

**The Bowman-Hite Property
Warren County, Virginia**

**Bowman-Hite Farmhouse
Historic Structures Report
Part II**



Final Submission

***Prepared For:
The National Park Service, Cedar Creek and Belle Grove National Historical Park***

***By:
Quinn Evans Architects***

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Cover image shows the Bowman-Hite house as it appeared during the 1850s (left), 1876-1880s (middle) and today (right). (M. Spencer, 2013)

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Administrative Data

Administrative Data:

The first part of the Historic Structures Report (HSR) for the Bowman-Hite Farmhouse at the Cedar Creek – Belle Grove National Historical Park was begun in June 2011 through a cooperative agreement between the National Park Service and the University of Mary Washington's Department of Historic Preservation. The initial key facilitator for the National Park Service at the outset of the project was Dr. Tonia Horton, Chief of Cultural Resources and Landscape Architect at Cedar Creek and Belle Grove National Historical Park. In the summer of 2012, project supervision was undertaken by Eric Breitreutz, Chief of the Historical Architecture Program for the National Park Service's Northeast Region.

The current work on the HSR, the Part II, was begun in Fall 2014 through a contract between the National Park Service and Quinn Evans Architects. The main contact for the Park is Amy Bracewell, Site Manager of Cedar Creek and Belle Grove National Historical Park.

Project Objective:

The objective of the HSR is to provide a foundational cultural resource management document for the Bowman-Hite farmhouse and bank barn. The research, narrative, drawings, and analysis of Part I form the basis for the next stage of investigation, Part II: Treatment, the current objective. Part I addresses the developmental history of the structures in their historic context, elaborates on their existing condition and threats to integrity, and provides baseline recommendations for historical significance. The Part I also includes a draft National Register Nomination for the Bowman-Hite farmhouse.

Part II will form the basis for both interim and long-range treatment plans and management decisions for both the historic bank barn and farmhouse. The HSR conforms to the *Secretary of the Interior's Standards for Historic Properties* and *Director's Order-28, Cultural Resource Management*. The proposed HSR will also assist the Park in fulfilling both its Section 110 (planning for historic resources) and 106 (compliance) responsibilities under the National Historic Preservation Act.

Background:

The Bowman-Hite property is located in Warren County, Virginia at the northern end of the Shenandoah Valley. Situated near the confluence of Cedar Creek and the Shenandoah River, the mid-19th century farmstead consists of a ca. 1850s brick farmhouse, ca. 1881 Standard Pennsylvania timber frame bank barn, and various dependencies and agricultural structures.¹ During the Battle of Cedar Creek in 1864, the farmhouse was witness to Confederate General Jubal Early's early morning attack on Union General Sheridan's left flank.

Purchased in 2003 from the Whitham family, the National Park Service acquired the farmstead and eight acres. The Shenandoah Valley Battlefield Foundation (SVBF) purchased the surrounding farmland, which incorporated approximately 134 acres. With these two purchases, the land holdings associated with the Bowman-Hite farm has remained relatively intact since 1879.

¹ Noble, "The Old Barn Book", pg 90-92; Allen Noble defines the Standard Pennsylvania bank barn as distinct from the Sweitzer barn in that it has a symmetrical gable. The forebay is incorporated under this gable which tends to have a relatively shallow pitch compared with a Sweitzer barn.

The historic significance of the property and its two standing primary structures— while known in the broader context – at the time of the project had not been studied. The Park commissioned a land tenure history in FY 2010, which provided the first outline of the property’s ownership patterns from the 1730s to present, and significantly narrowed the date range for construction of the farmstead’s buildings. Subsequent projects have also been carried out, including measured drawings of the farmstead’s barn and farmhouse (2010), a building forensics report on both the barn and farmhouse (2011), a physical description and inventory assessment of the barn and farmhouse (2011), and an archaeological assessment (2012), all of which provided additional information concerning construction dates, significance, and integrity.

Tasks:

Based on established historic structures and preservation documentation methodology, this project will document the evolution of the two-primary historic structures at the Bowman-Hite farm, their current condition, character-defining features, historic significance, and contextual associations.

Part I of the HSR consists of the following "Part 1 Developmental History" elements as outlined in DO-28, "Model HSR Contents":

Executive Summary: concise account of research methodology, major research findings, issues identified during the course of the project’s execution, and recommendations for further study.

Administrative Data: names, numbers, and locational data pertinent to the historic structures; related studies.

Developmental History: This section of the proposed HSR incorporates research and findings from associated field studies now underway, and includes new research, archival documentation, and field analysis to produce a body of evidence sufficient to support the treatment recommendations and draft National Register nomination for the Bowman-Hite farmhouse.

- **Historic Background and Context:** Expanding recent land tenure history, this section describes the people and events associated with the structures. It establishes a recommended period or periods of significance.
- **Chronology of Development and Use:** Expanding recent architectural investigations (building forensics and structural evolution), this section discusses the physical construction, modification, and use of the structures. It explores and synthesizes the correlation of historic documentation with field observation and materials analysis.
- **Physical Description:** Expanding recent architectural inventory, this section will provide a systematic accounting of all features, materials, and spaces according to age, significance, and condition. This section also discusses causes of deterioration and structural condition, and the physical integrity of the structures.

Appendix

- Associated graphics (drawings, photographs, materials analysis)
- Draft National Register Nomination for Bowman-Hite farmhouse

Part II of the HSR consists of the following "Part 2 Treatment of Use" elements as outlined in DO-28, "Model HSR Contents":

- Ultimate Treatment and Use: This narrative discusses and analyzes the ultimate treatment and use of the structure as defined in park planning documents. If they have not been defined, this section may recommend an ultimate treatment and use. If analysis of the structure suggests that a planned treatment or use would adversely affect it, the text may present an alternative approach.
- Requirements for Treatment: In concise terms, this text outlines applicable laws, regulations, and functional requirements. Specific attention should be given to issues of human safety, fire protection, energy conservation, abatement of hazardous materials, and handicapped accessibility.
- Alternatives for Treatment: This section presents and evaluates alternative approaches to realization of the ultimate treatment. Alternatives are presented in both text and graphic form. Analysis addresses the adequacy of each solution in terms of impact on historic materials, effect on historic character, compliance with NPS policy, and other management objectives. The section concludes with elaboration on the recommended course of action and specific recommendations for preservation treatments.

The final part of the HSR, "Part 3 Record of Treatment," will consist of the completion report summarizing how the work was accomplished and additional technical data.

Applicable Documents:

National Park Service, *Director's Order-28, Cultural Resource Management*. Washington, DC: DOI-NPS, 1998.

National Park Service, Preservation Brief 43: The Preparation and Use of Historic Structure Reports. Washington, DC: DOI-NPS, 2005.

National Park Service, *National Register Bulletins*. Washington, DC: DOI, various dates.

- 15: *How to Apply the National Register Criteria for Evaluation*
- 16A: *How to Complete the National Register Registration Form*
- 39: *Researching a Historic Property*

National Park Service, *Secretary of the Interior's Standards for the Treatment of Historic Properties*. Washington, DC: 1992.

Weeks, Kay and Anne E. Grimmer, *Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings*. Washington, DC: DOI/National Park Service, 1995.

Unpublished documents prepared for National Park Service, Cedar Creek and Belle Grove National Historical Park:

- Cultural Landscape Inventory, “Whitham Farmstead.” (2007)
- Margaret Peters and Maral Kalbian, “The Bowman-Hite Property, Warren County, Virginia: Narrative History, Timeline, and Annotated Bibliography.” (2010)
- Bryan Townes and Michael Spencer, “Measured Drawings and Existing Conditions Documentation for Bowman-Hite House and Barn,” (2010)
- Cedar Creek and Belle Grove National Historical Park, “General Management Plan,” (2010)
- Michael Spencer, “Forensic Analysis of the Bowman-Hite Farmhouse and Barn,” (2011)
- Bryan L. Townes, “Bowman-Hite Farmhouse and Bank Barn Historic Structure Documentation; Building Evolution and Use; Physical Description Inventory,” (2011)
- Williams and Mary center for Archaeological Research, “An Archaeological Assessment of the Bowman-Hite Farm Property,” (2012)

Executive Summary

Executive Summary:

Historical Significance:

The Bowman-Hite farmstead, historically known as the Charlie Hite Farm, illustrates the Warren County, Virginia family farmsteads, typical of the late-19th and early-20th centuries. The farmstead's location within the path of advancing Confederate troops, during the October 19, 1864, Battle of Cedar Creek, also connects the farmhouse directly to this historic event.² Through these contexts, Agriculture and Military, the farmstead meets National Register Criterion A, on both a national and local level, demonstrating association with a national historic event, the Battle of Cedar Creek in 1864, a decisive Union victory, as well as its role in conveying local agricultural trends in Warren County, Virginia from 1881-1942.

Period of Significance:

The primary period of the Farmhouse has yet to be established but it can be defined as the period of significance as recommended in the draft National Register for Historic Places nomination for the Farmhouse: 1864 and ca. 1881-1942. The date of 1864 corresponds with the Battle of Cedar Creek. The brick portion of the Farmhouse dates to ca. 1850s while some elements of the ca. 1870s frame addition are extant, mostly within the later Whitman-era addition.

Preferred Use:

The Bowman-Hite farmstead and surrounding 134 acres is now owned by the National Park Service (NPS) and the Shenandoah Valley Battlefield Foundation (SVBF) as part of the Cedar Creek and Belle Grove National Historical Park (CEBE). The farmstead is part of a vision for a unified trail system throughout the CEBE that links park areas, expands interpretive opportunities, and helps visitors understand the significance of its stories and landscapes.³ The preferred use of the Farmhouse is one that will return the structure to a condition of usefulness to the Park and with a continuing contribution to the Park's interpretive objectives.

Preferred Treatment: Restoration:

The the preferred (ultimate) treatment is to restore the Farmhouse as faithfully as possible to its original appearance, that is, the appearance through the period of significance. This will then result in the removal of any elements of the Farmhouse added after this time period. The proposed repairs and restoration treatments will conform to the Secretary of the Interior's Standards for Restoration. This approach includes recommendations to restore missing features from the period of significance that are supported by good documentation. To guide the implementation of an overall treatment approach of restoration, NPS provides standards and associated guidelines, *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, & Reconstructing Historic Buildings*.

² JED Hotchkiss, Hotchkiss Battle Maps, *Sketch of the Battle of Belle Grove*, October 19, 1864, No. 29

³ Cedar Creek and Belle Grove National Historical Park Trail Development Strategy and Management Plan, 2015.

Treatment Approach Zone Diagrams:

Within an overall treatment approach, various spaces within a historic resources may merit different treatments due to the relative significance of the spaces and of features within the spaces. The exterior is designated as a restoration zone. The roof is also designated as a restoration zone. The surrounding site is designated as a preservation zone. The one room in the basement is designated a free zone to allow for use as a mechanical room if necessary. The three first floor rooms in the ca. 1850s brick portion are designated as a restoration zone. The first floor rooms within the Whitman-era addition are designated as a free zone to allow for the re-creation of the ca. 1870s frame addition. The three second floor rooms in the ca. 1850s brick portion are designated as a restoration zone. The second floor rooms within the Whitman-era addition are designated as a free zone to allow for the re-creation of the ca. 1870s frame addition. The attic is designated a free zone.

Program Requirements:

Per Chapter 8 of NPS-28 Cultural Resource Management Guideline, historic structures that functionally serve park staff or visitors are generally expected to meet modern safety, access, and energy efficiency standards, their character may impose limitations on functional modifications and adjacent development. For this modest building, the program requirements are also modest. As a Park support structure, the space use program for the preferred use would be as follows:

Basement:

<u>Utility</u>	300 SF
Subtotal	300 SF

First Floor:

Exhibit / Public space	830 SF
Unisex restroom	30 SF
Mech. Room & service sink	30 SF
<u>Stairway</u>	170 SF
Subtotal	1060 SF

Second Floor:

Exhibit / Public space	590 SF
<u>Stairway</u>	170 SF
Subtotal	760 SF

Attic (unoccupied):

<u>Utility</u>	470 SF
Subtotal	470 SF

Total (all floors)	2590 SF
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Treatment and Work Recommendations:

There are three distinct alternatives for the future utilization of this building. These are discussed below. The third option, mothball, could be done now until funding is available for a future utilization.

Alternate #1 - Restoration:

A more intensive and complex project would restore this building to its appearance during the period of significance. This would primarily entail restoring the exterior with the result that the building and site could become very close to the mid-19th century appearance. Partnered with a restoration of the Barn, the Bowman-Hite farmstead could approach a composite whole. The restoration, aside from restoring materials, would also provide accessible access for visitors as well as have the potential to increase the live load capacity if required for larger groups of visitors. There would be six primary project work elements:

1. Site work - Provide accessible paths and improve drainage around the building.
2. Structural work -Complete stabilization work and increase live load capacity for an Assembly use.
3. Restoration - Restore the ca. late 1850s brick Hite farmhouse (ell).
4. Demolition - Remove the Whitman-era additions (1967-2003).
5. Re-creation - Re-create the ca. late 1870s Pirkey rear frame addition
6. Systems - Upgrade all mechanical, electrical, and plumbing systems. Install fire or smoke detection, along with an intrusion alarm system. Install a public toilet room. Install a fire suppression system.

The rough order of magnitude estimate of construction costs for this alternative would be range from approximately \$806,000 to \$926,900. See Appendix II for the detailed estimate work sheet. This assumes construction would start in Spring 2016 and likely be complete by 2017.

In this alternative, the building would improve the interpretation of the farmstead and assist in meeting the goals of the unified trail system. The largest drawback of this alternative is the cost.

Alternative #2 - Preservation:

A straightforward project would include selective exterior repair and restoration work. This minimal project would continue the current practices of stabilization, repair, and replacement if necessary. The use of the Farmhouse could be used as a preservation teaching tool for use by the Park and academic institutions. There would be five primary project work elements:

1. Site work - Provide accessible paths and improve drainage around the building.
2. Structural work - Stabilization work.
3. Exterior - Repoint masonry, repair and repaint wood elements.
4. Roofing - Provide a new roof to eliminate moisture infiltration from the roof.
5. Systems - Provide lighting and convenience power fixtures. Install a fire or smoke detection, along with an intrusion alarm system.

The rough order of magnitude estimate of construction costs for this alternative would be range from approximately \$809,000 to \$930,350. See Appendix II for the detailed estimate work sheet. This assumes construction would start in Spring 2016 and likely be complete by 2017.

Alternate #3 - Mothball:

As the building has been unoccupied and largely unused for many years, it may be simpler to do selective stabilization and repair then seal the building up as much as possible to reduce or eliminate moisture infiltration and animal intrusion. If a significant project were not possible in the near future, then the building should be secured and mothballed in the interim to protect it from detrimental effects such as weathering and vandalism. There would be five primary project work elements:

1. Insect/animal extermination - Provide metal mesh behind any openings.
2. Site work - Improve site drainage around the building to reduce/eliminate moisture infiltration from the ground and surrounding site.
3. Exterior - Repoint masonry, repair and repaint wood elements.
4. Roofing - Provide a new roof to eliminate moisture infiltration from the roof.
5. Systems - Turn off utilities except for electric power. Provide temporary lighting and convenience power fixtures should be installed to facilitate future interior survey and inspections. Install a fire or smoke detection, along with an intrusion alarm system. Provide fans to assist natural ventilation.

The rough order of magnitude estimate of construction costs for this alternative would be range from approximately \$179,000 to \$205,850. See Appendix II for the detailed estimate work sheet. This assumes construction would start in Spring 2016 and likely be complete by 2017.

Recommended Alternative - Alternate #1 - Restoration:

The recommended alternative is Alternate #1 - Restoration. This alternative will fulfill the preferred use of the Farmhouse by returning the structure to a condition of usefulness to the Park and furthering the Park's interpretive message on the Civil War and the role of farmsteads. This alternative will also help "tell the story," one of the goals of the proposed unified trail system throughout CEBE. A restored farmhouse would become a scene setter and as a destination for organized interpretation consisting of groups of ten to fifteen persons. The current condition of the Farmhouse does not lend itself for anything other than as a set piece on the land to walk around the exterior and observe. Once additional structural and building repairs and restoration activities are completed, the interior could be shown to the public and possibly even used to hold events.

Depending on accessible access to the house, the re-creation of the ca. 1870s frame addition could be the location for the unisex staff/visitor toilet (comfort station), utility sink, and the cellar could contain mechanical and fire protection equipment while the rest of the first floor would remain open for Park activities (either staff use or public interpretation). Ideally, the house would be accessible at both the first floor and second floor, but not necessarily the cellar nor the attic. The project would include extending and upgrading the mechanical, electrical, and plumbing systems.

Assessment of Affect for Recommended Treatments:

The Farmhouse would be restored in accordance with the Secretary's Standards. The introduction of modern systems would be limited and located in secondary areas in a manner that minimizes visual impact and damage to historic materials. Hence, there would be no adverse effect.

Design and Treatment Philosophy

Design and Treatment Philosophy:

The Bowman-Hite farmstead, historically known as the Charlie Hite Farm, illustrates the Warren County, Virginia family farmsteads, typical of the late-19th and early-20th centuries. This agricultural context is demonstrated by the historic size of the farm from 1881-1942, as well as the intact farmstead, which, includes the extant ca. 1850s farmhouse, spring, late-19th-century smoke house, ca. 1881 bank barn and livestock yard, early-20th-century cow shed, and early-20th-century chicken coops. The farmstead's location within the path of advancing Confederate troops, during the October 19, 1864, Battle of Cedar Creek, also connects the farmhouse directly to this historic event.⁴ Through these contexts, Agriculture and Military, the farmstead meets National Register Criterion A, on both a national and local level, demonstrating association with a national historic event, the Battle of Cedar Creek in 1864, a decisive Union victory, as well as its role in conveying local agricultural trends in Warren County, Virginia from 1881-1942.

The Bowman-Hite farmstead and surrounding 134 acres is now owned by the National Park Service (NPS) and the Shenandoah Valley Battlefield Foundation (SVBF) as part of the Cedar Creek and Belle Grove National Historical Park (CEBE). CEBE was created by Congress to help preserve, protect, and interpret the nationally significant Civil War landscape and antebellum plantation. In addition, the park contains prehistoric resources, ecologically important areas, evidence of early European settlement, and serves as a focal point within the Shenandoah Valley Battlefields National Historic District.

The farmstead is part of a vision for a unified trail system throughout the CEBE that links park areas, expands interpretive opportunities, and helps visitors understand the significance of its stories and landscapes.⁵ The goals of the trail system are fourfold: 1) Connectivity - connecting key features of the park and adjacent towns and public lands; 2) Telling Stories - connecting visitors to history by telling stories "from backcountry to breadbasket to battlefield and beyond" and increasing awareness and understanding park resources; 3) Sensitivity to Park Resources - providing a physically active exploration while protecting sensitive resources; and 4) Collaboration - demonstrating a broad partnership of organizations under a uniform and coherent appearance to the visitor.⁶

Preferred Use:

The preferred use of the Farmhouse is one that will return the structure to a condition of usefulness to the Park and with a continuing contribution to the Park's interpretive objectives. This will include the interpretation of the Civil War in the nineteenth century and the role of the farmsteads. The interpretation period could be the first four periods as identified in the Historic Background and Content.

- I. 1734-1843 George and Isaac Bowman
- II. 1843-1872 Charles J. Hite and Rebecca Bowman
- III. 1872-1881 William Stickley and John Pirkey
- IV. 1881-1967 Kerns Family

⁴ JED Hotchkiss, Hotchkiss Battle Maps, *Sketch of the Battle of Belle Grove*, October 19, 1864, No. 29

⁵ Cedar Creek and Belle Grove National Historical Park Trail Development Strategy and Management Plan, 2015.

⁶ Ibid.

Additionally, the Farmhouse should be put in the immediate context of the Bowman-Hite Farmstead for interpretation as well. As such, the Farmstead should be used as a park interpretive feature both as a scene setter and as a destination for organized interpretation consisting of groups of ten to fifteen persons. The current condition of the Farmhouse does not lend itself for anything other than as a set piece on the land to walk around the exterior and observe. Once additional structural and building repairs and restoration activities are completed, the interior could be shown to the public and possibly even used to hold events. Also, the Farmhouse could in part be used as a preservation laboratory to study historic building construction and restoration methods and materials.

Site:

The Farmhouse is part of the larger farmstead and has an immediate connection with the Barn and other outbuildings. Universally accessible paths between the Barn and the Farmhouse would connect the buildings and the site physically and allow visitors to explore the farmstead. The paths would be connected to the trail system. A trailhead could be located at the site and as such provide information kiosks, parking, benches, picnic tables, viewing areas, and other outdoor facilities.

Basement:

The basement will continue in its primary use as storage and/or utility space for Park staff..

First Floor:

The preferred use of the first floor will be for interpretive purposes with public access and/or as a preservation lab. The three primary rooms, those in the original brick portion of the house, would be part of any tours. The adjacent spaces to the west would include a unisex toilet room and utility sink for either for staff only use or public use. Space could also be made into a conditioned space with audio visual capabilities that will allow for large groups to gather and meet.

Second Floor:

The preferred use of the second floor will be for interpretive purposes with limited public access to these rooms. Another possibility would be to use some of the rooms on the second floor for administrative purposes, i.e. offices or small meeting rooms. The three primary rooms in the original brick portion of the house could also be used as a preservation lab. Creating an accessible route for persons with disabilities to the second floor presents challenges. The stairway would remain, but it is not currently feasible to provide any form of mechanical lift. This will be discussed in subsequent sections. Additional lighting would be brought to the second floor. If used as an office space, permanent heating or cooling would be provided.

Though the proposed use of this building is limited, and the building is very small size, permanent heating or cooling should be installed for the Park staff. Water, sewer, and electric power would be re-connected for the lower level. The windows and doors would be rehabilitated so that fresh air ventilation would be available. An automatic fire suppression system would be installed throughout the building.

Attic:

The attic level is accessed via a hatch in the ceiling. The use of the attic would remain as inaccessible.

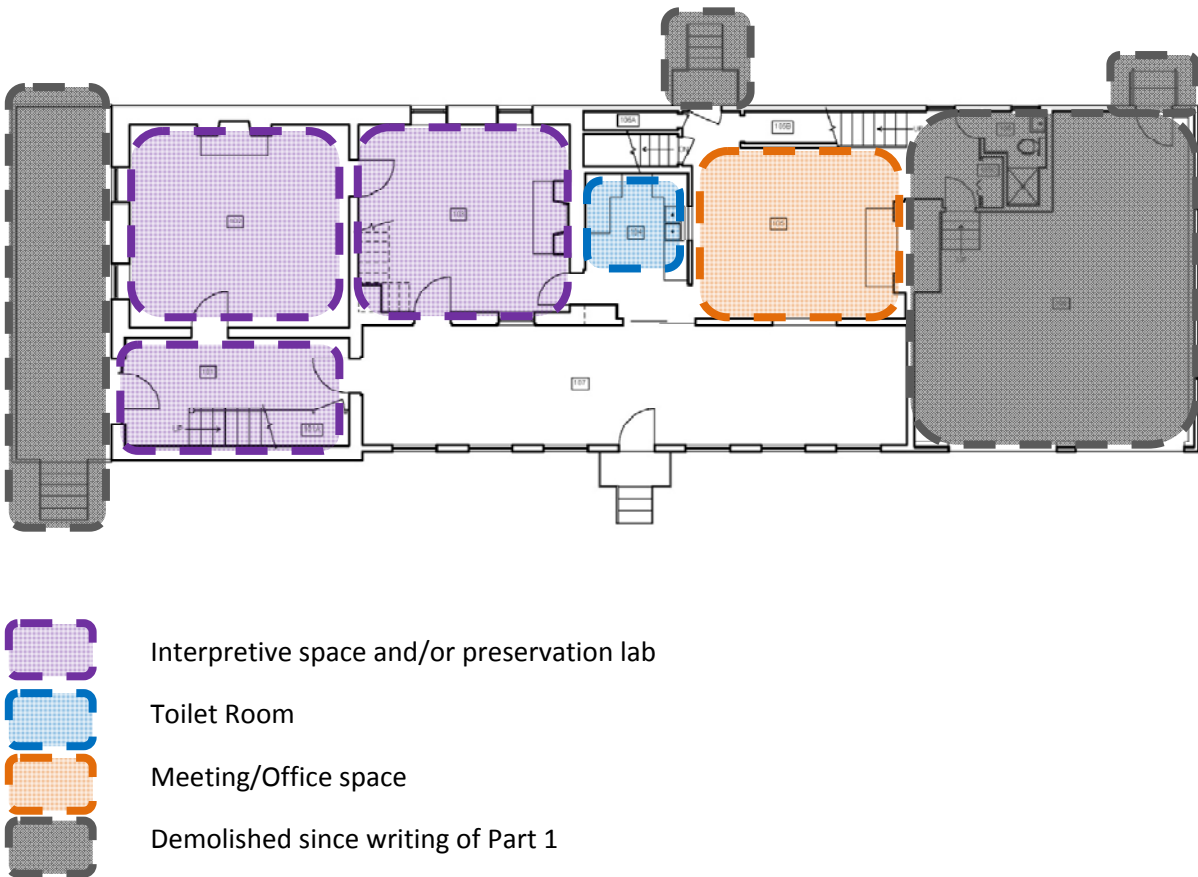


Figure 1: First floor plan preferred use diagram.

