suspended from the ceiling medallion. This fixture appears to be in good condition and is functioning properly.



Detail of decorative carpet in Room 105, JMI, 2006.



Detail of plaster grape vine crown molding, JMI, 2006.



Detail of the decorative corbel, JMI, 2006.



View of the fireplace on the west wall, JMI, 2006.



View of the alcove on the east wall, JMI, 2006.



Detail of the chandelier in the dining room, JMI, 2006.

## 106 & 107 / Dining Room Closets 1 & 2

The right (south) closet accommodates the dumbwaiter, and the left (north) closet is for storage.

FLOOR: The concrete floor is in good condition.

WALLS: The painted plaster walls are in good condition.

<u>CEILING:</u> The painted plaster ceiling is in good condition. There is a ceiling mounted fan in room 107 which appears to be inoperable.

<u>UNITS IN PLACE</u>: There is a wood mounted beaded board and shelf in both rooms which are painted white to match the plaster. The interior of Room 107 has dumbwaiter access door with call button.

<u>DOORS:</u> The painted wood doors to both closets are adorned with face mounted box locks and nickel-plated doorknobs. Both doors are in fair condition, although the door to Room 106 has a crack on the top panel.





Detail of interior face-mounted box lock, JMI, 2006.



Detail of the dumbwaiter access door, JMI, 2006.



Detail of the dumbwaiter call button, JMI, 2006.

#### **108 / MUSEUM**

This room has functioned since 1923 as a formal museum space, discretely separated from the period house museum on the east.



<u>FLOOR:</u> The museum vestibule has a white marble threshold and black marble floor, of which both are in good condition. The museum has oak parquet floor that has some buckling, along with areas of wear and abrasion.

<u>WALLS:</u> The paneled walls and moldings in this room consist largely of American oak. All elements are in good condition and exhibit minimal wear. The baseboard is broken and loose in one location on the south end of the east wall, and the molding and baseboard are cracked in various locations throughout.

<u>CEILING:</u> The flat plaster ceiling is painted white, and is in generally good condition with small areas of paint loss.

<u>UNITS IN PLACE:</u> A variegated black marble fireplace with a decorative metal grille is centered on the north wall. The fireplace marble is cracked along the top, but is in good condition otherwise. Built-in curved benches with brass grilles flank the fireplace and conceal radiators. Radiators are encased in oak paneling with brass vents below each of the south wall windows. Built-in oak display cases with glass doors, brass pulls and locks are supported by wooden legs. The cases are situated along the east and west walls, and are illuminated by interior fluorescent lights. The pulls on all of the display case doors are missing.

<u>DOORS</u>: A pair of faux grained metal fire doors with nickel-plated knobs provides access to room 102. One of the fire door knobs is missing and nickel plating on the other door is heavily worn. On the room 102 side of the double doors is a pair of swinging wood doors with brass hardware. There is a hidden door with brass hardware on the north end of the east wall paneling that leads to room 101.

<u>WINDOWS</u>: There are two painted wood single sash windows on the north elevation. There are three metal casement windows with wire glass and security tape on the south elevation. One of the casement windows has been removed to accommodate an air conditioner.

<u>LIGHTING:</u> Two eight-light chandeliers and one track light are attached to the ceiling. These features appear to be in good condition and are functioning properly.



View of the museum space looking north, JMI, 2006.



Detail of the oak parquet floor, JMI, 2006.



Detail of damage along the baseboard, JMI, 2006.



View of the hidden door and passageway, JMI, 2006.



Example of cracks in the wall panels, JMI, 2006.



View of the black marble fireplace on the north wall, JMI, 2006.

# S2 / STAIRWELL 2

This stairwell provides access between the first floor and second floor levels and is used by both visitors and National Park Service staff.



<u>FLOOR:</u> The stairs are constructed of white oak and are covered by a central decorative carpet runner. The wood treads and risers appear in to be in good condition. The carpet, however, is experiencing areas of wear. At the top of the stairs there is a white marble threshold which is in good condition.

<u>WALLS</u>: The decorative wallpaper is stained and worn in some locations. The wood baseboard is painted white and is generally in good condition. There is some plaster deterioration and wallpaper loss and staining.

<u>CEILING:</u> The plaster ceiling in this space in the underside of stairway 3. The plaster is painted white and is in good condition with isolated areas of cracking near wood moldings.

UNITS IN PLACE: There is one wood handrail which appears to be in good condition.

<u>LIGHTING</u>: On the north wall there is one decorative wall sconce which appears to be in good condition and is functioning properly.



View of the staircase, JMI, 2006.



Detail of the wallpaper abrasion and markings, JMI, 2006.

## 201 / CURATOR'S ROOM

This room was designed to serve as the curator's room and currently is used to exhibit historic objects and books. There is a hidden passageway between rooms 201 and 210 on the west wall. This passageway has cork flooring and oak paneled walls and ceiling. In addition, there is also a storage space in this passageway that has a wood door with brass knobs.



<u>FLOOR:</u> The cork floor, which is in good condition, has a decorative dark cork border and wood threshold.

<u>WALLS:</u> The plaster walls and cornice are painted white and are in fair condition. General conditions include small cracks in one corner and paint loss and flaking along the picture rail. The picture rail, baseboard, and window trim are all wood and painted white to match the plaster.

<u>CEILING:</u> The ceiling consists of non-decorative plaster and appears to be in fair condition with some areas of paint loss and flaking near the window.

<u>UNITS IN PLACE</u>: On the south wall adjacent to the door there is a wall mounted Empire breaker box which is loose in its fitting. Under the window on the north wall there is a radiator encased in painted wood paneling. The paneling has areas of paint loss and wood abrasion.

<u>DOORS:</u> The wood door that leads to the hidden space connecting to Room 210 is painted off-white with an interior ceramic knob and lock cover as well as an exterior brass knob and lock cover. There is a painted metal door with ceramic knobs and lock covers that leads to room 202.

<u>WINDOWS:</u> There is a painted wood six over six sash window that has a deteriorated wood sill with some areas of paint loss.

<u>LIGHTING:</u> There is one eight-light chandelier which appears to be in good condition and is functioning properly.



Detail of chandelier, JMI, 2006.



View looking north, JMI, 2006.

## 202 / HALL

This space represents the original "side" hallway of the Roosevelt's family residence, and provides discrete access to the contemporary museum to the west. Theodate Pope Riddle designed the building so that the contemporary museum's presence would not compromise the visitor's appreciation of the midnineteenth century house.



<u>FLOOR:</u> The decorative carpeting is the same as that in room 102. There is a black marble threshold into room 201 that is cracked.

<u>WALLS:</u> The decorative wallpaper covering the walls is in fair condition and exhibits some water damage and abrasions. The wood door, trim, and baseboards are painted off white. There is paint loss and wood abrasion on one of the door frames.

<u>CEILING:</u> The plaster ceiling incorporates a plaster cornice, and appears to be in good condition with no visible signs of deterioration.

<u>UNITS IN PLACE</u>: A painted wood door stop on the baseboard is in good condition. There is a wall mounted fire alarm. A brass decorative wall-mounted gas light fixture is in good condition, although it is unclear whether it was functional at one time.

<u>LIGHTING</u>: There are two decorative wall sconces which appear to be in good condition and are functioning properly.



View of hall looking north, JMI, 2006.



Detail of inoperable wall mounted fixture, JMI, 2006.

## 203 / BEDROOM

This room represents the "master bedroom" in the Roosevelt family residence.



<u>FLOOR:</u> The decorative carpeting is the same as that in room 202, and there is damage at the seam in the middle of the room.

<u>WALLS:</u> The walls are covered with decorative wallpaper that is characterized by some discoloration. The wood baseboard and door and window trim are painted off-white.

<u>CEILING:</u> The plaster ceiling incorporates a decorative plaster crown molding. The ceiling features appear to be in good condition with no visible signs of deterioration.

<u>UNITS IN PLACE</u>: The marble fireplace surround and mantle are made from white marble with variegated grey veining. These elements are in good condition as are the decorative metal summer grilles and black marble hearth. Radiators below the north wall windows are encased in wood paneling with metal grills. The radiator covers are painted black and the metal grilles are painted white. Both are in good condition.

<u>DOORS</u>: There is a fixed-in-place wood paneled door on the south wall which was intended as part of the interpretation. The door is fitted with ceramic knob and cover and is in good condition. A paneled metal door with ceramic knobs and lock covers leads to Room 302. Although this door is in good condition, the interior lock cover is missing. A wood paneled door with a ceramic knob and an interior face-mounted knob opens to Room 204.

<u>WINDOWS</u>: The two windows each has wood six over six sash windows with interior wood louvered shutters painted off-white. The shutters are fitted with porcelain knobs. There are areas of paint loss on the window sills.

<u>LIGHTING:</u> The two decorative wall sconces which appear to be in good condition are functioning properly.



Damaged seam in the decorative carpeting, JMI, 2006.



Area of discoloration on the decorative wallpaper, JMI, 2006.

# THEODORE ROOSEVELT BIRTHPLACE NATIONAL HISTORIC SITE HISTORIC STRUCTURE REPORT



View of the east wall and marble fireplace, JMI, 2006.



Detail of the louvered shutters, JMI, 2006.



View looking southwest, door to left side of photograph is fixed-in-place, JMI, 2006.



View of north wall and sash windows, JMI, 2006.

## 204 – CLOSET/BATHROOM

This room occupies part of the space between the bedroom and nursery.



<u>FLOOR:</u> The decorative carpet floor is the same as that in Room 202, and is in fair condition.

<u>WALLS:</u> The walls are covered with decorative wallpaper that is characterized by some discoloration. The wood baseboard and door and window trims are painted off-white.

<u>CEILING:</u> The plaster ceiling incorporates a decorative plaster cornice. The ceiling features appear to be in good condition with no visible signs of deterioration. There is a recessed ceiling fan which appears to be inoperable.

<u>UNITS IN PLACE</u>: The built in wood cupboards above and below the sink are painted white and have porcelain pulls. The nonfunctioning marble sink is white with grey veining (it was never intended to function, as it has no plumbing). All elements are in good condition. There is a mounted push-button light switch mortised into the door to Room 207.

<u>DOORS:</u> There are two wood paneled doors on the north and south of this room. They are both in good condition but their associated hardware is slightly damaged.

<u>LIGHTING:</u> There is one ceiling mounted light in this room. The light appears to be in poor condition and is currently not working.



Detail of damaged porcelain door knob, JMI, 2006.



View of non-functioning marble sink, JMI, 2006.

## 206 / JANITOR'S CLOSET

This room was designed, and still serves, as a janitor's closet and storage for miscellaneous equipment.



<u>FLOOR:</u> The 1/2" square white ceramic floor tiles and white marble threshold are in good condition.

<u>WALLS</u>: The lower two thirds of the wall are covered with white glazed subway tile that is in fair condition with minimal cracks. The upper portion of the wall plaster is painted off-white along with the wood door trim.

<u>CEILING</u>: The plaster ceiling consists of non-decorative plaster. The ceiling features appear to be in good condition with no visible signs of deterioration. There is a recessed ceiling fan which appears to be inoperable.

<u>UNITS IN PLACE</u>: There are built-in wood shelves above and next to the sink. The wall mounted porcelain utility sink is in poor condition and has major cracks.

<u>DOORS:</u> There is a paneled metal door painted off-white and fitted with ceramic knobs and lock covers. The interior lock cover on the door is missing and the paint on the metal door is in poor condition. There are significant areas of flaking paint as well as disfiguration of the metal itself.

<u>LIGHTING</u>: The room is lit with one wall sconce which appears to be in good condition and is functioning properly.



View of janitor's closet, JMI, 2006.



Paint loss on metal door, JMI, 2006.



Detail of ceramic hardware, JMI, 2006.

## 207 / NURSERY

This room is interpreted as the nursery of the Roosevelt family's residence

<u>FLOOR:</u> The decorative carpeting is the same as that in room 202, and there is damage at the seam in the middle of the room.

<u>WALLS:</u> The walls are covered with decorative wallpaper, characterized by some discoloration. The wood baseboard, door and window trim are painted off-white.

<u>CEILING:</u> The plaster ceiling incorporates a decorative plaster crown molding. The ceiling features appear to be in good condition with no visible signs of deterioration.

<u>UNITS IN PLACE:</u> The marble fireplace surround and mantle are made from white marble with variegated grey veining. These elements are in good condition as are the decorative metal summer grill and black marble hearth. Radiators below the north wall windows are encased in wood paneling with metal grilles. The radiator covers are painted black and the metal grilles painted white. Both are in good condition.

<u>DOORS</u>: There is a wood door with porcelain hardware and interior face-mounted knob which opens from room 204. The painted metal panel door with ceramic knobs and lock covers opens from room 202, and is in good condition. The interior knob to this door is missing and there are small areas of paint loss. All doors are painted off-white.

<u>WINDOWS</u>: There are two painted wood six over six sash windows on the south wall. An air conditioning window unit has been added to the eastern window.

<u>LIGHTING</u>: There are two decorative wall sconces which appear to be in good condition and are functioning properly.





View of east wall including fireplace, JMI, 2006.



View of south west corner of room, JMI, 2006.

#### 208 / OUTDOOR GYMNASIUM

This room is interpreted as the outdoor gymnasium nursery, although it is not included in visitor tour (except by being referenced). The photographs below were taken from the exterior fire escape stairwell. General conditions include flaking paint on both the latticework and projecting beams.





Exterior view of the gymnasium looking east, JMI, 2006.



Exterior view of the gymnasium looking west, JMI, 2006.

## 209 / STUDY ROOM

This room was designed as a study and is currently used as the National Park Service curator's office.



<u>FLOOR:</u> The cork floor has a decorative dark cork border and threshold. The floor is in fair condition and has some worn and discolored cork tiles.

<u>WALLS</u>: The paneled walls, moldings, and baseboards in this room consist largely of American oak. The woodwork is in good condition and exhibits only minimal deterioration from wear and thermal movement.

<u>CEILING</u>: The plaster ceiling features a subtle two-step collar. The ceiling features appear to be in good condition with no visible signs of deterioration.

<u>UNITS IN PLACE</u>: There are wall-mounted oak bookcases with oak hinged doors. The wood is generally in good condition. However, the brass pulls and hardware are missing from many of the bookcase doors. Radiators are encased in oak paneling with brass grilles below each of the south wall windows.

<u>DOORS</u>: There are double oak entry doors, incorporating a glass configuration of 3 lights by 7 lights. The hardware from these doors has been removed and replaced, and there is some residual damage to the wood surfaces.

<u>WINDOWS</u>: There are metal casement windows with brass hinge latches and interior storm windows. One casement window has been removed to accommodate the installation of an air conditioning unit. Plexiglas has also been installed in this window to compensate for differences in size between the original window and A/C unit.

<u>LIGHTING:</u> There is an eight-light chandelier and two ceiling fixtures, both are in good condition.



View of the oak paneling and built-in bookcases, JMI, 2006.



Air conditioning unit installed in the pane opening, JMI, 2006.



Detail of the casement entrance door and brass hardware, JMI, 2006.

## 210 / LIBRARY

This room was designed and continues to function, as a library dedicated to Theodore Roosevelt.



<u>FLOOR:</u> The library vestibule has black marble floors that are in good condition. The library interior has cork floors with a decorative dark cork perimeter. The original tiles in the floor field measure 12" x 24" with every other course ending in a 12" x 12" tile. The floor is in fair condition; however, the tile pattern is interrupted in several areas with 12" x 12" replacement tiles, which exhibit wear and abrasion.

<u>WALLS:</u> The library vestibule has oak paneled walls that are in good condition. The library walls are paneled in American oak with an oak baseboard and cornice. Several of the wall panels are separated, particularly above the fireplace.

<u>CEILING:</u> The plaster ceiling features a subtle two-step collar. The ceiling features appear to be in good condition with a few visible previous repairs that have been repainted.



View of the library looking north, JMI, 2006.



Detail of replacement cork tiles in floor, JMI, 2006.



Detail of paneling above a projecting bookcase, JMI, 2006.



Detail of previous repairs to the paneling above altered bookcase A (see drawing on the next page), JMI, 2006.

<u>UNITS IN PLACE</u>: The marble fireplace and hearth are black marble with tan veining. Radiators are encased in oak paneling with brass grilles below each of the north wall windows. The west and east walls are covered with built-in oak bookcases with oak glazed doors and square brass knobs. Single-door bookcases consist of a two light by seven light glass configuration, and flush double-door bookcases have a three light by seven light glass configuration. Single door bookcases are set in-between double-door bookcases, and are either flush to the wall or project into the room the depth of a double door bookcase.

Single door projecting bookcases lettered A-D no longer exist, but were shown in the original floor plans. Physical evidence suggests that bookcase letter C was removed at the time of construction by the original installer with subtle alterations to the paneling above the bookcase. Bookcases A, B and D have more obvious repairs to the paneling details above the bookcases, as not all of the details are in-kind and stray from original details above the other wall bookcases. There are also alterations to the cork floors where bookcases A, B, C and D once projected. Written documentation, in the form of a letter dated August of 1955, also supports that the bookcases were removed.



Historic floor plan of library showing location of bookcases.



Black leather swinging entry doors, JMI, 2006.



Hidden door to room 201, JMI, 2006.



Alterations visible above the bookcase with in kind repairs, JMI, 2006.

<u>DOORS</u>: Two metal fire doors are painted off-white and lead to room 202. The right door has a brass door knob and the left door has a brass knocker. There are also double swinging wood entry doors with black leather upholstery and brass beading. There is a hidden door located on the north end of the east wall within one of the bookcases that provides access to room 201. All doors are generally in good condition.

<u>WINDOWS</u>: There are two wood six over six sash windows with interior storm windows in the niches on the north wall.

<u>LIGHTING</u>: There are four six-light chandeliers which appear to be in good condition and are functioning properly.



View of the library looking south into the study, JMI, 2006.



View of the library looking north, JMI, 2006.



Detail of door hidden in bookcase, JMI, 2006.



View of built-in cabinets on east wall, JMI, 2006.

# S3 / STAIRWAY 3

This stairway provides access between the second floor and third floor levels and is used primarily by National Park Service staff.



<u>FLOOR:</u> The stairs are constructed of white oak and are covered by a central decorative carpet runner. The wood treads and risers appear in to be in good condition. The carpet is experiencing areas of wear.

<u>WALLS</u>: The upper portion of the wall is oak paneling with a black marble coping that extends from the baseboard in Room 303. The marble is in good condition, and only has one minor crack. The lower half of the stairwell below the marble is covered with decorative wallpaper.

<u>UNITS IN PLACE</u>: The oak hand rail and balustrade are in good condition.

# **301 / OFFICE**

This room was designed as an office for Mrs. Wood, the director of the WRMA, and is now used as an office for National Park Service personnel.



<u>FLOOR:</u> The recent maroon carpeting covering the hardwood floor is in fair condition, and is not a part of the original design.

<u>WALLS:</u> The paneled walls, moldings, baseboard and cornice in this room consist largely of American oak. The oak elements are in good condition, exhibiting only minimal wear.

<u>CEILING:</u> The plaster ceiling is in fair condition with one area of deteriorated paint and plaster.

<u>UNITS IN PLACE:</u> Radiators are encased in oak paneling with brass grilles below each of the north wall windows.

<u>WINDOWS:</u> There are two six over six wood sash windows in fair condition with some deterioration and paint loss on the sills.

<u>LIGHTING:</u> There are two ceiling lights which appear to be in good condition and are functioning properly.



Detail of past repairs on ceiling in north west corner, JMI, 2006.

## **302 / OFFICE**

This room was designed as the WRMA work room and is now used as an office for National Park Service personnel.

<u>FLOOR:</u> The modern maroon carpeting is in fair condition, and is not a part of the original design. There is some damage at the seam of the carpet. There is a small metal threshold to Room 301 and a wood threshold to Room 303. Both locations show minimal signs of wear.

<u>WALLS:</u> The paneled walls, moldings, baseboard, and cornice in this room consist largely of American oak. The oak elements are in good condition, exhibiting only minimal wear.

<u>CEILING:</u> The plaster ceiling is in good condition.

<u>UNITS IN PLACE</u>: There are large oak cabinets with wooden knobs along the east wall. The wood is in good condition, and the pulls are largely intact. A vault is concealed in one of the cabinets. There is also a fireplace consisting of black marble, brass and oak with a black marble hearth. The fireplace is in fair overall condition, although the black slate threshold show signs of wear. Radiators are encased in oak paneling with brass grilles below the north wall window.

<u>DOORS</u>: The wood door with brass knobs provides access to Room 401 and is in good condition. The faux grained metal paneled door with brass knobs and lock covers provides access to Room 403 and is also in good condition.

<u>WINDOWS:</u> There is one six over six wood sash window which accommodates an air conditioning unit, and is in good condition.

<u>LIGHTING:</u> There are four decorative ceiling lights and one eight-light chandelier which appear to be in good condition and are functioning properly



Detail of fireplace with signs of wear on the threshold, JMI, 2006.



View of the office looking north, JMI, 2006.

# 303 / Lobby

This room was designed, and continues to function, as a lobby. The surveyed area includes the entrance alcove to room 305 and 306.



FLOOR: The terrazzo floor is in good overall condition exhibiting minor cracks in isolated areas.

<u>WALLS:</u> The paneled walls and moldings in this room consist largely of American oak. The walls and black marble baseboards are in good condition and characterized by minimal damage including cracks in molding elements and separation on the south wall. Aside from a crack near stairwell 4 the baseboards are also in good condition.

<u>CEILING:</u> The plaster ceiling has a low profile raised coffer and is in good condition. The entry to room 306 has an arched wood paneled ceiling.

UNITS IN PLACE: There is a thermometer, fire alarm and thermostat mounted on the paneling.

<u>LIGHTING</u>: There is an eight-light chandelier, and two decorative ceiling lights which appear to be in good condition and are functioning properly



View of wall paneling and arched hallway into room 306, JMI, 2006.



Crack in the baseboard, JMI, 2006.



Detail of separation in oak paneling, JMI, 2006.

## 304 / BATHROOM

The room was designed originally as a bathroom. There are two closets with doors in this room. The first closet is on the far end of the bathroom and was probably intended to be a supply closet. The second closet is nearest to the entry and was probably intended to be a janitor's closet.



<u>FLOOR:</u> All floors are covered with 1/2" white ceramic tile and three white marble thresholds, one is at the entry and the other two are at the closets.

<u>WALLS:</u> The walls are covered with 4" white glazed tiles, in good condition. As in room 405, the glazing is different than all other bathroom tiles and suggests recent replacement. There is a white-painted metal vent that is broken on one corner. Closet one has pink-painted plaster walls on the upper half and 4" tiles on the lower half; the walls are in good condition. Closet two has walls covered with 5" off white glazed ceramic tiles that are similar to the tiles in rooms 105 and 106. The tiles are in good condition.

<u>CEILING:</u> The white-painted plaster ceiling is in good condition. Closet one has a ceiling fan.

<u>UNITS IN PLACE</u>: The wall mounted porcelain sink is supported by two metal legs and has a new faucet. There is also a porcelain toilet with a replacement seat cover, a built-in mirror, a white marble stall with grey veining and a built-in ceramic toilet paper dispenser. The marble stall has a few cracks on one side. Closet 2 has one wall mounted porcelain sink that is in good condition.

<u>DOORS:</u> Both wood closet doors are painted white on the exterior and pink on the interior side. They have ceramic knobs and painted metal lock covers.

<u>LIGHTING:</u> The bathroom has one decorative wall sconce and one ceiling light. Each closet has ceiling lights which appear to be in good condition and are functioning properly



View of sink in utility closet, JMI, 2006.



Detail of missing edge of wall vent, JMI, 2006.

## 305 / BATHROOM

The room was designed originally as a bathroom.



<u>FLOOR:</u> The floor is covered with 1/2" square white ceramic tiles and white marble threshold; both are in good condition. The threshold is covered with caution strips.

<u>WALLS:</u> The walls are covered with 4"x 4" white glazed tiles. The glazing is different than all other original bathroom tiles and suggests recent replacement. The tiles are in good condition, but have some paint spatter. There is a white painted metal wall vent that is in good condition.

<u>CEILING</u>: The white non-decorative plaster ceiling has flaking paint in some areas.

<u>UNITS IN PLACE</u>: The wall mounted porcelain sink is supported by two metal legs and has a new faucet that is in good condition. Other units include a porcelain toilet with replacement seat cover, a built in mirror, a white marble stall with grey veining and a built in ceramic toilet paper dispenser. The toilet paper dispenser is broken and there are a few cracks on the side of the marble stall.

<u>DOORS</u>: The entry wood door with exterior brass knob and the interior door knob replaced with a brass plate is in good condition. The exterior side of the door has new signage.

<u>LIGHTING:</u> There is one decorative wall sconce and one decorative ceiling light both of which appear to be in good condition and are functioning properly



Detail of two cracks in the proper right marble stall jamb, JMI, 2006.



Detail of broken toilet paper dispenser, JMI, 2006.

## **306 / OFFICE**

This room was designed as a club room for both associations and is now used as an office for National Park Service personnel.

<u>FLOOR:</u> The parquet oak floor and oak threshold are in good condition. There is a closet with carpeting, which is in fair condition.

<u>WALLS:</u> The paneled walls and moldings in this room consist largely of American oak with black marble baseboards. The paneled walls and black marble baseboards are in good condition. The walls in the closet are plaster and painted white.

<u>CEILING:</u> The plaster ceiling has a low profile raised coffer border and appears to be in good condition.

<u>UNITS IN PLACE</u>: There are built-in shelves along one wall with cabinets below. Some of the cabinet doors are missing brass hardware pulls. There is a fireplace on the east wall consisting of black marble, brass and oak with a black marble hearth which is in good condition. Radiators are encased in oak paneling with brass grilles below the south wall window.

<u>DOORS</u>: The faux grained metal paneled door with brass knobs and lock covers is experiencing areas of paint loss on the exterior side. There is a wood closet door with brass knobs which is in good condition.

<u>WINDOWS</u>: The two six over six steel sash windows with wire glass are experiencing wholesale loss of paint.

<u>LIGHTING</u>: There is a five-light chandelier and two recessed track lights on the ceiling and a single fixture in the closet. These four fixtures appear to be in good condition and are functioning properly.



Detail of faux finish loss on the metal door, JMI, 2006.





View of east wall showing lowered oak paneled ceiling fireplace, JMI, 2006.



Loss of paint on steel window sash, JMI, 2006.

## **307 / ARTIFACT STORAGE**

This room was designed as a board room for the RMA and WRMA Committees, and is now used as collection storage.

<u>FLOOR:</u> There is a decorative linoleum floor and oak threshold. Both are in good condition.

<u>WALLS:</u> The oak paneled walls and oak baseboard, door trim and moldings are in fair condition. Some of the panels have cracks and are blistering, most of these conditions occur on the flat portions of the paneling.

<u>CEILING:</u> The white painted plaster ceiling has water damage and deteriorated paint and plaster near the windows.

<u>UNITS IN PLACE</u>: There are large built in oak cupboards along the walls. All of the cupboard doors are missing pulls.

<u>DOORS:</u> The entry door to 308 is wood with brass knobs and lock covers. The wood is split on the door panels.

<u>WINDOWS</u>: There are steel casement windows with wire glass and interior storm windows. The windows are in poor condition.

<u>LIGHTING</u>: There are four six-light fluorescent fixtures which appear to be in good condition and are functioning properly.



Detail of blistering and cracks in the wall paneling, JMI, 2006.





Detail of wall paneling and built in closet doors, JMI, 2006.



Detail of deteriorated surface finishes on ceiling, JMI, 2006.

## **308 / COLLECTION STORAGE**

This room was originally designed as a lobby and is now used as collection storage.



<u>FLOOR:</u> There is a cork floor and threshold that has wear and associated areas of damage. The vestibule has a black marble floor that is in good condition.

<u>WALLS:</u> There are oak paneled walls and oak baseboards, moldings, and door trim. All elements are in good condition.

<u>CEILING:</u> The white painted plaster ceiling is in fair condition with minimal paint loss/flaking.

<u>DOORS</u>: There are faux grained metal entry doors with decorative brass pulls leading to room 303. There is another wood door with brass hardware to room 310. The doors have minimal deterioration and wear; and are in good condition

<u>LIGHTING</u>: There are six fluorescent light units. The lights are additions to the original design and are in good condition.

## **309 / FILE ROOM**

This room was designed as a file room and is now used for collection storage; there are two vaults located in this room.

<u>FLOOR:</u> There is a concrete floor and wood threshold. There is a large crack in the concrete that runs east/west across the room. The floor has signs of wear and discoloration;, and is in fair condition.

<u>WALLS:</u> The west wall is plaster, and the north, east and south walls are paneled with painted woodwork, including the door trim. The concrete baseboard is painted grey to match the floor.

<u>CEILING:</u> The concrete ceiling has a mounted monitor, and is in good condition.

<u>UNITS IN PLACE</u>: There are two large safety vaults stamped [HERRING HALL MARVIN SAFE CO]. There are builtin tan-painted wood cupboards, and some have built-in yellow-painted wood collection shelves.

<u>DOORS</u>: There is a wood door with brass hardware that leads to room 310. The door has minimal signs of wear, and is in good condition.

<u>LIGHTING</u>: There is one ceiling light fixture that is in good condition.



Detail of the crack in the concrete floor, JMI, 2006.





View of the built in vault, JMI, 2006.



View of east wall, JMI, 2006.

## **310 / ARTIFACT STORAGE**

This room was designed as the MRA work room and is now used for collection storage.

<u>FLOOR:</u> The cork floor is in poor condition with damaged, stained, and worn tiles.

<u>WALLS:</u> The white-painted plaster walls have off-white-painted wood baseboards, moldings, and door trim. All of these elements are in good condition.

<u>CEILING:</u> The white painted plaster ceiling is in fair condition, and has peeling in the southwest corner of the room.

<u>UNITS IN PLACE</u>: A wood, black marble and patinated brass fireplace with an engraved decorative brass motif is located on the north wall.

<u>LIGHTING</u>: There are six fluorescent light units. The lights are additions to the original design and are in good condition.



View of room 310 into room 309, JMI, 2006.





Detail of cork floor in poor condition, JMI, 2006.



Areas of flaking and lost paint on the ceiling, JMI, 2006.



Oak, marble and patinated brass fireplace, JMI, 2006.

## S4 / STAIRWAY 4

This double staircase connects the third and fourth floors. This area is no longer part of the visitors' tour.

<u>FLOOR:</u> The oak treads and risers are finished with different lighter stain than the other stairwells. There is evidence that a round sander was used on the stair treads, indicating that they have been refinished. The stairs are covered with a decorative red carpet runner. The landing has an oak parquet floor in good condition.

<u>WALLS:</u> The oak paneled walls are curved along the landing, and have some areas of water staining below deteriorated areas of the ceiling. The wood baseboard is in poor condition with many scratched and worn areas.

<u>CEILING:</u> The plaster ceiling is painted white and is in fair condition. There is deterioration of the painted finish as well as a large area of plaster damage and water staining.

<u>UNITS IN PLACE</u>: There are two brass hand rails terminating with a leaf motif. They are in fair condition and exhibit minimal corrosion on the recessed areas of the leaf detail.

<u>DOORS:</u> There is a hidden wood door in the south landing wall panel which leads to Room 404.

<u>LIGHTING</u>: There is one wall sconce, one ceiling light fixture and one twelve-light chandelier. All fixtures appear to be in good condition and are functioning properly.





View of Stairwell 4, JMI, 2006.



View of deteriorated plaster ceiling, JMI, 2006.



Detail of brass handrail and areas of green corrosion, JMI, 2006.



Detail of damage on baseboard and lighter stained oak stairs, JMI, 2006.

## 401 / DRESSING ROOM

This room was designed as a dressing room for programmed events and is now used for collection storage.



<u>FLOOR:</u> The tongue and groove oak floor has a trap door; and is in good condition.

<u>WALLS:</u> The plaster walls are painted white and are in poor condition. There are several areas of paint loss and flaking throughout as well as plaster deterioration near the windows. The wood door trim and baseboard are painted yellow and are in good condition.

<u>CEILING</u>: The plaster ceiling is painted white and is in poor condition, There are several areas of previous repairs, paint flaking and loss and plaster deterioration.

<u>UNITS IN PLACE</u>: There is a wall mounted breaker box for the stage with a panel labeled [Albin Gustafson Co.; 205 E  $43^{rd}$  St.]. There is a wall mounted phone missing its receiver, and disconnected radiator moved from under the window.

<u>DOORS</u>: A wood door with brass hardware leads to the stage, and has a large crack in the wood, a broken brass knob and missing brass lock cover.

WINDOWS: The two six over six wood sash windows with wire glass are in good condition.

<u>LIGHTING:</u> There are two ceiling lights and 1 wall sconce. All fixtures appear to be functioning properly.





View of flaking and paint loss throughout the ceiling, and plaster deterioration in the far corner, JMI, 2006.

Detail of paint and plaster deterioration on walls, JMI, 2006.
# 402 / **BATHROOM**

This room was designed as a bathroom for the adjoining dressing room and although the dressing room and stage receive minimal use, the fixtures appear to be functioning.

<u>FLOOR:</u> The floor is covered with 1/2" square white glazed ceramic tile and a marble threshold; both are in good condition.

<u>WALLS:</u> The 5" square white ceramic tile walls are in fair condition. There are three holes above the sink indicating that a fixture or accessory has been previously removed. There is a white marble door frame with grey veining that is in good condition.

<u>CEILING:</u> The plaster ceiling is painted white and is in good condition. There is a recessed ceiling fan and metal grate which appears to be inoperable.

<u>UNITS IN PLACE</u>: The toilet stall is made of white marble with grey veining and is in good condition. There is a wall mounted porcelain sink with a single-peg pedestal, above which is a built-in mirror. Both of these features are in good condition.

<u>DOORS:</u> The wood door is painted yellow with a ceramic knob and painted metal lock cover

<u>LIGHTING</u>: There is one wall sconce that appears to be in good condition and is functioning properly.





View of single-peg pedestal sink. Note holes in the tile wall, JMI, 2006.

## 403 / SERVING KITCHEN

This room was designed as a serving kitchen and continues to be used for that same purpose.

FLOOR: The concrete floor is in good condition.

<u>WALLS:</u> The plaster walls are painted white and are in good condition. The wood baseboard and door and window trim are painted white and in good condition.

<u>CEILING:</u> The plaster ceiling is painted white and is in good condition. There is an opening in the northeast corner leading to the crawl space above stairway 4.

<u>UNITS IN PLACE:</u> There is dumbwaiter access with two metal doors and a control panel. There is also a stove and an enameled cast iron double basin sink. Both are in good condition.

