WILLIAM REDDICK MANSION

HISTORIC STRUCTURE REPORT SUMMARY

Completed November 2013 for the

REDDICK MANSION ASSOCIATION

Project Team
Sullivan Preservation
with
The Structural Shop
Architectural Consulting Engineers
Historic Surfaces
Cardno ATC

Introduction

The Reddick Mansion Historic Structure Report was compiled between January and July of 2013 by Sullivan | Preservation and their professional consultants. The Reddick Mansion Association, represented by President Diane Sanders and HSR committee members Donna Nordstrom, Steve Meyer, George Cary and Edmund Thornton commissioned the Sullivan | Preservation team to undertake the study. Diane Sanders provided general oversight for the project and maintained day-to-day contact with the Team.

The Reddick Mansion Historic Structure Report (HSR) was funded by the Jeffris Family Foundation as part of the Jeffris Heartland Fund with matching funds from the Reddick Mansion Association.

The Jeffris Family Foundation Jeffris Heartland Fund supports the development of important historic preservation projects in the states of Iowa, Illinois, Indiana, Michigan, Minnesota, Missouri, Ohio, and Wisconsin. Grants for Historic Structure Reports and other advanced planning studies are provided but must be matched dollar-for-dollar with cash from sources unrelated to the Jeffris Family Foundation.

The Reddick Mansion Association (RMA) was formed in 1974 as a not-for-profit corporation with a mission to preserve and operate the building and grounds. Between 1888 and 1974 the Mansion served as Reddick Library, the public library for Ottawa, Illinois. After the library board constructed new facilities and abandoned the Mansion, a lease was prepared between the Reddick Mansion Association and the City of Ottawa to allow the RMA to administer and operate the Mansion building. A similar agreement is in place today.

The Association's Mission Statement reads:

> The Reddick Mansion Association is responsible for the historic preservation and restoration of the Reddick Mansion by adhering to acceptable restoration practices in conformance with adaptive public use.
>
> The Association will foster the use of the Reddick Mansion for the community's cultural, educational, social, recreational experiences and other beneficial purposes.[1]

[1] Reddick Mansion Website: http://www.reddickmansion.org/mission2.html accessed June, 2013.

Statement of Purpose

A Historic Structure Report (HSR) serves to fully document the history and physical condition of a structure in a particular place and time. The following excerpt from the ASTM Standard on Performance of Building Constructions, specifically Historic Structure Reports, explains:

> "The Purpose of a Historic Structure Report is to (1) document and analyze the building's initial construction and subsequent alterations through historical, physical and pictorial evidence; (2) document the current state of the building's architectural materials and overall structural stability; (3) select an appropriate historic preservation treatment (protection, stabilization, preservation, rehabilitation, and restoration or reconstruction); (4) establish priorities for project work items; and (5) make an estimate of project costs. When completed, the report becomes the planning document which is the basis for developing the working drawings and specifications… prior to commencement of project work"[2]

The Reddick Mansion Historic Structure Report was based on precedents developed by the National Park Service, the Association for Preservation Technology International, and the ASTM Task Group Guide for Historic Structure Reports.

Project Team

The Sullivan | Preservation Team was comprised of:

Sullivan | Preservation:

- Anne Sullivan, AIA
  - Served as team leader, reviewed architectural issues, worked with consultants during their site visits as appropriate and served as primary author of the HSR.

Consulting Professionals

- The Structural Shop - Christopher Botkin under the supervision of Ken Veach, PE, SE
  - Reviewed structural issues and compiled a report of findings with recommendations.
- Architectural Consulting Engineers - Mark Nussbaum, PE
  - Reviewed mechanical, electrical, plumbing and fire suppression issues and compiled a report of findings with recommendations.
- Historic Surfaces - Anthony Kartsonas
  - Reviewed existing paint analyses, provided additional paint sampling and exposure windows, and compiled a report of findings with recommendations.
- Cardno ATC - Andrew Nilson under the supervision of Ash Memon
  - Compiled a hazardous materials report to assess the presence of asbestos-containing products.

[2] ASTM, E-6 on Performance of Building Constructions; Task Group E06.24.04: Historic Structure Reports, "Mission Statement."

Methodology

The compilation of the Reddick Mansion Historic Structure Report was undertaken in several stages: a review of archival material, interviews, physical documentation, assessment of condition, and compilation of recommendations for repair with budget cost estimates leading to a long-term plan.

Archival Material Review

The Sullivan | Preservation team members became familiar with William Reddick and the history of the Reddick Mansion and Library primarily through historic material provided to us from the RMA. These documents include, but are not limited to:

- A report compiled in 1975 by Dr. Paul Sprague with architect William Dring, entitled "History, Significance, and Feasibility for Adaptive Use of the William Reddick Mansion at Ottawa, Illinois." This document was prepared for the National Trust for Historic Preservation and the Ottawa Silica Company Foundation. Much of this document is reproduced herein as the Historical Analysis portion of the HSR, with supplemental information added by our team.
- "Notes Prepared April 4, 1978 Regarding the Reddick Mansion" compiled by David Mumper.
- "Notes Gleaned from the Minutes of the Reddick Library Board of Directors" prepared by David Mumper, 2009, which was of extraordinary use to our team.
- The original carpenter specifications for construction of the William Reddick Mansion in Ottawa, Illinois, provided to our team in the following forms:
    - A photocopy of the handwritten original.
    - A transcription by David Mumper, completed in 2010 from a photocopy of the original.
- The Reddick family's original inventory of furniture in each room.

Additional primary research was undertaken by our team members at the Reddick Library local history room. Scans were made of original photographs and newspaper clippings.

Unless otherwise noted:

- Current photographs of the building and site were taken by the Sullivan | Preservation team members in Spring 2013.
- Photographs dating to c. 1970 were copied from photo albums in the Reddick Mansion Association (RMA) collection, unless they are noted as part of the Brookman collection. A number of these were held within records kept by R.A. (Jim) McClevey, whose personal files on the Mansion have recently been added to the RMA collection.
- A number of c. 1970 photographs were offered to the project team by Mr. and Mrs. Ken Brookman. Mr. Brookman is credited where they have been used.
- All of the historic photographs predating Library occupation were found in the Reddick Library local history room files. Copies of most of these photographs are in the RMA collection. Copies of several historic photographs are framed and hanging on the Lower Level of the Reddick Mansion. Their original source is unknown

except for those credited to the Funk Family, which was indicated on one framed collage of photographs.
- Early and Mid-20th century Reddick Library Photos were found in the Reddick Library local history room files. Copies of some, but not all, of these are in the RMA files.
- Photographs taken in the 1970s by Dr. Paul Sprague in preparation for his 1975 assessment report have been credited to him. Scanned copies of his photographs are available in the RMA files (kindly donated by him for this study in 2013).
- A number of newspaper clippings pertaining to the Reddicks, the Mansion and the Library are available in the Reddick Library local history room files.
- A number of post-1975 receipts, memos, letters, short reports and the like are available in the RMA files.

Interviews

The Sullivan | Preservation team met with several persons who have had long-term experience with the building and who have undertaken previous investigations. Among those who met with us or provided information are:
- Ken Brookman, former site manager (c. 1970s-1980s), who walked the site with us and provided us with a great number of photographs dating from the early days of the RMA that document changes made to the Mansion at that time.
- George Cary, architect, former RMA board member and principal of Basalay, Cary & Alstadt Architects, Ltd. (BCA). Cary's firm completed a Capital Needs Assessment for the Mansion in Sept. 2011 that was the basis for our cost study, as well as Window and Exterior Trim Restoration construction documents that were of use to our team. BCA also shared with our team building elevations and plans that have been utilized in this report.
- Steve Meyer and Larry Swanson, RMA members, who didn't mind getting their hands dirty in reviewing the attic and sub-basement with our team members. They also compiled a thorough "HSR Report Suggestions" list of questions that kept our team on our toes. They provided research regarding properties that preceded the Reddick Mansion on the Mansion site.
- Tom Weiss, a contractor who has worked at the Reddick Mansion in the past and had memory of a number of things that have since been altered.
- Dave Rabideau, an RMA board member and local contractor, who provided the boom lift for the exterior inspection and worked with us to brainstorm various issues regarding exterior conditions.

A full list of resources utilized for compilation of this report are listed in the Bibliography, attached as an Appendix to this report.

Physical Documentation and Assessment of Condition

The Sullivan | Preservation Team undertook site visits both as a team, individually, and in pairs throughout spring 2013. Conditions were noted and digital photographs taken. Unfortunately no original building plans or elevations exist. Our team utilized base plans and elevations provided by either the RMA or BCA Architects for our inspections.