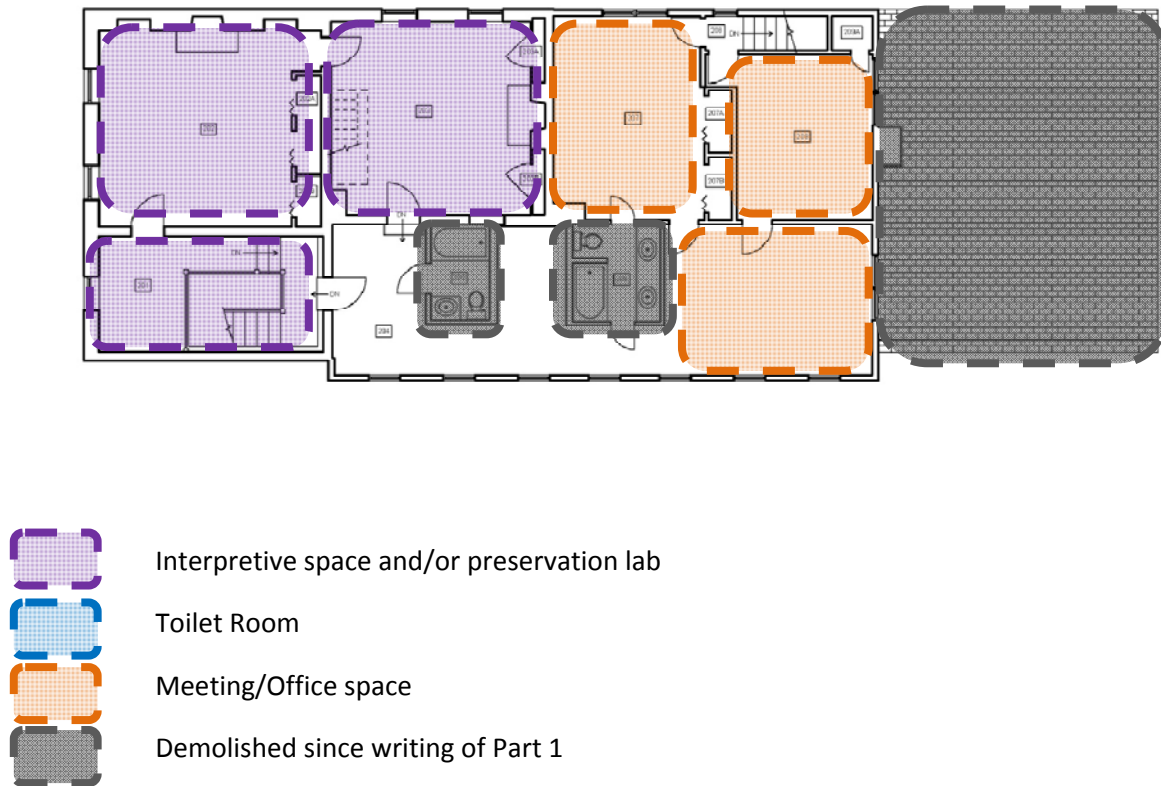


Figure 2: Second floor plan preferred use diagram.

Treatment Philosophy Standards and Guidelines:

In the previous sections, this report identified the historically and architecturally significant features of this historic resource along with their conditions. This section outlines the overarching guidelines and recommendations for the proper treatment approach of these character-defining features and the building as a whole. Code requirements will be discussed in a subsequent section followed by treatment recommendations.

The U.S. National Park Service (NPS) has developed standards and guidelines for approaches to various treatments of historic properties. These are published in *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings*.⁷ These standards are widely utilized and understood by historic preservation professionals, architects, engineers, contractors, and craftsmen around the country. Four principal treatment options apply to existing buildings: preservation, rehabilitation, restoration, and reconstruction. The last option, reconstruction, is not applicable to this historic resource. Whereas the treatment Restoration provides guidance on restoring—or re-creating—building features, the Standards for Reconstruction and Guidelines for Reconstructing Historic Buildings address those aspects of treatment necessary to re-create an entire non-surviving building with new material.⁸

The most fundamental decision involving the future of a historic building is to choose the appropriate treatment approach. The NPS indicates the following considerations should be addressed in making this choice:

- Relative importance in history,
- Physical condition,
- Proposed use, and
- Mandated code requirements.⁹

These issues are addressed later in this section.

A treatment is a physical intervention carried out to achieve a historic preservation goal. It cannot be considered in a vacuum. Choosing the appropriate treatment approach for a building and its site requires careful decision-making about the extent of historic documentation, existing physical conditions, historic value or significance, proposed use, long and short term objectives, operational and code requirements (e.g. accessibility, fire protection, security), as well as anticipated capital improvements, staffing, and maintenance costs. The potential impact of the treatment on any significant archaeological and natural resource should also be considered in the decision-making

⁷ *The Secretary of the Interior Standards* are available in print form, as well as on the internet in a web-based format. This Historic Features Survey references the 1995 print edition. The internet version is available here: <http://www.nps.gov/tps/standards.htm>

⁸ Kay D. Weeks and Anne E. Grimmer, *The Secretary of the Interior's Standards for the Treatment of Historic Properties* (U.S. Department of the Interior, 1995), 167.

⁹ Kay D. Weeks and Anne E. Grimmer, *The Secretary of the Interior's Standards for the Treatment of Historic Properties* (U.S. Department of the Interior, 1995), 1.

process.¹⁰ These factors are all weighed with the goal of selecting a single treatment approach which is judged to be most appropriate to achieve the historic preservation objective.

Treatment Approaches:

The Secretary of the Interior's Standards defines four principal treatment approaches that can be applied to historic buildings and landscapes: preservation, rehabilitation, restoration, and reconstruction. Reconstruction is not applicable to this historic structure. These three treatment approaches are sometimes used interchangeably, but each has a unique definition and associated standards and guidelines as developed by the NPS. In all instances, these definitions are intended to apply to both historic buildings and landscapes. This report applies the words "preservation," "rehabilitation," and "restoration" to describe the treatment approaches as defined by NPS:

Preservation:

Preservation is defined as the act or process of applying measures necessary to sustain the existing form, integrity, and materials of a historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-related work to make the properties functional is appropriate within a preservation project."¹¹ The treatment emphasizes repair and conservation of significant building features and strives to retain existing materials and features while employing as little new materials as possible.¹²

Preservation as a Treatment. When the property's distinctive materials, features, and spaces are essentially intact and thus convey the historic significance without extensive repair or replacement; when depiction at a particular point of time is not appropriate; and when a continuing or new use does not require additions or extensive alterations, Preservation may be considered as a treatment. Prior to undertaking work, a documentation plan for Preservation should be developed.¹³

The guidelines state that the preservation treatment approach aims to:

- Identify, retain, and preserve historic materials and features;
- Stabilize deteriorated historic materials and features as a preliminary measure;
- Protect and maintain historic materials and features;
- Repair (stabilize, consolidate, and conserve) historic materials and feature;
- Provide limited replacement in kind of extensively deteriorated portions of historic features; and

¹⁰ Adapted from "Factors to Consider When Selecting An Appropriate Treatment." *Guidelines for the Treatment of Cultural Landscapes*. NPS Technical Preservation Services. Accessed November 2014.
<http://www.nps.gov/tps/standards/four-treatments/landscape-guidelines/factors.htm>

¹¹ Ibid., 17.

¹² Ibid., 19-20.

¹³ Ibid., 21.

- Address energy efficiency/accessibility/health and safety code considerations.¹⁴

Rehabilitation:

Rehabilitation is defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.¹⁵

Rehabilitation as a Treatment. When repair and replacement of deteriorated features are necessary; when alterations or additions to the property are planned for a new or continued use; and when its depiction at a particular time is not appropriate, rehabilitation may be considered as a treatment. Prior to undertaking work, a documentation plan for Rehabilitation should be developed.¹⁶

The guidelines state that the rehabilitation treatment approach aims to:

- Identify, retain, and preserve historic materials and features;
- Protect and maintain historic materials and features;
- Repair historic materials and features;
- Replace deteriorated historic materials and features;
- Design for the replacement of missing historic features;
- Assess alterations/additions for the new use; and
- Address energy efficiency/accessibility/health and safety code considerations.¹⁷

Restoration:

Restoration is defined as the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project.¹⁸

Restoration as a Treatment. When the property's design, architectural, or historical significance during a particular period of time outweighs the potential loss of extant materials, features, spaces, and finishes that characterize other historical periods; when there is substantial physical and documentary evidence for the work; and when contemporary alterations and additions are not planned, Restoration may be considered as a treatment. Prior to undertaking work, a particular period of time, i.e., the restoration period, should be selected and justified, and a documentation plan for Restoration developed.¹⁹

The guidelines state that the restoration treatment approach aims to:

- Identify, retain, and preserve materials and features from the restoration period;

¹⁴ Ibid. 19.

¹⁵ Ibid., 61.

¹⁶ Ibid., 66.

¹⁷ Ibid. 63-66

¹⁸ Ibid., 117.

¹⁹ Ibid., 121.

- Protect and maintain materials and features from the restoration period;
- Repair (stabilize, consolidate, and conserve) materials and features from the restoration period;
- Replace extensively deteriorated features from the restoration period;
- Remove existing features from other historic periods;
- Re-create missing features from the restoration period; and
- Address energy efficiency/accessibility/health and safety code considerations.²⁰

Selecting an Appropriate Treatment:

The primary period of the Farmhouse has yet to be established but it can be defined as the period of significance as recommended in the draft National Register for Historic Places nomination for the Farmhouse: 1864 and ca. 1881-1942. The date of 1864 corresponds with the Battle of Cedar Creek. The brick portion of the Farmhouse dates to ca. 1850s while some elements of the ca. 1870s frame addition are extant, mostly within the later Whitman-era addition. The period of significance spans the length of time during which the property attained the primary physical characteristics that make it important and encompasses the continuity of use as a working farm.

In selecting the most appropriate overall treatment for this property based on the NPS guidelines of relative importance in history, physical condition, proposed use, and mandated code requirements, there are a number of important philosophical and practical considerations for this historic structure, as follows.

- The Farmhouse is important to the development of the farmstead and the CEBE.
- The building is in fair condition and the character-defining features show wear and tear as well as deterioration. The Farmhouse no longer continues to perform its original function and will require some repair or renewal.
- The building exhibits a high level of architectural integrity from the period of significance. The period of significance can be established as the period for a restoration treatment.
- Depiction at a particular period of time would be appropriate. Almost all of the character-defining interior finishes represent a particular period of time.
- The preferred use of the Farmhouse requires that it depicts the form, features, and character of the structure as it appeared through the period of significance: 1864 and ca.1881-1942.
- Upgrading of the electrical system would make the structure functional for its preferred use.
- The historical significance of the Farmhouse outweighs the potential loss of extant materials, features, and spaces from outside of the period of significance.
- A continuing or new use does require additions or extensive alterations. Contemporary additions that re-create building features are planned at the Farmhouse.

²⁰ Ibid. 119-121.

Preferred Treatment: Restoration:

After review and evaluation of the selection factors above for the Farmhouse, the preferred (ultimate) treatment is to restore the Farmhouse as faithfully as possible to its original appearance, that is, the appearance through the period of significance. This will then result in the removal of any elements of the Farmhouse added after this time period. The proposed repairs and restoration treatments will conform to the Secretary of the Interior's Standards for Restoration. This approach includes recommendations to restore missing features from the period of significance that are supported by good documentation.

Standards for Restoration:

To guide the implementation of an overall treatment approach of restoration, NPS provides standards and associated guidelines. The Secretary of the Interior established ten Standards for Restoration. The standards "allow for the depiction of a building at a particular time in its history by preserving materials from the period of significance and removing materials from other periods." ²¹ (See Table 1.)

Guidelines for Restoration:

The Secretary of the Interior has developed Guidelines for Restoring Historic Buildings to provide general design and technical recommendations for a variety of materials, elements, and systems as well as additions, accessibility, and health and safety. The Guidelines pertain to historic buildings of all sizes, materials, occupancy, and construction types; and apply to interior and exterior work as well as the removal of existing features and recreating missing features.

Overall Guidelines:

With these Standards and Guidelines in mind, several specific overall guidelines for the restoration treatment approach of the Farmhouse are suggested:

- The period of significance is defined as 1864 and ca. 1881-1942. All of the significant, character-defining features from this period will be identified, retained, maintained, repaired, and conserved.
- Restoration (or conservation) of individual elements to their original condition or appearance is absolutely appropriate within the overall restoration treatment.
- Intrusions or other less-than-sensitive building modifications that are inconsistent with the period of significance will be identified for removal and replacement with materials more appropriate to the period of significance. This approach also requires removal of the Whitman-era addition.
- Missing features from the restoration period may be replaced (e.g. the ca. 1870s frame addition and its two porches), based on documentary and physical evidence, using traditional materials or compatible substitute materials. If future research indicates a feature once existed at the time of period of significance; then it could be replicated if there is sufficient documentation based on detailed field investigation.

²¹ Ibid. 2.

- New elements needed to make the building functional for contemporary purposes, such as accessibility considerations, will be integrated and designed in a way that is sensitive to the building's significant exterior and interior features, spaces, and materials.

The Secretary of the Interior's Standards for Restoration

1. A property will be used as it was historically or be given a new use which reflects the property's restoration period.
2. Materials and features from the restoration period will be retained and preserved. The removal of materials or alteration of features, spaces, and spatial relationships that characterize the period will not be undertaken.
3. Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate and conserve materials and features from the restoration period will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.
4. Materials, features, spaces, and finishes that characterize other historical periods will be documented prior to their alteration or removal.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize the restoration period will be preserved.
6. Deteriorated features from the restoration period will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials.
7. Replacement of missing features from the restoration period will be substantiated by documentary and physical evidence. A false sense of history will not be created by adding conjectural features, features from other properties, or by combining features that never existed together historically.
8. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
9. Archeological resources affected by a project will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
10. Designs that were never executed historically will not be constructed.

Table 1: *Secretary of the Interior's Standards for Restoration*, p. 118.

Treatment Approach Zone Diagrams:

Within an overall treatment approach, various spaces within a historic resources may merit different treatments due to the relative significance of the spaces and of features within the spaces. Therefore, treatment approach zones are recommended for specific areas within the building. Typically, the exterior will consistently be within a restoration or preservation zone. Another zone, a free zone, will also be applied to certain spaces such as mechanical rooms. In this zone, virtually any alterations would be permissible as long as they do not have an adverse effect on the overall structure or the historic fabric. To illustrate the various treatment approaches within a historic resource, treatment zone diagrams utilizing floor plans have been prepared. A narrative description of the specific treatment approach zones is followed by the treatment approach zone diagrams for each floor. Proposed work recommendations in line with the treatment of restoration are discussed in the next chapter.

Exterior:

The exterior is designated as a restoration zone. The roof is also designated as a restoration zone. The surrounding site is designated as a preservation zone.

Basement:

The one room in the basement is designated a free zone to allow for use as a mechanical room if necessary.

First Floor:

The three rooms in the ca. 1850s brick portion are designated as a restoration zone. The rooms within the Whitman-era addition are designated as a free zone to allow for the re-creation of the ca. 1870s frame addition.

Second Floor:

The three rooms in the ca. 1850s brick portion are designated as a restoration zone. The rooms within the Whitman-era addition are designated as a free zone to allow for the re-creation of the ca. 1870s frame addition.

Attic:

The attic is designated a free zone.

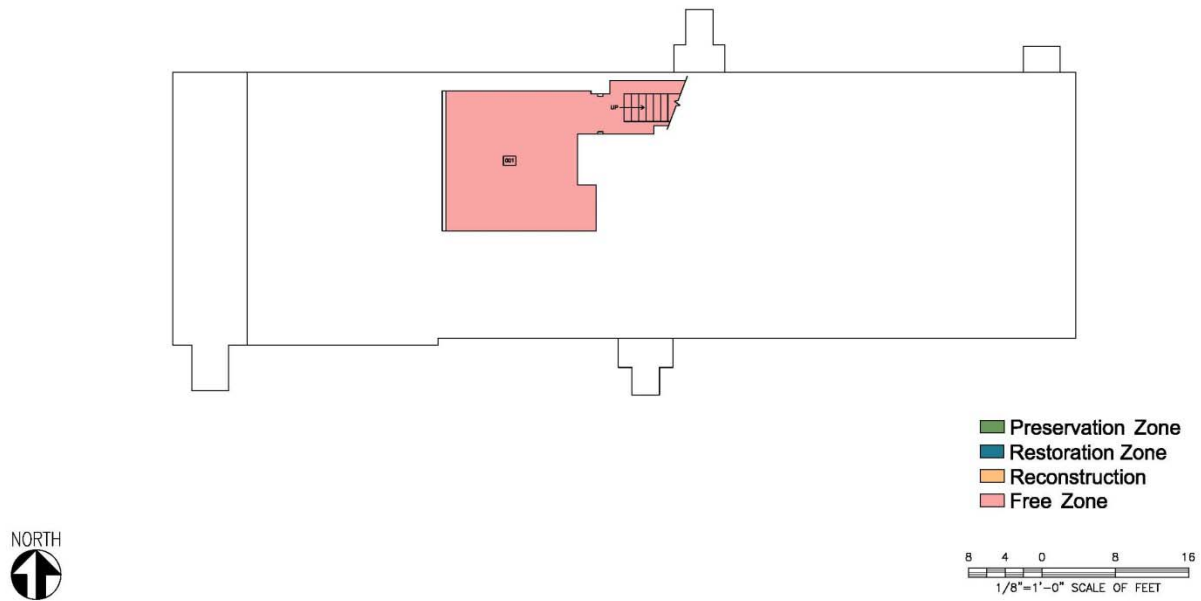


Figure 3: Basement preservation treatment approach diagram.

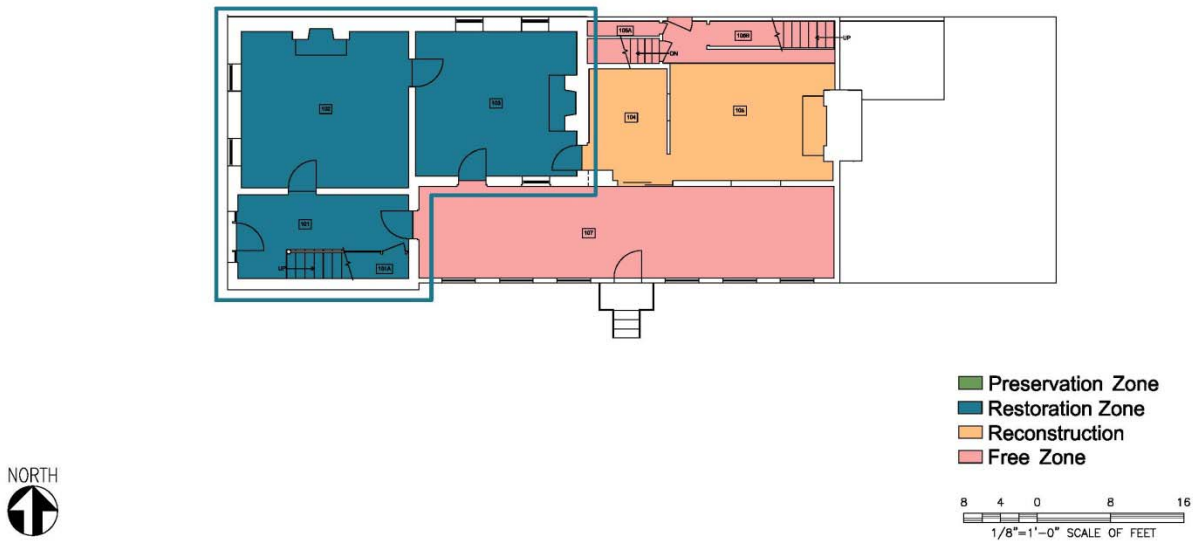


Figure 4: First floor plan preservation treatment approach diagram.

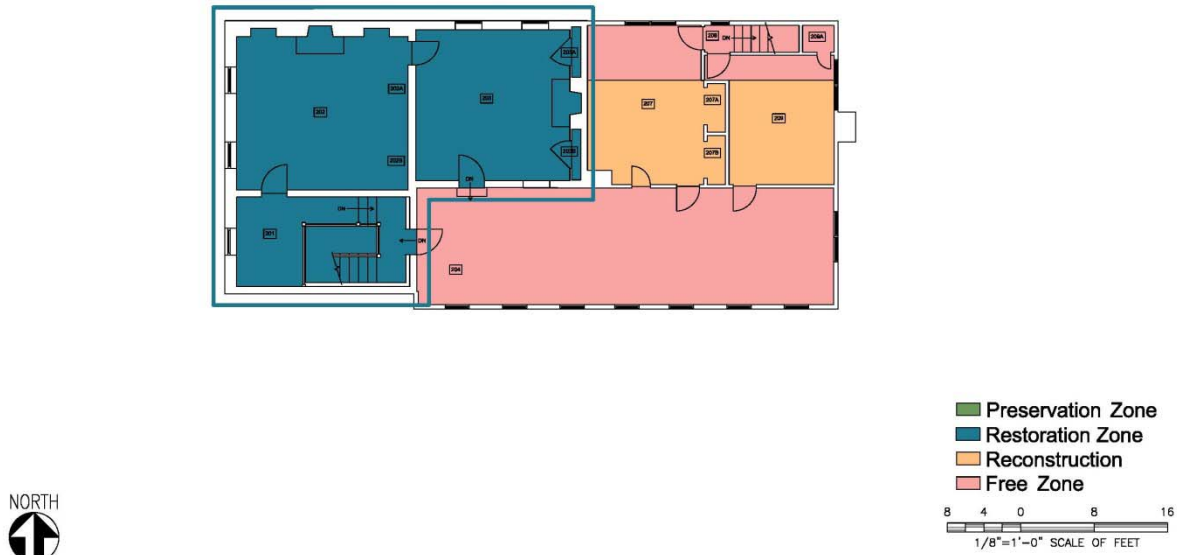


Figure 5: Second floor plan preservation treatment approach diagram.

Conclusion:

As stated in the beginning of this report, these recommendations for an overall restoration treatment approach should be used to inform future work at the Farmhouse. Treatments should comply with the most recent version of the standards and guidelines of the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. With the information gained from the detailed conditions assessment, appropriate preservation treatments and maintenance protocols for character-defining features are developed in the subsequent sections and are recommended for implementation.

The 2011 *Forensic Analysis of the Bowman-Hite Farmhouse and Barn* analyzed wood, mortar, and paint samples. Some additional historic finish analysis will likely be recommended for any features identified within a restoration zone. The information gained from additional analysis should be reviewed in tandem with this HSR, as well as any new information, in order to develop the specific restoration design for a facade or a room.

Requirements for Treatment

Requirements for Treatment:

Per Chapter 8 of NPS-28 Cultural Resource Management Guideline, historic structures that functionally serve park staff or visitors are generally expected to meet modern safety, access, and energy efficiency standards, their character may impose limitations on functional modifications and adjacent development.

Program Requirements:

For this modest building, the program requirements are also modest. As a Park support structure, the space use program for the preferred use would be as follows:

Basement:

<u>Utility</u>	<u>300 SF</u>
Subtotal	300 SF

First Floor:

Exhibit / Public space	830 SF
Unisex restroom	30 SF
Mech. Room & service sink	30 SF
<u>Stairway</u>	<u>170 SF</u>
Subtotal	1060 SF

Second Floor:

Exhibit / Public space	590 SF
<u>Stairway</u>	<u>170 SF</u>
Subtotal	760 SF

Attic (unoccupied):

<u>Utility</u>	<u>470 SF</u>
Subtotal	470 SF

Total (all floors)	2590 SF
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Legal Requirements:

Treatment and use of the historic structure and site are affected by federal laws and regulations that address life safety, accessibility, and the protection of cultural resources. These include:

Building Codes:

National Park Service policy is guided by the International Building code, which is applicable to both historic and non-historic buildings. However, the code does include the following provision regarding historic buildings:

3406.1 Historic Buildings: the provisions of this code related to the construction, repair, alteration, addition, restoration, and movement of structures, and change of occupancy shall

not be mandatory for historic buildings where such buildings are judged by the building official to not constitute a distinct life safety hazard.

