MUEGGE HOUSE HISTORIC STRUCTURE ASSESSMENT

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DRAFT HISTORIC STRUCTURE ASSESSMENT – DELIVERABLE #4
OCTOBER 20, 2019

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HISTORY COLORADO, STATE HISTORICAL FUND

SCHEUBER + DARDEN
architects LLC

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CHARLES MUEGGE HOUSE
HISTORIC STRUCTURE ASSESSMENT

PART I: INTRODUCTION

1.1 RESEARCH BACKGROUND/PARTICIPANTS

The Town of Bennett applied for and received a historic structure assessment grant from the State Historical Fund in 2018 with a contract time frame of October 2, 2018 to October 2, 2020. Scheuber + Darden Architects was chosen to complete the HSA with a contract date of November 6, 2018. A kick-off meeting occurred December 6, 2018 with Anne McCleave from the State Historical Fund, Taeler Houlberg with the Town of Bennett and Barbara Darden with Scheuber + Darden Architects. Subsequently, Scheuber + Darden Architects performed two field inspections, one on February 19, 2019 (weather was very cold, cloudy, windy and snowing and in the teens) and on May 15, 2019 (weather was sunny, warm and in the high 70s). Barbara Darden and Dave Wittman from Martin Martin Consulting Engineers were both on site on July 12. The purpose of these field inspections was to assess and document the condition of the site and building.

Over the course of their field inspections, Scheuber and Darden measured the building and assessed and photographed the exterior, interior, and site conditions addressing deficiencies that may have changed in the differing weather conditions that occurred during the several field inspections. This report includes data gathered during the field work and information provided by the Town of Bennett and History Colorado. This report also provides descriptions, conditions, and preliminary recommendations with specific treatment options that are intended to conform to *The Secretary of the Interior's Standards for the Treatment of Historic Properties*.

This project was paid for in part by a State Historical Fund grant from History Colorado. (SHF #2019-HA-005).

1.2 BUILDING LOCATION/SITE PLAN OR VICINITY MAP

Physical Address: 401 S. First Street, Bennett, Colorado

See Appendix for Site Plan

PART II: HISTORY AND USE

2.1 Architectural Significance and Construction History

History

The Muegge House was constructed in 1913, by Garrett Harris. Garrett cultivated dryland wheat, corn and other non-irrigated crops on his new farm.

Garrett and his small family moved to Bennett, Colorado from Waverly, Martin County, Minnesota with his wife and three of his six children circa 1913. He was married to Blanche Francis Harris and his three children were Francis Garrett, born in 1889; Fannie Poole, born in 1892; and Lucy Harris, born in 1896 all in Minnesota.[1] When he arrived in Colorado, Harris purchased the 640-acre section of the land just south of Bennett, where the house currently sits from the Union Pacific Land Company, the railroads development company, for $960. He had the Muegge House constructed circa 1913 for his wife and family, while cultivating dryland wheat, corn and other non-irrigated crops.

Figure 1 – Only known photo of the original Muegge House constructed by Garrett Harris

According to Garrett's grandson, Sidney Harris, Garrett only lived in the house for a short period of time as he owned other properties near Bennett, in Denver and in Canada. Garrett, according to his grandson, also owned the first bus business in Bennett and invested in trucking. After moving out of the house, he leased it to a series of tenants and built a second home on the property where his family lived until 1914, when they moved to a property on Kiowa Creek, which Harris had purchased in 1914. Later, most likely after his retirement, they moved to a small home on Fifth Street in Bennett.

Due to the Great Depression, the Harris family lost the property. A succession of owners and tenants lived in the house, leaving the house virtually intact until it was purchased by Charles Muegge in 1944.

He used this house as a bunkhouse for hired hands that worked the land. According to the 1948 Assessor's card, the building had plumbing, heating, casement windows, hardwood floors, knotty pine paneling in the living/dining rooms, bathroom and kitchen improvements. Vinyl siding was added to the second story, circa 1980s. According to the property survey completed in February 1999, the house, a blue metal shed, a white wood shed, a metal Quonset hut and a trailer home remained on the property (see Annexation Map in the Appendix). The house (5AM.1278), its outbuildings and the six-acre parcel was landmarked in 1999.

[1] 1910 US Federal Census, Find a Grave.com

Understanding that an important part of Bennett's agricultural heritage may be lost to development, the property was donated by Dent Hand, a Muegge relative, in 1997. Volunteers and local nonprofits pitched in to make emergency repairs. A State Historical Fund Historic Structure Assessment was granted in 1997 (#98-M2-004) and another grant in 1999 (2000-P1-017).[2]

Estelle Cole was the State Historical Fund Specialist for the #2000-P1-017 grant. After a public RFP process, William J. DeMaio, AIA from Denver, received the contract for the construction documents.[3] Structural Consultants, Inc. were the structural engineers and Kazin and Associates were the electrical engineers (See a copy of the Historic Structure Assessment and construction documents in the Appendix).

In 2000, a rehabilitation contract was let to Hammers and Nails Contracting of Bennett. Subcontractors included EFCO Electric, Thornton; King of Quality Hardwood Floors, Thornton; Plains Heating and Air Conditioning, Limon; and Howell's Rain Gutters and Repair, Byers.

In 2000, the property was leased to the High Five Plains Foundation, REAP and the Bennett Historical Society. They remained in the house for many years, but by 2010, the house was once again empty and being used for storage. In 2010, they began looking at using the house as an interpretive center with historical displays depicting the history of the Town of Bennett and surrounding area.

In 2017, the building was flooded. All the damage occurred on the south elevation and in the basement. After a 3-day rainstorm, water was able to enter a sealed access door below the porch deck and allowed a foot of water into the basement. The basement walls were lined with R19 insulation over the concrete walls and a small section of drywall on the south elevation of the basement. The floor was dirt according to the insurance company.

Developmental History/Timeline

1912	House was constructed.
1944 - 1948	Wood floors; indoor plumbing and forced-air heating; and knotty pine walls and ceilings were added to the interior of the house, bathroom and kitchen improvements.
1944 – 1948	Wrap around porch was added to the house to take advantage of the local breezes; added the steel sash windows.[4]
Circa 1980s	Vinyl siding was added to the second floor.
1997	Air conditioning was added to the upstairs. Ductwork was installed within the walls during a remodel.
1997 – 1999	Interim repairs and weatherproofing by volunteers (no detail of work completed).
2000	See construction documents in the Appendix for changes to the house.
After 2000	Original wood windows and steel sash windows were removed and new vinyl windows were installed.

Character Defining Features

According to the Architectural Inventory 1403 form, the 1948 improvements are contributing features and should be retained as adaptive reuse of the house as a bunkhouse. Therefore, the building's character defining features are:

1. Steep front gabled roof.

[2] Harvesting Historical Riches, The Muegge House: Echoes of Bennett's Past
[3] Undated Letter to Mayor David Dummar from Joe Racine
[4] Letter from Mary Ellen Dressler, March 12, 2010. Greeley, CO

2. Three-sided wrap around porch.
3. Wood sash windows.
4. 4” horizontal wood lap siding.
5. Side passage front entry plan
6. Knotty pine wall and ceiling paneling.
7. Steel sash windows.

Period of Significance – 1944 – 1990s

2.2 EXISTING SKETCH PLANS

Please see Appendix 8.03 for floor plans and building footprint.

2.3 PROPOSED PROGRAM

Current Use & Proposed Program

The building is currently empty, but it has been discussed turning the building into an interpretive center with photos and memorabilia of Bennett’s early history.

This report and assessment is written utilizing T*he Secretary of the Interior’s Standards for Historic Properties*. The Secretary of the Interior’s Standards has four Treatments: Preservation, Restoration, Reconstruction and Rehabilitation. Within each treatment there are standards and guidelines that should be followed when working on a historic building. The four treatments are identified and defined as:

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 than 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-required work to make properties functional is appropriate within a preservation project.

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.

Reconstruction is defined as the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location.

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.

When assessing a historic property and identifying its proposed use, a specific treatment is identified and implemented through recommendations based on the standards and guidelines within the treatment. That doesn’t mean that within a rehabilitation treatment, for example, that one cannot utilize restoration, preservation or reconstruction if necessary to work on a particular historic element within the building or

property, especially if it is a character defining element. Understanding the treatments, standards and guidelines is important in working on a historic property. Since this building is no longer used as a house, the use of the rehabilitation treatment is appropriate in the preparation of this report and the implementation of the associated recommendations.

There are several approaches in creating a plan for the rehabilitation of a building. The Secretary of the Interior's Standards clearly describes these approaches and they are as follows:

Identify, Retain, and Preserve Historic Materials and Features.
It is important to identify the buildings form and elements that are important in defining a building's historic character and which should be retained in order to preserve its character.

Protect and Maintain Historic Materials and Features
Once these features are identified, then protecting and maintaining them is addressed. This report provides a description, condition and recommendation of not only the character defining features, but all of the elements that make up the building. The recommendations are based on the Secretary of the Interior's Standards Guidelines.

Repair Historic Materials and Features
Repair of historic materials should occur with the least amount of intervention, such as patching, piecing-in, splicing, consolidating, or otherwise reinforcing or upgrading them according to recognized preservation methods and not replacement unless the feature has completely failed. A part of the feature can be replaced in kind or with an approved substitute material. A substitute material should convey the visual appearance of the remaining parts of the feature and finish.

Replace Deteriorated Historic Materials and Features
If an entire character defining feature is missing, then it can be replaced if there is enough physical evidence left to re-establish the feature as an integral part of the rehabilitation. The preference is to replace the element in-kind with the same material, but if it is not technically or economically feasible then a compatible substitute material can be considered.

Design for the Replacement of Missing Historic Features
When an entire feature is missing, it can no longer physically define the historic character of the building. In this instance, the element or feature should be rebuilt if enough historical documentation, either physical or photographic, can be found to correctly reproduce the element. Replacement is always the recommendation in Rehabilitation. If enough historical documentation is not available, then a replacement feature with a new design is acceptable as long as it is compatible with the remaining character defining features. The new design should always take into account the size, scale, and material of the historic building and should be clearly differentiated from the historic elements so that a false historical appearance is not created.

Alterations/Additions for the New Use
During rehabilitation, some exterior and interior alterations are usually needed to assure its continued use. It is important that these alterations do not radically change, obscure, damage or destroy any character defining features, spaces, materials, or finishes. Alterations may include the removal of selected features that are intrusive and detract from the overall historic character. A new addition may also be required for its new use. New additions are not recommended, but if necessary, they should be clearly differentiated from the historic building and no character defining features should be altered or removed.

Energy Efficiency, Accessibility Considerations, Health and Safety Code Considerations

During rehabilitation, necessary changes to the building may be required to meet accessibility requirements and or code requirements. Changes may also be required to improve energy efficiency. This work is important, but should not damage, radically change, or destroy any character defining features in a building.

Other Sources of Information

We also use the National Park Service **Preservation Briefs** to provide guidance on preserving, rehabilitating and restoring historic buildings. These briefs provide more direct and explicit instruction on how to implement the recommendations found in this report and should be utilized by the owner and the user when implementing the recommendations with their own staff or personnel. They also help owners recognize and resolve common problems prior to beginning work and recommend methods and approaches for restoring historic buildings that are consistent with their historic character. For further information, the link to the website is: http://www.nps.gov/tps/how-to-preserve/briefs.htm

This report by no means provides the building owner and user with enough information to complete the rehabilitation of their building. It is only a first step in the process. The report provides the owner and user with a scope of work, a preliminary project budget and a phasing schedule. The next step is to hire a preservation architect and/or engineer to implement the recommendations in the report by completing construction documents that can then be utilized by a qualified general contractor to complete the work.

3.1 SITE

- **ASSOCIATED LANDSCAPE FEATURES**
  Photographs and Illustrations: 1.0 – 6.0

DESCRIPTION:
The building sits just to the east of Bennett Town Hall. It fronts Highway 79 on the east and a private access road on the south. There is another town building located to the north of the building.

The grounds surrounding the building are relatively flat but slopes towards the north and west. There is a concrete sidewalk to the north and a walking path that curves from the south. A portion of the west, south and north portions of the property are covered with recycled asphalt, while the rest of the property is covered with grass and natural vegetation that is left to grow naturally. There are only a few trees on the property. A deciduous tree on the south approximately 50 feet from the house and an evergreen tree that is approximately 30 feet from the house on the east. Other trees are located along the public sidewalk on the east and a planting bed and timber fence are located at the corner of the property to the west.

There is a wood handicap ramp that has one pipe rail on the north side. Another pipe rail is setting against the ramp on the south side as it has come loose from the ramp.

CONDITION:
The site is in good to poor condition. Most of the trees and grasses look healthy and well maintained. The evergreen tree appears to be diseased and is dying. The grass grows against the building and the concrete porch.

The Town has had issues with water infiltration at the handicap ramp on the south elevation. Water drains towards the ramp and the historic basement access, which is just below the ramp (*see figure 2*). The water enters between the house and the concrete retaining wall of the historic concrete stairs to the basement. The Town installed sand bags along the ramp to prevent the water infiltration, but those bag have now disintegrated.

Figure 2 Erosion under the wood deck from water drainage. Plywood is covering the historic stairs into the basement.

RECOMMENDATIONS:
According to the Secretary of the Interior Standards, identifying, retaining and preserving buildings and their site features are important in defining its overall historic character. Additionally, it is important to protect and maintain the building by providing proper drainage to assure that water does not allow water to stand against the building or plants impact its foundation.

To protect the building, remove the recycled asphalt from the property. Create a swale approximately 10' away from the building and raise grade against the porch and building and slope 6" in 10'-0" to the swale to

create positive drainage away from the building as recommended by *Preservation Brief 39: Holding the Line: Controlling Unwanted Moisture in Historic Buildings.* Add topsoil and reseed with native grasses after sitework is complete.

Additionally, remove the curb cut at the south road to prevent water from entering the property during a heavy rainstorm or during snow events and associated melting.

See additional recommendations under INTERIOR FINISHES – Basement.

- **PARKING**
  Photographs and Illustrations: N/A

DESCRIPTION:
There is a on-street parking lot on the west side of the property, which is a part of the municipal parking lot. Recycled asphalt surrounds the south and west elevations and is occasionally used for parking also.

CONDITION:
The parking is in good condition. ADA parking is close by and is shared with the adjacent municipal building.

RECOMMENDATIONS:
Removal of the recycled asphalt and the associated parking on the site should be removed for reasons provided in the section above.

- **ARCHAEOLOGY**
  Photographs and Illustrations: N/A

DESCRIPTION:
No archaeological excavation has been performed on this property.

CONDITION:
N/A

RECOMMENDATIONS:
Deep re-grading that would disturb potential artifacts is not recommended. A shallow surface archaeological reconnaissance should be conducted prior to any ground disturbance, and the State Historical Fund staff archaeologist should be consulted and offer advisement in the event ground disturbance is anticipated, i.e. utility installation trenching or foundation excavation. "Archaeological monitoring/mitigation is required by a number of state and federal regulations when any ground disturbance results from preservation activities where there is state and/or federal involvement."

3.2 STRUCTURAL SYSTEMS

- **GENERAL STRUCTURAL SYSTEM DESCRIPTION**

Photographs and Illustrations: N/A

DESCRIPTION:
The building is a wood framed building with wood siding and wood framing and roof members. It has a concrete foundation and has an elevated concrete, wrap around porch on the south, east and north elevations that we believe was constructed by Charles Muegge when he rehabilitated the building into a bunkhouse in the 1940s. Due to the age of the building, portions of the foundation may be stone and later parged with concrete. The crawlspace was inaccessible, so it was not determined whether the foundation on the east side of the house remains stone.

CONDITION:
The foundation has had some weathering, but overall it is in fair condition. The wall and roof framing appear to be in good condition.

RECOMMENDATIONS:
See FOUNDATION SYSTEMS and ASSOCIATED LANDSCAPE for recommendations.

- **FOUNDATION SYSTEMS**

Photographs and Illustrations: 1.0 – 8.0, 49.0

DESCRIPTION:
It is believed that the original foundation was stone, primarily due to the age of the building. The crawlspace was inaccessible due to the extent of mud and flooding, but the original stone foundation may be visible on the east side behind the porch addition. Additionally, the visible concrete foundation on the west and north elevations may have been stone and either replaced or parged with concrete during its period of significance.

Figure 3 Cracks at Face of Concrete Porch and Weathering of the Concrete

CONDITION:
The original basement walls were not visible due to the batt insulation installed on the interior of the foundation walls and the ability to access the basement due to mud and flooding. Above grade on the exterior, the concrete was in fair condition, but was heavily weathered and eroded in some areas.

The porch foundation, which was visible is in fair condition. There is significant horizontal cracking along the foundation wall and cracking at the corners where the columns bear *(see Figure 3)*.

RECOMMENDATIONS:
Remove the existing batt insulation in the basement so a more thorough assessment can be completed. This assessment should be completed by a structural engineer that specializes in historic preservation.

There is minimal movement in the building so we don't recommend any work at this time. If there is evidence of additional movement in the future, then the existing concrete foundations should be replaced or underpinned. The construction documents should be completed by a structural engineer with experience in historic building systems.

Where the concrete is displaced on the surface of the porch and is a tripping hazard, grind the concrete and fill any cracks with a flexible sealant. Monitor the cracking on the vertical face and if it continues to displace, cut out the section and repour.

- **FLOOR AND CEILING SYSTEMS**
  Photographs and Illustrations: 49.0

DESCRIPTION:
First Floor Framing System
The floor is 2"x 8" floor joists at 16" O.C. with 1x tongue and groove sheathing.

Second Floor Framing System
Unknown. There is no access.

CONDITION:
First Floor Framing System
Good condition except at the basement stair where additional support is required.

First Floor Ceiling System
Good condition. The ceiling is true and level.

RECOMMENDATIONS:
During a rehabilitation, have a structural engineer design supplemental supports at the corners of the stair and install per the drawings. No other work is recommended at this time. Load calculations were not completed as a part of this grant, so load capacities are not known.

- **ROOF FRAMING SYSTEM**
  Photographs and Illustrations: 13.0, 14.0, 48.0

DESCRIPTION:
The roof is 2" x 4" at 16" O.C. where visible. New collar ties were added in the 2000 SHF grant at every 4'-0". There is 1x board sheathing with OSB on top.

Porch: The porch is also framed with 2" x 4" members with 1x board sheathing.

CONDITION:
The roof framing is in good condition, except for three, split roof joists on the porch.

RECOMMENDATIONS:
Replace the damaged roof joists with replica joists at the porch. Load calculations were not completed as a part of this grant, so load capacities are not known.

3.3 ENVELOPE – EXTERIOR WALLS

- **EXTERIOR WALL CONSTRUCTION**
  Photographs and Illustrations: N/A

DESCRIPTION:
The walls are 2" x 4" studs at 16" O.C. where visible (Original House) The additions (see floor plan for locations) are 2" x 4" studs, but the spacing varies between 13" to 22" O.C. There is lap sheathing on the Original House.

CONDITION:
Where visible in good condition. There is no obvious deflections or deterioration.

RECOMMENDATIONS:
No work recommended at this time.