<u>DOORS</u>: There is one metal fire door with 2 wire glass windows and brass bar handle that leads to the outdoor fire escape stairs. The metal door leading onto the auditorium, room 405, has a faux grained exterior and is painted white on the interior. Both doors and associated brass knobs and lock covers are in good condition. In addition there are two dumbwaiter doors which appear to be in good condition

<u>WINDOWS:</u> There is one wood sash window with wire glass which appears to be in good condition.

<u>LIGHTING:</u> There are two ceiling lights with porcelain fixtures which appear to be in good condition and are functioning properly.





View of crawl space located above Room 403, JMI, 2006.



Original stove, JMI, 2006.



Enameled double basin sink, JMI, 2006.



View of dumbwaiter doors on east wall, JMI, 2006.

# 404 / STORAGE

This room was intended to be used as a storage space and continues to serve that purpose. A number of miscellaneous items are currently stored here, including additional auditorium seating.



FLOOR: The scored concrete floor appears to be in good condition.

<u>WALLS:</u> The plaster walls are painted tan and are in fair condition with isolated areas of paint loss and plaster deterioration. The painted concrete baseboard is in good condition.

<u>CEILING</u>: The plaster ceiling is painted white and is in good condition. There are two motion sensors mounted to the ceiling.

<u>DOORS</u>: There is a wood door with brass hardware that is in poor condition, which exhibits a large crack in one panel, a broken doorknob, and missing lock cover.

<u>WINDOWS</u>: There are three six over six wood sash windows with wire glass that all appear to be in good condition.

LIGHTING: There is one ceiling light and two wall sconces with partial and missing light fixtures.



Detail of plaster and paint deterioration, JMI, 2006.



View of the window and radiator on the south wall, JMI, 2006.

## 405 / AUDITORIUM AND STAGE

This room was designed as an auditorium and stage for events and performances. Although in limited use, the room still serves its original function. There have been few modifications to this space.

<u>FLOOR:</u> There is a parquet oak floor in the auditorium that is in good condition. The stage has a tongue and groove oak floor.

<u>WALLS:</u> The walls of the auditorium and stage are made up entirely of oak paneling which is in fair condition. Many of the panels have large and moderate cracks. The oak baseboard and moldings are in good condition. The incised signage throughout the auditorium is a unique original feature and is in good condition. There are eight brass radiator grilles built into the wood paneling. They appear to be in good condition with minimal corrosion.

<u>CEILING:</u> There is a decorative plaster ceiling with three elaborately designed plaster medallions and molding. There are ceiling vents visible behind the medallions. The plaster ceiling has areas of previous repair.

<u>UNITS IN PLACE</u>: There are four wall mounted fans [General Electric] in fair condition. On the stage there is a mounted screen with a wood paneled screen cover with hidden brass pulls.

<u>DOORS</u>: There is one pair of curved oak double closet doors with brass knobs and lock covers. There are four oak double doors, and all have brass doorknobs and lock covers. All the double doors have split panels.

<u>LIGHTING</u>: There are two elaborately decorated wood sconces, nine single recessed track lights, six twelve-light chandeliers, two single spot lights, and three five-light spot light panels. All the light fixtures appear to be complete and in working order.





Detail of decorative parquet floor, JMI, 2006.



View of the auditorium, JMI, 2006.



Detail of cracks in decorative wall panels, JMI, 2006.



Detail of the decorative plaster medallion, JMI, 2006.



Decorative wood wall sconces, JMI, 2006.



Detail of the decorative parquet floor, JMI, 2006.



View of the ceiling above stage, JMI, 2006.



Detail of the decorative twelve-light chandelier, JMI, 2006.



Detail of the stage oak floor, JMI, 2006.

## 406 / BATHROOM

This area was originally designed and used as a dressing room bathroom, but is now used for storage. The fixtures are not in use.



<u>FLOOR:</u> The floors are covered with 1/2" square white ceramic tile and a white marble threshold.

<u>WALLS:</u> The walls are covered with 5" square white ceramic tile with crazed glazing, and have a few minor cracks. The wood door trim is painted yellow.

<u>CEILING</u>: The plaster ceiling is painted white and is experiencing severe deterioration of plaster and painted surfaces. There is a mounted metal vent that also shows signs of deterioration.

<u>UNITS IN PLACE</u>: There is a white marble stall with grey veining that is in good condition. There is also a wall-mounted porcelain corner sink, and a built in mirror and porcelain paper towel dispenser.

<u>DOORS:</u> The wood door is painted yellow with a ceramic knob and painted metal lock cover. There is some paint loss on the door; otherwise it is in good condition.

<u>LIGHTING</u>: There is one ceiling light that does not work properly.



Detail of inoperable corner pedestal sink with original faucets, JMI, 2006.



Detail of severely damaged plaster and paint and a corroded ceiling vent, JMI, 2006.



Detail of plaster and paint deterioration, JMI, 2006.

# 407 / DRESSING ROOM

This room was designed as a dressing room for programmed events and is now used for collection storage.



FLOOR: The tongue and groove oak flooring is in good condition.

<u>WALLS:</u> The plaster walls are painted white and are in good condition. The wood baseboard, and door and window trim are painted yellow and are in good condition.

<u>CEILING:</u> The plaster ceiling is painted white and is in good condition.

<u>UNITS IN PLACE</u>: The push-button light switch shows some signs of wear but is in good condition.

DOORS: The wood door with brass hardware which leads onto the stage is in good condition.

<u>WINDOWS</u>: The one, six over six, wood casement window is painted white and aside from an accumulation of paint is in good condition.

<u>LIGHTING:</u> There is one ceiling light and two wall sconces, one has a missing fixture. All fixtures appear to be in good condition and are functioning properly.



Detail of the window hardware, JMI, 2006.

# 408 / DRESSING ROOM

This room was designed as a dressing room for programmed events and is now used for collection storage.

FLOOR: There is an oak floor that is in good condition.

<u>WALLS:</u> The walls are painted white and are in good condition. The door trim and baseboard are painted yellow and are in good condition as is the beaded wood window frame.

<u>CEILING:</u> The plaster ceiling is painted white and appears to be in good condition.

<u>DOORS</u>: The is a wood door which leads to Room 407, is fitted with brass knobs and painted metal lock covers and is in good condition.

<u>WINDOWS</u>: There is one painted wood casement window, which, aside from an accumulation of paint, is in good condition.

<u>LIGHTING:</u> There is one wall sconce which appears to be in good condition and is functioning properly.





View of the window and north wall, JMI, 2006.

## S6 / STAIRWAY SIX

This stairway connects rooms 403 and 409.

FLOOR: The concrete floor and metal staircase are in good condition.

<u>WALLS:</u> The concrete walls are painted white and are in good condition.

<u>CEILING:</u> The concrete ceiling is painted white and is in good condition.

<u>UNITS IN PLACE</u>: There are two metal handrails that are in good condition. At the bottom landing there is one wall mounted porcelain sink.

DOORS: There is one painted metal door to room 403.

<u>WINDOWS</u>: The one single-light sash window with wire glass is in good condition.

<u>LIGHTING</u>: There is one wall sconce which appears to be in good condition and is functioning properly.





Wall mounted electrical panels, JMI, 2006.



Metal stairway between rooms 403 and 409, JMI, 2006.

# 409 / MOTION PICTURE ROOM

This room is located above room 404 and was designed to house the motion picture projector for programmed events. It currently has no use.



WALLS: The plaster walls are painted white and are in good condition.

<u>CEILING:</u> The plaster ceiling is painted white and is in good condition.

<u>UNITS IN PLACE</u>: The built-in projector housing contains a film projector pointed at the stage. There is a wall mounted telephone to backstage room 401 [Stanley & Patterson], a wall mounted hatchet, and one breaker box.

<u>DOORS</u>: The metal door which leads to stairway S6 is fitted with painted brass hardware and is in good condition.

WINDOWS: The one single-light sash window with wire glass is in good condition.

<u>LIGHTING</u>: There is one ceiling light which appears to be in good condition and is functioning properly.



Detail of wall mounted axe, JMI, 2006.



Detail of film projector space and phone to room 501, JMI, 2006.



# 410 / Film Storage

The designed and current interpreted use is a film storage room.

FLOOR: The concrete floor is in good condition.

<u>WALLS:</u> The plaster walls are painted white and are in good condition. The concrete baseboards and wood door and window trim are painted red and are in good condition.

<u>CEILING:</u> The white painted plaster ceiling is in good condition.

<u>UNITS IN PLACE:</u> There is a wall mounted wood coat rack.

<u>WINDOWS</u>: There are two single sash windows with safety glass.



Detail of the painted wood sash window and wire glass, JMI, 2006.





View of the west wall, JMI, 2006.

# S5 / STAIRWAY 5

This area is the stairway and landings between the fourth and fifth floors.

<u>FLOOR:</u> The painted metal staircase has slate treads. The slate is generally in fair condition; however there is noticeable wear on the lower level treads which have yellow and black caution tape. The painted metal staircase is generally in good condition.

<u>WALLS:</u> The plaster walls are painted white and are generally in fair condition exhibiting areas of previous repairs and paint deterioration.

<u>CEILING:</u> The painted plaster ceiling has an eightlight wire glass skylight, and a round metal vent. There is evidence of water infiltration around the skylight causing ceiling paint and plaster deterioration. This same condition is also evident around the metal vent.

<u>UNITS IN PLACE:</u> There are two wall mounted wood hand rails that are generally in good condition.

<u>WINDOWS:</u> There is one six over six wood sash window with safety glass at the bottom landing that is in good condition.

<u>LIGHTING:</u> There is one wall sconce that is in good condition.





Detail of the slate treads, JMI, 2006.



Deteriorated paint and plaster, JMI, 2006.



Deteriorated metal and glass in the skylight, JMI, 2006

# 501 / JANITOR'S ROOM

The room is currently not used, except to access the roof.

FLOOR: The concrete floors are in good condition.

WALLS: The painted plaster wall and concrete baseboard are generally in fair condition, with areas of deterioration and loss of painted finish. The exposed plaster has discolored.

The plaster ceiling is painted white and is in good CEILING: condition.

UNITS IN PLACE: There is one white ceramic sink in poor condition with crazing and several cracks. The original faucets are in fair condition, and have minimal corrosion. There is also a set of built-in cabinets with wood and glass doors which is in fair condition.

DOORS: There is one metal door to Room 502 that is in good condition.

WINDOWS: There is one single sash window with wire glass that is Detail of paint loss and plaster in good condition.

LIGHTING: There are two ceiling lights that are in poor condition. One of the lights is missing all accessories, while the other is only missing the globe.



Detail of built-in cabinetry, JMI, 2006.



Detail of ceramic sink, JMI, 2006.





deterioration, JMI, 2006.

# 502 / ROOF SERVICE ROOM

This room is used for storage and roof deck access.

FLOOR: The concrete floor is in good condition.

<u>WALLS:</u> The painted plaster ceiling is in poor condition, and has several cracks. The wall has painted frames around the French doors.

<u>CEILING:</u> The painted plaster ceiling is in good condition.

<u>DOORS</u>: There is one painted metal fire escape door and a two painted metal French doors with wire glass windows; all of the doors are in good condition.

<u>WINDOWS</u>: There are three single sash windows with wire glass, and all of them are in good condition.

LIGHTING: There are two ceiling lights, and both have missing light fixtures.



The double doors lead to the roof terrace, JMI, 2006.



Detail of the wire glass, JMI, 2006.



# 503 / VENT ROOM

This room houses a blower motor and electrical service box for the ventilation system.



FLOOR: The concrete floor is in good condition.

<u>WALLS:</u> The walls are constructed of terracotta block and mortar walls, and the south and west walls are painted black. The terra cotta is in generally good condition, and the painted finish has small areas of loss. There is a metal door frame that is in good condition.

<u>CEILING:</u> The concrete ceiling is in good condition.

UNITS IN PLACE: The room has a blower motor [GE Box] that does not appear to be functioning.

DOORS: There is a metal door to Room 502 that is in good condition.

WINDOWS: There are two single sash windows with wire glass, and both are in good condition.



The blower motor requires maintenance, JMI, 2006.



View of the painted terra cotta, JMI, 2006.



Detail of the blower motor, JMI, 2006.

## 504 / ROOF DECK

This roof deck is accessed via room 502.

<u>ROOF DECK:</u> The terracotta tiles are in fair condition and are characterized by areas of soiling, salt efflorescence, and deteriorated mortar. The copper roof and flashing are in good condition



<u>PARAPET WALLS</u>: The brick walls are in fair condition with some areas of soiling, staining and salt efflorescence.

<u>ROOFING MEMBRANE:</u> The EPDM roof membrane appears to be in good condition however, evidence of trapped moisture is present on the interior finishes below and suggests that there should be further investigations into the efficacy of this material

<u>SKYLIGHTS</u>: The skylights on the roof are perhaps the most problematic element of the entire exterior. The sets of skylights consist of both interior and exterior glazing assemblies. They were originally designed to provide natural light to stairway 5 and the dumbwaiter shaft. However, poor maintenance of these and adjacent components has prevented the skylights from operating properly. As a result, water infiltration has caused damage to interior plaster ceilings and walls. These elements require immediate attention, not only to protect the elements themselves, but to prevent further deterioration of interior elements.



View of the roof deck looking north east, JMI, 2007.



View of copper flashing and EPDM roofing, JMI, 2007.



View of French doors leading to Room 502, JMI, 2007



View of roof deck looking west showing areas of efflorescence, staining, and soiling, JMI, 2007.

# 1.6 HVAC/ELECTRICAL/FIRE SUPPRESSION

## **EXISTING HEATING SYSTEM**

Currently, heating is provided exclusively by hot water radiators distributed throughout the facility. These radiators are part of the original construction. The exact routing of the piping for these radiators is unknown, but given the quantity and locations of the radiators throughout the facility, pipe routing in the interior walls and ceilings is extensive.

Since several of the radiators are inoperable, failures in the piping system have already occurred. Furthermore, any effort to replace the existing piping would require removal and replacement of large areas of walls and ceilings. Finally, given the era of the pipe installation, asbestos insulation would likely be present and would have to be properly removed when exposed. Given the age and location of the piping, it should not be reused for any new HVAC system. A new HVAC system should provide a new and independent heating system to the facility.

# FUTURE HEATING SYSTEM

Because of the obvious aesthetic and space limitations in bringing in and installing an HVAC system throughout the facility, a large central air-handler type system is not a realistic solution. The installation of a large air handler, plus the need to route large supply and return ductwork throughout the facility, would require an unacceptable amount of demolition. Small, modular HVAC units provide the greatest ability to minimize HVAC space requirements and facility disruption. These systems include water source heat pumps and fancoils. The fancoils can be served by either a 2 or 4 pipe water system, or a refrigerant coil system. Some types of fancoils are designed to deliver air at 45 degrees or even colder. This reduces the required airflow and allows the use of small diameter (4 inch or smaller) ductwork. Each system has advantages and disadvantages. A fancoil system was proposed in the November 6, 2003 Title IV Report by Landmark Facilities Group, Inc. Their design made use of a roof-mounted air-cooled chiller and heating hot water from the basement. The 4 pipe system proposed in their report allows both simultaneous heating and cooling of different spaces. In comparison, a 2-pipe system can be used in only heating or cooling, not both. Nor is switchover between the heating and cooling modes immediate. As an example, it may take as long as a day to let the system cool down from the heating mode before the water can be run through a chiller.

One disadvantage to the air cooled chiller concept is electrical consumption. An air-cooled system will use considerably more electricity than a water-cooled system using a cooling tower. Several adjacent buildings in the area, including a similar sized building across the street, were observed with new or fairly new cooling towers installed. Another disadvantage is the need to run 4 pipes throughout the building to each fancoil or air handler location. Routing and concealing the piping in the building will be difficult, so the less piping the better.

Fancoils using (DX) are inexpensive. Their disadvantage is that typically each fancoil must be paired with its own condensing unit. If 8 DX fancoils were in the facility, it would require 8 condensing units on the roof. In comparison, multiple fancoils could be served by the same chiller and can't be part of a larger cooling system.

A water source heat pump system has the advantage of only needing 2 pipes. The heat pumps either reject heat or draw heat from the same supply water. Different units used can be in heating

or cooling modes simultaneously. The system would use a cooling tower, so less electricity would be consumed compared to an air-cooled system. Another advantage of water source heat pumps is their small size, with a typical unit being comparable in size to a residential furnace. Thus they can be moved into the building through the existing doors and halls. Demolition for moving the heat pumps into the building would not be required.

A disadvantage to heat pumps is that they are either on or off. They cycle to maintain space temperature, while a fancoil unit would modulate to maintain a constant setpoint. A water source heat pump system would have units of minimal footprint and would only require the routing of 2 pipes, a supply and return. By using propylene glycol in the system, the heat pump piping could be routed outside with no concern for freezing if the system shuts down. The system would use a cooling tower, which would reduce electrical consumption. Heating would be introduced through a shell and tube heat exchanger supplied with steam. This heating would be completely independent of the existing hot water/radiator system and would meet the space heating requirements if the existing system failed.

# **EXISTING ELECTRICAL SYSTEM**

Presently, the building is served by a Consolidated Edison 120/208V, three phase, 4 wire, electrical service comprised of:

- a) Undersized service entrance conductors that are spliced in the end cable tap box
- b) A 500 MCM cable feeder extends from the end cable tap box through a CT Cabinet and terminates in a General Electric heavy duty main electrical service disconnect switch (the main electric service disconnect switch, rated for 400A, is fused at 375A)
- c) The electrical service conductors extend from the service disconnect switch into a wireway where the conductors are tapped into multiple disconnect single circuit breaker enclosures which provide power distribution to local panelboards throughout the building
- d) A 15kW A/C to D/C rectifier is also tapped inside the above wireway, providing power to the direct current elevator motor
- e) Consolidated Edison electric meter is located inside the electric room and is connected to current transformers housed in the CT Cabinet.

The electric room is not dedicated to the electric service and shares this space with other building utilities such as sanitary lines, water and steam piping. The required working clearances in front of the electrical devices are not met due to the routing of this piping.

As noted above, the service entrance conductors are believed to be undersized to serve the existing electrical service. A 375A electrical service requires service entrance conductors to be a minimum size of 500MCM, based on an insulation rating of 75 Degrees. The existing service entrance conductors do not bear any insulation type or wire size markings, but are estimated to be #3/0 AWG conductors that are rated for 200 amps based on an insulation rating of 75 Degrees.

The majority of the existing panelboards date back to the original electrical installation in 1922 with the exception of several residential grade Murray and Thomas & Betts panelboards. The Empire/Lexington/GE panelboards are in poor condition and have exceeded their useful lives. The residential grade panelboards are in good condition but are intended to be installed in residential applications.

Although the electrical service adequately supplies power to the existing building electric loads, it does not have the capacity to supply power to any new electrical loads. The existing branch circuit wiring was last updated in 1955, is in poor condition and is still providing power to lighting and receptacles. The wiring has brittle cloth insulation due to its age and could potentially crumble apart if alterations are made to this wiring (repairing or extending existing circuits). There have been electrical shorts and fires in the past from the deteriorated electrical system. Its continued use represents an ongoing fire hazard to the site. There have been minimal electrical alterations through the years. For example, there have been several newer residential grade panelboards that have been installed in the past five to ten years and window air conditioner circuits installed in surface conduit.

A new electrical service capable of providing power for new mechanical equipment, lighting, receptacles, elevator, and other miscellaneous electrical loads should be installed. A new service rated at 800A, 120/208V, 3 phase, 4 wire should be located in a dedicated space in the basement to allow for adequate working space and eliminate other deficiencies. Distribution panelboards located near the new mechanical equipment and multiple lighting panelboards located on each floor for general lighting and receptacle circuits would be fed from a main distribution panel located at the service entrance.

# **EXISTING FIRE SUPPRESSION SYSTEM**

Currently the building has a partial fire sprinkler system, which covers only the basement. It is recommended that fire sprinkler coverage be extended throughout the building to protect the Public and the resource.

Routing fire sprinkler piping will be invasive. Except for a few areas in the basement, the historic ceilings are attached directly to the bottom of the floor structure above. It may be possible to conceal sprinkler piping which runs parallel to the floor beams. However, sprinkler piping which runs perpendicular to floor beams will most likely have to be routed below historic ceilings. Every effort should be made to minimize the intrusion by installing these lines in inconspicuous locations. Such locations may include areas behind or above display cases, pipe chases created behind existing ceiling coves, or pipe chases created by the selective use of drop ceilings. Vertical pipe runs will also be a challenge. It may be possible to conceal vertical runs within the existing radiator pipe chases, chimneys, or dumb waiter shaft. The use of concealed pendent heads or extended coverage sidewall heads may also help reduce the visual intrusion.

To minimize cutting and patching of historic fabric, it would be advantageous to design and install any electrical and HVAC modifications in concert with the fire sprinkler system. This would also reduce the number of times that the historic furnishings and artifacts would have to be moved and stored to accommodate construction activities. In view of the code deficiencies identified within this building, it is recommended that the use of the auditorium be suspended until the fire sprinkler system is installed and operational.

Michael Hromanik, PE, LEED® Accredited Professional Associate, Mechanical Engineer PLANNING ARCHITECTURE ENGINEERING INTERIORS 8600 Indian Hills Drive, Omaha, NE 68114 T 402.391.8111 F 402.391.8564 D 402.390.4244 www.leoadaly.com MPHromanik@leoadaly.com



# THEODORE ROOSEVELT BIRTHPLACE NATIONAL HISTORIC SITE

Rehabilitate HVAC and Protect Collections Miscellaneous Meeting-Compliance Probe Work

Contract No. 1443CX200041400 Task Order No. T20000414H0 PMIS No. THRB-016068

28 East 20th Street New York, New York 10003

May 5, 2008 WJE No. 2007.3697.1

Prepared for: National Park Service Denver Service Center

and

HDR Engineering, Inc. One Blue Hill Plaza Pearl River, New York 10965

Prepared by: **WJE Engineers & Architects, P.C.** 14 Washington Road, Suite 501 Princeton Junction, New Jersey 08550 609.799.7799 tel | 609.799.7088 fax



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#### Via Email (Patricia.Parvis@hdrinc.com) and Federal Express Priority Overnight

May 5, 2008

Ms. Patricia A. Parvis HDR Engineering, Inc. One Blue Hill Plaza Pearl River, New York 10965

Re:	Project Title:	Theodore Roosevelt Birthplace National Historic Site Rehabilitate HVAC and Protect Collections Miscellaneous Meeting-Compliance Probe Work
	Project Location:	28 East 20th Street New York, New York 10003
	Contract No.	1443CX200041400
	Task Order No.	T20000414H0
	PMIS No.	THRB - 016068
	WJE No.	2007.3697.1

Dear Ms. Parvis:

At your request, which was made on behalf of the Denver Service Center of the National Park Service, WJE Engineers & Architects, PC (WJE) performed a structural investigation of the Theodore Roosevelt Birthplace National Historic Site located at 28 East 20th Street in New York, New York. The investigation was performed under an existing Indefinite Delivery/Indefinite Quality (IDIQ) contract with the National Park Service and the Amendment of Solicitation/Modification of Contract No. 1, which became effective 21 September 2007.

The purpose of this investigation is to help facilitate the proposed heating, ventilating and air conditioning work and other future improvements by others, such as electrical, information technology, and fire suppression while retaining as much of the historic fabric of the building and its finishes as feasible. The initial scope of this work was established in the National Park Service's Request for Proposal and the project meeting between the National Park Service, HDR Engineering, Inc., John Milner Architects, Inc., and WJE. The project meeting was held at the Theodore Roosevelt Birthplace National Historic Site on 16 August 2007. The parties mutually agreed that the objectives of this investigation are to:

- Expand upon the present knowledge and understanding of the structural system of the building
- Identify the locations of plenums and chases, such as the space above the suspended ceiling, concealed compartments, and pipe chases set within the walls
- Identify the structural system and its physical condition
- Supplement the Draft Submission of the Historic Structure Report written by John Milner Architects, Inc. as a subconsultant to HDR Engineering, Inc., dated May 2007.



This work consists of a multi-task effort of document review, as-built construction survey, visual structural condition survey, dimensional survey, non-destructive probe openings, and an evaluation of findings. A summary of the topics discussed, questions to be answered, qualifiers, possible investigative techniques, and other findings from an initial walk through survey, performed on 16 August 2007, are given in the meeting notes recorded by HDR Engineering, Inc.

A more detailed investigation was performed by WJE between October and December 2007. This report presents WJE's findings and also supplements Section 1.3 Physical Description, Section 1.4 Character Defining Features, and Section 1.5 Condition Survey of the Historic Structure Report. It also provides a description of the structural framing, observations, test results, and discussion. Supporting documentation includes photographs, sketches, and condition survey drawings. The condition survey drawings may be used as a baseline to monitor future conditions.

# **Document Review**

The documents listed below were considered during our investigation. These were listed in ascending chronological order with some having been furnished for review and others acquired by WJE.

- Second Report of the Joint Committee on Concrete and Reinforced Concrete, November 20, 1912
- *"Cinder Concrete Floors"* written by G.B. Waite published in *ASCE Transactions*, Paper No. 1312, Volume LXXVII, December 1914
- *"Cinder Concrete Floor Construction Between Steel Beams"* written by G.E. Strehan and H. Perrine published in *ASCE Transactions*, Paper No. 1341, March 3, 1915
- Authorization No. 8, May 25, 1921
- Transmittal Letter written by Ms. Theodate Pope Riddle (Architect of Record), New York, New York, June 8, 1921
- Authorization No. 10, June 23, 1921
- List of Bidders, June 24, 1921
- Transmittal Letter written by Ms. Theodate Pope Riddle, New York, New York, June 24, 1921
- Progress Report written by Ms. Theodate Pope Riddle, New York, New York, July 21, 1921
- Certificate of Occupancy No. 7213 issued by the Bureau of Buildings for the Borough of Manhattan, 1923 (Appendix A)
- A Retrospective on Cinder Concrete Draped-Mesh Floor Systems of the Early Twentieth Century presented by Anthony M. Dolhon, PE and Carina G. Santos to the ACI 2002 Spring Convention, 2002 (Appendix B)
- ASTM D4580-03 Standard Practice for Measuring Delaminations in Concrete Bridge Decks by Sounding, 2003
- Historic Structure Report: Theodore Roosevelt Birthplace National Historic Site written by John Milner Architects, Inc., Chadds Ford, Pennsylvania as a subconsultant to HDR Engineering, Inc., Pearl River, New York, "Draft" May 2007
- Drawings titled, "Rehabilitate HVAC System to Protect Collection, Schematic Design 100% Draft" prepared by Leo A Daly, June 25, 2007
- Meeting Notes by HDR Engineering, Inc., Pearl River, New York, August 16, 2007
- Meeting Notes by HDR Engineering, Inc., Pearl River, New York, October 31, 2007



# **Preliminary Building Survey**

On 16 August 2007, WJE performed a joint walk through visual survey with National Park Service, HDR Engineering, Inc., and John Milner Architects, Inc. in preparation for drafting a written Request for Proposal. The survey identified several potential probe sites, which were understood to likely evolve as information on the structure is obtained and as the potential opportunities for routing future utilities become apparent. The initial list of potential probe sites included:

- Basement structure
- Leak path survey to identify the source of water leaks causing or contributing to the concrete distress in basement, peeling paint and wall distress at the top of Stair S5
- Terrace condition with a close-up examination of the terrace joints
- Open joints in penthouse brick masonry and vertical crack in the brick masonry
- Cavity beneath the finished floor in Dressing Rooms 401 and 408
- Attic space above Preparation Room 403 and Stair S4 and condition of walls above the ceiling
- Dumb waiter shafts in Preparation Room 403
- Cavity above vaults in Vault Room 309
- Ceiling vents in Auditorium Room 405
- Electrical boxes, light fixtures, and smoke detectors in Auditorium Room 405
- Ceiling vent in Closet 406
- Cavity above the ceiling finishes at ceiling vents in Restroom 402
- Wall vents behind the wood paneling in Auditorium Room 405
- Separations in the base molding in Auditorium Room 402 and other base molding openings
- Exit sign covers in Auditorium Room 406
- Chimney flues in Bedroom 203, Front Parlor 103, Family Parlor 104, and Museum 108
- Window seat vents in Nursery 207
- Wall vent in Hall 102
- Previously disturbed wall paneling in Library 210
- Window seat vents in Office 306
- Wall vents in Room 304
- Plenum above the light fixtures in Office 306.

A subsequent progress meeting was held on 31 October 2007. The meeting modified this list and limited the survey to openings of at least 4 inches in diameter that may permit future ducts.

## **HVAC** Renovation

A review of the Leo Daly drawings reveals:

- New conduit and piping to replace the service cars in the dumb waiter
- New opening in the walls of the dumb waiter shaft on the Mezzanine floor
- Utilizing the existing opening of the dumb waiter shaft on the First Floor
- New opening in the walls of the dumb waiter shaft on the Second Floor
- New opening in the north-south orientated center load-bearing wall on the Second Floor
- Three new condensing units installed on the penthouse roof.



#### Primary Test Methodologies

The following survey and test methods were employed in performing the work described in the original Request for Proposal, as modified by subsequent progress meetings held on-site and via teleconferences. The resulting scope of work was generally accomplished utilizing a "low-tech" approach to performing the condition survey with the potential for using many of the more technologically advanced test methods as well as destructive approaches temporarily set aside pending a further assessment of their need. The methodologies for these surveys and tests are discussed below.

#### As-Built Structural Survey

WJE performed an as-built construction survey of the structural system within readily accessible areas of the building. The survey included the identification of notable structural elements and details of construction. The findings were recorded on survey sheets based on the Historic Structure Report drawings:

- Construction materials (i.e., structural steel, cinder concrete, steel reinforcement)
- Size and orientation of structural members
- Orientation of wire mesh used in the floor slabs
- Description of existing structural repairs or modifications
- Location of cavities concealed behind decorative wall finishes or above ceiling finishes
- Type of roof construction, location of roof drains, and other penetrations
- Location of floor penetrations
- Location of load-bearing walls
- Locations of applied loads, rooftop equipment, suspended ceilings, and supported duct work
- Location of unusually heavy loads
- Deviations from existing construction documents.

The survey made use of readily accessible openings, such as removable cover plates, fixtures, or grilles whenever possible to gain views into or behind assemblies. Views into ducts, flues, and shafts were also used in the survey.

#### Structural Condition Survey

The structural condition survey examined the condition of the building structure, such as the types and patterns of distress, including cracks (i.e., size, depth, type, and pattern), open joints, water leakage, efflorescence stains, concrete delaminations and spalls, and other notable conditions. The as-built structural survey and structural condition survey were performed concurrently.

#### **Delamination Survey**

A sounding survey was performed at selected areas in general accordance with ASTM D4580-03 *Standard Practice for Measuring Delaminations in Concrete Bridge Decks by Sounding*. The survey utilized a "T" shaped rotary percussion sounding device model Delam 2000, manufactured by Philip K. Clark Company, Inc. that has two hardened steel rotary units that spin when rolled over the surface of the concrete, striking the surface with sufficient force to create a sound. A distinct ringing sound is created when the device passes over material that is well bonded to the underlying substrate and a dull or hollow sound is created when it passes over a de-bonded surface.



Concrete delaminations are planar separations within the concrete, usually at the level of the reinforcing steel. It is among the first signs that may appear in deteriorating reinforced concrete. In general, delaminations can be caused by freeze-thaw action or by corrosion and subsequent expansion of the embedded steel reinforcement. The expansive force induces an outward thrust on the concrete, causing the concrete to crack or form a spall (a fragment that detaches from the larger mass). Early stages of delamination are not readily visible on the surface of the concrete, but they can be detected with non-destructive sounding techniques.

#### Borescope Survey

A fiber-optic borescope was used to observe the inside of enclosed and inaccessible spaces in an effort to survey the location and contents of wall cavities. A thin metal tube containing a bundle of optical fibers is inserted through a 3/8 inch diameter opening. An attached light source and eye piece allow the inspection of the hidden space with minimal disruption to the enclosing materials. This type of survey is frequently used for building facade and cavity wall inspections.

#### **Elevation Survey**

Floor-to-floor and floor-to-ceiling elevations were measured to determine the amount of space that is available above the suspended ceilings.

#### Metal Detector Survey

A metal detector (such as the Fisher Meter used by WJE in this survey) is a device that generates a magnetic field. When a magnetic material is encountered, the field is disturbed in an amount that varies in relation to the size and proximity of the object. WJE performed this survey for embedded metals in an effort to locate reinforcing in the concrete foundation walls and embedded steel beams and columns encased in concrete or masonry.

#### Reinforcement Survey

A survey was made of readily accessible structural members, floor slab beams, and embedded steel reinforcement in order to quantify sizes, depths of cover, placement, and conditions. This survey utilized a variety of devices, including a Protovale CM-9 Cover Meter, a Fisher rebar locator and a metal detector, digital calipers, and a Krautkramer Branson CL5 Ultrasonic Thickness Gauge.

#### **Secondary Test Methodologies**

Other applicable investigative methods and laboratory studies had been initially proposed, but it was decided that those methods would be held in reserve pending the findings of the methods described above. Brief descriptions of these additional, more technologically complex methods follow.

#### **Compressive Strength of Concrete**

Many important properties of concrete can be determined from compressive strength testing, such as shear strength, tensile strength, modulus of elasticity, and durability. These tests would require the removal of core samples from the structure.



#### Ground Penetrating Radar

This method utilizes high-frequency electromagnetic waves to reveal subsurface conditions without the need to disturb the surface. It can be used to obtain information on embedded structures, voids, faults in a material, etc.

#### Impact Echo

This method can detect the size and location of significant concrete flaws such as honeycombing, debonding, delaminations, cracks, voids, and cold joints. Although it only requires access to one side of the concrete surface, it can be used to measure the thickness of concrete assemblies. This method involves sending a mechanical pulse into the surface and analyzing the returning waves caused by deficiencies within the concrete.

#### Impulse Radar

Electromagnetic waves are pulsed into a material and read by an antenna receiver. The reflected waves are altered by changes in materials, voids, or buried objects.

#### Infrared Thermography

Infrared thermography is a non-destructive test used to detect thermal patterns across a given surface. The variations in patterns can indicate the presence of moisture, voids, or deterioration within a wall system.

#### Spectral Analysis of Surface Waves

This method was developed to read wave velocities and profiles in layered systems where access to the material is only available on one side. It is useful for locating delaminations, measuring the thickness of slabs or the thicknesses of multiple layers. The equipment is identical to that used for impact echo testing (except for the addition of a second receiver), so the two tests are often performed jointly.