National parks have a responsibility to maintain public health and safety. The NPS retains the authority to administer adherence to building Codes.

NFPA Code 914:

National Fire Protection Association (NFPA) Codes for historic buildings apply to this historic structure, including NFPA 914, "Code for Fire Protection of Historic Structures." Due to the intended use as a utility or public facility, measures should be taken to prevent fires. These should include keeping excess plant growth away from the exterior of the building and storing flammable materials away from the structure. Smoking should be prohibited in and around the structure, and fire-fighting equipment such as hand-held fire extinguishers should be easily available, particularly during site work.

Architectural Barriers Act (ABA):

The ABA requires access to facilities designed, built or altered with Federal dollars or leased by Federal agencies. The law covers a wide range of facilities, including post offices, social security offices, prisons, and national parks. It also applies to non-government facilities that have received Federal funding, such as certain schools, public housing, and mass transit systems. Passed in 1968, the ABA stands as the first measure by Congress to ensure access to the built environment. Facilities that predate the law generally are not covered, but alterations or leases undertaken after the law took effect can trigger coverage.

National Historic Preservation Act:

The National Historic Preservation Act of 1966 as amended (NHPA) mandates federal protection of significant cultural resources. As this property is eligible and may become a listed building on the National Register or a contributing building in a National Register of Historic Places Historic District, major work undertaken at the site is required to undergo review under Section 106 of the NHPA, which requires federal agencies to "take into account the effect" of any undertaking affecting properties listed on or eligible for listing on the National Register of Historic Places. This process may require consultation with local governments, State and Tribal Historic Preservation Offices, and the Advisory Council on Historic Preservation.

DOI and NPS Policies and Regulations:

Treatment and use of the historic structure and site are also affected by certain policies and regulations of the Department of the Interior and the National Park Service.

Secretary of the Interior's Standards:

The Secretary of the Interior's Standards for the Treatment of Historic Properties have established standards and guidelines for the use and treatment of historic structures, and *The Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* have established standards and guidelines for the use and treatment of historic cultural landscapes. This report has been prepared in accordance with both documents, all recommended treatments conform to the Standards.

General Management Policies:

This document and the treatments recommended herein also comply with the policies set forth in NPS General Management Policies (2006), the service-wide policy document of the National Park Service. The introduction to Section 5: "Cultural Resource Management" states that

The National Park Service will protect, preserve, and foster appreciation of the cultural resources in its custody and demonstrate its respect for the peoples traditionally associated with those resources through appropriate programs of research, planning, and stewardship.

These goals are achieved through research and documentation of cultural resources, application of integrative and collaborative planning procedures, and appropriate treatment and stewardship in order to make cultural resources available for the public understanding and enjoyment. Section 5 also explicitly states that preservation of cultural resources in their existing states should receive priority, and that alternatives should be considered before undertaking treatments of greater intervention.

Building Code Summary:

Applicable Codes:

The National Park Service has adopted the following codes and standards:

International Building Code (IBC) - current edition
International Code for Existing Building (IEBC) - current edition
International Mechanical Code (IMC) - current edition
International Plumbing Code (IPC) - current edition
National Electric Safety Code (NESC) - current edition

National Fire Protection Association Codes (NFPA) – current edition, including, but not limited to the following:

NFPA 10: Standard for Portable Fire Extinguishers
NFPA 13: Standard for the Installation of Sprinkler Systems
NFPA 70: National Electrical Code
NFPA 72: National Fire Alarm and Signaling Code
NFPA 101: Life Safety Code
NFPA 914: Code for Fire Protection of Historic Sites

Architectural Barriers Act Accessibility Standards (ABAAS)
Leadership in Energy and Environmental Design (LEED) rating system – current edition

This building code review is based on the 2012 International Building Code (IBC). Building codes are updated on a three year cycle, with the next edition to be issued in 2015. Revisions to the building code are generally minor in nature but can impact the project scope. All new work shall be designed to meet the adopted codes to the greatest extent possible. Historic buildings undergoing renovations, additions or alterations or change in occupancy are not required to meet all the provisions of the code when judged by the building official not to constitute a distinct life safety hazard.

When the National Park Service wishes to make improvements or modifications to the structure, a team of licensed design professionals should be retained to prepare design and construction documents. This team of professionals is responsible for ensuring that their design and documents comply with

applicable building codes and standards. The following code summary describes an approach to building code compliance, but cannot address specifics at this preliminary phase.

Use and Occupancy Classification (IBC Chapter 3):

The proposed occupancy of the building is a mixed-use occupancy that includes:

Assembly (A-3): Interpretive Exhibit area

This use is intended for the gathering of persons for purposes such as exhibition halls, lecture halls, and museums.

Business (B): Offices, preservation laboratory (testing and research)

Storage (S):

This use permits storage that is not classified as a hazardous occupancy.

The most restrictive occupancy is Assembly (A-3).

Type of Construction (IBC Chapter 6):

Type III-B. The original construction is of noncombustible exterior load-bearing masonry walls and the following materials for interior building elements: wood decking at floors and roof, wood interior columns and beams, and wood framed interior nonbearing walls and partitions.

Height and Area Summary (IBC Chapter 5):

For this use and construction type, the code would permit a 2 story (above ground), 9,500 SF structure, so the Farmhouse is well within the allowable height and area. The area of the Farmhouse within the surrounding exterior walls is 1,915 SF.

Height:

The existing building is 2 1/2 stories above grade. The total height from grade to the ridge of the attic is approximately 27'-0". The existing height is within the height limitations for the construction type and proposed use groups. The number of stories above grade is within the limitations when taking into account the automatic sprinkler system increase.

The proposed cumulative area for Assembly uses is greater than 10% of the total first floor area. Therefore, spaces dedicated to these use groups shall be considered separate from the Storage use group and the most stringent requirements are applied.

Floor Area:

The existing square footage per floor is within the limitations when taking into account the automatic sprinkler system increase.

Height and Area Limit:

The height and area limits are based on assembly use, the most restrictive of the proposed building uses. Additionally, the building can be equipped throughout with an automatic sprinkler system which

allows for increases in both height and area. The height and area limits for Type III-B construction including the allowable increases are as follows:

3 (2 allowable + 1 increase) stories, 75 (55 allowable + 20 increase) feet tall, 19,000 SF (9,500 + 200%) per floor

Fire-Resistance-Rated Construction (IBC Chapter 7):

Shaft Enclosures:

Shaft enclosures connecting up to three stories shall be constructed of 1-hour rated construction. This requirement applies to stairs, elevators, and mechanical shafts.

Enclosed elevator lobbies are not required where an elevator shaft enclosure connects less than four stories.

Fire Partitions:

Fire resistance rated corridor walls are not required when the building is equipped throughout with an automatic sprinkler system.

Interior Finishes (IBC Chapter 8):

Finish Classifications by Occupancy:

A-3 Fully Sprinklered

Exit Enclosures and Exit Passageways: Class B; flame spread 26-75; smoke developed 0-450

Corridors: Class B; flame spread 26-75; smoke developed 0-450

Rooms and Enclosed Spaces: Class C; flame spread 76-200; smoke developed 0-450

B Fully Sprinklered

Exit Enclosures and Exit Passageways: Class B; flame spread 26-75; smoke developed 0-450

Corridors: Class C; flame spread 76-200; smoke developed 0-450

Rooms and Enclosed Spaces: Class C; flame spread 76-200; smoke developed 0-450

S-1 Fully Sprinklered

Exit Enclosures and Exit Passageways: Class C; flame spread 76-200; smoke developed 0-450

Corridors: Class C; flame spread 76-200; smoke developed 0-450

Rooms and Enclosed Spaces: Class C; flame spread 76-200; smoke developed 0-450

Floor Finishes: materials complying with DOC FF-1 "pill test".

Fire Protection Systems (IBC Chapter 9):

Current NPS policy would mandate the installation of an automatic fire suppression system for this building.²² Per the "Historic Property Assessment Matrix" in NPS Reference Manual 58 "Structural Fire,"

²² Director's Order 58: Structural Fire Management states, "In the preservation of historic structures and museum and library collections, every attempt will be made to comply with national building and fire codes. When these cannot be met without significantly impairing a structure's integrity and character, management and use of the

a fire alarm system is required and the Park should install a fire suppression system. A variance request would be required if no system is installed.

Automatic Sprinkler Systems:

The installation of an automatic sprinkler system is required for Use Group A-3. Because the building will be categorized as nonseparated mixed-use, an automatic sprinkler system is required throughout the building.

Standpipe Systems:

Standpipe systems are not required where the uppermost floor level is 30 feet or less above the lowest level of fire vehicle access.

Portable Fire Extinguishers:

Portable fire extinguishers are required and shall be located in accordance with IBC section 906.

Fire Alarm and Detection Systems:

We recommend that the entire building be fully protected with a fire alarm and detection system to provide early warning to occupants and the NPS.

Means of Egress (IBC Chapter 10)

Per section 10003.1 of IEBC, existing door openings and corridor and stairway widths less than those specified elsewhere in this code may be approved, provided that, in the opinion of the code official, there is sufficient width and height for a person to pass through the opening or traverse the means of egress. However, the swing of the main exit doors may need to swing in the direction of the path of exit travel as there is not another approved means of egress to serve the total occupant load.

An accessible means of egress are not required in alterations to existing buildings.

Exit access travel distance shall not exceed 250 feet for assembly and storage uses equipped throughout with an automatic sprinkler system. The design professional preparing construction documents will need to configure any new partitions and corridors to continue to comply.

Accessibility (IBC Chapter 11):

When a building facility or element is altered it shall comply with the requirements of Chapter 11 of the International Building Code and the current accessibility code ICC/ANSI A117.1, unless technically infeasible. When technically infeasible, compliance shall be to the maximum extent possible. At least one accessible route shall be provided from accessible parking spots and sidewalks to the accessible building entrance. An accessible route connecting accessible floor levels within the building is required.

structure will be modified to minimize potential hazards rather than modifying the structure itself. Subject to the previous paragraph, when warranted by the significance of a historic structure or a museum or library collection, adequate and appropriate fire detection, warning, and suppression systems will be installed."

At least 60 percent of all public entrances shall be accessible. Accessible means of egress are not required in alterations to existing buildings. Accessible parking spaces located on an accessible path to an accessible building entrance are required when parking is provided. Door hardware and other operating mechanisms shall be accessible. Toilet rooms and drinking fountains shall be accessible. Room, directional and egress signage shall comply with the provisions of the code.

Due to the difference in elevation between grade and the first floor, ramps or platform lifts at the exterior of the building are required to provide accessible public entrances.

Energy Efficiency (IBC Chapter 13):

Alterations, renovations or repairs to the building envelope, mechanical, service water heating, electrical distribution or illumination systems shall conform to the International Energy Conservation Code (IECC) for new construction. Provisions to the IECC shall not be mandatory for historically significant buildings listed (or eligible) on state, local, or National Register of Historic Places.

Structural Design (IBC Chapter 16):

Comply with the calculated allowable loads.

Historic Buildings (IBC Chapter 34)

Chapter 34, Section 3407 "Historic Buildings" relaxes strict compliance with the life safety provisions of the code. When the actual design for the rehabilitation is taken further, individual life safety and code issues can be examined.²³

Accessibility Requirements:

As a Federal facility, this structure must comply with the Architectural Barriers Act Accessibility Standards (ABAAS).²⁴ These standards are consistent with those of the Americans with Disabilities Act (ADA). Accessibility requirements in the IBC should also be met.

Accessible Route:

The Farmhouse is required to have an accessible route from the site through one entrance to the public spaces within the building to the maximum extent possible. The accessible route is not required to extend to the second story per F206.2.3 Exception 6 and the Accessibility chapter in IBC as this would require extreme alteration of the interior. To install a lift, both floors would lose considerable usable space. An exterior lift and access to the upper floor would be unacceptable.

²³ Per section 3407.1, "The provisions of this code relating to the construction, repair, alteration, addition, restoration and movement of structures, and change of occupancy shall not be mandatory for historic buildings where such buildings are judged by the building official to not constitute a distinct life safety hazard."

²⁴ ABAAS F201.1 and F202.1 require alterations to existing buildings to comply with these requirements.

Toilet Facilities:

As it is likely that NPS would desire to have a unisex toilet room within the Farmhouse, then the toilet room should meet the ABAAS accessibility standards. The exception in F203.2 Existing Elements does not obviate or limit in any way a federal agency's obligation to provide reasonable accommodations pursuant to the Rehabilitation Act of 1973. Federal employees with disabilities are entitled to reasonable accommodations in the workplace. Such accommodations may include modifications to areas of the workplace, including the common areas such as toilet rooms. Reasonable accommodations are always provided on a case-by-case basis and are specific to the unique needs of a person. As such, an accommodation may be consistent with, or depart from, the specific technical requirements of ABAAS, or any other document. One unisex toilet room complying with F213.2.1 is allowed per Exception 2 in F213.2.10 ABAAS F213.2 requires toilet rooms to comply with F603 Toilet and Bathing Rooms. Compliance with F604 Water Closets and Toilet Compartments would also be required as well as all other requirements for turning space and clear floor space.

Drinking Fountain:

A minimum of two drinking fountains are required by ABAAS F211.2 but the Exception states that a single drinking fountain that complies with F602.1-602.7 (with dual spouts) is allowed to be substituted for two separate drinking fountains. The drinking fountain could be associated with a new comfort station or at the Farmhouse.

Alternatives for Treatment

Treatment and Work Recommendations:

This section presents and evaluates alternative approaches to realization of the ultimate treatment. Alternatives are presented in both text and graphic form. Analysis addresses the adequacy of each solution in terms of impact on historic materials, effect on historic character, compliance with NPS policy, and other management objectives. The section concludes with elaboration on the recommended course of action and specific recommendations for preservation treatments.

Introduction:

There are three distinct alternatives that have been discussed for the future utilization of this building. These are discussed below. The third option, mothball, could be done now until funding is available for a future utilization.

Alternate #1 - Restoration:

A more intensive and complex project would restore this building to its appearance during the period of significance. This would primarily entail restoring the exterior with the result that the building and site could become very close to the mid-19th century appearance. Partnered with a restoration of the Barn, the Bowman-Hite farmstead could approach a composite whole. The restoration, aside from restoring materials, would also provide accessible access for visitors as well as have the potential to increase the live load capacity if required for larger groups of visitors. There would be six primary project work elements:

1. Site work - Provide accessible paths and improve drainage around the building.
2. Structural work - Complete stabilization work and increase live load capacity for an Assembly use.
3. Restoration - Restore the ca. late 1850s brick Hite farmhouse (ell).
4. Demolition - Remove the Whitman-era additions (1967-2003).
5. Re-creation - Re-create the ca. late 1870s Pirkey rear frame addition
6. Systems - Upgrade all mechanical, electrical, and plumbing systems. Install fire or smoke detection, along with an intrusion alarm system. Install a public toilet room. Install a fire suppression system.

The rough order of magnitude estimate of construction costs for this alternative would be range from approximately \$806,000 to \$926,900. See Appendix II for the detailed estimate work sheet. This assumes construction would start in Spring 2016 and likely be complete by 2017.

In this alternative, the building would improve the interpretation of the farmstead and assist in meeting the goals of the unified trail system. The largest drawback of this alternative is the cost.

Alternative #2 - Preservation:

A straightforward project would include selective exterior repair and restoration work. This minimal project would continue the current practices of stabilization, repair, and replacement if necessary. The use of the Farmhouse could be used as a preservation teaching tool for use by the Park and academic institutions. There would be five primary project work elements:

1. Site work - Provide accessible paths and improve drainage around the building.
2. Structural work - Stabilization work.
3. Exterior - Repoint masonry, repair and repaint wood elements.
4. Roofing - Provide a new roof to eliminate moisture infiltration from the roof.
5. Systems - Provide lighting and convenience power fixtures. Install a fire or smoke detection, along with an intrusion alarm system.

The rough order of magnitude estimate of construction costs for this alternative would be range from approximately \$809,000 to \$930,350. See Appendix II for the detailed estimate work sheet. This assumes construction would start in Spring 2016 and likely be complete by 2017.

Alternate #3 - Mothball:

As the building has been unoccupied and largely unused for many years, it may be simpler to do selective stabilization and repair then seal the building up as much as possible to reduce or eliminate moisture infiltration and animal intrusion. If a significant project were not possible in the near future, then the building should be secured and mothballed in the interim to protect it from detrimental effects such as weathering and vandalism. There would be five primary project work elements:

6. Insect/animal extermination - Provide metal mesh behind any openings.
7. Site work - Improve site drainage around the building to reduce/eliminate moisture infiltration from the ground and surrounding site.
8. Exterior - Repoint masonry, repair and repaint wood elements.
9. Roofing - Provide a new roof to eliminate moisture infiltration from the roof.
10. Systems - Turn off utilities except for electric power. Provide temporary lighting and convenience power fixtures should be installed to facilitate future interior survey and inspections. Install a fire or smoke detection, along with an intrusion alarm system. Provide fans to assist natural ventilation.

The rough order of magnitude estimate of construction costs for this alternative would be range from approximately \$179,000 to \$205,850. See Appendix II for the detailed estimate work sheet. This assumes construction would start in Spring 2016 and likely be complete by 2017.

Recommended Alternative - Alternate #1 - Restoration:

The recommended alternative is Alternate #1 - Restoration. This alternative will fulfill the preferred use of the Farmhouse by returning the structure to a condition of usefulness to the Park and furthering the Park's interpretive message on the Civil War and the role of farmsteads. This alternative will also help "tell the story," one of the goals of the proposed unified trail system throughout CEBE. A restored farmhouse would become a scene setter and as a destination for organized interpretation consisting of groups of ten to fifteen persons. The current condition of the Farmhouse does not lend itself for anything other than as a set piece on the land to walk around the exterior and observe. Once additional structural and building repairs and restoration activities are completed, the interior could be shown to the public and possibly even used to hold events.

Depending on accessible access to the house, the re-creation of the ca. 1870s frame addition could be the location for the unisex staff/visitor toilet (comfort station), utility sink, and the cellar could contain mechanical and fire protection equipment while the rest of the first floor would remain open for Park activities (either staff use or public interpretation). Ideally, the house would be accessible at both the first floor and second floor, but not necessarily the cellar nor the attic. The project would include extending and upgrading the mechanical, electrical, and plumbing systems.

Treatment and Work Recommendations:

Preservation Treatment Recommendations:

As this property is eligible to be listed on the National Register of Historic Places, all treatments should be in compliance with the Secretary of the Interior's Standards and Guidelines for Treatments of Historic Properties. The following provides a narrative regarding treatments to the major site and building elements. Once this project moves into a formal "design" phase, it would be expected that these general guidelines would be made much more precise for each significant site and building element.

The overall condition of the farmhouse is fair to good; however there are some concerns that need immediate attention. The primary areas of concern deal mostly with moisture problems related to poor site drainage and the north and west elevations.

Site Features:

There are few, if any, significant site features remaining for Farmhouse at this time. The vegetation around the house was removed and was not from the period of significance. Features include such elements as the setting, topography, and adjacent outbuilding. Their condition is fair. The primary areas of concern deal mostly with moisture problems related to poor site drainage.

For Mothball treatment:

- Provide clear path to door on south elevation.
- Re-grade site around the Farmhouse to ensure proper drainage away from the walls.

For Restoration treatment:

Setting:

- Retain and protect the setting of the Farmhouse, that being part of a farmstead.
- Protect and maintain the surrounding lane and topography around the Farmhouse.
- Recreate any missing setting features from the period of significance if they are discovered in future research.

Buildings and structures:

- Restore adjacent outbuildings that date to the period of significance.
- Protect, maintain, and repair the adjacent outbuildings from further deterioration.
- Reconstruct any missing adjacent outbuildings from the period of significance if they are discovered in future research.
- Relocate adjacent outbuilding to its historic location east of the Farmhouse (where the Whitman-era garage was located).

Topography:

- Retain and preserve the siting (i.e. do not re-grade the landscape around the Farmhouse).
- Protect and maintain the siting so that erosion does not alter the slope of the land around the Farmhouse.
- Re-grade site around the Farmhouse to ensure proper drainage away from the walls.

Circulation routes:

- Provide an accessible brick/gravel path to the Farmhouse.
- Connect accessible paths to the Barn to the proposed trail system.
- Provide brick/gravel path to main entrance on west elevation.
- Provide appropriate steps and front porch to main entrance on west elevation.

Vegetation:

- Remove vegetation away from foundation walls.
- Prune vegetation to maintain vistas to the north and west.
- If discovered upon further research, replant with vegetation from the period of significance.

Exterior Features:

The exterior character-defining features should be repaired and restored where possible. Any exterior features that cannot be preserved due to excessive deterioration should be replaced in kind. Restoration of the exterior to its appearance during the period of significance will have the greatest impact on the interpretation of this historic resource. The overall condition of the exterior is fair.

Overall massing:

For Mothball treatment:

- Retain and preserve the current overall massing.

For Restoration treatment:

- Remove recent Whitman era additions (1967-2003).
- Remove concrete slab and CMU perimeter of former garage.
- Re-create the late 1870s Pirkey rear frame addition.

Walls:

The condition of most of the walls is good to fair.

For all treatments (Mothball, Preservation, Restoration):

- Repoint stone foundation on north and west elevations. Remove inappropriate mortar, i.e. Portland Cement mortar.
- Repoint brick walls on west elevation. Assess structural repairs. Coordinate repairs with repairs to the interior face of brick walls.
- Routine selective repointing of the mortar joints should continue on a cyclical basis, perhaps every 10 to 15 years. Hand tools should be used to remove any loose mortar. The repair mortar mix should be designed to match the visual qualities, composition, texture, and physical properties of the historic mortar. In particular, effort should be made to match the sand (size, distribution, color, shape, and surface luster) in the historic mortar. The historic tooling technique should be replicated.
- Replace-in-kind missing bricks on west elevation.²⁵
- The existing foundations should be evaluated.

For Mothball and Preservation treatments:

- Repaint all wood components, including Whitman era additions (1967-2003).
- Replace rotten portions of joists along north elevation under door of the Whitman era additions (1967-2003).
- Weatherproof the joint between upper and lower siding on the east elevation.
- Replace plywood sheathing under soffit on south facade over door. Provide new soffit siding. Reattach existing.
- Seal joints at aluminum verge boards on north and south elevations.

²⁵ This appears to have been taken care of between the time of the Part 1 of the HSR and QEA's site visit in 2015.

For Restoration treatment:

- Remove paint from brick walls. Restore to unpainted appearance from the period of significance.
- Remove inappropriate mortar (mixes with high Portland Cement content).
- Repoint all stone foundation and brick upper walls with compatible and matching mortar from the period of significance in color, texture, and profile.
- Repoint stone foundation with V joint (match historic tooling).
- Reset and realign bricks to left of door sill.
- Repair east walls where Whitman era additions (1967-2003) were removed.
- Provide historically appropriate shutters.
- Preserve and retain stud walls, framing members, and window trim of late 1870s Pirkey rear frame addition.
- Reconstruct the rest of the late 1870s Pirkey rear frame addition.
- Remove aluminum over wooden verge board on both north and south elevations. Replace rotten verge board.

Doors and windows:

The six-over-six sash windows and the two-over-two sash windows both date to the period of significance and should be preserved. If a unified appearance is desired, the six-over-six sash windows should be consistent on the ca. 1850s brick portion and the two-over-two sash windows should be consistent on the ca. 1870s rear frame addition. The paint finishes are in poor condition and there is bare wood visible. Most of the window sills have rot. All wooden elements should be repaired where possible. Those in deteriorated conditions will be replaced in-kind.

For all treatments (Mothball, Preservation, Restoration):

- Replace-in-kind all door and window sills on the west elevation.
- Repaint all wood components.
- Replace fully rotten sills and framing members.

For Mothball treatment:

- Replace all rotten sills.
- Stabilize the basement north elevation window. Provide a vent in a fixed sash.
- Confirm all locks on doors and windows are in operable condition and can be locked.
- Replace sill on east elevation window (left window in room 210).
- Replace sealant under sills of the windows from the Whitman era additions (1967-2003).
- Replace sill and rotten framing members of attic window. Reattach screen.
- Repaint all wood components.

For Restoration treatment:

- Re-create the Greek Revival porch on the west elevation at the main entrance.
- Restore windows. Replace two west elevation two-over-two sash windows and two north elevation two-over-two windows with six-over-six sash windows.
- Restore doors.
- Provide new trim to cover joint between brick wall and framing members.
- Remove the broken pediment over the door on the west elevation. Repair brick when removed.
- Replace-in-kind the basement north elevation window.