- **EXTERIOR FINISHES**
  Photographs and Illustrations: 1.0 – 4.0, 11.0, 12.0, 15.0 – 21.0

DESCRIPTION:
Original House: The original house is clad with horizontal lapped wood siding with a 4 1/8" exposure. 1" x 4" corner boards exist at each corner. The trim around the windows and doors vary. It is believed that the original windows and doors on the main house retain the original trim. This includes Window J, H, L, K and Door 100. The trim around Window J, H, L, K is 1" x 4" have a sloped wood sill. The hood over the window includes a flat frieze with a stepped cornice above with an angled drip on top. Door 100 has identical trim.

The rest of the trim on the other windows (Windows A, I, M, N, O, P, Q, R) have simple, 1" x 4" trim at the sides, sill and head. Window A, prior to the Charles Muegge ownership in 1943 was a bay window (*see Figure 1 above*).

Figure 4 Damage from water infiltration at porch roof connection.

Addition 1: This addition is clad with horizontal lapped wood siding with a 4 1/8" exposure. The historic 1" x 4" corner boards are retained. The window trim is simple 1" x 4" boards with a wood sill and a small wood drip cap at the head. The door trim is the same as the window trim.

Enclosed Porch Addition: The enclosed porch has vertical 1" x 4" boards above the door, while the 3/8" paneled beadboard is below the windows and doors, which was most likely installed during the SHF#2000-P1-017 grant, but after 1998 according to a black and

Figure 5 Deteriorated Wood Siding, Rotted Siding and Gaps at Plugs from Blown-in Insulation

white photo of the building in 1998.

CONDITION:

Original House: The wood siding is in fair condition with some areas in poor condition. There is extensive evidence of past paint failure under the current paint. Additionally, during the SHF#2000 grant, holes were drilled in the siding and above and below the windows to install blown-in insulation. The boards have significant deterioration with gaps between the plugs and wood siding where the plugs have shrunk. The north elevation, at the first floor has extensive damage, where water has dripped behind the porch roof and damaged and warped the wood siding at the first-floor level (*see Figure 4*). Additionally, the siding has cobwebs and dirt covering the building. The bottom row of wood siding at the first floor is exhibiting more deterioration than the rest of the siding, most likely from standing water and snow on the concrete porch. There is also paint peeling, most of it is located at the second story where the siding is not protected by the wrap-around porch. The siding at the second floor also has boards that have splits and are warped. The window and door trim are mostly in good condition, except at Windows K & L. The cornice trim is loose and warped.

Addition 1: The wood siding is in fair condition with some areas in poor condition. There is extensive evidence of past paint failure under the current paint. Additionally, during the SHF#2000 grant, holes were drilled in the siding and above and below the windows to install blow-in insulation. The boards have significant deterioration where the plugs have shrunk leaving gaps between the plugs and wood siding. One board on the north elevation has completely rotted due to water infiltration around the plugs (*see Figure 5*). Additionally, the siding has cobwebs and dirt covering the building. There is also extensive paint peeling, exposing the raw wood behind. The west addition has two rows of siding infill that does not match the rest of the siding.

Figure 6 Panelized beadboard at enclosed porch addition. Note deteriorated paint and loose panels.

Enclosed Porch Addition: The panelized beadboard siding is warping and pulling away from the wall framing. The paint on the siding has extensive paint deterioration, exhibiting alligatoring and peeling areas (*see Figure 6*).

RECOMMENDATIONS:

Original House: Remove all wood siding that has the plugs and install new replica siding. This will prevent future water infiltration and possible wood framing damage. Epoxy all wood siding that have minor splits and replace siding that is

heavily warped, has splits that extend across over half of the length of the board or is rotted. When replacing this siding, inspect the wall framing and building paper for damage from water infiltration. If water damage exists, repair with replica members/material. Maintain the existing wood trim and repair the trim at Windows K & L. Sand the building to the next sound layer and paint the historic color. Although it appears that the historic color was always white, a historic paint analysis should be completed to document the historic color during its period of significance, which is 1948.

- **EXTERIOR MASONRY**
  Photographs and Illustrations: N/A

  See FOUNDATION SYSTEMS above.

  DESCRIPTION:
  The house has a straddle-ridge chimney constructed of red and green brick.

  CONDITION:
  The chimney is in good condition.

  RECOMMENDATIONS:
  There are no recommendations.

- **EXTERIOR APPENDAGES – PORCH, STOOP, PORTICO, ETC.**
  Photographs and Illustrations: 1.0 – 11.0, 13.0, 14.0,

DESCRIPTION:
Wrap-Around Porch
The wrap-around porch was constructed between 1944 – 1948, after Charles Muegge purchased the property. The porch is concrete with remnants of grey and blue paint. The hipped roof is supported by nominal 4" x 4" wood posts notched at the top. A nominal 2" x 8" beam spans between the posts and bears on the notch of each post. An additional 2" x 4" member has been added to the inside face of the wood post to provide additional support for the porch roof. There is also a 2" x 4" ledger with metal joist hangers at the face of the house to provide support for the rafters The porch roof is nominal 2" x 4" roof rafters with 1" x 4" tongue and groove sheathing. Historically, the roof had exposed rafter tails, but gutters and downspouts were added (installed during the 2000 SHF grant), which cover the ends of the rafter tails. There is ogee molding between the rafters at the underside of the roof.

Figure 7 Large Crack and Alligatoring of the Concrete Porch

CONDITION:
Wrap-Around Porch

The posts, columns and beam are in good to fair condition with a few minor exceptions. The columns sit directly on the concrete porch, so

there is minor deterioration at the base of the columns from snow and water. Approximately 50% of the ogee molding is missing between the rafters at the face of the house.

The roof framing is in good to fair condition. There is some minor deterioration of the sheathing in isolated spots. There are also a few areas where the rafters are split.

The concrete porch is in fair to poor condition. There is extensive alligatoring along the edges of the porch where it tends to receive the most damaging water and snow impact. Additionally, there are cracks that run from the edge of the porch towards the wall of the house *(see Figure 7)*. Four of these cracks are extensive with displacement and gaps of up to ½". The southeast corner of the porch is also cracked and displaced.

RECOMMENDATIONS:
Temporarily support the porch and install new column standoffs to raise the columns off the porch. This will require the posts to be slightly shortened but will prevent continued deterioration of the bottoms. Additionally, epoxy coat the bottoms of the columns to prevent moisture infiltration during large snow events.

Install replica ogee molding where it is missing.

Sister new rafters where they are split or damaged. Monitor the roof sheathing and maintain the roof envelope to prevent further deterioration of the roof sheathing.

Concrete porch: Where the concrete is displaced on the surface of the porch and is a tripping hazard, grind the concrete and fill any cracks with a flexible sealant. Monitor the cracking on the vertical face and if it continues to displace, cut out the section and repour.

3.4 ENVELOPE – ROOFING AND WATERPROOFING

- **ROOFING SYSTEMS**
  Photographs and Illustrations: 1.0 – 4.0, 22.0

DESCRIPTION:
The roof is clad with asphalt shingles that was installed during a previous SHF grant (SHF#00-01P1-017). There are contemporary, rectangular attic vents near the ridge of the roof on the south elevation.

CONDITION:
The shingles are in good condition with some minor hail damage.

RECOMMENDATIONS:
Preservation Brief 39 - Holding the Line: Controlling Unwanted Moisture in Historic Buildings discusses three levels of preservation. Level I Preservation Maintenance, Level II Repair and Corrective Actions and Level III Replacement/Alterations for Chronically Damp Conditions.

Level I Preventative Maintenance – *Apply cyclical maintenance procedures to eliminate rain and moisture infiltration*

The roof on this building only requires maintenance. Inspect the roof after every large hail, rain or wind event to determine if the roof should be replaced. If shingles are blown off, replace in-kind to prevent water infiltration.

Level II Repair and Corrective Action – *Repair features that have been damaged. Replace extensively deteriorated features with a new feature that matches in design, color, texture and where possible, materials.*

There are no Level II correction actions required on this roof.

Level III Replacement/Alterations for Chronically Damp Conditions – *Undertake exterior rehabilitation work that follows professional repair practices that include replacing a deteriorated feature with a new feature to match the existing design, color, texture and when possible materials.*

It is not anticipated that this roof will need to be replaced in the near future but when it is replaced, the following elements should be included during the replacement.

1. Install ice and water shield to the lower four feet of the roof to limit damage from ice dams;
2. Modify the attic ventilation. Instead of installing contemporary circular roof vents, install a ridge vent ad soffits vents to achieve the appropriate ventilation. Complete calculations to determine how many soffit vents are required to provide adequate attic ventilation. Roof top vents are not appropriate on this building. Soffit vents should be coordinated with the SHF specialist and a historic preservation architect prior to selecting, locating and installing.
3. Install impact resistant asphalt shingles.

- **SHEET METAL FLASHING**
  Photographs and Illustrations: N/A

DESCRIPTION:
There is sheet metal drip edge flashing at the roof edge. Flashing also exists around the masonry chimney and vent penetrations.

CONDITION:
Good Condition.

RECOMMENDATIONS:
During a comprehensive roof replacement install new metal flashing at the roof edge, penetrations, and chimney.

- **PERIMETER FOUNDATION DRAINAGE**
  Photographs and Illustrations: N/A

DESCRIPTION:
There is no perimeter foundation drainage system around this building.

RECOMMENDATIONS:
No recommendations.

- **DRAINAGE SYSTEM, GUTTERS AND DOWNSPOUTS**
  Photographs and Illustrations: N/A

DESCRIPTION:
There are box gutters and downspouts on this building, which were installed during the previous grant (SHF#2000-P1-017). Downspout extensions exist on all downspouts.

CONDITION:
The gutters and downspouts are in good to fair condition. The extensions are plastic and several have been crushed or do not extend beyond the drip line of the building.

RECOMMENDATIONS:
Maintain the existing gutters and downspouts. Install new downspout extensions that extend at least 12" beyond the drip line of the roof.

1.5 WINDOWS AND DOORS

- **DOORS (INCLUDING HARDWARE, CASING/TRIM, AND FINISHES)**
  Photographs and Illustrations: 23.0 – 29.0, 31.0

Door 100 (2'-10" x 6'-10")
DESCRIPTION & CONDITION:
This is an original door, which can be seen in the 1914 photograph (*see Figure 1 in History*). It has three horizontal raised panels with a large lite above. The historic door hardware has been removed and replaced with a chrome finished contemporary lever handle. The historic keyhole remains. There is also an older slide bolt on the interior of the door. There is a contemporary aluminum storm door on the exterior.

Trim: The historic trim is 4 ½" wide. The entablature above the door is the original door casing. It is 6 ½" tall with stepped crown molding atop a wide frieze. Below the frieze is a beaded architrave molding. There is a 10" high plinth block at either side of the door at the floor.

The trim and door are painted a light brown. The exterior of the door is painted white.

The door is in fair condition. There is some paint deterioration and some minor deterioration of the joints. The door hardware is in good condition. The storm door will not close and latch completely.

The historic trim is in good condition. It is presumed that the original finish was stain. A historic paint analysis should be completed to determine the color of the trim during its period of significance, which began in 1944 when Charles Muegge purchased the house.

RECOMMENDATIONS:
Restore the historic door, completing a paint analysis to determine the color during its period of significance. Tighten any loose joints, re-glaze the window and sand the door to the next sound layer prior to painting. Install new lever hardware that is compatible with the historic character of the building. Install a new storm door or wood screen.

Door 101 (2'-8" x 6'-7")
DESCRIPTION & CONDITION:
This is an original door. It has three horizontal panels with a large lite above. There is a single horizontal panel above the lite. The historic door hardware has been removed and replaced with a bright brass round knob. There is a contemporary aluminum storm door on the exterior. The door is painted white on the exterior and is stained on the interior. The stain dates to the period of significance beginning in 1944.

Trim: The historic trim is 2 ¼" wood casing, which dates to the period of significance. The casing has been painted brown.

The door is in fair condition. There is paint deterioration and minor deterioration of the joints. The wood glazing strips are in fair to poor condition with water damage and minor rot. The door hardware is in good condition. The storm door is in good condition.

The historic trim is in good condition.

Figure 8 Evidence of the Door Being Widened

RECOMMENDATIONS:
Restore the historic door, completing a paint analysis on the exterior to determine the color during its period of significance. Tighten any loose joints, re-glaze the window and sand the door to the next sound layer prior to painting. Install new lever hardware that is compatible with the historic character of the building.

Remove the painted finish on the interior trim and stain to match the rest of the historic stained finishes dating from the period of significance.

Door 102 (2'-10" x 6'-6")
DESCRIPTION & CONDITION:
This is a historic door that dates to the period of significance beginning in 1944. It has three horizontal plywood panels with a large lite above. The door was widened from a 2'-6" door to a 2'-10" door during the period of significance (*see Figure 8*). The historic door hardware is intact. The door hardware, which dates from its construction in 1912, is a black metal, oval knob with an oval beaded escutcheon. A contemporary deadbolt has been installed above. It has a bright brass finish and is installed on a large brass plate that wraps the door jamb. The door is painted white on the exterior and is stained on the interior.

Trim: The historic trim is 2 ¼" wood casing, which dates to the period of significance. The casing is stained, which dates to the period of significance.

The door is in fair condition. There is some paint deterioration at the plywood panels, especially at the bottom of the door. The door hardware is in good condition.

The historic trim is in good condition.

RECOMMENDATIONS:
Restore the historic door, completing a paint analysis to determine the exterior color during its period of significance. Tighten any loose joints, re-glaze the window and sand the door to the next sound layer prior to painting.

Door 103 (2'-8" x 6'-9")
DESCRIPTION & CONDITION:
The door is a contemporary door that was most likely installed during the previous SHF grant (#2000-P1-017). The lever door hardware is integral with the storm door.

Trim: The door does not have any trim.

The door is in poor condition as it no longer latches.

RECOMMENDATIONS:
Remove the door and install a new door that is more compatible with the historic character of the house. Most likely, the enclosed porch only had a screen door, not a storm door.

Door 104 (2'-8" x 6'-6")
DESCRIPTION & CONDITION:
This is an original door opening. The door has been removed, but there is evidence that a door once existed at this location.

Trim: The historic trim on the hall-side of the door is 4 ½" wide. The entablature above the door is the original door casing. It is 6 ½" tall with stepped crown molding atop a wide frieze. Below the frieze is a beaded architrave molding. There is a 10" high plinth block at either side of the door at the floor. The trim on the office side of the door is the 2 ¼" stained wood casing from its period of significance. The trim on the hall side of the opening is painted brown. The casing on the office side is stained.

The trim is in good condition.

RECOMMENDATIONS:
It is presumed that the original finish on the hall trim was stained. A historic paint analysis should be completed to determine the color of the trim during its period of significance, which began in 1944 when Charles Muegge purchased the house. If possible, it should also be determined if the historic door existed during the period of significance or if it was removed by Charles Muegge when he rehabilitated the interior between 1944 and 1948. If it is found that the door existed, it should be re-installed.

Door 105 (5'-1" x 6'-7")
DESCRIPTION & CONDITION:
This is an opening that dates to the period of significance. The door trim is 2 ¼" wide stained wood casing.

RECOMMENDATIONS:
No recommendations.

Door 106 (2'-6" x 6'-5")
DESCRIPTION & CONDITION:
This is an opening that dates to the period of significance. The door trim is 2 ¼" wide stained wood casing.

RECOMMENDATIONS:
No recommendations.

Door 107 (3'-0" x 6'-8")
DESCRIPTION & CONDITION:
This is an opening that dates to the period of significance. The door is a contemporary, pressed wood four-panel door with a black finish lever hardware.

The door trim is 2 ¼" wide wood casing. It has been painted.

RECOMMENDATIONS:
It is presumed that the original finish on the hall casing was stained like the rest of the wood casing throughout the first floor. Restore the wood casing to its historic appearance. The contemporary door should be removed and a door that is more compatible with the historic character of the building should be installed.

Door 108 (2'-8" X 6'-7½")
DESCRIPTION & CONDITION:
This is an opening that dates to the period of significance. Historically, it had a door in the opening, as hinge locations are visible. The door trim is 2 ¼" wide wood casing. The casing on the conference room side is stained. The casing on the breakroom side is painted.

RECOMMENDATIONS:
It is presumed that the original finish on all the casing was stained like the rest of the wood casing throughout the first floor. Restore the wood casing to its historic appearance. Install a wood door that is compatible with the historic character of the house.

Door 109 (2'-8 ½" X 6'-6")
DESCRIPTION & CONDITION:
This is an opening that dates to the period of significance. The door trim is 2 ¼" wide painted wood casing.

RECOMMENDATIONS:
It is presumed that the original finish on the casing was stained like the rest of the wood casing throughout the first floor. Restore the wood casing to its historic appearance.

Door 110 (2'-5 ½" x 6'-5 ½")
DESCRIPTION & CONDITION:
It is unclear whether this door dates to the period of significance or its original construction. The push door is a multi-lite, contemporary door with a floor pivot hinge. There is no door casing/trim on either side of the door. The door is in good condition. It rubs the jamb slightly when opening.

RECOMMENDATIONS:
Sand the door to the next sound layer and paint. Sand the jamb of the door to allow for easy operation.

Door 111 (2'-4" x 6'-0")
DESCRIPTION & CONDITION:
This is an opening and door that dates to the period of significance, which begins in 1944. Historically, access to the basement was from the exterior, but Charles Muegge moved the access to the interior when he constructed the wrap-around porch. The door is a single plywood panel door with a stained finish and antique brass knob. There is an eye and hook that latches the door shut. The door trim is 2 ¼" wide stained wood casing.

The door and casing is in good condition. The doorknob no longer latches.

RECOMMENDATIONS:
Adjust the doorknob to allow the door to latch properly.

Door 200 (2'-6" x 6'-6 ½")
DESCRIPTION & CONDITION:
This is an original door. It has four vertical panels. The upper panels are larger than the two bottom panels.

The door hardware is the original and is a black metal knob with black escutcheon. The door is painted a beige brown.

Trim: The historic trim is 4 ½" door casing with ogee moulding on one edge. The casing has been painted beige-brown.

The door, trim and hardware are in good condition.

RECOMMENDATIONS:
The door sticks on the carpet and does not close easily. If carpet is to remain, then the bottom of the door should be shaved slightly so it will close and latch. Complete a paint analysis to determine the color of the door during period of significance.

Door 201 (2'-6" x 6'-6 ½")
DESCRIPTION & CONDITION:
This is an original door. It has four vertical panels. The upper panels are larger than the two bottom panels. The door hardware is the original and is a black metal knob with black escutcheon. The door is painted a beige brown.

Trim: The historic trim is 4 ½" door casing with ogee moulding on one edge. The casing has been painted beige-brown.

The door, trim and hardware are in good condition.

RECOMMENDATIONS:
Complete a paint analysis to determine the color of the door during period of significance.

Door 202 (2'-0" x 6'-0 ½")
DESCRIPTION & CONDITION:
This is an original opening, but the door has been removed.

Trim: The historic trim is 4 ½" door casing with ogee moulding on one edge. The casing has been painted beige-brown.

The trim is in good condition.

RECOMMENDATIONS:
If needed, a new replica door can be fabricated and installed on the closet opening.

Door 203 (2'-6" x 6'-6 ½")
DESCRIPTION & CONDITION:
This is an original door. It has four vertical panels. The upper panels are larger than the two bottom panels. The door hardware is the original and is a black metal knob with black escutcheon. The door is painted a beige brown.