Recommendations for Repair

Based on an analysis of the consultant reports and the findings of the Sullivan | Preservation team, a list of work items was compiled for the Reddick Mansion interior, exterior, MEP and structural systems and immediate site elements as well as for the Caretaker's House exterior. This information was utilized to prepare the cost estimates and phased recommendations. The cost study prepared by BCA Architects for the 2011 Capital Needs Assessment was used as a basis for our cost study, with costs escalated, revised and supplemented as required, based upon our experience with historic properties of this type. The cost study with prioritized/phased recommendations is found herein and is summarized in the Executive Summary.

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Executive Summary and Long Term Plan

Project Identification

The William Reddick Mansion is located at 100 West Lafayette Street in Ottawa, LaSalle County, Illinois, 61350. At the time of Reddick's death in 1885, his estate occupied the entire east half of block 56 immediately north of Washington Park, and was comprised of five structures: the Mansion, the two story brick building west of the Mansion,[1] the Barn, Carriage House, and a wood frame residence. Reddick willed his home (lot 10 & 11) to the library association in 1885. Reddick Library occupied the building until 1978 when it moved to a new structure.

In the middle part of the 20th century the north half of the property was sold. An auto garage occupies the land where the two northernmost buildings once stood. The land around the Reddick Mansion now serves somewhat as a city park, and is tastefully landscaped.

Existing Building Use and Integrity

The Mansion currently serves as an interpreted house museum with non-interpreted meeting spaces available on the Lower Level and Main Level. The exterior of the Mansion has high historic integrity, there having been little replacement of original material in its 157-year history. The interior has varying degrees of historic integrity. The Lower Level has lost most of its historic fabric, with the exception of the windows and associated trim, and some doors and associated trim.

The Main Level has high historic integrity, mainly owing to the extraordinary decorative plaster ceilings and superior original wood graining on some interior features. The East Parlors have been restored to their original configuration and are now interpreted spaces, but details such as paint color, window dressings and light fixtures are not entirely authentic. Two West Parlors remain modified in their configuration, and lack original finishes. The Northwest Room has no historic integrity.

The Bedroom Level has high historic integrity, mainly owing to the extraordinary decorative plaster ceilings. The trim was originally wood grained but has been over-painted. Currently the Southeast Bedroom is restored and interpreted. The Central Hall is also interpreted, but it has been altered from its original configuration with two partitions, breaking it in to three spaces. The other bedrooms remain un-restored. They retain original trim and plaster ceilings, but were modernized in the 1970s for office use. The

[1] This building currently serves the Ottawa Visitor's Center, but served as a Caretaker's House during the Library period, and has been referred to alternatively as a "smokehouse," as an "icehouse" in the Library Minutes, and as a "laundry and tool shed" in an interview with Sylvia Funk. The building's original use is not known, as it underwent a considerable rehabilitation in the 1920s when converted for a Caretaker's residence.

Center West Dressing Room has been seriously modified. A restoration here will mean fabrication of material in order to interpret the space. The Northwest "Wet Room" has no historic integrity and would be very difficult to fabricate for interpretation.

The Servants' Level has high historic integrity and has remained virtually untouched since 1888. As a result the rooms are in very poor condition and in need of plaster repair and painting, proper lighting, and restored floor finishes.

The site retains moderate historic integrity. Only the Mansion and Caretaker's House remain from the original five buildings on the site. The Barn, Carriage House and a wood frame house north of the Mansion were demolished in the mid-20th century. The existing landscape is lush and beautifully maintained, although not in keeping with the period of significance.

Discussion of Significance

The Reddick Mansion is listed as a contributing property within the Washington Park Historic District (National Register of Historic Places, 1973). Washington Square is of particular historic significance because it hosted the first of the famous Lincoln-Douglas Debates, held on August 21, 1858. The debate lasted three hours under the hot August sun, and focused on the issues of popular sovereignty, setting the tone for the other debates to come in 1858.[2] Because of its historic significance as the location of the first Lincoln-Douglas debate, the integrity of its contributing properties, and significance to local life, the Washington Park Historic District was added to the United States National Register of Historic Places on April 11, 1973. [3]

The Reddick Mansion was constructed between 1856 and 1858, from a design completed by Chicago architects Olmsted and Nicholson. The Italianate-style building was and is a formidable presence facing Washington Park. It is significant for its embodiment of the park's period of significance (relating to the 1858 debates), as well as for its association with a prominent Illinois citizen. Reddick served as "one of the earliest and best remembered sheriffs of LaSalle County, and as a state senator for nearly a decade… Were it not for his continued dedication to the Democratic Party, Reddick might well have fulfilled his ambitions to become governor of Illinois and U.S. Senator… Reddick (remained) active in civic affairs, (working) on behalf of free public education… reach(ing) its finale in his last bequest. The gift of his residence to the City of Ottawa for use as a public Library."[4]

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[2] National Register of Historic Places, Washington Park Historic District, Ottawa, LaSalle County, Illinois, Constance Fetzer, ed., 1974.

[3] Excerpted from http://en.wikipedia.org/wiki/Washington_Park_Historic_District.; originally quoted from the National Register Historic District Nomination.

[4] Sprague, Paul PhD and William B. Dring, AIA. "History, Significance, and Feasibility for Adaptive Use of the William Reddick Mansion" prepared for the National Trust for Historic Preservation and the Ottawa Silica Company Foundation, 1975, p. 11.

Periods of Significance and Changes Through Time

The Reddick Mansion has three periods of significance:

- **The Reddick Family Period: 1856 – 1887**
  - This period extends the initial design date of c. 1856 through 1887, when Mansion Library Board took possession of the building.
  - Key dates during this period are:
    - 1858: The first Lincoln-Douglas debate was held across the street in Washington Park (historic significance).
    - 1883: Eliza Collins Reddick died July 5, 1883.
    - 1885: William Reddick died March 8, 1885.
    - 1887: Elizabeth Burrier Funk Reddick (adopted daughter) died February 22, 1887.

- **The Reddick Library Period: 1888 – 1974**
  - This period extends from the date the Library opened through when it relocated to 1010 Canal St., Ottawa, IL.
  - Key dates during this period are indicated below. Those in italics are deemed periods of significant change:
    - 1888: Steam heating, toilets and electric lighting were installed.
    - 1906: The Lower Level was renovated for the new janitor.
    - 1908: The Library was re-wired.
    - *1912 - 13: Significant changes were made to the Library, including:*
      - A square arch was put on the west side of the Central Hall at the foot of the stairs.
      - Rooms on the Bedroom Level were converted into a Juvenile Department and LaSalle Co. Historical Museum.
      - A fire escape was installed at the east porch.
      - Stairs were removed from the Lower Level to the Main Level (assumed; Richardson report from 1923 states they were removed prior to 1920).
    - *1917: Second set of significant changes were made, under the direction of architect Jason Richardson.*
      - The Lower Level was outfitted for the Juvenile Department.
    - 1922: Murals were executed in the Fourth Floor Camp Fire Girls room.
    - *1923: The third set of significant changes were made, under the direction of architect Jason Richardson.*
      - Steel beams were added in various locations.
      - A wall was removed in the Northwest Room, Main Level (assumed).
      - The opening was enlarged between the Southwest Room (Library) and Center West Parlors, Main Level (assumed).
      - The Assembly Room was created on the Bedroom Level by removing partitions in the Southeast and Southwest Bedrooms.

- 1925: The floor was lowered in the Boiler Room and Coal Room and a new boiler/heating plant was installed.
- 1929: Significant repairs were made to the cornice and brackets, and all but one chimney were removed.
- 1934: A new chimney was constructed against the west elevation.
- 1940: A report was prepared by architect Louis Gerding to identify immediate repairs.
- 1946-1947: Fluorescent lights were installed throughout the Library.
- 1951: Architect Earl Gerding was approached again to complete a condition assessment, leading to a master plan of repairs submitted in 1952. He identified the danger of overloading floors with stacks.
- 1953: Major structural repairs were undertaken, including installation of three steel beams supported by pillars to reinforce the west side of the Main Level.
- 1961: The fourth set of significant changes included modifying the main entrance to create an aluminum vestibule, removing the west wall of the Southeast Parlor on the Main Level, misc. repairs.
- 1962 - 66: The State Fire Marshall required fire doors at the head and base of the main stairs.
- 1963: A new floor was installed over the coal bin in the northwest corner of the Lower Level (now the Kitchen).
- 1967: A king-post truss is thought to have been installed in the Servants' Level, off of which book shelving was hung in the Southwest Room, Bedroom Level.
- 1974-1975: The Reddick Library moved from the Reddick Mansion.

