Historic Structures Report:

FREDERICK ROEDER STORE

and

WHITE HALL TAVERN

Harpers Ferry National Historical Park



DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
NATIONAL CAPITAL REGION
1995

United States Department of the Interior

NATIONAL PARK SERVICE

Harpers Ferry Center

IN REPLY REFER TO:

Williamsport Preservation Training Center
205 West Potomac Street
Williamsport, Maryland 21795

H2215 (WPTC)

February 8, 1996

Dear Colleague:

It is my pleasure to furnish you with a copy of *Historic Structures Report: Frederick A. Roeder Store & White Hall Tavern, Harpers Ferry National Historical Park.* This document is the product of the combined efforts of the Williamsport Preservation Training Center, the Harpers Ferry National Historical Park Archeologists and Historians, and the Denver Service Center. The purpose of this report is two-fold: 1) to analyze and document the evolution of the historic structures, their current physical condition, and causes of deterioration; 2) present and evaluate alternative uses and treatments for these historic structures with an emphasis on preserving all extant historic material. The format used for this report is based on the criteria outlined in *National Park Service Cultural Resource Management Guidelines* (NPS-28), Release No. 4, July 4, 1994.

Any questions concerning this report should be referred to me at the address below:

The Gambrill House
4801 Urbana Pike #A
Frederick, MD 21704-7307
(301)663-8206

Sincerely,

H. Thomas McGrath, Jr.
Chief, Williamsport Preservation Training Center

bcc:
WPTC project file

Historic Structures Report
Frederick A. Roeder Store, Building 5
White Hall Tavern, Building 7
Harpers Ferry National Historical Park

Department of the Interior
National Park Service
Harpers Ferry National Historical Park
Williamsport Preservation Training Center
National Capital Region
1995

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Acknowledgements:

This project was conducted under a joint agreement between Williamsport Preservation Training Center, National Capital Region, Denver Service Center, and Harpers Ferry National Historical Park. Throughout the project the team benefited from the collective knowledge of the following people: Patricia Chickering and Michael A. Jenkins - HAFE Historians; Cari Young-Ravenhorst; John Ravenhorst, and Paul Shackel - HAFE Archeologists; Krista Pace Copeland - Former HAFE Architect; Peter Dessauer - HAFE Architect; Peg Bethany and Frank Shultz-DePalo - HAFE Curators; Thomas DuRant - Curator NPS Photograph Collection; Carol Petravage - HFC Historic Furnishings; Kimberly Hildebrand - IDC Computer Graphics; Bruce Noble - HAFE Cultural Resource Specialist; Eric Z. Ford and Paul J. Neidinger - WPTC Architects; Rebecca Stevens - Regional Historical Architect; Stephen Ziegenfuss - NCR Assistant Regional Historical Architect; Kevin Ortyll - NCR-LCS Coordinator; and Jerry Buckbinder - NPS Liaision with GPO.

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Executive Summary

Preface

Project Overview & Acknowledgements:

For the purpose of producing a comprehensive Historic Structures Report (HSR), analysis, documentation and investigations for Buildings 5 and 7 have been combined. The reason for this action is based on two main points: 1) the buildings, in the configuration they are in now, were constructed by the same owner, Frederick A. Roeder; 2) the buildings were designed to appear inherently identical. The funding for the production of the HSR came from Park Development Package 118 which will fund the initial stages of the stabilization and preservation construction for the two buildings as well. The following is an account of the events which led to the production of the HSR.

The history of the production of the (HSR) for Buildings 5 and 7, Roeder's Store and White Hall Tavern respectively, began nearly 35 years ago. During his 1957 to 1959 tour of duty at Harpers Ferry National Monument,[1] Harpers Ferry West Virginia, Charles W. Snell, Historian (Park Supervisory) completed the first draft of Historical Data Reports for Buildings 5 and 7. These reports were written as part of the preliminary studies of the events and their associated buildings that played a role in the history of Harpers Ferry from 1757 to 1865. In 1979 to 1981, Snell revisited the historical data reports for Buildings 5 and 7 and produced a revised draft that made the reports current from 1757 to 1955.

In 1990, Kira Ramakrishna, Lead Historian working at Harpers Ferry National Historical Park on Park Development Package 118 under a Cooperative Agreement between the University of Maryland History Department and the National Park Service, National Capitol Region, drafted an update of Mr. Snell's work. Over the ensuing 3 years, Patricia Chickering, who succeeded Ms. Ramakrishna as Lead Historian, updated this document. The final draft produced by Ms. Chickering has been referenced for the completion of the final HSR and is included in full as an appendix in this report. During the summer of 1990 Krista Copeland, with the assistance of Michael A. Jenkins, started a draft building analysis using the Inventory Condition Assessment Program (ICAP) for both structures. Their efforts were used as the ground work for the existing conditions/physical description section of the HSR.

As part of Park Development Package 118, archeological investigations took place in the back yard areas of Buildings 5 and 7. The excavations were conducted June through September of 1991 with a crew of three technicians and

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1 Harpers Ferry National Monument was the first designation given to the community when it came under government control in 1953. In 1963, Harpers Ferry National Monument became Harpers Ferry National Historical Park.

one supervisor from the park archeology staff. Cleaning, cataloging, and analysis of artifacts were under way in the archeology lab by summer 1992, while soil samples were sent to specialists for analysis of parasites and plant remains. Interpretation of bone specimens and artifact remains were also conducted. The findings of these investigations have been compiled into a report edited by Jill Halchin, Survey Archeologist, Gettysburg National Military Park. The first five chapters of this report have been included in the HSR. Prior to construction, two test pit excavations were performed adjacent to each structure. These excavations were made in order to investigate sites that would be disturbed during the preservation treatment of the buildings. The findings from this investigation wererecorded in an addendum to the archeology section of the HSR.

In May 1992, the task for completing the HSR was assigned to Denver Service Center's Eastern Team (DSC-TEA) in Falls Church, Virginia. Tony Donald, a Section Chief at the Falls Church office, made the request for Historic American Buildings Survey photographic and measured drawing documentation to be performed on the two buildings. In January 1993, DSC-TEA architect Susan Shufelt, was assigned to be the Team Captain for the Park Development Package 118 project. At this time she wrote the project task directive and began work on the HSR. In March of that year, architects Kenneth Bennett and David Snow of DSC, Denver started working on the construction drawings and the research for the HSR.

As part of the research for the HSR, DSC-TEA contracted specialist from both within and outside the Park Service. In March 1993, engineer Jerrold Johnson from DSC-TEA began the structural analysis and structural recommendations for Buildings 5 and 7. For the purpose of testing the buildings for asbestos and radon, an indefinite quantities contract was established with the architecture/engineering firm of Grieves, Worrall, Wright, & O'Hatnick. In the summer of 1993, mechanical engineer Richard Varela, and electrical engineer Robert Michaud, both of DSC-TEA were assigned to the project to develop plans for heating and ventilation and electrical requirements. In September of 1993, the DSC-TEA team requested the North Atlantic Region (NAR), Cultural Resource Center (CRC) perform a paint analysis and make recommendations concerning the plaster, mortar and stucco in the two structures. Supervisor of the Building Conservation Branch (BCB) Stephen Spaulding supervised the project and Architectural Conservator Judith Quinn and Historical Architect Millan Galland performed the field work. Their findings and recommendations are included in the appendix of the HSR. From the Harpers Ferry Center (HFC), Conservators Greg Byrne and Al Levitan exposed and documented the Civil War era graffiti in Building 5. The findings of their analysis and documentation are included in the appendix of the HSR. As part of the design for the intended use of the structures Carol Petravage from HFC developed a historic furnishings plan for Building 7.

In December 1993, the responsibilities for the completion of Package 118 construction documents and HSR were passed on to the Williamsport Preservation Training Center (WPTC). The change over from DSC-TEA to WPTC was brought about by a decision made by National Capital Region (NCR) to contract WPTC day-labor construction teams to perform the work on Buildings 5 and 7. In May of 1994, NCR hired Michael Seibert as a Research Architectural Historian to

work under the supervision of WPTC Historical Architect Thomas Vitanza, on the completion of the HSR and prepare it for publication. During this time the architectural staff at WPTC prepared construction drawings and an architectural program for the treatment of Buildings 5 and 7. On July 26, 1994 WPTC Historical Architect Thomas Vitanza submitted a new draft task directive for Park Development Package 118. The Final Task Directive was approved August 10, 1994 by the Regional Director of the National Capital Region. It is anticipated that the Day Labor Construction Drawings will be completed and distributed by mid-November 1994. March 1995 is when WPTC has sceduled to begin the first construction phase of the multi-year preservation treatment of the two structures.

In the spring of 1995, the HSR was sent to the Government Printing Office in camera-ready form for publication.

Executive Summary

Introduction

Located in a gap in the northern Blue Ridge mountains, Harpers Ferry is situated on a rocky promontory in the confluence of the Shenandoah and Potomac rivers. Throughout history, this site played a significant role in the transportation of a nation. The passage carved by the force of the two rivers through the Blue Ridge mountains was used as a transportation route by early indian tribes. As American settlement grew this gap became a portal to the western frontier. Recognizing the significance of this site, George Washington worked to take advantage of the topography and the power of the rivers. In 1794, with the help of congress, Washington established Federal armory and arsenal on the Potomac river in Harpers Ferry. Washington's foresight proved fruitful. By the second quarter of the nineteenth century, the town of Harpers Ferry was a community teaming with the energy of the beginnings of the American Industrial Revolution.