Trim: The historic trim is 4 ½" door casing with ogee moulding on one edge. The casing has been painted beige-brown.

The door, trim and hardware are in good condition.

RECOMMENDATIONS:
Complete a paint analysis to determine the color of the door during period of significance. The door sticks on the carpet and does not close easily. If carpet is to remain, then the bottom of the door should be shaved slightly so it will close and latch.

Door 204 (2'-0" x 5'-9")
DESCRIPTION & CONDITION:
This is an original opening, but the door has been removed.

Trim: The historic trim is 4 ½" door casing with ogee moulding on one edge. The casing has been painted beige-brown.

The trim is in good condition.

RECOMMENDATIONS:
If needed, a new replica door can be fabricated and installed on the closet opening.

Door 205 (2'-6" x 6'-6 ½")
DESCRIPTION & CONDITION:
This is an original door. It has four vertical panels. The upper panels are larger than the two bottom panels. The door hardware is the original and is a black metal knob with black escutcheon. The door is painted a beige brown.

Trim: The historic trim is 4 ½" door casing with ogee moulding on one edge. The casing has been painted beige-brown.

The door, trim and hardware are in good condition.

RECOMMENDATIONS:

Complete a paint analysis to determine the color of the door during period of significance.

OVERALL DOOR RECOMMENDATIONS:
Beyond the recommendations mentioned above, the following recommendations for the doors should also be utilized during a rehabilitation project.

According to the Secretary of the Interior's Standards, doors in a historic building should be evaluated to determine if they are significant to the building. If after evaluation the doors are found to be:

1. Original.
2. Reflect the original design intent for the building.
3. Reflect the period or regional styles or building practices.
4. Reflect the changes to the building resulting from major periods or events, or
5. Are examples of exceptional craftsmanship or design.

The doors in the Charles Muegge House are mostly original, reflect the original design intent for the building, and reflect the period of construction and period of significance, and are examples of exceptional craftsmanship. Therefore, the doors are character defining features and are important in maintaining the historic character of the building.

Although there is no Preservation Brief the specifically addresses the restoration of historic, character defining doors, the recommendations found in *Preservation Brief 9 – The Repair of Historic Wooden Windows* can be used to restore all the historic doors discussed above.

Repair Class I: Routine Maintenance required to upgrade a door to "like new" condition normally includes the following steps. This includes all of the historic doors described above.

1. Interior and exterior paint/stain removal if it is found that the doors were painted during the period of significance.
2. Removal and repair of doors, including reglazing any lites in the doors or the transoms above the doors.
3. Repairs to the door frames.
4. Weatherstripping and reinstallation.
5. Repainting and restaining.

Safety Note: Considering the age of this building, the practices at the time of its construction and previous finishes analysis of buildings of similar vintage, it is very likely that some of the finishes are lead based, and there may be asbestos in the glazing compound. Therefore, custodial and typical maintenance procedures should avoid disturbing these finishes. The use of topical, non-invasive cleaning with mild detergent based solutions should be the "most aggressive" methodology used, thus minimizing the possibility of releasing any lead dust or lead containing rinse. The risk primarily applies to worker safety during more invasive refinishing and refurbishing processes that may involve aggressive chemical stripping and/or finish sanding.

Cost Implication Note: Due to the potential liability associated with the removal and/or refinishing of lead containing transparent and opaque finishes, mold mitigation, and replacing of glazing compound, this work should not be performed by laypersons. Necessitated by the industrial hygiene required protocols and procedures, the contracting of this type of abatement is costly and potentially damaging to the integrity of the historic fabric. Therefore, any refinishing of these features that disturbs the existing finishes should include this cost in addition to the actual finishes restoration costs.

- **WINDOWS (INCLUDING HARDWARE, CASING/TRIM, AND FINISHES)**
  Photographs and Illustrations: 30.0, 32.0 – 37.0

Window A (5'-7 ½" x 5'-1 ½")
DESCRIPTION & CONDITION:
This is a multi-lite, steel casement/picture window that dates to the period of significance beginning in 1944. The opening has two casement windows on either side of a picture window. The pair of casement windows have four-lites, the picture window has eight-lites. There is a fixed, horizontal, four-lite band above the casement windows and picture window. The interior of the sashes remain the historic, black metal finish. The exterior is painted white.

The window has 2 ¼" wide stained, wood casing dating to the period of significance.

The cranks and latches are no longer operational on the windows. The glazing bead is deteriorated on the exterior.

Window B (2'-11 ¾" x 4'-1 ¼")
DESCRIPTION & CONDITION:
This is a steel sash window that dates to the period of significance. It is a single steel sash casement window. The operating sash is on the west with a fixed panel on the east. Above there is a two-lite fixed panel.

There is no casing around the window, which appears to be original to the construction of this addition. The sill is clad with a white cove tile.

The cranks and latches are no longer operational on the windows. The glazing bead is deteriorated on the exterior.

The tile has a few chips but is in good condition.

Window C (2'-1" x 2'-0 ½")
DESCRIPTION & CONDITION:
This is a steel sash window that dates to the period of significance. It is a single steel sash casement window. The operating sash is on the south with a fixed panel on the north.

There is no casing around the window, which appears to be original to the construction of this addition.

The cranks and latches are no longer operational on the windows. The glazing bead is deteriorated on the exterior.

Window D (2'-6" x 2'-2 ½")
DESCRIPTION & CONDITION:
This is a steel sash window that dates to the period of significance. It is a single steel sash casement window. The operating sash is on the north with a fixed panel on the south.

There is no casing around the window, which appears to be original to the construction of this addition. There is a cove tile on the sill that dates to the period of significance.

The cranks and latches are no longer operational on the windows. The glazing bead is deteriorated on the exterior. The tile sill is in good condition.

Windows E, F, G:
DESCRIPTION & CONDITION:
These openings are a part of the enclosed porch. Historically, the porch was most likely screened. During the previous SHF grant (#2000-P1-017), plexiglass panels were installed in the openings, along with new wood stops. Wood lath was installed over the plexiglass on the west elevation.

Approximately ½ of the wood stops are missing, allowing the plexiglass to flex. The plexiglass in two of the openings have broken.

Window H (2'-2 ½" x 5'-0")
DESCRIPTION & CONDITION:
This is an original opening that dates to the period of construction. The window sash dates from the period of significance, which begins in 1944 when Charles Muegge purchased the house. The window sash is a steel casement window. The operable sash is on the north, the fixed panel is on the south. Above there is a two-lite, horizontal, fixed panel.

The window has 2 ¼" wide stained, wood casing dating to the period of significance.

The cranks and latches are no longer operational on the windows. The glazing bead is deteriorated on the exterior. The fixed panel is cracked.

Window I (6'-0" x 4'-11")
DESCRIPTION & CONDITION:
This is an original opening that dates to the period of significance beginning in 1944 when Charles Muegge purchased the house. It is believed, that this opening also had a steel sash combination casement/picture window. There is evidence of steel sash on the windowsill. There are holes and a shadow line of the former frame. The steel sash has been removed and a clear glass panel has been installed with wood stops.

The window has 2 ¼" wide stained, wood casing dating to the period of significance.

The glazing, wood stops and trim are in good condition.

Window J (2'-6 ½" x 5'-0 ½")
DESCRIPTION & CONDITION:
This is an original opening that dates to the period of construction. The window sash dates from the period of significance, which begins in 1944 when Charles Muegge purchased the house. The window is a steel sash casement window. The operable sash is on the west, the fixed panel is on the east. Above there is a two-lite, horizontal, fixed panel.

The window has 2 ¼" wide stained, wood casing dating to the period of significance.

The cranks and latches are no longer operational on the windows. The glazing bead is deteriorated on the exterior. The fixed panel is cracked.

Window K (2'-5" x 4'-5 ½")
DESCRIPTION & CONDITION:
This is an original opening that dates to the period of construction and period of significance. The original wood window was replaced in the 2000s with a 1/1, double pane, aluminum, replacement window. The painted window trim is original and is 4 ½" with an ogee molding at the edge. The window and trim are in good condition.

Window L (2'-5" x 4'-5 ½")
DESCRIPTION & CONDITION:
This is an original opening that dates to the period of construction and period of significance. The original wood window was replaced in the 2000s with a 1/1, double pane, aluminum, replacement window. The painted window trim is original and is 4 ½" with an ogee molding at the edge. The window and trim are in good condition.

Window M (2'-1" x 3'-5 ½")
DESCRIPTION & CONDITION:
This is an original opening that dates to the period of construction and period of significance. The original wood window was replaced in the 2000s with a 1/1, double pane, aluminum, replacement window. The painted window trim is original and is 4 ½" with an ogee molding at the edge. The window and trim are in good condition.

Window N (2'-1" x 3'-5 ½")
DESCRIPTION & CONDITION:
This is an original opening that dates to the period of construction and period of significance. The original wood window was replaced in the 2000s with a 1/1, double pane, aluminum, replacement window. The painted window trim is original and is 4 ½" with an ogee molding at the edge. The window and trim are in good condition.

Window O (2'-5" x 4'-5 ½")
DESCRIPTION & CONDITION:
This is an original opening that dates to the period of construction and period of significance. The original wood window was replaced in the 2000s with a 1/1, double pane, aluminum, replacement window. The painted window trim is original and is 4 ½" with an ogee molding at the edge. The window and trim are in good condition.

Window P (2'-5" x 4'-5 ½")
DESCRIPTION & CONDITION:
This is an original opening that dates to the period of construction and period of significance. The original wood window was replaced in the 2000s with a 1/1, double pane, aluminum, replacement window. The painted window trim is original and is 4 ½" with an ogee molding at the edge. The window and trim are in good condition.

Window Q (2'-6 x 3'-6")
DESCRIPTION & CONDITION:
This is an original opening that dates to the period of construction and period of significance. The original wood window was replaced with 1/1, double pane, aluminum, replacement window in the 200s. The date is unknown. The painted window trim is original and is 4 ½" with an ogee molding at the edge. The window and trim are in good condition.

Window R (2'-1" x 3'-5 ½")

DESCRIPTION & CONDITION:

This is an original opening that dates to the period of construction and period of significance. The original wood window was replaced in the 2000s with a 1/1, double pane, aluminum, replacement window. The painted window trim is original and is 4 ½" with an ogee molding at the edge. The window and trim are in good condition.

RECOMMENDATIONS:

According to the Secretary of the Interior's Standards, windows in a historic building should be evaluated to determine if they are significant to the building. If after evaluation the windows are found to be:

1. Original.
2. Reflect the original design intent for the building.
3. Reflect the period or regional styles or building practices.
4. Reflect the changes to the building resulting from major periods or events, or
5. Are examples of exceptional craftsmanship or design.

The windows in the Charles Muegge House are mostly original on the first floor and date to the period of significance. They reflect the design intent for the building during the period of significance and are examples of exceptional craftsmanship. Therefore, these windows are character defining features and are important in maintaining the historic character of the building.

Include the following work:

1. Window I: Replicate steel sash window.
2. Windows E, F, G: Remove plexiglass and install new insect screen. Install new interior wood storm windows.
3. Windows K – R: Remove and replace vinyl replacement windows with replica wood windows as existed during the period of significance.
4. Windows A – D, H & J:Restore the steel sash windows per methodology in the Historic Structure Assessment. See below for methodology.

Restoration of Steel Sash Windows

Overall, the steel sash windows in this house are in fair condition and can be repaired in place. According to *Preservation Brief 13: The Repair and Thermal Upgrading of Historic Steel Windows,* the following steps should require in the process of repair and restoration:

1. Remove light rust, flaking and excessive paint by using a wire brush, an aluminum oxide sandpaper or power tools adapted for abrasive cleaning such as an electric drill with a wire brush or a rotary whip attachment. An alternative approach is the use of chemical stripper specifically for removing paint and rust from steel.
2. Some paint may remain, which is good, as it protects the steel from rust. Once the rust and loose paint is removed, prime the steel sash with rust inhibiting primer.
3. Replace any cracked or broken glass and Reglaze windows with glazing compound.
4. Replace any missing screws or fasteners.
5. Clean and lubricate hinges and cranks. Find replacement cranks where broken or unable to repair.
6. Repaint all steel sections with two coats of finish paint compatible with the primer.
7. Install a high-quality elastomeric caulk between the window sash and the framing to create an air-tight joint.

Weatherization
The final element of window restoration is the installation of storm windows, which assist in the protection of the historic windows and provides insulation. Many styles of storm windows are available to improve thermal performance of the historic windows. Storm windows are thermally efficient, cost-effective, reversible and allow the retention of the original historic windows. A historic window with a high-quality storm window will thermally outperform a new double-glazed window.

Install new interior storm windows on the Charles Muegge House. The sashes of the storm windows should be no larger than the window sashes and should be painted the same color as the window sashes to minimize their appearance. Allied Windows is an online source for storm windows that are used in many historic window restorations.

Safety Note: Considering the age of this building, the practices at the time of its construction and previous finishes analysis of buildings of similar vintage, it is very likely that some of the finishes are lead based, and there may be asbestos in the glazing compound. Therefore, custodial and typical maintenance procedures should avoid disturbing these finishes. The use of topical, non-invasive cleaning with mild detergent based solutions should be the "most aggressive" methodology used, thus minimizing the possibility of releasing any lead dust or lead containing rinse. The risk primarily applies to worker safety during more invasive refinishing and refurbishing processes that may involve aggressive chemical stripping and/or finish sanding.

Cost Implication Note: Due to the potential liability associated with the removal and/or refinishing of lead containing transparent and opaque finishes, mold mitigation, and replacing of glazing compound, this work should not be performed by laypersons. Necessitated by the industrial hygiene required protocols and procedures, the contracting of this type of abatement is costly and potentially damaging to the integrity of the historic fabric. Therefore, any refinishing of these features that disturbs the existing finishes should include this cost in addition to the actual finishes restoration costs.

5.6 INTERIOR FINISHES

- **WALL, CEILING, FLOOR, TRIM AND BUILT-INS (BY ROOM)**
  Photographs and Illustrations: 38.0 – 47.0

Entrance Stair/Hall 100
DESCRIPTION:
Walls: The historic plaster was removed and new drywall with a light texture was installed during the 2000 SHF grant.

Ceiling: The historic plaster has been removed and new drywall with a light texture has been installed and painted.

Floor: The historic wood floor has been covered with carpet.

Trim: The original baseboard remains and was removed and reinstalled when the plaster was removed and drywall installed on the walls. The baseboard is 9 ½" tall and has decorative molding on top. The trim was most likely stained when it was constructed but is currently painted. It is not clear what the finish was during its period of significance without a paint analysis.

Built-ins: There is a wood stair to the second floor along the north wall. The wood risers and treads are original, but the handrail, newel post and pickets are not and were replaced in the prior SHF grant (2000-P1-017). The white pickets are 1 ½" square and are spaced two per tread to align with current code requirements on maximum spacing. The stained newel post varies in size, but is square with a stained contemporary handrail attaching to the backside. There is another contemporary handrail attached to the north wall of the stair. The treads are stained, the risers are painted the beige-brown color found throughout the building.

CONDITION:
The walls, ceiling, floor, trim and stairs are in good condition.

Office 101
DESCRIPTION:
Walls: The walls are stained knotty pine paneling dating from the period of significance (1944 – 1990s). The paneling is 7" v-groove boards, laid horizontally.

Ceiling: The ceiling is stained knotty pine paneling dating from the period of significance. The paneling is 6" wide v-groove boards.

Floor: The floor is 2 3/8" tongue and groove, wood flooring. It was installed either during or after the SHF 2000 grant. It overlays the original wood floor.

Trim: The baseboard trim is 3 ½" tall. The trim is a stained board with an rounded top and quarter round molding at the floor.

Built-ins: There is a white plywood cabinet encasing the chimney/flue/ductwork that extends to the second floor. Historically, this was a masonry chimney, but it is not clear where the chimney remains behind the plywood cover.

CONDITION:
The walls, ceiling, floor and trim are in good condition. The plywood cover over the chimney/flue is also in good condition but distracts from the historic character of the room.

Conference Room 102
Walls: The walls are stained knotty pine paneling dating from the period of significance (1944 – 1990s). The paneling is 7" v-groove boards, laid horizontally.

Ceiling: The ceiling is stained knotty pine paneling dating from the period of significance. The paneling is 6" wide v-groove boards.

Floor: The floor is 2 3/8" tongue and groove, wood flooring. It was installed either during or after the SHF 2000 grant. It overlays the original wood floor.

Trim: The baseboard trim is 3 ½" tall. The trim is a stained board with an rounded top and quarter round molding at the floor.

CONDITION:
The walls, ceiling, floor and trim are in good condition.

Breakroom 103
Historically, this room was much smaller and was enlarged during the period of significance. Muegge removed a portion of the wrap around porch on the north to enlarge this room. The ceiling of the room still follows the line of the historic wrap around porch.

DESCRIPTION:
Walls and Ceiling: The walls and ceiling are drywall with a light texture to replicate the historic plaster that was partially removed during the 2000 SHF grant. The remainder of the walls were drywall that date from the period of significance.

Floor: The floor is sheet vinyl tile that was installed after the 2000 SHF grant. The SHF grant specified carpet installation in this room. The sheet vinyl flooring is installed over a ¼" thick protection board.

Trim: The baseboard is a painted 1" x 6" board with ½" ogee molding on top to replicate the historic.

Built-ins: There are no built-ins.

CONDITION:
The walls, ceiling, floor and trim are in good condition.

Kitchen 104
DESCRIPTION:
Walls and Ceiling: The walls and ceiling are drywall with a light texture to replicate the historic plaster. The plaster was removed and drywall installed during the period of significance.

Floor: The floor is sheet vinyl tile that was installed after the 2000 SHF grant as it matches the Breakroom 103 flooring. The SHF grant specified sheet vinyl installation in this room. The sheet vinyl flooring is installed over a ¼" thick protection board.

Trim: There is 6" vinyl baseboard.

Built-ins: The 1950s metal cabinet and sink were removed during the 2000 SHF grant and new contemporary wood cabinetry was installed.

CONDITION:
The walls, ceiling, floor, trim and cabinets are in good condition.

Restroom 105
This room was decreased in size during the 2000 SHF grant. The original restroom/bathroom also included Hallway 106 with a door opening directly onto room 102. The bathroom had a built-in tub with tile on the north wall with a toilet in the northeast corner. The sink was located on the east wall.

DESCRIPTION:
Walls and Ceiling: The walls and ceiling are drywall with a light texture to replicate the historic plaster. Drywall was installed during the period of significance and was partially replaced during the 2000 SHF grant.

Floor: The floor is sheet vinyl tile that was installed either during or after the 2000 SHF grant. The SHF grant specified sheet vinyl installation in this room. The sheet vinyl flooring is installed over a ¼" thick protection board.

Trim: There is 4" vinyl baseboard.

Built-ins: There is a toilet and wall-hung sink on the east wall.

CONDITION:
The walls, ceiling, floor, trim and cabinets are in good condition.

Hallway 106
This room was originally part of the adjacent restroom and was created during the 2000 SHF grant to provide access to the much smaller Restroom 105.

DESCRIPTION:
Walls and Ceiling: The walls and ceiling are drywall with a light texture to replicate the historic plaster. Drywall was installed during the period of significance and was partially replaced during the 2000 SHF grant.