- Restore door and window hardware.
- Preserve window trim from late 1870s Pirkey rear frame addition.
- Restore attic window. Replace sill and rotten framing members of attic window. Provide new louvers to match the two existing. Provide screen on the interior face of the window.

Roof and chimneys:

The roof will need to be replaced in any alternative for treatment. Currently there is only roofing paper covering. The new roof should be historically appropriate, e.g. wood shingle.

For all treatments (Mothball, Preservation, Restoration):

- Clean gutters, downspouts, and drains.
- Extend downspout discharges away from the building.
- Replace rusted gutter straps.
- Confirm no holes/openings between gutter and roof. Repair any openings between gutters and roof.
- Provide new roof. Replace roofing paper and lathe.
- Repoint chimneys (west, center, and east).
- Confirm chimney caps are intact and there is no moisture infiltration nor animal ingress.
- Confirm stability of chimneys.

For Mothball treatment:

- See previous.

For Restoration treatment:

- Confirm size of drainage system components and if undersized, replace-in-kind.
- Restore the original brick chimneys.
- Provide a new roof with one appropriate to the period of significance, e.g. wood shingle.
- Remove paint on west chimney.
- Retain paint ghosting on east chimney.
- Provide gutter and downspouts on reconstructed late 1870s Pirkey rear frame addition.
- Confirm if straps on center chimney were present during the period of significance. If not, remove straps, confirm structural stability, repair, and repoint.
- Remove upper section of east chimney and reconstruct top to replicate its appearance during the period of significance.



Figure 6: View of southwest corner, towards northeast.
(Photograph by QEA, 2015)



Figure 7: View of northwest corner, towards southeast.
(Photograph by QEA, 2015)



Figure 8: View of southeast corner, towards northwest.
(Photography by QEA, 2015)



Figure 9: View of west facade. (Photograph by QEA, 2015)



Figure 10: View of north facade. (Photograph by QEA, 2015)



Figure 11: View of east facade. (Photograph by QEA, 2015)



Figure 12: View of south facade. (Photograph by QEA, 2015)



Figure 13: The front door surround to Springdale in Frederick County, Virginia. While added during the mid-19th century, this Greek Revival surround is similar in many respects to the less ornate example at the Bowman-Hite house, especially the sidelights and transom. (Photograph from the Handley Regional Library, early 20th century)

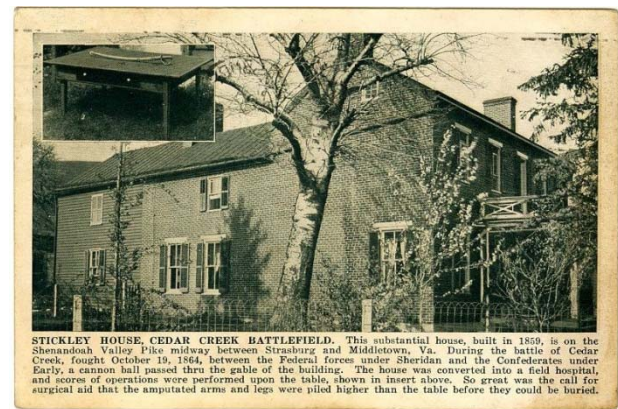


Figure 14: Early-20th century postcard of the Stickley house located about a mile north of the Bowman-Hite farm along both the Valley Pike and Cedar Creek. The structure was first built in 1859 (burned the same year and then re-built in 1860), and shares similarities with the Bowman-Hite house, including the floor plan, use of 1:5 common bond, and the large glass panes used for the windows. (Strasburg Museum Postcard Collection)



Figure 15: View of the Bowman-Hite farm, ca. 1960. Note the proximity of the outbuilding to the rear frame addition.

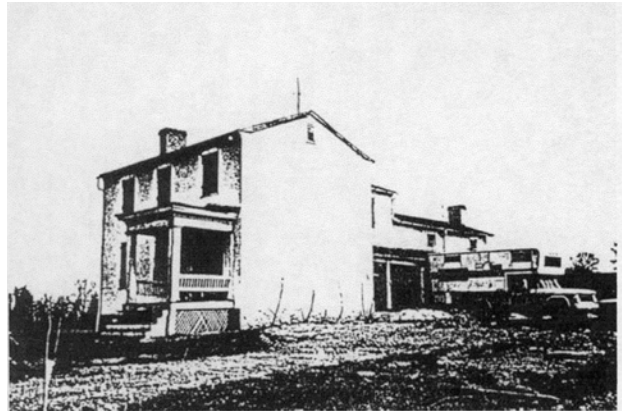


Figure 16: View of the Farmhouse, ca. 1971, shortly after the Whitham's purchased the property. Note the presence of the Greek Revival front porch, as well as the side porch and rear frame addition in the lower image. (Bottom photograph by unknown photographer, Department of Historic Resources, 1971)

Interior Features:

The interior character-defining features should be repaired and restored where possible. Any exterior features that cannot be preserved due to excessive deterioration should be replaced in kind. Restoration of the interior to its appearance during the period of significance will have the greatest impact on the interpretation of this historic resource. The overall condition of the interior is fair. The basement is in poor condition due to moisture infiltration. The first floor is in overall good condition. The second floor is in overall good condition. There is evidence moisture infiltration (humidity, mold, roof leaks), a few cracks to be monitored, and animal intrusions.

Documentation has been presented in the previous chapters to establish that Whitman-era addition has substantially altered the ca. 1870s rear frame addition. There is not much remaining fabric or finishes from the ca 1870s rear frame addition. As original elements are discovered through future selective probes or demolition, these elements should be preserved. It will be beneficial to add thermal insulation in the attic spaces over the ell and on the inside of the brick walls.

Room 001 - Basement/Crawl Space:



Figure 17: Northwest view of Room 001 - Basement/Crawl Space. (Photography by QEA, 2015)



Figure 18: Northeast view of Room 001 - Basement/Crawl Space. (Photography by QEA, 2015)



Figure 19: Southeast view of Room 001 - Basement/Crawl Space. (Photography by QEA, 2015)



Figure 20: Southwest view of Room 001 - Basement/Crawl Space. (Photography by QEA, 2015)

For all treatments (Mothball, Preservation, Restoration):

- Properly ventilate basement to reduce moisture and mold growth.
- Replace rotten wood lintel at basement window.
- Provide a sump pump in northwest corner where there likely was one previously.
- Provide metal mesh at each crawl space opening.

For Mothball treatment:

- Seal up basement window and add a vent.

For Preservation treatment:

Floors:

- Remove poured concrete slab to reveal dirt floor to allow passage of moisture.
- Clean floors. Remove animal droppings.

Walls:

- Retain existing whitewash on walls.

Doors: N/A

Windows:

- Reconstruct window.

Ceilings:

- Confirm structural stability of floor joists. Repair floor joists.
- Provide sister to joists with large 4" x12" notch above the window on the north elevation.
- Clean ceiling. Remove cobwebs.

Trim: N/A

Miscellaneous: N/A

Light Fixtures:

- Provide a utilitarian light fixture.

For Restoration treatment:

Floors:

- Remove poured concrete slab to reveal dirt floor to allow passage of moisture.
- Provide a dehumidifier.
- Clean floors. Remove animal droppings.

Walls:

- Re-whitewash basement walls. This will reduce moisture and mold growth.

Doors: N/A

Windows:

- Reconstruct window.

Ceilings:

- Confirm structural stability of floor joists. Repair floor joists. Increase loading capacity of floor joists by sistering.
- Provide sister to joists with large 4" x12" notch above the window on the north elevation.
- Clean ceiling. Remove cobwebs.

Trim: N/A

Miscellaneous: N/A

Light Fixtures:

- Provide a utilitarian light fixture.

Room 101 - Stair Hall:



Figure 21: West view of Room 101 - Stair Hall. (Photography by QEA, 2015)



Figure 22: Northeast view of Room 101 - Stair Hall. (Photography by QEA, 2015)



Figure 23: Southeast view of Room 101 - Stair Hall. (Photography by QEA, 2015)



Figure 24: South view of Room 101 - Stair Hall. (Photography by QEA, 2015)

For Mothball treatment:

Floors:

- Clean floors.

Walls:

- Retain existing plaster.
- Sound plaster walls. Remove loose plaster.
- Patch hole in the northeast corner (e.g. location of duct and vent removal).
- Remove flaking and loose paint.

Doors:

- None.

Windows:

- None.

Ceilings:

- Clean ceiling. Remove cobwebs.
- Remove loose plaster.

Trim:

- None.

Miscellaneous:

- None.

Light Fixtures:

- None.

For Restoration treatment:

Floors:

- Clean floors.
- Remove carpet remnants from stair treads.
- Refinish floors.

Walls:

- Perform paint analysis. Assess if stenciling also exists on first floor of stair hall.
- Sound plaster walls. Remove loose plaster. Repair and stabilize plaster.
- Restore stenciling (if exists).
- Remove flaking and loose paint. Repaint.

Doors:

- Perform additional paint analysis.
- Replace door latch and knob at west door with historically appropriate hardware.
- Repaint.

Windows:

- Perform additional paint analysis.
- Rehabilitate sidelites and transom on west wall.
- Repaint.

Ceilings:

- Perform additional paint analysis.
- Repaint.

Trim:

- Perform additional paint analysis.
- Repair wood trim at sidelites and transom.
- Repaint.

Miscellaneous:

- Confirm stability of wood railing.
- Repaint pickets.

Light Fixtures:

- Install historically-appropriate light fixtures to provide code-compliant foot-candles.

Room 102 - Front Parlor:



Figure 25: Northwest view of Room 102 - Front Parlor.
(Photography by QEA, 2015)



Figure 26: Northeast view of Room 102 - Front Parlor.
(Photography by QEA, 2015)



Figure 27: Southeast view of Room 102 - Front Parlor.
(Photography by QEA, 2015)



Figure 28: Southwest view of Room 102 - Front Parlor.
(Photography by QEA, 2015)

For Mothball treatment:

Floors:

- Clean floors.
- Patch hole in the southwest corner (e.g. location of duct and vent removal).

Walls:

- Retain existing plaster.
- Sound plaster walls. Remove loose plaster.
- Patch holes.
- Remove flaking and loose paint.

Doors:

- None.

Windows:

- None.

Ceilings:

- Remove loose plaster.

Trim:

- None.

Miscellaneous:

- Confirm fireplace is sealed from animal and insect infiltration.

Light Fixtures:

- None.

For Restoration treatment:

Floors:

- Clean floors.
- Patch hole in the northeast corner (e.g. locations of duct and vent removal). Patch with replacement-in-kind wood flooring.
- Refinish floors.

Walls:

- Perform additional paint analysis.
- Remove wood framing along west and north walls.
- Sound plaster walls. Remove loose plaster. Repair and stabilize plaster.
- Remove flaking and loose paint. Repaint.
- Assess structural repairs for brick exterior walls.
- Consider adding insulation along exterior walls.

Doors:

- Perform additional paint analysis.
- Remove paint from door hardware.
- Repaint.

Windows:

- Perform additional paint analysis.
- Rehabilitate windows on west wall. Remove vent.
- Repaint.

Ceilings:

- Perform additional paint analysis.
- Repaint.

Trim:

- Perform additional paint analysis.
- Reconstruct wood wall base where missing. Replace-in-kind.
- Remove and relocate window trim to plaster wall when wood framing is removed.
- Repaint.

Miscellaneous:

- Remove Whitman-era stone surround at fireplace. Assess if original material exists behind the stone.
- Restore surround.
- Confirm fireplace is sealed from animal and insect infiltration.

Light Fixtures:

- Install historically-appropriate light fixtures to provide code-compliant foot-candles.

Room 103 - Dining Room:

[Summary of conditions and then treatments]



Figure 29: Northwest view of Room 103 - Dining Room.
(Photography by QEA, 2015)



Figure 30: Northeast view of Room 103 - Dining Room.
(Photography by QEA, 2015)



Figure 31: Southeast view of Room 103 - Dining Room.
(Photography by QEA, 2015)



Figure 32: Southwest view of Room 103 - Dining Room.
(Photography by QEA, 2015)

For Mothball treatment:

Floors:

- Clean floors.
- Patch holes in the southwest corner and along north wall (e.g. location of duct and vent removal).

Walls:

- Retain existing plaster.
- Sound plaster walls. Remove loose plaster.
- Remove backing paper adhered to north wall.
- Remove mold.
- Patch holes.
- Remove flaking and loose paint.

Doors:

- None.

Windows:

- None.

Ceilings:

- Remove loose plaster.
- Patch opening along west wall.

Trim:

- None.

Miscellaneous:

- Confirm fireplace is sealed from animal and insect infiltration.

Light Fixtures:

- None.

For Restoration treatment:

Floors:

- Clean floors.
- Patch holes in the southwest corner and along north wall (e.g. locations of duct and vent removal). Patch with replacement-in-kind wood flooring.
- Refinish floors.

Walls:

- Perform additional paint analysis.
- Remove wood framing along west and north walls.
- Remove backing paper adhered to north wall.
- Remove mold.
- Remove modern wallpaper. Conserve wallpaper from the period of significance.
- Sound plaster walls. Remove loose plaster. Repair and stabilize plaster.
- Remove flaking and loose paint. Repaint.
- Consider recreating historic wallpaper.
- Assess structural repairs for brick exterior walls.
- Consider adding insulation along exterior walls.

Doors:

- Perform additional paint analysis.
- Remove paint from door hardware.
- Repaint.

Windows:

- Perform additional paint analysis.
- Rehabilitate windows on north wall. Remove vent.
- Repaint.

Ceilings:

- Perform additional paint analysis.
- Remove wallpaper.
- Patch opening along west wall.
- Repaint.

Trim:

- Perform additional paint analysis.
- Remove and relocate window trim to plaster wall when wood framing is removed.
- Repaint.

Miscellaneous:

- Remove Whitman-era stone surround at fireplace. Assess if original material exists behind the stone.
- Restore surround.
- Confirm fireplace is sealed from animal and insect infiltration.

Light Fixtures:

- Install historically-appropriate light fixtures to provide code-compliant foot-candles.

Room 104 - Kitchen:



Figure 33: Northwest view of Room 104 - Kitchen.
(Photography by QEA, 2015)



Figure 34: Northeast view of Room 104 - Kitchen.
(Photography by QEA, 2015)



Figure 35: Southeast view of Room 104 - Kitchen.
(Photography by QEA, 2015)



Figure 36: West view through former window opening of the north wall of Room 104 - Kitchen. (Photography by QEA, 2015)
Note the clapboard siding on the backside of the north wall (left) and the ghost of the porch roof on the west brick wall (right).



Figure 37: Detail of north wall. (Photography by QEA, 2015)
Note the former window opening and the beadboard.



Figure 38: Detail of backside of north wall facing the stairs to the basement. (Photography by QEA, 2015)
Note the former window opening and the clapboard siding.

For Mothball/Preservation treatment:

Floors:

- Clean floors.
- Patch hole in southwest corner e.g. location of duct and vent removal).

Walls:

- Patch holes.

Doors:

- None.

Windows:

- None.

Ceilings:

- Seal any openings (e.g. locations of duct and vent removal).

Trim:

- None.

Miscellaneous:

- None.

Light Fixtures:

- None.

For Restoration treatment:

This room would be demolished as part of a restoration to the period of significance. Demolition would include modern finishes. The restoration of the 1870s Pirkey rear frame addition would include some components of this room such as historic north and south wood stud framing, the window opening in the north wall and associated wood trim, and any beadboard or clapboard remnants. As part of the restoration, a new room to recreate the Pirkey rear frame addition would be constructed in the location of this room and the adjacent den. A door on the north wall would open to the small rear porch and another door on the south elevation would open to a long side porch. See the conjectural 1870s rear frame addition drawings in Appendix I.

Floors:

- None.

Walls:

- Retain and preserve west brick wall. Perform additional paint analysis on brick walls.
- Retain and preserve stud wall with beadboard finish from the former 1870s addition (north wall and south walls). Perform additional paint analysis on beadboard.
- Remove gypsum wall board finish on stud wall. Locate framing of former window in the 1870s frame addition.
- Retain and preserve wood clapboard on backside of north wall.

Doors:

- Reconstruct door on south wall.

Windows:

- Reconstruct window on south wall. Retain and preserve wood frame in window opening on the north wall.

Ceilings:

- Retain and preserve beadboard finish.
- Remove bulkhead around perimeter of the room.

Trim:

- Reconstruct trim for doors and windows.

Miscellaneous:

- None.

Light Fixtures:

- Install historically-appropriate light fixtures to provide code-compliant foot-candles.

Room 105 - Den:



Figure 39: Northwest view of Room 105 - Den. (Photography by QEA, 2015)



Figure 40: Northeast view of Room 105 - Den. (Photography by QEA, 2015)



Figure 41: Southeast view of Room 105 - Den. (Photography by QEA, 2015)



Figure 42: Southwest view of Room 105 - Den. (Photography by QEA, 2015)

For Mothball treatment:

Floors:

- Clean floors.
- Patch openings in floor. Provide temporary floorboards or plywood.
- Patch hole in northeast corner(e.g. location of duct and vent removal).

Walls:

- Patch openings.
- Patch holes.

Doors:

- None.

Windows:

- None.

Ceilings:

- Seal any openings (e.g. locations of duct and vent removal).

Trim:

- None.

Miscellaneous:

- Confirm fireplace is sealed from animal and insect infiltration.

Light Fixtures:

- None.

For Restoration treatment:

This room would be demolished as part of a restoration to the period of significance. Demolition would include the stair to the second floor and modern finishes. The restoration of the 1870s Pirkey rear frame addition would include some components of this room such as historic wood stud framing, the chimney, and any beadboard or clapboard remnants. As part of the restoration, a new room to recreate the Pirkey rear frame addition would be constructed in the location of this room and the adjacent kitchen. A door on the north wall would open to the small rear porch and another door on the south elevation would open to a long side porch. See the conjectural 1870s rear frame addition drawings in Appendix I.

Floors:

- Remove tile flooring and plywood subfloor.
- Assess condition of floorboards. Repair. Refinish floorboards.

Walls:

- Retain brick chimney breast.
- Retain and preserve stud wall in southeast corner of east wall and along south wall.
- Remove modern framing on south wall.
- Remove wood finish on south wall. Locate framing of former window in the 1870s frame addition.

Doors:

- Reconstruct doors on south and north walls.

Windows:

- Reconstruct windows on south wall. Retain and preserve wood frame in stud wall.

Ceilings:

- Remove gypsum wallboard finish.
- Assess if beadboard finish exists. Repair finish or replace-in-kind.

Trim:

- Reconstruct trim for doors and windows.

Miscellaneous:

- Remove Whitman-era hearth at fireplace. Assess if original material exists.
- Perform additional paint analysis on brick chimney breast.
- Restore fireplace surround. Refer to other original mantels in the house and in nearby houses of similar construction dates to inform the design of the mantel.
- Confirm fireplace is sealed from animal and insect infiltration.

Light Fixtures:

- Install historically-appropriate light fixtures to provide code-compliant foot-candles.

Room 107 - Long Room:



Figure 43: Northwest view of Room 107 - Long Room.
(Photography by QEA, 2015)



Figure 44: Northeast view of 107 - Long Room. (Photography by QEA, 2015)



Figure 45: Southeast view of Room 107 - Long Room.
(Photography by QEA, 2015)



Figure 46: Southwest view of Room 107 - Long Room.
(Photography by QEA, 2015)

For Mothball treatment:

Floors:

- Clean floors.
- Patch openings.
- Patch hole along south wall (e.g. location of duct and vent removal).

Walls:

- None.

Doors:

- None.

Windows:

- None.

Ceilings:

- Patch hole along north wall.

Trim:

- None.

Miscellaneous: N/A

- None.

Light Fixtures:

- None.

For Restoration treatment:

This room would be demolished as part of a restoration to the period of significance.

As part of the restoration, the first floor windows would be reconstructed.

Floors:

- Assess if cistern is located under floor.
- Reconstruct porch floor.

Walls:

- Continue to monitor crack at jack arch above west door.
- Retain and preserve brick walls (west end wall and left side of north wall shared with Room 203 - East Bedroom). Perform additional paint analysis on brick walls.
- Retain and preserve stud walls from former 1870s addition (middle and right of north wall shared with Room 104 - Kitchen and Room 105 - Den). Remove gypsum wall board finish on stud wall. Retain and preserve siding. Perform additional paint analysis on siding. Locate framing of former door in the 1870s frame addition.
- Retain and utilize porch rafter pockets in north brick wall for reconstruction of 1870s porch.

Doors:

- Remove doors into Room 201 - Stair Hall and Room 203 - East Bedroom.

Windows:

- Reconstruct windows into Room 201 - Stair Hall and Room 203 - East Bedroom. Retain and preserve wood frame in window opening into Room 203 - East Bedroom. Provide Dutchman repair to sill of window into Room 203 - East Bedroom. Perform paint analysis on wood trim around window into Room 203 - East Bedroom.

Ceilings:

- Reconstruct porch roof.

Trim:

- Perform additional paint analysis on door and window trim at brick walls.
- Perform additional paint analysis on window trim at north stud wall.

Miscellaneous:

- None.

Light Fixtures:

- None.

Room 108 - Garage:

This room longer exists. All that remains is a concrete slab and a low perimeter wall of concrete masonry units.

For Mothball treatment:

- No work.

For Preservation treatment:

- No work.

For Restoration treatment:

- Remove slab and perimeter wall. Replant vegetation.
- Review data with park on location of outbuildings at this location.
- Plan for possible relocation of nearby outbuilding.

Room 201 - Stair Hall:



Figure 47: West view of Room 201 - Stair Hall. (Photography by QEA, 2015)



Figure 48: Northeast view of Room 201 - Stair Hall. (Photography by QEA, 2015)



Figure 49: East view of Room 201 - Stair Hall. (Photography by QEA, 2015)



Figure 50: South view of Room 201 - Stair Hall. (Photography by QEA, 2015)

For Mothball treatment:

Floors:

- Clean floors.

Walls:

- Retain existing plaster.
- Sound plaster walls. Remove loose plaster.
- Patch opening above door to Room 204 - Hall.
- Patch hole in the northeast corner (e.g. location of duct and vent removal).
- Remove flaking and loose paint.

Doors:

- None.

Windows:

- None.

Ceilings:

- Remove loose plaster.

- Remove water-damaged plaster. Assess structural stability of roof joists. Repair as necessary. Patch plaster. Coordinate roof joists repair with roofing repairs (sheathing, roofing, and flashing).

Trim:

- None.

Miscellaneous:

- None.

Light Fixtures:

- None.

For Restoration treatment:

Floors:

- Clean floors.
- Remove carpet remnants from stair treads.
- Patch hole in the northeast corner (e.g. locations of duct and vent removal). Patch with replacement-in-kind wood flooring.
- Refinish floors.

Walls:

- Perform additional paint analysis. Confirm all locations of stenciling.
- Remove wood framing along west wall.
- Sound plaster walls. Remove loose plaster. Repair and stabilize plaster.
- Patch opening above door to Room 204 - Hall. Patch with replacement-in-kind plaster.
- Patch hole in the northeast corner (e.g. location of duct and vent removal). Patch with replacement-in-kind plaster.
- Restore stenciling.
- Remove flaking and loose paint. Repaint.

Doors:

- Perform additional paint analysis.
- Remove door to Room 204 - Hall.
- Repaint.

Windows:

- Perform additional paint analysis.
- Rehabilitate windows on west wall.
- Reconstruct window on east wall.
- Repaint.

Ceilings:

- Perform additional paint analysis.
- Remove edge track from dropped acoustical panel ceiling.
- Remove water-damaged plaster. Assess structural stability of roof joists. Repair as necessary. Patch plaster. Coordinate roof joists repair with roofing repairs (sheathing, roofing, and flashing).
- Repaint.

Trim:

- Perform additional paint analysis.
- Remove and relocate window trim to plaster wall when wood framing is removed.
- Repaint.

Miscellaneous:

- Confirm stability of wood railing.
- Repaint pickets.

Light Fixtures:

- Install historically-appropriate light fixtures to provide code-compliant foot-candles.

Room 202 - West Bedroom:



Figure 51: Northwest view of Room 202 - West Bedroom.
(Photography by QEA, 2015)



Figure 52: Northeast view of 202 - West Bedroom.
(Photography by QEA, 2015) The modern closets on the east wall have been removed.



Figure 53: Southeast view of Room 202 - West Bedroom.
(Photography by QEA, 2015)



Figure 54: West view of Room 202 - West Bedroom.
(Photography by QEA, 2015)

For Mothball treatment:

Floors:

- Clean floors.