#### Ultrasonic Pulse Velocity

Also referred to as pulse velocity, this is a standard test for assessing concrete that utilizes a transmitter and receiver to pass ultrasonic energy directly through the material. The resulting velocity may indicate the density of the material. Access to both sides of the material is required.

#### Push Camera Survey

The push camera is commonly used for storm pipe inspections and may have application to flue inspections. This method has a much longer reach than a borescope since it uses a video camera lowered on cables or mounted on a robotic crawler, which allows views down the length of inaccessible vertical, horizontal, or irregular shafts.

## **HSR Section 1.3 Physical Description Supplement**

#### Foundation

**Document Review:** Authorization No. 8 and its accompanying transmittal letter written by Ms. Pope Riddle during the construction period indicates that Tide-Water Building Company was approved to use standard removable wall forms supplied by Liomin & Wales Company instead of wood forms for concrete walls in the basement.



The progress report, dated 21 July 1921, prepared by Ms. Pope Riddle indicates that, "...all of the [load-bearing foundation] walls of this building now rest upon a bed of rock and there is absolutely no danger of settlement."

*As-Built Structural Survey:* An as-built structural survey of the foundation as viewed from within the basement revealed an east-west orientation of the beams in the ceiling, relatively wide interior north-south oriented walls, and the use of conventional concrete used in the construction of the perimeter walls, center north-south wall alongside the stairs, and the multi-wythe brick masonry alongside the stairs. These structural elements are indicative of load-bearing walls.

The wall to the west of the stairs is constructed of 1 foot 8 inches thick plain concrete. The wall to the east of the stairs is constructed of 12 inch thick, multi-wythe brick masonry. All other walls within the basement are partitions used to separate spaces.

The load-bearing foundation walls of the basement are constructed of conventional concrete, known in historical publications as "stone" concrete. The "stone" designation was commonly used in early concrete literature to refer to a specific type of concrete used in the early twentieth century and to distinguish it from "cinder" concrete. Both types were commonly used at the time of construction. Today, the word "stone" has been dropped in common usage.

Other exposed brick masonry walls within the basement, such as the walls around the security safe, are non-load bearing partition walls. Walls around the storage closets and restrooms, which are covered with plaster finish, conceal 4 inch thick hollow clay tile, also known as speed tile.

A close-up visual examination of the load-bearing foundation walls, particularly in Room B-11, revealed a regular pattern of surface indentations indicative of the use of removable forms consistent with Authorization No. 8 written during the time of construction.

An as-built structural survey of the under floor space, located at the south end of the basement, revealed that the space is divided into east and west sections. The foundation walls and the slab on ground are constructed of conventional concrete. The under floor space at the south end of the basement was accessible through a hatch opening. The ceiling slab, which is the underside of the Ground Floor slab, is discussed below in the Floor Construction section (Photos 13-20).

A close-up visual survey along the north wall of the basement indicated no openings between the basement and the sidewalk vaults. There were no apparent repairs made to walls that would suggest that openings or passages previously existed and have since been filled.

*Metal Detector Survey:* A metal detector survey of accessible areas of the perimeter concrete walls and the concrete center wall revealed no embedded reinforcing bars or steel columns, in particular columns located beneath the bearing seat of the floor beams. Therefore, based upon the lack of embedded steel reinforcement, WJE concluded that the foundation walls are un-reinforced, also known as plain concrete.



## **Floor Construction**

**Document Review:** Authorization No. 10, dated 23 June 1921 authorizes an award to A & C Pierce, Inc. for furnishing and installing reinforced concrete floor and roof arches, including the beam and girder connections.

A progress report, dated 21 July 1921, prepared by Ms. Pope Riddle indicates that the first and second tiers, which correspond to the Ground Floor and the First Floor, respectively, are supported by structural steel beams. The report also suggests that the upper floors are also similarly supported by structural steel beams.

The Certificate of Occupancy No. 7213, dated 1923 issued by the Bureau of Buildings for the Borough of Manhattan, indicates that the live load floor capacity for the Ground Floor, which the Certificate refers to as the Basement, and each of the upper floors, is 100 pounds per square foot.

*As-Built Structural Survey:* An as-built structural survey within the basement revealed that there is no suspended ceiling, and therefore the underside of the Ground Floor slab is fully exposed. The slab appears to be constructed of reinforced concrete supported on concrete beams (Photos 1-3). However, upon close-up examination of the concrete used in the slab and a subsequent metal detector survey (discussed below), WJE observed that the beams are not conventionally reinforced concrete beams, but rather structural steel beams encased in cinder concrete used for fire protection.

The structural steel beams span in the east-west direction and are supported at their ends on the foundation walls. The embedded steel beams are not readily visible. A survey of the overall beam encasement revealed that the concrete encasement varied from 9 to 11 inches wide by 9-1/2 to 13 inches deep measured below the bottom of the slab. The beam spacings vary with spacings up to 7 feet on center. The bearings of the steel beams were not readily visible, but the type of construction suggests that the beams extend several inches within the load-bearing wall with their ends fully encased inside the wall.

A visual survey of the underside of the Ground Floor slab revealed pipe hangers, trapeze hangers, and electrical conduit suspended from the underside of the slab and from the bottom flange of the structural steel beams. WJE also observed small diameter pipe penetrations, generally less than 6 inches in diameter with openings chipped through the floor slab, rather than core drilled (Photos 4-5). One exception was an opening formed in the concrete that is most likely an abandoned coal shoot or fireplace clean out shoot (Photo 6).

A pipe penetration in the ceiling above Room B-05, which corresponds with the floor of Room G-07 Men's Room, enabled WJE to measure the thickness of the Ground Floor slab. The thickness is 8 inches.

A visual survey of the space above the archive vaults revealed that the construction of the Fourth Floor slab (i.e., ceiling above the Third Floor) was similar to that used in the Ground Floor slab. WJE observed that the floor beams span in the east-west direction and bear on multi-wythe brick masonry walls. The beams are spaced at 6 feet on center (Photos 9-10). Elsewhere on the upper floors, the floor finishes and the suspended ceilings generally conceal the structural floor slab.



A visual survey of the under floor space in Room 403 Dressing Room revealed existing pipe and electrical conduct below the wood flooring (Photos 59-60). The partition walls bear on structural steel beams encased in concrete.

WJE estimates that for the outer dimension of the beam encasement (9 to 11 inches wide by 9-1/2 to 13 inches deep) plus the thickness of the floor slab (8 inches) less the concrete cover (2 inches), the structural steel beams are approximately 5 to 7 inches wide by 13-1/2 to 17 inches deep.

*Metal Detector Survey:* A metal detector survey using a Fisher Meter revealed that the floor beams consist of structural steel beams encased in cinder concrete. These findings confirmed the construction period progress reports that describe the use of structural steel beams.

**Reinforcement Survey:** A reinforcement survey of the exposed wire mesh embedded within the cinder concrete slab revealed that for the primary wire reinforcement used in the ceiling above Stair FS-0 and oriented in the north-south direction, the wire measures 0.238 to 0.240 inch in diameter and spaced at 4-1/2 inches on center (Photo 7). Similar values were measured for the primary wire reinforcement in the ceiling above Room B-06 (Photo 8) and above Room 309.

*Structural Analysis:* Although a numerical analysis of floors loads was not performed and was beyond the scope of this investigation, a preliminary analysis using period load tables for the design of cinder concrete loads was performed. Based upon the reinforcement table from the Proposed Building Code of 1913 in New York City and cited in the paper titled, "Cinder Concrete Floors," written by G.B. Waite and published in ASCE Transactions in December 1914, the uniform live load per square foot area is 100 pounds per square foot for floor spans up to 7 feet in length. The live load is based upon load testing. This value is consistent with the Certificate of Occupancy issued by the city.

## **Roof Construction**

**As-Built Structural Survey:** An as-built structural survey of the roof slab is generally concealed by a plaster ceiling suspended from the roof slab. Nevertheless, within the attic space above Room 403 Preparation Room, we can observe the construction of the roof slab along the east wall and the south wall. A visual survey revealed the similar type of construction as the Ground Floor slab and the Fourth Floor slab. The roof slab is constructed of cinder concrete with draped wire mesh supported on structural steel beams encased in cinder concrete for fire protection. The structural steel beams span in the east-west direction and are supported at their ends on the brick masonry walls. Pipe hangers and electrical conduit are suspended from the underside of the slab and from the bottom flange of the structural steel beams (Photos 11-12).

## Wall Construction

*As-Built Structural Survey:* An as-built structural survey was performed in the space above the archive vaults in Room 309 (Photos 21-24), the attic space above Room 409 Preparation Room (Photos 11-12), and the roof penthouses in Room 503 Vent Room (Photo 25). The survey revealed that the perimeter walls and also the center wall, which is situated directly above the concrete foundation wall in the basement, are constructed of load-bearing, multi-wythe brick masonry.

*Borescope Survey:* A borescope survey was performed through openings in the decorative wood paneling in the auditorium. The survey revealed hollow clay tile backup wall (Photos 61-64).



Ms. Patricia A. Parvis HDR Engineering, Inc. May 5, 2008 Page 10

### **Pipe Chases**

**As-Built Structural Survey:** An as-built structural survey that was performed in the basement, Room 309 Vault Room, and in the attic space above Room 403 Preparation Room. The survey also revealed pipe chases set inside the concrete foundation walls in the basement extend upwards in the brick masonry on the upper floors. At locations where the chases are visible, WJE observed that the spaces were filled with piping and conduit (Photos 26-29). However, one chase located at the north end of the east wall was empty of pipes and other conduit. On other intermittent floors the chases were not readily visible and were concealed (Photo 30).

#### **Dumb Waiter Shaft**

*As-Built Structural Survey:* An as-built structural survey of the dumb waiter shaft performed from within the elevator pit, revealed a concrete foundation wall below the Ground Floor and brick masonry above the Ground Floor (Photos 31-36). Within the building, the dumb waiter is accessible from within closets (Photos 37-40).

#### Abandoned Chimney Flue

*As-Built Structural Survey:* An as-built structural survey revealed that an abandoned fireplace chimney extends from the basement in Room B-10 Boiler to the roof (Photo 41-44). The chimney is constructed of concrete in the basement and brick masonry above and lined with clay tile.

#### **Fireplace Flues**

*As-Built Structural Survey:* An as-built structural survey of the fireplace chimneys was performed in the period rooms, archive room, and office. The survey revealed that the chimneys are constructed of brick masonry and the flues are lined with clay tile (Photos 45-58). The flue openings measure approximately 6-8 inches square. The flues in the archive room and the office were welded in the closed position (Photos 54 and 56).

#### **Roof Terrace and Penthouse**

*As-Built Structural Survey:* An as-built structural survey revealed load-bearing, brick masonry walls with encased structural steel columns, and terrace pavers (Photos 67-74).

## **HSR Section 1.4 Character Defining Features Supplement**

*Structural Hollow Clay Tile:* This material can be observed directly in various substrate locations, such as the basement, auditorium, archive vault, and the rooftop penthouse. It is a fired clay, lightweight and fire-retardant structural material, used in non-load-bearing partitions. It appears unfinished or painted, and it may also serve as a back-up wall for the application of more decorative finish materials in other locations. The assemblies viewed did not appear to be grout filled or reinforced.

**Brick Masonry:** The exterior walls of the non-street-facing elevations are three wythe, load-bearing, brick masonry walls. The brick is typically placed in a common bond with a 6th course header. Brick is also used for some interior partitions, such as the central dividing wall.

*Conventional "Stone" Concrete:* The foundation walls are constructed of conventional "stone" concrete, known as such because of the use of stone for the aggregate. The compressive strength of the concrete foundation walls is assumed to be in the vicinity of 3,000 pounds per square inch, which was a common



value for this material in the early twentieth century, although no testing of material samples was performed to verify this value.

*Cinder Concrete with Draped Wire Floor System:* The floor slab system utilized cinder concrete in combination with draped wire mesh. The wire mesh was draped over the top flange of structural steel beams. The concrete usually used was a lightweight type that included cinders, generally derived from the burning of coal, as the aggregate. The bottom flanges of the steel beams project below the flat slab bottom and they are typically encased by the concrete, thereby protecting the steel during fire. The pattern of the boards that made up the formwork for the system is clearly visible. This concrete slab and beam encasement system was accepted as being a fire resistant floor system.

*Structural Steel:* Original construction documents indicate that structural steel beams were used in the framing of the floor and roof assemblies. Although the steel beams were not observable, confirmation of their presence is supported by the presence of the concrete encasements that drop below the bottoms of the flat slabs and by readings obtained when those encasements were scanned with a metal detector. No signs of distressed steel, such as corrosion staining or concrete spalling at the encasements, were observed in the areas viewed inside the building. Exterior steel, such as the lintel over the door of the roof penthouse, exhibits damage from exposure to the elements.

# **HSR Section 1.5 Condition Survey Supplement**

#### Structural Condition Survey

Efflorescent staining on the walls within the under floor space of the basement suggests that the floor has a tendency for flooding up to approximately 3 inches in depth. At the time of this survey, there were no visible water leaks from plumbing within this space.

A structural condition survey revealed water damaged decorative wood paneling in Room 406 Auditorium from the piping for the toilet and sink in Room 402 Restroom (Photos 65-66). Open joints in the rooftop terrace (Photos 67, 69-70) and exterior brick masonry of the roof top penthouses (Photos 67, 71-74) contributed to water leaks and spalling of the hollow clay tile and suspended ceiling above stair S4 (Photo 68).

WJE observed that on the Ground Floor, the floor terrazzo was cracked. The crack extends on the north-south directly above the brick masonry load-bearing wall, which is located alongside the stairs in the basement.

This investigation did not include material sampling, destructive probe openings, laboratory testing, structural load capacity analysis, evaluation of findings, or rehabilitation documents. The scope of this work was not intended to be an exhaustive investigation of the structural members, but rather be sufficient to supplement the Historic Structure Report. For example, it was not necessary to document the location of every beam.



Ms. Patricia A. Parvis HDR Engineering, Inc. May 5, 2008 Page 12

This letter is based upon information available at the time of WJE's analysis. If additional facts or information become available, WJE will consider that information and amend and/or supplement this letter as necessary.

If you have any questions, please contact the undersigned project manager.

Very truly yours,

## WJE ENGINEERS & ARCHITECTS, PC

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Anthony M. Dolhon, PE Project Manager and Senior Associate

AMD:gb Enclosures: Photos 1-74 Table 1 Drawings Appendix A Appendix B



**PHOTOS** 





Photo 1. Overview of the underside of the Ground Floor as seen in the basement above Room B-10 Boiler Room



Photo 2. Overview of the underside of the Ground Floor as seen in the basement above Room B-10 Boiler Room





Photo 3. Overview of the underside of the Ground Floor as seen in the basement above Room B-02 Electrical Junction Box Room



Photo 4. Floor penetration in the ceiling above Room B-05, which corresponds with the floor in Room G-07 Men's Room




Photo 5. Floor penetration in the ceiling above Room B-10 Boiler Room



Photo 6. Formed opening in the concrete foundation wall at the ceiling with brick closure in the fireplace clean out shoot in Room B-01 Hallway





Photo 7. Floor penetration in the ceiling above Stair FS-0 with exposed wire reinforcement in the slab with wire oriented in the north-south direction (wire measures 0.238 to 0.240 inch in diameter and spaced at 4-1/2 inches on center)



*Photo 8. Floor penetration in the ceiling above Room B-06 with exposed wire reinforcement in the slab with wire oriented in the north-south direction* 



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Photo 9. Space above the suspended ceiling above the archive vaults in Room 309



Photo 10. Space above the suspended ceiling above the archive vaults in Room 309





Photo 11. Suspended ceiling above Stair S-4 and the underside of the roof slab



Photo 12. Suspended ceiling above Room 403 Preparation Room and the underside of the roof slab



Photo 13. Overview of the East section of the under floor space

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Photo 14. Overview of the West section of the under floor space





Photo 15. Efflorescence staining on the east wall of the under floor space at the beam seat



Photo 16. Efflorescence staining on the west wall of the under floor space





Photo 17. Efflorescence staining on the center wall of the under floor space



Photo 18. Efflorescence staining on the south east corner of the under floor space with pipe chase on the south wall





Photo 19. Close-up of the pipes in the pipe chase on the south wall of the under floor space



Photo 20. Typical floor penetration in the underside of the Ground Floor seen in the under floor space





Photo 21. Space above the archive vaults in Room 309



Photo 22. Space above the archive vaults in Room 309





Photo 23. Space above the archive vaults in Room 309



Photo 24. Hollow clay tile manufacturer seen in the space above the archive vaults in Room 309



Photo 25. Hollow clay tile used in Room 503 Vent Room



Photo 26. Piping and conduit in the pipe chase in Room 403 Preparation Room





Photo 27. Abandoned piping and conduit in the pipe chase in Room B-05



Photo 28. Piping and conduit in the pipe chase in Room B-10 Boiler Room





Photo 29. Empty pipe chase in the east foundation wall adjacent to Room B-03 Restroom



Photo 30. Concealed pipe chase behind the storage shelves in the west wall in G-15 Museum





Photo 31. Concrete foundation wall in the dumb waiter pit



Photo 32. Brick masonry in the dumb waiter shaft above the Ground Floor





Photo 33. Brick masonry in the dumb waiter shaft above the Ground Floor



Photo 34. Brick masonry in the dumb waiter shaft above the Ground Floor





Photo 35. Underside of one of two dumb waiter cars



Photo 36. Dumb waiter's manufacturer plaque





Photo 37. Dumb waiter access in Room G-09 Kitchen



Photo 38. Dumb waiter access in the closet of Room 107





Photo 39. Dumb waiter access in the closest of Room 306 Office



Photo 40. Dumb waiter access in Room 403 Preparation Room





Photo 41. Abandoned fireplace chimney in Room B-10 Boiler Room



Photo 42. Flue opening inside the chimney in Room B-10 Boiler Room





Photo 43. Fireplace chimney concealed behind the closet doors in the Tea Room



Photo 44. Fireplace chimney at the roof





Photo 45. Fireplace and chimney flue in Room 103 Front Parlor



Photo 46. Fireplace and chimney flue constructed of brick masonry in Room 103 Front Parlor





Photo 47. Chimney flue lined with clay masonry in Room 103 Front Parlor



Photo 48. Chimney flue lined with clay masonry in Room 103 Front Parlor





Photo 49. Fireplace and chimney flue constructed of brick masonry in Room 104 Family Parlor



Photo 50. Fireplace and chimney flue constructed of brick masonry in Room 104 Family Parlor



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Photo 51. Chimney flue constructed of brick masonry and lined with clay tile in Room 104 Family Parlor



Photo 52. Chimney flue constructed of brick masonry and lined with clay tile in Room 104 Family Parlor



Photo 53. Fireplace and chimney flue in Room 310 Archive Storage



Photo 54. Chimney flue in Room 310 Archive Storage concealed by metal lining with closed vent





Photo 55. Fireplace and chimney flue in Room 306 Office



Photo 56. Chimney flue in Room 306 Office concealed by metal lining and closed vent





Photo 57. Fireplace and chimney flue in Room 203 Bedroom



Photo 58. Sealed chimney tops at the north wall





Photo 59. Under floor space beneath Room 403 Dressing Room



Photo 60. Under floor space beneath Room 403 Dressing Room





Photo 61. Hollow clay tile walls are hidden behind the wood paneling of the Room 405 Auditorium



*Photo 62. Hollow clay tile walls are hidden behind the wood paneling walls of the Room 405 Auditorium* 





Photo 63. Hollow clay tile walls are hidden behind the wood paneling of the Room 405 Auditorium



Photo 64. Hollow clay tile walls are hidden behind the wood paneling of the Room 405 Auditorium





*Photo 65. Water damaged decorative wood paneling in Room 406 Auditorium from the piping for the toilet and sink in Room 402 Restroom* 



*Photo 66.* Close-up of water damaged decorative wood paneling in Room 406 Auditorium from the piping for the toilet and sink in Room 402 Restroom



Photo 67. Open joints in the exterior brick masonry of the roof top penthouse



Photo 68. Water staining suspended ceiling above Stair S4





Photo 69. Open joints in the roof top terrace pavers with silt accumulation at the roof drain



Photo 70. Open joints in the roof top terrace pavers





*Photo 71. Open joints in the exterior brick masonry of the roof top penthouse with repointing near the top of the wall* 



Photo 72. Vertical crack in the exterior brick masonry encasing a structural steel column



Photo 73. Open joints in the exterior brick masonry of the roof top penthouse with repointing near the top of the wall



Photo 74. Severe corrosion of the steel lintel of the roof top penthouse



TABLE


#### **Table 1. Topographic Survey Data**

#### Instrument Setup No. 1 in Boiler B-10 (Basement)

Point	Description	<b>BS</b> (+) (feet)	H.I. (feet)	FS (-) (feet)	Elevation (feet)
BM No. 1	Boiler B-10 Floor Drain	6.385	106.385		100.00
1	Boiler B-10 Floor			5.315	101.07
2	Hallway B-07 Floor			4.035	102.35
3	Boiler B-10 Ceiling			-4.50	110.89
4	Hallway B-07 Ceiling			-6.06	112.45
5	Stair S0 Lower Landing			4.045	102.34

#### Instrument Setup No. 2 in Stair FS-0 (Basement)

Point	Description	BS (+) (feet)	H.I. (feet)	FS (-) (feet)	Elevation (feet)
6 = 5	Stair S0 Lower Landing	8.075	110.415		102.34
7	Stair S0 Intermediate Landing			5.560	104.86
8	Stair S0 Intermediate Landing			5.565	104.85
9	Bathroom B-03 Floor			4.870	105.55

#### Instrument Setup No. 3 in Electrical B-02 (Basement)

Point	Description	BS (+) (feet)	H.I. (feet)	FS (-) (feet)	Elevation (feet)
10 = 8	Stair S0 Intermediate Landing	2.665	107.515		104.85
11	Electrical B-02 Floor			5.330	102.19
12	Electrical B-02 Ceiling			-4.805	112.32

#### Instrument Setup No. 4 in Stair FS-0 (Basement)

Point	Description	BS (+) (feet)	H.I. (feet)	FS (-) (feet)	Elevation (feet)
7	Stair S0 Intermediate Landing	5.500	110.355		104.86
13 T.P.	Stair FS-0 Intermediate Tread			1.390	108.97

#### Instrument Setup No. 5 in Service G-08 (Mezzanine)

Point	Description	BS (+) (feet)	H.I. (feet)	FS (-) (feet)	Elevation (feet)
13 T.P.	Stair FS-0 Intermediate Tread	9.625	118.59		108.97
14	Stair FS-0 Intermediate Ceiling			-2.505	121.10
15	Service G-08 Floor			5.545	113.05
16	Vestibule G-08 Lower Landing			5.785	112.81
17	Service G-08 Ceiling			-2.715	121.31



#### Instrument Setup No. 6 in Basement B-05 (Basement)

Point	Description	<b>BS</b> (+) (feet)	H.I. (feet)	FS (-) (feet)	Elevation (feet)
2	Hallway B-07 Floor	5.485	107.835		102.35
18	Basement B-05 Ceiling			-4.520	112.36
19	Basement B-05 Floor			5.400	102.44
20	Basement B-05 Ceiling			-4.515	112.35

#### Instrument Setup No. 7 in Basement B-05 (Basement)

Point	Description	BS (+) (feet)	H.I. (feet)	FS (-) (feet)	Elevation (feet)
19	Basement B-05 Floor	5.560	107.995		102.44
20A	Basement B-05 Floor			5.485	102.51
21	Basement B-08 Bottom of Hatch			-5.8	113.80
22	Basement B-08 Floor			-5.6	113.60

#### Instrument Setup No. 8 in Hall G-02 (Mezzanine)

Point	Description	BS (+) (feet)	H.I. (feet)	FS (-) (feet)	Elevation (feet)
5	Stair S0 Lower Landing	13.790	116.130		102.34
23	Ladies G-04 Threshold			3.075	113.06
24	Elevator E1 Threshold			3.075	113.06

#### Instrument Setup No. 9 in Hall G-02 (Same Location as Setup No. 24, Mezzanine)

Point	Description	BS (+) (feet)	H.I. (feet)	FS (-) (feet)	Elevation (feet)
23	Ladies G-04 Threshold	5.525	118.580		113.06
25	Museum G-15 Lower Landing			7.010	111.57
26	Vestibule G-01 Landing			5.485	113.10
27 T.P.	Stair S1 Intermediate Tread			1.845	116.74

#### Instrument Setup No. 10 in Hall 102 (First Floor)

Point	Description	BS (+) (feet)	H.I. (feet)	FS (-) (feet)	Elevation (feet)
27 T.P.	Stair S1 Intermediate Tread	12.790	129.525		116.74
28	Stair S2 Lower Landing			5.475	124.05
29	Stair S2 Lower Landing Ceiling			-6.540	136.07
30	Front Parlor 103 Ceiling			-6.540	136.07
31	Elevator E2 Threshold			5.490	124.04
32 T.P.	Stair S2 Intermediate Tread			1.070	128.46

nstrument Setup No. 11 in Hall 202 (Second Floor)								
Point	Description	BS (+) (feet)	H.I. (feet)	FS (-) (feet)	Elevation (feet)			
32 T.P.	Stair S2 Intermediate Tread	12.490	140.945		128.46			
33	Stair S3 Lower Landing			2.980	137.97			
34	Stair S3 Lower Landing Ceiling			-6.965	147.91			
35	Bedroom 203 Ceiling			-7.015	147.96			
36	Elevator E3 Threshold			2.995	137.95			
37	Library 210 Threshold			2.695	138.25			
38 T.P.	Stair S3 Intermediate Tread			0.560	140.39			

### Instrument Setup No. 12 in Hall 202 (Second Floor)

Point	Description	BS (+) (feet)	H.I. (feet)	FS (-) (feet)	Elevation (feet)
38 T.P.	Stair S3 Intermediate Tread	3.330	143.715		140.39
39 T.P.	Stair S3 Intermediate Tread			0.840	142.88

#### Instrument Setup No. 13 in Lobby 303 (Third Floor)

Point	Description	BS (+) (feet)	H.I. (feet)	FS (-) (feet)	Elevation (feet)
39 T.P.	Stair S3 Intermediate Tread	12.030	154.905		142.88
40	Elevator E4 Threshold			5.175	149.73
41	Stair S4 Lower Landing			5.160	149.75

#### Instrument Setup No. 14 in Stair S4 Intermediate Landing (Third/Fourth Floor)

Point	Description	BS (+) (feet)	H.I. (feet)	FS (-) (feet)	Elevation (feet)
41	Stair S4 Lower Landing	7.975	157.720		149.75
42 T.P.	Stair S4 Intermediate Tread			0.725	157.00

#### Instrument Setup No. 15 in Stair S4 Middle of Stair (Fourth Floor)

Point	Description	<b>BS</b> (+) (feet)	H.I. (feet)	FS (-) (feet)	Elevation (feet)
42 T.P.	Stair S4 Intermediate Tread	9.635	166.630		157.00
43	Stair S4 Upper Landing			5.375	161.26
44	Preparatory 403 Floor			4.790	161.84
45	Auditorium 405 Ceiling			-7.325	173.96

### Instrument Setup No. 16 in Preparation Room 403 (Fourth Floor)

Point	Description	BS (+) (feet)	H.I. (feet)	FS (-) (feet)	Elevation (feet)
43	Stair S4 Upper Landing	6.255	167.510		161.26
46 = 44	Preparatory 403 Floor			5.685	161.83
47	Preparatory 403 Ceiling			-4.265	171.78
48	Preparatory 403 Roof Slab Ceiling			-12.065	179.58
49	Auditorium 405 Floor			6.230	161.28

#### Instrument Setup No. 17 in Auditorium 405 East (Fourth Floor)

Point	Description	BS (+) (feet)	H.I. (feet)	FS (-) (feet)	Elevation (feet)
49	Auditorium 405 Floor	5.440	166.720		161.28
50	Auditorium 405 Ceiling			-7.255	173.98
51	Auditorium 405 Floor			5.420	161.30
52	Auditorium 405 Stage Floor			3.405	163.32
53	Auditorium 405 Stage Ceiling			-5.935	172.66

### Instrument Setup No. 18 in Stair S5 intermediate Landing (Fourth Floor/Roof)

Point	Description	BS (+) (feet)	H.I. (feet)	FS (-) (feet)	Elevation (feet)
51	Auditorium 405 Floor	6.725	168.025		161.30
54	Stair S5 Intermediate Landing			5.420	162.61
55	Dressing 401 Floor			5.445	162.58
56	Dressing 401 Ceiling			-2.535	170.56
57	Stair S5 Intermediate Landing			4.185	163.84
58 T.P.	Stair S5 Intermediate Tread			0.515	167.51

#### Instrument Setup No. 19 in Stair S5 Intermediate Landing (Fourth Floor/Roof)

Point	Description	BS (+) (feet)	H.I. (feet)	FS (-) (feet)	Elevation (feet)
58 T.P.	Stair S5 Intermediate Tread	6.430	173.940		167.51
59	Stair S5 Intermediate Tread			0.275	173.67

### Instrument Setup No. 20 in Stair S5 Upper Landing (Roof)

Point	Description	BS (+) (feet)	H.I. (feet)	FS (-) (feet)	Elevation (feet)
59	Stair S5 Intermediate Tread	9.485	183.150		173.67
60	Stair S5 Upper Landing			5.675	177.48
61	Room 501 Floor			5.750	177.40
62	Roof Terrace 504 Threshold			5.695	177.46
63	Stair S5 Upper Landing Ceiling			-1.965	185.12

#### Instrument Setup No. 21 on Roof Terrace 504 (Roof)

Point	Description	BS (+) (feet)	H.I. (feet)	FS (-) (feet)	Elevation (feet)
62	Roof Terrace 504 Threshold	5.455	182.910		177.46
64	Roof Terrace 504 Drain (E)			5.580	177.33
65	Roof Terrace 504 Drain (W)			5.670	177.24
66	Roof Terrace 504 Floor (NW)			5.280	177.63
67	Roof Terrace 504 Floor (NE)			5.215	177.70
68	Roof Terrace 504 Floor (SE)			5.200	177.71
69	Roof Terrace 504 Floor (SW)			5.260	177.65
70	Room 502 Threshold (Outdoor)			5.215	177.70
71	Room 502 Threshold (Indoor)			5.515	177.40

#### Instrument Setup No. 22 on Penthouse Roof (Penthouse)

Point	Description	BS (+) (feet)	H.I. (feet)	FS (-) (feet)	Elevation (feet)
62	Roof Terrace 504 Threshold	13.545	191.000		177.46
72	Penthouse 501 Roof			4.505	186.50
73	Penthouse 502 Roof			4.260	186.74

#### Instrument Setup No. 23 on Roof Terrace 504 (Roof)

Point	Description	BS (+) (feet)	H.I. (feet)	FS (-) (feet)	Elevation (feet)
62	Roof Terrace 504 Threshold	5.480	182.935		177.46
74	Penthouse 502 Ceiling			-2.240	185.18



Instrument Setup No. 24 in Hall G-02 (Same Location as Setup No. 9, Mezzanine)							
Point	Description	BS (+) (feet)	H.I. (feet)	FS (-) (feet)	Elevation (feet)		
23	Ladies G-04 Threshold	5.565	118.620		113.06		
75	Museum G-15 Lower Ceiling			-3.675	122.30		

### Instrument Setup No. 25 in Museum G-15 (Mezzanine)

Point	Description	BS (+) (feet)	H.I. (feet)	FS (-) (feet)	Elevation (feet)
25	Museum G-15 Lower Landing	5.615	117.185		111.57
76	Museum G-15 Upper Landing			4.135	113.05
77	Tea Room G-14 Floor			4.105	113.08
78	Tea Room G-14 Glass Ceiling			-6.765	123.95
79	Tea Room G-14 Wood Panel Ceiling			-6.465	123.65



DRAWINGS

# THEODORE ROOSEVELT BIRTHPLACE NATIONAL HISTORIC SITE

1443CX200041400 HISTORIC STRUCTURE REPORT PMIS 16068, TASK ORDER NO.T2000414H0 EXISTING AS-BUILT & CONDITION DRAWINGS APRIL 2007





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Headquarters & Laboratories-Northbrook, Illinois Atlanta | Austin | Boston | Chicago | Cleveland | Dallas | Denver | Detroit Honolulu | Houston | Los Angeles | Minneapolis | New Haven | New York Princeton | San Francisco | Seattle | Washington, DC

Structural Drawing Supplement

- Basement Plan - Basement Reflected Ceiling Plan - Ground Floor Plan (ako Mezzanine) - First Floor Plan
- Ground Floor Plan (alco Mezzanine)
- First Floor Plan
- Second Floor Plan
- Third Floor Man
- Fourth Floor Man
- Roof Plan
- Not Used
- Not used
- Section









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PART 2 – TREATMENT AND USE

#### 2.1. TREATMENT AND USE

#### **Historic Preservation Objectives**

The Theodore Roosevelt Birthplace National Historic Site continues to serve its original purpose, a museum and vehicle for the interpretation and perpetuation of the ideals of Theodore Roosevelt. Although the mission of the facility has remained fairly true, its ownership, operation, and visitation have changed over time. The building, because it has remained relatively unaltered since construction, represents a fine example of an early 20th century museum. The building also represents one of the earliest examples of historic reconstruction as a means to memorialize a president. Therefore, any future interventions should take into account and embrace the significance of this historic resource and incorporate aspects of its conception, design and construction into the interpretation. There is much more to the story of this facility than merely the life of Theodore Roosevelt. The rich history that has unfolded, as a result of honoring his legacy, requires attention and explanation to the visitor.

#### **Treatment Priorities**

Priority 1 treatments for Theodore Roosevelt Birthplace involve those elements forming the building envelope and protecting the interior elements from active deterioration. The roof elements and north facade brownstone masonry, which were in poor condition, were repaired in 2006. During the condition survey for this Historic Structure Report, elements of the building envelope in poor condition or representing safety hazards were identified as high priority. Currently, high priorities include:

#### **EXISTING MATERIALS**

- Exterior doors and frames
- o Exterior windows and frames
- Exterior metal fire escape

#### **NEW MATERIALS**

- Fire escape treads
- Concrete pad in the front landscape
- o Exterior door and frame elements
- o Exterior window and frame elements

#### ROOF

- Roof skylights and caps
- o Tiles on the roof terrace and above the caretakers' apartment

Priority 2 items include finishes and other aesthetic features that need to be repaired as part of the buildings overall preservation and continued use. Currently, second priority items include:

#### **EXISTING MATERIALS**

- o Exterior metalwork
- o Plaster walls and ceiling finishes
- o Wood paneling and other decorative wood elements
- o Interior wood and metal doors including trim and hardware
- Period room wallpapers
- o Cork floors
- o Period room decorative carpets
- o Deteriorated marble/stone built-in features
- Exterior metal plaque and flagpole
- o Exterior masonry on rear façade
- Stucco and finish work in ground level entrance vestibule
- Historic kitchen appliances
- Porcelain and ceramic fixtures

#### NEW MATERIALS

- o Hardware for display cabinets, bookcases and cabinets
- Finish work of ground level entrance

#### **2.2. REQUIREMENTS FOR WORK**

The existing conditions within Theodore Roosevelt Birthplace are similar to those conditions present after construction in 1923. Although the building was ahead of its time in terms of its mechanical systems and construction, certain upgrades need to be performed to enhance minimum life safety and fire safety criteria.