Floor: The floor is the same 2 3/8" tongue and groove wood flooring found in Rooms 101 and 102 and was installed either during or after the 2000 SHF grant.

Trim: The baseboard is a contemporary, painted, 1" x 6" baseboard that closely matches the historic baseboard.

Built-ins: There are no built-ins.

CONDITION:
The walls, ceiling, floor and trim are in good condition.

Hallway 200
DESCRIPTION:
Walls and Ceiling: The walls and ceiling are drywall with a light texture to replicate the historic plaster. New drywall was installed during the 2000 SHF grant.

Floor: The floor is carpet over the original tongue and groove wood floor. The carpet was installed after the 2000 SHF grant.

Trim: The painted baseboard is the historic 7 ½" baseboard with ogee molding and a quarter round at the floor. It is not clear whether the baseboard was painted during the period of significance or whether it was stained. There is 4 ½" painted wainscoting board on the walls. It is not clear whether this is original or was added at a later date.

Built-ins: There are no built-ins.

CONDITION:
The walls, ceiling, floor and trim are in good condition.

Office 201

DESCRIPTION:

Walls and Ceiling: The walls and ceiling are drywall with a light texture to replicate the historic plaster. New drywall was installed during the 2000 SHF grant.

Floor: The floor is carpet over the original tongue and groove wood floor. The carpet was installed after the 2000 SHF grant.

Trim: The painted baseboard is the historic 7 ½" baseboard with ogee molding and a quarter round at the floor. It is not clear whether the baseboard was painted during the period of significance or whether it was stained. There is 4 ½" painted wainscoting board on the walls. It is not clear whether this is original or was added at a later date.

Built-ins: There are contemporary cabinets on the wall.

CONDITION:

The walls, ceiling, floor, trim and built-ins are in good condition.

Office 202

DESCRIPTION:

Walls and Ceiling: The walls and ceiling are drywall with a light texture to replicate the historic plaster. New drywall was installed during the 2000 SHF grant.

Floor: The floor is carpet over the original tongue and groove wood floor. The carpet was installed after the 2000 SHF grant.

Trim: The painted baseboard is the historic 7 ½" baseboard with ogee molding and a quarter round at the floor. It is not clear whether the baseboard was painted during the period of significance or whether it was stained. There is 4 ½" painted wainscoting board on the walls. It is not clear whether this is original or was added at a later date.

Built-ins: There are no built-ins.

CONDITION:

The walls, ceiling, floor and trim are in good condition.

Office 203

DESCRIPTION:

Walls and Ceiling: The walls and ceiling are drywall with a light texture to replicate the historic plaster. New drywall was installed during the 2000 SHF grant.

Floor: The floor is carpet over the original tongue and groove wood floor. The carpet was installed after the 2000 SHF grant.

Trim: The painted baseboard is the historic 7 ½" baseboard with ogee molding and a quarter round at the floor. It is not clear whether the baseboard was painted during the period of significance or whether it was

stained. There is 4 ½" painted wainscoting board on the walls. It is not clear whether this is original or was added at a later date.

Built-ins: There are no built-ins.

CONDITION:
The walls, ceiling, floor and trim are in good condition.

Office 204
DESCRIPTION:
Walls and Ceiling: The walls and ceiling are drywall with a light texture to replicate the historic plaster. New drywall was installed during the 2000 SHF grant. The attic access is located in this room.

Floor: The floor is carpet over the original tongue and groove wood floor. The carpet was installed after the 2000 SHF grant.

Trim: The painted baseboard is the historic 7 ½" baseboard with ogee molding and a quarter round at the floor. It is not clear whether the baseboard was painted during the period of significance or whether it was stained. There is 4 ½" painted wainscoting board on the walls. It is not clear whether this is original or was added at a later date.

Built-ins: There are no built-ins.

CONDITION:
The walls, ceiling, floor and trim are in good condition.

Basement
The historic basement stair access is at the south elevation and was covered with wood decking during the 2000 SHF grant. It appears that the historic stair has concrete walls and steps and was covered by a wood sloped door at grade. The historic porch covering above also provided some protection.

Figure 9 Basement Looking Towards Exterior Stair – Note Mud on Floor and Black Mold on Wall By the Stair

DESCRIPTION
Walls: The walls are the interior face of the concrete foundation and have been lined with plastic covered batt insulation that was installed during the 2000 SHF grant.

Ceiling: Exposed structure.

Floor: The floor is dirt. A new sump pump was installed after the 2000 SHF grant.

CONDITION
The basement is in very poor condition. There is a history of flooding in the basement and it has continued. The dirt floor is very muddy, but it was not possible to determine exactly where the water

was entering the basement, except that it was near the historic basement stair access. (access to the basement was limited due to the quantity of mud). There is a large area of black mold to the west of the stairs where the team believes the water is entering the building (*see Figure 9).* There is a large amount of erosion under the wood deck in front of the screened porch at the southwest corner of the building and it is believed that the water is flowing from the property into the southwest corner of the basement at this location (*see Figure 2 under Associated Landscape Features*). Without doing major demolition, the exact cause is unknown.

The sump pump does not operate as it should. It sits at least 3" above the floor surface so does not work to remove water from the basement.

RECOMMENDATIONS:
According to the Secretary of the Interior's Standards, "an interior floor plan, the arrangement and sequence of spaces, and applied finishes are individually and collectively important in defining the historic character of the building." The historic interior finishes should be retained and repaired during a rehabilitation project. The spaces within the church are divided into primary and secondary spaces. The primary spaces are Vestibule 100, Church Hall 101 and Chancel 102. The secondary spaces are the Vestry/Kitchen 103, Women's Restroom 104, Men's Restroom 105 and Storage/Mechanical 106.

The interior features and essential proportions of primary interior spaces should be retained and their distinctive features such as the wood floors, ceiling heights, baseboards, light fixtures, hardware, paint and other decorative materials that accent interior features and provide color, texture and patterning to the walls, floors and ceilings should not be damaged, obscured, or destroyed in a rehabilitation project. In addition, the relationship of the rooms and corridors and other primary spaces to each other is significant and should also be considered. Secondary spaces, that serve the primary spaces can have extensive changes that will not have a detrimental effect on the overall historic character of the building.

Where damage exists in primary spaces and to some extent secondary spaces, the interior features and finishes should be repaired by reinforcing the existing historic materials, which includes limited replacement in-kind or with compatible substitute materials. When entire replacement is required due to extensive damage, the feature or finish should be replaced in-kind using the historic remains to create a reproduction. If the use of the same material is not possible, either economically or it is no longer available, then a compatible substitute material may be used.

When alterations or additions are needed to accommodate service functions such as bathrooms, mechanical equipment and electrical services for a building's use, then the removal of decorative material or features is acceptable in secondary spaces and reused in areas appropriate to their historic placement. These features include: baseboard trim, door casing, and historic doors. Install removable partitions that do not destroy the sense of space when a new use requires the subdivision of character-defining interior spaces. In addition, it is not recommended to lower ceilings or obscure character defining features so that a new use can be accommodated.

In general, the following rehabilitation work is recommended in this building:

Restoration of the Historic Stained Finish on the Trim, Baseboard and Wainscoting
A paint analysis should be completed by a conservation company that has a good knowledge of historic paints to determine if the wood trim, wainscoting and baseboard was stained or painted during the period

of significance. Restoration of the stained finishes in the primary spaces is recommended if it is discovered that it existed during the period of significance.

Removal of the painted finish will be difficult and a painter with extensive experience in the restoration of historic woodwork should be utilized to assure that the paint finish is removed without damaging the underlying wood beneath. The best methodology is to use a high-quality solvent type stripper to remove the paint. Once the paint is removed, the surface should be washed with mineral spirits to remove any residue. The new stained finish should match the historic stained finish.

Additional recommendations include:

1. Remove carpet from second floor and restore historic wood floors.
2. Basement: Remove the existing wood deck over the historic stair entrance and screened porch along with the wood ramp. Remove the soils down to the footing of the basement foundation wall and re-expose both the basement stair wall and basement wall. Have a structural engineer, which specializes in historic preservation, to complete an intensive level investigation and recommendations. At a minimum, the following should be completed:
   a. The concrete foundation walls at this location should incorporate a new waterproofing membrane to be designed during a construction documents phase. A fluid membrane is not recommended.
   b. Underpin the porch foundation if necessary after investigations are complete.
   c. Regrade around the building creating a swale at least 10'-0" away to drain water away from the building. Raise grade around the building and slope it toward the swale.
   d. Remove the reclaimed asphalt at the south and west elevations as this an impervious material and is increasing the quantity of drainage. Add new topsoil and reseed.
   e. Remove the curb cut at the south road to prevent water from entering the property during a heavy rainstorm and draining toward the building.

   Additionally, in the basement, install a perforated pipe approximately 6" below the floor surface and pipe it to the existing sump pump. Additionally, replace the sump pump and lower it so that it is at the surface of the floor. Overlay the dirt floor with 6" of gravel. Remove the insulation from the face of the concrete to allow the concrete to breath. During the assessment the team was unable to assess the concrete walls to determine if there was any failure or deterioration. After removal, an assessment by a qualified structural engineer with historic qualifications should be consulted for any additional repairs. Covering the concrete does not allow the concrete to breath, as concrete is porous and the insulation is trapping any moisture between the concrete and insulation.

5.7 MECHANICAL SYSTEMS

- **HEATING/AIR CONDITIONING**
  Photographs and Illustrations: 48.0, 49.0, 51.0

DESCRIPTION:
The building has a gas fired central heating and air conditioning unit. The ductwork runs through the chases that run alongside the historic chimney.

CONDITION:
The heat works in the building, as it is kept to a minimal temperature in the winter while it remains vacant. The air conditioner may not work, as the fan does not appear to be working when switched on.

RECOMMENDATIONS:
Have a mechanical contractor investigate the unit during a rehabilitation project and anticipate replacing the unit. It was installed during the 2000 SHF grant.

- **VENTILATION**
  Photographs and Illustrations: N/A

DESCRIPTION:
The building is passively ventilated using the doors and windows.

CONDITION:
The current methods of building ventilation are appropriate.

RECOMMENDATIONS:
There are no recommendations.

- **WATER SERVICE, PLUMBING, AND SEWER UTILITIES**
  Photographs and Illustrations:

DESCRIPTION:
The water and plumbing systems were updated during the 2000 SHF grant. It is not clear whether the galvanized piping was replaced during this project though.

CONDITION:
Currently the water is turned off, so assessment of the water systems is not possible.

RECOMMENDATIONS:
There are no recommendations.

- **FIRE SUPPRESSION – SPRINKLERS**
  Photographs and Illustrations: N/A

DESCRIPTION:
The building has no sprinkler system.

CONDITION:
N/A

RECOMMENDATIONS:
It is not deemed necessary or recommended to add a sprinkler system or other automatic fire suppression system to this building. However, a portable, hand held dry chemical fire extinguisher should be located at each of the exterior doors and should be maintained in the quantity and at locations specified by the fire marshal.

5.8 ELECTRICAL SYSTEMS

- **ELECTRICAL SERVICE AND PANELS**
  Photographs and Illustrations: N/A

DESCRIPTION:
The electrical system was upgraded during the 2000 SHF grant to a 200-amp service. Additionally, additional outlets were also installed.

CONDITION:
The existing electrical system appears to be adequate, but there is no emergency disconnect or shutoff.

RECOMMENDATIONS:
During a rehabilitation project, it is recommended to have an electrical engineer assess the panel and the electrical service.

- **ELECTRICAL DISTRIBUTION SYSTEM**
  Photographs and Illustrations: 52.0, 53.0

DESCRIPTION:
Power comes from a pole located at the northwest corner of the building and then extends to the panels located at the northwest corner underground. There is a separate 200-amp panel and GFI outlet attached to the pole with an emergency disconnect inside the panel.

CONDITION:
The condition is unknown as the service is buried. The service is functioning within the house.

RECOMMENDATIONS:
During a rehabilitation project, it is recommended to have an electrical engineer assess the panel and the electrical service.

- **LIGHTING**
  Photographs and Illustrations: 38.0 – 43.0, 45.0 – 47.0

DESCRIPTION:
All lighting is modern and contemporary and was added during the 2000 SHF grant. All rooms have a central, surface mounted incandescent ceiling light fixture. Upstairs, the lights are incorporated into ceiling fans. Additionally, track lights were installed in Rooms 101 and 102 as they were intended to be exhibit rooms. Rooms 101 and 102 also have wall sconces which were installed during the 2000 SHF grant.

CONDITION:
All light fixtures are working as they should.

RECOMMENDATIONS:
Restore the exterior light fixture. The current lighting appears to be adequate for the occupants use. The missing light at the Vestibule should be installed at the ceiling where the historic light was located. Since the type of light is unknown, install a contemporary light that is simple, but compatible with the historic

character of the building. During the rehabilitation, coordination with the architect and State Historical Fund will assist in choosing an appropriate light fixture with shade.

- **FIRE DETECTION SYSTEM**
  Photographs and Illustrations: N/A

DESCRIPTION:
Smoke alarms exist throughout the building.

CONDITION:
It does not appear that all the smoke detectors are hard wired.

RECOMMENDATIONS:
During a rehabilitation project, it should be determined if additional fire detection requirements are needed.

- **SECURITY ALARM SYSTEM**
  Photographs and Illustrations: N/A

DESCRIPTION:
The building has a security system.

CONDITION:
The system has been in alarm mode during every visit.

RECOMMENDATIONS:
During a rehabilitation project, a security company should be contacted and the system upgraded and repaired to function properly.

4.1 HAZARDOUS MATERIALS

Photographs and Illustrations: All Exterior and Interior Finishes Photos

As noted in the finishes sections of this report, it is likely that lead based finishes exist. Please refer to the notes in each of those sections for recommendations. If these materials are undisturbed, they pose no danger, but if they are to be removed or altered, tests should be performed to determine their composition and appropriate precautions taken, if necessary.

4.2 MATERIALS ANALYSIS

No material analyses, other than the visual identification described in the preceding sections, were performed. However, for the purposes of proposed future work on this building, the following Material Analysis suggestions are offered and recommended:

Paint Color History Documentation
Asbestos Testing and Analysis – especially where historic drywall exists, including texture and floor finishes and mastic that may be under more contemporary floor finishes. The glazing putty should also be tested for asbestos. It is easily removed, but the contractor should be notified prior to any window restoration.

4.3 ZONING CODE COMPLIANCE

This current use of this building complies with local codes, so no zoning issues exist.

4.4 BUILDING CODE COMPLIANCE

This is a cursory overview of the Building Code. In a rehabilitation project, a thorough review of the code and the building's use, must be completed.

Square Footage: 1,293 sq. ft.
Occupancy: B
Number of Floors Allowed: 4
Number of Floors Present: 2
Maximum Occupancy: 13 people
Exits: 2 (1 from the upstairs): Maximum occupant load is below 29 on the second floor; Path of Travel is less than 75', according to Table 1006.3.2. One exit is allowed for a Group B Occupancy on the second floor.
Exits Required: 1 - 2
Type: V

4.5 ACCESSIBILITY COMPLIANCE

The building is not currently ADA accessible. A wood ramp was installed during the 2000 SHF grant. The steel railings are in poor condition and one of the railings is laying on the ground. The ramp no longer meets the ADA as it does not have a curb and the railings do not meet the ADA. Additionally, there is a 2"+ step into the building. A maximum of ½" is required.

As a part of the sitework a new handicap ramp should be constructed. The new ramp should be constructed of concrete to be more compatible with the rest of the building. In addition, this will also help with the drainage at this location and prevent water from entering the building. A 3'-0" wide sidewalk should be constructed from the handicap parking to the west to the ramp.

To provide access to the building, the floor of the screened porch should also be removed. The flooring was added in the 2000 SHF grant and is just spaced wood decking. Remove the wood decking and install new wood sleepers on top of the existing joists to slope the entire floor up to the building floor level. Reinstall the wood decking without the gaps as the wood has already shrunk.

The bathroom mostly meets the ADA, except for the grab bars. The grab bars will need to be replaced to meet the ADA and a new vertical grab bar should be installed. The mirror will need to be lowered to meet the ADA.

5.1 PRIORITIZED WORK

Based on the results of the Historic Structure Assessment, it has been determined that the combined preservation, restoration, conservation, and rehabilitation needs of this building require a comprehensive program. Addressing these needs with long-term solutions, consisting of quality restoration repairs to the building's character defining features, results in this recommended prioritized preservation, implementation and capital project program plan. The overall intent of this capital project program plan is to rehabilitate the building, but restore its character defining features.

As stated at the beginning of the report, rehabilitation is the most applicable standard to be used with the Muegge House.

Rehabilitation is defined by The Secretary of the Interior's Standards as the following, "In **Rehabilitation**, historic building materials and character-defining features are protected and maintained as they are in the treatment Preservation; however, an assumption is made prior to work that existing historic fabric has become damaged or deteriorated over time and, as a result, more repair and replacement will be required. Thus, latitude is given in the **Standards for Rehabilitation and Guidelines for Rehabilitation** to replace extensively deteriorated, damaged, or missing features using either traditional or substitute materials. Of the four treatments, only Rehabilitation includes an opportunity to make possible an efficient contemporary use through alterations and additions."

The building's character defining features will be restored.

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.

This report has identified the building's form and elements that are important in defining it historic character and made recommendations on what should be done to retain, maintain and preserve this historic building and its important character defining features.

5.1 Prioritized Work

The next step is to create a preservation plan that will provide the basis for the actual rehabilitation of the building. This plan will prioritize the work based on deterioration, structural weakness, and/or life safety issues over less urgent repairs. In addition, the priority should be given to the needs of the historic building/resource. Programmatic needs of the building owners and/or clients are secondary priorities.

There are numerous maintenance tasks that the Town of Bennett should be addressed and monitored on an annual basis:

1. Monitor the concrete/stone foundation systems and if there is evidence of movement, then the existing concrete foundations should be replaced or underpinned. The construction documents should be completed by a structural engineer with experience in historic building systems.
2. Monitor the cracking on the vertical face and if it continues to displace, cut out the section and repour.

3. Monitor the roof sheathing and maintain the roof envelope of the porch to prevent further deterioration of the roof sheathing.
4. Inspect the roof after every large hail, rain or wind event to determine if the roof should be replaced. If shingles are blown off, replace in-kind to prevent water infiltration.
5. Maintain the existing gutters and downspouts. Install new downspout extensions that extend at least 12" beyond the drip line of the roof.
6. Install a portable, handheld dry chemical fire extinguisher at each of the exterior doors and maintain in the quantity and at locations specified by the Fire Marshal.
7. Repair the security system so that it functions properly.

Additionally, during a comprehensive rehabilitation project, which includes construction documents, include the following:

1. Have an electrical engineer assess the panel and the electrical service.
2. Determine if additional fire detection requirements are needed.
3. Upgrade the security system.
4. Paint color history documentation/analysis.
5. Asbestos Testing and Analysis

The preservation plan will also prioritize the work based on work that should be completed immediately, critical deficiencies, serious deficiencies and minor deficiencies.

Critical Deficiencies

Critical deficiencies are identified as:

- Advanced deterioration resulting in failure of the building feature or element or its possible failure if not corrected within two years.
- Accelerated deterioration of adjacent or related building materials that has occurred as a result of the feature or element's deficiency.
- The feature or element poses a threat to the health and/or safety of the user.
- The feature or element fails to meet a legislative requirement.