- **The Reddick Mansion Association Period: 1975 – Present**
  - This period extends from when the fledgling RMA entered into a short-term agreement with the City of Ottawa to operate the building. Ultimately, a longer-term agreement was established in 1978.
  - Key dates during this period are:
    - *1976 - 1978: Major Restoration Campaign including:*
      - 1976: The removed west wall of the Southeast Parlor on the Main Level was reconstructed, and the Southeast Parlor was restored.
      - 1977: The Kitchen in the Northwest Room, Lower Level, was remodeled.
      - 1978: The three East Parlors on the Main Level were painted, grained, and restored.
      - 1978: The South Elevation porch balustrades were reconstructed and installed.
      - 1978: The vestibule doors were recreated and the pier mirror was moved to the vestibule from the Southeast Parlor.
    - 1978: The not-for-profit Reddick Mansion Association was formed, and a final draft agreement was made with the City of Ottawa.

- 1981: Storm windows were fabricated and installed on the interior face of the window sash.
- 1983: A heat and smoke alarm system was installed.
- *1991-92: The perimeter retaining wall and cast iron fence were reconstructed.*
- 1998: The Lower Level was remodeled for Ottawa Visitor's Bureau use.
- 2004: The Main Level windows were repaired and painted.

Restoration Target Date and Interpretation

We recommend that the Restoration Target Date be set within what we consider the primary period of significance: **The Reddick Family Period: 1856 – 1887.**

The RMA has previously identified 1875 as the restoration target date. The Sullivan | Preservation Team feels this date should be pushed forward to the early 1880s, when both Mr. and Mrs. Reddick were living and still active within the community. Historic photographs exist of the East Parlors from their funerals in 1883 and 1885, which should continue to be used for identifying appropriate décor and furniture.

Main Level

On the Main Level, the Central Hall, the Southeast and Center East Parlors, and the Dining Room are interpreted as historic spaces. They should remain museum spaces, but we recommend that the walls and ceilings be painted in the original paint colors identified in our analysis in order to better understand the spaces' original design intent.

The two parlors on the west half of the Main Level are currently used as rental space to the public. It is appropriate that these spaces continue to be used as public gathering space, and that they be "moderately interpreted." The walls and ceiling should be painted in the original colors identified in our analysis, but because the original grained trim was stripped at some point, it may remain a complimentary solid color. The original floors are covered with a new hardwood floor. It should be stained darker to be more in keeping with the original wood in the house.

The service areas in the northwest corner of the Mansion on every floor level have been so altered over time that they retain no historic integrity. We recommend that these remain neutral service spaces, and that they ultimately house an elevator shaft that extends from the Lower Level to the Servants' Level. The elevator would provide access for the disabled and make life generally more pleasant for all users. An accessible unisex restroom can be provided on one or more levels in this area as well.

Bedroom Level

On the Bedroom Level, the Central Hall and Southeast Bedroom are interpreted as historic spaces. They should remain museum spaces, but we recommend that the Central Hall's partitions be removed, since they confuse the interpretation of the space, and that the walls

and ceilings in both rooms be painted in the original paint colors identified in our analysis. The RMA will have to negotiate with the local fire department and code officials regarding removal of the fire-rated stair enclosure, positioning of exiting signage, and the fact that there is only one means of exit from this level.

The Northeast Bedroom, Center East Bedroom, Southwest Bedroom and Center West Dressing Room are now vacant and available for interpretation. The Northeast Bedroom can be restored to represent Elizabeth Funk Reddick's bedroom, and be interpreted to depict the daily life of a young woman in the 19th century. The Southwest Bedroom and adjacent Dressing Room should be restored for interpretation as Mrs. Eliza Reddick's bedroom suite. All the aforementioned rooms should be painted using the original paint colors identified in our analysis, and appropriate furniture obtained.

Due to the fact that the Reddick Library occupied the structure longest, coupled with the significance of William Reddick's gesture in leaving his private home to the City of Ottawa for use as a public library, we feel that a space within the Mansion should be utilized for Library interpretation. The Center East Bedroom on the Bedroom Level would be most appropriately interpreted to represent the Reddick Library era, as it still contains several of the Reddick Library's original bookshelves. A display describing the **Reddick Library Period: 1888 – 1974** should be prepared for this space.

Servant's Level
The rooms on the Servant's Level should be refurbished, their plaster repaired or replaced and painted, and those rooms used for storage and possibly RMA (or other) offices. Without a second means of access, (and due to the steep existing stairs) it would not be possible to have public visitation on this level. Once the elevator is installed, these spaces may become available for museum use or office rental.

Attic
The attic should be insulated between the roof rafters and prepared for installation of mechanical equipment. The floor joists and roof rafters may have to be structurally supplemented to support the integration of mechanical equipment and associated insulation.

Lower Level
The rooms at the Lower Level have lost most of their historic integrity through modernizations. It has become popular in recent years to interpret the servants' lifestyle in historic house museums of this type. It would be appropriate to make modifications to the Southeast Room in order to interpret it as a Servants' Dining or Sitting Room. It seems probable that the original Kitchen was located in the Northeast Room. This space may be renovated with a new kitchen that is more serviceable and in keeping, design-wise, with a historic home of this period, and will serve "double-duty" as a catering kitchen for the Main Level event space.

Space Utilization and Museum Operation

The Reddick Mansion Association is entering an important new era regarding use of the Mansion. For over twenty years most of the rooms on the Bedroom Level were being utilized as offices, rented to outside non-profit organizations, which limited the ability to interpret these spaces. This year the last of these tenants left the building, allowing RMA the freedom to use the spaces for their own purposes. The Association's primary wish is to fully interpret the Main and Bedroom Levels as a house museum, while receiving additional income from rental spaces.

Today, most museums like the Reddick Mansion have found it difficult to operate solely as interpreted house museums. The RMA has survived for many years on office rental income together with entry fees, and a number of generous donations of both money and volunteer time. The organization rightly sees a future in offering event space, and has worked toward making the west side of the Main Floor as desirable as possible for events rental. They have also upgraded the site surrounding the Mansion, making the grounds available for events.

House Museums need to be an integral part of the community, serving many audiences in different ways. In order to survive, the RMA must expand their programming, and work toward filling their underutilized spaces with activity.

We have recommended that the vacant bedrooms on the Bedroom Level be returned to museum interpretation, but this may take some time. In the meantime, RMA should consider upgrading the rooms to be "moderately interpreted" by removing and replacing the industrial carpets, and painting the rooms in the colors identified in our analysis, making the spaces available for rental income again.

We see a great opportunity for partnerships within the Illinois River/I&M Canal National Heritage Corridor. House museums in this region should form a coalition and focus their programming and advertising dollars on making this area a destination, with the Reddick Mansion and Hegeler Carus Mansion serving as highlights on the tour.

The next step as the Reddick Mansion Association moves forward is to find a part- or full-time executive director who has the skills to raise awareness, money and interest in this important property. The volunteer efforts of the RMA have been extraordinary over its thirty-five year history, but in order to move to the next level they must invest in professionalizing the organization.

Summary of Findings from the Physical Analysis

Mansion Exterior

The Reddick Mansion is a massive stone and brick masonry structure that has survived well over the past 150+ years. The exterior is in overall fair to good condition. Areas of the building are in need of re-pointing, but overall, the mortar joints are stable. The stone has been inappropriately patched in the past, but it appears stable except at the base of the building where areas of the stone are cracked and spalling. Lowering the grade approximately six inches and grading the soil away from the building prior to stone patching should be effective. The sheet metal cornice is also in surprisingly good condition, although in need of painting. The only exterior elements that are in poor condition are the original wood windows, which are in immediate need of stabilization and in some cases rebuilding.

Mansion Interior

The Mansion interior retains many of its original details, which is remarkable, considering it served as a public library for nearly 100 years. The rooms that are furnished for interpretation are authentic, although the paint colors on the walls and ceiling should be modified to better match the original design intent. No seriously deteriorated areas were noted; the roof is relatively new and no interior water damage was noted. Several Bedroom Level rooms are in un-restored condition, having served as offices for many years. The Servants' Level is in poor condition—the plaster walls and ceilings retain their original paint (!) and exhibit considerable cracking and failure. In order to be a usable space, that level will need complete refurbishment. It now serves, however, as an interesting look back into time. The Lower Level has been modernized to serve RMA office and gathering space requirements. There is enough original material in the Southeast Room to interpret that space as a Servant's Dining Hall or Sitting Room.