Applicable codes include the following:

- International Building Code, 2003 for construction and building.
- International Existing Building Code, 2003 for construction and building.
- NFPA 101 Life Safety Code, 2003 for fire safety and means of egress
- NFPA 914 Code for Fire Protection of Historic Structures, 2001 for fire safety and means of egress (slated for revision Fall 2005)
- NFPA 909 Code for the Protection of Cultural Resources Properties Museums, Libraries, and Places of Worship, 2003 (may apply depending on use & interpretation of structure)
- Americans with Disabilities Act of 1990 and Americans with Disabilities Act Accessibility Guidelines (ADAAG)

All of the above-listed codes or regulations acknowledge that there are challenges in meeting all of the requirements in historic buildings without damaging or losing significant historic fabric. In most cases, alternative methods of compliance or variances must be reviewed and agreed upon by a design process team. The following is a summary of the new requirements relative to the continued use of the facility.

#### NFPA 101 & NFPA 914

NFPA 914, Chapter 4, outlines the process by which the historic integrity of an historic structure and the existing fire safety features shall be assessed. Section 4.3.3.1.2 states that "Buildings shall be evaluated in accordance with the requirements of NFPA 101, Life Safety Code." Structures that are found to have deficiencies shall have a plan of correction developed to achieve either prescriptive compliance or performance-based compliance. Prescriptive compliance may include alternatives, equivalencies, and/or modifications. Such compensatory features may include automatic fire suppression, fire-rated walls and doors to contain fire and smoke, and alarm monitoring to decrease response time. Although the building is constructed of fire rated material and consists of fire doors to isolate various components of the facility, the system dates to the 1920s.

<u>Number of Exits</u>: In general, two (2) exits are required from each floor. A single means of egress is allowed if (a) the single exit serves only one floor and the total travel distance is less than 100' or (b) there is only one (1) tenant, the building has automatic fire suppression and the total travel distance is less than 100'.

Conditions: The fire escape accessible from the back of the building requires that evacuees return through the building through the ground level. This fire escape is not accessible from all floors.

Interior and Exterior Fire Doors: Exit enclosure doors must swing in the direction of egress.

Conditions: Many existing interior fire doors swing inward against the direction of egress.

#### Architectural Barriers Act Accessibility Standards (ABAAS)

In general, historic structures are expected to comply with the accessibility guidelines for building alterations except where the required work would threaten or destroy the historic significance of the building. In such cases the alternative requirements in ABA may be used.

Minimum ABAAS requirements for historic preservation are:

- At least one accessible route from a site access point to an accessible entrance.
- At least one accessible entrance which is used by the public.
- At least one toilet facility along an accessible route (may be unisex).
- Accessible routes from accessible entrance to all publicly used spaces on at least the level of the accessible entrance (includes 32" clear doorways).

Theodore Roosevelt Birthplace presents several existing conditions that are in conflict with even the minimum requirements.

Accessible Entrance: There are three existing doors on the north side of the building that could potentially provide access to visitors. However these doors are located below or above sidewalk grade. The primary visitor entrance is located down a flight of exterior stairs and has no landing or walkway to provide proper access to the door. Creative solutions will be required to make the entrance to this building accessible without disturbing the appearance of the historic resource. Once inside this door, there is level access to the ground floor and elevator. However the museum on the ground floor is still inaccessible, as it is two steps below the main ground floor level.

<u>Toilet Facilities</u>: Two ground-floor powder rooms exist but are not entirely accessible. Upgrades need to be made to these rooms to improve accessibility.

<u>Accessible Route</u>: Once inside the building there is accessibility via elevator, however, there are several impediments to accessibility including a level change between the period house portion of the complex and the museum portion. The elevator only provides access to the first five floors and does not access the auditorium and roof levels. The elevator cab, although smaller than those in contemporary accessible elevators, may be deemed acceptable.



View of main visitor entrance located below sidewalk level grade, JMI, 2007.

#### 2.3. ALTERNATIVES FOR TREATMENT

Alternate options have been provided for recommendations. The alternatives, listed in the table below, represent the most obvious and realistic substitute options to recommendations. More detailed recommendations require further analysis of the identified elements, and should be completed before any conservation work is performed. All of the recommendations have the alternative of "no treatment," however, this option is not included in the table. The choice to not perform conservation treatment of the identified elements will result in the continued deterioration of the element, and often surrounding materials. As deterioration continues, it is likely that the rate of deterioration will increase.

Treatment	Advantage	Disadvantage			
Priority One					
	Roof Skylights and Caps				
Conserve skylight panels and caps	<ul> <li>Retention of historic fabric</li> <li>Significant reduction in the rate of deterioration</li> </ul>				
Remove skylight	• Elimination of possible water damage in the area	<ul> <li>Loss of historic fabric</li> <li>Sacrifice of potentially salvageable materials</li> <li>Reduction of interior light</li> </ul>			
	Exterior Windows and Frame	S			
Selective in kind replacement and wood conservation	<ul> <li>Retention of historic fabric where possible</li> <li>Significant reduction in the rate of deterioration</li> </ul>	• Loss (minimal) of historic fabric			
New replacement of all frames	<ul> <li>New materials will be water tight</li> <li>Elimination of deteriorated elements</li> </ul>	<ul> <li>Loss of historic fabric</li> <li>Sacrifice of potentially salvageable materials</li> </ul>			
	<b>Exterior Doors and Frames</b>	•			
Materials Conservation	<ul> <li>Retention of historic fabric</li> <li>Significant reduction in the rate of deterioration</li> </ul>				
Selective in kind replacement of frames	<ul> <li>New materials will be water tight</li> <li>Elimination of deteriorated elements</li> <li>Retention of original design</li> </ul>	<ul> <li>Loss of (minimal) historic fabric</li> <li>Sacrifice of potentially salvageable materials</li> </ul>			
New replacement of all frames	<ul> <li>New materials will be water tight</li> <li>Elimination of deteriorated elements</li> </ul>	<ul> <li>Loss of historic fabric</li> <li>Sacrifice of potentially salvageable materials</li> </ul>			

Treatment	Advantage	Disadvantage
Selective in kind	<ul> <li>Roof Terrace and above the Careta</li> <li>Retention of historic fabric where possible</li> </ul>	Loss of (minimal)
replacement and conserve tiles	<ul><li>Elimination of deteriorated elements</li><li>Retention of original design</li></ul>	historic fabric
Material replacement with membrane & concrete	<ul> <li>New materials will be water tight</li> <li>Elimination of deteriorated elements</li> </ul>	<ul> <li>Loss of historic fabric</li> <li>Sacrifice of potentially salvageable materials</li> <li>Addition of weight to roof</li> </ul>
Replace with brick	<ul> <li>New materials will be water tight</li> <li>Elimination of deteriorated elements</li> </ul>	<ul> <li>Loss of historic fabric</li> <li>Sacrifice of potentially salvageable materials</li> <li>Possible addition of weight to roof.</li> </ul>
	Exterior Fire Escape Stairwel	1
Selective in kind replacement and conserve metal	<ul> <li>Retention of historic fabric where possible</li> <li>Elimination of deteriorated elements</li> <li>Retention of original design</li> <li>Increased safety and functionality of the exit route for visitors and staff</li> </ul>	• Loss (minimal) of historic fabric
Replace Stairway	• Increased safety and functionality of the exit route for visitors and staff	<ul> <li>Loss of historic fabric</li> <li>Sacrifice of potentially salvageable materials</li> </ul>

Treatment	Advantage	Disadvantage		
Priority Two	Priority Two			
	Exterior metal work			
Repaint and conserve metal	<ul> <li>Retention of historic fabric</li> <li>Significant reduction in the rate of deterioration</li> </ul>			
Repaint only		• Paint finish will fail over corroded metal quickly		

Treatment	Advantage	Disadvantage
	Exterior masonry on rear faca	de
Masonry conservation and selective in kind replacement	<ul> <li>Retention of historic fabric</li> <li>Significant reduction in the rate of deterioration</li> <li>Elimination of deteriorated elements</li> <li>Retention of original design</li> </ul>	Loss of historic fabric
Selective new brick replacement	<ul> <li>Retention of historic fabric where possible</li> <li>Significant reduction in the rate of deterioration</li> <li>Elimination of deteriorated elements</li> <li>Retention of original design</li> </ul>	<ul> <li>Loss of historic fabric</li> <li>Loss of original design</li> <li>Sacrifice of potentially salvageable materials</li> </ul>
	Damaged Plaster Ceilings and w	alls
Plaster conservation and repainting	<ul> <li>Retention of historic fabric where possible</li> <li>Significant reduction in the rate of deterioration</li> </ul>	
Repaint only		• Paint finish will fail over deteriorated plaster quickly
	Wood Paneling and Elements	S
Wood Conservation	<ul> <li>Retention of historic fabric</li> <li>Significant reduction in the rate of deterioration</li> </ul>	
In kind replacement panels	<ul> <li>Elimination of deteriorated elements</li> <li>Retention of original design</li> </ul>	Loss (minimal) of historic fabric
	Interior Metal and Wood Doo	rs
Materials Conservation	<ul> <li>Retention of historic fabric</li> <li>Significant reduction in the rate of deterioration</li> </ul>	
Repainting	• Elimination of deteriorated elements	• Loss of historic fabric
	Interior Door and Window Fran	mes
Selective in kind replacement and conservation	<ul> <li>Retention of historic fabric</li> <li>Significant reduction in the rate of deterioration</li> <li>Elimination of deteriorated elements</li> <li>Retention of original design</li> </ul>	

Advantage	Disadvantage
New materials will be water	Loss of historic fabric
tight	• Loss of original design
Elimination of deteriorated	• Sacrifice of potentially
elements	salvageable materials
Wallpaper	1
L	
	• Loss of historic fabric
-	
	• Loss of historic fabric
-	
	• Loss of historic fabric
	aro
	Loss (minimal) of
	historic fabric
	instone fabrie
6 6	
	Loss of historic fabric
	<ul> <li>Loss of original design</li> <li>Sacrifica of potentially</li> </ul>
• Security of museum conection	• Sacrifice of potentially salvageable materials
	Salvageable materials
Door and Cabinet Hardware	I
Retention of historic fabric	
where possible	
• Significant reduction in the	
	<ul> <li>tight</li> <li>Elimination of deteriorated elements</li> <li>Wallpaper</li> <li>Retention of historic fabric where possible</li> <li>Significant reduction in the rate of deterioration</li> <li>Elimination of deteriorated elements</li> <li>Retention of original design <ul> <li>Cork Floors</li> </ul> </li> <li>Retention of historic fabric where possible</li> <li>Significant reduction in the rate of deterioration</li> <li>Elimination of deteriorated elements</li> <li>Retention of historic fabric where possible</li> <li>Significant reduction in the rate of deterioration</li> <li>Elimination of deteriorated elements</li> <li>Retention of original design <ul> <li>Carpets</li> </ul> </li> <li>Retention of historic fabric where possible</li> <li>Significant reduction in the rate of deterioration</li> <li>Elimination of deteriorated elements</li> <li>Retention of historic fabric where possible</li> <li>Significant reduction in the rate of deterioration</li> <li>Elimination of deteriorated elements</li> <li>Retention of original design <ul> <li>Display Cabinet Missing Hardway</li> <li>Elimination of deteriorated elements</li> <li>Retention of original design</li> <li>Display Cabinet Missing Hardway</li> <li>Elimination of deteriorated elements</li> <li>Retention of original design</li> <li>Security of museum collection</li> <li>Elimination of deteriorated elements</li> <li>Security of museum collection</li> </ul> </li> <li>Elow and Cabinet Hardware</li> <li>Retention of historic fabric</li> </ul>

Treatment	Advantage	Disadvantage
In Kind Replacement	<ul> <li>Elimination of deteriorated elements</li> <li>Retention of original design</li> </ul>	<ul> <li>Loss (minimal) of historic fabric</li> <li>Sacrifice of potentially salvageable materials</li> </ul>
	Kitchen Appliances	•
Materials Conservation	<ul> <li>Retention of historic fabric</li> <li>Possible use for future interpretation/exhibits</li> </ul>	
Sell Appliances	• Income revenue from sales can be used for other projects	<ul> <li>Loss of historic fabric</li> <li>Sacrifice of potentially salvageable materials</li> </ul>
	Exterior Flag Pole	
Metal Conservation	<ul> <li>Retention of historic fabric where possible</li> <li>Significant reduction in the</li> </ul>	
Replace Metal Flag Pole and Plaque	<ul> <li>rate of deterioration</li> <li>Elimination of deteriorated elements</li> </ul>	<ul> <li>Loss of historic fabric</li> <li>Sacrifice of potentially salvageable materials</li> </ul>
	Installed Marble Features	-
Marble Conservation	<ul> <li>Retention of historic fabric</li> <li>Significant reduction in the rate of deterioration</li> <li>Improved structural integrity</li> </ul>	
In kind replacement of marble	<ul> <li>Elimination of deteriorated elements</li> <li>Retention of original design</li> </ul>	• Loss (minimal) of historic fabric
	Installed Ceramic and Porcelain Fe	atures
Porcelain/ceramic conservation	<ul> <li>Retention of historic fabric</li> <li>Significant reduction in the rate of deterioration</li> <li>Improved structural integrity</li> </ul>	
Replace porcelain and ceramic features	<ul> <li>Elimination of deteriorated elements</li> <li>Retention of original design Ground Floor Entrance</li> </ul>	<ul> <li>Loss of historic fabric</li> <li>Sacrifice of potentially salvageable materials</li> </ul>
Complete stucco finish	Improvement of entrance	
and door frame	aesthetic	

#### 2.4. Assessment of Effect for Recommended Treatment

#### CRITERIA FOR EVALUATION

All recommended treatments should be completed following Secretary of Interior Standards for Historic Preservation and Rehabilitation and the American Institute for Conservation of Historic and Artistic Works. A survey of all objects, elements, and surfaces should be performed before any future interventions are undertaken. The survey will ensure documentation of the historic fabric before treatment, and allow for the necessary planning of the intervention.

#### 2.5. HAZARDOUS MATERIALS AND HVAC CONSIDERATIONS

#### **Hazardous Materials**

Environmental Planning Management, Inc. performed a hazardous materials survey for asbestoscontaining materials (ACM), lead-based paint (LBP), Universal Wastes, polychlorinated biphenyls (PCBs), and radon at Theodore Roosevelt Birthplace in November of 2006. The hazardous materials survey reports are referenced in Appendix H. Summaries of the survey findings are provided below.

#### Asbestos-Containing Materials

A total of 255 bulk samples were collected from 78 suspect asbestos ACM homogeneous groups. These samples were collected from the following areas: suspect asbestos-containing pipe insulation (PI) and mudded joint packing (MJP) residue and debris, intact PI/MJPs, MJPs associated with fiberglass PI, duct insulation, pipe gasket material, door gasket material, black mastic coating, various roofing materials, tar paper/waterproofing, various caulks, putties and mastics, wall, ceiling and decorative molding plasters, wallpaper and glue, ceramic tile mortar and grout, terrazzo flooring material, linoleum flooring material, various floor tiles and associated glues and/or mastics, ceramic tile grout, glues and mortars. Below is a summary of the confirmed and assumed ACM, as well as confirmed non-asbestos materials.

The following materials are asbestos-containing:

- Intact corrugated paper and cementitious PI/MJPs and PI/MJPs residue/debris, observed in various locations throughout the building;
- Duct insulation material in the sub-basement and radiator insulation material behind metal enclosures at all enclosed radiator units (i.e., behind wood paneling or wood enclosures) on all floors except the subbasement and roof;
- Gasket material at flanges associated with steam pipes and the heat exchanger in the subbasement boiler room (B-10);
- 9 inch by 9 inch white and green floor tile in sub-basement room B-11;
- Linoleum flooring material in rooms 301 and 307 on the third floor;
- Black mastic, black flashing material, and black mastic joint sealant on bulkhead roofs, and the backyard roof (first floor);

- Black mastic caulk material at the cap flashing (counter flashing) joint located in specific areas of the east and south bulkhead roofs;
- Black mastic and black mastic residue at the door frame of the dumbwaiter mechanical room (bulkhead roof), the lintels of the south patio doors (roof), and on the south patio wall respectively;
- Black mastic sealant at the glazing joints of the skylight on the east bulkhead roof;
- Red caulk at the metal counter flashing on the perimeter of the 2<sup>nd</sup> floor terrace/porch;
- Ebony board material inside electrical panels at the 4<sup>th</sup> floor backstage and the projection room.

Some materials are assumed to be asbestos-containing. These materials were not able to be sampled and analyzed. Some built-up roofing materials were not sampled because of concerns that destructive sampling could result in additional water leaks. The electrical wiring at Theodore Roosevelt Birthplace is a combination of older suspect ACM cloth woven braided insulation and newer non-ACM PVC or plastic insulation. Since this wiring could not be de-energized, the braided cloth wiring insulation is assumed asbestos-containing until proper analysis can determine otherwise.

Elevator motors use a braking system similar to a car. Suspect brake pad material was observed at the motor in room B-06 and in the dumbwaiter elevator mechanical room above the south bulkhead roof. Since the system could not be de-energized, the brake pads are assumed asbestoscontaining until proper analysis of the brake pads can determine otherwise.

The following materials are *assumed* to be asbestos-containing:

- Built-up roofing material beneath ceramic tiles and concrete at the east, west, south and elevator bulkhead roofs and the 2<sup>nd</sup> floor terrace patio;
- Brake pad and arc-shield materials in both elevator machine rooms;
- Various wires located in the relay assembly and fuse panel located inside B-06 (elevator machine room);
- The west wall of the B-01 where the central vacuum system is located;
- Dumbwaiter Elevator Mechanical Room: various wires associated with the elevator motor, relay panel, and disconnect panel on the north wall;
- Wiring associated with light fixture located inside HVAC room on the 5<sup>th</sup> floor, in the southwest area;
- Various wires inside large electrical panel located on the 4<sup>th</sup> floor, backstage in room 401;

- Various wires inside breaker panel located on 4<sup>th</sup> floor loft level in the projection room.
- Braided wire insulation in various electrical panels, located in the elevator machine rooms, central vacuum system, HVAC room, 4<sup>th</sup> floor back stage, and 4<sup>th</sup> floor loft level projection room. Significant amounts of suspect braided wire insulation may be present in the walls, floors and ceilings of the building;

The following materials were tested and are *not* asbestos-containing:

- Two coat wall and ceiling plaster and decorative molding plaster throughout the building;
- Wallpaper glue composite in various exhibit rooms in the building;
- MJPs associated with fiberglass pipe insulation in the 4<sup>th</sup> floor crawlspace over the serving kitchen; riser pipes in the serving kitchen; 4<sup>th</sup> floor projection room and room 402, backstage on the 4<sup>th</sup> floor. Also the majority of PI and fitting covers in the sub-basement are non-ACM fiberglass insulation;
- 12 inch by 12 inch brown floor tiles and associated mastics in the basement reception area and the elevator.
- Mastic associated with 9 inch by 9 inch floor tiles in room B-11 and cork flooring throughout the building;
- Terrazzo flooring in the basement and on the 3<sup>rd</sup> floor;
- Tar paper/waterproofing beneath wood and marble flooring throughout the building;
- Various grouts and mortars and tile glues associated with ceramic wall and floor tiles throughout the restrooms and the basement kitchen;
- Black coating material on the interior of the exterior brick walls of the building;
- Built-up roof material beneath the ceramic floor tiles located on the patio roof and the backyard roof;
- Black caulk material at the expansion joints of the ceramic patio roof, the flashing joint of the backyard roof and the 2<sup>nd</sup> floor terrace/porch;
- Roof material over the ceramic floor tiles on the bulkhead roofs;
- Beige caulk at the glazing joint of the elevator bulkhead roof;
- Gray caulk and black putty at glazing associated with south patio doors;
- Gray caulk at the elevator bulkhead roof peak joint and exterior of the 1<sup>st</sup> floor dining room windows;

- Various glazing putties at windows throughout the building;
- Vibration damper cloth and door gasket material in the HVAC room.

A summary of all asbestos-containing materials identified along with the description, location, and quantity can be found in Table I in Appendix H.

Asbestos-containing materials that will be impacted by renovation projects at THRB should be abated in accordance with all applicable federal, state and local regulations. Assumed asbestos-containing materials should be treated as asbestos-containing unless otherwise determined not to be.

#### Lead-Based Paint

The results of the lead-based paint survey indicate that approximately half of the components tested at Theodore Roosevelt Birthplace contained lead-based paint, based on the EPA/HUD standard of 1.0 milligram per square centimeter (mg/cm<sup>2</sup>). Although many components have been found to contain paint below the EPA/HUD standard of 1.0 mg/cm<sup>2</sup> the majority of surfaces nevertheless contain a detectable level of lead.

Table 1.0 in Appendix H. lists all tested components and their respective locations, substrates, color, condition, test result, classification and whether or not a detectable level of lead is present regardless of the HUD/EPA level of  $1.0 \text{ mg/cm}^2$ .

New construction, alteration, repair, or renovation of structures, substrates, or portions there of with any detectable level of lead based paint are governed by the OSHA construction standard for Lead 29 CFR 1926.62. All building components with a detectable level of lead based paint should therefore be considered a potential source of lead emissions if disturbed.

Renovations will likely impact lead containing surfaces including, but not limited to, walls, radiators, baseboards, painted pipes, etc. As manual demolition is an OSHA Lead in Construction Standard regulated activity, work must proceed in accordance with the Standard or a negative exposure assessment will be required for construction workers. If there is a negative exposure assessment, worker protection requirements would minimally include hand washing facilities and lead awareness training.

In cases where ACM and LBP will be disturbed by renovation activities, abatement would be required. ACM were found "in various thermal system insulating materials including pipe and elbow joint insulation, duct and radiator insulation; in various electrical components including wiring, arc shields and panel boards; in a few floor materials at specific locations on the third floor and sub-basement; on steam pipe flanges in the sub-basement; in exterior caulks, sealants and roofing materials on bulkhead roofs, the second floor terrace, the backyard roof, and some skylights; and miscellaneous mastics at the door frame of the dumbwaiter mechanical room, the lintels of the south patio doors, and on the south patio wall." LBP was identified on approximately half of the surfaces tested.

If the only options for a renovation project are disturbing building materials with ACM or LBP or those with historic fabric/character defining features, abatement of hazardous materials must

be considered as the first choice. Hazardous materials can be readily quantified and the associated abatement costs estimated. The benefit is twofold: building materials with historic fabric/character defining features are spared, and hazardous materials are permanently removed from the site.

### HVAC

Concurrent with the preparation of this Historic Structure Report, an assessment was made, under separate contract between the National Park Service and Leo A. Daly Co., on the requirements for renovation of the existing HVAC system. The interventions that would result from improvement of the HVAC system could have an impact on the site's historic fabric. In order to assess that impact and offer recommendations to minimize adverse effect on the site's character defining features, the set of seven color coded floor plan drawings included in Section 1.4 was annotated and entitled Possible Opportunities for HVAC Equipment Location and Distribution Layouts. These drawings are bound in this section and indicate spaces within the building that could accommodate air handling units, as well as potential duct alignments to deliver conditioned air. For reasons of cost and preservation of original architectural fabric, Leo A. Daly Co. suggests retaining the existing hot water radiant heating system, with improvements, and installing new air handling units to supply air conditioning and promote ventilation. Removing the existing radiation system and combining the delivery of both heat and air conditioning through one integrated system has the potential to result in significant impact on historic fabric. The floor structure of the building consists of concrete slabs that were poured with concrete beams spanning east-west. With the exception of the Ground Floor, the ceiling finishes were installed in close proximity to the undersides of the beams, providing little or no opportunity for the installation of new ductwork and piping in a north-south alignment without invading historic and structural fabric.

To the extent possible, the air handlers should be placed in spaces that have the lowest classification with respect to character defining features. In some instances, placement of these units in spaces with higher classifications would be acceptable when no viable alternative locations exist and with the provision that character defining features would be protected from damage and the installation would be fully reversible. To the extent possible, alignments for ductwork should be selected to minimize the invasion and/or compromise of character defining features. Where no viable alternatives exist, it may be acceptable to disassemble components (such as cabinetry and wall or ceiling finishes) to facilitate the installation of ductwork, with the provision that these components be reassembled and fully restored to their original appearance with minimal loss of historic fabric.

The following Drawings A0 (Basement Floor Plan) through A6 (Roof Plan) are intended to provide essential information to assist the project engineers in exploring the options for accommodation of the HVAC renovations in the historic building.

DUMB WAITER SHAFT AVAILABLE









2

3

4

Most surfaces are composed of character defining features and should not be altered, but areas/features not mentioned in the detailed assesment may be altered using extreme sensitivity.

Some surfaces are composed of character defining features that should not be altered, but areas/features not mentioned can be altered.

Most of the surfaces are not considered character defining features (except those noted), and may be considered for alteration.

HDR JOHN MILNER ARCHITECTS, INC.

### POSSIBLE OPPORTUNITIES FOR HVAC EQUIPMENT LOCATIONS AND DISTRIBUTION LAYOUTS (based on preservation of character defining features)

### BASEMENT FLOOR PLAN\*

**IIIIIII** Existing radiator locations.

Possible location for supply/ return ductwork. (on drawings)

///////// Possible location for supply/ return ductwork. (on photos)

> Possible location for air handling units.



G-08

G-05 TOILE

G-02 HALL

08.

G-04 LADIES RM

14.

The majority of the surfaces are character defining and should not be altered.

G-03 STAFF OFFICE

13.

G-15 MUSEUM

Most surfaces are composed of character defining features and should not be altered, but areas/features not mentioned in the detailed assessment may be altered using extreme sensitivity.

Some surfaces are composed of character defining features that should not be altered, but areas/features not mentioned in the detailed assessment can be altered.

Most of the surfaces are not considered character defining features (except those noted), and may be considered for alteration.

HDR DJOHN MILNER ARCHITECTS, INC.

POSSIBLE OPPORTUNITIES FOR HVAC EQUIPMENT LOCATIONS AND DISTRIBUTION LAYOUTS

## GROUND FLOOR PLAN\*

DUMB WAITER SHAFT AVAILABLE

SPACE AVAILABLE ABOVE THE CEILING



Possible location for supply/ return ductwork. (on drawings)

//////// Possible location for supply/ return ductwork. (on photos)

Possible location for air handling units.

## (based on preservation of character defining features



HDR JOHN MILNER ARCHITECTS, INC.

### POSSIBLE OPPORTUNITIES FOR HVAC EQUIPMENT LOCATIONS AND DISTRIBUTION LAYOUTS

## FIRST FLOOR PLAN\*



#### LEGEND

**IIIIIII** Existing radiator locations.

Possible location for supply/ return ductwork. (on drawings)

//////// Possible location for supply/ return ductwork. (on photos)

> Possible location for air handling units.

## (based on preservation of character defining features





The majority of the surfaces are character defining and should not be altered.

Most surfaces are composed of character defining features and should not be altered, but areas/features not mentioned in the detailed assessment may be altered using extreme sensitivity.

Some surfaces are composed of character defining features that should not be altered, but areas/features not mentioned in the detailed assessment can be altered.

Most of the surfaces are not considered character defining features (except those noted), and may be considered for alteration.

HDR D JOHN MILNER ARCHITECTS, INC.

POSSIBLE OPPORTUNITIES FOR HVAC EQUIPMENT LOCATIONS AND DISTRIBUTION LAYOUTS

## SECOND FLOOR PLAN\* $\square$

**IIIIIII** Existing radiator locations.

Possible location for supply/ return ductwork. (on drawings)

///////// Possible location for supply/ return ductwork. (on photos)

Possible location for air handling units.

## (based on preservation of character defining features
#### THEODORE ROOSEVELT BIRTHPLACE, N.H.S









The majority of the surfaces are character defining and should not be altered.

Most surfaces are composed of character defining features and should not be altered, but areas/features not mentioned in the detailed assessment may be altered using extreme sensitivity.

Some surfaces are composed of character defining features that should not be altered, but areas/features not mentioned in the detailed assessment can be

Most of the surfaces are not considered character defining features (except those noted), and may be considered for alteration.

HDR JOHN MILNER ARCHITECTS, INC.

POSSIBLE OPPORTUNITIES FOR HVAC EQUIPMENT LOCATIONS AND DISTRIBUTION LAYOUTS

2

3

4

**IIIIIII** Existing radiator locations.

Possible location for supply/ return ductwork. (on drawings)

//////// Possible location for supply/ return ductwork. (on photos)

> Possible location for air handling units.

## (based on preservation of character defining features)

#### THEODORE ROOSEVELT BIRTHPLACE, N.H.S









RATING	
1	The majority of the surfaces are character def and should not be altered.
2	Most surfaces are composed of character de features and should not be altered, but areas not mentioned in the detailed assessment mo altered using extreme sensitivity.
3	Some surfaces are composed of character de features that should not be altered, but areas not mentioned in the detailed assessment car altered.
4	Most of the surfaces are not considered chara

defining features (except those noted), and may be considered for alteration.

#### HDR JOHN MILNER ARCHITECTS, INC.

#### POSSIBLE OPPORTUNITIES FOR HVAC EQUIPMENT LOCATIONS AND DISTRIBUTION LAYOUTS

# FOURTH FLOOR PLAN\* A

efining

**IIIIIII** Existing radiator locations.

efining Possible location for supply/ as/features return ductwork. ay be (on drawings) ///////// Possible location for supply/ defining return ductwork. s/features (on photos) an be Possible location for air racter handling units.

# (based on preservation of character defining features

### THEODORE ROOSEVELT BIRTHPLACE, N.H.S















considered for alteration.

## POSSIBLE OPPORTUNITIES FOR HVAC EQUIPMENT LOCATIONS AND DISTRIBUTION LAYOUTS

HDR JOHN MILNER ARCHITECTS, INC.

## ROOF PLAN\* A



**IIIIIII** Existing radiator locations.

Possible location for supply/ return ductwork. (on drawings)

//////// Possible location for supply/ return ductwork. (on photos)

> Possible location for air handling units.

# (based on preservation of character defining features)

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James N. Cleary, Plumbing and Heating Contracter letter to Mrs. Hooper (WMRA), April 11, 1940.

Leland H. Lyon, Office of Theodate Pope letter to Mrs. William Barbour, July 21, 1922.

Leland Lyon, Office of Theodate Pope letter to Mrs. Alexander Lambert, July 24, 1923.

L. L. Calvert, The Tide-Water Building Company proposal letter to Leland Lyons, Office of Theodate Pope, December 18, 1922.

M. O'Connell & Co., Builders work agreement addressed to Miss Matthews, November 18, 1954.

Mrs. Alexander Lambert letter to Mr. Clarence L. Law, New York Edison Company, December 12, letter, 1930.

Miss Dorothy Mathews, WRMA letter to Mrs. Robinson, WRMA, September 6, 1955.

Mrs. Emma Hooper, Financial Secretary WMRA letter to Mr. Kessler, American Commercial Painting Co., July 25, 1940.

Mrs. John Henry Hammond, President letter to Mrs. Barbour, June 28, 1922.

Mrs. Sherman Post Haight, President WMRA letter to D. W. Heine, Service Manager of The Birge Company, August 31, 1955.

Napier, A. Milton, Tide-Water Construction Company letter to Theodate Pope, Attention Mr. Leland Lyon, October 10, 1921.

Theodate Pope, Office of Theodate Pope letter to William Rutherford Mead, September 17, 1898.

Theodore Roosevelt letter to Dr. Robert Underwood Johnson, 1906, as quoted from Evening Telegram, New York, January 15, 1923.

Woman's Memorial Roosevelt Association, Work Sheet, August 15, 1955.

Woman's Memorial Roosevelt Association, undated estimate memo "Approximate amounts being spent in the redoing of TR House."

APPENDIX B HISTORIC PHOTOGRAPHS



Women's Memorial Roosevelt Association, undated (THRB Archives).



Nursery, 1930 (THRB Archives).



Bedroom, 1933 (THRB Archives).



Parlor, 1935 (THRB Archives).



Etching of the Theodore Roosevelt Birthplace, 1923, (THRB Archives).

APPENDIX C Current Building Drawings

# THEODORE ROOSEVELT BIRTHPLACE NATIONAL HISTORIC SITE

1443CX2000 HISTORIC STRUCTURE REPORT PMIS 16068, TASK ORDER NO.T2000414B5 EXISTING CONDITION DRAWINGS MAY 2007



Marl	Sheet	REVISION Dat	e Initial	RECOMMENDED:	Date	PT S	HISTORIC STRUCTURE REPORT	TITLE OF SHEET EXISTING CONDITIONS	DRAWING NO.
				APPROVED:		NATIONAL Park SERVICE	UNITED STATES DEPARTMENT OF THE INTERIOR	NAME OF PARK	PKG. SHEET
			APPROVEU:	Date	DEPARTMENT OF THE INTERIOR	NATIONAL PARK SERVICE DENVER SERVICE CENTER	THEODORE ROOSEVELT BIRTHPLACE FIELD AREA NORTHEAST NEW YORK NEW YORK	[1]	

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APPENDIX D HISTORIC BUILDING DRAWINGS



Ground Floor Schematic Drawing, Theodate Pope Riddle, 1920





Second Floor Schematic Drawing, Theodate Pope Riddle, 1920



Third Floor Schematic Drawing, Theodate Pope Riddle, 1920



Fourth Floor Schematic Drawing, Theodate Pope Riddle, 1920



Ground Floor Drawing, Theodate Pope Riddle, 1923



First Floor Drawing, Theodate Pope Riddle, 1923



Second Floor Drawing, Theodate Pope Riddle, 1923



Third Floor Drawing, Theodate Pope Riddle, 1923



Fourth Floor Drawing, Theodate Pope Riddle, 1923
APPENDIX E HISTORIC MATERIALS ANALYSIS In January of 2007, John Milner Architects, Inc. extracted paint samples from the Theodore Roosevelt Birthplace. Samples were taken from several distinct locations on architectural components to assess building chronology and finish color schemes. Samples were taken from sheltered areas such as corners and crevices to ensure a full complement of layers in the best condition possible.