Walls:

- Retain existing plaster.
- Sound plaster walls. Remove loose plaster.
- Patch two holes in the southeast corner (e.g. locations of duct and vent removal).
- Remove flaking and loose paint.

Doors:

- None.

Windows:

- None.

Ceilings:

- Remove loose plaster.

- Remove water-damaged plaster. Assess structural stability of roof joists. Repair as necessary. Patch plaster. Coordinate roof joists repair with roofing repairs (sheathing, roofing, and flashing).

Trim:

- None.

Miscellaneous:

- Confirm fireplace is sealed from animal and insect infiltration.

Light Fixtures:

- None.

For Restoration treatment:

Floors:

- Clean floors.
- Refinish floors.

Walls:

- Perform additional paint analysis.
- Remove wood framing along north wall.
- Sound plaster walls. Remove loose plaster. Repair and stabilize plaster.
- Remove styrofoam panels inside the closets on the north wall. Assess finish of walls. Repair.
- Patch two holes in the southeast corner (e.g. locations of duct and vent removal). Patch with replacement-in-kind plaster.
- Remove flaking and loose paint. Repaint.
- Assess structural repairs for brick exterior walls.
- Consider adding insulation along exterior walls.

Doors:

- Perform additional paint analysis.
- Repaint.

Windows:

- Perform additional paint analysis.
- Rehabilitate windows on west wall. Remove vent.
- Repaint.

Ceilings:

- Perform additional paint analysis.
- Remove edge track from dropped acoustical panel ceiling.
- Remove water-damaged plaster. Assess structural stability of roof joists. Repair as necessary. Patch plaster. Coordinate roof joists repair with roofing repairs (sheathing, roofing, and flashing).
- Repaint.

Trim:

- Perform additional paint analysis.
- Remove and relocate window trim to plaster wall when wood framing is removed.
- Repaint.

Miscellaneous:

- Remove Whitman-era stone surround at fireplace. Assess if original material exists behind the stone.
- Restore surround.

- Confirm fireplace is sealed from animal and insect infiltration.

Light Fixtures:

- Install historically-appropriate light fixtures to provide code-compliant foot-candles.

Room 203 - East Bedroom:



Figure 55: Northwest view of Room 203 - East Bedroom.
(Photography by QEA, 2015)



Figure 56: Northeast view of Room 203 - East Bedroom.
(Photography by QEA, 2015)



Figure 57: Southeast view of Room 203 - East Bedroom.
(Photography by QEA, 2015)



Figure 58: South view of Room 203 - East Bedroom.
(Photography by QEA, 2015)

For Mothball treatment:

Floors:

- Clean floors.
- Patch hole in the southwest corner (e.g. locations of duct and vent removal).

Walls:

- Retain existing plaster.
- Sound plaster walls. Remove loose plaster.
- Remove flaking and loose paint.

Doors:

- None.

Windows:

- None.

Ceilings:

- Remove loose plaster.

- Remove water-damaged plaster. Assess structural stability of roof joists. Repair as necessary. Patch plaster. Coordinate roof joists repair with roofing repairs (sheathing, roofing, and flashing).

Trim:

- None.

Miscellaneous:

- Confirm fireplace is sealed from animal and insect infiltration.

Light Fixtures:

- None.

For Restoration treatment:

Floors:

- Clean floors.
- Patch hole in the southwest corner (e.g. locations of duct and vent removal). Patch with replacement-in-kind wood flooring.
- Refinish floors.
- Reconstruct stair to first floor.

Walls:

- Perform additional paint analysis.
- Remove wood framing along north wall.
- Sound plaster walls. Remove loose plaster. Repair and stabilize plaster.
- Provide replacement brick under sill on south wall.
- Patch hole in brick in the closet.
- Remove flaking and loose paint. Repaint.
- Assess structural repairs for brick exterior walls.
- Consider adding insulation along exterior walls.

Doors:

- Perform additional paint analysis.
- Remove door into Room 204 - Hall to be replaced by reconstructed window.
- Repaint.

Windows:

- Perform additional paint analysis.
- Rehabilitate windows on north wall. Remove vent.
- Reconstruct two windows on south wall. Remove gabled glass cabinet.
- Repaint.

Ceilings:

- Perform additional paint analysis.
- Remove edge track from dropped acoustical panel ceiling.
- Remove water-damaged plaster. Assess structural stability of roof joists. Repair as necessary. Patch plaster. Coordinate roof joists repair with roofing repairs (sheathing, roofing, and flashing).
- Repaint.

Trim:

- Perform additional paint analysis.
- Remove and relocate window trim to plaster wall when wood framing is removed.
- Reconstruct wood trim for windows on the south wall.

- Repaint.

Miscellaneous:

- Remove Whitman-era stone surround at fireplace. Assess if original material exists behind the stone.
- Restore surround.
- Confirm fireplace is sealed from animal and insect infiltration.

Light Fixtures:

- Install historically-appropriate light fixtures to provide code-compliant foot-candles.

Room 204 - Hall:



Figure 59: Northwest view of Room 204 - Hall. (Photography by QEA, 2015)



Figure 60: Northeast view of Room 204 - Hall (formerly Room 210 - Southeast Room). (Photography by QEA, 2015)



Figure 61: Southeast view of Room 204 - Hall (formerly Room 210 - Southeast Room). (Photography by QEA, 2015)



Figure 62: Southwest view of Room 204 - Hall. (Photography by QEA, 2015)



Figure 63: North view of Room 204 - Hall (formerly Room 205 - West Bathroom). (Photography by QEA, 2015)



Figure 64: North view of Room 204 - Hall (formerly Room 206 - East Bathroom). (Photography by QEA, 2015)

For Mothball treatment:

Floors:

- Clean floors.
- Patch holes in plywood floor.
- Remove water-damaged plywood flooring. Assess structural stability of floor joists. Repair as necessary. Replace flooring.

Walls:

- Remove water-damaged gypsum wallboard along south wall. Assess structural stability of wall framing. Repair as necessary. Replace gypsum wallboard.
- Continue to monitor step Crack #2 on north wall.²⁶

Doors:

- None.

Windows:

- None.

Ceilings:

- Remove water-damaged gypsum wallboard at west end of the room. Remove water-damaged insulation. Assess structural stability of roof joists. Repair as necessary. Replace ceiling finish. Coordinate roof joists repair with roofing repairs (sheathing, roofing, and flashing).
- Seal any openings (e.g. locations of duct and vent removal).
- Provide gypsum wallboard at locations where it is currently missing (over former Room 205 - West Bathroom and Room 206 - East Bathroom).

Trim:

- None.

Miscellaneous: N/A

- None.

Light Fixtures:

- None.

For Restoration treatment:

This room would be demolished as part of a restoration to the period of significance.

As part of the restoration, the second floor windows would be reconstructed.

Floors:

- None.

Walls:

- Continue to monitor step Crack #2 on north wall.²⁷
- Retain and preserve brick walls (west end wall and left side of north wall shared with Room 203 - East Bedroom). Perform additional paint analysis on brick walls.
- Retain and preserve stud walls from former 1870s addition (middle of north wall shared with Room 207 - Ell West Bedroom). Remove gypsum wall board finish on stud wall. Locate framing of former window in the 1870s frame addition.
- Retain and utilize porch rafter pockets in north brick wall for reconstruction of 1870s porch.

Doors:

- Remove doors into Room 201 - Stair Hall and Room 203 - East Bedroom.

²⁶ This crack, Crack #2, is a step crack and not a thru-brick crack like Crack #1.

²⁷ This crack, Crack #2, is a step crack and not a thru-brick crack like Crack #1.

Windows:

- Reconstruct windows into Room 201 - Stair Hall and Room 203 - East Bedroom. Retain and preserve wood frame in window opening into Room 203 - East Bedroom. Provide Dutchman repair to sill of window into Room 203 - East Bedroom. Perform pain analysis on wood trim around window into Room 2013 - East Bedroom.

Ceilings:

- None.

Trim:

- None.

Miscellaneous:

- None.

Light Fixtures:

- None.

Room 205 - West Bathroom:

This room longer exists. All that remains are some plumbing connections at the floor.

For Mothball treatment:

- No work.

For Restoration treatment:

This room would be demolished as part of a restoration to the period of significance.

Room 206 - East Bathroom:

This room longer exists. All that remains are some plumbing connections at the floor.

For Mothball treatment:

- No work.

For Restoration treatment:

This room would be demolished as part of a restoration to the period of significance.

Room 207 - Ell West Bedroom:



Figure 65: Northwest view of Room 207 - Ell West Bedroom.
(Photography by QEA, 2015)



Figure 66: Northeast view of 207 - Ell West Bedroom.
(Photography by QEA, 2015)



Figure 67: South view of Room 207 - Ell West Bedroom.
(Photography by QEA, 2015)



Figure 68: Southwest view of 207 - Ell West Bedroom. .
(Photography by QEA, 2015)

For Mothball treatment:

Floors:

- Clean floors.

Walls:

- Continue to monitor thru-brick Crack #1 on the brick west wall. Assess if associated with stability of chimney.²⁸

Doors:

- None.

Windows:

- None.

Ceilings:

- Examine cause of water stain at top of west wall. Repair.
- Examine cause of water stain in middle of west wall from edge of ceiling. Repair.
- Repair hole in gypsum wallboard ceiling.

²⁸ It is unknown if the crack was observed before or after the 2011 earthquake in Virginia. It is possible that it was caused by the earthquake.

Trim:

- None.

Miscellaneous: N/A

Light Fixtures:

- None.

For Restoration treatment:

This room would be demolished as part of a restoration to the period of significance.

Retain corner post of the 1870s frame addition that is located in the southwest corner of the room.

Room 208 - Hall Landing:



Figure 69: Northwest view of Room 208 - Hall Landing. (Photography by QEA, 2015)



Figure 70: East view of 208 - Hall Landing. (Photography by QEA, 2015)



Figure 71: East view of Room 208 - Hall Landing. (Photography by QEA, 2015)

For Mothball treatment:

Floors:

- Clean floors.

Walls:

- None.

Doors:

- None.

Windows:

- None.

Ceilings:

- None.

Trim:

- None.

Miscellaneous: N/A

Light Fixtures:

- None.

For Restoration treatment:

This room would be demolished as part of a restoration to the period of significance.

Room 209 - Ell East Bedroom:



Figure 72: Northwest view of Room 209 - Ell East Bedroom.
(Photography by QEA, 2015)



Figure 73: Northeast view of 209 - Ell East Bedroom.
(Photography by QEA, 2015)



Figure 74: Southeast view of Room 209 - Ell East Bedroom.
(Photography by QEA, 2015)



Figure 75: Southwest view of 209 - Ell East Bedroom.
(Photography by QEA, 2015)

For Mothball treatment:

Floors:

- Clean floors.

Walls:

- None.

Doors:

- None.

Windows:

- None.

Ceilings:

- Examine cause of water stain above door. Repair.
- Repair hole in gypsum wallboard ceiling.

Trim:

- None.

Miscellaneous: N/A

Light Fixtures:

- None.

For Restoration treatment:

This room would be demolished as part of a restoration to the period of significance.

Room 210 - Southeast Room:

See Room 204 - Hall.

As of 2015, Room 210 - Southeast Room is no longer a separate room due to the demolition of Room 205 - West Bathroom and Room 206 - East Bathroom.

Room 211 - Laundry Room:

See Room 204 - Hall.

As of 2015, Room 210 - Southeast Room is no longer a separate room due to the demolition of Room 205 - West Bathroom and Room 206 - East Bathroom.

Room 301 - Attic:



Figure 76: South view of Room 301 - Attic. (Photography by QEA, 2015)



Figure 77: North view of Room 301 - Attic. (Photography by QEA, 2015)



Figure 78: Detail of south view of Room 301 - Attic. (Photography by QEA, 2015)



Figure 79: Detail of north view of Room 301 - Attic. (Photography by QEA, 2015)²⁹

For all treatments (Mothball, Preservation, Restoration):

- Remove bat guano, rodent droppings, and other animal debris (e.g. snake skins).
- Replace-in-kind rotten nailers and any other framing materials showing signs of rot.
- Seal any openings.

For Mothball treatment:

- See above.

For Restoration treatment:

- Replace insulation.
- Assess condition of chimney masonry.
- Repoint brick end walls.
- Install metal mesh on inside face of vent. See exterior for vent repairs.

²⁹ The "fuzzy" appearance on the rafters is likely the result of white rot (a wood-decay fungus caused by excess moisture) which can be treated by borates or boric acid. Another possible explanation, though less likely, is that it is the result of "salt kill" or salt defibration that may have been caused by a fire retardant or wood preservative.

Architectural Improvements:

Beyond the repair and preservation of the historic building and site elements noted above, the following elements would become part of a normal architectural scope of work:

- Provide an accessible pathway and entrance into the building on the south side.
- Provide a unisex toilet room, with adjacent utility sink and mechanical closet on the first floor. This could be staff use or for public use as a comfort station.
- Examine the existing wooden stairway and upgrade where possible to assure safe utilization.³⁰
- Consider sustainable design strategies and apply selectively to this project to improve the performance and reduce future utility costs (i.e. ground source heat pump, solar power).
- Add thermal insulation to the roof/attic assembly and to the perimeter walls to meet energy conservation standards.
- Assure all window assemblies are in good condition to reduce air infiltration in the summer and winter and then to also provide fresh air ventilation during the mild months.
- Consider providing water and vapor barriers to structural envelope.

³⁰ If further documentation or evidence is found regarding a central stair, then reconstruction of the central stair may be considered.

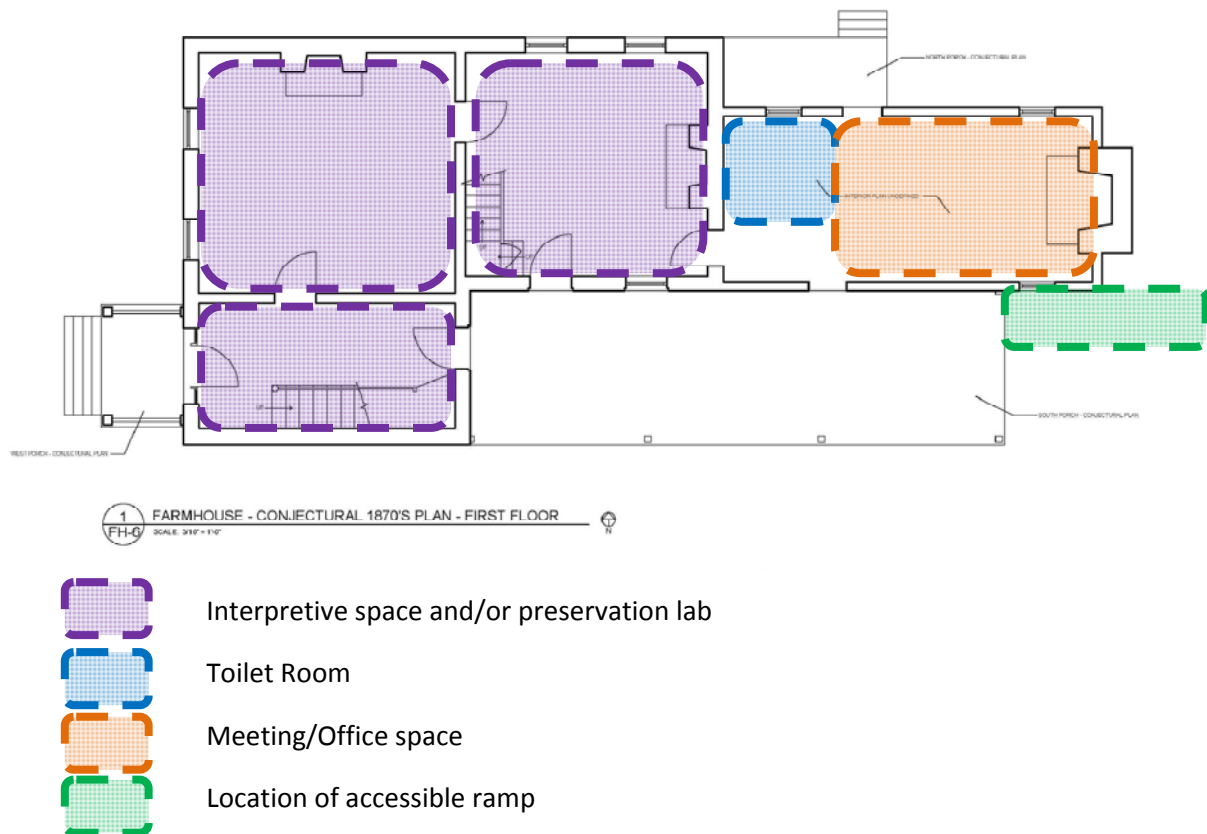


Figure 80: Space utilization plan for the first floor. Note the re-introduction of the front porch, side porch, and back porch as well as the Pirkey rear frame addition.

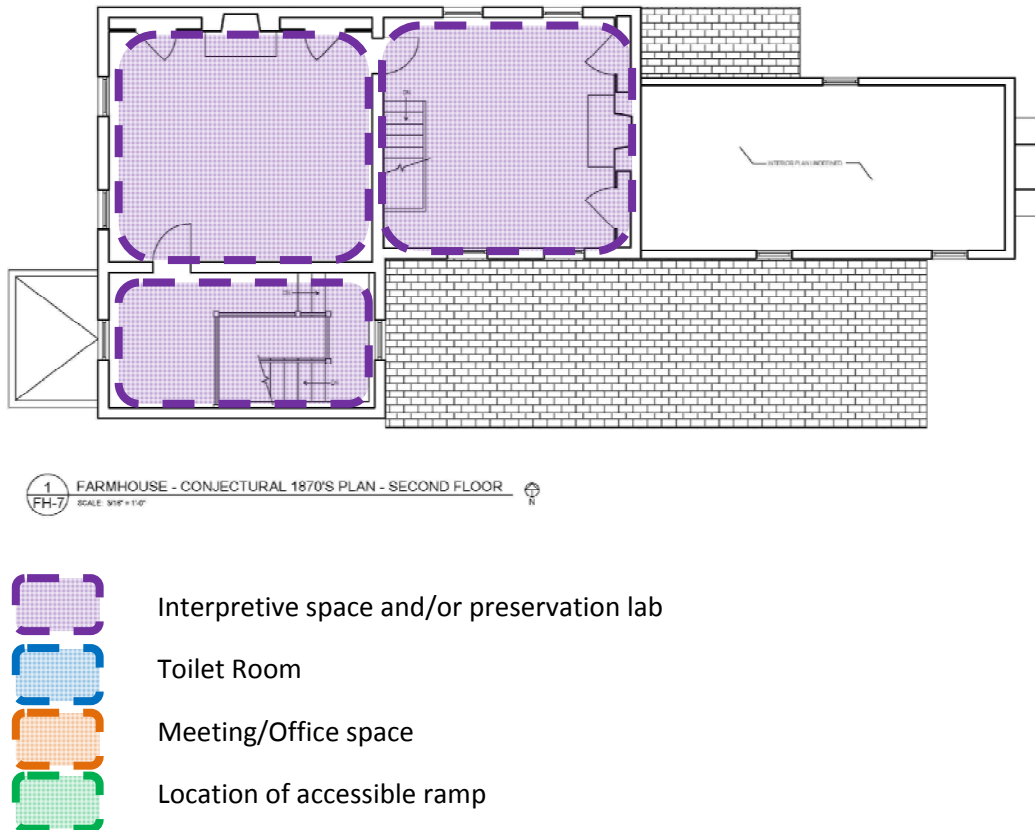


Figure 81: Space utilization plan for the second floor.

Structural Improvements:

Beyond the repair and replacement-in-kind of the structural systems as described above, the following would become part of a normal scope of work:

For Mothball treatment:

- Assess structural system. Provide any emergency structural repairs .

For Restoration treatment:

- Determine the current live load capacity.
- If the occupancy is changed to Assembly A-3, an increase to the live load capacity may be required.
- Determine seismic upgrades.
- Provide necessary structural repairs as well as structural strengthening to meet code requirements for a change in occupancy.
- Confirm structural stability of floor joists. Repair floor joists. Increase loading capacity of floor joists by sistering.

The structural condition of the building appears to be satisfactory. However, the exterior brick walls should be assessed by a structural engineer.

Fire Protection Improvements:

The following would become part of a normal scope of work:

For Mothball treatment:

- Provide smoke detectors and fire extinguishers throughout the house.

For Restoration treatment:

- Provide smoke detectors and fire extinguishers throughout the house.
- Consider adding a fire protection system. An automatic fire protection systems meeting NFPA 72 would be installed within this building. It is likely that new water source would be needed to support such a system. The system would include smoke detection and fire alarm devices. Photoelectric smoke detectors are typically preferred. The extent and type of system would be the subject of a future design phase.

Electrical Improvements:

The following would become part of a normal scope of work:

- Any existing electrical system should be completely removed and replaced with new service, secondary distribution and power and lighting devices. The extent and type of electrical system would be the subject of a future design phase. It is recommended that electrical service be re-established to the Farmhouse. The extent and type of electrical system would be the subject of a future design phase.
- Provide site, exterior, and interior lighting. Though this is not a restoration treatment, providing lighting would provide for the safety of visitors who come to visit CEBE.

Mechanical and Plumbing Improvements:

For Moth treatment:

- Ensure proper ventilation with fans to assist natural ventilation.

For Restoration treatment:

- Provide heating and possible cooling.
- Any existing plumbing and mechanical piping or equipment should be removed entirely. New underground water, sanitary and storm sewer/septic systems are most likely required to support this facility.
- Heating and air conditioning can be provided by a ground source heat pump. This system will provide heated or cooled water to small fan coil units located in each room. This is an energy efficient system.
- If it is desired, an accessible drinking fountain that has dual height spouts, can be installed.³¹

Security Improvements:

For Mothball treatment:

- Provide an alarm system.

For Restoration treatment:

- Provide an alarm system

³¹ A minimum of two drinking fountains are required by ABAAS F211.2 but the Exception states that a single drinking fountain that complies with F602.1-602.7 is allowed to be substituted for two separate drinking fountains.

**Assessment of
Affect for
Recommended
Treatments**

Assessment of Affect for Recommended Treatments:

Introduction:

This chapter provides a narrative regarding the effect (i.e. impact) to the historic and architectural character of the property with the execution of the proposed treatment (Alternate #1). The details of this treatment are provided in the previous section, Treatment and Work Recommendations. This section considers the Advisory Council on Historic Preservation's criteria of adverse effect per the Section 106 process.

- Adverse effects occur when an undertaking may directly or indirectly alter characteristics of a historic property that qualify it for inclusion in the Register [i.e. location, design, setting, workmanship, materials, feeling, and association].
- Adverse effects include physical destruction or damage; alteration not consistent with the Secretary of the Interior's Standards; relocation of a property; change of use or physical features of a property's setting; visual, atmospheric, or audible intrusions; neglect resulting in deterioration; or transfer, lease, or sale of a property out of Federal ownership or control without adequate protections
- If a property is restored, rehabilitated, repaired, maintained, stabilized, remediated or otherwise changed in accordance with the Secretary's Standards, then it will not be considered an adverse effect with the agreement of the SHPO.³²

This narrative provides a professional opinion regarding compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966.

Proposed Treatment Summary - Alternate #1 - Restoration:

The proposed treatment is to restore this building to its appearance during the period of significance. This would primarily entail restoring the exterior with the result that the building and site could be returned very close to the mid-19th century appearance. Partnered with a restoration of the Barn, the Bowman-Hite farmstead could approach a composite whole. The restoration, aside from restoring materials, would also provide accessible access for visitors as well as have the potential to increase the live load capacity if required for larger groups of visitors.

Opinion on Effect:

This opinion blends an evaluation of and takes into account three factors:

- An understanding of the proposed National Register nomination form, especially in regards to the documentation of significance,

³² Excerpted from the ACHP Section 106 Regulations Flowchart Material, <http://www.achp.gov/flowexplain>.

- A broad understanding of the changes and alterations that have occurred to the property over time; and
- An evaluation of the treatments. The proposed treatment is the “action” to be documented pursuant to the Section 106 of the NHPA.

Civil Effect:

For a restoration, existing utilities will need to be upgraded per current code requirements. Any digging for new civil work may require archeological investigations.

Site and Setting Effect:

One aspect of the proposed work is to provide accessible paths compliant with ABAAS to the farmhouse as well as to regrade to improve the drainage. Site disturbance to upgrade utilities and building access (accessible paths) will result in some site excavation. New paths, not part of the original construction nor modifications within the period of significance would need to be undertaken sensitively.