Mansion Structure

The infrastructure within the Mansion has been modified over time, as recorded by architect Jason Richardson in the 1920s, and other accounts after that time. Our investigation found that the structure is sound. However, if/when mechanical equipment is integrated into the Attic space, the Attic floor joists may have to be reinforced. Similarly, the roof rafters may need reinforcement to ensure that they can support the snow load once the attic space is fully insulated.

Mansion MEP

The Mansion is currently heated with radiant (radiator) heat, and is not air conditioned except by window units. We recommend that the radiators be retained, and that the entire structure be outfitted for ducted air conditioning with supplemental heat/de-humidification. A ground-source heat pump (GSHP) system is most appropriate, and capable of simultaneous control of temperature and humidity (assumed at a maximum 60%), through the use of hot gas reheat. New humidifiers would be integrated for winter humidification to recommended levels (35%). Our energy model predicts that the GSHP system will operate for about the same cost as the current system ($9,000/year), despite

the fact that the current system has almost no cooling and does not control for humidity at all. When compared to a standard air conditioning system with reheat, we see an annual savings using the GSHP system of about $2,500.00. This system has an initial installation up-charge from a standard split type A/C of just $20,000, indicating a roughly 10-year payback. An architect should be included on the HVAC integration team in order to properly design and detail integration of the system into the building. The system can be effectively integrated within the historic structure without disturbing too much historic fabric, as the house contains sufficient closets to accommodate the new ducted system.

Caretaker's House Exterior

The Caretaker's House is constructed of brick with limestone trim. The brick masonry is in fair to poor condition, and in general need of re-pointing. The brick and stone have some seriously deteriorated areas that are in need of patching or possible replacement. The wood cornice is suffering from spot deterioration. Repairs should be made to the cornice as soon as possible to prevent bird and animal infestation. The windows and doors are in overall fair condition with a few exceptions; in one case a window is in danger of collapse and should be addressed immediately.

Site

The site on which the Mansion sits has a lovely park setting and is well maintained by volunteers. The pavement is in fair condition and is spalling in some locations. The RMA has been upgrading the site, most notably this summer with the construction of a portico north of the Mansion. Site features like this will attract visitors and persons wishing to hold an event on the site. The site as it is does not reflect the Reddick Family Period, when it was quite austere, based on historic photographs. We think it is appropriate that the green space around the Reddick Mansion remain landscaped and vibrant in order to attract visitors.

Summary

The Reddick Mansion was well built initially and has fared generally well over time. An enormous amount of energy and a fair amount of money was fed into restoring the public spaces of the building between the inception of the RMA in 1978 and about 1990. Since then, repairs have been undertaken on an as-needed and piecemeal basis. The lack of records after 1990 (as evidenced in the Timeline) indicate that perhaps the working relationship between the RMA and the City of Ottawa should be strengthened and better records kept of repairs and changes made to the Mansion.

The co-operative relationship between the RMA and the City of Ottawa must be strengthened in order to successfully restore and maintain the Mansion. It is hoped that this Historic Structure Report and the Cost Study with recommended phased restoration work will open a dialogue, and the two entities will work together to create a Master Plan for the next twenty years. Both City *and* RMA funds must be faithfully dedicated on a *yearly basis* to the restoration and maintenance of this important piece of Illinois history.

Long Term Plan

The Reddick Mansion Historic Structure Report provides a detailed condition assessment report with recommendations for the following structures:

- Reddick Mansion Interior, Structural, MEP, and Mansion Exterior Conditions
- Caretaker's House Exterior Condition
- Reddick Mansion Site Issues

Observations of existing condition and recommendations for repair/restoration are discussed within the chapters pertaining to those areas. The recommendations for each building area were entered into the Final Cost Study chart. For each recommendation, an estimate of probable cost was provided, in 2013 dollars. Subtotals were generated, onto which several contingencies were added: 9% for General Conditions, Bond and Insurance, 5% Contractors Fee, 5% Design Contingency and an 8% Construction Contingency. For planning purposes, an estimate of Professional Design Fees was provided within the estimate for each scope of proposed work.

The Final Cost Study was organized to provide two planning options for the Reddick Mansion Association:

1. A large-scale restoration project, in which the work will be undertaken over a one- to two-year period following one year of planning and construction document preparation.
2. A phased restoration approach, whereby money is raised over the next five years in order to start restoration in the sixth year. Work would spread out over a twenty-year period:
    a. Priority 1: 6-10 years
    b. Priority 2: 11-15 years
    c. Priority 3: 15-20 years
3. A third category was provided, entitled Maintenance & Repair, into which critical items or scopes of work that can be categorized as maintenance were placed.

Summary of Costs

A detailed chart is provided on the last page of the Cost Study, and is summarized here:

Option 1: Large-Scale Restoration

Mansion total estimated Construction Cost:

Construction Cost (2015-2016):	$2,924,935
Design Fees (2014):	$287,087
Maintenance & Repair (2014):	$57,982

Caretaker's House Exterior total estimated Construction Cost:

Construction Cost (2015-2016):	$343,934
Design Fee (2014):	$31,149
Maintenance & Repair (2014):	$43,855

Site total estimated Construction Cost:		
Construction Cost (2015-2016):		$78,819
Design Fee (2014):		$6,100
Maintenance & Repair (2014):		$23,873
Option 1 Total:		
Construction Cost (2015-2016):		**$3,348,688***
Design Fee (2014):		**$324,336***
Maintenance & Repair (2014):		**$125,710***

*Note: These are estimates for planning purposes only. Construction Documents must be prepared and cost estimates obtained from them in order to identify actual planned construction cost. In the case of Maintenance & Repair, bids must be sought from qualified contractors for the work proposed. Note also that scopes of work and professional design fees were estimated on an individual line item basis; there would be a savings if a large scope of work were undertaken at one time, and one set of construction documents prepared for all the work.

Option 2: Phased Restoration over time

Priority 1 (2018-2023):		
Mansion:		$1,637,416
Caretaker's House:		$117,418
Site:		$91,759
	Total**:	$1,846,593
Priority 2 (2024-2029):		
Mansion:		$675,538
Caretaker's House:		$96,905
Site:		$7,787
	Total**:	$780,230
Priority 3 (2030-2035)		
Mansion:		$1,136,409
Caretaker's House:		$152,784
Site:		$5,840
	Total**:	$1,295,034

**Note: These are estimates for planning purposes only, and were generated for the year 2013. With each passing year, the estimate must be raised by between 4% and 7%, cumulatively.

Recommended Procedure for Moving Forward

The estimates provided are for planning purposes only. They were generated based upon verbal description of work and broad estimates of quantity. There may be economy in combining scopes of work in to one large project, or in to several smaller projects that

utilize contractors within similar trades (i.e. all the masonry work at one time vs. over several years, etc.).

Option 1: Large-Scale Restoration

In order to identify actual scopes of work with associated costs for a full restoration, Construction Documents must be prepared by an Architecture/Engineering (A/E) team first. There are several phases of the Construction Document process as relating to building restoration:

1. **Pre Design** – The A/E undertakes an investigation to understand the building's complexities and formulates an idea of what needs to be undertaken. The HSR serves as a Pre Design document.
2. **Schematic Design** – The A/E identifies an appropriate scope of work and finalizes recommendations for repair. The HSR serves as a Schematic Design document.
3. **Design Development** – The A/E translates the verbal recommendations in to drawings, notes and descriptions that provide enough critical information so that a cost analysis can be undertaken.
4. **Construction Documents and Bidding Document Preparation** – With Owner go-ahead, the construction documents, comprised of drawings and project manual/specifications, are prepared in order to bid to several pre-qualified contractors.
5. **Bidding & Negotiation** – The project is bid and the Owner chooses from among several contractors who have bid on the same exact scope of work. With pre-qualified bidders, the lowest bid typically receives the contract. If prequalification is not possible, then the project should be awarded to the lowest *qualified* bidder (sometimes not the lowest bid).
6. **Construction and Construction Administration** – While the general contractor and his sub-contractors complete the work, it is advisable to continue the involvement of your architect and engineer/s during Construction Administration in order to verify that the work being undertaken is being completed as described in the construction documents.

The first step we recommend is that the RMA contract with an A/E team to generate Design Development documents for the scope of work identified in this project. The documents should be prepared in a way that they could be broken apart and scopes of work undertaken separately if necessary. Upon completion of Design Development documents, a line item cost estimate should be prepared by a construction cost estimator familiar with building restoration practices. This should give the RMA the best idea of projected construction costs related to each scope of work.

When RMA is ready to move forward with a large-scale restoration, the project should be bid to pre-qualified general contractors who have secured sub-contracts with trades who have exhibited experience working on historic and National Register properties.