Comparative analysis of paint layers and subsequent color matching were accomplished using an Apochromatic stereo zoom microscope with fiber optic illumination. Many of the paint layers have been given general color notations based on comparative differences. However, matching to a Munsell color should be performed if a specific layer is chosen for further study. Additional analysis can also pinpoint pigment and binder type; information that can help establish when a particular paint layer was applied.

Further chemical and physical analysis of paint samples and their individual constituent parts may reveal additional information regarding specific sources of materials and significant alterations over time. A comparative study of information attained from studying other building features and materials can provide supplementary data for the accurate intervention and interpretation of this significant architectural resource.



	Paint Sample No. 3
	<b>Location:</b> THRB North Facade Front Door interior Wood Substrate
Magnification: 120 x	Description: Layer 5 – Dark Green Layer 4 – Tan/Brown Layer 3 – Black Dark Green Layer 2 – Dark Green Layer 1 – White Primer Substrate - Wood

	Paint Sample No. 5 Location: THRB Ground Floor Kitchen (109/110, door) Wood Substrate
Magnification: 120 x	Description: Layer 5 – White Layer 4 – Cream/Off white Layer 7 – Off white Layer 6 – Cream/Off white Layer 5 – Salmon Buff Layer 4 – Pink Buff Layer 3 – Cream/Off white Layer 2 – Cream/Off white Layer 1 – Tan Substrate - Wood

	Paint Sample No. 6
	<b>Location:</b> THRB Ground Floor Caretaker's Room (113, baseboard) Wood Substrate
Magnification: 120 x	Description: Layer 6 – White Layer 5 – White Layer 4 – Cream/Off white Layer 7 – Lt. Green Layer 6 – White Layer 5 – Lt. Green Layer 4 – Pink Layer 3 – White Layer 3 – White Layer 1 – Tan Substrate - Wood



	Paint Sample No. 8 Location: THRB Caretaker's Room (113, Int. door trim) Wood Substrate	
Magnification: 120 x	Description: Layer 9 – White Layer 8 – White VOID Layer 7 – Lt. Green Layer 6 – White Layer 5 – Lt. Green Layer 4 – Pink Layer 3 – White Layer 2 – Cream/Off white Layer 1 – Glazing Substrate - Wood	
	Paint Sample No. 9 Location: THRB	

	Paint Sample No. 9
	Location: THRB Caretaker's Room (113, Int. door to stair) Metal Substrate
and the second	Description:
the second s	Layer 13 – White
	Layer 12 – White
the second of the second second	Layer 11 – Cream
	Layer 10 – White
	Layer 9 – Lt. Green
	Layer 8 – Pink
	Layer 7 – White
	Layer 6 – Off White
Maarifiantiana 120 m	Layer 5 – Off White
Magnification: 120 x	Layer 4 – Glazing
	Layer 3 – White
	Layer 2 – Brown/Red (poss. Graining)
	Layer 1 – White
	Substrate - Metal

	Paint Sample No. 10 Location: THRB Parlor (trim) Wood Substrate
Magnification: 120 x	Description: Layer 5 – White Layer 4 – Off White Layer 3 – Cream Layer 2 – Grey White Layer 1 – White Substrate - Wood



	Paint Sample No. 12 Location: THRB Curator's room (wall) Plaster Substrate
Magnification: 120 x	Description: Layer 8 – White Layer 7 – Tan Layer 6 – Lt. Blue/Green Layer 5 – Off White Layer 4 – Lt. Green Layer 3 – Cream Layer 2 – Cream Layer 1 – Glazing Substrate - Plaster



# THEODORE ROOSEVELT BIRTHPLACE NATIONAL HISTORIC SITE HISTORIC STRUCTURE REPORT

	Paint Sample No. 14
And the second for th	<b>Location:</b> THRB 3rd Floor (metal door in hall) Metal Substrate
Magnification: 120 x	Description: Layer 7 – White Layer 6 – Cream Layer 5 – Cream Layer 4 – Off White Layer 4 – Off White Layer 3 – Red Brown (Poss. Graining) Layer 2 – Brown Layer 1 – Off White Substrate - Metal

APPENDIX F NATIONAL REGISTER NOMINATION .

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STATEMENT OF SIGNIFICANCE

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On this site, where he was born and lived until he was 15 years old, is commemorated the boyhood of the many-sided man who be-came his country's 26th President. Here, in a 4-story brown-stone standing in a now-lost residential setting, Theodore Roosevelt passed some of his most formative years. After bouts with childhood ailments, early passions for nature and books, and the shaping influences of family and travel, he grew into the man whose character, vigorous personality, and momentous deeds made him a dynamic force in American life from his earliest political years to the day of his death.

Poor health plagued Roosevelt almost from the start. One of his earliest recollections was of his father walking up and down the room at night, holding him in his arms. The Roosevelt children\_spent their summers in the New Jersey highlands or along the Hudson, but the change did little to help the youngster's condition. When he was 12 years old and his health was beginning to improve, his father spurred him along by installing a gymnasium on the porch of the nursery. The boy responded by doggedly working out on the apparatus, along with the rest of the neigh-borhood youngsters. Within a year he improved so much that asthma never again seriously interfered with his activities. If he missed out on the rough-and-tumble of boyhood, he found solace in books and natural history. He learned to read at an early age, and his keen intelligence and surging energy sought a range of outlets. Physically unable to attend school, he extended his uneven tutoring by wide reading. Heroic tales, science, and biography were his first tastes. By the age of 8, he was a budding naturalist, and by 14 had grasped the main tenets of Darwin. His curiosity left him little time for brooding.

When Theodore was 10, the Roosevelts went off to Europe for their first Grand Tour. Often homesick, ill, or exhausted, Theodore later remembered the trip with distaste. But for a boy so observant, the experience must have been something more than an ordeal in endurance. Four years later, in 1872-1873, the family returned to Europe. For Theodore, equipped now with better health, addded years, and new resolve, this trip was more profitable.

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#### THRBLIST.XLS

LIST OF CLAS	SIFIED ST	RUCTU	IRES (LCS)
THEODORE ROOSE PARK STRUCTURE	VELT BIRTHP	ACE NAT	IONAL HISTORIC SITE 10-Jun-94
	STRUCTURE	IDLCS#	STRUCTURE NAME
BUILDINGS:	01	01329	THEODORE ROOSEVELT BIRTHPLACE

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Page 1

## LIST OF CLASSIFIED STRUCTURES (LCS) SINGLE ENTRY REPORT

1

Identification	
IDLCS: 01329	Structure Number: 1
Structure Name 1: THEODORE ROOSE Structure Name 2: Structure Name 3:	
ORGCODE: 1816 County: NE Regional Of	
Subunit ORGCODE: Name: Alpha Code: County: NE	
Number of UTM's: 1	Zone/Easting/Northing 18 585340 4510000
Significance	Date: 12/07/76
NR Status: ENTERED - DOCUMEN Significance: NATIONAL NHL: NO	Date: / /
Significance BUILT AS A COMMEMORATIVE RECONSTRUCTION OF THEO ASSOCIATION. IS A FINE EXAMPLE OF EARLY RECONS TO ISSUES OF HISTORIC ACCURACY.	DORE ROOSEVELT'S BOYHOOD HOME BY ROOSEVELT MEMORIAL TRUCTIVE EFFORTS THAT RESPONDED W/ HEALTHY PRAGMATISM
Historical Information	
Period of Construction: HISTORIC	
Date: 1921-1923 (CC) Designer:THE Date: - () Designer: Date: = () Designer: Date: - () Designer:	
Functions, Uses, Materials, Im	
Historic Functions ORGANIZATIONAL MUSEUM (EXHIBITION HALL)	Current Uses HISTORIC FURNISHED INTERIOR ADMINISTRATIVE OFFICE (HDQS)
BuildingsMater	rialsStructures
Foundation: CONCRETE Framing: CONCRETE Walls: SANDSTONE/BROWNSTONE	Sub-structure:
Roof: SLATE	Super Serveen
Volume: 20,001 - 2,000,000 C	UBIC FT
STR. FACADE-2 PARTS. 1: 5-STORY BROWNSTONE RU RAIL, FENCE, BALCONY. LABELS @ WIN. SCALLOP S STREET. BROWNSTONE, NO FENESTRATION. TILE ROO	W HOUSE. 3 BAY, FLIGHT BROWNSTONE STEPS @ ENTRY. IRON LATE MANSARD W/ DORMERS. 2: 5-STORY, SET BACK FROM IF DECK.
Impact Level: MODERATE Impac	t Types: THEFT OR LOOTING POLLUTION
Condition: GOOD	VANDALISM

page 1 of 2

#### LIST OF CLASSIFIED STRUCTURES (LCS) SINGLE ENTRY REPORT Continued

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IDLCS Park Structure Name	Number
01329 THRB THEODORE ROOSEVELT BIRTHPLACE	1
Management Information	
NPS Legal Interest: FEE Federal Owne Life: Exp. Date: / / Local Owne	
Management Category: MUST BE PRES. & MAINT Management Date Management Agreement: NONE Agrmt. Exp. Date	: 03/01/63 ; / /
Proposed Ultimate Treat: Doc: Date Approved Ultimate Treat: NO TREATMENT Doc: NONE Date	: ///
Treatment Responsibilities Treatment Costs	
Interim Treatment: NPS Interim: \$0 Da Ultimate Treatment: NPS Ultimate: \$0 Da Routine Maintenance: NPS Level of Estimate: Cyclic Maintenance: NPS Estimator:	te: / te: /
Approved Ultimate Treatment Completed: NO	
Management Text	
MORE EMPHASIS COULD BE PLACED ON DAY-TO-DAY MAINTENANCE OF THE SITE, ESPECIALLY IN THE NON-PUB AREAS.	LIC
Nat. Reg.: 66000054 CSI: Nat. Cat: NO	
HABS: BRIDGES: HAER: DAMS: QTRS:	
CLI CRBIB Other	
1.   HRS 1.   1.     2.   HS ASSESS 2.   2.     3.   HSR 3.   3.     4.   CLR 4.   4.     5.   5.   5.	
Documentation Level: POOR	
Date Entered/Updated: 11/30/93 Logger: PBG	

Date of Report: 05/19/94

page 2 of 2

PHOTO + GUARD # 3224 LIGHT IMPRESSIONS\* Rochester, NY



Structure No. 01 IDLCS: 01329 THEODORE ROOSEVELT BIRTHPLACE

## APPENDIX G TIMELINE OF CONSTRUCTION AND BUILDING HISTORY

Date	Type Of Work	Contractor	Cost
3/23/1921	Steel	Eidlitz & Ross	\$13,450.00
3/29/1921	Connecticut Brownstone (Façade)	George Brown & Co.	\$19,224.00
	Limestone Sills & Lintels (Rear)		
4/1/1921	Steps, Paving, & Ashlar Granite	George Brown & Co.	\$2,480.00
4/19/1921	Bluestone Coping & Chimney Caps	E. J. Nevins	\$495.00
5/17/1921	Excavation, Backfilling, & Shoring	Clarence L. Smith	\$5,072.00
5/23/1921	Common Brick	Peck Building Material Co.	\$3,850.00
	Portland Cement	Peck Building Material Co.	\$5,120.00
5/25/1921	Cowbay Sand	Manhattan Sand Co.	\$1,072.50
	Washed Gravel	Manhattan Sand Co.	
	Broken Stone	Manhattan Sand Co.	\$1,015.00
6/8/1921	Concrete Basement	Liomin & Wales Co.	.16 per 2 sided
			forms
			.31 per 1 sided
			forms
-	Front Wood Window Frames	John Carl & Sons	\$650.00
6/23/1923	Reinforced Concrete Floors and Arches	A. & G. Pierce	\$8,720.00
1/12/1922	Roofing & Sheet Metal	Norman-Seton Inc	\$5,475.00
1/12/1922	Roughing for Plumbing & Vacuum Fixtures	Joseph Miller	\$7,066.00
1/12/1922	Heating	Walker & Chambers	\$6,770.00
1/12/1922	Wiring	J. P. Hall Smith	\$2,925.00
1/27/1922	Terra Cotta Partition Block	Anness & Potter Fire Clay	
		Co.	
	Iron Stairs & Fire Escape	Sexauer & Lemke	\$3,917.00
2/2/1922		Joseph B. Friedlander's Son	\$600.00
2/8/1922	Gypsum Block	H.W. Bell	

Date	Type Of Work	Contractor	Cost
5/19/1922	Electrical Supply	New York Edison Co.	\$78.43
Date	Type Of Work	Contractor	Cost
3/23/1921	Steel	Eidlitz & Ross	\$13,450.00
3/29/1921	Connecticut Brownstone (Façade)	George Brown & Co.	\$19,224.00
	Limestone Sills & Lintels (Rear)		
4/1/1921	Steps, Paving, & Ashlar Grantie	George Brown & Co.	\$2,480.00
4/19/1921	Bluestone Coping & Chimey Caps	E. J. Nevins	\$495.00
5/17/1921	Excavation, Backfilling, & Shoring	Clarence L. Smith	\$5,072.00
5/23/1921	Common Brick	Peck Building Material Co.	\$3,850.00
	Portland Cement	Peck Building Material Co.	\$5,120.00
5/25/1921	Cowbay Sand	Manhattan Sand Co.	\$1,072.50
	Washed Gravel	Manhattan Sand Co.	
	Broken Stone	Manhattan Sand Co.	\$1,015.00
6/8/1921	Concrete Basement	Liomin & Wales Co.	.16 per 2 sided
			forms
			.31 per 1 sided
			forms
6/13/1921	Front Wood Window Frames	John Carl & Sons	\$650.00
6/23/1923	Reinforced Concrete Floors and Arches	A. & G. Pierce	\$8,720.00
1/12/1922	Roofing & Sheet Metal	Norman-Seton Inc	\$5,475.00
1/12/1922	Roughing for Plumbing & Vacuum Fixtures	Joseph Miller	\$7,066.00
1/12/1922	Heating	Walker & Chambers	\$6,770.00
1/12/1922	Wiring	J. P. Hall Smith	\$2,925.00
1/27/1922	Terra Cotta Partition Block	Anness & Potter Fire Clay	
		Co.	
1/27/1922	Iron Stairs & Fire Escape	Sexauer & Lemke	\$3,917.00

Date	Type Of Work	Contractor	Cost
2/2/1922	Exterior Glass	Joseph B. Friedlander's Son	\$600.00
2/8/1922	Gypsum Block	H.W. Bell	
5/19/1922	Electrical Supply	New York Edison Co.	\$78.43
6/17/1922	Hollow Metal Doors & Bucks	Lanton	\$5,775.00
6/25/1922	Elevator	Otis Elevator Co.	\$4,850.00
7/1/1922	Dumb Waiter	Otis Elevator Co.	\$5,060.00
7/18/1922	Exterior Bronze	Penn Brass & Bronze Works	\$6,650.00
10/24/1922	Rolled Steel Sash & Frames		\$1,330.00
11/15/1922	Marble Mantels, Hearths, Cast Iron Fireplace		
	Linings, & Summer Fronts		\$750.00
11/20/1922	Damp-proofing Exterior Walls	Tide-Water Co.	
11/29/1922	Gillies & Georghegan Telescope Hoist (model A),		
	Sidewalk Door & Frame, Automatic Opener &		
	Closing Device w/ Safety Gate & Ladder		\$520.00
11/29/1922	Tin Clad Doors & Hardware	Coburn Trolley Track Mfg.	
		Со	\$286.00
12/2/1922		Norman-Seton Inc	\$441.00
12/18/1922	Plaster Furring & Plaster	John J. Roberts Co.	\$9,494.00
	Hangers for Furring		\$277.00
	Models fro Plaster		\$430.00
1/31/1923	Hardware for Hollow Metal Doors	P & F Corbin	\$1,270.00
	Hardware for Hollow Metal Doors	P & F Corbin	\$224.00
2/16/1923	Fireplace Fittings	Wm. H. Jackson Co.	\$1,325.00
2/23/1923	Tile Work	Mart & Lanton	\$2,072.00
2/23/1923	Prep for Tile Work	J.J. Roberts Co	\$240.00
3/9/1923	J.L. Mott Iron Works Plumbing Fixtures	Joseph Miller	\$2,306.00

Date	Type Of Work	Contractor	Cost
3/21/1923	Parlour and Library Carpet	W. & J. Sloane	\$632.66
3/28/1923	Dining Room and two bedrooms and passage	Torrey, Bright & Capen Co.	\$796.92
4/11/1923	Interior Marble & Slate	McGratty & Sons	\$5,659.00
4/11/1923	Weather-stripping	Hurst-Farr Inc	\$145.00
4/11/1923	Mirrors & Medicine Cabinet	Mart & Lanton	\$225.00
4/11/1923	Linings & Radiator Enclosures	Walker & Chambers	\$630.00
4/11/1923	Hardware for Exterior Shutters	P.F. Corbin	\$222.50
4/11/1923	Snow Guards	Norman-Seton Inc	\$120.00
4/16/1923	Millwork	T.H. Lawrence	\$5,758.00
4/16/1923	Cork Floors	Bonded Cork Inc	\$800.00
4/19/1923	Hardware for Cabinets and Millwork	P.F. Corbin	\$4,259.00
4/26/1923	Cabinets In Basement & In Library on 2nd Floor	Skinner, Perry, & Freeman	\$28,200.00
4/26/1923	Cabinet Work in 1st Floor Museum & Auditorium	T.D. Wadleton	\$15,025.00
4/26/1923	Cabinet Work on 3rd Floor and 3rd to 4th Floor Stair	Henry Baumguard Inc	\$15,000.00
4/27/1923	Toilet Work & Setting Old Mantels	McGratty & Sons	\$1,323.00
5/15/1923	Interior Glass	Thos. C. Edmonds & Co.	\$1,600.00
5/31/1923	Bluestone Curb	Best Bros.	\$215.00
6/12/1923	Wood Stair Work	J.J. Wallace Co.	\$3,295.00
7/5/1923	Lighting Equipment	Frink Reflector Co.	\$2,239.00
8/8/1923	Terrazzo Work	DePaoli & Co.	\$850.00
8/18/1923	Painting	Henry D. Moeller	\$3,643.00
8/21/1923	Parquet Flooring	Hasbrouck Flooring Co.	\$2,500.00
9/14/1923	Paneled Partition in Women's Work Room	Henry Baumguard Inc	\$578.00
9/14/1923	Bronze Register Faces	Penn Brass & Bronze Works	\$2,600.00
9/28/1923	Kalsomining Ceilings	Henry D. Moeller	\$676.00
11/15/1923	Telephone Service	New York Telephone Co.	\$48.10

Date	Type Of Work	Contractor	Cost
11/15/1923	Trim	Thos. Lawrence	\$1,404.80
11/15/1923	Marbloid floor	Marbleoid Company	
11/15/1923	Lumber	Crane & Clark	
11/27/1923	Tablet Over Entrance, Chain, Bulletin Board Frames,	Penn Brass & Bronze Works	
	Small sign on stoop		\$1,125.00
12/28/1923	Furnishing and Installation Light Fixtures	Sterling Bronze Co.	\$7,321.00
3/13/1931	Upgrade Major Electrical to A.C., letter of intent	New York Edison Co.	
?/?/1935	Install Timeclock and Security System	Holmes Protective Co.	
7/22/1936	Interior Ceiling Rekalsomined, Repainting, Cleaning Woodwork	Mercraft Studios, Inc.	\$74.00
4/5/1940	Cork Floor Repairs (library, work room and hall)	Rollo, Johnson & Siedler, Inc.	\$183.00
4/11/1940	Hot water piping and brass fittings	James N. Cleary, Plumbing and Heating Contractor	
4/12/1940	Cork Floor Repairs (offices)	Rollo, Johnson & Siedler, Inc.	\$54.00
4/12/1940	Roof work (cement and copper hoods)	The West Side Roofing Co.	\$125.00
7/25/1945	Exterior Painting (dark green fire escape, skylights, and grills) stated preference for Pittsburg sun paints	American Commercial Painting Co.	\$350.00
10/21/1954	Proposal Roof Work (tiling, waterproofing with asbestos fiber roof cement, and installation of new	B. & S. Smith General	ψ000.00
	Mansard gutters)	Contractors	\$3,375.00
11/8/1954	Proposal for Wallpaper Hanging, Refinishing Woodwork, Exterior Masonry Repairs and Repointing, Roof and Skylight Repairs	E. W. Howell Co.	
			\$9,329.00

Date	Type Of Work	Contractor	Cost
11/18/1954	Repainting (2 coats throughout period rooms,	M. O'Connell & CO.,	
	museums and offices), Remove Paper and Prepare	Builders	
	Walls for Paper Hanging, Varnish Railings, Plaster		
	Repairs to two rear rooms	\$3,070.00	
5/2/1955		Laurence S. Harrison,	
	exterior, and rewiring current electrical system)	Consulting Engineer	
5/23/1955	Additional Paintwork estimate	E. W. Howell Co.	\$556.00
12/3/1956	3 sets of Exterior Flood Lights	Albin Gustafson Company	\$1,148.00
6/19/2006	Exterior Masonry Stabilization and Roof Repairs	Puente Construction	
		Enterprises, Inc.	\$248,000.00

## APPENDIX H Hazardous Materials Analysis

#### Lead-Based Paint Survey Guidelines

Guidelines used for the lead-based paint survey were a modified protocol established by the U.S. Department of Housing and Urban Development (HUD) in the Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing. The Guidelines are issued pursuant to section 1017 of the Residential Lead-Based Paint Hazard Reduction Act of 1992, which is otherwise referred to as Title X.

HUD has established a threshold of 0.5% by weight and/or 1.0 mg/cm2 at and above which a paint is considered to be lead-based.

The Niton XLp 300A Series Lead-Based Paint Analyzer (XRF) is a complete lead-based paint analysis system, which quickly, accurately, and non-destructively measures the concentration of lead in painted surfaces.

Components that were identified as containing lead in concentrations at or above the HUD/EPA threshold limit of 1.0 mg/cm2 are listed in red in Table 1.0. Components that were identified as containing lead in concentrations below the HUD/EPA threshold limit of 1.0 mg/cm2 are listed in black.

XRF readings listed as "NULL" are a result of the Niton XLp 300A proximity sensor loosing contact with the testing substrate. Building components were retested in this case.

XRF readings listed as "Verification Shot" are a result of pre and post inspection testing shots of a known NIST standard.

XRF readings listed as "Shutter Cal" are a result of the XRF device performing an Internal calibration check.

### Universal Wastes and Polychlorinated Biphenyls (PCBs)

Federally-designated *Universal Wastes* include batteries, pesticides, mercury-containing equipment and lamps.

A total of five fluorescent light fixtures and ten fluorescent bulbs are in rooms B-05 and B-11 in the sub-basement. No thermostats, mercury switches, batteries, or pesticides were observed in the building. When discarded, these materials require collection, handling, transportation, and disposal in accordance with 40 CFR Part 273 requirements.

Seven assumed PCB-containing light fixture ballasts were inventoried as no labeling was present to indicate these ballasts do not contain PCBs. These ballasts are located in the light fixtures in rooms B-05 and B-11. When discarded, these ballasts may be regulated under the Toxic Substance Control Act (TSCA) and 40 CFR 761 depending upon the concentration, if any, of PCBs in the capacitors and potting material.

Level HSR Room Name Hazmat Room Name						
Subbasement	B-01	MR1				
Subbasement	B-02	MR5				
Subbasement	B-03	BTR1				
Subbasement	B-04 (Safe)	MR3				
Subbasement	B-05	MR2				
Subbasement	B-06	MR4				
Subbasement	B-07	SW1/C1				
Subbasement	B-08	MR7				
Subbasement	B-09	MR8				
Subbasement	B-10 (Boiler Room)	MR1				
Subbasement	B-11	MR6				
Basement/Ground Floor	G-01	FC/F1				
Basement/Ground Floor	G-02 (Hall)	F2/L/C2/C3/E1				
Basement/Ground Floor	G-03 (Staff Office)	R (Reception)				
Basement/Ground Floor	G-04 (Ladies Room)	BTR2				
Basement/Ground Floor	G-05 (Toilet)	BTR2				
Basement/Ground Floor		BTR3				
	G-06 (Toilet)	BTR3				
Basement/Ground Floor	G-07 (Mens Room)					
Basement/Ground Floor	G-08	EC/Dead End Corridor				
Basement/Ground Floor	G-09 (Kitchen)	K1				
Basement/Ground Floor	G-10 (Caretaker's Room)	01				
Basement/Ground Floor	G-11	BTR4				
Basement/Ground Floor	G-12	CL2				
Basement/Ground Floor	G-13 (Caretaker's Living Room)	O2, CL3, CL4				
Basement/Ground Floor	G-14 (Tea Room)	EH2				
Basement/Ground Floor	G-15 (Museum)	EH1				
First Floor	101	F3				
First Floor	102 (Hall)	C4				
First Floor	103 (Front Parlor)	EH3 (Museum)				
First Floor	104 (Family Parlor)	EH4 (Museum)				
First Floor	105 (Dining Room)	EH7 (Museum)				
First Floor	106	CL5				
First Floor	107	CL6				
First Floor	108 (Museum)	EH8				
Second Floor	201 (Curator's Room)	EH9				
Second Floor	202 (Hall)	C9				
Second Floor	203 (Bedroom)	EH10 (Museum)				
Second Floor	204	C5				
Second Floor	205	CL7				
Second Floor	206	CL8				
Second Floor	207 (Nursery)	EH11 (Museum)				
Second Floor	208 (Porch)	2nd Floor Terrace				
Second Floor	209 (Study Room)	LBR2				
Second Floor	210 (Library)	LBR1				
Third Floor	301 (Office)	O4				
Third Floor	302 (Office)	O3				
Third Floor	303 (Lobby)	L2				
Third Floor	304	BTR5A/BTR5B				
Third Floor	305	BTR6				
Third Floor	306 (Office)	05				
Third Floor	307 (Artifact Storage)	ST1				
	our (Aniadi Olulaye)					

## THRB Room Name Comparison Chart for HSR and Hazmat Reports

Third Floor	308	C7, CLA, CLB
Third Floor	309	ST3, CL, CL
Third Floor	310 (Artifact Storage)	ST2
Fourth Floor	401 (Dressing Room)	ST5
Fourth Floor	402	BTR7
Fourth Floor	403 (Serving Kitchen)	K2
Fourth Floor	404 (Storage)	ST4, SW8
Fourth Floor	405 (Auditorium)	AUD
Fourth Floor	406	BTR8
Fourth Floor	407	ST6, CL15
Fourth Floor	408	C8
Fourth Floor	409 (Projection Room)	PR
Fourth Floor	410	ST4B
Roof	501	C10
Roof	502	C11
Roof	503	C12
Roof	503 (Vent Room)	HVAC Room
Roof	Roof Deck	Roof Patio

			Ta	able 1.0					
			Results of	of XRF Testi	ng				
Shot #	Room	Location	Component	Substrate	Color	Condition	XRF Result	Classification	Detectable Lead Level Present
2	Verification Shot	NA NA	NA	NA	NA NA	NA NA	1.1 1.1	Positive	NA
3	Verification Shot	NA	NA	NA NULL	NA	NA	1.1	Positive	NA
5	Verification Shot	NA	NA	NA	NA	NA	1.2	Positive	NA
6	Mechanical Room 1	В	Door	Metal	Red	Good	18.9	Positive	Yes
7 8	Mechanical Room 1 Mechanical Room 1	A C	Door Railing	Metal Metal	Red Brown	Good Poor	14.7 5.5	Positive Positive	Yes Yes
9	Mechanical Room 1	D	Wall	Concrete	Green	Fair	0.7	Negative	Yes
10				NULL					
11	Mechanical Room 6	В	Wall	Brick	White	Good	0.02	Negative	Yes
12 13	Mechanical Room 6	D	Wall	NULL Concrete	White	Good	-0.05	Negative	Yes
14	Mechanical Room 6	B	Ceiling	Concrete	White	Good	0.00	Negative	No
15	Mechanical Room 3	В	Wall	Metal	Green	Good	13.6	Positive	Yes
16	Mechanical Room 4	A	Door	Metal	Red	Good	13.5	Positive	Yes
17 18	Mechanical Room 2 Mechanical Room 7	A	Door Pipe	Metal Metal	Red White	Good Poor	13.2 8.3	Positive Positive	Yes Yes
10	Mechanical Room 7	A	Door	Metal	Green	Good	15.1	Positive	Yes
20	Mechanical Room 7	С	Door	Metal	Green	Good	6.8	Positive	Yes
21	Mechanical Room 7	С	Ladder	Metal	Green	Good	6.8	Positive	Yes
22 23				NULL NULL					
24	Corridor 1	Α	Door	Metal	Red	Good	14.8	Positive	Yes
25	Corridor 1	С	Door	Metal	Red	Good	17	Positive	Yes
26	Bathroom 1	D	Door	Metal	Red	Good	4.6	Positive	Yes
27 28	Bathroom 1 Bathroom 1	B	Door Frame Wall	Metal Plaster	Red White	Good Poor	7.8 0.05	Positive Negative	Yes Yes
29	Bathoom 1	В	Waii	NULL	Winte	1 001	0.00	Negative	103
30	Bathroom 1	В	Ceiling	Plaster	White	Poor	-0.05	Negative	No
31	Bathroom 1	D	Baseboard	Concrete NULL	Red	Poor	0.07	Negative	Yes
32 33	Bathroom 1	A	Floor	Concrete	Red	Poor	0.01	Negative	Yes
34	Stairwell 2	B	Door	Metal	Red	Good	16.9	Positive	Yes
35	Stairwell 2	В	Door Frame	Metal	Red	Good	8.4	Positive	Yes
36 37	Stairwell 2 Stairwell 2	BB	Stair Tread Stair Riser	Metal Metal	Red Red	Fair Good	0.15 3.9	Negative Positive	Yes Yes
38	Stairwell 2	A	Stair Rail	Metal	Red	Good	6.1	Positive	Yes
39	Stairwell 2	A	Wall	Plaster	Green	Good	0.05	Negative	Yes
40	Stairwell 1	D	Wall	Plaster	Green	Fair	-0.11	Negative	No
41 42	Stairwell 1	D	Stair Tread	NULL Metal	Red	Fair	0.21	Negative	Yes
42	Stairwell 1	D	Stair Riser	Metal	Red	Good	2.6	Positive	Yes
44	Stairwell 1	D	Stair Stringer	Metal	Red	Good	2.2	Positive	Yes
45	Stairwell 1	D	Newel Post	Metal	Red	Good	2.8	Positive	Yes
46 47	Stairwell 1 Lobby	D B	Wall Ceiling	Concrete Plaster	Red White	Good Good	0.4	Negative Negative	Yes Yes
47	Lobby	A	Window Frame	Wood	Brown	Good	0.08	Negative	Yes
49	Lobby	A	Window Sash	Wood	Brown	Good	9.3	Positive	Yes
50	Lobby	В	Crown Molding	Plaster	White	Good	0.02	Negative	Yes
51 52	Reception	D	Ceiling	Plaster NULL	White	Good	-0.18	Negative	Yes
53				NULL					
54	Exhibit Hall 1	В	Ceiling	Plaster	White	Good	0.01	Negative	Yes
55	Exhibit Hall 1	В	Crown Molding	Plaster	White	Good	0.01	Negative	Yes
56 57				NULL NULL					
58	Corridor 2	В	Ceiling	Plaster	White	Good	0.08	Negative	Yes
59	Corridor 2	В	Crown Molding	Plaster	White	Good	0.02	Negative	Yes
60	Bathroom 2	A	Door Door	Wood	White	Good	0.28	Negative	Yes
61 62	Bathroom 2	A	Door Frame	Wood NULL	White	Good	0.18	Negative	Yes
62 63	Bathroom 2	A	Ceiling	Plaster	White	Good	0.4	Negative	Yes
64	Bathroom 3	С	Door	Wood	White	Good	0.16	Negative	Yes
65	Bathroom 3	С	Door Frame	Wood	White	Good	0.21	Negative	Yes
66 67	Bathroom 3 Corridor 3	C C	Ceiling Ceiling	Plaster Plaster	White White	Good Poor	0.09	Negative Negative	Yes Yes
68	Cornuol S		Cennig	NULL	wille	F001	0.00	inegative	165