Architecture Effect - Exterior:

With execution of the treatments toward further restoration of the exterior elements to the mid-19th century appearance, the historic and architectural integrity will be maintained. Further, utilizing sound preservation technology will assure that the building will have continued service life and a viable use. The demolition of the Whitman-era additions (1967-2003) and the recreation of the ca. late-1870s Pirkey rear frame addition will enhance the historic feeling.

Architecture Effect - Interior:

A restoration approach will be followed for the interior of the building. The interior has a high degree of integrity that will be preserved and maintained with the proposed work. The devices and visible equipment due to the upgrading of mechanical, electrical, and plumbing systems as well as the introduction of fire and smoke detection, along with an intrusion alarm system and the introduction of a fire suppression system would be done so that the visual impact is minimized. A new public toilet room in the recreated 1870s Pirkey rear frame addition will be required but would be done sensitively so not to disturb the historic fabric.

Structural Effect:

Repair and replacement-in-kind work will not have any substantial effect. However, if additional stabilization is required either due to failure of existing members or increasing the live load, consideration should be made to make sensitive modifications to minimize the visual impact. The second floor floors and/or first floor ceiling may need to be removed and reinstalled in order to examine the condition of the floor joists and/or any necessary repairs. The second floor may need to be reinforced to meet building codes if the live load capacity is increased for an Assembly use.

Mechanical Effect:

As heating, cooling, and plumbing were not part of original construction (other than fireplaces and possible stoves), any mechanical equipment or plumbing fixtures (i.e. staff unisex toilet room, utility sink, and dual height drinking fountain) would be concealed as much as possible so as not to detract from the historic character. In order to provide these items, some material may be cut to provide

chases. As this is a fairly small building, not much room exists to hide any equipment. The mechanical equipment can be located in the cellar with minimal effect on the historic character. Otherwise, it will need to be located in a large closet. Depending on the selected systems, devices to heat and cool in each space may be visible but should be installed to minimize the visual impact.

Electrical Effect:

As electricity was not part of original construction, consideration should be made to make sensitive modifications to minimize the visual impact when upgrading the electrical equipment. Any conduit would be concealed in walls.

Safety Effect:

As fire protection was not part of original construction, any sprinklers and associated piping would be concealed as much as possible to minimize the visual impact and not affect the historic character of a mid-19th century farmhouse. As this is a fairly small building, not much room exists to hide any equipment but efforts would be made to conceal as much as possible.

Accessibility Effect:

In the alternatives, accessibility to the exterior doors is easily achievable with ramped paths. Ramps will be visible but their visual impact would be minimized. Door thresholds may need to be altered to be ABAAS-compliant but this does not have a substantial effect. However, altering door openings to meet the minimum required accessible clearance will have a minimal effect on the historic character. To address this, automatic door openers (and closers) can be installed. Their design and placement would be sensitively incorporated so as to minimize the visual impact.

With the removal of the non-significant interior partitions, an accessible route within the interior can be created. Access to the recreated porches from the first floor will be limited to visual access unless a ramp is provided. This would have a minimal effect on the historic character but would be reversible. As the second floor was not originally made accessible (and nor is it required per exceptions in ABAAS F206.2.3), any attempts to provide a lift to this floor would affect the feeling of a mid-19th century farmhouse. While providing an ABAAS-compliant unisex restroom will be beneficial to the visitors and staff who occupy the farmhouse, it will occupy some of the space of the recreated 1870s Pirkey rear addition. A dual height drinking fountain would be located so as to have a minimal effect on the historic feeling.

Sustainability Effect:

The use of a ground source heat pump, an energy efficient system, may be installed. Its placement would be done so as to minimize the visual impact. In order to place the ground heat exchanger, the site would need to be disturbed. Disturbing the site would not be an adverse affect unless it disturbed archeological remains. Small fan coil units to distribute the air may be installed but would be designed so as to have a minimal effect.

If the thermal performance is upgraded by insulating the historic walls, then the existing interior dimensions will decrease and the exterior plaster walls would be encapsulated, similar to what had been done previously. New interior finishes could replicate what was there originally. New windows in the recreated addition could be double insulated glazed windows to increase the envelope's thermal performance. The new windows would replicate the historic window type and muntin grid pattern and

would enhance the historic feeling. Storm windows on existing original windows would also aid in the thermal performance and not affect the historic character.

Conclusion:

The Farmhouse would be restored in accordance with the Secretary's Standards. The introduction of modern systems would be limited and located in secondary areas in a manner that minimizes visual impact and damage to historic materials. Hence, there would be no adverse effect.

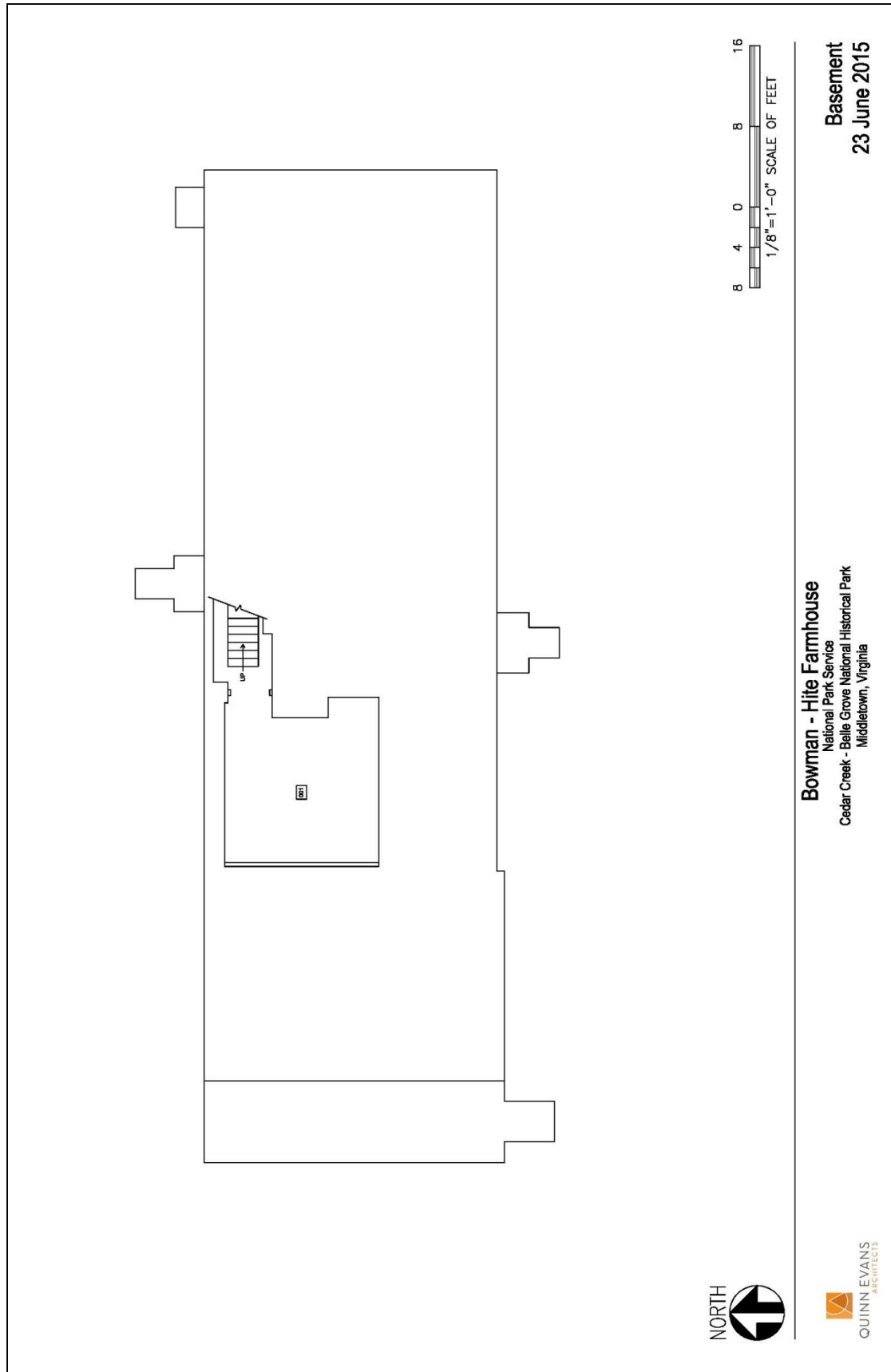
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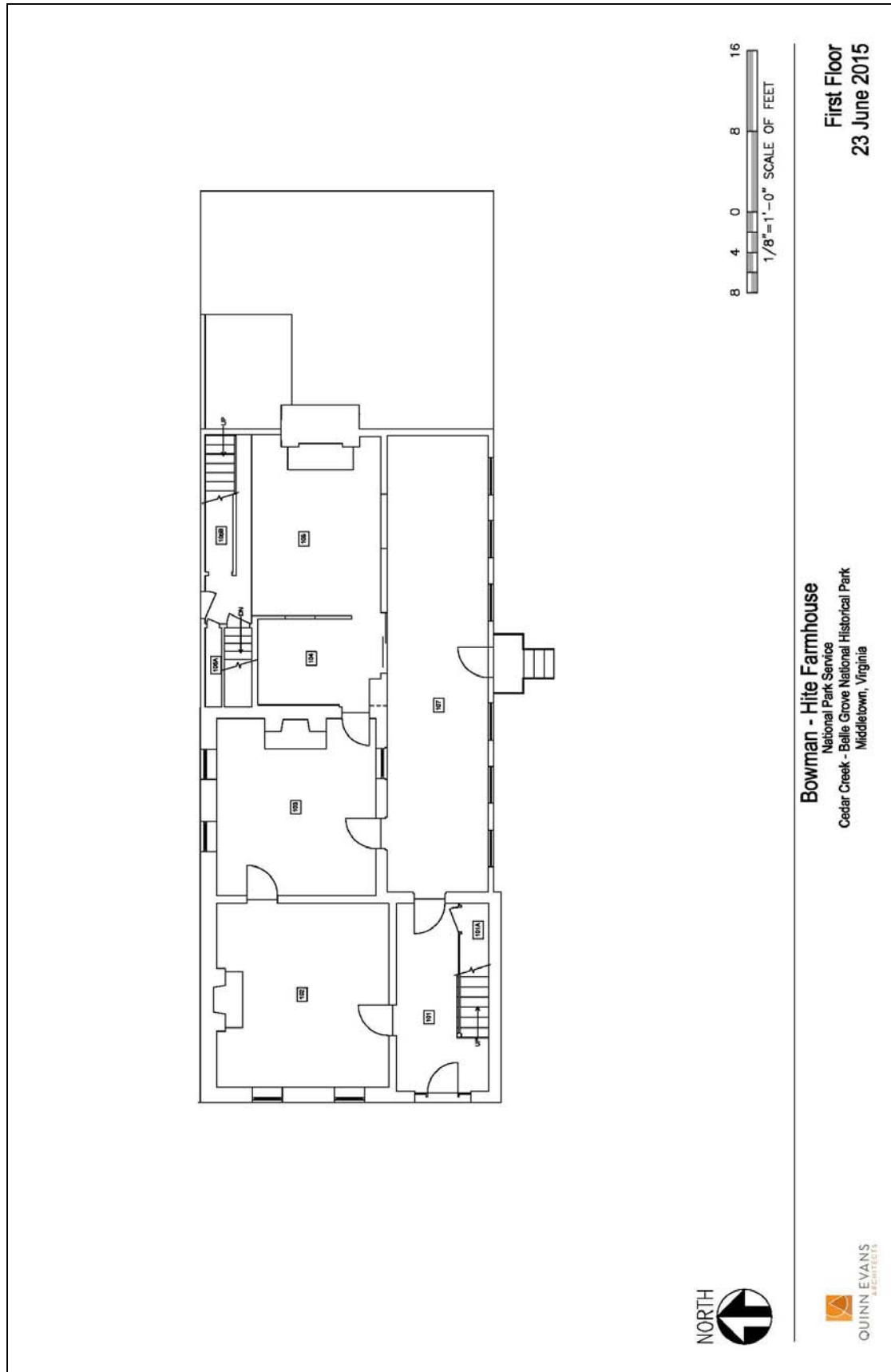
Appendix I:

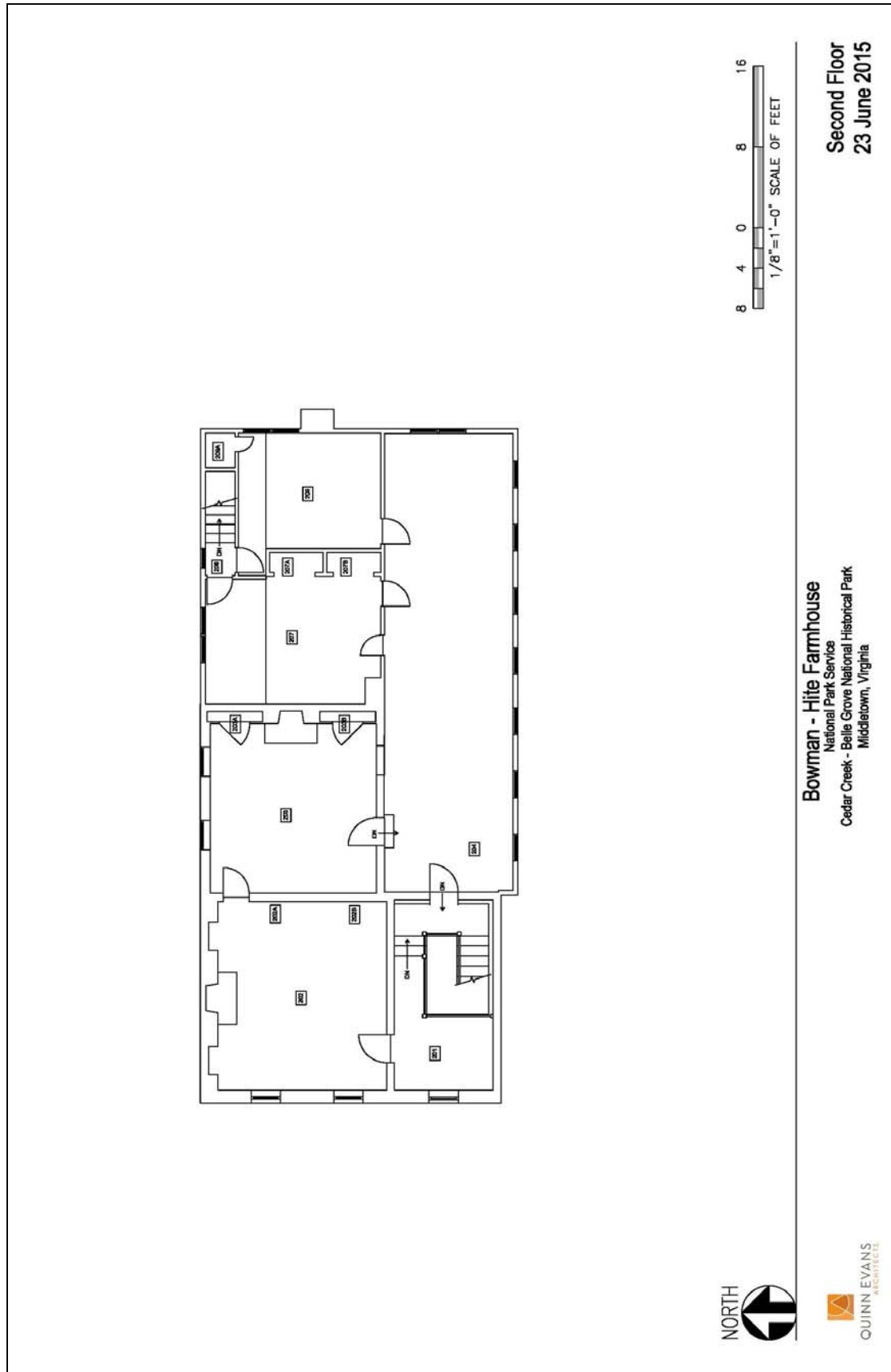
Bowman-Hite

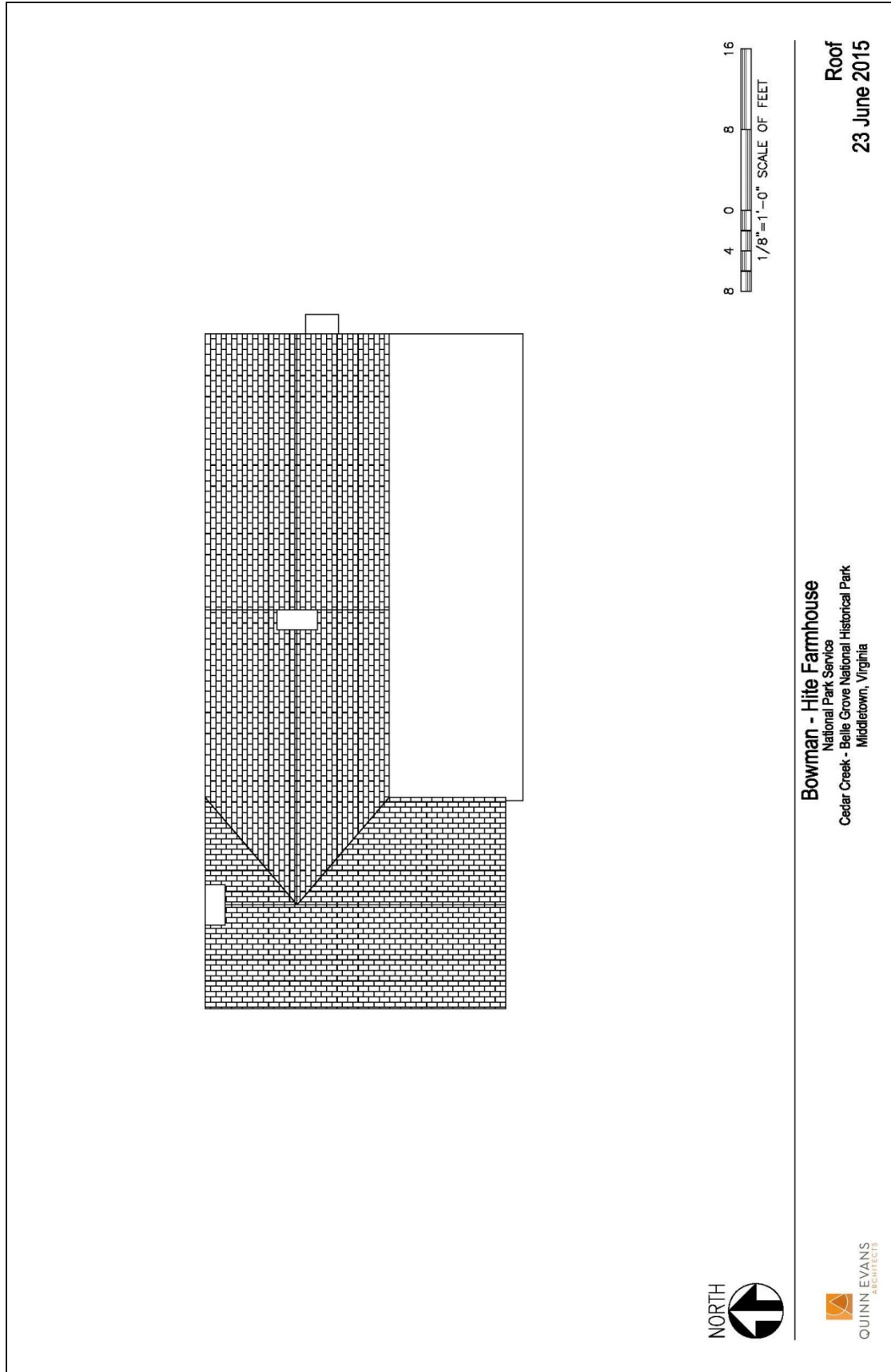
Measured Drawings

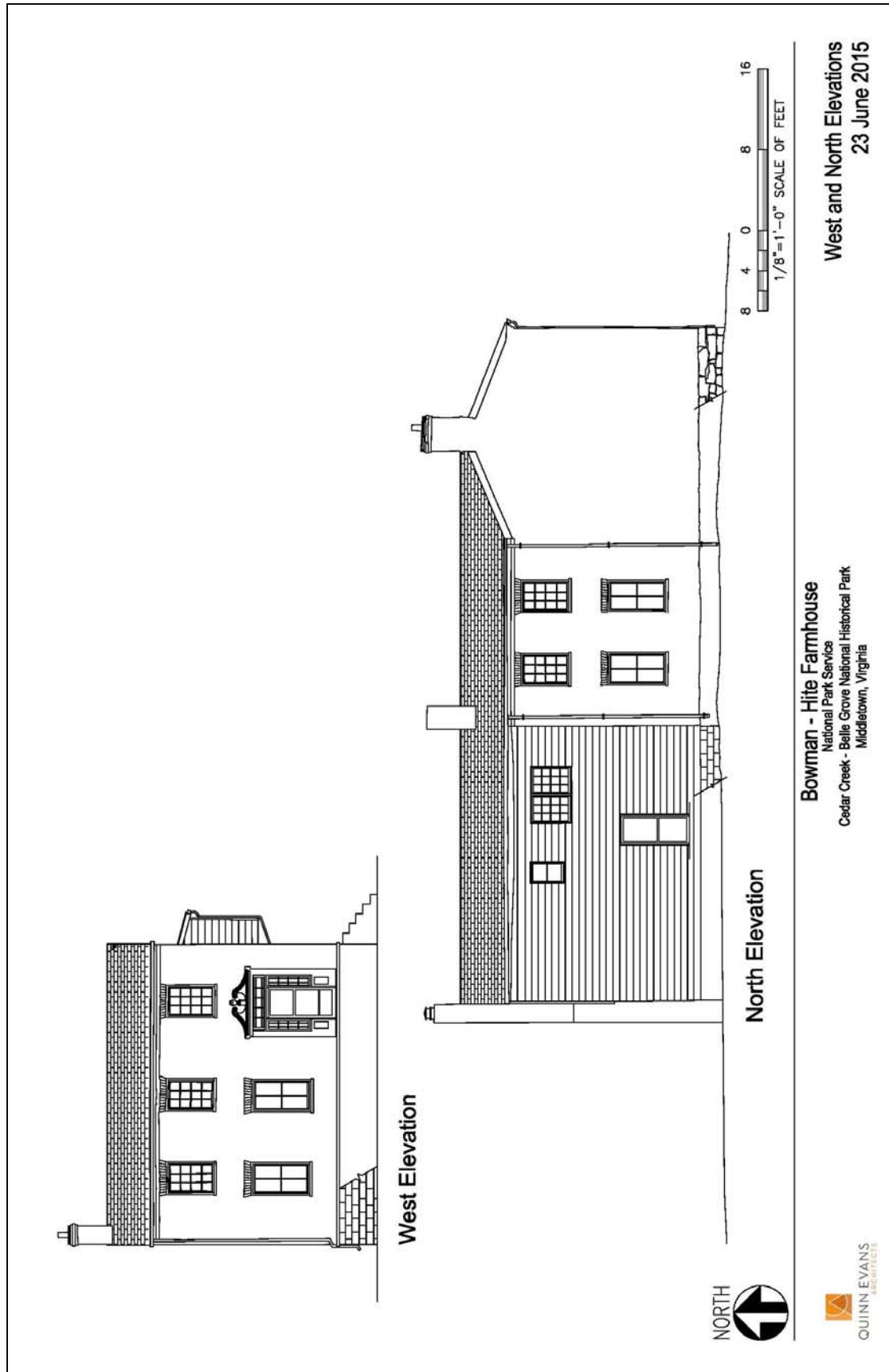
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- 2010
- Conjectural Original
- Conjectural 1870s