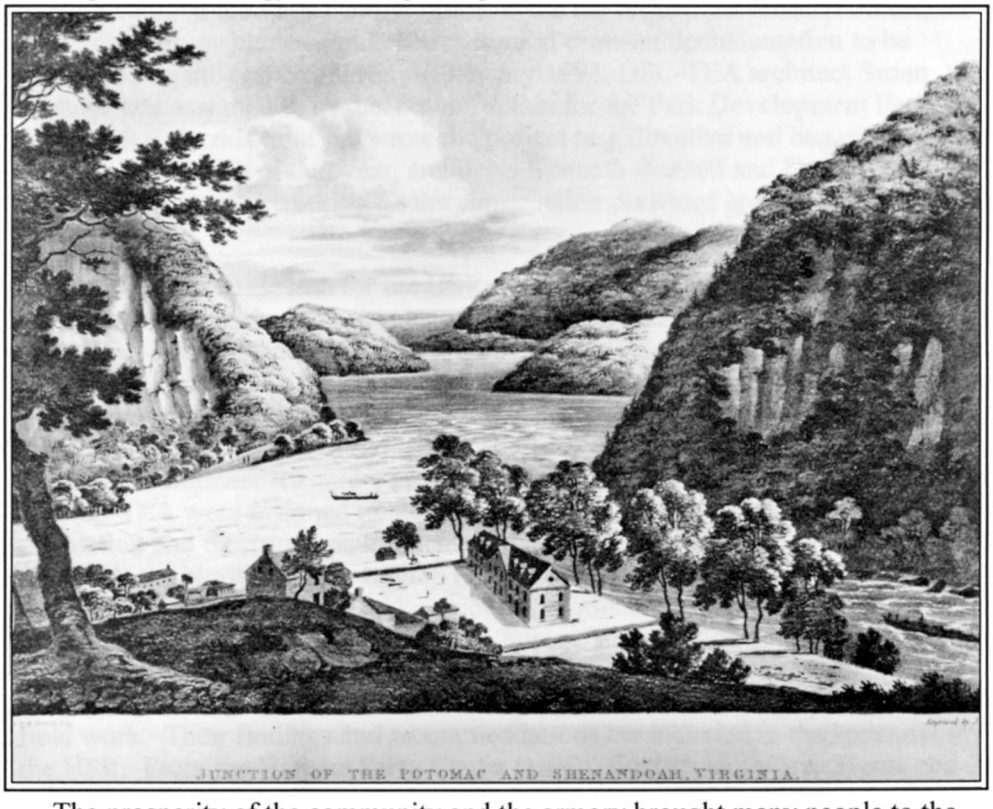


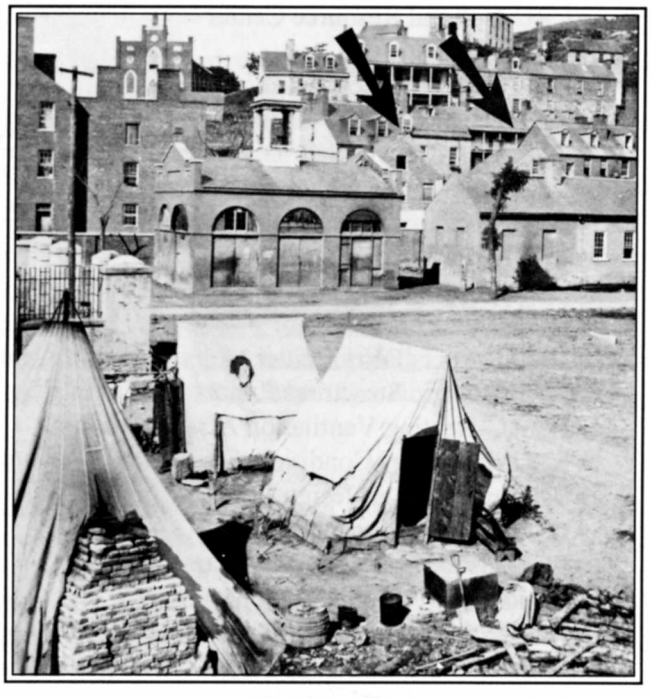
Illustration depicting early armory buildings at the confluence of the Potomac and Shenandoah rivers, c. 1803-1806, on file HAFE NHP.

The prosperity of the community and the armory brought many people to the area. Small businesses opened throughout the community to provide goods and services for the armory workers. Buildings 5 and 7 were products of this early prosperity. Building 7 was constructed in 1838-39 by William Anderson, a prominent citizen and local merchant, as a one story stone warehouse with a slate roof. Building 5 was constructed in 1856 by Frederick Augustus Roeder, a confectioner and baker. Roeder owned both buildings at the time of construction of Building 5. Historically, the buildings were used as taverns or drinking houses, warehouses, and dwellings.

Introduction

As the country wrestled with the growing controversy over the morality of the institution of slavery, Harpers Ferry was soon to become the site of the first military confrontation over this issue. On October 16, 1859, radical abolitionist John Brown led a small group of men, called the "army of liberation", to attack the armory and seize the over 100,000 rifles and muskets stored there. Brown's raid failed miserably. Thirty-six hours after it had begun, U.S. Marines, led by Lt. Col. Robert E. Lee, stormed Brown's strong hold - the armory fire enginehouse. John Brown and his remaining men were captured and hanged for treason against the Commonwealth of Virginia. Due to their proximity to the armory, especially the armory fire enginehouse, Buildings 5 and 7 were the backdrop for the violence that took place that fateful day.

During the course of the American Civil War, control of Harpers Ferry changed hands many times. Union forces occupied the town the longest (from 1862-1865). During this occupation the Roeder family fled their Lower Town home and business buildings. With the buildings being vacant, they were used as barracks for Union soldiers. The soldiers who stayed in these dwellings left behind graffiti that chronicled their feelings and opinions of the war. The most prominent is the graffiti left by Col. Baxter's 72nd Pennsylvania Fire Zouaves of Philadelphia.



View of Buildings 5 and 7 showing proximity to "John Brown's Fort", note soldiers bivouac in foreground.

After the war, the buildings were reoccupied by the Roeder family and were reopened as taverns. They continued to be used as taverns or restaurants through the beginning of the twentieth century until the Jefferson County Court voted the county dry on June 6, 1911. Building 5 remained vacant until the Park acquired it in 1953. Building 7 was used as a dwelling after the declaration of prohibition through the 1930s. The building then became vacant until the Park acquired it 1953.

Executive Summary

Acronym Key

In order to develop a more readable report, acronyms for commonly repeated titles and department names will be used. The following is an alphabetical listing of the acronyms used and their meanings:

- ASCE-American Society of Civil Engineers
- BCB-Building Conservation Branch
- BOCA-Building Officials and Code Administrators
- CRBIB-Cultural Resource Bibliography
- CRC-Cultural Resource Center
- D-Door
- DC-Division of Conservation
- DCP-Developmental Concept Plan
- DSC-TEA-Denver Service Center - Eastern Team (Falls Church, Virginia)
- EPA-Environmental Protection Agency
- HABS-Historic American Buildings Survey
- HAFE-Harpers Ferry (Park)
- HEPA-High Efficiency Particulate Air (Filter)
- HC-Handicapped
- HFC-Harpers Ferry Center (Administrative Center)
- HSR-Historic Structures Report
- HVAC-Heating Ventilation Air Conditioning
- ICAP-Inventory Condition Assessment Program
- IDC-Interpretive Design Center
- IP-Interpretive Prospectus
- LCS-List of Classified Structures
- NAR-North Atlantic Region
- NCR-National Capital Region
- NHP-National Historical Park
- NPS-National Park Service
- PDS-Professional Design Services
- PE-Professional Engineer
- pCi/L-picocurries per liter
- RM- Room
- S-Stair
- T&G-Tongue and Groove (ref. flooring)
- UMD-University of Maryland
- UTM-Universal Transverse Mercator
- W-Window
- WPTC-Williamsport Preservation Training Center
- WV-West Virginia

Summary of Reports

1. Research completed to produce the Historic Structures Report.

In order to fully understand the history and cultural impact of Buildings 5 & 7 various levels of research have been completed. The scope of this research covers a broad variety of disciplines and fields of expertise. Though seemingly non-descript in nature the following research has proven the structures to be rich cultural resources. The following is a summary of the reports completed during the course of the production of the Historic Structures Report for Buildings 5 and 7.

Summary of Reports

A. Historical Data Reports:

-Charles W. Snell, DSC, Draft Historic Structure Report, Frederick A. Roeder's Store, Bldg. No. 5,on Wager Lot No. 16, Historical Data, Harpers Ferry National Historical Park, West Virginia, April 1980.

-Charles W. Snell, DSC, Draft Historic Structure Report, White Hall Tavern, Bldg. No. 7,on Subdivisions No. 2 and No. 4 of Wager Lot No. 15, Historical Data, Harpers Ferry National Historical Park, West Virginia, April 1980.

- Kira Ramakrishna, previous lead historian HAFE (1990), updated by Patricia Chickering, current Lead Historian, HAFE, Historic Structure Report, History Section, Package 118, Buildings 5, 7, (16, and 16A), White Hall Tavern, Roeder Store, and the Roeder House and Annex, Harpers Ferry National Historical Park, West Virginia, June 1994.

In 1980 Charles Snell, DSC Historian, produced an updated draft of the historical data for Buildings 5 and 7 that was a revision of a draft that he produced in 1959. This information was compiled in an early effort to produce historic structure reports for Buildings 5 and 7. Snell's report contains historic data about the people, events and uses associated with Buildings 5 and 7 from 1757 to 1955. In 1990 Kira Ramakrishna, former Lead Historian HAFE, again updated this material for Park Development Package 118. In 1994, this information was again updated and finalized by Patricia Chickering, current Lead Historian HAFE, using the history data base created under the cooperative agreement with the University of Maryland. A copy of the 1994 version of this report is included in this Historic Structures Report. The following is a summary of this information.

Buildings 5 and 7 are located in Lower Town Harpers Ferry on the west side of Potomac Street. Building 5 is on the corner of Potomac Street and Hog Alley. Building 7 is the next structure south (toward Shenandoah Street). Both buildings are two and one-half story masonry structures and have street-fronting gable end walls.

In 1838, William B. Anderson constructed Building 7 on subdivisions 2 and 4 of Wager lot 15. The original structure served as a warehouse. In 1844, Frederick A. Roeder started leasing Wager lot 16. In 1847, Roeder purchased subdivisions 2 and 4 of Wager lot 16 which contained Building 7. Later that year, Roeder also purchased Wager lot 15 which he had been leasing. In a letter dated 1852,

Armory superintendent Huger refers to Building 7 as "a drinking house known as White-Hall".

In 1856, Frederick Roeder sold part of Wager lot 15 that fronted the alley and contained the front portion of Building 7 to the U.S. government in order to widen the existing alley to what was to become Potomac street. The front portion of Building 7 was then demolished and a new facade was constructed. The first floor of Building 5 was probably constructed at this time using the left-over stone from Building 7.

In April 1861, Mary Ann Roeder, Frederick Roeder's wife, died. On July 4, 1861, Frederick Roeder was shot accidentally by a soldier of the 9th Regiment New York Volunteer Infantry. These tragedies combined with the outbreak of the War prompted their children to flee to Maryland for safety. They returned to the area in 1862. During the Civil War, Buildings 5 and 7 were looted by townspeople and later occupied by Union troops (this is the source of the Civil War era graffiti).

In 1872, James Roeder, son of Frederick Roeder was granted a liquor license and may have operated a saloon in either building (5 or 7). Building 7 exchanged proprietors several times over the next few years. By 1881, Bridget Burleigh purchased Wager lot 16 from the Roeder heirs. In 1882 Building 7 caught fire. Damage was minimal due to quick response.

Through the turn of the century, the two structures were used on and off as taverns or saloons. In the first half of the 20th century, the structures were used on and off as dwellings or were vacant.

In 1952, both buildings were sold to the State of West Virginia. In 1953, both structures were deeded to the United States for inclusion in Harpers Ferry National Monument. Since the acquisition of the properties by the Federal Government in 1953, Buildings 5 and 7 have been part of many Park maintenance and rehabilitation projects.

B. National Register of Historic Places

The entire lower town of Harpers Ferry was entered in the National Register of Historic Places as a historic district at the inception of the National Register on October 15, 1966 (National Register reference number 66000041). The inventory / nomination form, was completed on May 7, 1981. Buildings 5 and 7 are listed as contributing to the qualities that make lower town eligible for listing in the National Register (National Register reference number 79002584). An abbreviated version of the inventory--nomination form is included in the appendices of this report.

C. Structural Analysis Report:

Jerrold E. Johnson II, PE, DSC, Harpers Ferry National Historical Park Historic Structures Report, Buildings 5 and 7, July 1993.