Option 2: Phased Restoration over time - Mansion

If the RMA decides to undertake the restoration in a phased manner over several years, work must be prioritized based upon several criteria, the first of which is safety; the second of which is utilization of funding to best serve the use of the building for the future.

Mansion

1. Priority 1: Exterior
    a. Original wood window restoration (can be undertaken over several years by floor or by elevation)
    b. Spot repointing of Mansion and removal of damaged stone
    c. Paint and repairs to cornice
    d. Repairs and repainting of East Porch
    e. Mechanical upgrade to include Heating and A/C with associated structural and integration of attic insulation
2. Priority 1: Interior
    a. Central Hall and Wainscot restoration
    b. Move Kitchen to northeast corner and redesign so it can be used as a catering kitchen for events

Caretaker's House

1. Priority 1:
    a. Repairs to soffit and fascia
    b. Repairs / restoration of windows
    c. Repairs to stone sills
    d. Paint / seal roof

Site

1. Priority 1:
    a. Repair/rebuild brick wall
    b. Regrade soil around mansion perimeter
    c. Clean/paint iron fence and make repairs to stone wall

END EXECUTIVE SUMMARY

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Cost Study

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PRIORITY KEY

Maintenance & Repair: Immediate need; ongoing maintenance
Alternate 1: Large Scale Restoration
Priority 1: First year: Design fees for Construction Documents
Priority 2: Following year: Large scale restoration
Alternate 2: Phased Restoration
Priority 1: 6-10 years - short term (assume 5 year fundraising effort)
Priority 2: 11-15 years - mid-term
Priority 3: 15-20 years - long term

						MAINTENANCE	ALTERNATE 1: LARGE SCALE RESTORATION		ALTERNATE 2: PHASED RESTORATION		
	ITEM	QUANTITY	UNIT	UNIT COST	COST SUB-TOTAL	Maintenance & Repair	PHASE 1: Plan/Design	PHASE 2: 1-5 yrs Restoration	PRIORITY 1: 6-10 yrs	PRIORITY 2: 11-15 yrs	PRIORITY 3: 15-20 yrs
SITE											
Parking Lot NW corner of site											
	Parking Lot Asphalt	720	sf	7	5,040	5,040					
	Striping	154	lf	1	154	154					
	Accessible Parking Signage	1	ea	500	500	500					
	Concrete Pad	180	sf	25	4,500	4,500		2	4,500	4,500	4,500
						10,194			**4,500**	**4,500**	**4,500**
Various Site Improvements											
	Stain/Seal Sidewalk	2500	sf	2	5,000	5,000					
	Site Lighting	4	ea	800	3,200	3,200					
	Site Sign	0	0	0	1,500					1,500	
	Landscaping	0	0	0	0						
						8,200			**0**	**1,500**	**0**
Iron Fence and Retaning Wall											
	Reset Stones in Stone Wall	5	ea	500	2,500			2,500	2,500		
	Clean/Paint Fence	325	lf	50	16,250			16,250	16,250		
								18,750	**18,750**	**0**	**0**
Brick Wall, west side of site											
	Reset Stone Cap	10	ea	500	5,000			5,000	5,000		
	Tuckpoint/replace bricks	1850	sf	15	27,750			27,750	27,750		
	Design Fees for restoration specs (12%)				3,500		3,500		3,500		
							3,500	**32,750**	**36,250**	**0**	**0**
Re-grade soil around Mansion perimeter											
	Re-grade to drain away from fndtn				7,000			7,000	2 7,000		
	Landscape related to regrading				3,000			3,000	2 3,000		
	Design Fees				1,200		1,200		1,200		
						0	1,200	10,000	11,200	0	0
					SUBTOTAL: SITE	**18,394**	**4,700**	**61,500**	**70,700**	**6,000**	**4,500**

	ITEM	QUANTITY	UNIT	UNIT COST	COST SUB-TOTAL	MAINTENANCE	ALTERNATE 1: LARGE SCALE RESTORATION		ALTERNATE 2: PHASED RESTORATION		
						Maintenance & Repair	PHASE 1: Plan/Design	PHASE 2: 1-5 yrs Restoration	PRIORITY 1: 6-10 yrs	PRIORITY 2: 11-15 yrs	PRIORITY 3: 15-20 yrs
MANSION EXTERIOR											
Foundation Repairs											
	Dampproof exerior face of Foundation	236	lf	200	47,200						47,200
	Perimeter fndtn drain and Storm Line	150	lf	100	15,000						15,000
	Extend downspout leaders away from fndtn	75	ea	3	225	225					
	Repoint exposed interior foundation wall		unit		8,500			2		8,500	
	Install perimeter beam for proper joist bearing				15,000					15,000	
	Clear crawlspace, even out and install vapor barrier				10,000					10,000	
	Architectural fees for specs/const observ (12%)				10,500					10,500	
						225				**44,000**	**62,200**
Masonry											
	Short Term										
	Remove spalling stone over S. entry door				100	100					
	Spot repointing est 10% of exterior, misc.				5,500			5,500	5,500		
	Repoint joints in limestone string courses				2,000			2,000	2,000		
	Mortar Analysis				500			500	500		
	Replace spalled or missing bricks	500	ea	10	5,000			5,000	5,000		
	Replace damaged stone, S. end of E. porch				2,500			2,500	2,500		
	Architectural fees for specs/const observ (est)				3,500		3,500		3,500		
						100	**3,500**	**15,500**	**19,000**		
	Mid-Term										
	Remove parging and repoint Boiler Room brick				5,000			5,000 2		5,000	
	Apply water repellent coat to Boiler Rm brick				3,000			3,000 2		3,000	
	Readhere large spalled stone at base and patch-repair as required	150	lf	100	15,000			15,000 2		15,000	
	Architectural fees for specs/const observ (12%)				2,500		2,500			2,500	
							2,500	**23,000**		**25,500**	
	Long-Term										
	Repoint entire building w/ appropriate mortar	7000	sf	12	84,000			91,000			91,000
	Remove all limestone patches and repair				45,000			45,000			45,000
	Tool back stone at base and install stone veneer				50,000			50,000			50,000
	Architectural fees for specs/const observ (est)				20,000		20,000				20,000
							20,000	**186,000**			**206,000**
Entry Steps South Elevation											
	Short Term										
	Repoint exterior and interior face of knee walls	1000	sf	8	8,000			8,000	8,000		
	Replace Front Steps Handrails	40	lf	100	4,000			4,000	4,000		
	Mid Term										
	monitor the condition of the steps joints				0						
	Long Term										
	Step replacement		allow		150,000			150,000		150,000	
	Disassemble top of knee wall										
	replace steps with new cast stone steps										
	reassemble knee wall and flash at copings										
	Architectural fees for specs/const observ (est)				13,000		13,000		13,000		
							13,000	**162,000**	**25,000**	**150,000**	
Roof											
	Mid Term										
	Metal Coping	160	lf	25	4,000			2		4,000	
										4,000	
	Long Term										
	Replace Membrane Roof	1575	sf	6	9,450						9,450
	Replace Asphalt Roof Shingles	2150	sf	4	8,600						8,600
	Replace wood Decking as required	128	sf	15	1,920						1,920
	Architectural fees for specs/const observ (est)				1,500						1,500
											21,470