Tasks related to Critical Deficiencies:

1. Remove the recycled asphalt from the property. Create a swale approximately 10' away from the building and raise grade against the porch and building and slope 6" in 10'-0" to the swale to create positive drainage away from the building. Add topsoil and reseed with native grasses after sitework is complete.
2. Remove the curb cut at the south road to prevent water from entering the property during a heavy rainstorm or during snow events and associated melting.
3. If SHF funding is obtained, Archaeological monitoring/mitigation is required when any ground disturbance results from preservation activities where there is state and/or federal involvement.
4. Remove the existing batt insulation in the basement so a more thorough assessment can be completed. This assessment should be completed by a structural engineer that specializes in historic preservation.
5. Remove the existing wood deck over the historic stair entrance and screened porch along with the wood ramp. Remove the soils down to the footing of the basement foundation wall and re-expose both the basement stair wall and basement wall. Have a structural engineer, which specializes in historic preservation, to complete an intensive level investigation and recommendations.
6. Install new waterproofing membrane at the concrete foundation walls at historic basement stairs and walls.

7. Basement: Install a perforated pipe approximately 6” below the floor surface and pipe it to the existing sump pump.
8. Replace the sump pump and lower it so that it is at the surface of the floor.
9. Overlay the dirt floor with 6” of gravel.
10. Construct a new handicap ramp. The new ramp should be constructed of concrete to be more compatible with the rest of the building.
11. Construct a new 3’-0” wide sidewalk from the handicap parking to the ramp.
12. To provide access to the building, remove the floor of the screened porch and install new wood sleepers on top of the existing joists to slope the entire floor up to the building floor level. Reinstall the wood decking without the gaps as the wood has already shrunk.
13. Install grab bars that meet the current ADA. Lower mirror to meet ADA.

Serious Deficiencies

Serious Deficiency is defined as:

- Deterioration, if not corrected within two to five years, will result in the failure of the building feature or element.
- The feature or element may pose a threat to the health and/or safety of the user within two to five years if the deterioration is not corrected.
- Deterioration of the adjacent or related building materials and/or systems will occur as a result of the deficiency of the feature or element.

Tasks related to serious deficiencies:

1. Where the concrete is displaced on the surface of the porch and is a tripping hazard, grind the concrete and fill any cracks with a flexible sealant.
2. During a rehabilitation, have a structural engineer design supplemental supports at the corners of the stair to the basement and make repairs per the drawings.
3. Replace the damaged roof joists with replica joists at the porch.
4. Original House: Remove all wood siding that has the plugs and install new replica siding. Epoxy all wood siding that have minor splits and replace siding that is heavily warped, has splits that extend across over half of the length of the board or is rotted. When replacing this siding, inspect the wall framing and building paper for damage from water infiltration. If water damage exists, repair with replica members/material.
5. Repair the trim at Windows K & L.
6. Sand the building to the next sound layer and paint the historic color.
7. Temporarily support the porch and install new column standoffs to raise the columns off the porch. Epoxy coat the bottoms of the columns to prevent moisture infiltration during large snow events.
8. Windows K – R: Remove and replace vinyl replacement windows with replica wood windows as existed during the period of significance.
9. Windows A – D, H & J:Restore the steel sash windows per methodology in the Historic Structure Assessment.
10. Window I: Replicate steel sash window.
11. Windows E, F, G: Remove plexiglass and install new insect screen. Install new interior wood storm windows.
12. Install interior storm windows throughout the house.

Minor Deficiencies

Minor Deficiency is defined as:

- Standard preventative maintenance practices and building conservation methods have not been followed,
- A reduced life expectancy of affected or related building materials and/or systems will result.
- A condition exists with long-term impact beyond five years.

Tasks related to minor deficiencies:

1. A shallow surface archaeological reconnaissance should be conducted prior to any ground disturbance.
2. Install replica ogee molding at the porch where it is missing.
3. Install ice and water shield to the lower four feet of the roof to limit damage from ice dams;
4. Modify the attic ventilation. Instead of installing contemporary circular roof vents, install a ridge vent ad soffits vents to achieve the appropriate ventilation. Complete calculations to determine how many soffit vents are required to provide adequate attic ventilation. Roof top vents are not appropriate on this building. Soffit vents should be coordinated with the SHF specialist and a historic preservation architect prior to selecting, locating and installing.
5. Install impact resistant asphalt shingles.
6. During a comprehensive roof replacement install new metal flashing at the roof edge, penetrations, and chimney.
7. Door 100: Restore the historic door, completing a paint analysis to determine the color during its period of significance. Tighten any loose joints, re-glaze the window and sand the door to the next sound layer prior to painting. Install new lever hardware that is compatible with the historic character of the building. Install a new storm door or wood screen.
8. Door 101: Restore the historic door, completing a paint analysis on the exterior to determine the color during its period of significance. Tighten any loose joints, re-glaze the window and sand the door to the next sound layer prior to painting. Install new lever hardware that is compatible with the historic character of the building. Remove the painted finish on the interior trim and stain to match the rest of the historic stained finishes dating from the period of significance.
9. Door 102: Restore the historic door, completing a paint analysis to determine the exterior color during its period of significance. Tighten any loose joints, re-glaze the window and sand the door to the next sound layer prior to painting.
10. Door 103: Remove the door and install a new door that is more compatible with the historic character of the house. Most likely, the enclosed porch only had a screen door, not a storm door.
11. Door 104: A historic paint analysis should be completed to determine the color of the trim during its period of significance. If possible, it should also be determined if the historic door existed during the period of significance or if it was removed by Charles Muegge when he rehabilitated the interior between 1944 and 1948. If it is found that the door existed, it should be re-installed.
12. Door 107 & 108: Restore the wood casing to its historic stained appearance. The contemporary door should be removed and a door that is more compatible with the historic character of the building should be installed.
13. Door 109: Restore the wood casing to its historic stained appearance.
14. Door 110: Sand the door to the next sound layer and paint. Sand the jamb of the door to allow for easy operation.
15. Door 111: Adjust the doorknob to allow the door to latch properly.
16. Door 200 & 203: If carpet is to remain, then the bottom of the door should be shaved slightly so it will close and latch. Complete a paint analysis to determine the color of the door during period of significance.

17. Door 201 & 205: Complete a paint analysis to determine the color of the door during period of significance.
18. Door 202 204: If needed, a new replica door can be fabricated and installed on the closet opening.
19. Interior Finishes: Complete a paint analysis to determine if the wood trim, wainscoting and baseboard was stained or painted during the period of significance. Restoration of the stained finishes in the primary spaces is recommended if it is discovered that it existed during the period of significance.
20. Remove carpet from the second floor and restore wood floors.
21. Have a mechanical contractor investigate the unit during a rehabilitation project and anticipate replacing the unit. It was installed during the 2000 SHF grant.
22. Restore the exterior light fixture.
23. The missing light at the Vestibule should be installed at the ceiling where the historic light was located. Since the type of light is unknown, install a contemporary light that is simple, but compatible with the historic character of the building. During the rehabilitation, coordination with the architect and State Historical Fund will assist in choosing an appropriate light fixture with shade.

The remainder of this report includes preliminary cost allowances for conceptual budgeting purposes based on the recommended prioritized building improvement program. The proposed priority levels were assigned to provide both project phasing and financial planning for future grant applications and conceptual costs for construction. Costs reflect the current use.

5.2 PHASING PLAN

A restoration phasing plan has been completed to assist in budgeting for the work that is described above. This plan is divided into several categories, which include: Items that Need Immediate Attention, and then Repairs that are based on the importance or deterioration of the element.

Phase I - Items that Need Immediate Attention

Understanding that restoration and rehabilitation may not be able to be completed in one phase, Phase I should be completed within the next 2 years:

1. Remove the recycled asphalt from the property. Create a swale approximately 10’ away from the building and raise grade against the porch and building and slope 6” in 10’-0” to the swale to create positive drainage away from the building. Add topsoil and reseed with native grasses after sitework is complete.
2. Remove the curb cut at the south road to prevent water from entering the property during a heavy rainstorm or during snow events and associated melting.
3. If SHF funding is obtained, Archaeological monitoring/mitigation is required when any ground disturbance results from preservation activities where there is state and/or federal involvement.
4. Remove the existing batt insulation in the basement so a more thorough assessment can be completed. This assessment should be completed by a structural engineer that specializes in historic preservation.
5. Remove the existing wood deck over the historic stair entrance and screened porch along with the wood ramp. Remove the soils down to the footing of the basement foundation wall and re-expose both the basement stair wall and basement wall. Have a structural engineer, which specializes in historic preservation, to complete an intensive level investigation and recommendations.
6. Install new waterproofing membrane at the concrete foundation walls at historic basement stairs and walls.

7. Basement: Install a perforated pipe approximately 6" below the floor surface and pipe it to the existing sump pump.
8. Replace the sump pump and lower it so that it is at the surface of the floor.
9. Overlay the dirt floor with 6" of gravel.
10. Construct a new handicap ramp. The new ramp should be constructed of concrete to be more compatible with the rest of the building.
11. Construct a new 3'-0" wide sidewalk from the handicap parking to the ramp.
12. To provide access to the building, remove the floor of the screened porch and install new wood sleepers on top of the existing joists to slope the entire floor up to the building floor level. Reinstall the wood decking without the gaps as the wood has already shrunk.
13. A shallow surface archaeological reconnaissance should be conducted prior to any ground disturbance.

Phase II

The following items can be completed in the next 2 – 4 years.

1. Where the concrete is displaced on the surface of the porch and is a tripping hazard, grind the concrete and fill any cracks with a flexible sealant.
2. Replace the damaged roof joists with replica joists at the porch.
3. Install replica ogee molding at the porch where it is missing.
4. Original House: Remove all wood siding that has the plugs and install new replica siding. Epoxy all wood siding that have minor splits and replace siding that is heavily warped, has splits that extend across over half of the length of the board or is rotted. When replacing this siding, inspect the wall framing and building paper for damage from water infiltration. If water damage exists, repair with replica members/material.
5. Repair the trim at Windows K & L.
6. Sand the building to the next sound layer and paint the historic color.
7. Temporarily support the porch and install new column standoffs to raise the columns off the porch. Epoxy coat the bottoms of the columns to prevent moisture infiltration during large snow events.
8. Windows K – R: Remove and replace vinyl replacement windows with replica wood windows as existed during the period of significance.
9. Windows A – D, H & J:Restore the steel sash windows per methodology in the Historic Structure Assessment.
10. Window I: Replicate steel sash window.
11. Windows E, F, G: Remove plexiglass and install new insect screen. Install new interior wood storm windows.
12. Install interior storm windows throughout the house.
13. Door 100: Restore the historic door, completing a paint analysis to determine the color during its period of significance. Tighten any loose joints, re-glaze the window and sand the door to the next sound layer prior to painting. Install new lever hardware that is compatible with the historic character of the building. Install a new storm door or wood screen.
14. Door 101: Restore the historic door, completing a paint analysis on the exterior to determine the color during its period of significance. Tighten any loose joints, re-glaze the window and sand the door to the next sound layer prior to painting. Install new lever hardware that is compatible with the historic character of the building. Remove the painted finish on the interior trim and stain to match the rest of the historic stained finishes dating from the period of significance.
15. Door 102: Restore the historic door, completing a paint analysis to determine the exterior color during its period of significance. Tighten any loose joints, re-glaze the window and sand the door to the next sound layer prior to painting.

16. Door 103: Remove the door and install a new door that is more compatible with the historic character of the house. Most likely, the enclosed porch only had a screen door, not a storm door.

Phase III

All of Phase III is interior work and can be completed at any time.

1. Door 104: A historic paint analysis should be completed to determine the color of the trim during its period of significance. If possible, it should also be determined if the historic door existed during the period of significance or if it was removed by Charles Muegge when he rehabilitated the interior between 1944 and 1948. If it is found that the door existed, it should be re-installed.
2. Door 107 & 108: Restore the wood casing to its historic stained appearance. The contemporary door should be removed and a door that is more compatible with the historic character of the building should be installed.
3. Door 109: Restore the wood casing to its historic stained appearance.
4. Door 110: Sand the door to the next sound layer and paint. Sand the jamb of the door to allow for easy operation.
5. Door 111: Adjust the doorknob to allow the door to latch properly.
6. Door 200 & 203: If carpet is to remain, then the bottom of the door should be shaved slightly so it will close and latch. Complete a paint analysis to determine the color of the door during period of significance.
7. Door 201 & 205: Complete a paint analysis to determine the color of the door during period of significance.
8. Door 202 204: If needed, a new replica door can be fabricated and installed on the closet opening.
9. Interior Finishes: Complete a paint analysis to determine if the wood trim, wainscoting and baseboard was stained or painted during the period of significance. Restoration of the stained finishes in the primary spaces is recommended if it is discovered that it existed during the period of significance.
10. Remove carpet from the second floor and restore wood floors.
11. Have a mechanical contractor investigate the unit during a rehabilitation project and anticipate replacing the unit. It was installed during the 2000 SHF grant.
12. Restore the exterior light fixture.
13. The missing light at the Vestibule should be installed at the ceiling where the historic light was located. Since the type of light is unknown, install a contemporary light that is simple, but compatible with the historic character of the building. During the rehabilitation, coordination with the architect and State Historical Fund will assist in choosing an appropriate light fixture with shade.
14. Install grab bars that meet the current ADA. Lower mirror to meet ADA.
15. During a rehabilitation, have a structural engineer design supplemental supports at the corners of the stair to the basement and make repairs per the drawings.

Phase IV

The roof replacement is not a high priority, but repeated storms may the require the Town of Bennett complete this work sooner than 5 to 10 years.

1. Install ice and water shield to the lower four feet of the roof to limit damage from ice dams;
2. Modify the attic ventilation. Instead of installing contemporary circular roof vents, install a ridge vent ad soffits vents to achieve the appropriate ventilation. Complete calculations to determine how many soffit vents are required to provide adequate attic ventilation. Roof top vents are not appropriate on this building. Soffit vents should be coordinated with the SHF specialist and a historic preservation architect prior to selecting, locating and installing.

3. Install impact resistant asphalt shingles.
4. During a comprehensive roof replacement install new metal flashing at the roof edge, penetrations, and chimney.

5.3 ESTIMATE OF PROBABLE COST OF CONSTRUCTION

See attached Cost Estimate for costs of individual deficiencies.

Phase I	$202,021
Phase II	$171,534
Phase III	$74,666
Phase IV	$19,200
TOTAL PROJECT COSTS	**$467,421**
Total Cash Match Required (25%) – For Phases I & II	**$93,388**
Town of Bennett – Phases III & IV	**$93,867**
Total State Historical Fund Grants (75%) – For Phases I & II	**$280166**

NOTES

1. Only Phases I & II are highly competitive and are most likely to be funded by the State Historical Fund. The Town of Bennett would be required to provide a 25% cash match. The State Historical Fund would match with a grant equal to 75% of the construction costs of Phase I & Phase II.
2. The work in Phases III & IV are not as competitive and contain elements from the SHF#2000 grant, so the Town of Bennett can not ask for additional funding for repeat work. Therefore, the Town of Bennett would need to pay for these two phases with their own resources.
3. The items included in this cost analysis only reflect certain key components of the total rehabilitation of this building. They should not be considered reflective of an "all inclusive" restoration and historic rehabilitation budget. Further pricing proposals for cost trending and budget confirmation is required and strongly recommended. **At this time, yearly composite average construction cost increases are projected to be in the range of 10% per year, with conventional, new construction type material costs increasing at a similar or higher rate.**

   As a result, no warranty is expressed or implied regarding these estimated items due to the many variables involved, such as specialized construction, hidden conditions, fluctuating market conditions, local building/pricing environment, and the availability of experienced and qualified craftspeople to execute these restoration repairs and conservation means and methods.

1.0 East Elevation of Muegge House

2.0 South Elevation of Muegge House

3.0 West Elevation – Muegge House

4.0 North Elevation of Muegge House

5.0 Looking Northeast at Drainage Toward Building and Handicap Ramp

6.0 Drainage Issues – South Elevation at Ramp and Historic Basement Entrance Under Deck

7.0 Crack at Southeast Corner of Porch

8.0 Concrete Foundation of Porch at South Elevation

9.0 Cracks on Surface of Porch

10.0 Cracks at the Southeast Corner of Porch

11.0 Siding Deterioration Due to Water Infiltration Between Roof and Wall

12.0 Holes in Siding Where Blown In Insulation was Installed

13.0 Split in Porch Rafter

14.0 Split in Porch Rafter

15.0 Siding Deterioration – North Elevation

16.0 Deterioration of Siding Where Holes were Drilled for Insulation

17.0 Holes Drilled for Installation of Blown-In Insulation

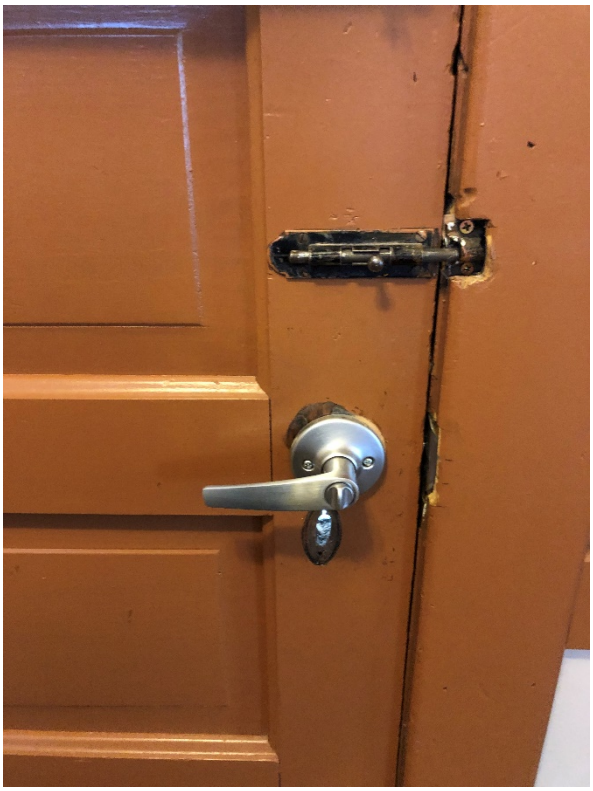
18.0 Siding Deterioration and Inappropriate Siding Installation