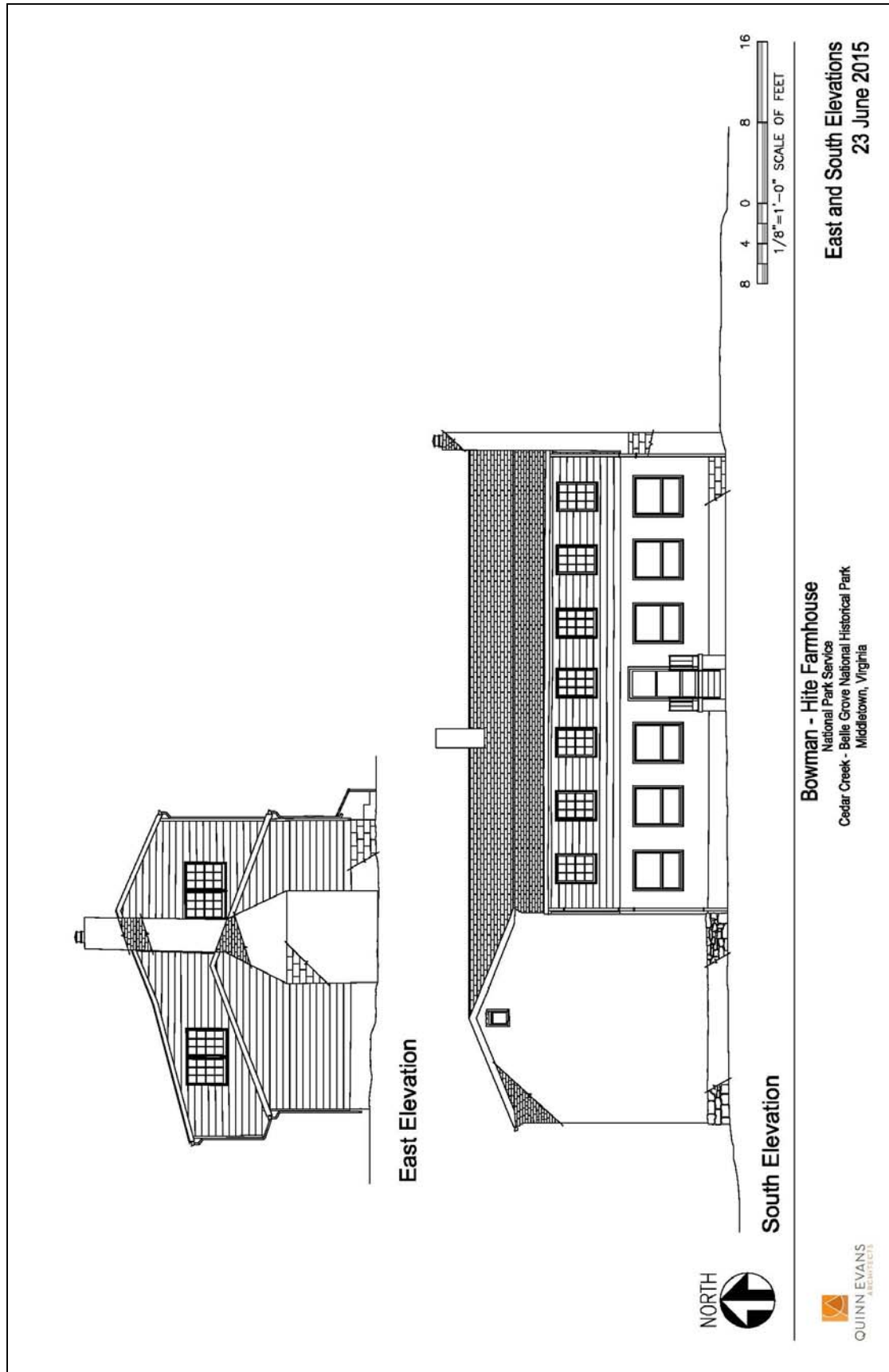


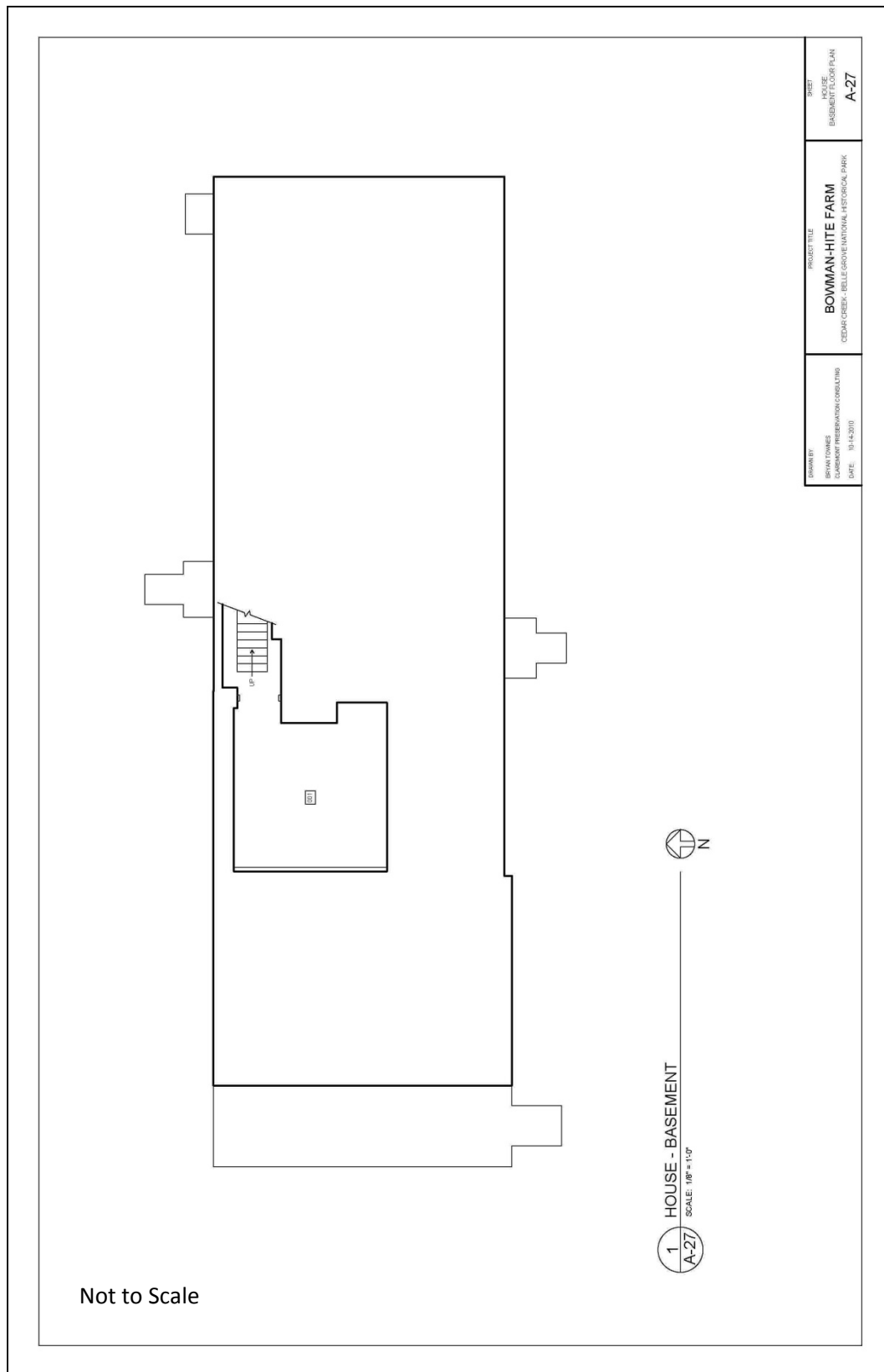


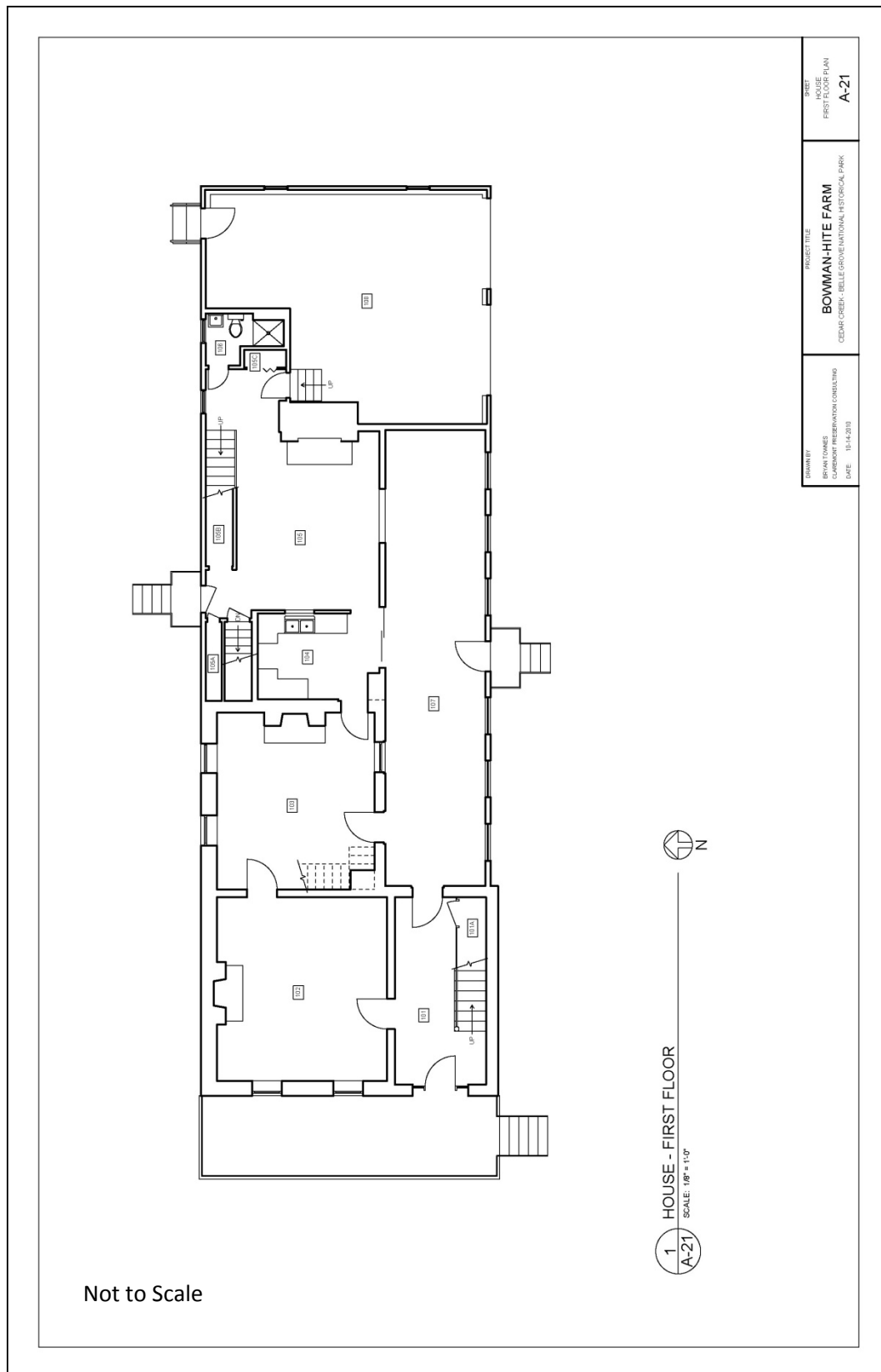


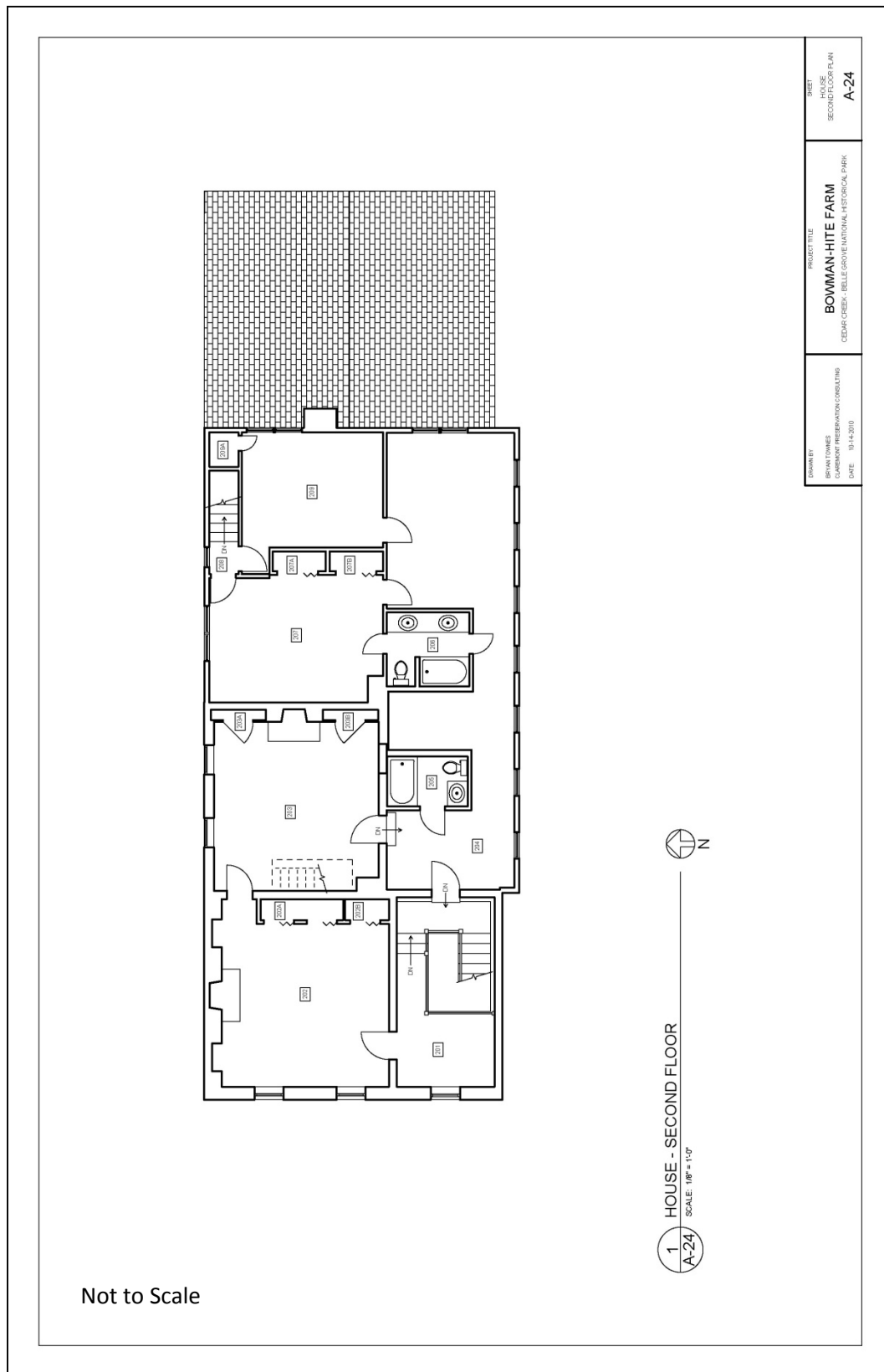


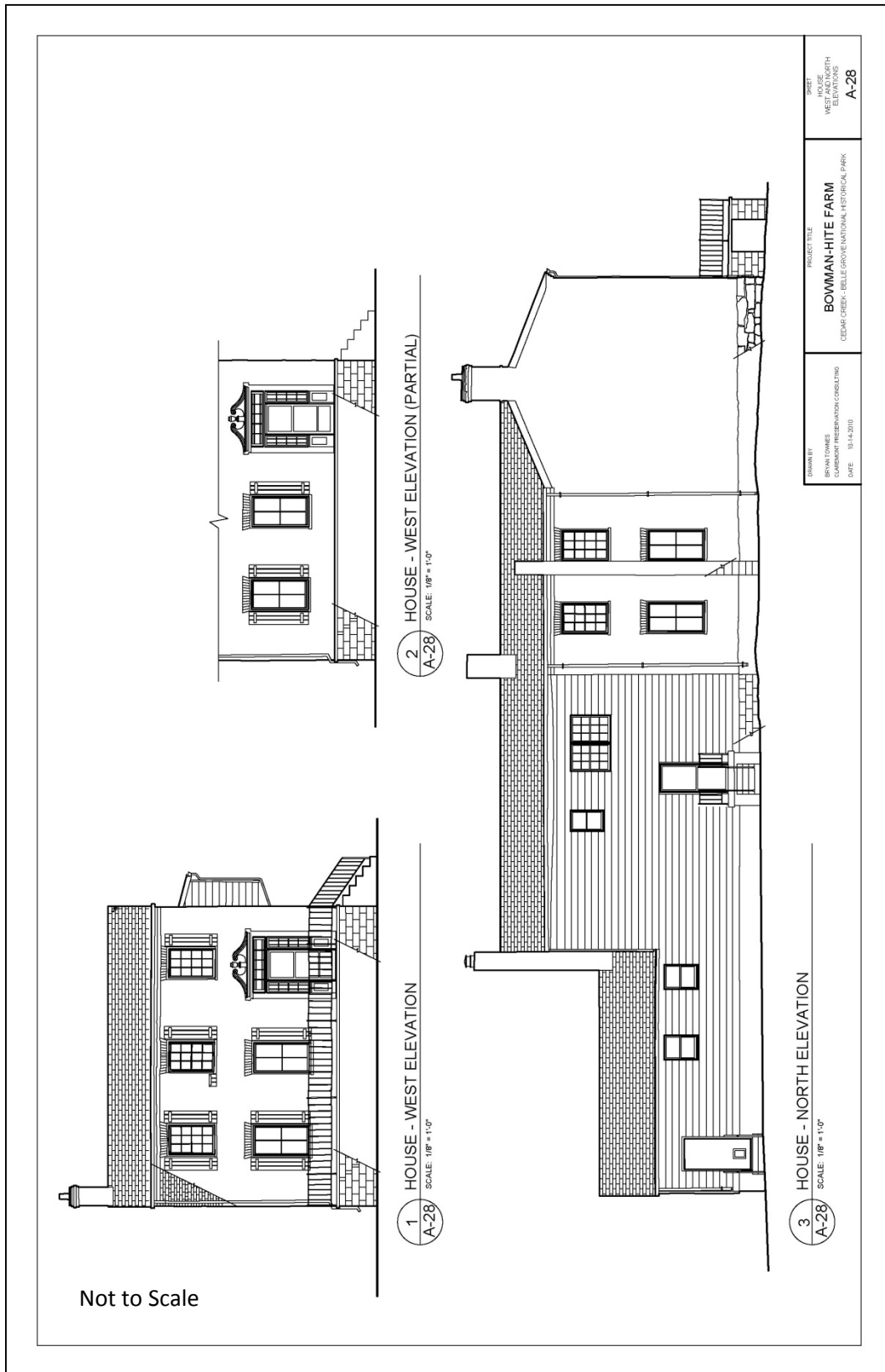


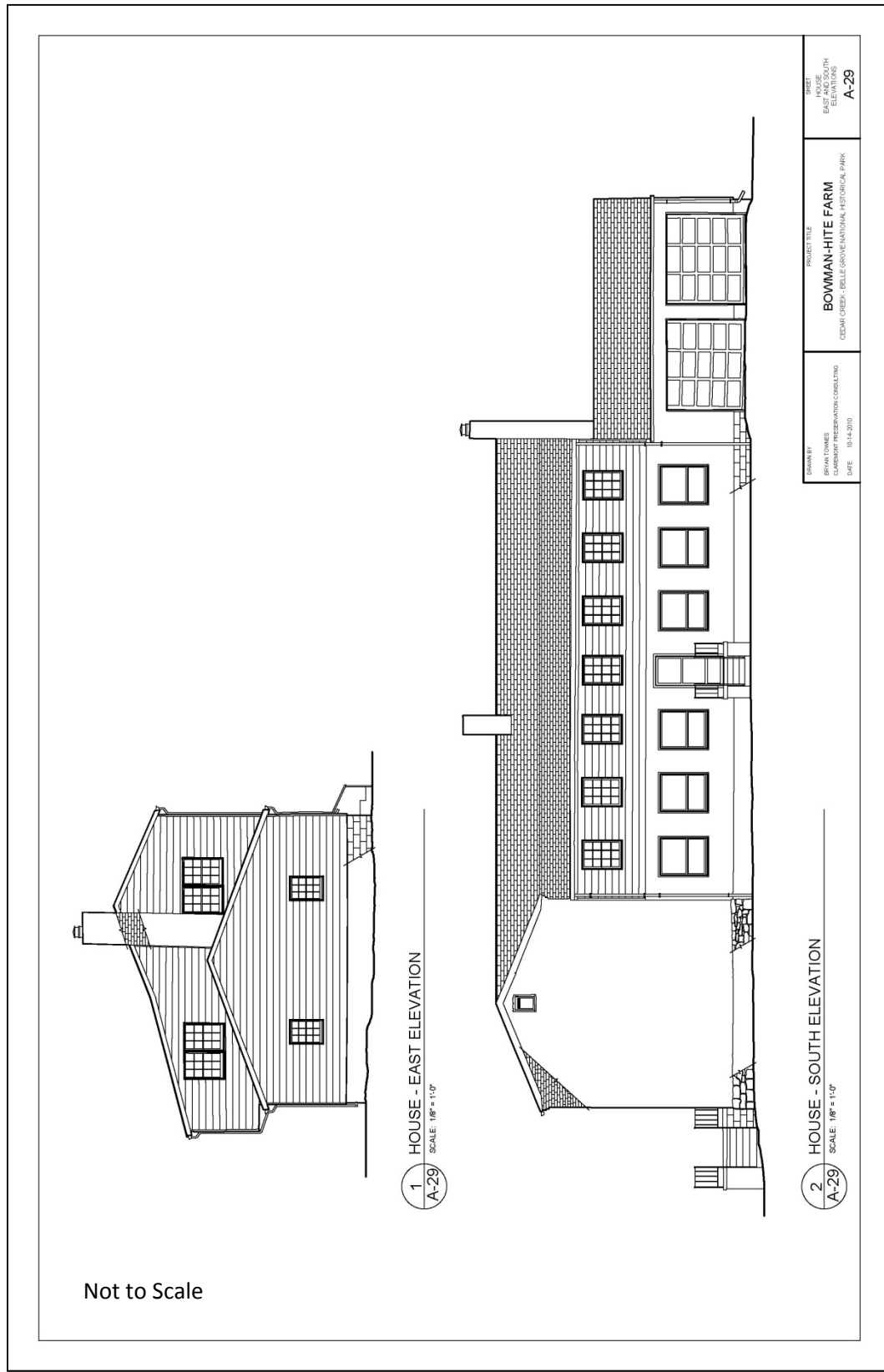


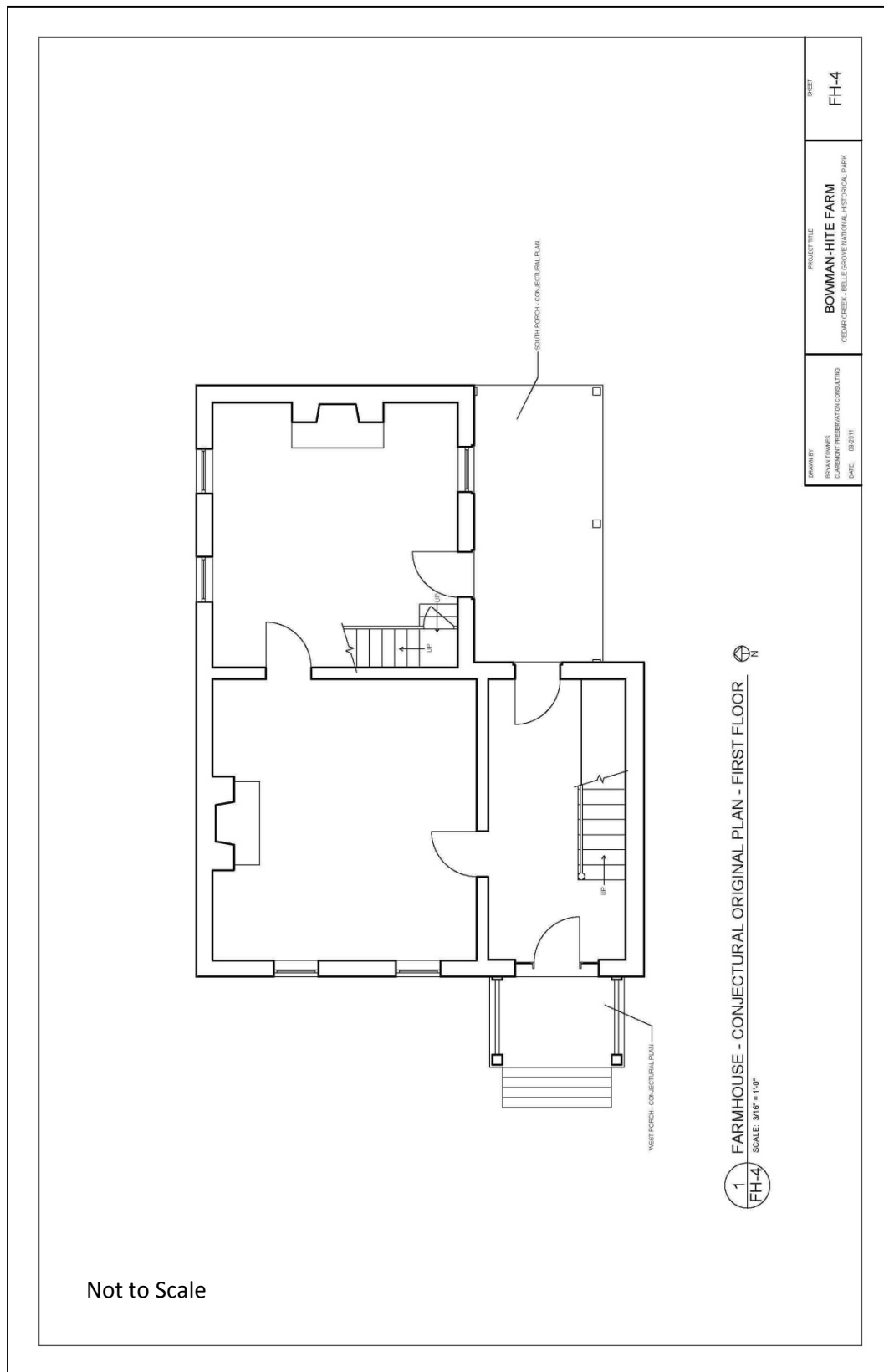




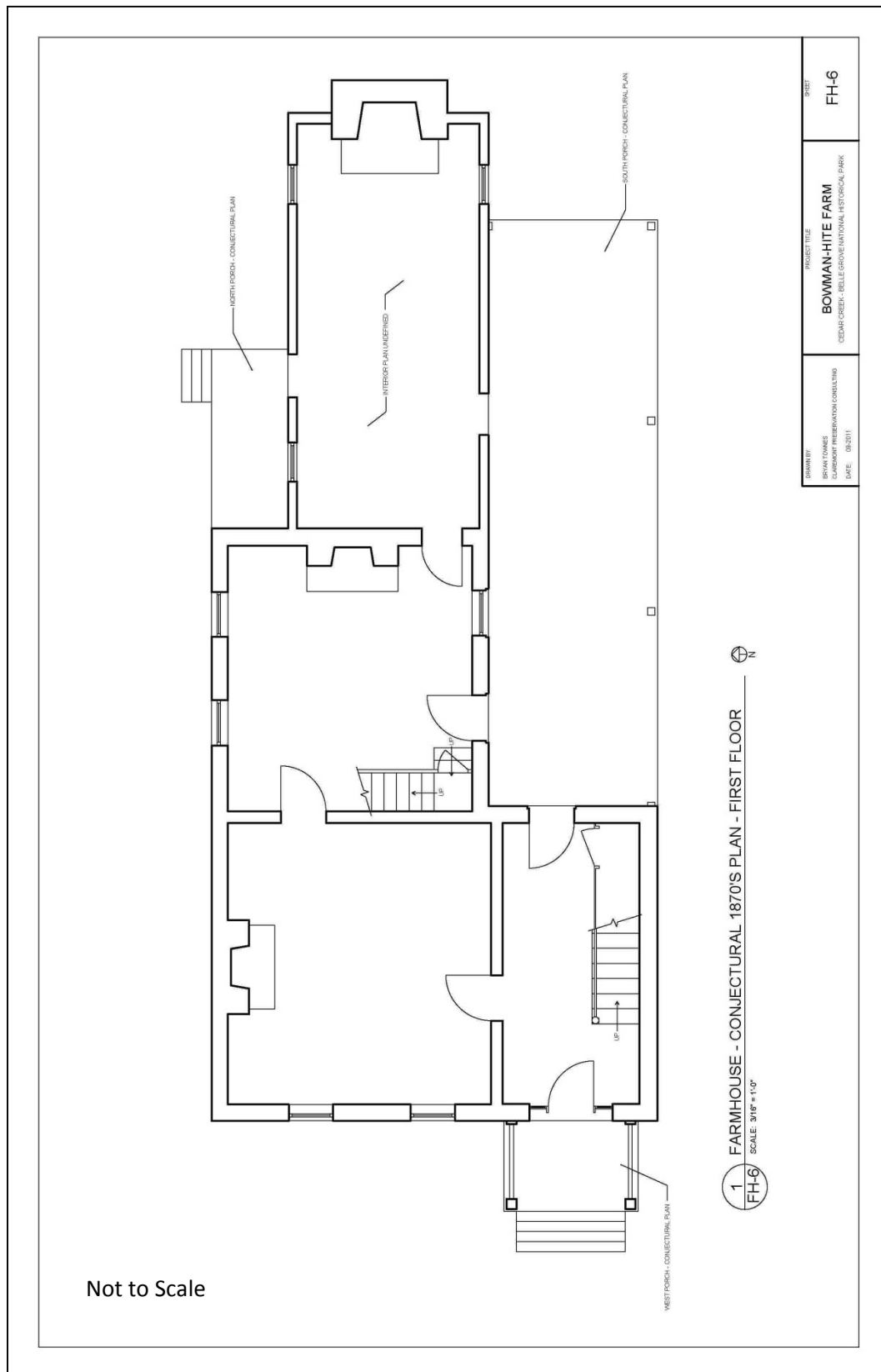


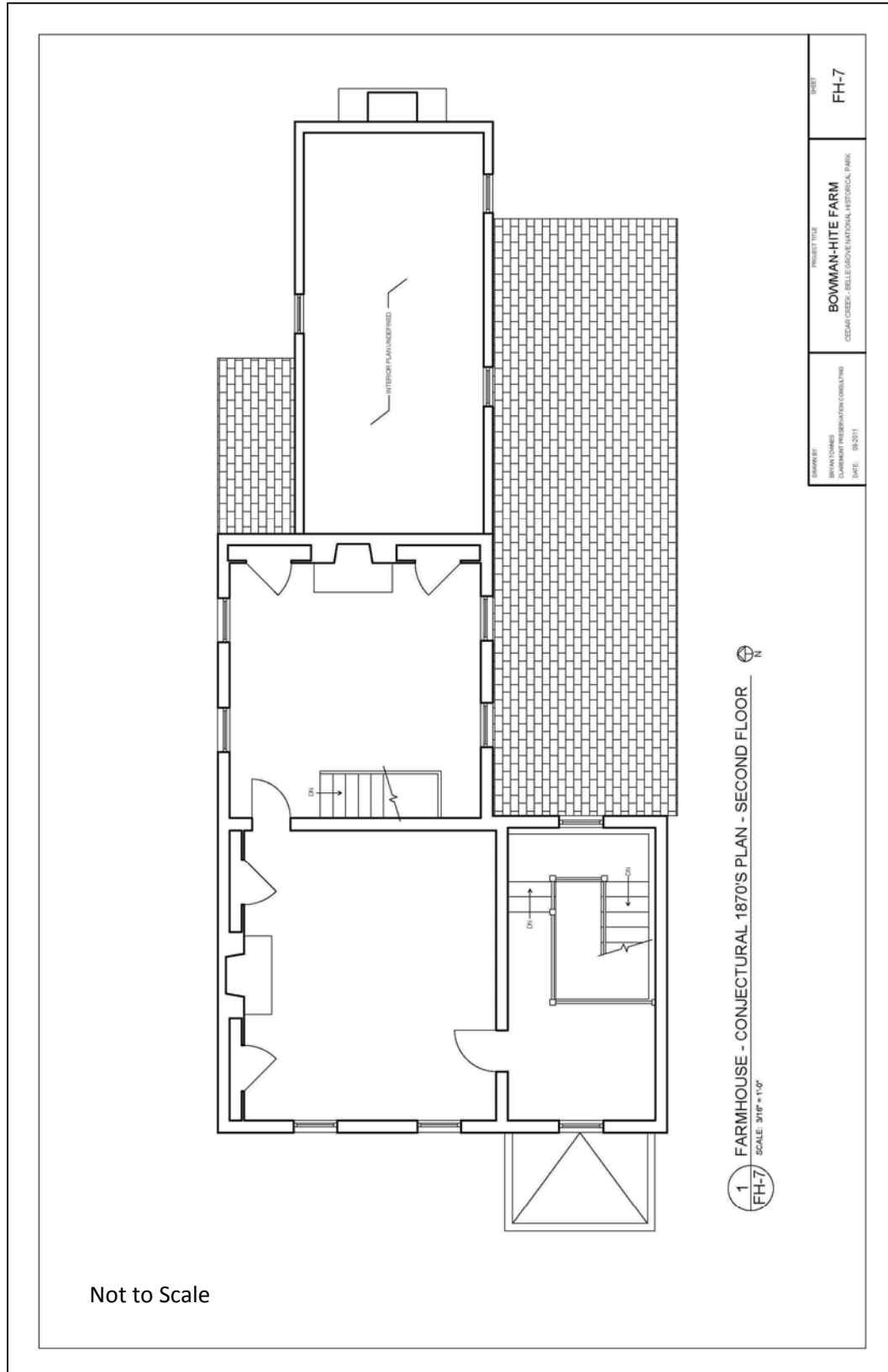












Appendix II:

Bowman-Hite

Cost Estimate

Concept Cost Estimate

Bowman-Hite Farmhouse & Barn Warren County, Virginia

Prepared for:

Quinn Evans Architects

2121 Ward Place, NW, 4th Floor

Washington, D.C. 20036

202-298-6700

June 22, 2015

Prepared by:

R.W. Brown & Associates

364 Brandon Lane

Heathsville, Virginia 22473

804-580-3535

email: rwbrownestr@juno.com

Concept Cost Estimate

Project: Bowman-Hite Farmhouse & Barn, Warren County, Virginia		Page 1
Architect: Quinn Evans Architects		RWB Job # 15-23-A
Estimated by: R.W. Brown & Associates		6/22/15

NOTES

- 1 Unit costs include subcontractors' overhead and profit, except mechanical and electrical, which are noted as separate line items at the end of their respective sections.
- 2 Unit prices, provided by suppliers, subcontractors, and past experience, reflect standard construction methods and materials. Sales tax and labor burden are included in the unit prices of each item. Labor prices are based on wage scale conditions but do not reflect overtime. Total estimate considers a competitive bidding process and responsive bids from at least 3 qualified bidders.
- 3 This estimate is based on 65% Draft Submission HSR dated May 2015.
- 4 The total cost is based on a construction start of Spring 2016.
- 5 Exclusions:
 - Architectural and Engineering Fees
 - Exhibit or interpretive development
 - Furnishings or equipment not itemized in the estimate

Concept Cost Estimate

Project: Bowman-Hite Farmhouse & Barn, Warren County, Virginia			Page 2
Architect: Quinn Evans Architects		RWB Job # 15-23-A	
Estimated by: R.W. Brown & Associates			6/22/15

Recapitulation

Item	Total Cost	Gross Area	\$/SF (Bldg Only)
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Farmhouse

Alternate #1 - Restoration - 19th Century	\$806,000	2,530 SF	\$318.58
Alternative #2: Preservation - Current House	\$809,000	5,148 SF	\$157.15
Alternative #3: Mothball	\$179,000	5,148 SF	\$34.77

Bank Barn

Alternate #1 - Restoration - 19th Century	\$557,000	3,250 SF	\$171.38
Alternative #2: Preservation	\$378,000	3,250 SF	\$116.31
Alternative #3: Mothball	\$129,000	3,250 SF	\$39.69

Concept Cost Estimate

Project: Bowman-Hite Farmhouse & Barn, Warren County, Virginia			Page 3
Architect: Quinn Evans Architects		RWB Job # 15-23-A	
Estimated by: R.W. Brown & Associates	Farmhouse		6/22/15

Alternate #1 - Restoration - 19th Century

Item	Quantity	Unit	Unit Price	Total Cost	Group Total
INTERIOR/EXTERIOR DEMOLITION	2,530	SF	6.00	15,180	
PEST EXTERMINATION/TREATMENT	1	LS	2,500.00	2,500	
REMOVE ADDITIONS	1	LS	16,000.00	16,000	
POINT FOUNDATION WALL	576	SF	11.00	6,336	
STRUCTURAL STABILIZATION	2,530	SF	6.00	15,180	
RESTORE PORCHES	552	SF	16.00	8,832	
EXTERIOR SIDING/PAINTED	4,473	SF	8.00	35,784	
INSULATION	6,725	SF	2.25	15,131	
ROOFING & FLASHING	2,252	SF	12.00	27,024	
INTERIOR WALL & CLG FINISHES	6,230	SF	4.20	26,166	
INTERIOR DOORS & HARDWARE	9	EA	400.00	3,600	
EXTERIOR DOORS & HARDWARE	4	EA	1,100.00	4,400	
WINDOWS	13	EA	900.00	11,700	
INTERIOR WOOD TRIM	1,270	LF	3.25	4,128	
FLOOR FINISHES	2,530	SF	7.00	17,710	
KITCHEN CABINETS & EQUIPMENT	1	EA	12,000.00	12,000	
FIRE SUPPRESSION	2,530	SF	4.00	10,120	
PLUMBING - PER FIXTURE	5	EA	3,000.00	15,000	
HVAC	2,530	SF	40.00	101,200	
ELECTRICAL POWER & LIGHTING	2,530	SF	18.00	45,540	
FIRE ALARM/SECURITY	2,530	SF	2.20	5,566	
SITE RESTORATION - ALLOW	1	LS	60,000.00	60,000	

SUBTOTAL		459,097
GENERAL REQUIREMENTS @	15.0%	68,865
SUBTOTAL		527,961
GENERAL CONTRACTOR'S OH&P @	10.0%	52,796
SUBTOTAL		580,757
BOND @	1.5%	8,711
SUBTOTAL		589,469
HISTORIC PRESERVATION @	10.0%	58,947
SUBTOTAL		648,416
DESIGN CONTINGENCY @	20.0%	129,683
SUBTOTAL		778,099
ESCALATION @	3.51%	27,311

Total Alternate #1 - Restoration - 19th Century 805,410

SAY: 806,000

COST/SF: 2,530 SF = \$ 318.34 /SF

Concept Cost Estimate

Project: Bowman-Hite Farmhouse & Barn, Warren County, Virginia			Page 4
Architect: Quinn Evans Architects		RWB Job # 15-23-A	
Estimated by: R.W. Brown & Associates	Farmhouse		6/22/15

Alternative #2: Preservation - Current House

Item	Quantity	Unit	Unit Price	Total Cost	Group Total
INTERIOR/EXTERIOR DEMOLITION	5,148	SF	6.00	30,888	
PEST EXTERMINATION/TREATMENT	1	LS	3,000.00	3,000	
POINT FOUNDATION WALL	576	SF	11.00	6,336	
STRUCTURAL STABILIZATION	5,148	SF	6.00	30,888	
EXTERIOR SIDING/PAINTED	4,216	SF	8.00	33,728	
INSULATION	6,800	SF	2.25	15,300	
ROOFING & FLASHING	2,570	SF	12.00	30,840	
INTERIOR WALL FINISHES	1,362	SF	4.20	5,720	
INTERIOR DOORS & HARDWARE	16	EA	400.00	6,400	
EXTERIOR DOORS & HARDWARE	3	EA	1,100.00	3,300	
WINDOWS	28	EA	900.00	25,200	
INTERIOR WOOD TRIM	2,360	LF	3.25	7,670	
FLOOR FINISHES	5,148	SF	7.00	36,036	
KITCHEN CABINETS & EQUIPMENT	1	EA	15,000.00	15,000	
FIRE SUPPRESSION	5,148	SF	4.00	20,592	
PLUMBING - PER FIXTURE	5	EA	3,000.00	15,000	
HVAC	5,148	SF	18.00	92,664	
ELECTRICAL POWER & LIGHTING	5,148	SF	8.00	41,184	
FIRE ALARM/SECURITY	5,148	SF	2.20	11,326	
SITE RESTORATION - ALLOW	1	LS	30,000.00	30,000	
SUBTOTAL					461,072
GENERAL REQUIREMENTS @	15.0%				69,161
SUBTOTAL					530,233
GENERAL CONTRACTOR'S OH&P @	10.0%				53,023
SUBTOTAL					583,256
BOND @	1.5%				8,749
SUBTOTAL					592,005
HISTORIC PRESERVATION @	10.0%				59,200
SUBTOTAL					651,205
DESIGN CONTINGENCY @	20.0%				130,241
SUBTOTAL					781,446
ESCALATION @	3.51%				27,429