For the completion of the Historic Structure Report for Buildings 5 and 7 a structural analysis was completed by the Denver Service Center Eastern Team (DSC-TEA) in June, 1993, and revised in July, 1993. Jerrold E. Johnson completed the structural analysis and made several recommendations as to the treatment of buildings 5 and 7. The following is a summary of the structural analysis report.

Building 5: Main Structure:

The overall condition of Building 5 is good. No serious problems exist that would hinder the park from using the structure in the way that is described in this HSR. Certain conditions due exist however, that must be addressed before the park can occupy the structure.

The first floor steel joists are rated for 73 pounds per square foot. This is less than the allowed minimum museum loading of 100 pounds per square foot for live load requirements for public spaces as defined by both the Building Officials and Code Administrators International, Inc. (BOCA) 6-90 building code and American Society of Civil Engineers (ASCE) 7-88, the National standard for minimum design loads for buildings and other structures (new construction). The painted coating on the steel joists has begun to breakdown and some light rust is starting to appear. The joists need to be scraped, primed and painted before severe rusting begins and the strength of the joists is compromised. Both the second and third floor wooden framing structure is rated for a safe live load of 20 pounds per square foot (half of what is permitted by residential building codes for new construction). These spaces are safe for a limited number of people for short periods of time, and should not be used for continuous storage or office space. The wood roof framing is adequate for snow loads.

Although the first floor system has been rated for only 73 pounds per square foot, it has been determined more than adequate for the proposed park use as a visitor contact station. Due to the limited load capabilities of the second and third floor systems, a permanent sign will be posted stating these limitations and therefore prohibit excessive loading of these spaces.

The foundation walls and first floor exterior walls are constructed of loosely coursed rubble stone and a very soft mortar. The condition of the stone is good but the condition of the mortar is poor, in some places no pointing exists between the stones. These areas need to be repaired with a similar soft mortar and the joints finished with proper pointing. The second floor exterior walls are brick. In many locations the brick is spalling and badly deteriorating. These deteriorating bricks need to be replaced and the pointing repaired using a similar soft mortar.

Building 5 Annex:

The first floor substructure of the annex is a concrete slab on-grade with wood nail strips that support the finished floor. The second floor framing is rated at 50 pounds per square foot. The roof framing is a simple one way pitch. The current roof system is structurally capable of carrying the required snow load and dead load of the ceiling.

Walls of the annex have been extensively repaired in the past. The 1956 HABS drawings show the north wall ready to collapse. As with the main structure there are several badly deteriorating bricks, these bricks need to replaced and the pointing repaired using a similar soft mortar. An excessive amount of fill has been placed against the exterior walls. This needs to be removed to stop water from leaching through the walls.

Building 7:

The first floor steel joists are rated for 73 pounds per square foot. This is less than the allowed minimum museum loading of 100 pounds per square foot for live load requirements for public spaces as defined by both the BOCA Building Code and ASCE 7-88, the National standard for minimum design loads for buildings and other structures (new construction). The painted coating on the steel joists has begun to breakdown and some light rust is starting to appear. The joists need to be scraped, primed and painted before severe rusting begins and the strength of the joists is compromised. The second floor wood framing system is rated for a safe live load of 30 pounds per square foot. The third floor is rated for 20 pounds per square foot. Both floors are rated lower than what is permitted by residential building codes for new construction. These spaces are safe for a limited number of people for short periods of time, and should not be used for continuous storage or office space. The roof framing is adequate for snow loads.

Although the first floor system has been rated for only 73 pounds per square foot, it has been determined more than adequate for the proposed park use as an exhibition space. Do to the limited load capabilities of the second and third floor systems, a permanent sign will be posted stating these limitations and therefore prohibit excessive loading of these spaces.

The foundation walls and exterior walls are constructed of loosely coursed rubble stone and a very soft mortar. The condition of the stone is good but the condition of the mortar is poor, in some places no pointing exists between the stones. These areas need to be repaired with a similar soft mortar and the joints finished with proper pointing. Full height vertical joints are evident on the southeast and northwest walls. These are the result of a 19th century reconstruction and are not the result of a structural problem.

In the course of developing the Treatment and Use section of the HSR the above report was considered and reviewed. Not all of the recommendations made fit the current Treatment Philosophy for Buildings 5 and 7 as decided by National Capital Region and Harpers Ferry National Historical Park. In particular, the steel floor joists in Building 5 and 7 will remain intact. They will be cleaned then primed and painted to protect them from further deterioration. The intended use for both buildings will not require the 100 pounds per square foot live load rating

for new construction as prescribed by the report, therefore no additional joists will be added.

D. Hazardous Materials Report:

Jenkins Professionals, Inc., Asbestos and Radon Survey: Harpers Ferry National Historical Park Buildings 5,7,(16, 16A), Contract No.: CX-2000-1-0020, April, 1993.

Before any work could proceed on Buildings 5 and 7, hazardous materials testing had to be performed. Jenkins Professionals, Inc. was contracted by the architecture firm of Grieves, Worrall, Wright and O'Hatnick (the A/E firm hired by DSC-TEA-EAP) to perform radon and asbestos testing on Buildings 5, 7, (16 and 16A). The following is the executive summary given in the Jenkins Professionals report of the findings for Buildings 5 and 7.

On tuesday, April 13, 1993 a representative of Jenkins Professionals, Inc. (JPI) conducted an asbestos and radon survey of Buildings 5, 7, 16, and 16A located within the Harpers Ferry National Park. Mr. Peter Dessauer, Architect for the Park, accompanied the JPI representative during the collection of the asbestos samples and the placement of radon canisters.

Radon canisters, supplied by DMA-Radtech, were placed in the basements, crawlspaces, or the lowest area of each of Buildings 5, 7, 16, and 16A. Results of analysis indicate all four (4) tests were below the 4.0 picocurries per liter (pCi/L) level at which EPA recommends additional testing and evaluation.

Fourteen (14) samples of suspected asbestos-containing materials were collected and analyzed. Only one sample was identified as containing asbestos at a concentration greater than 1%. Sample number HF13-7, taken from an abandoned flue in Whitehall Tavern (Bldg. 7) on the 2nd floor showed 5-10% Chrysotile asbestos. All other samples were taken of plaster and loose insulation. During the initial inspection, the roofing materials (felt paper) were overlooked as a potential asbestos source. These materials have since been tested and proved negative for asbestos content.

E. Paint and Plaster Analysis Report:

Judith Quinn, North Atlantic Region-Cultural Resource Center-Building Conservation Branch, Interior Finishes Analysis - Buildings 5 & 7 Harpers Ferry NHP, October 1993.

In order to identify the 1850 and 1856 finishes of the first story in Buildings 5 and 7, the Denver Service Center, Falls Church Branch, (who was currently in the process of completing the Historic Structures Report for Buildings 5 and 7) commissioned North Atlantic Region (NAR), Cultural Resources Center (CRC), Building Conservation Branch (BCB) to perform a complete interior analysis for both structures. This report was published in October 1993. The following is a summary of this report.

Executive Summary

The goal of this paint analysis was to identify the circa 1852 finishes of the first story of Building 7 and the circa 1856 finishes of the first story of Building 5[2]. These dates represent the preferred restoration dates for the buildings. The identified finishes were to be color matched to the Munsell Color Notation System. In addition, the paint samples were to be tested for the presence of lead in order to address safety concerns during any removal of these finishes during construction or alterations.

The findings in the report were qualified by a disclaimer stated by the CRC researchers. The disclaimer reads as follows:

Caution:

Please note that the determination of the desired finishes was problematic due to the lack of documentation detailing the architectural evolution of the buildings, and the extensive deterioration of the buildings from a long history of environmental adversity and deferred maintenance. Of particular concern is the lack of definite dated evidence on which to pin certain finishes. All conclusions, therefore, should be accepted with flexibility and will be prefaced with qualifying language. The final decisions concerning restoration finishes should be made by the historical architect after reviewing the findings of this analysis.

Building 7:

Determining the 1852 colors for Building 7 was difficult, due the fact that the front 20 feet (east side) of the building was removed in 1856. Therefore, the bottom layer on the interior of the front wall should date to 1856. This did not however, help to identify the 1852 finishes on the other walls on the first floor (they date to c. 1838).

Building 5:

The paint analysis for Building 5 was much less complicated than for Building 7. The desired restoration finish is the original ca. 1856 finish. Despite the fact that there were several plastering campaigns in the front room, the original ca. 1856 plaster has been identified on the north and south walls. Analysis of the wood work indicates that the stair housing, stair door frame, stair door, and the south door on the west wall are original. The original finish on the plaster walls was a white lime-based paint applied directly to the plaster. The original wood work finish was a blue gray oil-based paint.

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2 Since the completion of these reports, the period of significance for Building 7 has been revised to 1856, the year which the sructure was substantially altered to its current configuration.

Results:

All the colors found in the stratigraphies for the two buildings were matched to Munsell color samples. The notations for the sample colors are in the appendix of the report. Combining the findings of this paint analysis with the Treatment Philosophy of this project, Harpers Ferry Park (HAFE), Harpers Ferry Center (HFC), Williamsport Preservation Training Center (WPTC) and National Capitol Region (NCR) decided on painting the buildings in similar color schemes. Building 5 will have neutral white walls (Munsell Color Standard N 9.5) and blue gray wood work (Munsell Color Standard 10 B 6/2). Building 7 will have exposed plaster as a finished wall surface and all wood work will be painted blue green (Munsell Color Standard 7.5 BG 8/2).

Exterior finish colors for woodwork could not be determined due to the fact that none of the existing exterior woodwork is from the historic period. Historic black and white photographs give the impression that the exterior woodwork was painted a variety of colors. This report includes current recommendations for exterior finishes.

Both structures were found to contain limited amounts of finish material which tested positive for lead. In Building 5, paint on plaster was found to be lime based containing no lead. On the woodwork, the original finish and the next five layers tested positive to the presence of lead. The final two finish layers are modern latex based paint and contain no lead. In Building 7, very little lead based paint was found in the samples. One out of twenty-three layers of paint on the plaster was found to test positive to the presence of lead. On the woodwork five layers out of a possible total of twenty-two layers, tested positive. As in Building 5 the last three layers are modern latex paint and contain no lead. For more information refer to the stratigraphies chart in the report located in the appendix of this report.

F. Condition Report for Plaster, Stucco, and Mortar:

Judith Quinn and Millan Galland, NAR-CRC-BCB, Harpers Ferry National Historical Park; Condition Report on the Plaster, Stucco and Mortar in Buildings #5,#7,(#16 and #16A), October 1993.

In order to determine the proper treatment for the deteriorating masonry and plaster in and on Buildings 5 and 7, Denver Service Center, Falls Church Branch, (who was currently in the process of completing the Historic Structures Report for Buildings 5 and 7) commissioned North Atlantic Region (NAR), Cultural Resources Center (CRC), Building Conservation Branch (BCB), to perform a complete analysis of the mortar, stucco and plaster for both structures. This report was published in October 1993. The following are sections excerpted from this report.