	ITEM	QUANTITY	UNIT	UNIT COST	COST SUB-TOTAL	MAINTENANCE	ALTERNATE 1: LARGE SCALE RESTORATION		ALTERNATE 2: PHASED RESTORATION		
						Maintenance & Repair	PHASE 1: Plan/Design	PHASE 2: 1-5 yrs Restoration	PRIORITY 1: 6-10 yrs	PRIORITY 2: 11-15 yrs	PRIORITY 3: 15-20 yrs
Cornice, Gutters, Downspouts											
	Cornice										
	Wire brush, prime, paint brackets				35,000			35,000 2	35,000		
	Prepare prime and paint all wood at cornice				10,000			10,000 2	10,000		
	Maintenance re-painting				2,500					2,500	2,500
	Architectural fees for specs/const observ (est)				5,500		5,500		5,500		
							5,500	**45,000**	**50,500**	**2,500**	**2,500**
	Repairs to gutter / downspouts										
	Galvanized Downspout	90	lf	25	2,250			2,250		2,250	
	Non-copper Gutter/Downspout Restoration	105	lf	200	21,000			21,000		21,000	
	Clear once per year	5	ea	350	1,750	1,750		2	1,750	1,750	1,750
	spot repairs as required	1	ea	2500	2,500	2,500		2	2,500	2,500	2,500
						4,250		**23,250**	**4,250**	**27,500**	**4,250**
Window and Door Restoration											
	Lower Level Windows										
	S	4		2500	10,000		10,000		10,000		
	S. Vestibule	2		1200	2,400			2,400	2,400		
	E	8		2500	20,000			20,000	20,000		
	N	1		2500	2,500			2,500	2,500		
	W	7		2500	17,500			17,500	17,500		
	Main Level Windows										
	S	4		3000	12,000		12,000		12,000		
	E	7		3000	21,000			21,000	21,000		
	E. new window at fire esca;e	1		6000	6,000			6,000 2	6,000		
	N	3		3000	9,000			9,000	9,000		
	W	7		3000	21,000			21,000	21,000		
	Bedroom Level Windows										
	S	6	ea	4100	24,600	24,600			24,600		
	E	7		4100	28,700			28,700	28,700		
	E. new window at fire esca;e	1		6000	6,000			6,000 2	6,000		
	N	3		4100	12,300			12,300	12,300		
	W	7		4100	28,700			28,700	28,700		
	Servant's Level Windows										
	S	5		1200	6,000			6,000	6,000		
	E	8		1200	9,600			9,600	9,600		
	N	3		1200	3,600			3,600	3,600		
	W	7		1200	8,400			8,400	8,400		
	Architectura / Proj Mgt fees for specs (est)				8,000		8,000		8,000		
	Exterior Door Restoration										
	Restore and weatherstrip	3	ea	3000	9,000			9,000	9,000		
	Door & Window Maintenance										
	paint, caulk, minor repairs				7,500	7,500		2		7,500	7,500
						32,100	**30,000**	**211,700**	**266,300**	**7,500**	**7,500**

	ITEM	QUANTITY	UNIT	UNIT COST	COST SUB-TOTAL	MAINTENANCE Maintenance & Repair	ALTERNATE 1: LARGE SCALE RESTORATION PHASE 1: Plan/Design	ALTERNATE 1: LARGE SCALE RESTORATION PHASE 2: 1-5 yrs Restoration	ALTERNATE 2: PHASED RESTORATION PRIORITY 1: 6-10 yrs	ALTERNATE 2: PHASED RESTORATION PRIORITY 2: 11-15 yrs	ALTERNATE 2: PHASED RESTORATION PRIORITY 3: 15-20 yrs
Porches and Wood Balconies											
	East Porch (2 balconies)										
	Short Term										
	repair small openings to prevent vermin				3,500	3,500			3,500		
	Strip, prime and paint wood				22,000			22,000	22,000		
	Floor restructure and repairs to rails				15,000			15,000	15,000		
	Railing repairs				6,000			6,000	6,000		
	Replace EPDM Roofing	2	ea	7500	15,000			15,000	15,000		
	Architectural fees for specs/const observ (est)				4,500		4,500		4,500		
						3,500	**4,500**	**58,000**	**66,000**		
	South Balconies (3 tot)										
	Short Term				0						
	Maintenance to bottom rail				500	500			500		
	Mid-Term										
	Repair / replace deteriorated railing elements				3,000			3,000		3,000	
	Strip prime and paint				2,000			2,000		2,000	
	Long Term										
	Replace EPDM roofing	3	ea	6500	19,500			19,500			19,500
	Architectural fees for specs/const observ (est)				1,500		1,500				1,500
						500	**1,500**	**24,500**	**500**	**5,000**	**21,000**
					SUBTOTAL: MANSION EXTERIOR	**40,675**	**80,500**	**748,950**	**431,550**	**266,000**	**324,920**

	ITEM	QUANTITY	UNIT	UNIT COST	COST SUB-TOTAL	MAINTENANCE Maintenance & Repair	ALTERNATE 1: LARGE SCALE RESTORATION PHASE 1: Plan/Design	ALTERNATE 1: LARGE SCALE RESTORATION PHASE 2: 1-5 yrs Restoration	ALTERNATE 2: PHASED RESTORATION PRIORITY 1: 6-10 yrs	ALTERNATE 2: PHASED RESTORATION PRIORITY 2: 11-15 yrs	ALTERNATE 2: PHASED RESTORATION PRIORITY 3: 15-20 yrs
MANSION MECHANICAL / ELECTRICAL / PLUMBING											
Mechanical											
	From Capital Needs Assessment										
	Boiler	0	ea		0						
	Radiators	0	ea		0						
	Self Contained A/C Unit	1	ea	15000	15,000						
	Window A/C Units	6	ea	1000	6,000						
	Residntial A/C Condenser	1	ea	7000	7,000						
	Water Heater	1	ea	2500	2,500						
	Hot and Cold Water Distribution	0	0	0	0						
	Alternate 4 (Recommended) Ground Source Heat Pump		allow		230,000			230,000	230,000		
	Mechanical Engineering professional fees				20,000		20,000		20,000		
	Architectural fees for integration (est)				12,000		12,000		12,000		
	Associated Construction and Plaster Repair		allow		35,000			35,000	35,000		
	Alternate 2: Standard split type AC with air cooled condnsing unit with hot water reheat coils and local direct vent high efficiency hot water boilers		allow		210,000						
	Mechanical Engineering professional fees				20,000						
	Architectural fees for integration (est)				12,000						
	Insulation (associated w/HVAC)										
	Insulation with vapor barrier to attic roof	4500	sf	3.5	15,750			15,750	15,750		
							32,000	**280,750**	**312,750**		

	ITEM	QUANTITY	UNIT	UNIT COST	COST SUB-TOTAL	MAINTENANCE Maintenance & Repair	ALTERNATE 1: LARGE SCALE RESTORATION PHASE 1: Plan/Design	ALTERNATE 1: LARGE SCALE RESTORATION PHASE 2: 1-5 yrs Restoration	ALTERNATE 2: PHASED RESTORATION PRIORITY 1: 6-10 yrs	ALTERNATE 2: PHASED RESTORATION PRIORITY 2: 11-15 yrs	ALTERNATE 2: PHASED RESTORATION PRIORITY 3: 15-20 yrs
Electric											
	Dielectic Connections	25	ea	150	3,750	3,750					
	Electrical Wiring	0	0	0	0						
	Upgrade Electrical Service	1	ea	5500	5,500			5,500	5,500		
	Remove Conduit, Rewire 4th Floor	2900	sf	12	34,800			34,800		34,800	
	GFCI Outlets	4	ea		250	250			250		
	Professinal Fees (est)				3,500		3,500			3,500	
						4,000	**3,500**	**40,300**	**5,750**	**38,300**	
Plumbing											
	Sanitary Waste and Vent System		alllow		7,500			7,500	2,500	2,500	2,500
								7,500	**2,500**	**2,500**	**2,500**
Fire Protection											
	Fire Alarm Panel	1	ea	6000	6,000			6,000	6,000		
	Smoke Detectors	29	ea	100	2,900			2,900	2,900		
								8,900	**8,900**		
	SUBTOTAL: MANSION MECHANICAL / ELECTRICAL / PLUMBING					**4,000**	**35,500**	**337,450**	**329,900**	**40,800**	**2,500**

	ITEM	QUANTITY	UNIT	UNIT COST	COST SUB-TOTAL	MAINTENANCE Maintenance & Repair	ALTERNATE 1: LARGE SCALE RESTORATION PHASE 1: Plan/Design	ALTERNATE 1: LARGE SCALE RESTORATION PHASE 2: 1-5 yrs Restoration	ALTERNATE 2: PHASED RESTORATION PRIORITY 1: 6-10 yrs	ALTERNATE 2: PHASED RESTORATION PRIORITY 2: 11-15 yrs	ALTERNATE 2: PHASED RESTORATION PRIORITY 3: 15-20 yrs
MANSION STRUCTURAL											
Structural											
	Structural Modifications for HVAC										
	to attic joists for HVAC eqip dead load		allow		25,000			25,000	25,000		
	Structural Engineering Fees 12%				3,000		3,000		3,000		
	Structural Modifications for insulation										
	to rafters for insulated roof snow dead load		allow		35,000			35,000	35,000		
	Structural Engineering Fees 12%				4,200		4,200		4,200		
	SUBTOTAL: MANSION STRUCTURAL (RELATED TO HVAC)						**7,200**	**60,000**	**67,200**		