19.0 Siding on the Upper South Elevation

20.0 Siding on the Upper West Elevation

21.0 Deterioration and Loose Beadboard Panel at Screened Porch

22.0 Chimney and Roof Ventilation



23.0 Door 100 Interior and Hardware

24.0 Door 101 Interior and Exterior

25.0 Door 102

26.0 Door 107

27.0 Door 110

28.0 Door 111

29.0 Doors 200, 201, 203, 205

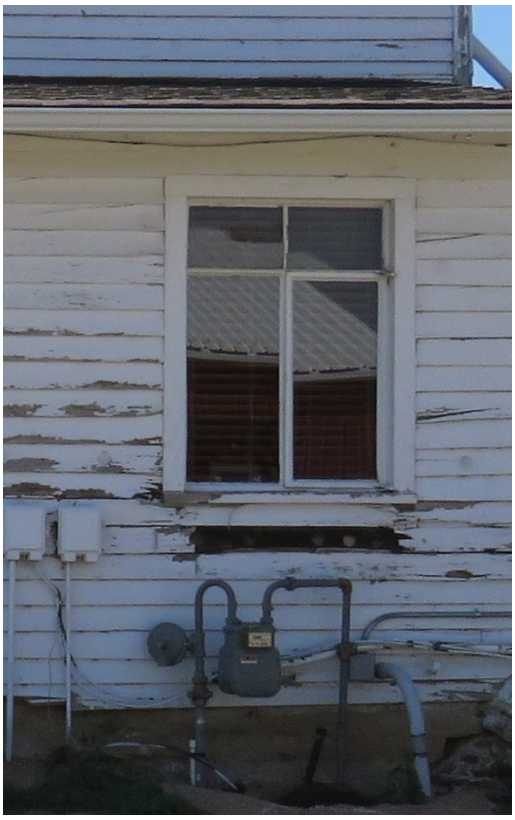
30.0 Screened Porch – Looking West

31.0 Screened Porch – Looking South

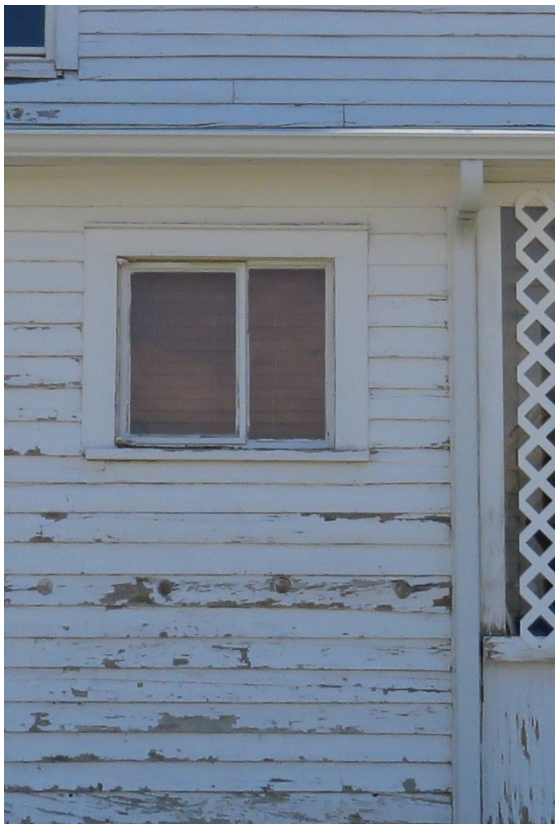
32.0 Window H, Window J Similar

33.0 Windows K Through R – Vinyl Replacement Windows

34.0 Window A



35.0 Window B



36.0 Window C

37.0 Window I

38.1 Breakroom 103 – Looking North

38.2 Restroom 105

39.0 Conference Room 102 – Looking North

40.0 Kitchen 104 – Looking West

41.0 Office 101 – Looking South

42.0 Entrance Hall – 100 – Looking West

43.0 Second Floor Hall – Looking South

44.0 Office 201 – Looking East

45.0 Office 202 – Looking East

46.0 Office 203 – Looking West

47.0 Office 204 – Looking West

48.0 Attic with Insulation and Chimney

49.0 Basement – Looking West – Note Muddy Floor and Peeling Insulation off of Walls

50.0 Basement Sump Pump Sits Above Floor Level

51.0 HVAC Unit in Basement

52.0 Electrical Panels on North Side of House – Fed From Power Pole

53.0 Outlets on Side of the Electrical Panel

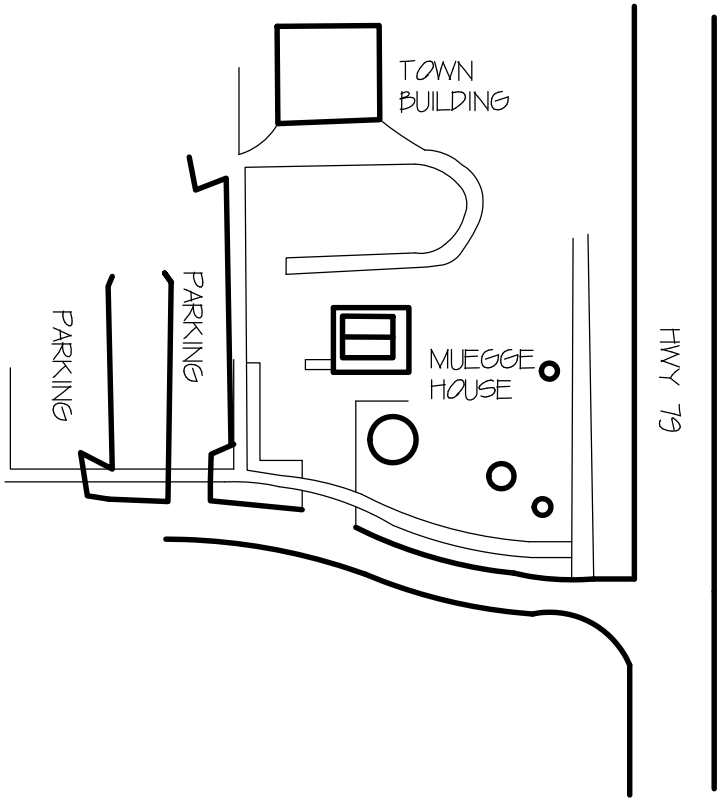
Bibliography

Steele, Virginia R., and Geoffrey R. Hunt, PHD. *Historic Architectural Component Form – Muegge House*. Colorado Historical Society, 1998, *Historic Architectural Component Form*.

Steele, Virginia. *Historic Structure Assessment - Muegge House*. 1998, *Historic Structure Assessment - Muegge House*.

Steele, Virginia R., and Geoffrey R. Hunt, PHD. *Architectural Inventory Form - Muegge House*. Colorado Historical Society, 1999, *Architectural Inventory Form*.

Demaio, AIA, William. "Muegge House Renovation - Construction Documents." 2000, pp. A1.0–A4.



1
S1.0

SITE PLAN

SCALE: NTS

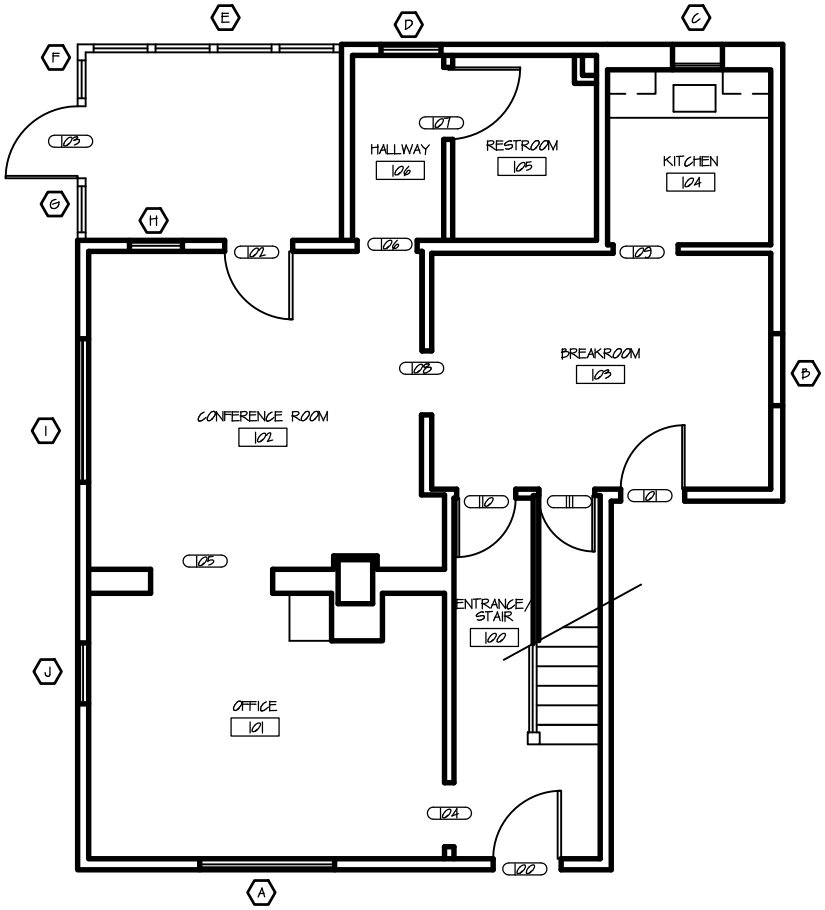
N

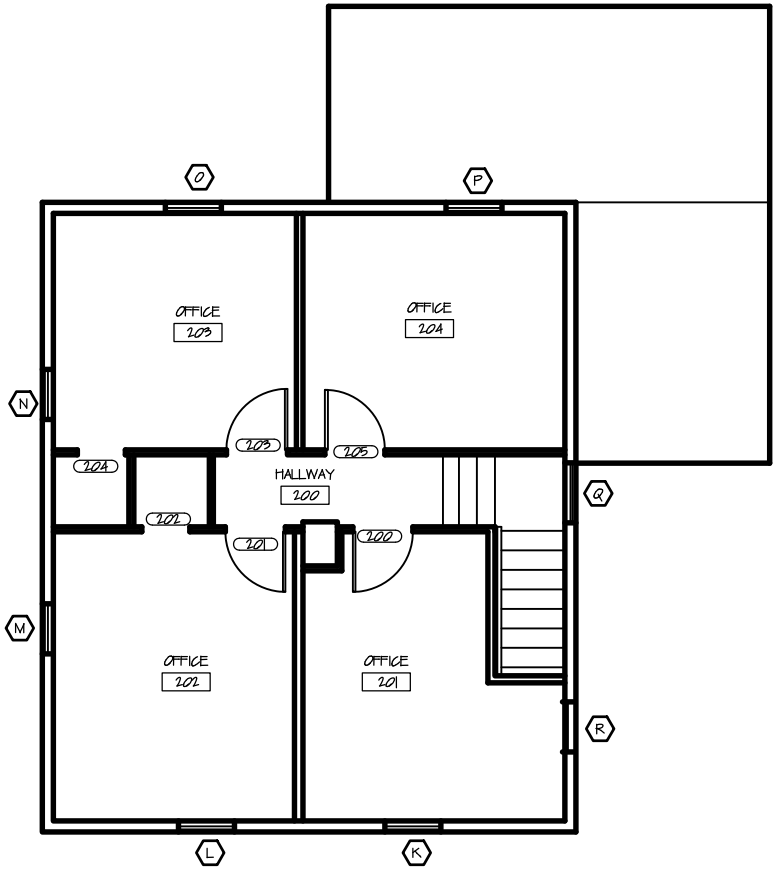
SCHEUBER + DARDEN
architects LLC
P.O. BOX 909
PARKER, COLORADO 80134
303.915.8415

SITE PLAN

MUEGGE HOUSE – TOWN OF BENNETT

S1.0





1
A1.0

FIRST FLOOR PLAN

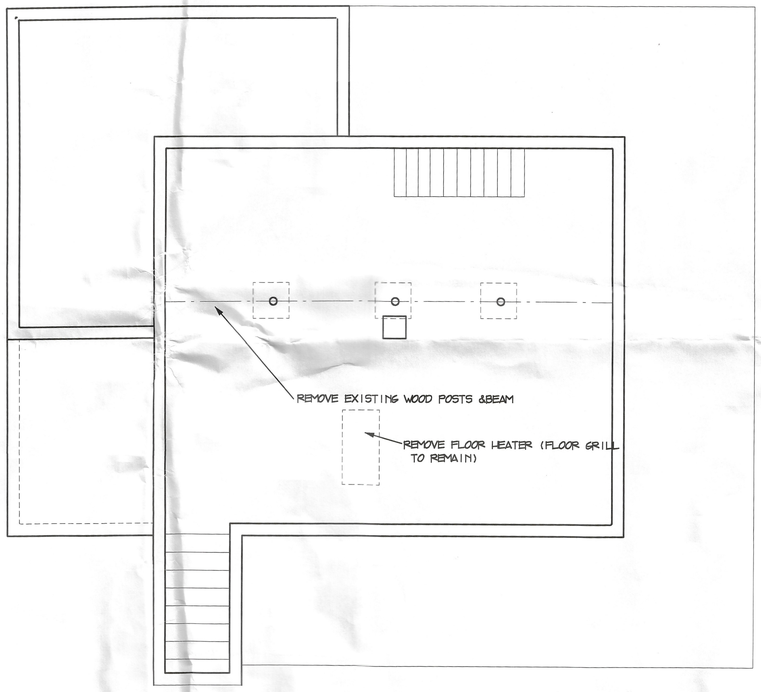
SCALE: 1/8"=1'-0"

SCHEUBER + DARDEN
architects LLC
P.O. BOX 909
PARKER, COLORADO 80134
303.915.8415

FLOOR PLAN

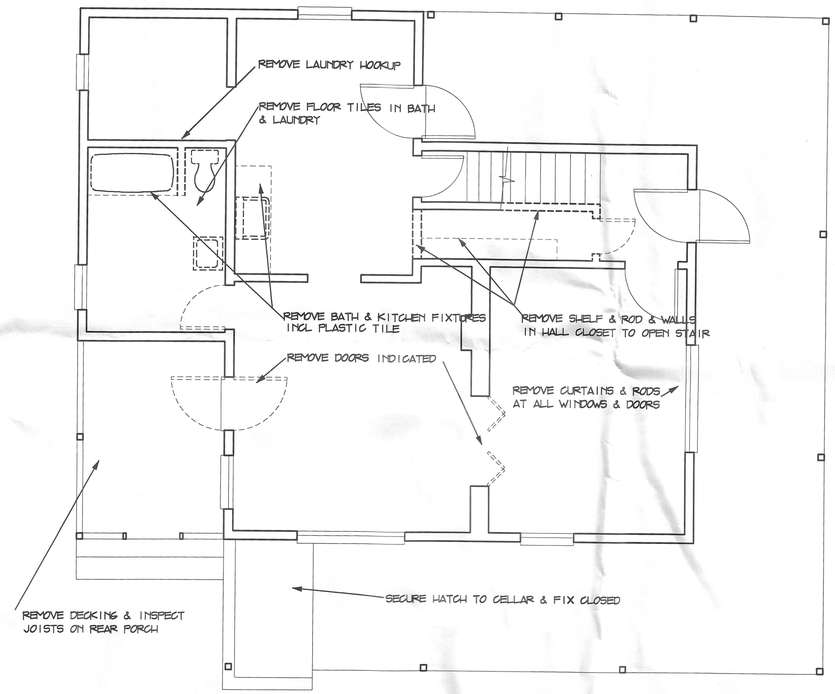
MUEGGE HOUSE – TOWN OF BENNETT

A1.0



NORTH

BASEMENT PLAN-DEMOLITION
1/4" = 1'-0"



NORTH

FIRST FLOOR PLAN-DEMOLITION
1/4" = 1'-0"

GENERAL NOTES

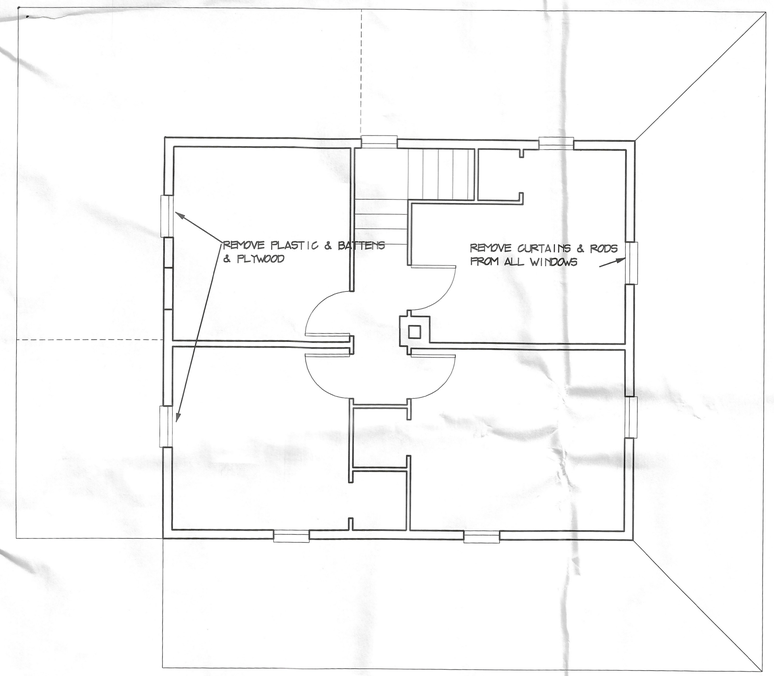
ALL WORK TO BE PERFORMED IN COMPLIANCE WITH STATE AND LOCAL CODES. DRAWINGS COMPLETED TO CONFORM TO 1997 UBC. CONTRACTOR TO SECURE ALL PERMITS PRIOR TO CONSTRUCTION

THE BUILDING IS A LOCAL HISTORIC LANDMARK. NOTIFY ARCHITECT BEFORE REMOVING ANY ITEMS FROM THE BUILDING
THE PROJECT IS FUNDED IN PART BY A GRANT FROM THE COLORADO HISTORICAL SOCIETY. STATE HISTORICAL FUND

PROVIDE COMBUSTION AIR TO FURNACE AND WATER HEATER AS REQUIRED.