After examining the existing conditions concerning the plaster on and in Buildings 5 and 7 the NAR researchers made the following Recommendations and General Conservation Policy:

Executive Summary

Recommendations:

Immediate:

- -extend and redirect downspouts away from building
- -remove water from Bldg. 5 crawl space

Short-term:

- -repair/replace faulty/deteriorating flashing
- -apply backer rod and sealant at window openings
- -open windows during dry periods for ventilation

Long-term:

- -add mechanical ventilation and sump pump at Bldg. 5 and Bldg. 7 basement
- -remove Portland cement-rich stucco at Bldg. 5, replace with lime-rich stucco, scored to match Bldg. 7
- -regrade for positive slope away from building

Contingent on other conditions:

- -sidewalk/HC access rehabilitate/verify slope away from buildings
- -monitoring for railroad vibration
- -monitoring of water table
- -moisture/temperature monitoring of interior and exterior of buildings
- -installation of exhibit space etc.

Recommendations based on further study/monitoring:

- -installation of damp-proof course (or building drains)
- -coordination of work to minimize damage to surface finishes

General Conservation Policy:

- Generally, as moisture is the prime cause of deterioration to historic finishes, all attempts at correcting these attendant problems should assume the highest priority in the conservation plan for the historic plaster.

Mortar:

- Selective repointing only of eroded joints is recommended. Joints that are performing their duty should remain, especially considering the complexity of matching the composition of the historic mortar.

Stucco:

- -Complete removal only of Portland cement-rich stucco on #5 first floor.
- -Re-attachment of stucco on southeast wall of #7 to preserve remaining example of scored stone pattern.

-Other locations: removal of large areas of detached stucco, repointing of stone below maintaining minimum 5/8" space for keying of patch/replacement stucco, and patching/replacement the exterior stucco in the future.

Plaster:

First floor: An overall consolidation /stabilization program may be prohibitively costly considering the advanced stage of deterioration. Considering that very little of the surface finish remains on the first floors, the value of preserving the base coats is limited. For interpretive purposes, a representative section of solid plaster may be conserved.

Buildings 5 and 7:

Second floor and attic: A large proportion of the plaster has been damaged from previous water leaks, installation of replacement windows, removal of baseboards and trim, and building movement. Moisture laden air, wetted exterior walls and human habitation have added to the damage. In consideration of potential paint stratigraphic information and uncovered historic graffiti, it is recommended to stabilize the existing plaster. After all building envelope and structural deficiencies have been managed, a stabilization program for the plaster would involve assessing the quantity of loose and deteriorated plaster and selective reattachment of sections that are threatening to damage adjacent sound sections.

The above recommendations were taken into consideration for the development of the Architectural Program for Buildings 5 and 7. The use of passive ventilation (with possible mechanical assistance) was chosen over the recommended full HVAC system to aid in the removal of excess moisture from the structures. In addition, the Building 7 design proposal for a handicapped access ramp for the front entry has been eliminated. The ramp would have presented an added drainage / moisture problem along the northeast elevation. However, there will be handicapped access at the rear of the building.

The report also included an appendix which contained information about plaster consolidation and reattachment procedures. This information should serve well as a guide for future plaster treatment that is beyond the scope of Package 118 WPTC Day-labor construction work.

G. Civil War Graffiti Analysis:

Greg Byrne and Al Levitan, Harpers Ferry Center-Division of Conservation, Graffiti Survey Building #5, Harpers Ferry National Historical Park, October 1993.

The second and third floors of Building 5 contain Civil War era graffiti. For the completion of the Historic Structure Report (HSR) for this structure and for Park records, Harpers Ferry Park enlisted the services of Greg Byrne and Al Levitan of Harpers Ferry Center, Division of Conservation to survey the graffiti and its plaster substrate in Building 5. The project was completed in the summer of 1993 and the findings were published in October 1993. This report is included in the appendix of the HSR. The following is a summary of the report.

Due to time constraints and budget limitations the Park agreed to the following scope of work: full documentation of the graffiti in the garret (third floor) only, and to reveal graffiti in selected areas on the second floor to assess

how much graffiti was present on the second floor and how long it would take to reveal and document it.

The graffiti in the garret is obscured by a translucent layer of an unpigmented, dilute lime wash. Several methods were tested to remove this covering. From the testing, it was observed that distilled water swabbed over the graffiti would make the lime coat temporarily translucent. Therefore, for photographic documentation purposes the designated area would be swabbed with distilled water and then photographed.

For the photographic documentation the sloped ceiling of the garret was divided into 60 cm square sections and the knee wall was divided into 30 cm x 60 cm sections. Each square was given a discreet number and letter designation regardless if it contained graffiti. Each block was photographed with a 35 mm camera and ASA 400 Ektachrome slide film. For illumination, natural light and a high intensity incandescent lamp were used. Ultraviolet light was tried but did not prove successful. Each square was also transcribed onto graph paper in order to accurately record the written information in the graffiti.

The graffiti on the second floor is obscured by layers of dirt and paint. The method for removing these layers required the use of a scalpel to scrape off the overlying strata. This method, though time consuming, proved very successful.

In conclusion, the project documented the graffiti in the third floor garret and surveyed, through sample test blocks, the graffiti on the second floor of Building 5. The lime wash, and paint which covered the inscriptions have helped to preserve them by protecting the surface from soiling and light exposure. From the test blocks on the second floor, it can be assumed that the graffiti on the second floor is as widespread as in the garret. Revealing large areas will be time consuming and expensive, the estimate for revealing one square foot will require between eight and ten hours.

Recommendations for treatment are few and simple. First, preserve the historic plaster by consolidating and re-securing it to the wood lath, being sure consolidation does not prevent overlying paint from being removed. Second, develop techniques to preserve exposed graffiti. Third, only reveal graffiti bearing strata if it is to be fully documented and preserved. Fourth, provide proper environmental conditions for the preservation of the plaster and lath: provide protection from mechanical damage that may occur during construction; utilize passive ventilation to avoid over-heating the structure, which would result in the desiccation of the lath and plaster.

H. Archeology Report:

Jill Y. Halchin, Editor, HAFE, Paul Shackel, Principal Investigator, HAFE, Archeological Views of the Upper Wager Block, A Domestic and Commercial Neighborhood in Harpers Ferry, 1994.

In the summer of 1991, excavations began in the Upper Wager Block as part of Package 118. The excavations were in preparation for the renovations and new

exhibits in Park Buildings 5, 7, (16, 16A) in Lower Town Harpers Ferry. The investigation was intended to supply information about site integrity, structures, landscape, historic residents and neighborhood activities. Combined in an anthropological framework with historical research, the archeological data have been analyzed to illuminate the lifestyles of the residents. Results of these analyses should be applicable to restoration, exhibits, and other interpretation while simultaneously assisting the planning for the preservation of the remaining cultural resources. Chapters 1 through 5 of this report will be included in full as part of this HSR. The following is a brief summary of Chapters 2 through 5, (Chapter 1 is the introduction), excerpted from the introduction of the Archeology Report.

Chapter 2 of the report provides a review of this data from historic documents, photographs, and maps, that outline property ownership, lot lines, and building dates, plus information about businesses and residents. Descriptions of the stratigraphy, features, and artifacts found in the project area are described in Chapter 3. Findings from previous projects in the area are included in order to provide a comprehensive description of the area. Chapter 3 also relates field methodology used in 1991 and summarizes previous subsurface investigations. Chapter 4 interprets the stratigraphic and historical data on the cultural landscape, including views of the neighborhood during several time periods in a format that may be useful in restoration and interpretation planning. Chapter 5 presents Cummings and Pusemans technical analysis of seeds, pollen, phytoliths and other floral remains as well as parasites from three select proveniences: two privies and a backyard area. The floral, faunal and parasite interpretation provides new insight into the diet and health of residents, and probably , hotel guests and employees.

The remainder of the report consists of discussions of artifact assemblages, with an emphasis on ceramic glass from several proveniences that coincide with specific cultural units. Staff archeologists, Eric Larsen and Michael Lucas, present discussion of a 1830s-1840s hotel-era privy; backyard refuse associated with a German immigrant family and their bakery and confectionery business; two trash pits associated with nineteenth-century saloons; other trash pits and a privy used by the household and business of a saloon keeper during the late nineteenth and early twentieth century.

The final chapter includes general observations about the nature of the site and the limits of interpretation as well as specific warnings about remaining subsurface cultural resources. A review of the preceding chapters, intended to explore several research topics, brings together the findings of different types of analysis, and concludes the report.

I. Inventory / Condition and Assessment Program - Data for Buildings 5 and 7.

Prepared by: Krista Pace Copeland, HAFE Park Architect and Michael A. Jenkins Research Assistant, University of Maryland, Fall 1990.

Executive Summary

Building 5:

The Inventory / Condition Assessment Program (ICAP) for Building 5 was completed in July 1990 and is summarized as follows (the full ICAP documentation is included as an appendix to this HSR).

Significance: Building 5 was constructed by Frederick A. Roeder to replace the space lost when his building next door (Building 7) was shortened. It was used as a tavern, a store, and a warehouse, and was also occupied by the Union Army as a stable and barracks in 1861-1862.

Architectural Description: Building 5 is a two story structure with a slate gable roof. The first story is stone, the second is brick. A two story brick annex exists at the rear.

Significant Information:

- Date: 03/01/81
- Building Condition: Poor
- Management Category: A- Must be Preserved
- Maintenance Priority: 1 - High
- Occupancy Classification: Exhibit
- Treatment Type: Restoration (now preservation)
- HABS Number: WV-223
- National Register Number: 66000041

Building 7:

The Inventory / Condition Assessment Program (ICAP) for Building 7 was completed in July 1990 and is summarized as follows (the full ICAP documentation is included as an appendix to this HSR).

Significance: Building 7 was erected by William Anderson and altered by Frederick A. Roeder. It served first as a warehouse, then as "White Hall Tavern", the next known use was a stable for the Union Army during 1861-1862.

Architectural Description: Building 7 is a two story stone building with a slate gable roof.

Significant Information:

- Date: 03/01/81
- Building Condition: Poor
- Management Category: A- Must be Preserved
- Maintenance Priority: 1 - High
- Occupancy Classification: Exhibit
- Treatment Type: Restoration (now preservation)
- HABS Number: WV-156
- National Register Number: 66000041

J. List of Classified Structures

Buildings 5 and 7 have both been entered into the List of Classified Structures (LCS). The basic significant information contained in the two listings is listed below and is current through June 14, 1994.