	Table 1.0								
			Results of	of XRF Testi	ng			1	-
Shot #	Room	Location	Component	Substrate	Color	Condition	XRF Result	Classification	Detectable Lead Level Present
69	Corridor 3	С	Crown Molding	Plaster	White	Poor	0.02	Negative	Yes
70	Closet 1	Α	Door Frame	Metal	White	Good	2.9	Positive	Yes
71	01 / 1			NULL	14/1 14			N	N N
72 73	Closet 1 Kitchen1	C D	Wall Door	Plaster Wood	White White	Good Good	0.5 5.6	Negative Positive	Yes Yes
74	Kitchen1	D	Door Frame	Wood	White	Good	0.5	Negative	Yes
75	Kitchen1	D	Wall	Plaster	White	Good	0.4	Negative	Yes
76	Kitchen1	С	Cabinet	Wood	White	Good	8.8	Positive	Yes
77	Kitchen1	С	Ceiling	Plaster	White	Good	0.4	Negative	Yes
78	Kitchen1	В	Locker	Wood	White	Good	7.6	Positive	Yes
79	Kitchen1	В	Dumbwaiter	Metal	White	Good	22.2	Positive	Yes
80 81	Office 1 Office 1	A	Door Door Frame	Wood Wood	White White	Good Good	9.4 6.9	Positive Positive	Yes Yes
82	Office 1	B	Wall	Plaster	White	Poor	0.9	Negative	Yes
83	Office 1	B	Baseboard	Wood	White	Good	5.9	Positive	Yes
84	Office 1	В	Ceiling	Plaster	White	Poor	0	Negative	No
85	Office 1	В	Skylight	Metal	White	Good	11.3	Positive	Yes
86	Office 1	В	Radiator	Metal	White	Good	10	Positive	Yes
87	Bathroom 4	A	Door	Wood	White	Good	8.6	Positive	Yes
88	Bathroom 4	A	Door Frame	Wood	White	Good	1.8	Positive	Yes
89 90	Bathroom 4	В	Wall	Plaster NULL	White	Good	0.21	Negative	Yes
91				NULL					
92				NULL					
93	Bathroom 4	В	Skylight Frame	Wood	White	Good	11.1	Positive	Yes
94	Closet 2	A	Door	Wood	White	Good	17.8	Positive	Yes
95	Closet 2	Α	Door Frame	Wood	White	Good	10.1	Positive	Yes
96				NULL					
97	01		14/-11	NULL	\\//+:\+-	E a la	0.5	N a sea Gran	No
98 99	Closet 2	В	Wall	Plaster NULL	White	Fair	0.5	Negative	Yes
100	Closet 2	В	Ceiling	Plaster	White	Fair	0.5	Negative	Yes
100	Closet 2	B	Pipe	Metal	White	Fair	5.7	Positive	Yes
102	Office 2	B	Door Frame	Wood	White	Good	6.9	Positive	Yes
103		•		NULL					
104	Office 2	A	Wall	Plaster	White	Good	0	Negative	No
105	Office 2	Α	Baseboard	Wood	White	Good	6	Positive	Yes
106 107	Office 2	A	Ceiling	Plaster	White	Good	0.25	Negative	Yes
107	Office 2 Office 2	A	Crown Molding Skylight Frame	Plaster Wood	White White	Good Good	6.7 3.8	Positive Positive	Yes Yes
100	Closet 3	A	Door	Wood	White	Good	11.5	Positive	Yes
110	Closet 3	A	Door Frame	Wood	White	Good	7.5	Positive	Yes
111		•		NULL					•
112				NULL					
113	Closet 3	С	Wall	Plaster	White	Fair	0.01	Negative	Yes
114	Closet 3	C	Shelf	Wood	White	Good	10.2	Positive	Yes
115 116	Closet 4 Closet 4	A	Door Door Frame	Wood Wood	White White	Good Good	9.4 5.7	Positive Positive	Yes Yes
117	Closet 4	C	Wall	Plaster	White	Fair	0.02	Negative	Yes
118	Closet 4	C	Shelf	Wood	White	Good	12.8	Positive	Yes
119	Entrance Corridor	C	Door	Metal	White	Good	29.2	Positive	Yes
120	Entrance Corridor	С	Door Frame	Metal	White	Good	12.6	Positive	Yes
121	Entrance Corridor	В	Wall	Plaster	White	Good	0.4	Negative	Yes
122				NULL					
123	Entropos Corrido		Boochaard	NULL	Drawn	Cond	10	Desitive	Vaa
124 125	Entrance Corridor	В	Baseboard	Concrete NULL	Brown	Good	1.6	Positive	Yes
125	Entrance Corridor	В	Floor	Concrete	Brown	Good	0.8	Negative	Yes
120	Entrance Contract			NULL	2.000	0000	0.0	gauvo	
128				NULL					
129	Entrance Corridor	В	Ceiling	Plaster	White	Good	0.4	Negative	Yes
130	Closet 1A	В	Door	Metal	Beige	Good	7.5	Positive	Yes
131	Closet 1A	В	Door Frame	Metal	Beige	Good	2.2	Positive	Yes
132	01		\A/_ II	NULL	D-1		~ ~	N	¥-
133 134	Closet 1A	A	Wall	Plaster NULL	Beige	Good	0.5	Negative	Yes
134				NULL					
	Closet 1A	С	Cabinet	Wood	Beige	Good	12	Positive	Yes

				ble 1.0					
			Results o	f XRF Testi	ng	1		F	
Shot #	Room	Location	Component	Substrate	Color	Condition	XRF Result	Classification	Detectable Lead Level Present
137	Stairwell 3	В	Stair Riser	Wood	White	Good	0.14	Negative	Yes
138	Stairwell 3	В	Stair Stringer	Wood	White	Good	0.15	Negative	Yes
139 140	Stairwell 3 Corridor 4	D A	Molding Door	Wood Wood	White White	Good Good	11.6 15.4	Positive Positive	Yes Yes
140	Shutter Verification Shot	NA	NA	NA	NA	NA	3.84	Positive	NA
142	Corridor 4	A	Door Frame	Wood	White	Good	12.9	Positive	Yes
143	Corridor 4	A	Ceiling	Plaster	White	Good	0	Negative	No
144	Corridor 4	A	Crown Molding	Plaster	White	Good	-0.02	Negative	Yes
145	Corridor 4	В	Baseboard	Wood	White	Good	13.7	Positive	Yes
146 147				NULL NULL					
148	Foyer 3	Α	Door	Wood	Green	Good	2.6	Positive	Yes
149	Foyer 3	Α	Door Frame	Wood	White	Good	16.2	Positive	Yes
150	Foyer 3	В	Wood Panel	Wood	White	Good	13.5	Positive	Yes
151 152	<b>F</b> 0		Quillin a	NULL	White	01	0.01	Manadara	N
152	Foyer 3	A	Ceiling	Plaster NULL	white	Good	0.01	Negative	Yes
154	Foyer 3	В	Crown Molding	Plaster	White	Good	0.02	Negative	Yes
155	Foyer 3	В	Baseboard	Wood	White	Good	10.7	Positive	Yes
156	Exhibit Hall 3	D	Door	Wood	White	Good	22.7	Positive	Yes
157	Exhibit Hall 3	D	Door Frame	Wood	White	Good	15.2	Positive	Yes
158 159	Exhibit Hall 3 Exhibit Hall 3	A B	Window Frame Crown Molding	Vinyl Plaster	White White	Good Good	7.3 0.01	Positive Negative	Yes Yes
160	Exhibit Hall 3	A	Crown Wolding	Plaster	White	Good	0.01	Negative	No
161	Exhibit Hall 3	В	Baseboard	Wood	White	Good	11.5	Positive	Yes
162	Exhibit Hall 4	D	Door	Metal	White	Good	26.8	Positive	Yes
163	Exhibit Hall 4	D	Door Frame	Wood	White	Good	12	Positive	Yes
164 165	Exhibit Hall 4 Exhibit Hall 4	D	Baseboard Crown Molding	Wood Plaster	White White	Good Good	<u>15.5</u> -0.04	Positive Negative	Yes Yes
165	Exhibit Hall 4	D	Crown Wolding	Plaster	White	Good	0.04	Negative	Yes
167	Exhibit Hall 4	B	Mantle	Wood	White	Good	1.6	Positive	Yes
168	Exhibit Hall 7	Α	Door Frame	Wood	White	Good	12	Positive	Yes
169	Exhibit Hall 7	В	Molding	Plaster	White	Good	0	Negative	No
170	Exhibit Hall 7	В	Crown Molding	Plaster	White	Good	0	Negative	No
171 172	Exhibit Hall 7 Exhibit Hall 7	B C	Ceiling Baseboard	Plaster Wood	White White	Good Good	0	Negative Positive	No Yes
172	Closet 5	D	Door	Wood	White	Good	18.6	Positive	Yes
174	Closet 5	D	Door Frame	Wood	White	Good	15.4	Positive	Yes
175				NULL					
176	Closet 5	В	Wall	Plaster	White	Good	0.16	Negative	Yes
177 178	Closet 5	В	Ceiling	NULL Plaster	White	Good	0	Negative	No
170	Closet 6	D	Door	Wood	White	Good	16.3	Positive	Yes
180	Closet 6	D	Door Frame	Wood	White	Good	11.5	Positive	Yes
181	Closet 6	В	Wall	Plaster	White	Good	0.27	Negative	Yes
182				NULL					
183 184	Closet 6 Exhibit Hall 8	BB	Ceiling Ceiling	Plaster Plaster	White White	Good Good	0.28	Negative Negative	Yes Yes
185	Exhibit Hall 8	B	Crown Molding	Plaster	White	Good	0.01	Negative	Yes
186	Stairwell 5	D	Stair Riser	Wood	White	Good	8.7	Positive	Yes
187	Stairwell 5	D	Stair Stringer	Wood	White	Good	12.1	Positive	Yes
188	Corridor 9	С	Door	Wood	White	Good	21.1	Positive	Yes
189 190	Corridor 9	C B	Door Frame	Wood Wood	White White	Good	14.2 15.1	Positive	Yes
190	Corridor 9	B	Baseboard	NULL	white	Good	15.1	Positive	Yes
191	Corridor 9	В	Ceiling	Plaster	White	Good	-0.08	Negative	No
193	Corridor 9	В	Crown Molding	Plaster	White	Good	0.02	Negative	Yes
194				NULL					
195	Exhibit Hall 9	C	Door Door Frame	Metal	White	Good	0.04	Negative	Yes
196 197	Exhibit Hall 9 Exhibit Hall 9	C C	Door Frame Wall	Wood Plaster	White White	Good Good	10.7 9.8	Positive Positive	Yes Yes
197	Exhibit Hall 9	C	Baseboard	Wood	White	Good	9.8	Positive	Yes
199	Exhibit Hall 9	C	Ceiling	Plaster	White	Good	0	Negative	No
200	Exhibit Hall 9	C	Crown Molding	Wood	White	Good	0	Negative	No
201	Exhibit Hall 9	Α	Window Frame	Wood	White	Good	9.4	Positive	Yes
202	Exhibit Hall 9	A	Window Sash	Wood	White	Good Good	12.3 13.8	Positive Positive	Yes Yes
203	Corridor 9	B	Door	Wood	White				

Shot #       205       206       207       208       209       210	Room Exhibit Hall 10 Exhibit Hall 10	Location	Results o	f XRF Testii	ng				Detectable
205 206 207 208 209 210	Exhibit Hall 10 Exhibit Hall 10	Location	Component						Detectable
206 207 208 209 210	Exhibit Hall 10		oomponent	Substrate	Color	Condition	XRF Result	Classification	Lead Level Present
207 208 209 210		D	Door	Metal	White	Good	25.4	Positive	Yes
208 209 210		D	Door Frame	Wood	White	Good	9.9	Positive	Yes
209 210	Exhibit Hall 10	D	Baseboard	Wood	White	Good	16.6	Positive	Yes
210	Exhibit Hall 10	D	Ceiling	Plaster NULL	White	Good	0.02	Null	Yes
	Exhibit Hall 10	D	Crown Molding	Wood	White	Good	0.01	Negative	Yes
211	Exhibit Hall 10	A	Window Frame	Wood	White	Good	7.9	Positive	Yes
212	Exhibit Hall 10	А	Window Sash	Wood	White	Good	11.3	Positive	Yes
213	Corridor 5	A	Door	Wood	White	Good	17.8	Positive	Yes
214	Corridor 5	A	Door Frame	Wood	White	Good	13.7	Positive	Yes
215 216	Corridor 5 Corridor 5	B	Baseboard Ceiling	Wood Plaster	White White	Good Good	<u>10</u> 0	Positive Negative	Yes No
210	Corridor 5	D	Cabinet	Wood	White	Good	12.8	Positive	Yes
218	Exhibit Hall 11	D	Door	Metal	White	Good	16.3	Positive	Yes
219	Exhibit Hall 11	D	Door Frame	Wood	White	Good	15.1	Positive	Yes
220	Exhibit Hall 11	А	Baseboard	Wood	White	Good	10.8	Positive	Yes
221	Exhibit Hall 11	A	Ceiling	Plaster	White	Good	0	Negative	No
222	Exhibit Hall 11	C	Window Frame	Wood	White	Good	13.8	Positive	Yes
223 224	Exhibit Hall 11	С	Window Sash	Wood NULL	White	Good	8	Positive	Yes
224	Exhibit Hall 11	А	Crown Molding	Wood	White	Good	0.1	Negative	Yes
226	Closet 8	C	Door	Metal	White	Good	25.1	Positive	Yes
227	Closet 8	C	Door Frame	Wood	White	Good	18.1	Positive	Yes
228				NULL					
229				NULL					
230	Closet 8	A	Wall	Plaster	White	Good	0.05	Negative	Yes
231	Closet 8	A	Ceiling	Plaster	White	Good	0.5	Negative	Yes
232 233	Library 1 Library 1	B	Door Frame Ceiling	Wood Plaster	White White	Good Good	<u>14.2</u> 0	Positive Negative	Yes No
233	Library 1	B	Crown Molding	Plaster	White	Good	0.01	Negative	Yes
235	Library 2	A	Ceiling	Plaster	White	Good	0	Negative	No
236	Library 2	A	Crown Molding	Plaster	White	Good	0.16	Negative	Yes
237	Stairwell 6	С	Stair Riser	Wood	White	Good	7.5	Positive	Yes
238	Stairwell 6	С	Stair Stringer	Wood	White	Good	7.8	Positive	Yes
239	Lobby 2	C	Ceiling	Plaster	White	Good	0.01	Negative	Yes
240 241	Lobby 2 Office 3	C C	Crown Molding Ceiling	Plaster Plaster	White White	Good Good	0.5	Negative Negative	Yes No
241	Office 3	A	Window Frame	Wood	Brown	Fair	0.1	Negative	Yes
243	Office 3	A	Window Sash	Wood	Brown	Fair	7.9	Positive	Yes
244	Office 4	С	Ceiling	Plaster	White	Fair	0	Negative	No
245	Office 4	Α	Window Frame	Wood	Brown	Fair	9.1	Positive	Yes
246	Bathroom 5	D	Door	Wood	White	Good	0.2	Negative	Yes
247	Bathroom 5	D	Door Frame	Metal	White	Good	0.3	Negative	Yes
248 249	Bathroom 5	А	Ceiling	NULL Plaster	White	Good	0.18	Nogotivo	Yes
249	Bathroom 6	D	Door	Wood	White	Good	0.18	Negative Negative	Yes
251	Bathroom 6	D	Door Frame	Wood	White	Good	0.13	Negative	Yes
252				NULL				· · · · ·	
253	Bathroom 6	D	Ceiling	Plaster	White	Good	0.02	Negative	Yes
254	Office 5	D	Ceiling	Plaster	White	Good	0	Negative	No
255	Office 5	D	Crown Molding Wall	Plaster	White White	Good Fair	0	Negative Null	No
256 257	Closet 11 Corridor 7	AB	Ceiling	Plaster Plaster	White	Good	0	Null Negative	No No
258	Corridor 7	A	Crown Molding	Plaster	White	Good	0	Negative	No
259	Storage Room 2	A	Wall	Plaster	White	Fair	15	Positive	Yes
260	Storage Room 2	A	Ceiling	Plaster	White	Fair	0	Negative	No
261	Storage Room 2	D	Crown Molding	Plaster	White	Fair	0	Negative	No
262	Storage Room 1	D	Wall	Plaster	White	Fair	8.9	Positive	Yes
263 264	Storage Room 1 Storage Room 1	B	Wall Ceiling	Wood Plaster	White White	Good Fair	<u>15.8</u> 0	Positive Negative	Yes No
264	Storage Room 1	D	Baseboard	Plaster	Gray	Fair	0.01	Negative	Yes
266	Storage Room 1	B	Cabinet	Wood	White	Fair	11	Positive	Yes
267	Storage Room 1	A	Ceiling	Plaster	White	Poor	0	Negative	No
268	Stairwell 7	А	Ceiling	Plaster	White	Fair	0.01	Negative	Yes
269	Auditorium 1	A	Ceiling	Plaster	White	Good	0	Negative	No
270	Auditorium 1	A	Crown Molding	Plaster	White	Good	0.3	Negative	Yes
271 272	Kitchen 2 Kitchen 2	A	Door Door Frame	Wood Wood	White White	Good Good	14 9.2	Positive Positive	Yes Yes

				able 1.0						
	Results of XRF Testing									
Shot #	Room	Location	Component	Substrate	Color	Condition	XRF Result	Classification	Detectable Lead Level Present	
273				NULL						
274 275	Kitchen 2 Kitchen 2	C C	Wall Baseboard	Plaster Plaster	White Brown	Good Good	0.4	Negative Negative	Yes Yes	
275	Kitchen z	C	Daseboard	NULL	DIOMI	Guuu	0.20	Negative	165	
277	Kitchen 2	С	Ceiling	Plaster	White	Good	0.26	Negative	Yes	
278	Kitchen 2	С	Window Frame	Wood	White	Good	14.5	Positive	Yes	
279	Kitchen 2	С	Window Sash	Wood	White	Good	12.7	Positive	Yes	
280 281	Kitchen 2 Closet 15	D A	Cabinet Door	Wood Wood	White White	Good Good	10.2 11.7	Positive Positive	Yes Yes	
282	Closet 15	A	Door Frame	Wood	White	Good	8.1	Positive	Yes	
283	Closet 15	С	Wall	Plaster	Pink	Fair	0	Negative	No	
284	Bathroom 8	В	Door	Wood	White	Fair	17.9	Positive	Yes	
285 286	Bathroom 8 Bathroom 8	B D	Door Frame Ceiling	Wood Plaster	White White	Fair Good	6.9 0.02	Positive	Yes Yes	
287	Storage Room 6	C	Door Frame	Wood	Yellow	Fair	9	Negative Positive	Yes	
288	Storage Room 6	B	Wall	Plaster	White	Fair	6.4	Positive	Yes	
289	Storage Room 6	В	Baseboard	Wood	Yellow	Good	6.4	Positive	Yes	
290	Storage Room 6	A	Ceiling	Plaster	White	Fair	0.19	Negative	Yes	
291 292	Storage Room 6 Corridor 8	A D	Window Frame Door	Wood Wood	Yellow Yellow	Fair Good	5.6 19.2	Positive Positive	Yes Yes	
292	Corridor 8	D	Door Frame	Wood	Yellow	Good	8.7	Positive	Yes	
294	Corridor 8	A	Wall	Plaster	White	Good	7	Positive	Yes	
295	Corridor 8	А	Baseboard	Wood	Yellow	Good	11	Positive	Yes	
296	0		0 "	NULL						
297 298	Corridor 8 Corridor 8	A	Ceiling Window Frame	Plaster Wood	White White	Good Fair	0 5.9	Negative Positive	No Yes	
290	Storage Room 5	D	Door	Wood	Yellow	Good	10.2	Positive	Yes	
300	Storage Room 5	D	Door Frame	Wood	Yellow	Good	7.9	Positive	Yes	
301	Storage Room 5	С	Wall	Plaster	White	Poor	7.7	Positive	Yes	
302	Storage Room 5	C	Baseboard	Wood	Yellow	Good	8.4	Positive	Yes	
303 304	Storage Room 5 Storage Room 5	C A	Ceiling Window Frame	Plaster Wood	White Yellow	Poor Fair	0.13	Negative Positive	Yes Yes	
305	Storage Room 5	C	Electrical Panel	Metal	Yellow	Good	0.07	Negative	Yes	
306	Bathroom 7	A	Door	Wood	Yellow	Good	10.8	Positive	Yes	
307	Bathroom 7	А	Door Frame	Wood	Yellow	Good	6.8	Positive	Yes	
308	Detherman 7		Quilling a	NULL	14/1-14-	E - in	<u>^</u>	Manativa	NI-	
309 310	Bathroom 7 Stairwell 8	C C	Ceiling Floor	Plaster	White Gray	Fair Good	0	Negative Negative	No No	
311	Stairwell 8	B	Riser	Metal	Brown	Good	11.4	Positive	Yes	
312		-		NULL		• •				
313				NULL		1 1		n		
314	Stairwell 8	D	Stringer	Disstan	Brown	Good	6.4	Positive	Yes	
315 316	Stairwell 8 Stairwell 8	A	Wall Window Frame	Plaster Wood	White Brown	Good Fair	4.1 4.5	Positive Positive	Yes Yes	
317	Stairwell 8	A	Window Sash	Wood	Brown	Fair	12.7	Positive	Yes	
318	Stairwell 8	В	Ceiling	Plaster	White	Good	0.23	Negative	Yes	
319	Corridor 10	A	Door	Metal	Brown	Fair	19.3	Positive	Yes	
320 321	Corridor 10 Corridor 10	A D	Door Frame Wall	Metal Plaster	Brown White	Fair Poor	6 0.4	Positive Negative	Yes Yes	
321		U	vvali	NULL	wille	1 001	0.4	negative	162	
323	Corridor 10	D	Baseboard	Plaster	Brown	Fair	0.5	Negative	Yes	
324	Corridor 10	D	Ceiling	Plaster	White	Poor	0.05	Negative	Yes	
325	Corridor 10	B	Cabinet	Wood	White	Fair	13.5	Positive Negative	Yes	
326 327	Corridor 11 Corridor 10	A	Door Door Frame	Metal Metal	Brown Brown	Good Good	0.5	Negative Positive	Yes Yes	
328	Corridor 10	C	Wall	Plaster	White	Fair	0.5	Negative	Yes	
329	-	· · ·		NULL		• •		· · · · ·		
330				NULL						
331				NULL NULL						
332 333				NULL						
334				NULL						
335				NULL						
336				NULL				<del></del>		
337	Corridor 10	C	Ceiling	Plaster	White	Fair	0.07	Negative	Yes	
338 339	Corridor 10 Corridor 10	C C	Window Frame Window Sash	Metal Metal	Brown Brown	Good Good	14.1 13	Positive Positive	Yes Yes	
340	Corridor 10	C	Radiator	Metal	Brown	Good	0.3	Negative	Yes	

			Ta	able 1.0					
			Results of	of XRF Testi	ng				
Shot #	Room	Location	Component	Substrate	Color	Condition	XRF Result	Classification	Detectable Lead Level Present
341	Corridor 12	A	Door	Wood	Brown	Good	0.7	Negative	Yes
342	Corridor 12	A	Door Frame	Plaster	Brown	Good	0.4	Negative	Yes
343 344	Corridor 12 Corridor 12	A	Wall Baseboard	Plaster Plaster	White Brown	Good Good	0.02	Negative Negative	Yes Yes
344	Corridor 12	A	Ceiling	Plaster	White	Good	0.6	Negative	Yes
346	Corridor 12	c	Window Frame	Metal	Brown	Good	8	Positive	Yes
347	Corridor 12	C	Window Sash	Metal	Brown	Good	6.6	Positive	Yes
348	HVAC Room	В	Door	Metal	Brown	Good	17.3	Positive	Yes
349	HVAC Room	В	Door Frame	Metal	Brown	Good	12	Positive	Yes
350	HVAC Room	В	Wall	Brick	Black	Fair	0.03	Negative	Yes
351	HVAC Room	B	Ceiling	Concrete	Black	Fair	0	Negative	No
352 353	HVAC Room HVAC Room	C C	Window Frame Window Sash	Metal Metal	Black Black	Good Good	5.6 0.8	Positive Negative	Yes Yes
353 354	Rear Fire Escape	C	Stair Tread	Metal	Black	Poor	8.6	Positive	Yes
355	Rear Fire Escape	C	Stair Stringer	Metal	Black	Poor	2.7	Positive	Yes
356	Rear Fire Escape	C	Newel Post	Metal	Black	Poor	4.3	Positive	Yes
357				NULL					
358				NULL					
359	Roof Upper Walkway	В	Door	Metal	Black	Poor	0.06	Negative	Yes
360	Roof Upper Walkway	С	Vent Cap	Metal	Black	Good	0.1	Negative	Yes
361	Roof Upper Walkway	C	Parapet Cap	Metal	Black	Poor	3.4	Positive	Yes
362 363	Verification Shot Verification Shot	NA NA	NA NA	NA NA	NA NA	Good Good	<u>1</u> 1.1	NA NA	Yes Yes
363	Verification Shot	NA	NA	NA	NA	Good	1.1	NA	Yes
365	Shutter Verification Shot	NA	NA	NA	NA	Good	4.51	NA	Yes
366	Verification Shot	NA	NA	NA	NA	Good	1.1	NA	Yes
367				NULL					
368	Verification Shot	NA	NA	NA	NA	Good	1.2	NA	Yes
369	Verification Shot	NA	NA	NA	NA	Good	1.2	NA	Yes
370	Stairwell 8	В	Door	Metal	White	Fair	20.3	Positive	Yes
371	Stairwell 8	В	Door Frame	Metal	White	Fair	10.9	Positive	Yes
372 373				NULL NULL					
373	Stairwell 8	С	Wall	Plaster	White	Fair	0.6	Negative	Yes
375	Stairwell 8	C	Baseboard	Plaster	Brown	Good	0.03	Negative	Yes
376	Stairwell 8	D	Floor	Concrete	Brown	Fair	0.09	Negative	Yes
377	Stairwell 8	В	Stair Stringer	Metal	Black	Good	4.3	Positive	Yes
378	Stairwell 8	В	Newel Post	Metal	Black	Good	7.2	Positive	Yes
379	Stairwell 8	С	Window Frame	Metal	Brown	Good	11.2	Positive	Yes
380				NULL					
381	Stairwell 8		Cailing	NULL	White	Cood	0.5	Magativa	Vee
382 383	Projection Room 1	C B	Ceiling Door	Plaster Metal	Brown	Good	0.5	Negative Positive	Yes Yes
384	Projection Room 1	B	Door Frame	Metal	Brown	Good Good	4.6	Positive	Yes
385			Door Frame	NULL	DIOWII	0000	4.0	1 0311176	163
386	Projection Room 1	A	Wall	Plaster	White	Good	0.7	Negative	Yes
387				NULL				· · · · ·	
388	Projection Room 1	С	Baseboard	Plaster	Brown	Good	0.03	Negative	Yes
389	Projection Room 1	D	Floor	Concrete	Brown	Good	0.12	Negative	Yes
390	Projection Room 1	C	Window Frame	Metal	Brown	Good	3.8	Positive	Yes
391	Projection Room 1	C	Window Sash	Metal	Brown	Good	4.2	Positive	Yes
392 393	Projection Room 1 Projection Room 1	C C	Ceiling Pipe	Plaster Metal	White White	Good Good	0.6	Negative Negative	Yes Yes
<u> </u>	Projection Room 1	D	Electrical Panel	Metal	White	Good	9.3	Positive	Yes
395	Projection Room 1	A	Projector Mantle	Metal	Brown	Good	3.4	Positive	Yes
396	Projection Room 1	A	Projector Table	Wood	Brown	Good	0.03	Negative	Yes
397	Storage Room 4B	B	Door	Metal	Brown	Good	17.9	Positive	Yes
398	Storage Room 4B	В	Door Frame	Metal	Brown	Good	4.5	Positive	Yes
399				NULL					
400	<b>a</b> . –			NULL					
401	Storage Room 4B	D	Wall	Plaster	White	Good	0.3	Negative	Yes
402	Storage Room 4B	D	Baseboard	Plaster	Brown	Good	0.04	Negative	Yes
403	Storage Room 4B	C	Floor	Concrete	Brown	Fair	0.04	Negative	Yes
404 405	Storage Room 4B	С	Window Frame	Metal NULL	Brown	Good	2.6	Positive	Yes
405	Storage Room 4B	С	Ceiling	Plaster	White	Good	0.7	Negative	Yes
400	Storage Room 4	A	Wall	Plaster	White	Good	0.7	Negative	No
							~		

	Table 1.0										
	Results of XRF Testing										
Shot #	Room	Location	Component	Substrate	Color	Condition	XRF Result	Classification	Detectable Lead Level Present		
409	Storage Room 4	A	Ceiling	Plaster	White	Good	0	Negative	No		
410	Storage Room 4	С	Window Frame	Metal	Brown	Good	10.4	Positive	Yes		
411	Storage Room 4A	С	Wall	Plaster	White	Good	0.5	Negative	Yes		
412	Elevator Mechanical Room	D	Door	Metal	Black	Poor	1.3	Positive	Yes		
413	Elevator Mechanical Room	В	Wall	Metal	Black	Poor	0.01	Negative	Yes		
414	Roof Patio	С	Door	Metal	Black	Good	0.19	Negative	Yes		
415	Roof Patio	В	Door	Metal	Black	Good	0.06	Negative	Yes		
416	South Façade	4th floor	Window Frame	Metal	Black	Fair	7.9	Positive	Yes		
417	South Façade	1st floor	Door	Metal	Black	Good	3.6	Positive	Yes		
418	South Façade	1st floor	Door Frame	Metal	Black	Good	9.4	Positive	Yes		
419	South Façade	1st floor	Exhibit Hall 1 Skylight	Metal	Black	Fair	0.01	Negative	Yes		
420	South Façade	1st floor	Exhibit Hall 1 Skylight Rail	Metal	Black	Fair	0	Negative	No		
421				NULL							
422	2nd Floor Terrace	2nd floor	Window Frame	Metal	Black	Good	6.4	Positive	Yes		
423	2nd Floor Terrace	2nd floor	Wood Post	Wood	Pink	Good	1.7	Positive	Yes		
424	2nd Floor Terrace	2nd floor	Wood Lattice	Wood	Pink	Good	15.7	Positive	Yes		
425	2nd Floor Terrace	2nd floor	3rd Floor Decking Underside	Wood	Blue	Good	9.1	Positive	Yes		
426	North Façade	1st floor	Front Door	Wood	Green	Good	8.7	Positive	Yes		
427	North Façade	1st floor	Door Frame	Wood	Green	Good	10.1	Positive	Yes		
428	North Façade	1st floor	Window Shutter	Wood	Beige	Good	0	Negative	No		
429	North Façade	1st floor	Window Frame	Wood	Beige	Good	11.8	Positive	Yes		
430	North Façade	3rd floor	Window Shutter	Wood	Beige	Good	0	Negative	No		
431	North Façade	3rd floor	Window Frame	Wood	Beige	Good	13.7	Positive	Yes		
432	North Façade	Basement	Window Sash	Wood	Beige	Good	14.7	Positive	Yes		
433	Foyer 1	С	Door	Wood	Beige	Fair	0.16	Negative	Yes		
434	Foyer 1	С	Door Frame	Wood	Beige	Poor	4.9	Positive	Yes		
435	Foyer 1	A	Wall	Concrete	Beige	Good	0.3	Negative	Yes		
436	Foyer Closet	A	Door	Wood	Green	Good	0.06	Negative	Yes		
437	Foyer Closet	Α	Door Frame	Wood	Green	Good	0.03	Negative	Yes		
438	Stairwell 4	Α	Door	Wood	White	Good	8.3	Positive	Yes		
439	Stairwell 4	Α	Door Frame	Wood	White	Good	4.3	Positive	Yes		
440	Stairwell 4	A	Wall	Plaster	White	Fair	0	Negative	No		
441	Stairwell 4	Α	Floor	Concrete	Gray	Good	0.14	Negative	Yes		
442	Stairwell 4	С	Stair Tread	Metal	Gray	Good	0.19	Negative	Yes		
443	Stairwell 4	С	Stair Stringer	Metal	Black	Good	3.5	Positive	Yes		
444	Stairwell 4	С	Stair Riser	Metal	Black	Good	2.4	Positive	Yes		
445	Stairwell 4	С	Stair Rail	Metal	Black	Good	6.4	Positive	Yes		
446	Stairwell 4	С	Ceiling	Plaster	White	Fair	0	Negative	No		
447				NULL		•		· · · ·			
448	Stairwell 4	D	Baseboard	Wood		Good	0.07	Negative	Yes		
449	Verification Shot	NA	NA	NA	NA	NA	1.2	Positive	NA		
450	Verification Shot	NA	NA	NA	NA	NA	1.2	Positive	NA		
451	Verification Shot	NA	NA	NA	NA	NA	1.3	Positive	NA		


Long Island City, NY 11101

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#### **BULK SAMPLE ANALYSIS REPORT**

Client Sample Id# Lab Sample Id#	Sample Description	Sample	Appearance	Gravi	metric Prep	aration		PLM		Tem
		Location		% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Fibrous	% Non- Fibrous	Asbestos % & Type	Asbestos % & Type
TRB-WP-1A.1 06-12-003-01	Wall Plaster White Outer Coat	Basement Office 01	White Homogeneous Fibrous		Not Applicable	I <u></u>	0%	100%	NAD	····
TRB-WP-1A.2 06-12-003-02	Wall Plaster Brown Inner Coat	Basement Office 01	Grey Homogeneous Fibrous		Not Applicable		0%	100%	NAD	
TRB-WP-1B.1 06-12-003-03	Wall Plaster White Outer Coat	Basement BTR 3	White Homogeneous Fibrous	•	Not Applicable		0%	100%	NAD	
TRB-WP-1B.2 06-12-003-04	Wall Plaster Brown Inner Coat	Basement BTR 3	Grey Homogeneous Fibrous		Not Applicable		0%	100%	NAD	
TRB-WP-1C.1 06-12-003-05	Wall Plaster White Outer Coat	Sub Basement BTR 1	White Homogeneous Fibrous		Not Applicable		0%	100%	NAD	
TRB-WP-1C.2 06-12-003-06	Wall Plaster Brown Inner Coat	Sub Basement BTR 1	Beige Homogeneous Fibrous		Not Applicable		0%	100%	NAD	
TRB-WP-1D.1 06-12-003-07	Wall Plaster White Outer Coat	3rd Floor ST2	White Homogeneous Fibrous		Not Applicable		0%	100%	NAD	
TRB-WP-1D.2 06-12-003-08	Wall Plaster Brown Inner Coat	3rd Floor ST2	Beige Homogeneous Fibrous		Not Applicable		0%	100%	NAD	
TRB-WP-1E.1 06-12-003-09	Wall Plaster White Outer Coat	1st Floor CL6	White Homogeneous Fibrous		Not Applicable	· · · · · · · · · · · · · · · · · · ·	0%	100%	NAD	
TRB-WP-1E.2 06-12-003-10	Wall Plaster Brown Inner Coat	1st Floor CL6	Beige Homogeneous Fibrous		Not Applicable		0%	100%	NAD	
TRB-WP-1F.1 06-12-003-11	Wall Plaster White Outer Coat	4th Floor K2	White Homogeneous Fibrous		Not Applicable		0%	100%	NAD	····
TRB-WP-1F.2 06-12-003-12	Wall Plaster Brown Inner Coat	4th Floor K2	Beige Homogeneous Fibrous		Not Applicable		1% CELL	99%	NAD	



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#### **BULK SAMPLE ANALYSIS REPORT**