	ITEM	QUANTITY	UNIT	UNIT COST	COST SUB-TOTAL	MAINTENANCE	ALTERNATE 1: LARGE SCALE RESTORATION		ALTERNATE 2: PHASED RESTORATION		
						Maintenance & Repair	PHASE 1: Plan/Design	PHASE 2: 1-5 yrs Restoration	PRIORITY 1: 6-10 yrs	PRIORITY 2: 11-15 yrs	PRIORITY 3: 15-20 yrs
MANSION INTERIOR											
Lower Level / First Floor											
	Maintenance for Lower Level										
	Ground Floor Hall Carpet	380	sf	4	1,520			1,520		1,520	
	Ground Floor Office Carpet	315	sf	4	1,260			1,260		1,260	
	Ground Floor Conference Room Carpet	995	sf	4	3,980			3,980		3,980	
	Repair Wall at Ground Floor	1	allow	3500	3,500			3,500	3,500		
	Ground Floor Stair Handrail Upgrades	38	lf	25	950			950	950		
	Move Kitchen / historicaly compatible cabinets										
	Remodel Kitchen	175	sf	200	55,000			55,000		55,000	
	Design fees		allow		6,000		6,000			6,000	
	New Elevator / Accessible Toilet NW corner										
	Elevator	1	allow	150000	150,000			150,000			150,000
	Accessible Bathroom	1	allow	25000	25,000			25000			25000
	New drinking fountain + plumbing	1	allow	3500	3,500			3,500			3,500
	Design fees, const. observation		allow		16,000		16,000				16,000
				Lower Level / First Fl. Subtotal			**22,000**	**244,710**	**4,450**	**67,760**	**194,500**
Main Level / Second Floor											
Vestibule											
	Replace Carpet	75	sf	65	4,875			4,875	4,875		
	Grain Ceiling	90	sf	100	9,000			9,000	9,000		
	Grain Walls	225	sf	100	22,500			22,500	22,500		
Central Hall											
	Repair Main Floor Chandeliers	2	ea	500	1,000			1,000	1,000		
	Repalce Carpet	500		65	32,500			32,500	32,500		
	Ceiling plaser repair and paint per historic	600		7	4,200			4,200	4,200		
	Walls plaster repair and paint per historic	750	sf	4.5	3,375			3,375	3,375		
	Restore exisitng mural		allow		25,000			25,000	25,000		
	Install new reproduction "mural" wainscotting	400	lf	60	24,000			24,000	24,000		
SE Parlor											
	Repalce Carpet	400	sf	50	20,000			20,000			20,000
	Ceiling plaser repair and paint per historic	440	sf	7	3,080			3,080		3,080	
	Walls plaster repair and paint per historic	875	sf	4.5	3,938			3,938		3,938	
Center East Parlor											
	Repalce Carpet	300		65	19,500			19,500			19,500
	Ceiling plaser repair and paint per historic	360		7	2,520			2,520		2,520	
	Walls plaster repair and paint per historic	700		4.5	3,150			3,150		3,150	
Dining Room											
	Replace Carpet	375		65	24,375			24,375			24,375
	Ceiling plaser repair and paint per historic	450		7	3,150			3,150		3,150	
	Walls plaster repair and paint per historic	925		4.5	4,163			4,163		4,163	
SW Parlor											
	Refinish wood floor - darker stain	400		3.5	1,400			1,400		1,400	
	Ceiling plaser repair and paint per historic	510		7	3,570			3,570		3,570	
	Walls plaster repair and paint per historic	900		4.5	4,050			4,050		4,050	

	ITEM	QUANTITY	UNIT	UNIT COST	COST SUB-TOTAL	MAINTENANCE	ALTERNATE 1: LARGE SCALE RESTORATION		ALTERNATE 2: PHASED RESTORATION		
						Maintenance & Repair	PHASE 1: Plan/Design	PHASE 2: 1-5 yrs Restoration	PRIORITY 1: 6-10 yrs	PRIORITY 2: 11-15 yrs	PRIORITY 3: 15-20 yrs
West Center Parlor											
	Refinish wood floor - darker stain	275		3.5	963			963		963	
	Ceiling plaser repair and paint per historic	330		7	2,310			2,310		2,310	
	Walls plaster repair and paint per historic	600		4.5	2,700			2,700		2,700	
Northwest Service Area											
	Refinish wood floor - darker stain	275		3.5	963			963		963	
	Ceiling plaser repair and paint per historic	330		7	2,310			2,310		2,310	
	Walls plaster repair and paint per historic	600		4.5	2,700			2,700		2,700	
	Alternate for Consideration										
	Buildout for Elevator		allow		10,000			10,000			10,000
	Design fees, const. observation						21,000		11,500	3,600	5,500
				Main Level/ Second Fl. Subt.			**21,000**	**241,290**	**137,950**	**44,565**	**79,375**
Bedroom Level / Third Floor											
Central Hall											
	Appropriate Chandeliers	3	ea	1500	4,500			4,500	4,500		
	Repalce Carpet	500	sf	65	32,500			32,500	32,500		
	Ceiling plaser repair and paint per historic	600	sf	7	4,200			4,200	4,200		
	Walls plaster repair and paint per historic	750	sf	4.5	3,375			3,375	3,375		
	Install new "mural" wainscotting	400	lf	500	200,000			200,000	200,000		
	Grain door trim center hall and touch up	50	sf	100	5,000			5,000	5,000		
	Remove double door and transom partition	1	allow	3000	3,000			3,000	3,000		
	associated plaster repair		allow		1,500			1,500	1,500		
	Remove fire rated partition & new rail to match	1	allow	2000	2,000			2,000	2,000		
	re-craft missing wood stair rail	1	allow	4000	4,000			4,000	4,000		
	New period laylight in Skylight opening	1	ea	5000	5,000			5,000			5,000
SE Bedroom - Mr. Reddick											
	Appropriate Chandelier	1	ea	1500	1,500			1,500			1,500
	Repalce Carpet	400	sf	65	26,000			26,000			26,000
	Ceiling plaser repair and paint per historic	440	sf	7	3,080			3,080		3,080	
	Walls plaster repair and paint per historic	875	sf	4.5	3,938			3,938		3,938	
	Grain Trim per historic	80	sf	100	8,000			8,000		8,000	
Center East Bedroom - Library Interpretation											
	Appropriate Chandelier	1	ea	1500	1,500			1,500		1,500	
	Repalce Carpet	300	sf	65	19,500			19,500		19,500	
	Ceiling plaser repair and paint per historic	360	sf	7	2,520			2,520		2,520	
	Walls plaster repair and paint per historic	700	sf	4.5	3,150			3,150		3,150	
	Grain Trim per historic	80	sf	100	8,000			8,000		8,000	
NE Bedroom - Elizabeth Funk Reddick Bedroom											
	Appropriate Chandelier	1	ea	1500	1,500			1,500		1,500	
	Replace Carpet	375	sf	65	24,375			24,375		24,375	
	Ceiling plaser repair and paint per historic	450	sf	7	3,150			3,150		3,150	
	Walls plaster repair and paint per historic	925	sf	4.5	4,163			4,163		4,163	
	Grain Trim per historic	100	sf	100	10,000			10,000		10,000	
	Furniture allowance				10,000			10,000			
SW Bedroom - Mrs. Eliza Reddick Bedroom											
	Appropriate Chandelier	1	ea	1500	1,500			1,500			1,500
	Replace Carpet	400	sf	65	26,000			26,000			26,000
	Ceiling plaser repair and paint per historic	510	sf	7	3,570			3,570			3,570
	Walls plaster repair and paint per historic	900	sf	4.5	4,050			4,050			4,050
	Grain Trim per historic	80	sf	100	8,000			8,000			8,000
	Furniture allowance				10,000			10,000			10,000