Building 5:

- LCS Identification Number: 00546
- Structure Name 1: Bldg. # 5, Frederick A. Roeder's Store -- Lower Town
- Structure Name 2: Burleigh Store (also known as "Burleigh Tavern")

	Zone	Easting	Northing
• UTM Reference:	18	264600	43566020

- National Register Status: Entered - Documented Date: 10/15/66
- Significance: Contributing
- Management Category: A- Must be Preserved
- Period of Construction: Historic
- Date: 1856 (BU) Designer: Frederick Roeder
- Date: 1956-1963 (RR) Designer: series of small contracts
- Impact Level: Moderate
- Impact Types: Inappropriate Pres. / Rest., Neglect, Inappropriate Environment

Building 7:

- LCS Identification Number: 00621
- Structure Name 1: Bldg. # 7, White Hall Tavern -- Lower Town
- Structure Name 2: White Hall

	Zone	Easting	Northing
• UTM Reference:	18	264610	4356010

- National Register Status: Entered - Documented Date: 10/15/66
- Significance: Contributing
- Management Category: A- Must be Preserved
- Period of Construction: Historic
- Date: 1839- (BU) Designer: William Anderson
- Date: 1840-1850 (AL) Designer: 2nd-s Added, Frederick Roeder
- Date: 1856 (AL) Designer: Front Removed to Widen Alley
- Date: 1894 (AL) Designer: Add'n. of Frame Front Porch.
- Impact Level: Moderate
- Impact Types: Inappropriate Pres. / Rest., Structural Deterioration, Inappropriate Environment

K. Photographs:

Copies of historic photographs were obtained from the Harpers Ferry Park Library with the assistance of Frank Schultz DePalo and Peg Bethany. Other copies were obtained from the National Park Service Historic Photograph Collection at Harpers Ferry Center with the assistance of Tom DuRant, Curator Historic Photograph Collections. The photographs contained in this report cover the time period from 1859 to 1994. The 1990 existing conditions photographs by Krista Copeland, 1993 existing condition photographs (DSC) and 1994 existing condition photographs (WPTC) are also included in the report to document the structures prior to construction

L. Drawings

In 1956, Building 5 was documented by the Historic American Building Survey (HABS). During this documentation the structure was assigned the number WV-223. In 1959, Building 7 was documented by the Historic American Buildings Survey. During this documentation the structure was assigned the number WV-156. These drawings were updated and redrawn in 1992. The 1992 versions are referred to as the addendum to WV-223 and addendum to WV-156. Drawings for both buildings consist of floor plans, interior and exterior elevations, sections, roof plans, and details of significant features.

As part of the Williamsport Preservation Training Center project day-labor construction documents were prepared (drawing set number 385/25032, "Preservation of Buildings 5 and 7"). The final approved drawings are included in the report and contain all of the proposed changes made to the two structures. As part of the Record of Treatment section of the HSR, which will be produced after the construction process is finished, as-built construction documents will be prepared and submitted.

2. Major Research Findings

During the course of the research for the Historic Structures report for Buildings 5 and 7 few new discoveries were made. Both buildings share similar histories, being used historically as: warehouses, taverns, residences, and during the Civil War both structures were used as barracks facilities for Union soldiers. This Civil War occupation left its mark on both structures through graffiti left by soldiers who stayed in these buildings. Building 5 contains the most remarkable examples of this Civil War era graffiti as well as some rather intriguing graffiti from the twentieth century.

To further analyze this graffiti, Harpers Ferry Park enlisted the services of Harpers Ferry Center, Division of Conservation's Greg Byrne and Al Levitan to document all exposed graffiti. This study took place in the summer of 1993, and a report was released in the fall of 1993. This report contains photographs of the graffiti found in the attic or garret of Building 5. In an effort to determine the extent of Civil War era graffiti on the other floors Greg Byrne and Al Levitan revealed test patches on the walls of the second floor. The results of this proved that more graffiti existed under the subsequent layers of paint on the walls of the second floor. Building 7 has not yet been extensively examined for similar graffiti, although there is a partially obscured symbol painted on the west wall of the attic that could date to the Civil War era.

Further fabric analysis performed by North Atlantic Region revealed that large portions of the original building materials are still intact, including some original woodwork. The paint investigations showed lead paint is present in both structures.

During research for the HSR some questions have been raised as to the validity of the names given to the structures by the Park. The current names, Frederick A. Roeder Store and White Hall Tavern, are not representative of the uses of the structures during the period of significance established by the National Register Nomination (this period of significance is all of the 19th century). More research should be done to pinpoint names for the structures that are more representative of the owners and uses of the structures.

Historical research proved very helpful in determining the original room configurations for the two buildings. After the Civil War, Frederick Roeder's children sued the Federal government for rent of Buildings 5, 7, 16, and 16a, under the provisions of the Bowman Act (1902) and Tucker Act (1905)[3]. As part of the legal proceedings of this case the children gave testimony as to the value of each structure. As part of their testimonies, they gave descriptions of each building and the number of rooms in each during the Union soldiers occupation (1862-1865). This information has proven helpful in reading the ghost marks from former

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3 The documents for this case were obtained from Harpers Ferry Park Historical Research under the listing HFD-687.

partitions in the structures and provided a bases for conjecture as to the room configurations during the Civil War era.

Hazardous material analysis revealed only one sample of building fabric that contained chrysotile asbestos. This was material found in the chimney flue in Building 7. All other samples proved negative for asbestos. No recommendations were made by the research firm that identified the asbestos as to the treatment of this condition. The asbestos will be removed according to code prior to Park occupation of the structures.

Both structures were found to contain limited amounts of finish material which tested positive for lead. In Building 5, paint on plaster was found to be lime based containing no lead. On the woodwork, the original finish and the next five layers tested positive to the presence of lead. The final two finish layers are modern latex based paint and contain no lead. In Building 7, very little lead based paint was found in the samples. One out of twenty-three layers of paint on the plaster was found to test positive to the presence of lead. On the woodwork five layers out of a possible total of twenty-two layers, tested positive. As in Building 5 the last three layers are modern latex paint and contain no lead. For more information refer to the stratigraphies chart in the report located in the appendix of this report. Lead based paint will be treated according to code prior to Park occupation of the structures.

3. Major Issues Addressed in the Task Directive

The Task Directive for Park Development Package 118 states that the uses of Buildings 5 and 7 will comply with and be directed by existing planning documents. The Assessment of Alternatives for the Development Concept Plan for Harpers Ferry NHP was prepared in 1978, the Environmental Review of the Assessment of Alternatives was prepared in 1979 and the Developmental Concept Plan (DCP) was printed in 1980. These documents indicate that the first floors of the Lower Town buildings will be used for interpretation, and the upper floors will be used for offices, storage, and housing. The documents define the period of restoration for Lower Town as the entire 19th century. The specific period of significance for Buildings 5 and 7 has been defined as 1856. This the original construction date of Building 5 and the date of significant alterations to Building 7.

The Interpretive Prospectus (IP) for Harpers Ferry NHP was approved in 1980. It defines visitor uses as, for the most part, limited to the first floor with the upper floors designated for adaptive uses such as offices, quarters, and storage. Specifically, concerning Building 5, the IP states that the building "has the potential for becoming a contact point for visitors arriving by train.....if use of this transportation increases." According to the IP the historic furnishings for Building 7 will be retained: and Building 7 will continue to be used as a tavern exhibit.

Proposed Treatment:

The level of treatment for the structures will be limited to preservation. Preservation of historic structures is defined in NPS-28, Release No. 3 (1985) as:

> "Preservation shall maintain the existing form, integrity, and materials of a structure. Substantial reconstruction, restoration of lost features, or removal of accretions are not included in a preservation undertaking. Preservation includes techniques of arresting or retarding deterioration through a program of ongoing maintenance. Use of destructive techniques such as archeological excavation shall be limited to providing sufficient information for preservation."

This allows for the stabilization of the structure, establishment of weather resistant conditions, and protection and repair of historic fabric. When complete, the structure will be maintainable using accepted preservation maintenance techniques.

There is no anticipation of "major intervention" or destruction of later period accretions having some cultural value in themselves, which are treatments that apply to restoration. The building has not seen drastic modifications over the years which would alter the public understanding or impact the historic scene. It is determined, therefore, that the preservation of Buildings 5 and 7 is the appropriate treatment.

Following the above mentioned guidelines, Buildings 5 and 7 will, for the most part, be preserved. However, for the completion of Park Development

Executive Summary

Package 118, some rehabilitation work will be needed on the interior to accommodate the current proposed use of the buildings which is as follows. A visitor contact station containing orientation exhibits will be located on the first floor of Building 5, and a 19th-century tavern scene will occupy the first floor of Building 7. The basement of Building 7 and the second and third floors of both Buildings 5 and 7 will remain empty. The 1993 structural engineers report indicates that "the space is safe without modification for a limited number of people; however it must not be used for any continuous use such as for offices, or the storage of materials or equipment". Minimal heat and mechanical ventilation will be provided, although no air conditioning or plumbing will be added. In addition, the buildings will require electrical work and fire detection and security systems. Movable security barriers will be designed as part of this project for Building 7. These will be used to allow viewing of the exhibit while preventing physical visitor contact with the display.

4. Recommendations for Treatment and Use

The treatment and use of both structures is similar. The uses, although different, require similar treatment. The proposed use for Building 5 is a visitor contact station with exhibits, a ranger stationed on site periodically, with public access limited to the front room only. The proposed use for Building 7 is for a representational exhibit depicting a 19th -century tavern scene based on comparable research. The public will not enter the structure, but rather view the exhibit through outside windows and open doors (with security barriers). This exhibit will only be staffed occasionally by an interpreter or ranger.

The general program and philosophy for the treatment of the structures is preservation. In order to facilitate the proposed use of the structures the only rooms that will receive extensive treatment will be the front rooms of both structures and the rear first floor room (in the annex) of Building 5. These spaces will be used for exhibits and visitor contact.

The intent of the treatment for the exhibit spaces is to return the finishes of these spaces to the 1856 period (the period of significance). This will require that the existing historic plaster be stabilized and repaired with compatible materials as described in the Interior Finishes Analysis of Buildings 5 & 7 report given by the North Atlantic Region (NAR), Cultural Resource Center (CRC), Building Conservation Branch (BCB). This report is included in the appendix of this report. The report describes the appropriate colors for these rooms and gives Munsell notations and chemical compositions in order to properly replicate these colors. Other historic materials will be repaired or replaced.

The only major intrusion in the front room spaces will be the treatment of the non-historic floor systems in the individual structures (these floor systems were installed by the Park in 1975). In Building 5 the alterations will require the removal of the entire decking system in order to remove the rotted sections of flooring. This removal will also allow easy access to the steel joists below that must be cleaned, primed, and painted before any more deterioration due to rust occurs. When this decking is replaced there will be removable boards along the northwest and southeast walls to facilitate the cleaning of the crawl space below.

In Building 7, the floor system will remain intact and only the rotted portions will be removed and replaced. Neither floor system (Building 5 or 7) will actually come into contact with the historic plaster wall surface, but will be separated by a 2"-4" ventilation slot that will be continuous around the perimeter of the floor. Interior wood work will be repaired and/or replaced, doors will be reconstructed to replace missing units. Stairs and stair enclosures will be repaired and reconstructed where necessary. The rear door (D103) in Building 7 will be returned to its original dimensions.

The ceilings in the front rooms (RM101) of both buildings will be reconstructed using a three coat plastering method (brown coat, scratch coat, white coat) over wire lath. In the other rooms of the structures the only work to be done is repair and replacement of features to create a weather tight structure. For convenience purposes, minimal electrical service will be brought into the buildings for task lighting, exhibit use and lighting, and task heating. The final

intervention on the whole of the structures will be the installation of fire detection sensors and intrusion sensors throughout the buildings.