Client Sample Id# Lab Sample Id#	Sample Description	Sample	Appearance	Gravi	metric Prep	aration		PLM		Tem
		Location		% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Fibrous	% Non- Fibrous	Asbestos % & Type	Asbestos % & Type
TRB-WP-1G.1 06-12-003-13	Wall Plaster White Outer Coat	2nd Floor Corridor 5	White Homogeneous Fibrous		Not Applicable		0%	100%	NAD	
TRB-WP-1G.2 06-12-003-14	Wall Plaster Brown Inner Coat	2nd Floor Corridor 5	Beige Homogeneous Fibrous		Not Applicable	•	0%	100%	NAD	
TRB-WP-1H.1 06-12-003-15	Wall Plaster White Outer Coat	4th Floor ST5	White Homogeneous Fibrous		Not Applicable	)	0%	100%	NAD	· · · · ·
TRB-WP-1H.2 06-12-003-16	Wall Plaster Brown Inner Coat	4th Floor ST5	Beige Homogeneous Fibrous		Not Applicable	)	0%	100%	NAD	
TRB-WP-1I.1 06-12-003-17	Wall Plaster White Outer Coat	5th Floor ST4	White Homogeneous Fibrous		Not Applicable	)	0%	100%	NAD	
TRB-WP-11.2 06-12-003-18	Wall Plaster Brown Inner Coat	5th Floor ST4	Beige Homogeneous Fibrous		Not Applicable	)	1% CELL	99%	NAD	
TRB-CP-2A.1 06-12-003-19	Ceiling Plaster White Outer Coat	Basement CI 1A	White Homogeneous Fibrous		Not Applicable	)	0%	100%	NAD	
TRB-CP-2A.2 06-12-003-20	Ceiling Plaster Brown Inner Coat	Basement CI 1A	Beige Homogeneous Fibrous		Not Applicable	)	0%	100%	NAD	
TRB-CP-2B.1 06-12-003-21	Ceiling Plaster White Outer Coat	Basement BTR 2	White Homogeneous Fibrous		Not Applicable	•	0%	100%	NAD	
TRB-CP-2B.2 06-12-003-22	Ceiling Plaster Brown Inner Coat	Basement BTR 2	Beige Homogeneous Fibrous		Not Applicable	)	1% CELL	99%	NAD	
TRB-CP-2C.1 06-12-003-23	Ceiling Plaster White Outer Coat	Sub Basement BTR 1A	White Homogeneous Fibrous		Not Applicable	)	0%	100%	NAD	
TRB-CP-2C.2 06-12-003-24	Ceiling Plaster Brown Inner Coat	Sub Basement BTR 1A	Beige Homogeneous Fibrous		Not Applicable	9	2% CELL	98%	NAD	



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		Location		% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Fibrous	% Non- Fibrous	Asbestos % & Type	Asbestos % & Type
TRB-CP-2D.1 06-12-003-25	Ceiling Plaster White Outer Coat	1st Floor CL5	White Homogeneous Fibrous		Not Applicable	)	0%	100%	NAD	
TRB-CP-2D.2 06-12-003-26	Ceiling Plaster Brown Inner Coat	1st Floor CL5	Beige Homogeneous Fibrous		Not Applicable	9	0%	100%	NAD	
TRB-CP-2E.1 06-12-003-27	Ceiling Plaster White Outer Coat	2nd Floor LBR2	White Homogeneous Fibrous		Not Applicable		0%	100%	NAD	
TRB-CP-2E.2 06-12-003-28	Ceiling Plaster Brown Inner Coat	2nd Floor LBR2	Beige Homogeneous Fibrous		Not Applicable	•	1% CELL	99%	NAD	
TRB-CP-2F.1 06-12-003-29	Ceiling Plaster White Outer Coat	2nd Floor CL8 Ceiling	White Homogeneous Fibrous		Not Applicable	•	0%	100%	NAD	
TRB-CP-2F.2 06-12-003-30	Ceiling Plaster Brown Inner Coat	2nd Floor CL8 Ceiling	Beige Homogeneous Fibrous		Not Applicable		0%	100%	NAD	
TRB-CP-2G.1 06-12-003-31	Ceiling Plaster White Outer Coat	3rd Floor Office 03 Ceiling	White Homogeneous Fibrous		Not Applicable	)	0%	100%	NAD	
TRB-CP-2G.2 06-12-003-32	Ceiling Plaster Brown Inner Coat	3rd Floor Office 03 Ceiling	Beige Homogeneous Fibrous		Not Applicable	)	1% CELL	99%	NAD	
TRB-CP-2H.1 06-12-003-33	Ceiling Plaster White Outer Coat	4th Floor Auditorium Ceiling	White Homogeneous Fibrous		Not Applicable	•	0%	100%	NAD	
TRB-CP-2H.2 06-12-003-34	Ceiling Plaster Brown Inner Coat	4th Floor Auditorium Ceiling	Beige Homogeneous Fibrous		Not Applicable	)	0%	100%	NAD	
TRB-CP-2I.1 06-12-003-35	Ceiling Plaster White Outer Coat	Corridor to Roof	White Homogeneous Fibrous		Not Applicable	•	0%	100%	NAD	
TRB-CP-2I.2 06-12-003-36	Ceiling Plaster Brown Inner Coat	Corridor to Roof	Beige Homogeneous Fibrous		Not Applicable	•	1% CELL	99%	NAD	



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	Description	Location		% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Fibrous	% Non- Fibrous	Asbestos % & Type	Asbestos % & Type
TRB-MP-3A 06-12-003-37	Beige Molding Plaster	4th Floor Auditorium Ceiling	Beige Homogeneous Fibrous		Not Applicable		0%	100%	NAD	
TRB-MP-3B 06-12-003-38	Beige Molding Plaster	4th Floor Auditorium Ceiling	Beige Homogeneous Fibrous		Not Applicable		0%	100%	NAD	
TRB-MP-3C 06-12-003-39	Beige Molding Plaster	4th Floor Auditorium Ceiling	Beige Homogeneous Fibrous		Not Applicable		0%	100%	NAD	
TRB-RI-4A 06-12-003-40	Radiator Insulation Gray	4th Floor Auditorium	Grey Homogeneous Fibrous		Not Applicable		84.6% CELL	0%	15.4% CH	
TRB-RI-4B 06-12-003-41	Radiator Insulation Gray	2nd Floor LBR2	Grey Homogeneous Fibrous		Not Applicable	•			NA/PS	
TRB-RI-4C 06-12-003-42	Radiator Insulation Gray	1st Floor EH8	Grey Homogeneous Fibrous		Not Applicable	9		-	NA/PS	
TRB-DUCI-5A.1 06-12-003-43	Beige Canvas Outer Layer	Sub Basement MR2	Beige Homogeneous Fibrous		Not Applicable	9	100% CELL	0%	NAD	
TRB-DUCI-5A.2 06-12-003-44	White Insulation Inner Layer	Sub Basement MR2	White Homogeneous Fibrous		Not Applicable	•	67.1% CELL	0%	12.9% CH	:
TRB-DUCI-5B.1 06-12-003-45	Beige Canvas Outer Layer	Sub Basement MR7	Grey Homogeneous Fibrous		Not Applicable	•	100% CELL	0%	NAD	
TRB- DUCI-5B.2 06-12-003-46	White Insulation Inner Layer	Sub Basement MR7	White Homogeneous Fibrous		Not Applicable	•			NA/PS	
TRB-DUCI-5C.1 06-12-003-47	Beige Canvas Outer Layer	Sub Basement MR2	Grey Homogeneous Fibrous		Not Applicable	)	100% CELL	0%	NAÐ	
TRB- DUCI-5C.2 06-12-003-48	White Insulation Inner Layer	Sub Basement MR2	White Homogeneous Fibrous		Not Applicable	•			NA/PS	



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		Location		% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Fibrous	% Non- Fibrous	Asbestos % & Type	Asbestos % & Type
TRB-DEBRIS-6A 06-12-003-49	Pipe Insulation Material	Sub Basement MR7	Grey Homogeneous Fibrous		Not Applicable	)	20% CELL	57.8%	6.2% CH 16.0% AMO	
TRB-DEBRIS-6B 06-12-003-50	Pipe Insulation Material	Sub Basement MR7	Grey Homogeneous Fibrous		Not Applicable	)			NA/PS	
TRB-DEBRIS-6C 06-12-003-51	Pipe Insulation Material	Sub Basement MR8	Grey Homogeneous Fibrous		Not Applicable	)			NA/PS	
TRB-PI-7A 06-12-003-52	Pipe Insulation Material	Sub Basement MR8	Grey Homogeneous Fibrous		Not Applicable	)	86.1% CELL	0%	12.9% CH 1% CRO	
TRB-PI-7B 06-12-003-53	Pipe Insulation Material	Sub Basement MR8	Grey Homogeneous Fibrous		Not Applicable	)			NA/PS	
TRB-PI-7C 06-12-003-54	Pipe Insulation Material	Sub Basement MR8	Grey Homogeneous Fibrous	-	Not Applicable	· · · · · ·			NA/PS	
TRB-MJP-8A 06-12-003-55	Mudded Joint Packing Material	Sub Basement MR8	White Homogeneous Fibrous		Not Applicable	)	0%	86.3%	2.9% CRO 10.8% AMO	
TRB-MJP-8B 06-12-003-56	Mudded Joint Packing Material	Sub Basement MR8	White Homogeneous Fibrous		Not Applicable	)			NA/PS	<u></u>
TRB-MJP-8C 06-12-003-57	Mudded Joint Packing Material	Sub Basement MR8	Grey Homogeneous Fibrous		Not Applicable	)			NA/PS	
TRB-GM-9 06-12-003-58	Gasket Material	Sub Basement Inside MR1	Brown Homogeneous Fibrous		Not Applicable	)	0%	42.9%	57.1% CH	
TRB-FT-10A 06-12-003-59	9"x9" White Floor Tile	Sub Basement MR6	Beige Homogeneous Non Fibrous	23.9	8.2	67.8	0%	77.4%	22.6% CH	
TRB-FT-10B 06-12-003-60	9"x9" White Floor Tile	Sub Basement MR6	Beige Homogeneous Non Fibrous	25.1	13.5	61.4			NA/PS	



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Las gampie iu#		Location		% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Fibrous	% Non- Fibrous	Asbestos % & Type	Asbestos % & Type
TRB-FT-10C 06-12-003-61	9"x9" White Floor Tile	Sub Basement MR6	Grey Homogeneous Non Fibrous	25.0	10.1	64.9			NA/PS	
TRB-FTM-11A 06-12-003-62	Black Mastic Material	Sub Basement MR6	Black Homogeneous Non Fibrous	92.3	1.1	6.6	0%	100%	TRACE CH	0.99% CH
TRB-FTM-11B 06-12-003-63	Black Mastic Material	Sub Basement MR6	Black Homogeneous Non Fibrous	87.8	4.1	8.1	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-FTM-11C 06-12-003-64	Black Mastic Material	Sub Basement MR6	Black Homogeneous Non Fibrous	78.0	11.4	10.6	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-FT-12A 06-12-003-65	9"x9" Green Floor Tile	Sub Basement MR6	Green Homogeneous Non Fibrous	25.2	11.1	63.7	0%	71.7%	28.3% CH	
TRB-FT-12B 06-12-003-66	9"x9" Green Floor Tile	Sub Basement MR6	Green Homogeneous Non Fibrous	27.8	10.6	61.6			NA/PS	
TRB-FT-12C 06-12-003-67	9"x9" Green Floor Tile	Sub Basement MR6	Green Homogeneous Non Fibrous	27.2	12.4	60.3			NA/PS	
TRB-PR-BUR-13A.1 06-12-003-68	Built Up Roofing Material (1 <sup>st</sup> layer)	Patio Roof	Black Homogeneous Non Fibrous	89.5	· 5.1	5.4	0%	100%	NAD Inconclusive	NAD
TRB-PR-BUR-13A.2 06-12-003-69	Built Up Roofing Material (2 <sup>nd</sup> layer)	Patio Roof	Black Homogeneous Non Fibrous	82.0	10.4	7.6	0%	100%	NAD Inconclusive	NAD
TRB-PR-BUR-13B.1 06-12-003-70	Built Up Roofing Material (1 <sup>st</sup> layer)	Patio Roof	Black Homogeneous Non Fibrous	76.9	7.9	15.1	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-PR-BUR-13B.2 06-12-003-71	Built Up Roofing Material (2 <sup>nd</sup> layer)	Patio Roof	Black Homogeneous Non Fibrous	85.5	8.1	6.4	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-PR-BUR-13C.1 06-12-003-72	Built Up Roofing Material (1 <sup>st</sup> layer)	Patio Roof	Black Homogeneous Non Fibrous	68.6	3.1	28.3	0%	100%	NAD Inconclusive	Analysis not requested by client



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		Location		% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Fibrous	% Non- Fibrous	Asbestos % & Type	Asbestos % & Type
TRB-PR-BUR-13C.2 06-12-003-73	Built Up Roofing Material (2 <sup>nd</sup> layer)	Patio Roof	Black Homogeneous Non Fibrous	82.7	8.8	8.4	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-PR-JC-14A 06-12-003-74	Black Caulk Material	Patio Roof	Black Homogeneous Non Fibrous	83.5	9.1	7.4	0%	100%	NAD Inconclusive	NAD
TRB-PR-JC-14B 06-12-003-75	Black Caulk Material	Patio Roof	Black Homogeneous Non Fibrous	83.6	9.1	7.3	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-PR-JC-14C 06-12-003-76	Black Caulk Material	Patio Roof	Black Homogeneous Non Fibrous	86.2	10.7	3.1	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-BR-RM-15A 06-12-003-77	Black Roofing Material	South Bulkhead Roof	Black Homogeneous Non Fibrous	90.2	3.4	6.3	0%	100%	NAD Inconclusive	0.6% CH 0.3% ANTH
TRB-BR-RM-15B 06-12-003-78	Black Roofing Material	Elevator Bulkhead Roof	Black Homogeneous Non Fibrous	90.9	3.7	5.4	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-BR-RM-15C 06-12-003-79	Black Roofing Material	East Bulkhead Roof	Black Homogeneous Non Fibrous	91.5	2.1	6.4	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-EBR-FM-16A 06-12-003-80	Black Flashing Material	East Bulkhead Roof	Black Homogeneous Non Fibrous	98.8	0.2	1.1	0%	100%	NAD Inconclusive	
TRB-ELVR-FM-16B 06-12-003-81	Black Flashing Material	Elevator Bulkhead Roof	Black Homogeneous Non Fibrous	87.6	6.1	6.3	0%	100%	NAD Inconclusive	
TRB-SBR-FM-16C 06-12-003-82	Black Flashing Material	South Bulkhead Roof	Black Homogeneous Non Fibrous	83.0	9.1	7.8	0%	98.2%	1.8% CH	
TRB-CP-M-17A 06-12-003-83	Black Mastic Material	East Bulkhead Roof	Black Homogeneous Non Fibrous	61.1	1.3	37.6	0%	97.9%	2.1% CH	
TRB-CP-M-17B 06-12-003-84	Black Mastic Material	East Bulkhead Roof	Black Homogeneous Non Fibrous	60.1	11.3	28.6		···	NA/PS	



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	Description	Location		% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Fibrous	% Non- Fibrous	Asbestos % & Type	Asbestos % & Type
TRB-CP-M-17C 06-12-003-85	Black Mastic Material	East Bulkhead Roof	Black Homogeneous Non Fibrous	61.2	1.5	37.2			NA/PS	
TRB-M-18A 06-12-003-86	Black Mastic Flashing Material	East Bulkhead Roof	Black Homogeneous Non Fibrous	64.2	4.5	31.3	0%	97.5%	2.5% CH	
TRB-M-18B 06-12-003-87	Black Mastic Flashing Material	South Bulkhead Roof	Black Homogeneous Non Fibrous	61.0	11.4	27.6			NA/PS	
TRB-M-18C 06-12-003-88	Black Mastic Flashing Material	South West Bulkhead Roof	Black Homogeneous Non Fibrous	61.6	14.6	23.8			NA/PS	
TRB-M-19A 06-12-003-89	Black Mastic Caulk Material	East Bulkhead Roof	Black Homogeneous Non Fibrous	73.8	4.7	21.5	0%	93.9%	6.1% CH	
TRB-M-19B 06-12-003-90	Black Mastic Caulk Material	East Bulkhead Roof	Black Homogeneous Non Fibrous	72.8	4.6	22.6			NA/PS	
TRB-M-19C 06-12-003-91	Black Mastic Caulk Material	East Bulkhead Roof	Black Homogeneous Non Fibrous	74.7	2.2	23.2			NA/PS	
TRB-SKYM-20A 06-12-003-92	Black Mastic Sealant	East Bulkhead Roof	Black Homogeneous Non Fibrous	63.5	12.8	23.6	0%	94.4%	5.6% CH	
TRB-SKYM-208 06-12-003-93	Black Mastic Sealant	East Buikhead Roof	Black Homogeneous Non Fibrous	63.2	12.4	24.4			NA/PS	
TRB-SKYM-20C 06-12-003-94	Black Mastic Sealant	East Bulkhead Roof	Black Homogeneous Non Fibrous	63.5	10.4	26.1			NA/PS	
TRB-ESKG-21A 06-12-003-95	Beige Caulk	Elevator Bulkhead Roof	Beige Homogeneous Non Fibrous	21.7	74.5	3.8	0%	100%	NAD Inconclusive	NAD
TRB-ESKG-21B 06-12-003-96	Beige Caulk	Elevator Bulkhead Roof	Beige Homogeneous Non Fibrous	18.4	77.8	3.8	0%	100%	NAD Inconclusive	Analysis no requested by client



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		Location		% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Fibrous	% Non- Fibrous	Asbestos % & Type	Asbestos % & Type
TRB-ESKG-21C 06-12-003-97	Beige Caulk	Elevator Bulkhead Roof	Beige Homogeneous Non Fibrous	19.5	76.4	4.1	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-ELVR-C-22A 06-12-003-98	Gray Caulk	Elevator Bulkhead Roof	Grey Homogeneous Non Fibrous	78.9	13.4	7.7	0%	100%	NAD Inconclusive	Trace CH
TRB-ELVR-C-22B 06-12-003-99	Gray Caulk	Elevator Bulkhead Roof	Grey Homogeneous Non Fibrous	74.1	15.3	10.6	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-ELVR-C-22C 06-12-003-100	Gray Caulk	Elevator Bulkhead Roof	Grey Homogeneous Non Fibrous	74.2	14.2	11.6	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-PR-GR-23A 06-12-003-101	Gray Caulk	Patio Roof	Grey Homogeneous Non Fibrous	7.9	88.5	3.7	0%	100%	NAD Inconclusive	Trace CH
TRB-PR-GR-23B 06-12-003-102	Gray Caulk	Patio Roof	Grey Homogeneous Non Fibrous	6.8	85.8	7.3	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-PR-GR-23C 06-12-003-103	Gray Caulk	Patio Roof	Grey Homogeneous Non Fibrous	4.3	90.5	5.2	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-PR-LM-24A 06-12-003-104	Black Mastic	Patio Roof	Black Homogeneous Non Fibrous	42.2	33.9	23.9	0%	92.1%	7.9% CH	
TRB-PR-LM-24B 06-12-003-105	Black Mastic	Patio Roof	Black Homogeneous Non Fibrous	53.4	6.4	40.3			NA/PS	
TRB-PR-LM-24C 06-12-003-106	Black Mastic	Patio Roof	Black Homogeneous Non Fibrous	63.0	9.7	27.3			NA/PS	
TRB-PR-SWALL-25A 06-12-003-107	Black Mastic Residue	Patio Roof	Black Homogeneous Non Fibrous	46.5	2.7	50.9	0%	90.7%	9.3% CH	·
TRB-PR-SWALL-25B 06-12-003-108	Black Mastic Residue	Patio Roof	Black Homogeneous Non Fibrous	42.2	5.8	52.0			NA/PS	



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	Description	Location		% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Fibrous	% Non- Fibrous	Asbestos % & Type	Asbestos % & Type
TRB-PR-SWALL-25C 06-12-003-109	Black Mastic Residue	Patio Roof	Black Homogeneous Non Fibrous	35.5	61.9	2.6			NA/PS	
TRB-TG-26A 06-12-003-110	Beige Grout Material	Basement K1 Kitchen	Beige Homogeneous Fibrous		Not Applicable		0%	100%	NAD	
TRB-TG-26B 06-12-003-111	Beige Grout Material	Basement BTR 4 Restroom	Beige Homogeneous Fibrous		Not Applicable	)	0%	100%	NAD	
TRB-TG-26C 06-12-003-112	Beige Grout Material	3rd Floor BTR 5A	Beige Homogeneous Fibrous		Not Applicable	)	0%	100%	NAD	
TRB-TM-27A 06-12-003-113	Mortar Material	Basement BTR 4	Beige Homogeneous Fibrous		Not Applicable	)	0%	100%	NAD	
TRB-TM-27B 06-12-003-114	Mortar Material	Basement K1 Kitchen	Beige Homogeneous Fibrous		Not Applicable	)	0%	100%	NAD	
TRB-TM-27C 06-12-003-115	Mortar Material	3rd Floor BTR 5A	Beige Homogeneous Fibrous		Not Applicable	•	0%	100%	NAD	
TRB-FTG-28A 06-12-003-116	Floor Tile Grout Material	Basement BTR 4	White Homogeneous Fibrous		Not Applicable	•	0%	100%	NAD	
TRB-FTG-28B 06-12-003-117	Floor Tile Grout Material	3rd Floor BTR 5A	White Homogeneous Fibrous		Not Applicable	,	0%	100%	NAD	
TRB-FTG-28C 06-12-003-118	Floor Tile Grout Material	3rd Floor BTR 6	White Homogeneous Fibrous		Not Applicable	9	0%	100%	NAD	
TRB-FTM-29A 06-12-003-119	Floor Tile Mortar Material	Basement BTR 4	Beige Homogeneous Fibrous		Not Applicable	9	0%	100%	NAD	
TRB-FTM-29B 06-12-003-120	Floor Tile Mortar Material	3rd Floor BTR 5A	Beige Homogeneous Fibrous		Not Applicable	9	0%	100%	NAD	



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Client Sample Id# Lab Sample Id#	Sample Description	Sample	Appearance	Gravi	metric Prep	paration		PLM	Asbestos % & Type	Tem
		Location		% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Fibrous	% Non- Fibrous		Asbestos % & Type
TRB-FTM-29C 06-12-003-121	Floor Tile Mortar Material	3rd Floor BTR 6	Beige Homogeneous Fibrous		Not Applicable	e	0%	100%	NAD	· · · · · · · · · · ·
TRB-NTGL-30A 06-12-003-122	Yellow Wall Tile Glue	3rd Floor BTR 6	Yellow Homogeneous Non Fibrous	61.1	8.7	30.2	0%	100%	NAD Inconclusive	NAD
TRB-NTGL-30B 06-12-003-123	Yellow Wall Tile Glue	3rd Floor BTR 6	Yellow Homogeneous Non Fibrous	58.1	23.3	18.6	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-NTGL-30C 06-12-003-124	Yellow Wall Tile Glue	3rd Floor BTR 6	Yellow Homogeneous Non Fibrous	60.6	16.7	22.7	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-NTGR-31A 06-12-003-125	White Grout	3rd Floor BTR 5	White Homogeneous Fibrous		Not Applicable	9	0%	100%	NAD	
TRB-NTGR-31B 06-12-003-126	White Grout	3rd Floor BTR 6	White Homogeneous Fibrous		Not Applicable	Э	0%	100%	NAD	
TRB-NTGR-31C 06-12-003-127	White Grout	3rd Floor BTR 6	White Homogeneous Fibrous		Not Applicable	9	0%	100%	NAD	
TRB-W/G-32A 06-12-003-128	Wall Paper Glue Composite	2nd Floor Corridor 5	Brown Homogeneous Non Fibrous	66.7	4.8	28.6	0%	100%	NAD Inconclusive	NAD
TRB-W/G-32B 06-12-003-129	Wall Paper Glue Composite	2nd Floor EH 11	Brown Homogeneous Non Fibrous	71.6	19.4	9.0	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-W/G-32C 06-12-003-130	Wall Paper Glue Composite	1st Floor EH4	Brown Homogeneous Non Fibrous	73.1	3.8	23.1	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-FTM-33A 06-12-003-131	Floor Tile Glue Only	Elevator floor	Grey Homogeneous Non Fibrous	45.3	38.7	16.0	0%	100%	NAD Inconclusive	NAD
TRB-FTM-33B 06-12-003-132	Floor Tile Glue Only	Elevator floor	Grey Homogeneous Non Fibrous	55.1	19.6	25.2	0%	100%	NAD Inconclusive	Analysis not requested by client



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#### **BULK SAMPLE ANALYSIS REPORT**

Client Sample Id#	Sample	Sample	Appearance	Gravi	metric Prep	aration		PLM		Tem
Lab Sample Id#	Description	Location		% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Fibrous	% Non- Fibrous	Asbestos % & Type	Asbestos % & Type
TRB-FTM-33C 06-12-003-133	Floor Tile Glue Only	Elevator floor	Grey Homogeneous Non Fibrous	79.4	14.4	6.2	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-FT-34A 06-12-003-134	12"x12" Brown Floor Tile	Basement Reception Area	Gray/Brown Homogeneous Non Fibrous	13.5	83.5	3.0	0%	1 <b>00%</b>	NAD Inconclusive	NAD
TRB-FT-34B 06-12-003-135	12"x12" Brown Floor Tile	Basement Reception Area	Gray/Brown Homogeneous Non Fibrous	17.1	81.4	1.5	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-FT-34C 06-12-003-136	12"x12" Brown Floor Tile	Basement Reception Area	Gray/Brown Homogeneous Non Fibrous	15.5	82.4	2.1	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-FTM-35A 06-12-003-137	Black Mastic Material	Basement Reception Area	Black Homogeneous Non Fibrous	61.0	11.2	27.9	0%	100%	NAD Inconclusive	NAD
TRB-FTM-35B 06-12-003-138	Black Mastic Material	Basement Reception Area	Black Homogeneous Non Fibrous	41.2	36.8	22.1	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-FTM-35C 06-12-003-139	Black Mastic Material	Basement Reception Area	Black Homogeneous Non Fibrous	57.7	16.7	25.6	0%	100%	NAD Inconclusive	Analysis no requested by client
TRB-M-36A 06-12-003-140	Black Mastic	3rd Floor ST 2	Black Homogeneous Non Fibrous	58.7	11.9	29.4	0%	100%	NAD Inconclusive	NAD
TRB-M-36B 06-12-003-141	Black Mastic	2nd Floor LBR 1	Black Homogeneous Non Fibrous	42.6	12.1	45.4	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-M-36C 06-12-003-142	Black Mastic	3rd Floor Office 04	Black Homogeneous Non Fibrous	87.5	3.1	9.4	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-PR-GPP-37A 06-12-003-143	Black Glazing Putty	Patio Roof	Black Homogeneous Non Fibrous	26.9	69.2	3.8	0%	100%	NAD Inconclusive	NAD
TRB-PR-GPP-37B 06-12-003-144	Black Glazing Putty	Patio Roof	Black Homogeneous Non Fibrous	26.4	51.6	22.0	0%	100%	NAD Inconclusive	Analysis no requested by client



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Client Sample id# Lab Sample Id#	Sample Description	Sample Appearance Location	Appearance	Gravi	metric Prep	aration	PLM			Tem
	Description			% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Fibrous	% Non- Fibrous	Asbestos % & Type	Asbestos % & Type
TRB-PR-GPP-37C 06-12-003-145	Black Glazing Putty	Patio Roof	Black Homogeneous Non Fibrous	26.8	67.6	5.7	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-PI-38A.1 06-12-003-146	Pipe Insulation Material (1 <sup>st</sup> layer)	Crawl Space Above K2 on 4th Floor	Beige Homogeneous Fibrous		Not Applicable	)	100% CELL	0%	NAD	
TRB-PI-38A.2 06-12-003-147	Pipe Insulation Material (2 <sup>nd</sup> layer)	Crawl Space Above K2 on 4th Floor	Gray Homogeneous Fibrous		Not Applicable	)	84.6% CELL	0%	15.3% CH	
TRB-PI-38B.1 06-12-003-148	Pipe Insulation Material (1 <sup>st</sup> layer)	Crawl Space Above 4th Floor on Staircase	Beige Homogeneous Fibrous		Not Applicable	)	100% CELL	0%	NAD	
TRB-PI-38B.2 06-12-003-149	Pipe Insulation Material (2 <sup>nd</sup> layer)	Crawl Space Above 4th Floor on Staircase	Gray Homogeneous Fibrous		Not Applicable	)			NA/PS	
TRB-PI-38C 06-12-003-150	Pipe Insulation Material	Crawl Space Above 4th Fl on Staircase-Debris	Beige Homogeneous Fibrous		Not Applicable	9	80% CELL	0%	20% CH	
TRB-MJP-39A 06-12-003-151	Mudded Joint Packing Material	Crawl Space Above K2 on 4th Floor	Gray Homogeneous Fibrous		Not Applicable	•	0%	69.2%	30.8% CH	
TRB-MJP-39B 06-12-003-152	Mudded Joint Packing Material	Crawl Space Above ST3 Closet	Gray Homogeneous Fibrous		Not Applicable	<del>)</del>			NA/PS	
TRB-MJP-39C 06-12-003-153	Mudded Joint Packing Material	Crawl Space Above ST3 Closet	Gray Homogeneous Fibrous		Not Applicable	•			NA/PS	
TRB-MJP-40A.1 06-12-003-154	Mudded Joint Packing Material (1 <sup>st</sup> layer)	Crawl Space Above K2 on 4th Floor	Beige Homogeneous Fibrous		Not Applicable	9	100% CELL	0%	NAD	
TRB-MJP-40A.2 06-12-003-155	Mudded Joint Packing Material (2 <sup>nd</sup> layer)	Crawl Space Above K2 on 4th Floor	Gray Homogeneous Fibrous		Not Applicable	9	15% FBGL	85%	NAD	
TRB-MJP-40B.1 06-12-003-156	Mudded Joint Packing Material (1 <sup>st</sup> layer)	5th Floor Projection Room	Beige Homogeneous Fibrous		Not Applicable	)	100% CELL	0%	NAD	



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Client Sample Id# Lab Sample Id#	Sample Description	Sample Appearance	Gravi	metric Prep	aration		PLM	·	Tem	
		Location		% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Fibrous	% Non- Fibrous	Asbestos % & Type	Asbestos % & Type
TRB-MJP-40B.2 06-12-003-157	Mudded Joint Packing Material (2 <sup>nd</sup> layer)	5th Floor Projection Room	Gray Homogeneous Fibrous		Not Applicable	9	15% FBGL	85%	NAD	
TRB-MJP-40C.1 06-12-003-158	Mudded Joint Packing Material (1 <sup>st</sup> layer)	4th Floor K2	Beige Homogeneous Fibrous		Not Applicable	3	100% CELL	0%	NAD	
TRB-MJP-40C.2 06-12-003-159	Mudded Joint Packing Material (2 <sup>nd</sup> layer)	4th Floor K2	Gray Homogeneous Fibrous		Not Applicable	)	15% FBGL	85%	NAD	
TRB-MASTIC-41A 06-12-003-160	Black Coating Material	Crawl Space on 4th Floor Staircase	Black Homogeneous Non Fibrous	56.0	25.7	18.3	0%	100%	NAD Inconclusive	NAD
TRB-MASTIC-41B 06-12-003-161	Black Coating Material	5th Floor Interior of Dumbwaiter Shaft Wall	Black Homogeneous Non Fibrous	42.0	21.0	37.1	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-MASTIC-41C 06-12-003-162	Black Coating Material	Crawl Space Above ST3 Closet	Black Homogeneous Non Fibrous	95.6	1.8	2.7	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-PI-42A.1 06-12-003-163	Pipe Insulation Material (1 <sup>st</sup> layer)	Drain Pipe Above 4th Floor Staircase	Beige Homogeneous Fibrous		Not Applicable	•	100% CELL	0%	NAD	
TRB-PI-42A.2 06-12-003-164	Pipe Insulation Material (2 <sup>nd</sup> layer)	Drain Pipe Above 4th Floor Staircase	Gray Homogeneous Fibrous		Not Applicable	•	97.9% CELL 1% HAIR	0%	1.1% CH	
TRB-PI-42B.1 06-12-003-165	Pipe Insulation Material (1 <sup>st</sup> layer)	Drain Pipe Above 4th Floor Staircase	Beige Homogeneous Fibrous		Not Applicable	•	100% CELL	0%	NAD	
TRB-PI-42B.2 06-12-003-166	Pipe Insulation Material (2 <sup>nd</sup> layer)	Drain Pipe Above 4th Floor Staircase	Gray Homogeneous Fibrous		Not Applicable	•			NA/PS	
TRB-PI-42C.1 06-12-003-167	Pipe Insulation Material (1 <sup>st</sup> layer)	Drain Pipe Above 4th Floor Staircase	Beige Homogeneous Fibrous		Not Applicable	)	100% CELL	0%	NAD	
TRB-PI-42C.2 06-12-003-168	Pipe Insulation Material (2 <sup>nd</sup> layer)	Drain Pipe Above 4th Floor Staircase	Gray Homogeneous Fibrous		Not Applicable	9			NA/PS	



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### BULK SAMPLE ANALYSIS REPORT

Client Sample Id# Lab Sample Id#	Sample Description	Sample App Location	Appearance	Gravi	metric Prep	aration	PLM			Tem
	Description		Or Cc	% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Fibrous	% Non- Fibrous	Asbestos % & Type	Asbestos % & Type
TRB-MJP-43A 06-12-003-169	Mudded Joint Packing Material	Drain Pipe Above 4th Floor Staircase	Beige Homogeneous Fibrous		Not Applicable	·	0%	55.6%	44.4% CH	
TRB-MJP-43B 06-12-003-170	Mudded Joint Packing Material	Drain Pipe Above 4th Floor Staircase	Beige Homogeneous Fibrous		Not Applicable				NA/PS	
TRB-MJP-43C 06-12-003-171	Mudded Joint Packing Material	Drain Pipe Above 4th Floor Staircase	Beige Homogeneous Fibrous		Not Applicable				NA/PS	
TRB-GP-44A 06-12-003-172	Glazing Putty	4th Floor Fire Stairs	Beige Homogeneous Non Fibrous	21.2	42.1	36.7	0%	100%	NAD Inconclusive	NAD
TRB-GP-44B 06-12-003-173	Glazing Putty	4th Floor Fire Stairs	Gray Homogeneous Non Fibrous	21.7	45.5	32.8	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-GP-44C 06-12-003-174	Glazing Putty	4th Floor Fire Stairs	Gray Homogeneous Non Fibrous	25.2	56.4	18.3	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-GP-45A 06-12-003-175	Glazing Putty	Type I Window 5th Floor	Gray Homogeneous Non Fibrous	25.7	68.3	5.9	0%	100%	NAD Inconclusive	NAD
TRB-GP-45B 06-12-003-176	Glazing Putty	Type I Window 4th Floor	Gray Homogeneous Non Fibrous	26.4	66.3	7.4	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-GP-45C 06-12-003-177	Glazing Putty	Type I Window 4th Floor	Gray Homogeneous Non Fibrous	25.2	65.9	8.8	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-WP-46A 06-12-003-178	Tar Paper Waterproofing	4th Floor Auditorium	Black Homogeneous Non Fibrous	90.2	3.9	5.9	0%	100%	NAD Inconclusive	NAD
TRB-WP-46B 06-12-003-179	Tar Paper Waterproofing	4th Floor Backstage	Black Homogeneous Non Fibrous	94.7	0.8	4.5	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-WP-46C 06-12-003-180	Tar Paper Waterproofing	4th Floor Backstage	Black Homogeneous Non Fibrous	92.0	4.0	4.0	0%	100%	NAD Inconclusive	Analysis not requested by client