	ITEM	QUANTITY	UNIT	UNIT COST	COST SUB-TOTAL	MAINTENANCE: Maintenance & Repair	ALTERNATE 1: LARGE SCALE RESTORATION: PHASE 1: Plan/Design	ALTERNATE 1: LARGE SCALE RESTORATION: PHASE 2: 1-5 yrs Restoration	ALTERNATE 2: PHASED RESTORATION: PRIORITY 1: 6-10 yrs	ALTERNATE 2: PHASED RESTORATION: PRIORITY 2: 11-15 yrs	ALTERNATE 2: PHASED RESTORATION: PRIORITY 3: 15-20 yrs
West Center Dressing Room - Mrs. Eliza Reddick											
	Appropriate Chandelier	1	ea	1500	1,500			1,500			1,500
	Replace Carpet	275	sf	65	17,875			17,875			17,875
	Ceiling plaser repair and paint per historic	330	sf	7	2,310			2,310			2,310
	Walls plaster repair and paint per historic	725	sf	4.5	3,263			3,263			3,263
	Grain Trim per historic	60	sf	100	6,000			6,000			6,000
	Furniture allowance				7,500			7,500			7,500
Northwest Service Area											
	Electrical Fixtures that fit within period	4	ea	400	1,600			1,600			1,600
	Replace with wood floor - darker stain	275	sf	5.5	1,513			1,513			1,513
	Ceiling plaser repair and paint per historic	330	sf	7	2,310			2,310			2,310
	Paint walls per historic	600	sf	4.5	2,700			2,700			2,700
	Alternate for Consideration										
	Buildout for Elevator		allow		10,000			10,000			10,000
Restroom under stairs											
	Updat fixtures		allow		500			500			500
	update floor	25	sf	20	500			500			500
	Paint	225	sf	3	675			675			675
	lighting	1	ea	800	800			800			800
Servant's Hallway											
	Refinish wood floor - darker stain	120	sf		20,000			20,000			20,000
	Ceiling plaser repair and paint per historic	120	sf	7	840			840			840
	Paint walls per historic	600	sf	4.5	2,700			2,700			2,700
	Paint stairs and treads		allow		1,500			1,500			1,500
	Design Fees						47,500		23,500	8,500	15,500
				Bedroom Level / 3rd Fl Subtotal			**47,500**	**532,655**	**283,575**	**101,375**	**185,205**
Servant's Level / Fourth Floor											
	Repair/Paint Third Floor Walls	4960	ea	4	19,840			19,840			19,840
	Ceiling plaser repair and paint per historic	2240	ea	4	8,960			8,960			8,960
	Refinish Third Floor Wood Flooring	2240	ea	20	44,800			44,800			44,800
	Third Floor Lights	10	ea	800	8,000			8,000			8,000
	Design Fees						7,500				7,500
				Servant's Level/4th Fl Subtotal			**7,500**	**81,600**			**89,100**
				SUBTOTAL: MANSION INTERIOR		**0**	**98,000**	**1,107,255**	**432,975**	**213,700**	**548,180**

	ITEM	QUANTITY	UNIT	UNIT COST	COST SUB-TOTAL	MAINTENANCE	ALTERNATE 1: LARGE SCALE RESTORATION		ALTERNATE 2: PHASED RESTORATION		
						Maintenance & Repair	PHASE 1: Plan/Design	PHASE 2: 1-5 yrs Restoration	PRIORITY 1: 6-10 yrs	PRIORITY 2: 11-15 yrs	PRIORITY 3: 15-20 yrs
CARETAKER'S HOUSE EXTERIOR											
Masonry											
	Short Term										
	Spot repointing est 10% of exterior		allow		8,500	8,500					
	Mortar Analysis		allow		500	500		500			
	Strip paint off limestone; consolidate/repellent		allow		6,500			6,500	6,500		
	Paint brick sills		allow		1,500			1,500	1,500		
	Mid-Term										
	Repoint entire building w/ appropriate mortar		allow		45,000			45,000		45,000	
	Replace inappropriate bricks w/brick to match		allow		8,500			8,500		8,500	
	Remove and replace severely deter. Limest.		allow		15,000			15,000		15,000	
Soffit and Exterior Wood											
	Repair holes in soffit, secure loose boards, paint		allow		10,000	10,000		10,000			
	Review at close range & make spot repairs		allow		5,000				5,000		
	Prepare and paint Belvedere wood		allow		15,000			15,000	15,000		
	Prepare and paint entire soffit/fascia		allow		20,000			20,000	20,000		
Roof / Gutters / Downspouts											
	Seal gutter open seams		allow		8,500	8,500					
	Paint entire roof		allow		20,000			20,000	20,000		
	Replace sheet metal roof and gutter system		allow		18,000			18,000			18,000
Windows and Doors											
	Short Term										
	Repair window on north elevation		allow		1,500	1,500					
	Repair door on east elevation		allow		1,500	1,500					
	paint east and west el. Doors		allow		500	500					
	Mid Term										
	All wndws and doors: caulk & putty; prep & paint		allow		15,000			15,000	15,000		
	Long Term										
	replicate historic porch & railing		allow		40,000			40,000			40,000
	remove concrete steps & ramp; reconfig for ADA		allow		50,000			50,000			50,000
					SUBTOTAL	31,000		265,000	83,000	68,500	108,000
	Design Fees (9%) specs and const observation					2,790	**24,000**		7,470	6,165	9,720
						33,790	**24,000**	**265,000**	**90,470**	**74,665**	**117,720**
					SUBTOTAL: CARETAKER'S HOUSE EXTERIOR	**33,790**	**24,000**	**265,000**	**90,470**	**74,665**	**117,720**

SUMMARY

	ITEM	QUANTITY	UNIT	UNIT COST	COST SUB-TOTAL	MAINTENANCE: Maintenance & Repair	ALTERNATE 1: LARGE SCALE RESTORATION: PHASE 1: Plan/Design	ALTERNATE 1: LARGE SCALE RESTORATION: PHASE 2: 1-5 yrs Restoration	ALTERNATE 2: PHASED RESTORATION: PRIORITY 1: 6-10 yrs	ALTERNATE 2: PHASED RESTORATION: PRIORITY 2: 11-15 yrs	ALTERNATE 2: PHASED RESTORATION: PRIORITY 3: 15-20 yrs
	SUBTOTAL: MANSION EXTERIOR					**40,675**	**80,500**	**748,950**	**431,550**	**266,000**	**324,920**
	SUBTOTAL: MANSION MECHANICAL / ELECTRICAL / PLUMBING					**4,000**	**35,500**	**337,450**	**329,900**	**40,800**	**2,500**
	SUBTOTAL: MANSION STRUCTURAL (RELATED TO HVAC)					**0**	**7,200**	**60,000**	**67,200**	**0**	**0**
	SUBTOTAL: MANSION INTERIOR					**0**	**98,000**	**1,107,255**	**432,975**	**213,700**	**548,180**
	SUBTOTAL: MANSION EXTERIOR AND INTERIOR					**44,675**	**221,200**	**2,253,655**	**1,261,625**	**520,500**	**875,600**
	General Conditions / Bond / Insurance (9%)					4,021	19,908	202,829	113,546	46,845	78,804
	Subtotal					48,696	241,108	2,456,484	1,375,171	567,345	954,404
	Contractor's Fee (5%)					2,435	12,055	122,824	68,759	28,367	47,720
	Subtotal					51,131	253,163	2,579,308	1,443,930	595,712	1,002,124
	Design Contingency (5%)					2,557	12,658	128,965	72,196	29,786	50,106
	Total estimated bid price					**53,687**	**265,822**	**2,708,274**	**1,516,126**	**625,498**	**1,052,230**
	Construction Contingency (8%)					4,295	21,266	216,662	121,290	50,040	84,178
	MANSION TOTAL EST. CONST. COST (2013 $$)					**57,982**	**287,087**	**2,924,935**	**1,637,416**	**675,538**	**1,136,409**
	SUBTOTAL: CARETAKER'S HOUSE EXTERIOR					**33,790**	**24,000**	**265,000**	**90,470**	**74,665**	**117,720**
	General Conditions / Bond / Insurance (9%)					3,041	2,160	23,850	8,142	6,720	10,595
	Subtotal					36,831	26,160	288,850	98,612	81,385	128,315
	Contractor's Fee (5%)					1,842	1,308	14,443	4,931	4,069	6,416
	Subtotal					38,673	27,468	303,293	103,543	85,454	134,731
	Design Contingency (5%)					1,934	1,373	15,165	5,177	4,273	6,737
	Total estimated bid price					**40,606**	**28,841**	**318,457**	**108,720**	**89,727**	**141,467**
	Construction Contingency (8%)					3,249	2,307	25,477	8,698	7,178	11,317
	CARETAKER'S TOTAL EST. CONST. COST (2013 $$)					**43,855**	**31,149**	**343,934**	**117,418**	**96,905**	**152,784**
	SUBTOTAL: SITE					**18,394**	**4,700**	**61,500**	**70,700**	**6,000**	**4,500**
	General Conditions / Bond / Insurance (9%)					1,655	423	5,535	6,363	540	405
	Subtotal					20,049	5,123	67,035	77,063	6,540	4,905
	Contractor's Fee (5%)					1,002	256	3,352	3,853	327	245
	Subtotal					21,052	5,379	70,387	80,916	6,867	5,150
	Design Contingency (5%)					1,053	269	3,519	4,046	343	258
	Total estimated bid price					**22,105**	**5,648**	**73,906**	**84,962**	**7,210**	**5,408**
	Construction Contingency (8%)					1,768	452	5,912	6,797	577	433
	SITE TOTAL EST. CONST. COST (2013 $$)					**23,873**	**6,100**	**79,819**	**91,759**	**7,787**	**5,840**
	TOTAL PROJECT EST. CONST. COST (2013 $$)					**125,710**	**324,336**	**3,348,688**	**1,846,593**	**780,230**	**1,295,034**