As mentioned previously, the intent of the treatment for the buildings is preservation for minimal intervention with an emphasis on stabilization of existing fabric. Therefore, the treatment to the rest of the structure not previously mentioned will be minimal. All exterior windows will be inspected and treated for any problems. Exterior and interior masonry will be inspected, repointed, stabilized and re-stuccoed if necessary. In an effort to improve interior environmental conditions, a passive ventilation system will be introduced in each structure. The site, especially around Building 5, will be regraded in order to provide for more adequate drainage.

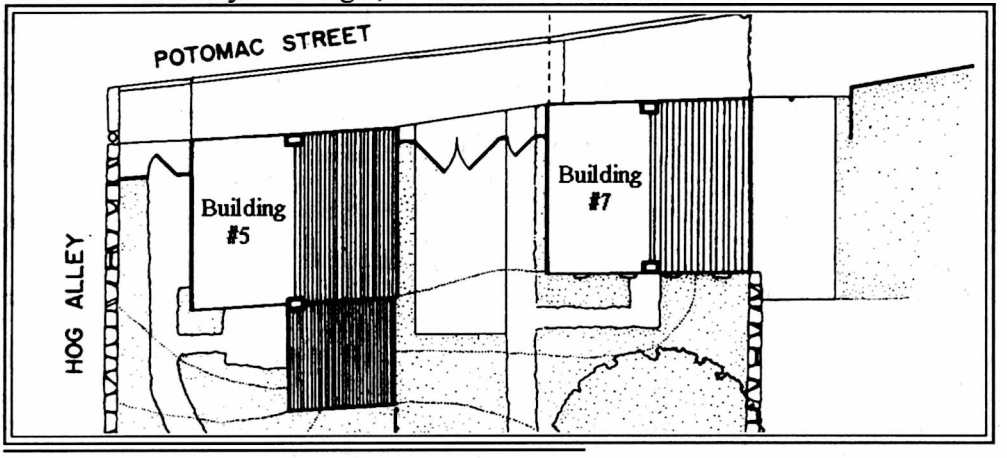
An architectural program has been developed by Williamsport Preservation Training Center in conjunction with Harpers Ferry Park and the National Capital Region. The program lists in detail the treatment of all building components and is included with this report in Part II-C. Requirements for Treatment section.

Administrative Data

A. Name, Number, and Locational Data

The Frederick A. Roeder Store, known as Building 5[4], and the White Hall Tavern, known as Building 7, are both included in Park Development Package 118 in Harpers Ferry National Historical Park. The National Park Service named Building 5 after Frederick A. Roeder, who constructed the building in 1856-57. According to historian Charles W. Snell, Building 7 was known as the White Hall Tavern at least during the 1848-1853 period. At this time the first floor contained a tavern, and according to Snell, the building "appears to have been painted white."[5]

Buildings 5 and 7 are located close to one another on Potomac Street in Lower Town Harpers Ferry. Building 5 is located on Wager lot number 16, and Building 7 straddles the boundary of subdivisions 2 and 4 of Wager lot 15[6]. The space between them was at one time filled by Building 6, which was torn down in 1956.



Site plan from 1992 HABS drawings, showing locations of Bldgs. 5 & 7, on file HAFE NHP.

4 Harpers Ferry National Historical Park designation: when the park was established, each existing building was assigned a number.

5 Charles W. Snell, Historic Structures Report, White Hall Tavern. Bldg. No. 7, on Subdivisions No. 2 and 4 of Wager Lot No. 15. Historical Data, April 1980.

6 For a description and history of the Wager lots see Charles W. Snell, Historic Structures Report, Frederick A. Roeder's Store, Bldg. No. 5, on Wager Lot No. 16, Historical Data, Harpers Ferry National; Historical Park, West Virginia , Denver Service Center, April 1980, pp. 2-9; Snell, Historic Structure Report, White Hall Tavern Bldg. No. 7, pp. 2-7; and Patricia Chickering, based on the report by Kira Ramakrishna, Historic Structure Report, History Section, Package 118, Buildings 5, 7, 16, and 16A, White Hall Tavern, the Roeder Store, and the Roeder House and Annex , Harpers Ferry National Historical Park, Harpers Ferry, West Virginia, January 1993, pp. 3-5. These reports are in the appendix.

Administrative Data

B. Treatment Philosophy and Proposed Treatment of Buildings 5 and 7

Treatment Philosophy:

The Development Concept Plan of March, 1980, called for restoring the historic structures and scene of Lower Town. It states that:

> "Greater importance will be placed on the history of Harpers Ferry during the 19th century. This will achieve a greater preservation of the Lower Town historic structures, much as they are, and avoid extensive alterations and reconstruction required to create a more limited scene as of the time of the John Brown Raid and the Civil War."
>
> "Existing restored buildings and those to be restored will be adaptively used and preserved for period interior presentation. Lower floors will be used for park interpretation with full public access. Upper floors and basements above the flood-plain will be used for park administration, storage, and residence needs."
>
> "In the Lower Town nearly all historic park structures will be part of the interpretive story as well as a backdrop for interpretative activities. The historic character will represent the 19th century and buildings will be used mainly for interpretive demonstrations, furnishings, audiovisual presentations, and exhibits."

The Interpretive Prospectus (IP) for Harpers Ferry NHP was approved in 1980. It defines visitor uses as, for the most part, limited to the first floor with the upper floors designated for adaptive uses such as offices, quarters, and storage. Specifically concerning Building 5, the IP states that the building "has potential for becoming a contact point for visitors arriving by train...if use of this form of transportation increases." According to the IP, the historic furnishings in Building 7 will be retained; Building 7 will continue to be a tavern.

The List of Classified Structures dated June 13, 1991, assigns Buildings 5 and 7 numbers 00546 and 00621, respectively, and lists the approved ultimate treatment for the structures as restoration. Inspection of the buildings by the Park Historical Architect and historical research by contract with University of Maryland which took place during 1991, determined the appropriate treatment for the building to be preservation. The definition of preservation is taken from NPS-28, Release Number 3 (1985):

> "Preservation shall maintain the existing form, integrity, and materials of a structure. Substantial reconstruction, restoration of lost features, or removal of accretions are not included in a preservation undertaking. Preservation includes techniques of arresting or retarding deterioration through a program of ongoing maintenance. Use of destructive techniques such as archeological excavation shall be limited to providing sufficient information for preservation."

This allows for the stabilization of the structure, establishment of weather resistant conditions, and protection and repair of historic fabric. When complete,

the structure will be easily maintained using accepted preservation maintenance techniques.

Proposed Treatment:

The building has not seen drastic modifications over the years which would alter the public understanding or impact the historic scene. It is determined, therefore, that the preservation of Buildings 5 and 7 is the appropriate treatment. There is no planned "major intervention" or destruction of later period accretions having some cultural value in themselves, which are treatments that apply to restoration.

Following the above mentioned guidelines, Buildings 5 and 7 will, for the most part, be preserved. However, for the completion of Park Development Package 118, some rehabilitation work will be needed on the interior to accommodate the current proposed use of the buildings which is as follows. A visitor contact station containing orientation exhibits will be located on the first floor of Building 5. In Building 7, a 19th-century tavern scene will occupy the first floor. The basement of Building 7 and the second and third floors of both Buildings 5 and 7 will remain empty. The 1993 structural engineers report indicates that "the space is safe without modification for a limited number of people; however it must not be used for any continuous use such as for offices, or the storage of materials or equipment." Minimal heat and ventilation will be provided, although no air conditioning or plumbing will be added. In addition, the buildings will require electrical work, fire detection, and security systems. Movable security barriers will be designed as part of this project for Building 7. These will be used to allow viewing of the exhibit while preventing visitor contact with the display.

Administrative Data

C. Related Studies

1. Historical Data

In 1959, historian Charles W. Snell prepared historical data reports for Buildings 5 and 7. Although these reports were updated in April 1980, they remain in draft form and were never formally published. In 1990, historian Kira Ramakrishna prepared a new history section that includes Buildings 5, 7, 16, and 16A (only 5 and 7 are included in this HSR). This document was revised in June 1994 by Patricia Chickering. Snell's historical data reports are included in the appendices of this historic structure report. Patricia Chickering's report is included in this HSR.

2. Archeological Investigations

Archeological investigations took place in 1991-1992 and the summer of 1994 the report of the findings of these excavations was completed in the fall of 1994. This report is included in the Developmental history section of this HSR.

3. Structural Analysis

In the summer of 1993 Jerrold Johnson, PE of Denver Service Center, Falls Church, Va. examined the structural stability of Buildings 5 and 7. He found the buildings to be sound. However, his findings put some limitations on the use of the structure. His report is included in the Existing Conditions section of this HSR. The calculations made to derive his conclusions are included in the appendix of this HSR.

4. Inventory Condition and Assessment Program

In the summer of 1990 Krista Pace Copeland, HAFE Historical Architect and Michael A. Jenkins, Research Historian, University of Maryland, completed inspections of Buildings 5 and 7. The data collected during this inspection was then entered into the Inventory Condition Assessment Program.

5.Historic American Buildings Survey Measured Drawings

In 1956, the Historic American Building Survey (HABS) completed existing condition drawings for Building 5. These drawings are identified as survey number WV 223. In 1959, HABS completed similar drawings for Building 7 which were identified as survey WV 156. In 1992, at the request of DSC, HABS again did field work for new existing condition drawings for both buildings. These drawings were completed in 1993. All four sets of drawings are included in the appendices of this HSR. In addition, the field notes for the 1993 HABS drawings are also included.

6. Williamsport Preservation Training Center Day-Labor Construction Drawings set number 385/80072: Preservation of Buildings 5 and 7.

In 1994, Williamsport Preservation Training Center (WPTC) developed Day Labor construction drawings in conjunction with the production of the HSR. These drawings illustrate the ultimate treatment -preservation, for both structures. The drawings will be included with "as-built" corrections in the "Treatment Record" which will follow the completion of all phases of construction.

D. Cultural Resource Data

1. National Register of Historic Places:

The entire Lower Town of Harpers Ferry was entered in the National Register of Historic Places as a historic district at the inception of the National Register on October 15, 1966 (National Register reference number 66000041). The inventory--nomination form, which was completed on May 7, 1981 to document the previously listed property, lists Buildings 5 and 7 as features contributing to the qualities that make Lower Town eligible for listing in the National Register (National Register reference number 79002584). An abbreviated version of the inventory--nomination form is included in the appendices of this report. Only that portion of the inventory--nomination form that includes a description of Buildings 5 and 7 has been included in the appendix.

2. Period of Significance:

Building 7: Although originally constructed in 1838, the structure was significantly altered in 1856. At this time, the front half of the building was removed by the United States Government for the purpose of widening the alley that was to become Potomac street. The demolition brought about the construction of a new facade for the building. The current configuration reflects the changes made during the 1856 period. Therefore, the period of significance covers 1856 to 1899.[7]

Building 5: The original construction date is 1856. Since this time the structure has not undergone any significant alterations and still retains major characteristics of this time period. Therefore, the period of significance covers 1856 to 1899.