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Client Sample Id# Lab Sample Id#	Sample Description		Gravi	metric Prep	aration	PLM			Tem	
			% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Fibrous	% Non- Fibrous	Asbestos % & Type	Asbestos % & Type	
TRB-PM-47A 06-12-003-181	Black Mastic Sealant	Dumbwaiter Elevator Mech. Room	Black Homogeneous Non Fibrous	64.9	16.7	18.4	0%	91.8%	8.2% CH	
TRB-PM-47B 06-12-003-182	Black Mastic Sealant	Dumbwaiter Elevator Mech. Room	Black Homogeneous Non Fibrous	62.2	18.9	. 18.9			NA/PS	
TRB-PM-47C 06-12-003-183	Black Mastic Sealant	Dumbwaiter Elevator Mech. Room	Black Homogeneous Non Fibrous	63.4	18.1	18.5			NA/PS	
TRB-BUR-48A 06-12-003-184	Built Up Roofing Material	Backyard Roof	Black Homogeneous Non Fibrous	97.3	1.6	1.1	0%	100%	NAD	Trace CH
TRB-BUR-48B 06-12-003-185	Built Up Roofing Material	Backyard Roof	Black Homogeneous Non Fibrous	96.8	2.0	1.2	0%	100%	NAD	Analysis not requested by client
TRB-BUR-48C 06-12-003-186	Built Up Roofing Material	Backyard Roof	Black Homogeneous Non Fibrous	95.8	2.9	1.3	0%	100%	NAD	Analysis not requested by client
TRB-SKF-49A 06-12-003-187	Black Flashing Material	Backyard Roof	Black Homogeneous Non Fibrous	72.4	7.3	20.3	0%	95.9%	4.1% CH	
TRB-SKF-49B 06-12-003-188	Black Flashing Material	Backyard Roof	Black Homogeneous Non Fibrous	72.9	8.3	18.9			NA/PS	
TRB-SKF-49C 06-12-003-189	Black Flashing Material	Backyard Roof	Black Homogeneous Non Fibrous	71.8	14.0	14.2			NA/PS	
TRB-WM-50A 06-12-003-190	Black Mastic Sealant	Backyard Roof	Black Homogeneous Non Fibrous	76.2	8.1	15.7	0%	97.0%	3.0% CH	
TRB-WM-50B 06-12-003-191	Black Mastic Sealant	Backyard Roof	Black Homogeneous Non Fibrous	73.6	6.7	19.7			NA/PS	
TRB-WM-50C 06-12-003-192	Black Mastic Sealant	Backyard Roof	Black Homogeneous Non Fibrous	71.2	9.4	19.4			NA/PS	



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Lab Sample Id#	Description		% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Fibrous	% Non- Fibrous	Asbestos % & Type	Asbestos % & Type	
TRB-PITCHM-51A 06-12-003-193	Black Mastic	Fire Stairs Support Columns	Black Homogeneous Non Fibrous	87.9	7.2	4.9	0%	100%	NAD Inconclusive	
TRB-PITCHM-51B 06-12-003-194	Black Mastic	Fire Stairs Support Columns	Black Homogeneous Non Fibrous	79.7	8.8	11.5	0%	97.1%	2.9% CH	
TRB-PITCHM-51C 06-12-003-195	Black Mastic	Fire Stairs Support Columns	Black Homogeneous Non Fibrous	70.9	7.4	21.7			NA/PS	
TRB-SKAF-52A 06-12-003-196	Black Caulk Material	Flashing Joint at South Parapet Wall	Black Homogeneous Non Fibrous	81.7	13.2	5.0	0%	100%	NAD Inconclusive	NAD
TRB-SKAF-52B 06-12-003-197	Black Caulk Material	Flashing Joint at South Parapet Wall	Black Homogeneous Non Fibrous	92.2	5.8	2.0	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-SKAF-52C 06-12-003-198	Black Caulk Material	Flashing Joint at South Parapet Wall	Black Homogeneous Non Fibrous	93.6	4.4	2.0	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-C-53A 06-12-003-199	Gray Caulk (Soft)	Backyard 1st Floor	Gray Homogeneous Non Fibrous	39.8	58.4	1.8	0%	100%	NAD	NAD
TRB-C-53B 06-12-003-200	Gray Caulk (Soft)	Backyard 1st Floor	Gray Homogeneous Non Fibrous	39.2	59.4	1.5	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-C-53C 06-12-003-201	Gray Caulk (Soft)	Backyard 1st Floor	Gray Homogeneous Non Fibrous	37.0	59.1	3.9	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-TERZF-54A 06-12-003-202	Terrazzo Floor Material	Basement K1	Gray Homogeneous Fibrous		Not Applicable	Ð	0%	100%	NAD	
TRB-TERZF-54B 06-12-003-203	Terrazzo Floor Material	Basement K1	Gray Homogeneous Fibrous		Not Applicable	e	0%	100%	NAD	
TRB-TERZF-54C 06-12-003-204	Terrazzo Floor Material	3rd Floor Lobby	Gray Homogeneous Fibrous		Not Applicable	Э	0%	100%	NAD	



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Client Sample Id# Lab Sample Id#	Sample Description	excription	Appearance		Tem					
	Description	Location		% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Fibrous	% Non- Fibrous	Asbestos % & Type	Asbestos % & Type
TRB-PI-55A 06-12-003-205	Pipe Insulation Material	3rd Floor Pl	White Homogeneous Fibrous		Not Applicable	)	0%	66.7%	33.3% CH	
TRB-PI-55B 06-12-003-206	Pipe Insulation Material	3rd Floor Pl	White Homogeneous Fibrous		Not Applicable	)			NA/PS	
TRB-PI-55C 06-12-003-207	Pipe Insulation Material	3rd Floor Pl	White Homogeneous Fibrous		Not Applicable	<b>;</b>			NA/PS	
TRB-LF-56A 06-12-003-208	Linoleum Flooring Material	3rd Floor Office 02	Beige Homogeneous Non Fibrous	58.3	20.8	20.8	0%	96.8%	3.2% CH	
TRB-LF-56B 06-12-003-209	Linoleum Flooring Material	3rd Floor ST1	Beige Homogeneous Non Fibrous	71.6	9.5	18.9			NA/PS	
TRB-LF-56C 06-12-003-210	Linoleum Flooring Material	3rd Floor ST1	Beige Homogeneous Non Fibrous	67.3	7.3	25.4	7		NA/PS	
TRB-VDC-57A 06-12-003-211	Vibration Damper Cloth Material	5th Floor Blower Room Vibration Damper	Black Homogeneous Non Fibrous	78.0	19.2	2.8	0%	100%	NAD Inconclusive	NAD
TRB-VDC-57B 06-12-003-212	Vibration Damper Cloth Material	5th Floor Blower Room Vibration Damper	Black Homogeneous Non Fibrous	80.4	16.7	2.9	0%	100%	NAD Inconclusive	Analysis no requested by client
TRB-VDC-57C 06-12-003-213	Vibration Damper Cloth Material	5th Floor Blower Room Vibration Damper	Black Homogeneous Non Fibrous	80.5	16.4	3.1	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-DG-58A 06-12-003-214	Door Gasket Material	5th Floor Blower Room Access Door Gasket	Black Homogeneous Non Fibrous	76.7	10.0	13.3	0%	100%	NAD Inconclusive	NAD
TRB-DG-58B 06-12-003-215	Door Gasket Material	5th Floor Blower Room Access Door Gasket	Black Homogeneous Non Fibrous	83.3	9.4	7.2	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-DG-58C 06-12-003-216	Door Gasket Material	5th Floor Blower Room Access Door Gasket	Black Homogeneous Non Fibrous	79.6	7.6	12.8	0%	100%	NAD Inconclusive	Analysis not requested by client



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Lab Sample Id#	Description	Location		% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Fibrous	% Non- Fibrous	Asbestos % & Type	Asbestos % & Type
TRB-EB-59A 06-12-003-217	Ebony Blacking Material	4th Floor Backstage	Gray Homogeneous Fibrous		Not Applicable	9	0%	80%	20% CH	
TRB-EB-59B 06-12-003-218	Ebony Blacking Material	4th Floor Backstage	Gray Homogeneous Fibrous		Not Applicable	9			NA/PS	
TRB-EB-59C 06-12-003-219	Ebony Blacking Material	4th Floor Backstage	Gray Homogeneous Fibrous		Not Applicable	9			NA/PS	
TRB-T2-WG-60A 06-12-003-220	Glazing Putty	3rd Floor Southside Office 01	Gray Homogeneous Non Fibrous	13.9	82.4	3.6	0%	100%	NAD Inconclusive	NAD
TRB-T2-WG-60B 06-12-003-221	Glazing Putty	3rd Floor Southside Office 01	Gray Homogeneous Non Fibrous	15.2	80.7	4.1	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-T2-WG-60C 06-12-003-222	Glazing Putty	3rd Floor Southside Office 01	Gray Homogeneous Non Fibrous	14.2	83.1	2.7	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-T3-WG-61A 06-12-003-223	Glazing Putty	3rd Floor Southside ST1	Gray Homogeneous Non Fibrous	22.1	59.8	18.1	0%	100%	NAD Inconclusive	NAD
TRB-T3-WG-61B 06-12-003-224	Glazing Putty	3rd Floor Southside ST1	Gray Homogeneous Non Fibrous	<b>24</b> .1	61.2	14.7	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-T4-WG-61C 06-12-003-225	Glazing Putty	3rd Floor Southside LBR2	Gray Homogeneous Non Fibrous	19.4	62.1	18.5	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-TER-62A 06-12-003-226	Black Mastic Sealant	2nd Floor Terrace	Black Homogeneous Non Fibrous	92.9	3.2	3.9	0%	100%	NAD Inconclusive	NAD
TRB-TER-62B 06-12-003-227	Black Mastic Sealant	2nd Floor Terrace	Black Homogeneous Non Fibrous	89.0	5.0	6.0	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-TER-62C 06-12-003-228	Black Mastic Sealant	2nd Floor Terrace	Black Homogeneous Non Fibrous	86.1	2.6	11.3	0%	100%	NAD Inconclusive	Analysis not requested by client



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#### **BULK SAMPLE ANALYSIS REPORT**

Client Sample Id#	Sample	Sample	Appearance	Gravi	metric Prep	aration	PLM			Tem
Lab Sample Id#	Description	Location	Pad	% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Fibrous	% Non- Fibrous	Asbestos % & Type	Asbestos % & Type
TRB-TERFC-63A 06-12-003-229	Red Caulk	2nd Floor Terrace	Red Homogeneous Non Fibrous	31.6	6.3	62.1	0%	97.6%	2.4% CH	
TRB-TERFC-63B 06-12-003-230	Red Caulk	2nd Floor Terrace	Red Homogeneous Non Fibrous	30.2	3.1	66.7			NA/PS	
TRB-TERFC-63C 06-12-003-231	Red Caulk	2nd Floor Terrace	Red Homogeneous Non Fibrous	50.6	4.1	45.3			NA/PS	
TRB-T6-WG-64A 06-12-003-232	Glazing Putty	2nd Floor Terrace	Gray Homogeneous Non Fibrous	27.7	64.6	7.7	0%	100%	NAD Inconclusive	NAD
TRB-T6-WG-64B 06-12-003-233	Glazing Putty	2nd Floor Terrace	Gray Homogeneous Non Fibrous	17.8	77.5	4.7	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-T6-WG-64C 06-12-003-234	Glazing Putty	1st Floor Northside	Gray Homogeneous Non Fibrous	12.4	77.8	9.7	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-T5-WG-65A 06-12-003-235	Glazing Putty	1st Floor Southside	Light Gray Homogeneous Non Fibrous	20.2	64.7	15.0	0%	100%	NAD Inconclusive	NAD
TRB-T5-WG-65B 06-12-003-236	Glazing Putty	1st Floor Southside	Light Gray Homogeneous Non Fibrous	20.6	71.1	8.2	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-T5-WG-65C 06-12-003-237	Glazing Putty	1st Floor Southside	Light Gray Homogeneous Non Fibrous	20.6	62.4	16.9	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-BAY-WG-66A 06-12-003-238	Glazing Putty	1st Floor EH 8	Gray Homogeneous Non Fibrous	19.3	64.0	16.7	0%	100%	NAD Inconclusive	NAD
TRB-BAY-WG-66B 06-12-003-239	Glazing Putty	1st Floor EH 8	Gray Homogeneous Non Fibrous	16.7	66.7	16.7	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-BAY-WG-66C 06-12-003-240	Glazing Putty	1st Floor EH 8	Gray Homogeneous Non Fibrous	20.6	62.5	16.9	0%	100%	NAD Inconclusive	Analysis not requested by client



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#### **BULK SAMPLE ANALYSIS REPORT**

Client Sample Id#	Sample	scription	Appearance	Gravi	metric Prep	aration		PLM		Tem
Lab Sample id#	Description		% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Fibrous	% Non- Fibrous	Asbestos % & Type	Asbestos % & Type	
TRB-T7-WG-67A 06-12-003-241	Glazing Putty	1st Floor Northside	Beige Homogeneous Non Fibrous	12.9	83.0	4.1	0%	100%	NAD Inconclusive	NAD
TRB-T7-WG-67B 06-12-003-242	Glazing Putty	1st Floor Northside	Beige Homogeneous Non Fibrous	18.5	73.1	8.3	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-T7-WG-67C 06-12-003-243	Glazing Putty	1st Floor Northside	Beige Homogeneous Non Fibrous	20.1	75.4	4.5	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-T8-WG-68A 06-12-003-244	Glazing Putty	4th Floor Northside	Gray Homogeneous Non Fibrous	19.7	75.1	5.2	0%	100%	NAD Inconclusive	NAD
TRB-T8-WG-68B 06-12-003-245	Glazing Putty	4th Floor Northside	Gray Homogeneous Non Fibrous	16.1	74.7	9.3	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-T8-WG-68C 06-12-003-246	Glazing Putty	4th Floor Northside	Gray Homogeneous Non Fibrous	11.0	80.5	8.6	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-T9-WG-69A 06-12-003-247	Glazing Putty	4th Floor Northside	Beige Homogeneous Non Fibrous	17.5	77.5	5.0	0%	100%	NAD Inconclusive	NAD
TRB-T9-WG-69B 06-12-003-248	Glazing Putty	4th Floor Northside	Beige Homogeneous Non Fibrous	13.3	68.1	18.6	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-T9-WG-69C 06-12-003-249	Glazing Putty	4th Floor Northside	Beige Homogeneous Non Fibrous	24.4	65.9	9.8	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-TMP-70A 06-12-003-250	Molding Plaster	Basement Corridor 2	White Homogeneous Fibrous		Not Applicabl	9	0%	100%	NAD	
TRB-TMP-70B 06-12-003-251	Molding Plaster	2nd Floor LBR1 Ceiling	White Homogeneous Fibrous		Not Applicabl	e	0%	100%	NAD	
TRB-TMP-70C 06-12-003-252	Molding Plaster	3rd Floor ST2 Ceiling	White Homogeneous Fibrous		Not Applicable	8	0%	100%	NAD	



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#### **BULK SAMPLE ANALYSIS REPORT**

**Client:** Environmental Planning & Management, 1983 Marcus Ave., Suite 109, Lake Success, NY 11042 **Building Address:** Theodore Roosevelt Birthplace, 28 East 20<sup>th</sup> Street, New York, NY **Project:** 26061.1

Client Sample Id# Sample Lab Sample Id# Description		Sample Appearance		Gravimetric Preparation				Tem		
	Description	Location		% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Fibrous	% Non- Fibrous	Asbestos % & Type	Asbestos % & Type
TRB-1SK-71A 06-12-003-253	Glazing Putty	Basement K2 Ceiling Windows	Gray Homogeneous Non Fibrous	18.0	71.5	10.5	0%	100%	NAD Inconclusive	NAD
TRB-ISK-71B 06-12-003-254	Glazing Putty	Basement Office 01 Ceiling Windows	Gray Homogeneous Non Fibrous	15.3	73.6	11.1	0%	100%	NAD Inconclusive	Analysis not requested by client
TRB-ISK-71C 06-12-003-255	Glazing Putty	Basement Office 02 Ceiling Windows	Gray Homogeneous Non Fibrous	15.1	74.5	10.4	0%	100%	NAD Inconclusive	Analysis not requested by client

Date Received: 12/01/06 Date of Analysis: 12/04/06 Date of Revised Report: 1/23/07

PLM Analyst: <u>Beata Stojanowska-Luft</u>

Lab Director:

NAD = No Asbestos Detected; NA/PS = Not Analyzed / Positive Stop; Trace = < 1%, CH = Chrysotile, AMO = Amosite, CRO = Crocidolite, ANTH = Anthophyllite, TRE = Tremolite, ACT = Actinolite, FBGL = Fiberglass, CELL = Cellulose. Polarized Light Microscopy (PLM) analysis of samples is performed by Method EPA 600/M4-82-020 and ELAP PLM Analysis Protocol 198.1 (friable sample) and protocol 198.6 (NOB samples), Transmission Electron Microscopy (TEM) analysis of samples is performed by Method ELAP TEM Analysis Protocol 198.4. Analytical equipments: Stereobinocular microscope (NTB02B), Polarized Light Microscope (MEIJI ML-9000-Serial # 902028). PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos-containing. Samples will be stored for sixty (60) days and then returned to the client upon request. The results relate only to the items calibrated or tested. This report may not be reproduced, except in full, without the written approval of Alpha Labs LLC. The report must not be used by the client to claim endorsement by NVLAP or any agency of the US Government.

NYS-DOH ELAP # 11833 NVLAP #: 200691-0 AIHA#: 174078

#### APPENDIX I Structural System Historical Research

Form-244-1023 Certificate of Occupancy.

- - -

BUREAU OF BUILDINGS BOROUGH OF MANHATTAN, CITY OF NEW YORK

CERTIFICATE OF OCCUPANCY No. 2213 102 3 EVC

Supersedes Certificate of Occupancy No.

To the owner or owners of the building:

19 23 New York Oct. 25

THIS CERTIFIES that the building located on Block@43 . Lot 55 -56

known as 23-23 Host 2021 Street noder a permit, Application No. 20012 27 19 73 conforms to the approved plans and under a permit, Application No. 279 K. B. of 19 22 conforms to the approved plans and specifications accompanying said permit and any approved amendments thereto, and to the requirements of the building code and all other laws and ordinances and to the rules and regulations of the board of standards and appeals, applicable to a building of its class and kind, except that in the case of a building heretofore existing and for which no previous certificate of occupancy has been issued and which has not been altered or converted since March 14, 1916, to a use that changed its classification as defined in the building code, this certificate confirms and continues the existing uses to which the building has been put; and

CERTIFIES FURTHER that the building is of firepreef construction within the meaning of the building code and may be used and occupied as a 19.0112 building as hereinafter qualified, in a 11 unrestricted district under the building zone resolution, subject to all the privileges, requirements, limitations, and conditions prescribed by law or as hereinafter specified.

STORY	LIVE LOADS List per Sq. Ft.	MALE	ONS AUCOMM	TOTAL	ÜSE
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**HISTORY OF CONCRETE:** 

## **A RETROSPECTIVE ON**

## CINDER CONCRETE DRAPED-MESH FLOOR SYSTEMS

## **OF THE EARLY TWENTIETH CENTURY**

### ANTHONY M. DOLHON, P.E. CARINA G. SANTOS WISS, JANNEY, ELSTNER ASSOCIATES, INC.



APRIL 22, 2002 ACI 2002 SPRING CONVENTION

## **PRESENTATION OVERVIEW**

- BACKGROUND
  - Chronology
  - Floor Systems
  - Characteristics
  - Tests
  - Design & Code
- **EXAMPLES**
- SUMMARY
- QUESTIONS



# BACKGROUND



## **CHRONOLOGY**

**PRIOR to 1885** 

**Burnt Clay Products** 

- TERRA COTTA
- BRICK ARCHES
- FLAT CEILING
- BOTTOM FLANGE CONSTRUCTION





### **Typical Floor Section - Brick Arch**



Friedman, Donald *Historical Building Construction: Design, Materials, and Technology*, Norton & Co., London, 1995.



### **Typical Floor Section - Segmental Tile Arch**



Friedman, Donald *Historical Building Construction: Design, Materials, and Technology*, Norton & Co., London, 1995.

Aus, Gunvald, Engineering News Record,, November 7, 1895, Vol. 34, No.19, p.314.



### **Typical Floor Section - Roebling Arch**



Friedman, Donald *Historical Building Construction: Design, Materials, and Technology*, Norton & Co., London, 1995.

## **CHRONOLOGY**

### <u>1896</u>

First reported use of cinder concrete in floor systems

### <u> 1895 - 1915</u>

Primary period for load testing of cinder concrete slabs



## CHARACTERISTICS OF CINDER CONCRETE DRAPED-MESH FLOOR SYSTEMS:

- Wire or wire mesh
- Cinders & bituminous aggregates
- Typical spans: 4 10 feet
- Wire mesh rests on, or is anchored to, top of steel beams
- Mesh is draped near midspan (approx. 1" bottom cover)
- Draped wire mesh carries loads with catenary action
- Lightweight concrete



### FIRE, WATER, AND LOAD TESTS

"The test structures were about 14 feet square and 9 ft. high, with a fire grate at the bottom and the floor slabs to be tested forming the ceiling. The average temperature on the tested floor slabs was 1700°F maintained for 4 hours. Following this there was a water test of 60 lb. pressure through a 1-1/8 in. nozzle applied for 10 min. to the underside of the slabs. During the fire test a load of 150 lb. per sq. ft. remained on the entire surface of the slabs. After the fire test the slabs were subjected to a total load of 600 lbs. per square ft."





Waite, G.B., "Cinder Concrete Floors", *ASCE Transactions*, Paper No. 1312, Vol. LXXVII, December 1914.

FIG. 2.—ARBITRARY TEST LOAD. SAND IN BAGS ON 4-IN. SLAB, 36 IN. WIDE AND 6 FT. LONG.

## CINDER CONCRETE FLOORS: WORKING LOADS



Waite, G.B., "Cinder Concrete Floors," ASCE Transactions, Paper No. 1312, Vol. LXXVII, December 1914.

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### **Typical Floor Section - Roebling Flat Slab**



Friedman, Donald. *Historical Building Construction: Design, Materials, and Technology*, Norton & Co., London, 1995.
#### **FLOOR SYSTEMS**



#### **Typical Floor Section - Metropolitan System**



Friedman, Donald *Historical Building Construction: Design, Materials, and Technology*, Norton & Co., London, 1995.

Engineering News, November 14, 1895, Vol. 34, No. 20, p. 332-333.

#### **FLOOR SYSTEMS**





#### **Typical Floor Section - Draped Mesh Concrete Slab**

Friedman, Donald *Historical Building Construction: Design, Materials, and Technology*, Norton & Co., London, 1995.

## CHRONOLOGY

#### <u> 1903 - 1904</u>

A special committee was appointed to investigate current practice, provide properties of concrete, and make design and code recommendations, including:

- American Society of Civil Engineers
- American Society for Testing Materials
- American Railway Engineering Association
- Association of American Portland Cement Manufacturers



# **CHRONOLOGY**



• December 1912: Progress Report of the Special Committee on Concrete and Reinforced Concrete

#### <u>1914</u>

 Approximately 200 approvals were given for reinforced concrete (cinder and stone) floor systems, *based on load tests*

 82 different floor systems (40 reinforced cinder concrete) were tested for *fire, water, and load*; primarily for the Bureau of Buildings of NYC



## CINDER CONCRETE FLOORS: REINFORCEMENT

#### TABLE 1.—Reinforcement.

(From Proposed Building Code of 1913, Sec. 104, Art. 8.)

Tension Wires 4 Inches on Centers.

		SPAN BETWEEN STEEL BEAMS.									
Live load per square foot of floor area.	Type of reinforcement.	6 ft. 0	in. or less.	6 ft. 1 in	. to 7 ft. 0 in.	7 ft. 1 in. to 8 ft. 0 in. (Area of steel per (foot width of slab.)					
		(f	Area of steel per oot width of slab.)	(f	Area of steel per ) oot width of slab.)						
100 lb. and less	Bars Wire mesh	0.4 lb. No.7 wire	(0.118 sq in.) (0.0735 sq. in.)	0.5 lb. No. 6 wire	(0.147 sq. in.) (0.0868 sq. in.)	0.6 lb. No. 5 wire	(0.177 sq. in.) (0.101 sq. in.)				
101 to 150 lb	Bars Wire mesh	0,5 lb. No. 6 wire	(0.147 sq. in.) (0.0868 sq. in.)	0.6 lb. No. 5 wire	(0.177 sq. in.) (0.101 sq. in.)	0.8 lb. No. 4 wire	(0.236 sq. in.) (0.120 sq. in.)				
151 to 200 lb	Bars Wire mesh	0.7 lb. No. 5 wire	(0.206 sq. in.) (0.101 sq. in.)	0.9 lb. No. 4 wire	(0.265 sq. in.) (0.120 sq. in.)	1.1 lb. No. 3 wire	(0.324 sq. in.) (0.140 sq. in.)				
201 to 250 lb }	Bars Wire mesh	0.8 lb. No. 4 wire	(0.236 sq. in.) (0.120 sq. in.)	1.0 lb. No. 3 wire	(0.294 sq. in.) (0.140 sq. in.)	1.2 lb. No. 2 wire	(0.353 sq. in.) (0.162 sq. in.)				

Matter in parentheses added for comparison. All other matter as per code.



Waite, G.B., "Cinder Concrete Floors," ASCE Transactions, Paper No. 1312, Vol. LXXVII, December 1914.

#### CINDER CONCRETE : PROPERTIES

TABLE 3.

"Weight and Compressive Strength of Cinder Concrete as Used in Fireproof Floors, New York City.

(The table covers 120 samples. Each figure given is the average of ten samples.)

Zone.	<b>A</b> .		B.		B2.			C.			
Mix Weight, lb. per cu. ft	1:	2:5 107	al an	1:	1:5 100	1 8	1:	2:5 107		1:	2:5 109
Crushing Strength, lb. per sq. in Mod. of Elast., lb. per sq. in Two-month Test:	924	407 600		857	507 400	1	280	818 000	1	492	980 000
Crushing Strength, lb. per sq. in Mod. of Elast., lb. per sq. in Six-month test :	1 184	701 000	1	030	662 000	1		254 000	1	1 428	035 250
Crushing Strength, lb. per sq. in Mod. of Elast., lb. per sq. in	971	933 000	1	050	754 000	1		744 000	1	1 276	478 000



Waite, G.B., "Cinder Concrete Floors," ASCE Transactions, Paper No. 1312, Vol. LXXVII, December 1914.

## CINDER CONCRETE FLOORS: UNIT STRESSES

<b>TABLE 2.</b> —	UNIT. STI	11111111	r Cinder partments.	ana an	AS USED	vix. Veirdi 10. 1
000 591 1 00 055 Clty. 815 000 175 1 10	Extreme fiber stress, in pounds per square inch.	B 158 Ratio of moduli of elasticity.	003 200 000 <b>Kind</b> of cinders 820 used. 000 170	Mixture.ja ni pa 19 Mixture.ja		Preferred reinforce- te ment.
Philadelphia, Pa. Boston, Mass Chicago, Ill Baltimore, Md	ed 1 bez 1 g <b>250</b> neg 800 1a f <b>245</b> 1o ff01zen	m-suldona 10- <b>80</b> 25 	Hard coal Soft coal Hard or soft. Hard or soft.	aggregate.	16 000 16 000 18 000 15 000 15 000	None. None. None. None.



Waite, G.B., "Cinder Concrete Floors," ASCE Transactions, Paper No. 1312, Vol. LXXVII, December 1914.

# **CHRONOLOGY**



• March 3, 1915

**193 Floor Approvals in Manhattan Building Bureau (133 were for cinder concrete floors)** 

 Cinder Concrete Research from Dept. of Civil Engineering, Columbia University

- Determine Compressive Strength
- Study Typical Behavior
- Recommended Specifications



#### CINDER CONCRETE: 1938 NYC Building Code

#### THE NEW YORK CITY BUILDING CODE

The present New York City Building Code, adopted 1938, specifies under Article II, Sub-Article 3, Fire Resistive Floors and Roofs, that the safe carrying capacity of reinforced concrete floor and roof construction between structural steel beams shall be determined by the following empirical formula:

$$w = \frac{3CA_s}{L^2}$$

In which-

- w = gross uniform floor load in pounds per square foot.
- $A_s = cross-sectional area of reinforcement in square inches per foot of width of slab.$
- L = clear span in feet between steel flanges and shall not exceed ten feet in any case, and when the gross floor load exceeds 200 pounds per square foot shall not exceed eight feet.

AMERICA

- C = the following coefficient, for steel having an ultimate strength of at least fifty-five thousand pounds per square inch:
  - (a) For cinder concrete
    - 20,000 when reinforcement is continuous\*
    - (2) 14,000 when reinforcement is hooked or attached to one or both supports.
  - (b) For stone concrete

2

- (1) 23,000 when reinforcement is continuous\*\*
- (2) 15,000 when reinforcement is hooked or attached to one or both supports.

WI

RE

\*For American Welded Wire Fabric C = 25,455\*\*For American Welded Wire Fabric C = 29,273



American Welded Wire Fabric for Concrete Reinforcement, American Steel and Wire Division U.S. Steel, 1944.

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N

## CINDER CONCRETE: 1938 NYC Building Code

MINIMUM SECTIONAL AREAS OF AMERICAN WELDED WIRE FABRIC For Given Loads and *Continuous* Spans on basis

#### BUILDING CODE OF THE CITY OF NEW YORK

as adopted 1938.

Floor and Roof Construction

Total Load including Weight of	4'0"	4'6"	5'0"	5' 6"	6'0"	6'6"	7'0"	Steel Flan	ges 8'0"	8'6"	9'0"	9'6"	10'0"					
Slab pounds per sq. ft.	Cro	Cross Sectional Area of Longitudinal Wires in Square Inches per Foot of Width of Welded Wire Fabric																
100	.021★	.027★	.033★	.040★	.048★	.056	.065	.074	.084	.095	.107	.119	.131					
125	.027★	.034★	.041★	.050★	.059	.070	.081	.093	.105	.119	.133	.148	.164					
150	.032★	.040★	.ó50★	.060	.071	.083	.097	.111	.126	.142	.160	.178	.197					
175	.037★	.047★	.058	.070	.083	.097	.113	.129	.147	.166	.186	.207	.230					
200	.042★	.054	.066	.080	.095	.111	.129	.148	.168	.190	.213	.237	.262					
225	.048★	.060.	.074	.090	.107	.125	.145	.166	.189	<b>+</b> 5 <b>-1</b> - 512' <b>-1</b> - 6'								
250	.053★	.067	.082	.100	.118	.139	.161	.185	.210	1								
275	.058	.073	.091	.109	.130	.153	.177	.203	.231									
300	.063	.080	.099	.119	.142	.166	.193	.221	.252	CINDER CONCRETE 1:2:5 (mox.) Mixture Ultimate Compressive Strength at 28 days at least: 700 lbs. p.s.i. Safe Fibre Stress 200 lbs. p.s.i.								
325	.069	.087	.107	.129	.154	.180	.209	.240	.273									
350	.074	.093	.115	.139	.165	.194	.225	.258	.294									
375	.079	.100	.123	.149	.177	.208	.241	.277	.315	for	END SPA	Sectiona ANS multip	Areas					
400	.084	.107	.131	.159	.189	.222	.257	.295	.336	- sh	own by 1.4	3						
425	.090	.113	.140	.169	.201	.236	.273	.314	.357	*								
450	.095	.120	.148	.179	.213	.249	.289	.332	.378									



American Welded Wire Fabric for Concrete Reinforcement, American Steel and Wire Division U.S. Steel, 1944.

#### **SUGGESTED READING:**

"Fireproof Floor Construction in New York City I." *Engineering News*, February 4, 1897, 72-75.

"Tests of Fireproof Floor Construction." *Engineering News*, May 27, 1897, pp. 332-333.

"Fire Test of a Cinder Concrete Floor." *Engineering News*, November 29, 1906, p. 562.

Second Report of Joint Committee on Concrete and Reinforced Concrete, November 20, 1912.

Strehan, G.E. and Perrine, H. "An Investigation of the Strength of Cinder Concrete," *Engineering News*, October 9, 1913, pp.722-724.

Waite, G.B., "Cinder Concrete Floors," *ASCE Transactions*, Paper No. 1312, Vol. LXXVII, December 1914



Strehan, G.E. and Perrine, H. "Cinder Concrete Floor Construction Between Steel Beams," *ASCE Transactions*, Paper No. 1341, March 3, 1915.

# EXAMPLES Cinder Concrete Draped-Mesh Floor Systems



#### The Empire State Building, New York City, 1930



#### Slab forms with mesh and conduit



Willis, C. ed., *Building The Empire State*, Norton & Co., London, 1998.

#### The Empire State Building, New York City, 1930



#### Slab forms with mesh and conduit



Willis, C. ed., *Building The Empire State*, Norton & Co., London, 1998.

## Turtle Bay Towers, New York City, circa 1920





## Turtle Bay Towers, New York City, circa 1920



## Federal Express Building, New York City, circa 1920



# **SUMMARY**

• By 1914, 90% of the fire-proof floor construction in New York City and 50% of the fire-proof floor construction in Philadelphia was of cinder concrete (Hurlbut, 1914 and Waite, 1914).

•Little, or no traditional design was associated with cinder concrete floor systems, but rather approvals were based on testing for a specified uniform load capacity.

• "Cinder concrete should not be used for reinforced concrete structures. It may be allowable in mass for very light loads or for fire protection purposes. The cinders used should be composed of hard, clean, vitreous clinker, free from sulphides, unburned coal, or ashes." (Second Report of the Joint Committee on Concrete and Reinforced Concrete, 1912)



 Nearly a century later, cinder concrete floors are still in service today. Many require maintenance, repair, and replacement.

# QUESTIONS



# ADDITIONAL QUESTIONS & COMMENTS

# ADolhon@wje.com



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#### John Milner Architects, Inc

104 Lakeview Drive Chadds Ford, Pennsylvania 19317 Ph. 610-388-0111 Fax. 610-388-0119 www.johnmilnerarch.com