INSTALL PLUMBING LINES TO WARM SIDE OF WALLS & FLOORS

GRADE AROUND BUILDING TO ALLOW POSITIVE DRAINAGE AWAY FROM FOUNDATION



NORTH

SECOND FLOOR PLAN-DEMOLITION
1/4" = 1'-0"

MUEGGE HOUSE RENOVATION
HIGHWAY 79
BENNETT, COLORADO

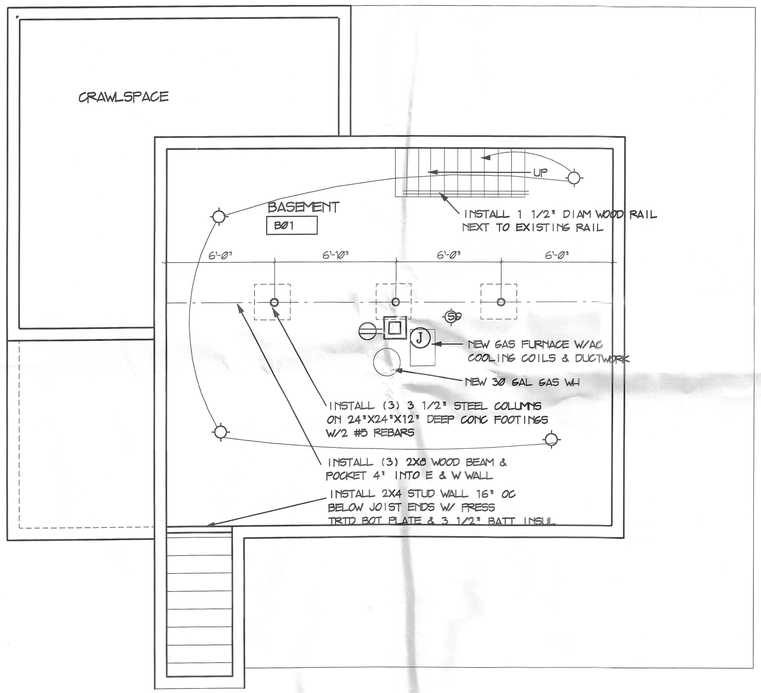
WILLIAM J DEMAIO AIA
734 COOK STREET DENVER, COLORADO 80206
PHONE (303) 321-2718 FAX (303) 321-2076

DATE: 3/31/2000
DRAWN BY: WJD
FILE: DEMPLAN

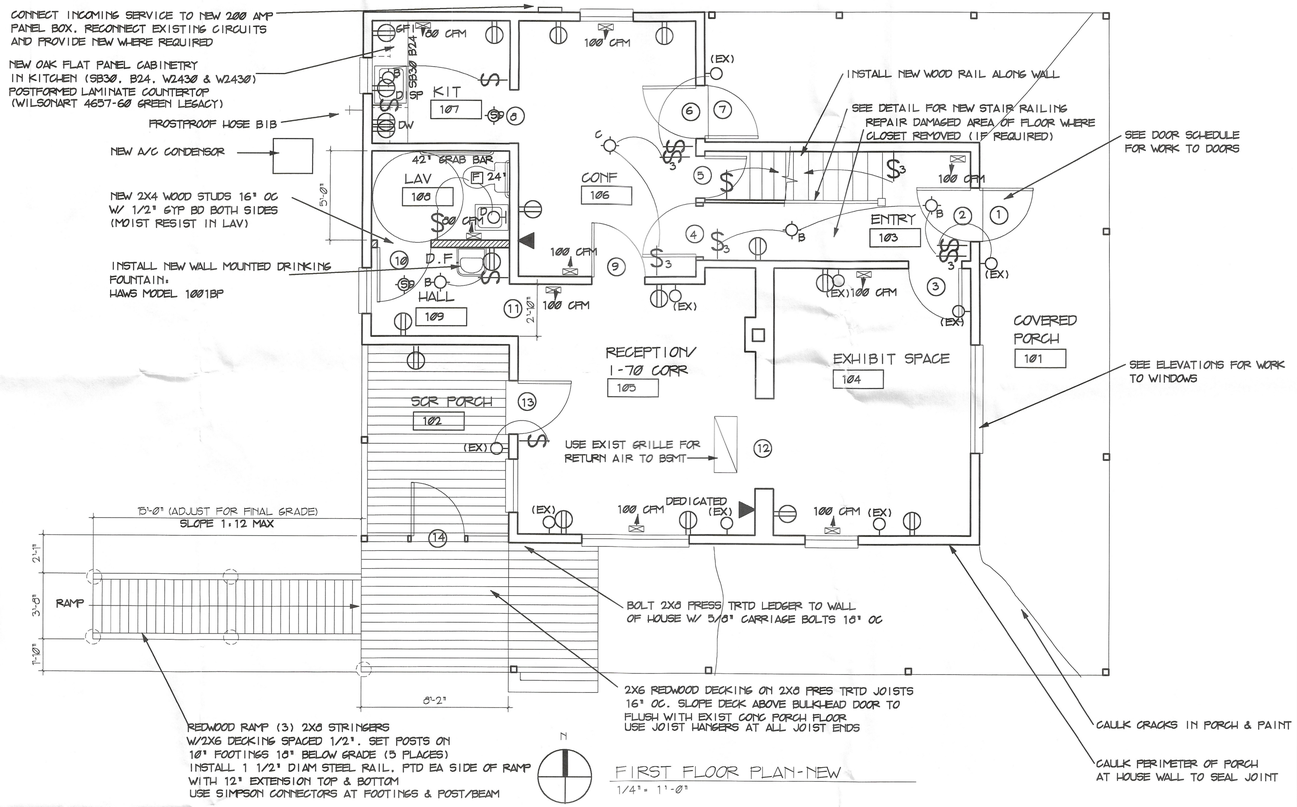
DEMOLITION FLOOR PLANS

A-1

SHT 1 OF 4



BASEMENT PLAN-NEW
1/4"= 1'-0"



FIRST FLOOR PLAN-NEW
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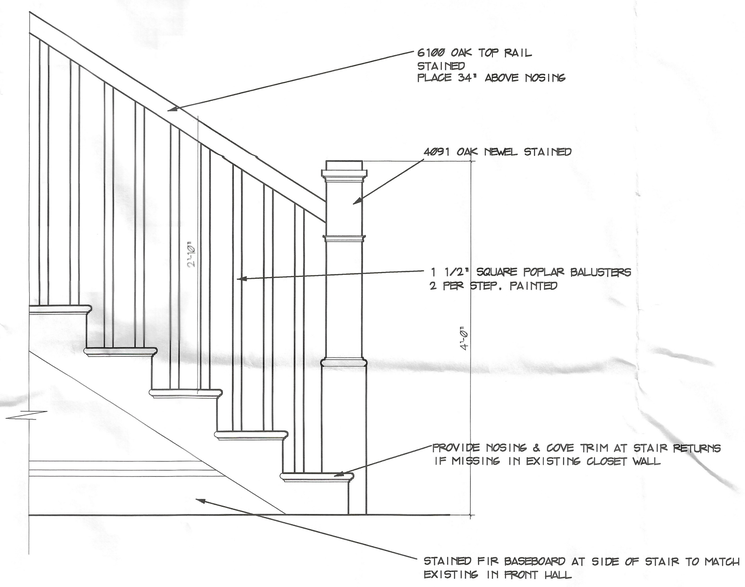
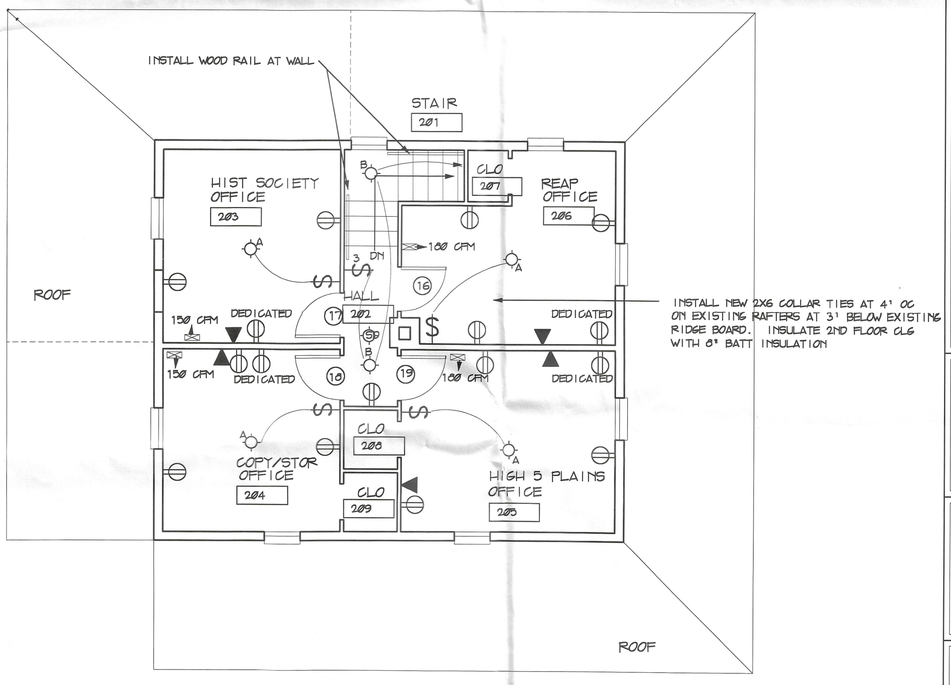


NEW STAIR RAILING DETAIL
1"= 1'-0"



SECOND FLOOR PLAN-NEW
1/4"= 1'-0"

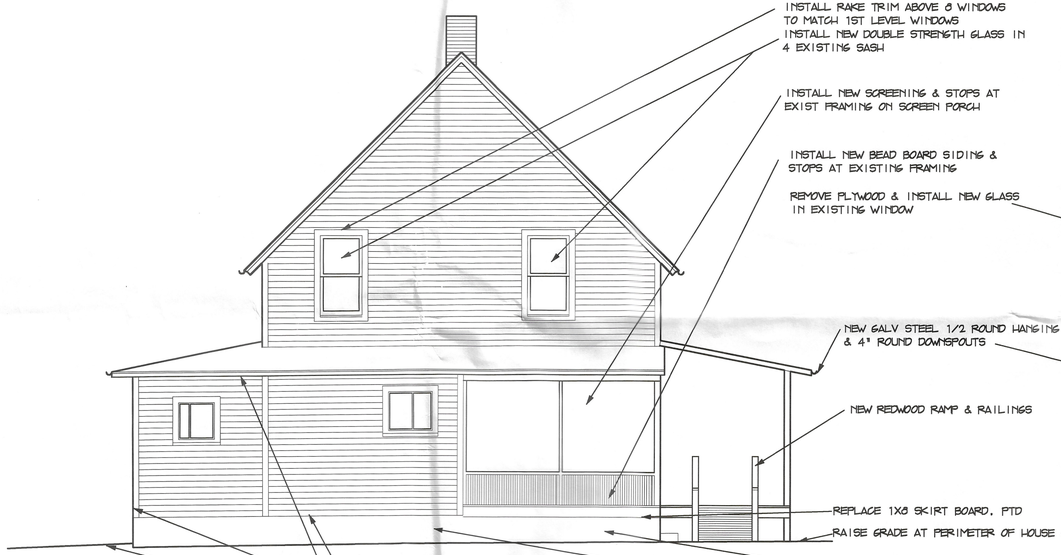
MUEGGE HOUSE RENOVATION
HIGHWAY 79
BENNETT, COLORADO

WILLIAM J DEMAIO AIA
734 COOK STREET DENVER, COLORADO 80206
PHONE (303) 321-2718 FAX (303) 321-2076

DATE: 3/31/2000
DRAWN BY: WJD
FILE: N-PLAN

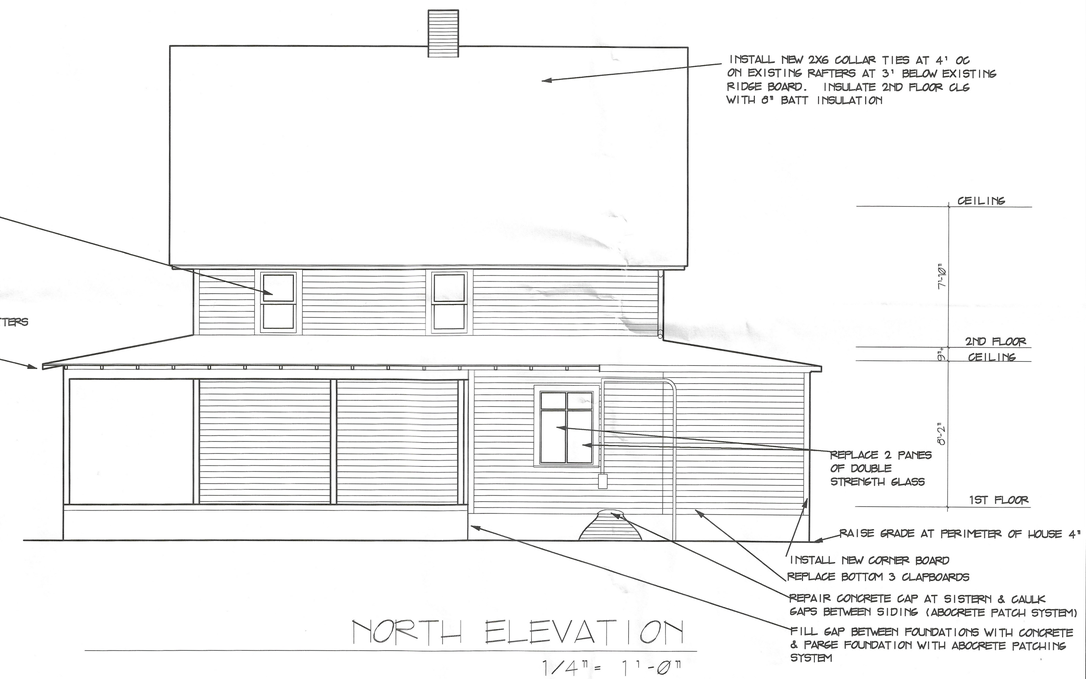
NEW PLANS

A-2
SHT 1 OF 4



WEST ELEVATION

1/4" = 1'-0"



NORTH ELEVATION

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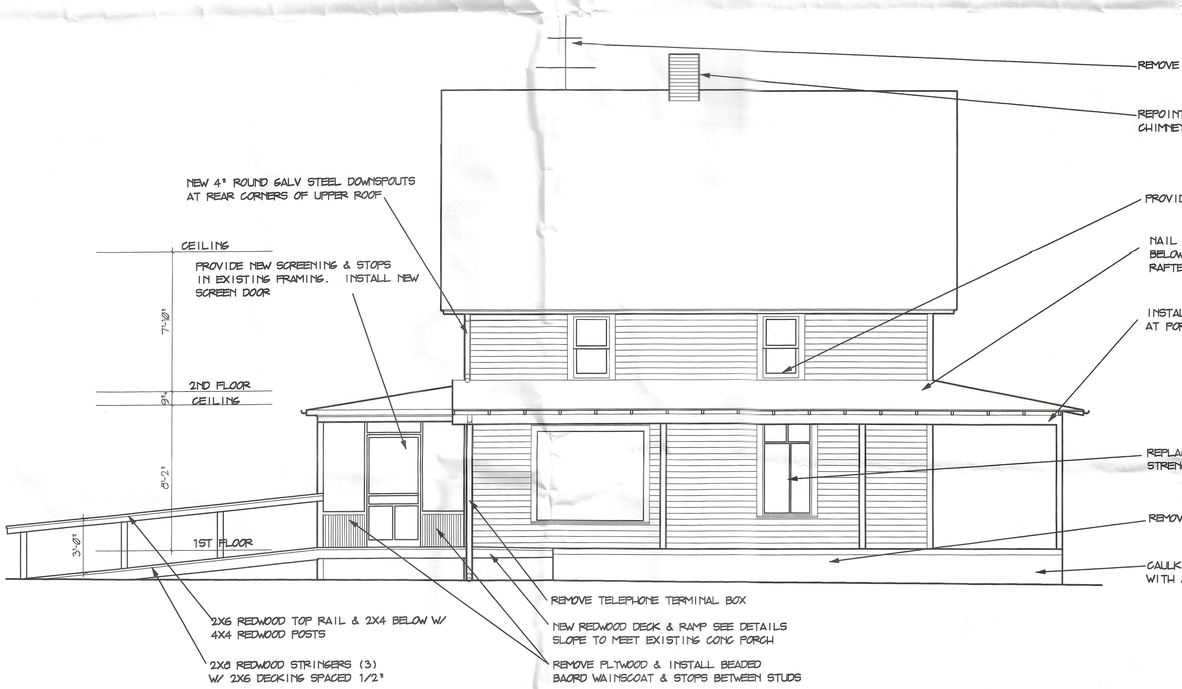

SOUTH ELEVATION

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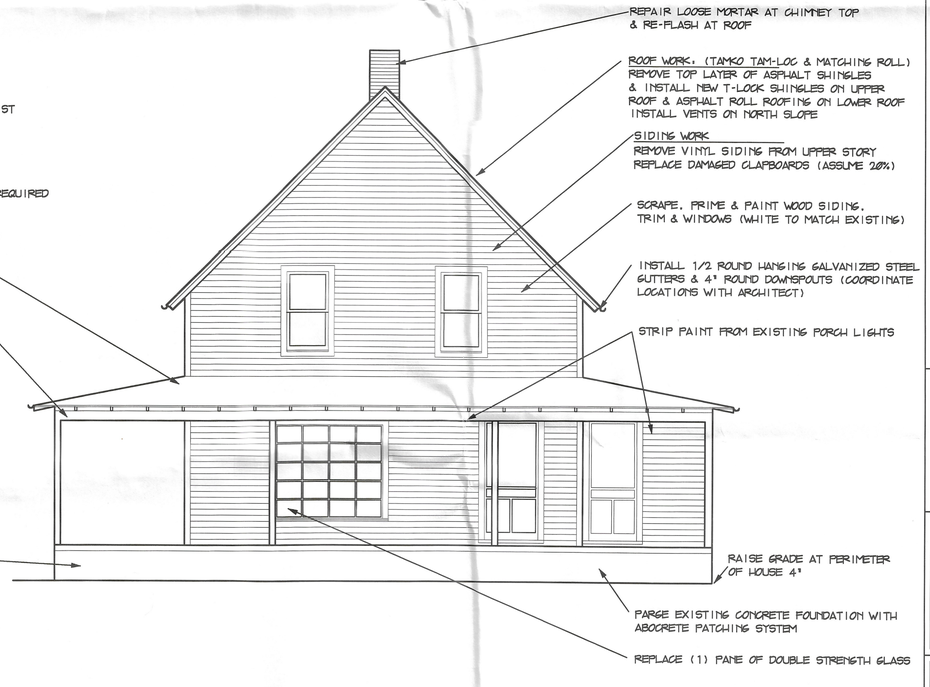

EAST ELEVATION

1/4" = 1'-0"

MUEGGE HOUSE RENOVATION

HIGHWAY 79

BENNETT, COLORADO

WILLIAM J DEMAIO AIA

734 COOK STREET DENVER, COLORADO 80206

PHONE (303) 321-2718 FAX (303) 321-2076

DATE: 3/31/2000

DRAWN BY: WJD

FILE: N-ELEVS

ELEVATIONS

A-3

SHT 3 OF 4

LIGHTING SCHEDULE

NO.	TYPE	MANFACT	MODEL #	FIXT HT	REMARKS
A	SURF MTD	REJUVINATION	C229-4 MT TABOR WITH (4) 190CE SHADES		MOTTLED BRASS FINISH
B	SURF MTD	REJUVINATION	C999 LOMBARD WITH (1) 35450 SHADE		MOTTLED BRASS FINISH
C	PENDANT	REJUVINATION	C888 ROSE CITY WITH 0040P14 SHADE	24"	MOTTLED BRASS FINISH
D	SCONCE	REJUVINATION	SF425 WALL SCONCE	7'-2" AFF	
E	PORCELIEN SOCKET				
(EX)	EXISTING				VERIFY EXISTING FIXTURES ARE OPERABLE
F	EXHAUST FAN	BROAN	MODEL 684		

REJUVINATION LAMP & FIXTURE CO
2550 NW NICOLAI
PORTLAND, OREGON 97210 (888) 401-1900

PLUMBING FIXTURE SCHEDULE

NO.	TYPE	MANFACT	MODEL #	REMARKS
1	TOILET	KOHLER	K-3422 WELLWORTH ELONGATED (WHITE) WITH SEAT K-4652	
2	LAV	KOHLER	K-1723 WHITE K-13228-5 & K-17715	WRAP PIPES BELOW SINK
3	DRINK FOUNT	HAWS	1001 BP BRUSHED CHROME	
4	KITCHEN SINK	KOHLER	K-3288-4	
5	KITCHEN FAUCET	KOHLER	K-7779-K W/K-16012-5 HANDLES POLISHED CHROME	WITH SPRAYER
6	DISHWASHER	GENERAL ELECTRIC	GSD2030ZWW	
7	DISPOSAL	INSINKERATOR	BADGER 5 PLUS	