3. Context of Significance:

Both Buildings 5 and 7 represent the qualities that make Lower Town eligible for National Register status. These structures retain significant character defining features from the period of significance. Features which play an important role in defining the character of these buildings include: their overall size, scale, and relationship to the streetscape, and contributions to the roofscape of the Lower Town and Wager Lot back yard areas. The buildings played a role in history as a back drop for the John Brown raid and were used as quarters for Union soldiers during the Civil War.

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7 The date of 1899 was chosen to comply with the end of the period of significance chosen for the Park which is all of the 19th century, according to Development Concept Plan of March, 1980.

Administrative Data

E. Recommendations for Additional Documentation

1. Documentary material (records, photographs, negatives, field notes, tapes, removed historic fabric, analysis of historic fabric, etc.) acquired during execution of this project shall become park property and accessioned into the park collection.

2. Photographic documentation of the building's exteriors and interiors is to be made prior to any major destructive investigation or construction. 8" x 10" black and white photographic prints of this documentation and their negatives shall be accessioned into the park collection. Documentation shall include each exterior and interior elevation and detail photographs of significant architectural features or historic artifacts.

3. Upon completion of construction operations two sets of the construction completion report and as-built construction drawings shall be given to the park.

4. Following construction, Maintenance Guidelines should be prepared to assist in scheduling and funding of both housekeeping and cyclical maintenance requirements. This should interface with the maintenance management system.

5. When each construction / preservation treatment phase is completed, as-built photographs should be taken as a record of work completed.

6. For scheduled preventive maintenance a full ICAP entry should be made into the Park's database (once a Park ICAP database established).

7. During research for the HSR some questions have been raised as to the validity of the names given to the structures by the Park. The current names, Frederick A. Roeder Store and White Hall Tavern, are not representative of the uses of the structures during the period of significance established by the National Register Nomination (this period of significance is all of the 19th century). More research should be done to pinpoint names for the structures that are more representative of the owners and uses of the structures.

Part 1: Developmental History

A. Historical Background and Context

The following is the Historic Structures Report History Section Buildings 5 and 7 of Development Package 118 report by Kira Ramakrishna updated by Patricia Chickering (1994) and the Archeological Views of the Upper Wager Block, A Domestic and Commercial Neighborhood in Harpers Ferry by Jill Halchin (1994)[8] and Archeological Investigations of Park Buildings 5 and 7 Package 118, Site 46JF200, Harpers Ferry National Historical Park, by Mia T Parsons. Both reports have been developed specifically for the HSR. The reproductions that follow retain their original page numbers and format. For convenience, the page numbering of the HSR will only count the introduction page of these two sections.

8 Only the first five chapters of the archeology report are part of the HSR, for more information on the findings of these investigations contact the Regional Archeologist, National Capital Region.

Historical Data

HISTORIC STRUCTURES REPORT

HISTORY SECTION

BUILDINGS 5 AND 7 OF

DEVELOPMENT PACKAGE 118

Harpers Ferry National Historical Park
Harpers Ferry, West Virginia

Based on the report by:

Kira Ramakrishna
August 1990

revised and updated by:

Patricia Chickering
August 1, 1994

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Preface

This History Section of the Historic Structures Report on Buildings 5 and 7 of Development Package 118 at Harpers Ferry National Historical Park was researched and written under a Cooperative Agreement between the National Park Service and the University of Maryland Department of History. The Cooperative Agreement, in effect since 1989, has had as primary goals creating a history database for Harpers Ferry prior to Park formation in 1953, and documenting building and property histories to support restoration, renovation, and interpretation decisions. The history database contains computerized indexes of local newspapers, local censuses and other demographic data, and pertinent property records.

Archeological and architectural investigations of the Package 118 site were conducted contemporary with Package 118 documentary research. In addition, oral history interviews with a direct descendant of Frederick Roeder, the eponymous occupant of the property until 1861, yielded valuable data.

Certain data inadequacies constrained research and tempered conclusions. Items in primary sources such as nineteenth century newspapers usually omitted specific locations as contemporary readers were familiar with sites, businesses, buildings, etc. Lack of a street numbering system in Harpers Ferry, changes in street names, alternative name spellings, and inconsistent data recording practices made census interpretation often difficult and risky. Historians found the past practice of employing juxtaposition of names in censuses to locate families at particular sites often misleading. It became clear that the census enumerator sometimes visited a <u>business</u> in Lower Town Harpers Ferry and recorded the owner's family in that sequence, although the family actually lived elsewhere. This report, therefore, interprets census data advisedly.

In summary, the following report on Package 118 draws on the body of work the Historical Research Project has been conducting under the National Park Service's Cooperative Agreement with the University of Maryland. While the History Database was a principal information source, various National Archives Record Groups, Library of Congress materials, and collections of regional public and private libraries, museums and historical associations also supplied data. Additionally, oral history interviews, as well as donated photographs, letters, and other memorabilia contributed significantly to this report. The Library of historical materials at Harpers Ferry National Historical Park has been a valuable reference source.

Acknowledgements

Dennis Frye, Park Chief Historian, has overseen the project from the beginning, guiding research, critiquing writing, giving logistical support, and providing liaison with Harpers Ferry National Historical Park offices and National Park Service offices and facilities.

Research benefitted from enthusiastic and constructive cooperation and comment of the park archaeology staff, particularly Paul Shackel and former park archeologist Jill Halchin. Former park architect Krista Copeland; Carol Petravage of the Furnishings Division, Interpretive Design Center, Harpers Ferry Center; as well as Maureen Joseph and Perry Carpenter Wheelock of the Historic Landscape Project, were generous in sharing information and expertise. The project is indebted to Vernon Smith, who retired in 1993 from Denver Service Center, Falls Church Virginia office, for locating the Roeder descendants. Park Architect Peter Dessauer kept historians informed as the project progressed from research to design and construction, and on the study made by Harpers Ferry Center Division of Conservation of graffiti in Building 5. The current report reflects a mutually beneficial dialogue during 1994 with Tom Vitanza and Mike Seibert of Williamsport Preservation Training Center. Michael A. Jenkins, Assistant Lead Historian of the Historical Research Project, provided invaluable assistance in all aspects of research and writing, and especially in his expertise in managing the data base, working magic with recording equipment, and mastering the computer systems.

I. PROJECT DESCRIPTION

This report updates and supplements Historical Data reports on Buildings 5 and 7 at Harpers Ferry National Historical Park written in 1980 by former Park Supervisory Historian Charles W. Snell. The buildings, which predate the Civil War, stand on the 'Wager Reservation,' land which John Wager retained when he sold his Harpers Ferry property to the U. S. Government in 1794 for establishment of an armory.[1]

II. OWNERSHIP OF THE PROPERTY

Wager Lot 15, Subdivisions 2 and 4 - Site of Building 7

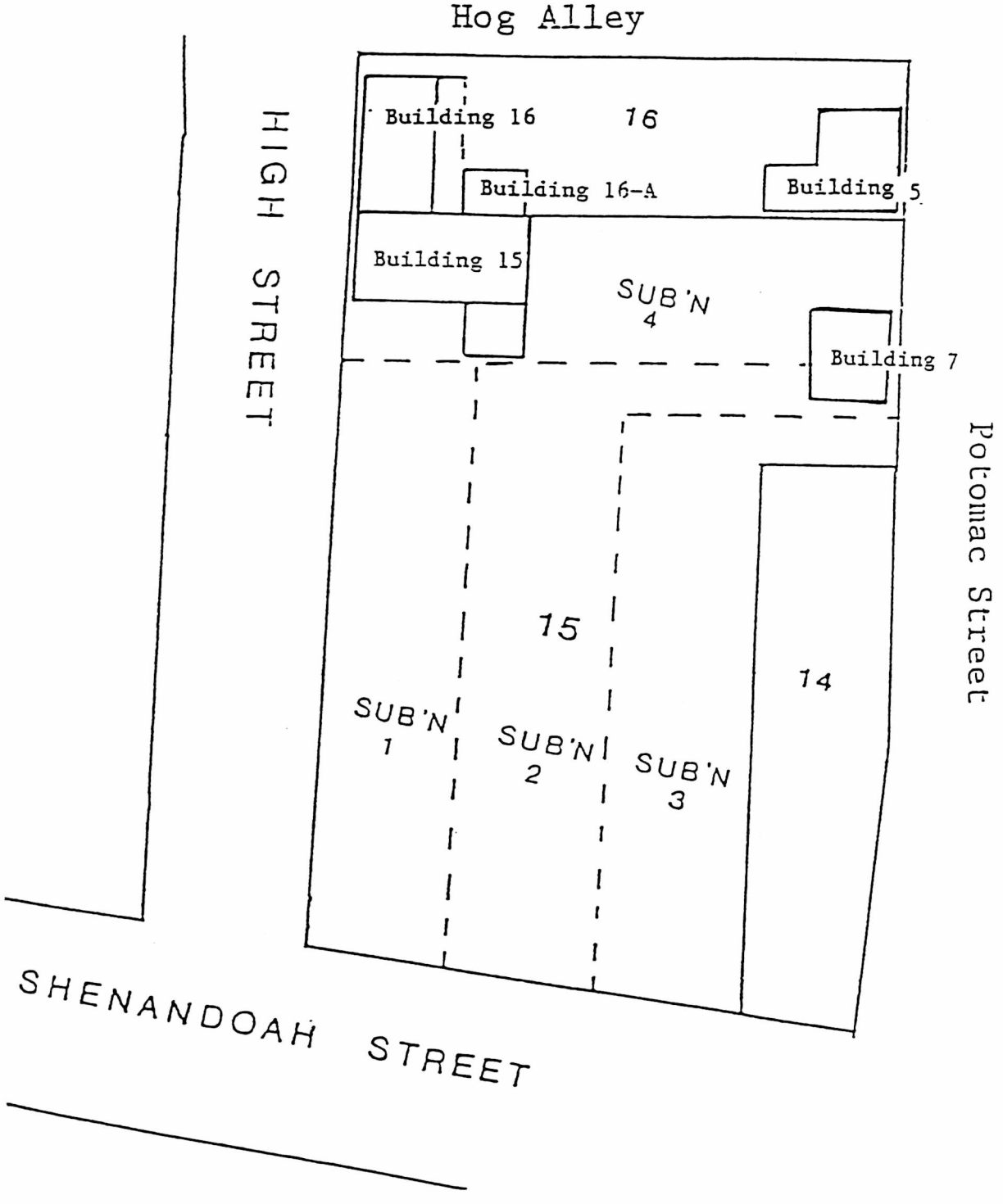
In the 1830s a complex set of court actions, precipitated by James B. Wager's bankruptcy, necessitated the division of Wager family holdings for distribution among heirs. The 'old tavern lot' of the Wager Six-Acre Reservation became Lot 15. Bounded on the south by Shenandoah Street, 'L'-shaped Lot 15 faced the U. S. Arsenal. High Street formed its western boundary, and the northern leg of the 'L' ran back to Potomac Street. Commissioners attempted to sell the property alloted to James B. Wager, including Lot 15. When that large lot did not sell, they subdivided it into four parcels--Subdivisions 1, 2, 3, and 4.[2]

High Street forms the west boundary of Wager Lot 15, Subdivision 4. The

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[1]Charles W. Snell, "Historic Structure Report. Frederick A. Roeder's Store, Bldg. No. 5 on Wager Lot 16. Historic Data," April 1980;
Charles W. Snell, "Historic Structures Report. White Hall Tavern. Building No. 7 on Subdivisions No. 2 and No. 4 of Wager Lot 15. Historical Data," April 1980.