Total Alternative #2: Preservation - Current House					808,875

SAY: **809,000**

COST/SF: 5,148 SF = \$ 157.12 /SF

Concept Cost Estimate

Project: Bowman-Hite Farmhouse & Barn, Warren County, Virginia			Page 5
Architect: Quinn Evans Architects		RWB Job # 15-23-A	
Estimated by: R.W. Brown & Associates	Farmhouse		6/22/15

Alternative #3: Mothball

Item	Quantity	Unit	Unit Price	Total Cost	Group Total
INTERIOR/EXTERIOR DEMOLITION	1	LS	2,000.00	2,000	
PEST EXTERMINATION/TREATMENT	1	LS	3,000.00	3,000	
POINT FOUNDATION WALL - ALLOW	100	SF	11.00	1,100	
STRUCTURAL STABILIZATION	5,148	SF	2.00	10,296	
EXTERIOR SIDING/PAINTED	4,216	SF	3.00	12,648	
ROOFING & FLASHING	2,570	SF	12.00	30,840	
SECURE EXTERIOR DOORS	4	EA	200.00	800	
SECURE WINDOWS	28	EA	150.00	4,200	
VENTILATION	5,148	SF	3.00	15,444	
ELECTRICAL POWER & LIGHTING	5,148	SF	2.25	11,583	
SITE RESTORATION - ALLOW	1	LS	10,000.00	10,000	
SUBTOTAL					101,911
GENERAL REQUIREMENTS @	15.0%				15,287
SUBTOTAL					117,198
GENERAL CONTRACTOR'S OH&P @	10.0%				11,720
SUBTOTAL					128,917
BOND @	1.5%				1,934
SUBTOTAL					130,851
HISTORIC PRESERVATION @	10.0%				13,085
SUBTOTAL					143,936
DESIGN CONTINGENCY @	20.0%				28,787
SUBTOTAL					172,724
ESCALATION @	3.51%				6,063
Total Alternative #3: Mothball					178,786

SAY: **179,000**

COST/SF: 5,148 SF = \$ 34.73 /SF

Concept Cost Estimate

Project: Bowman-Hite Farmhouse & Barn, Warren County, Virginia			Page 6
Architect: Quinn Evans Architects		RWB Job # 15-23-A	
Estimated by: R.W. Brown & Associates	Bank Barn		6/22/15

Alternate #1 - Restoration - 19th Century

Item	Quantity	Unit	Unit Price	Total Cost	Group Total
PEST EXTERMINATION/TREATMENT	1	LS	2,500.00	2,500	
INTERIOR/EXTERIOR DEMOLITION	3,250	SF	2.50	8,125	
POINT FOUNDATION WALL	948	SF	11.00	10,428	
STRUCTURAL STABILIZATION	3,250	SF	25.00	81,250	
PAINT EXTERIOR WOOD SIDING	4,100	SF	6.00	24,600	
REFURBISH INT WOOD PARTITIONS	6,800	BF	4.00	27,200	
ROOFING & FLASHING	2,530	SF	14.00	35,420	
GUTTERS & DOWNSPOUTS	200	LF	20.00	4,000	
REFURBISH WOOD STAIRS	2	FL	1,500.00	3,000	
REFURBISH SWINGING DOORS	3	EA	500.00	1,500	
REFURBISH SLIDING BARN DOORS	4	EA	600.00	2,400	
REFURBISH STABLE SWINGING DOORS	4	EA	500.00	2,000	
FLOOR TREATMENT	1,900	SF	7.00	13,300	
EARTH FLOOR TREATMENT	1,900	SF	4.00	7,600	
FIRE SUPPRESSION	NOT INCLUDED				
PLUMBING - ALLOW	1	LS	5,000.00	5,000	
ELECTRICAL POWER & LIGHTING	3,250	SF	12.00	39,000	
FIRE ALARM/SECURITY	3,250	SF	3.00	9,750	
SITE RESTORATION - ALLOW	1	LS	40,000.00	40,000	
SUBTOTAL					317,073
GENERAL REQUIREMENTS @	15.0%				47,561
SUBTOTAL					364,634
GENERAL CONTRACTOR'S OH&P @	10.0%				36,463
SUBTOTAL					401,097
BOND @	1.5%				6,016
SUBTOTAL					407,114
HISTORIC PRESERVATION @	10.0%				40,711
SUBTOTAL					447,825
DESIGN CONTINGENCY @	20.0%				89,565
SUBTOTAL					537,390
ESCALATION @	3.51%				18,862
Total Alternate #1 - Restoration - 19th Century					556,253

SAY: **557,000**

COST/SF: 3,250 SF = \$ 171.15 /SF

Concept Cost Estimate

Project: Bowman-Hite Farmhouse & Barn, Warren County, Virginia			Page 7
Architect: Quinn Evans Architects		RWB Job # 15-23-A	
Estimated by: R.W. Brown & Associates	Bank Barn		6/22/15

Alternative #2: Preservation

Item	Quantity	Unit	Unit Price	Total Cost	Group Total
PEST EXTERMINATION/TREATMENT	1	LS	2,500.00	2,500	
INTERIOR/EXTERIOR DEMOLITION	3,250	SF	2.50	8,125	
POINT FOUNDATION WALL	948	SF	11.00	10,428	
STRUCTURAL STABILIZATION	3,250	SF	25.00	81,250	
PAINT EXTERIOR WOOD SIDING	4,100	SF	6.00	24,600	
REFURBISH INT WOOD PARTITIONS	6,800	BF	4.00	27,200	
MISCELLANEOUS ROOFING REPAIRS	1	LS	2,000.00	2,000	
GUTTERS & DOWNSPOUTS	105	LF	20.00	2,100	
MODIFY SWINGING DOORS	3	EA	250.00	750	
MODIFY SLIDING BARN DOORS	4	EA	300.00	1,200	
MODIFY STABLE SWINGING DOORS	4	EA	250.00	1,000	
EARTH FLOOR TREATMENT	1,900	SF	4.00	7,600	
ELECTRICAL POWER & LIGHTING	3,250	SF	6.00	19,500	
FIRE ALARM/SECURITY	3,250	SF	2.20	7,150	
SITE RESTORATION - ALLOW	1	LS	20,000.00	20,000	
SUBTOTAL					215,403
GENERAL REQUIREMENTS @	15.0%				32,310
SUBTOTAL					247,713
GENERAL CONTRACTOR'S OH&P @	10.0%				24,771
SUBTOTAL					272,485
BOND @	1.5%				4,087
SUBTOTAL					276,572
HISTORIC PRESERVATION @	10.0%				27,657
SUBTOTAL					304,229
DESIGN CONTINGENCY @	20.0%				60,846
SUBTOTAL					365,075
ESCALATION @	3.51%				12,814
Total Alternative #2: Preservation					377,889

SAY: **378,000**

COST/SF: 3,250 SF = \$ 116.27 /SF

Concept Cost Estimate

Project: Bowman-Hite Farmhouse & Barn, Warren County, Virginia			Page 8
Architect: Quinn Evans Architects		RWB Job # 15-23-A	
Estimated by: R.W. Brown & Associates	Bank Barn		6/22/15

Alternative #3: Mothball

Item	Quantity	Unit	Unit Price	Total Cost	Group Total
PEST EXTERMINATION/TREATMENT	1	LS	2,500.00	2,500	
INTERIOR/EXTERIOR DEMOLITION	3,250	SF	1.00	3,250	
POINT FOUNDATION WALL	948	SF	11.00	10,428	
STRUCTURAL STABILIZATION - MIN	3,250	SF	5.00	16,250	
MISCELLANEOUS EXTERIOR REPAIRS	1	LS	3,000.00	3,000	
MISCELLANEOUS ROOFING REPAIRS	1	LS	2,000.00	2,000	
MODIFY SWINGING DOORS	3	EA	250.00	750	
MODIFY SLIDING BARN DOORS	4	EA	300.00	1,200	
MODIFY STABLE SWINGING DOORS	4	EA	250.00	1,000	
EARTH FLOOR TREATMENT	1,900	SF	4.00	7,600	
ELECTRICAL POWER & LIGHTING	3,250	SF	2.50	8,125	
FIRE ALARM/SECURITY	3,250	SF	2.20	7,150	
SITE RESTORATION - ALLOW	1	LS	10,000.00	10,000	
SUBTOTAL					73,253
GENERAL REQUIREMENTS @	15.0%				10,988
SUBTOTAL					84,241
GENERAL CONTRACTOR'S OH&P @	10.0%				8,424
SUBTOTAL					92,665
BOND @	1.5%				1,390
SUBTOTAL					94,055
HISTORIC PRESERVATION @	10.0%				9,406
SUBTOTAL					103,461
DESIGN CONTINGENCY @	20.0%				20,692
SUBTOTAL					124,153
ESCALATION @	3.51%				4,358
Total Alternative #3: Mothball					128,510

SAY: **129,000**

COST/SF: 3,250 SF = \$ 39.54 /SF