HARDWARE SCHEDULE

ALL HARDWARE AVAILABLE FROM:
ANTIQUE HARDWARE STORE 19 BUCKINGHAM PLANTATION DRIVE
BLUFFTON, SC 29910
(800) 422-9982

TYPE 1 SCREEN DOOR
LATCH: SDLB
HINGES: SDC2

TYPE 2 FRONT ENTRY DOOR
KNOBS: 7M2 OVAL KNOBS W/ SPINDLE

TYPE 3 INTERIOR
HINGES: 9D3.5 3 1/2" BALL TIP (2 HINGES)
LOCKSET: 7JP PRIVACY LATCHSET (2 3/8" BACKSET)
PLATES: 7R OVAL PLATES (2 PER DOOR)
KNOB: 7M2 OVAL KNOBS W/ SPINDLE

TYPE 4 REAR ENTRY DOOR
LOCKSET: 7SY6, JAMESTOWN OVAL
HINGES: 9D4, 4X4 BALL TIP (3 HINGES)

FINISH SCHEDULE

NO.	SPACE	FLOOR	BASE	WALLS	CEILING	HEIGHT	REMARKS
B01	BASEMENT						REPLACE COLUMNS & BEAM
101	PORCH	SAND PT	N/A	PTD	PT WOOD	VARIES	INSTALL NEW LEDGER & JOIST HANGERS
102	SCREEN PORCH	STAIN DECK		PTD	PT WOOD	VARIES	NEW 2X6 DECKING ON EXIST JOISTS? NEW BEADED BOARD WAINSCOT
103	ENTRY	SCREEN & SEAL WOOD	OIL EX WOOD	PT NEW GYP BD	PT NEW GYP BD	8'-3"	INSTALL 3/8" GYP BD ON WALLS & CLG NEW WOOD BASE TO MATCH EXIST
104	EXHIBIT SPACE	SCREEN & SEAL WOOD	OIL EX WOOD	CLEAN EXIS WOOD	CLEAN EXIS WOOD	8'-2"	
105	RECEPT	SCREEN & SEAL WOOD	OIL EX WOOD	CLEAN EXIS WOOD	CLEAN EXIS WOOD	8'-2"	
106	CONF RM	NEW CARPET	VINYL	PT NEW/EX GYP BD	PT EXIST GYP BD	8'-3"	ALLOW $30 PER SY FOR CARPET
107	KITCHEN	SHEET VINYL	VINYL	PATCH & PT GYP BD	PATCH & PT GYP BD	7'-8"	PROVIDE NEW 1/4" UNDERLAY ALLOW $30 PER SY FOR VINYL
108	LAV	SHEET VINYL	VINYL	PATCH & PT GYP BD	PATCH & PT GYP BD	7'-8"	PROVIDE NEW 1/4" UNDERLAY ALLOW $30 PER SY FOR VINYL
109	HALL	SHEET VINYL	VINYL	PATCH & PT GYP BD	PATCH & PT GYP BD	7'-8"	PROVIDE NEW 1/4" UNDERLAY ALLOW $30 PER SY FOR VINYL
201	STAIR	SCREEN & SEAL WOOD	OIL EX WOOD	PT NEW GYP BD	PT NEW GYP BD	8'-3"	PAINT & STAIN NEW RAILING INSTALL 3/8" GYP BD ON WALLS & CLG
202	HALL	NEW CARPET	OIL EX WOOD	PT NEW GYP BD	PT NEW GYP BD	8'-3"	INSTALL 3/8" GYP BD ON WALLS & CLG ALLOW $30 PER SY FOR CARPET
203	OFFICE	NEW CARPET	PT EXIST WOOD	PT NEW GYP BD	PT NEW GYP BD	VARIES	ALLOW $30 PER SY FOR CARPET INSTALL 3/8" GYP BD ON WALLS & CLG
204	OFFICE	NEW CARPET	PT EXIST WOOD	PT NEW GYP BD	PT NEW GYP BD	VARIES	INSTALL 3/8" GYP BD ON WALLS & CLG ALLOW $30 PER SY FOR CARPET
205	OFFICE	NEW CARPET	OIL EX WOOD	PT NEW GYP BD	PT NEW GYP BD	VARIES	INSTALL 3/8" GYP BD ON WALLS & CLG ALLOW $30 PER SY FOR CARPET
206	OFFICE	NEW CARPET	OIL EX WOOD	PT NEW GYP BD	PT NEW GYP BD	VARIES	INSTALL 3/8" GYP BD ON WALLS & CLG ALLOW $30 PER SY FOR CARPET
207	CLO	NEW CARPET	PT EXIST WOOD	PT NEW GYP BD	PT NEW GYP BD	VARIES	INSTALL 3/8" GYP BD ON WALLS & CLG ALLOW $30 PER SY FOR CARPET
208	CLO	NEW CARPET	PT EXIST WOOD	PT NEW GYP BD	PT NEW GYP BD	VARIES	INSTALL 3/8" GYP BD ON WALLS & CLG ALLOW $30 PER SY FOR CARPET
209	CLO	NEW CARPET	PT EXIST WOOD	PT NEW GYP BD	PT NEW GYP BD	VARIES	INSTALL 3/8" GYP BD ON WALLS & CLG ALLOW $30 PER SY FOR CARPET

DOOR SCHEDULE

NO.	TYPE	FIN	SIZE	SWING	FRAME TYPE	HDWR	REMARKS
1	EXISTING SCREEN	PTD				1	INSTALL NEW LATCH & CLOSER
2	EXIST	OIL/ PTD			EXIST WD PTD	2	INSTALL NEW DOORKNOB
3	EXIST	OIL					EXIST HARDWARE TO REMAIN
4	NEW 4 PANEL PINE	STAIN	2-10X6-8X1 3/8	LH	4 1/2" WOOD STAINED	3	
5	EXIST	OIL			WOOD PTD		EXIST HARDWARE TO REMAIN
6	EXIST	PTD			WOOD PTD		EXIST HARDWARE TO REMAIN
7	EXIST	PTD			WOOD PTD	1	
8	EXIST OPNG				EXIST WOOD PTD		
9	NEW 4 PANEL PINE	STAIN	3-0X6-8X1 3/8	LH	4 1/2" WOOD STAINED	3	
10	NEW 4 PANEL PINE	STAIN	3-0X6-8X1 3/8	RH	4 1/2" WOOD STAINED	3	
11	ENLARGE CASED OPNG				4 1/2" WOOD STAINED		ENLARGE CASED OPNG, NO DOOR
12	EXIST OPNG						REMOVE TRACK & FILL FRAME
13	NEW MAIMAN MC-217	STAIN	3-0X6-8X1 3/4	LH	4 1/2" WOOD STAINED	4	
14	NEW SCREEN DOOR	PTD	3-0X6-8X7/8"	LH		1	SCREEN DOOR TO MATCH FRONT

MUEGGE HOUSE RENOVATION
HIGHWAY 79
BENNETT, COLORADO

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DATE: 3/31/2000
DRAWN BY: WJD
FILE: SCHED

SCHEDULES
FINISH
DOOR
WINDOW
LIGHTING
PLUMBING

A-4

SHT 4 OF 4

Cost Estimate - Muegge House				
Item	**Quantity**	**Unit**	**Price/Unit**	**Total**
CRITICAL DEFICIENCIES				
1. A shallow surface archaeological reconnaissance should be conducted prior to any ground disturbance.	1	ls	$ 7,500.00	$ 7,500.00
Remove the recycled asphalt from the property. Create a swale approximately 10' away from the building and raise grade against the porch and building and slope 6" in 10'-0" to the swale to create positive drainage away from the building. Add topsoil and reseed with native grasses after sitework is complete.	1	ls	$ 20,000.00	$ 20,000.00
Remove the curb cut at the south road to prevent water from entering the property during a heavy rainstorm or during snow events and associated melting.	1	ls	$ 7,500.00	$ 7,500.00
Remove the existing batt insulation in the basement so a more thorough assessment can be completed. This assessment should be completed by a structural engineer that specializes in historic preservation.	1	ls	$ 5,000.00	$ 5,000.00
Remove the existing wood deck over the historic stair entrance and screened porch along with the wood ramp. Remove the soils down to the footing of the basement foundation wall and re-expose both the basement stair wall and basement wall. Have a structural engineer, which specializes in historic preservation, to complete an intensive level investigation and recommendations.	1	ls	$ 15,000.00	$ 15,000.00
Install new waterproofing membrane at the concrete foundation walls at historic basement stairs and walls.	1	ls	$ 1,200.00	$ 1,200.00
Basement: Install a perforated pipe approximately 6" below the floor surface and pipe it to the existing sump pump.	1	ls	$ 3,000.00	$ 3,000.00
Replace the sump pump and lower it so that it is at the surface of the floor.	1	ls	$ 1,500.00	$ 1,500.00
Overlay the dirt floor with 6" of gravel.	1	ls	$ 2,000.00	$ 2,000.00
Construct a new handicap ramp. The new ramp should be constructed of concrete to be more compatible with the rest of the building.	1	ls	$ 15,000.00	$ 15,000.00
Construct a new 3'-0" wide sidewalk from the handicap parking to the ramp.	1	ls	$ 7,500.00	$ 7,500.00
To provide access to the building, remove the floor of the screened porch and install new wood sleepers on top of the existing joists to slope the entire floor up to the building floor level. Reinstall the wood decking without the gaps as the wood has already shrunk.	1	ls	$ 1,200.00	$ 1,200.00
SUBTOTAL CONSTRUCTION PROJECT COSTS				**$ 86,400.00**
General Conditions (20%)	0.2			$ 17,280.00
Bonding (3%)	0.03			$ 2,592.00
Permits (5%)	0.05			$ 4,320.00
Overhead and Profit (20%)	0.2			$ 22,118.40

Item	Quantity	Unit	Price/Unit	Total
SUBTOTAL CONSTRUCTION PROJECT COSTS				**$ 132,710.40**
Architectural/Engineering Fees (15%)	0.15			$ 19,906.56
Historic Paint Analysis - 10 samples	10	ea	$ 150.00	$ 1,500.00
Archaeological Observation & Mitigation				$ 7,500.00
SUBTOTAL PROJECT COSTS				**$ 161,616.96**
Contingency (25%)	0.25			$ 40,404.24
TOTAL PROJECT COSTS				**$ 202,021.20**

Cost Estimate - Muegge House				
Item	**Quantity**	**Unit**	**Price/Unit**	**Total**
Serious Deficiencies				
1. Where the concrete is displaced on the surface of the porch and is a tripping hazard, grind the concrete and fill any cracks with a flexible sealant.	1	ls	$ 500.00	$ 500.00
1. Replace the damaged roof joists with replica joists at the porch.	1	ls	$ 1,300.00	$ 1,300.00
1. Original House: Remove all wood siding that has the plugs and install new replica siding. Epoxy all wood siding that have minor splits and replace siding that is heavily warped, has splits that extend across over half of the length of the board or is rotted. When replacing this siding, inspect the wall framing and building paper for damage from water infiltration. If water damage exists, repair with replica members/material.	1	ls	$ 25,000.00	$ 25,000.00
1. Repair the trim at Windows K & L.	1	ls	$ 250.00	$ 250.00
1. Temporarily support the porch and install new column standoffs to raise the columns off the porch. Epoxy coat the bottoms of the columns to prevent moisture infiltration during large snow events.	1	ls	$ 2,500.00	$ 2,500.00
1. Windows K – R: Remove and replace vinyl replacement windows with replica wood windows as existed during the period of significance.	8	ea	$ 2,700.00	$ 21,600.00
1. Windows A – D, H & J:Restore the steel sash windows per methodology in the Historic Structure Assessment.	6	ea	$ 2,000.00	$ 12,000.00
1. Window I: Replicate steel sash window.	1	ea	$ 5,000.00	$ 5,000.00
1. Windows E, F, G: Remove plexiglass and install new insect screen. Install new interior wood storm windows.	3	ea	$ 1,000.00	$ 3,000.00
1. Install interior storm windows throughout the house.	15	ea	$ 750.00	$ 11,250.00
SUBTOTAL SERIOUS DEFICIENCIES				**$ 82,400.00**
MINOR DEFICIENCIES				
1. Install replica ogee molding at the porch where it is missing.	1	ls	$ 250.00	$ 250.00
1. Door 100: Restore the historic door, completing a paint analysis to determine the color during its period of significance. Tighten any loose joints, re-glaze the window and sand the door to the next sound layer prior to painting. Install new lever hardware that is compatible with the historic character of the building. Install a new storm door or wood screen.	1	ls	$ 2,000.00	$ 2,000.00

Item	Quantity	Unit	Price/Unit	Total
1. Door 101: Restore the historic door, completing a paint analysis on the exterior to determine the color during its period of significance. Tighten any loose joints, re-glaze the window and sand the door to the next sound layer prior to painting. Install new lever hardware that is compatible with the historic character of the building. Remove the painted finish on the interior trim and stain to match the rest of the historic stained finishes dating from the period of significance.	1	ls	$ 2,000.00	$ 2,000.00
1. Door 102: Restore the historic door, completing a paint analysis to determine the exterior color during its period of significance. Tighten any loose joints, re-glaze the window and sand the door to the next sound layer prior to painting.	1	ls	$ 2,000.00	$ 2,000.00
1. Door 103: Remove the door and install a new door that is more compatible with the historic character of the house. Most likely, the enclosed porch only had a screen door, not a storm door.	1	ls	$ 750.00	$ 750.00
1. Door 104: A historic paint analysis should be completed to determine the color of the trim during its period of significance. If possible, it should also be determined if the historic door existed during the period of significance or if it was removed by Charles Muegge when he rehabilitated the interior between 1944 and 1948. If it is found that the door existed, it should be re-installed.	1	ls	$ 1,000.00	$ 1,000.00
Subtotal - Minor Deficiencies				**$ 8,000.00**
SUBTOTAL CONSTRUCTION PROJECT COSTS				**$ 90,400.00**
General Conditions (20%)	0.2			$ 18,080.00
Bonding (3%)	0.03			$ 2,712.00
Permits (5%)	0.05			$ 4,520.00
Overhead and Profit (20%)	0.2			$ 3,616.00
SUBTOTAL CONSTRUCTION PROJECT COSTS				**$ 119,328.00**
Architectural/Engineering Fees (15%)	0.15			$ 17,899.20
SUBTOTAL PROJECT COSTS				**$ 137,227.20**
Contingency (25%)	0.25			$ 34,306.80
TOTAL PROJECT COSTS				**$ 171,534.00**

Cost Estimate - Muegge House				
Item	**Quantity**	**Unit**	**Price/Unit**	**Total**
Install grab bars that meet the current ADA. Lower mirror to meet ADA.	1	ls	$ 750.00	$ 750.00
Subtotal - Critical Deficiencies				**$ 750.00**

Item	Quantity	Unit	Price/Unit	Total
MINOR DEFICIENCIES				
1. Door 104: A historic paint analysis should be completed to determine the color of the trim during its period of significance. If possible, it should also be determined if the historic door existed during the period of significance or if it was removed by Charles Muegge when he rehabilitated the interior between 1944 and 1948. If it is found that the door existed, it should be re-installed.	1	ls	$ 1,000.00	$ 1,000.00
1. Door 107 & 108: Restore the wood casing to its historic stained appearance. The contemporary door should be removed and a door that is more compatible with the historic character of the building should be installed.	1	ls	$ 3,000.00	$ 3,000.00
1. Door 109: Restore the wood casing to its historic stained appearance.	1	ls	$ 1,000.00	$ 1,000.00
1. Door 110: Sand the door to the next sound layer and paint. Sand the jamb of the door to allow for easy operation.	1	ls	$ 750.00	$ 750.00
1. Door 111: Adjust the doorknob to allow the door to latch properly.	1	ls	$ 100.00	$ 100.00
1. Door 200 & 203: If carpet is to remain, then the bottom of the door should be shaved slightly so it will close and latch. Complete a paint analysis to determine the color of the door during period of significance and restore	2	ea	$ 1,500.00	$ 3,000.00
1. Door 201 & 205: Complete a paint analysis to determine the color of the door during period of significance and restore.	2	ea	$ 1,500.00	$ 3,000.00
1. Door 202 204: If needed, a new replica door can be fabricated and installed on the closet opening.	2	ea	$ 1,500.00	$ 3,000.00
1. Interior Finishes: Complete a paint analysis to determine if the wood trim, wainscoting and baseboard was stained or painted during the period of significance. Restoration of the stained finishes in the primary spaces is recommended if it is discovered that it existed during the period of significance.	1	ls	$ 7,500.00	$ 7,500.00
1. Remove carpet from the second floor and restore wood floors.	1	ls	$ 5,000.00	$ 5,000.00
1. Have a mechanical contractor investigate the unit during a rehabilitation project and anticipate replacing the unit. It was installed during the 2000 SHF grant.	1	ls	$ 10,000.00	$ 10,000.00
1. Restore the exterior light fixture.	1	ls	$ 500.00	$ 500.00

Item	Quantity	Unit	Price/Unit	Total
1. The missing light at the Vestibule should be installed at the ceiling where the historic light was located. Since the type of light is unknown, install a contemporary light that is simple, but compatible with the historic character of the building. During the rehabilitation, coordination with the architect and State Historical Fund will assist in choosing an appropriate light fixture with shade.	1	ls	$ 750.00	$ 750.00
Subtotal - Minor Deficiencies				**$ 38,600.00**
SUBTOTAL CONSTRUCTION PROJECT COSTS				**$ 39,350.00**
General Conditions (20%)	0.2			$ 7,870.00
Bonding (3%)	0.03			$ 1,180.50
Permits (5%)	0.05			$ 1,967.50
Overhead and Profit (20%)	0.2			$ 1,574.00
SUBTOTAL CONSTRUCTION PROJECT COSTS				**$ 51,942.00**
Architectural/Engineering Fees (15%)	0.15			$ 7,791.30
SUBTOTAL PROJECT COSTS				**$ 59,733.30**
Contingency (25%)	0.25			$ 14,933.33
TOTAL PROJECT COSTS				**$ 74,666.63**

Cost Estimate - Muegge House				
Item	**Quantity**	**Unit**	**Price/Unit**	**Total**
MINOR DEFICIENCIES				
Roof Replacement: Includes: 1. Install ice and water shield to the lower four feet of the roof to limit damage from ice dams; 2. Modify the attic ventilation. Instead of installing contemporary circular roof vents, install a ridge vent ad soffits vents to achieve the appropriate ventilation. Complete calculations to determine how many soffit vents are required to provide adequate attic ventilation. Roof top vents are not appropriate on this building. Soffit vents should be coordinated with the SHF specialist and a historic preservation architect prior to selecting, locating and installing; 3. Install impact resistant asphalt shingles. 4. During a comprehensive roof replacement install new metal flashing at the roof edge, penetrations, and chimney.	1	ls	$ 10,000.00	$ 10,000.00
SUBTOTAL CONSTRUCTION PROJECT COSTS				**$ 10,000.00**
General Conditions (20%)	0.2			$ 2,000.00
Bonding (3%)	0.03			$ 300.00
Permits (5%)	0.05			$ 500.00
Overhead and Profit (20%)	0.2			$ 2,560.00
SUBTOTAL CONSTRUCTION PROJECT COSTS				**$ 15,360.00**
SUBTOTAL PROJECT COSTS				**$ 15,360.00**
Contingency (25%)	0.25			$ 3,840.00
TOTAL PROJECT COSTS				**$ 19,200.00**