[2]Snell, Bldg. No. 7 Report, Pages 3-5;
Please see schematic site map following Page 1. The not-to-scale map was adapted from a tracing (Doc. No. NM-HF 3076) done in 1957 by Park Architect A. W. Franzen from the 1835 plat of Wager lots; original in JCC Deed Book No. 29, Page 140;
For consistency, this report considers that High and Shenandoah Streets in Lower Town Harpers Ferry form a north/south, east/west grid, with Shenandoah Street running west from the Potomac River, and High Street running south to the Shenandoah river. Potomac Street, which parallels High Street in Lower Town, therefore runs north/south.


Hog Alley
HIGH STREET
Building 16
16
Building 16-A
Building 5
Building 15
SUB'N 4
Building 7
Potomac Street
15
14
SUB'N 1
SUB'N 2
SUB'N 3
SHENANDOAH STREET

NOT TO SCALE

lot runs parallel with Wager Lot 16 (on the north) and Subdivisions 1 and 2 of Wager Lot 15 (on the south) to what is now Potomac Street. On its High Street front the lot houses Building 15 and on most of its Potomac Street front eventually stood Building 6 (built in the 1890s), a frame structure which was removed by the Park in 1956. Wager Lot 15, Subdivision 2, is 'L'-shaped, with one 'leg' fronting 30 feet on Shenandoah Street, and running north to the boundary of Subdivision 4, and the other 'leg' paralleling Subdivision 4 east to Potomac Street. Building 7 straddles the boundary between Subdivisions 2 and 4.

William Anderson, a prominent local merchant, bought Subdivisions 2 and 4 of Wager Lot 15 at auction in October 1837, with the deed dated February 8, 1841. Anderson divided the property in 1847, selling Frederick Roeder the 24 by 40 foot portion fronting on an alley which later became Potomac Street. At the time that portion of the lot held Building 7, a warehouse.[3]

In 1856, Roeder sold some of the Potomac Street frontage and the part of Building 7 it held to the United States. The U. S. subsequently removed its portion of the building in order to widen the 'alley' (Potomac Street). Roeder, and later his heirs, retained the reduced Building 7 and its lot until 1874 when they conveyed it to Charles L. Hopwood. Hopwood sold the property to Alexander Murphy in March 1879, who in turn sold it to George R. Marquette in July of the same year. Marquette held the property until about 1913 when he sold it by unrecorded deed to T. M. Conner. After Conner died intestate on February 26, 1920, his estate passed to his many legal heirs. His widow Laura Y. Conner bought the partial interests of the other Conner heirs to acquire sole interest

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[3](Note: All deeds referenced are located in the Jefferson County Courthouse, Charles Town, West Virginia)
Deed Book 24, Page 457, Deed of Bargain and Sale, Andrew Kennedy and Joseph T. Daugherty to William Anderson, February 8, 1841;
Deed Book 29, Page 240, Deed of Bargain and Sale, William and Sarah Anderson to Frederick Augustus Roeder, November 2, 1847.

in the property, and she sold it to Harry Rockenbaugh in 1928. At Rockenbaugh's death (date unknown), the property passed to his sole heir, Aldridge T. Rockenbaugh, who sold it to Luke Loveless in 1941. Loveless conveyed the property to the State of West Virginia in 1952.[4]

Wager Lot 16 - Site of Park Building 5

Wager Lot 16 lies at the corner of High Street and Hog Alley. Like adjoining Wager Lot 15, Subdivision 4, Lot 16 fronts on High Street and runs back to Potomac Street. In the 1835 division of the Wager heirs' holdings, the property was allotted to Noah H. and Sarah A. Wager Swayne who leased it from 1837 to 1847. In September 1847 they sold the property to Frederick A. Roeder, the leaseholder at the time.[5]

Roeder, and subsequently his heirs, retained ownership of the property until 1881 when they sold it to Bridget Burleigh. The property remained in the

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[4]Deed Book 35, Page 299, Deed of Bargain and Sale, Frederick A. and Anna Maria Roeder to the United States, February 13, 1856;
Deed Book B, Page 153, Deed of Bargain and Sale, John J. and Mary R. Kern, Matilda E., James R., Mary C., A.H., and Margaret A. Roeder, and David T. and Amelia A. Shewbridge to Charles L. Hopwood, May 12, 1874;
Deed Book G, Page 221, Deed of Bargain and Sale, Charles L. and Charlotte R. Hopwood to Alexander Murphy, March 15, 1879;
Deed Book N, Page 237, Deed of Bargain and Sale, Alexander and Mary Murphy to George R. Marquette, July 15, 1879;
Deed Book 147, Page 371, Deed of Bargain and Sale, Laura Y. Conner to Harry Rockenbaugh, March 28, 1928. The deed specifies that the property conveyed is the same purchased by T.M. Conner from George R. Marquette about 1913 and that the deed is unrecorded;
Deed Book 154, Page 535, Deed of Bargain and Sale, Aldridge T. Rockenbaugh to Luke Loveless, July 28, 1941;
Deed Book 190, Page 242, Quit Claim, Cornelius M. and Mary E. Marquette and Daisy M. Shaw to the State of West Virginia, October 7, 1952;
Deed Book 190, Page 318, Deed of Bargain and Sale, Luke Loveless to the State of West Virginia, December 1, 1952.

[5]Deed Book 22, Page 340, Lease, Noah H. and Sarah A. Swayne to John G. Wilson, September 7, 1837;
Deed Book 27, Page 103, Agreement, John G. Wilson to Noah H. and Sarah A. Swayne, January 29, 1844 (Wilson surrenders the lease on this lot);
Deed Book 27, Page 102, Lease, Noah H. and Sarah A. Swayne to Frederick Augustus Roeder, January 29, 1844;
Deed Book 29, Page 303, Deed of Bargain and Sale, Noah H. and Sarah A. Swayne to Frederick A. Roeder, September 13, 1847.

Burleigh family until sale to the State of West Virginia in 1952.[6]

III. HISTORICAL DATA SECTION

Construction of Buildings 5, and 7

In November 1837, the aforementioned William Anderson, a prominent Harpers Ferry citizen and local merchant, solicited bids from carpenters and masons to build "two stone houses, each 30 by 40 feet, with cellars one of them to be one, and the other two stories high-- all to be covered in slate." Historian Snell believed one of these buildings was Building 7. It was built atop the boundary of Wager Lot 15, Subdivisions 2 and 4, and fronted on the alley which became Potomac Street. Snell postulated that Anderson built Building 7 in 1838-1839 for use as a warehouse.[7]

In 1847 Frederick Roeder purchased the "warehouse building," Building 7, from William Anderson and Wager Lots 16 and 17 from Wager heirs Noah and Sarah Swayne. Roeder, a confectioner and baker, and his wife came to Harpers Ferry from Germany in the early 1840s. 1850 was the first census in which the Roeder (spelled "Roder" in the Census) family appeared at Harpers Ferry. The head of household, Frederick A. Roder (41) born in Germany, was listed as a confectioner. Also in the household were Mary A. Roder (31) born in Germany; followed by Mary L. Roder (7), Matilda Roder (5), Augustus H. Roder (3), and James R. Roder (1), all born in Virginia. The Roeder household in the 1860 census consisted of

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[6]Deed Book I, Page 74, Deed of Bargain and Sale. Jacob and Louisa Kerns to Bridget Burley, December 24, 1880. Grantors are heirs of Frederick Roeder;
(note: there are several variations in spelling of "Burleigh")
Deed Book I, Page 104, Deed of Bargain and Sale. Frederick Roeder heirs to Bridget Burley, January 25, 1881;
Deed Book 190, Page 508, Deed of Bargain and Sale. Mary D. Burleigh to the State of West Virginia, December 12, 1952.

[7]Virginia Free Press. November 16, 1837. Page 3, Col. 4;
Snell, "White Hall," Page 1.

Frederick Roeder (50), from Saxony, a confectioner; his wife Anna (39), also from Saxony; and seven children born in Virginia: Mary L. (17), Matilda E. (15), Augustus H. (13), James A. (11), Emma A. (8), Albert T. (3), and Julia A. (1). According to the Spirit of Jefferson, Roeder "accumulated considerable property and wealth in the baking business," which he operated on his Wager Lot 16 property. Wager Lot 16 eventually held park Buildings 16, 16A, and 5.[8]

A letter dated July 17, 1852, from Armory Superintendent Benjamin Huger to Col. Henry H. Craig of the Ordnance Department, describes Building 7 as a "two story stone building," leading historian Snell to suggest that Roeder added a second story and attic to the structure sometime between the 1847 purchase date and 1852. No evidence has been found, however, to show the building was not originally constructed as a two-story structure despite Anderson's initial intent, or that Anderson himself did not add the second story before selling the property to Roeder.[9]

On February 13, 1856, Roeder sold 25 feet of the Potomac Street front of the Building 7 property, including the portion of Building 7 standing thereon, to the United States. Six months prior to the sale Armory Superintendent H. W. Clowe wrote to Col. Craig of the Ordnance Department explaining the transaction, and describing the "improvements" as "a two Story Stone House, occupied now as a Dwelling and Warehouse, and formerly as a Drinking house, known as the "White Hall." The United States demolished the part of the building bought from Roeder

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[8]Seventh Census (1859), Page 411B of Harpers Ferry;
Eighth Census (1860), Page 193 of Harpers Ferry;
Spirit of Jefferson. March 2, 1920. Page 5, Col. 4.

[9]Spirit of Jefferson. March 2, 1920, Page 5, Col. 4;
Deed Book 29, Page 303, Deed of Bargain and Sale, Noah H. and Sarah A. Swayne to Frederick A. Roeder, September 13, 1847;
Deed Book 29, Page 240, Deed of Bargain and Sale, William and Sarah Anderson to Frederick Augustus Roeder, November 2, 1847;
Snell, "Bldg. No. 7," Pages 10-11.

in order to widen the alley which became Potomac Street north of Shenandoah Street. Roeder then gave Building 7 a new facade, which brought it to its present dimensions.[10]

Armory correspondence reveals Roeder received $700 for the land he sold the government, but requested an additional $1000 to "replace" the demolished part of his building. Historian Snell contends Roeder used the $1000 to erect Building 5 on Wager Lot 16, as the area of Building 5 is approximates the space lost by the partial demolition of Building 7, and the facades of Buildings 5 and 7 are nearly identical. Snell, therefore, hypothesizes Building 5 was built at the same time Building 7 was given its new front, probably shortly after the 1856 property sale to the United States.[11]

Building 7 apparently had served as a saloon prior to its remodeling. The 1855 letter previously cited from Armory Superintendent Clowe to Colonel Craig of the Ordnance Department, and an 1852 letter from Armory Superintendent Huger to Colonel Craig, both identify the property as "a drinking house known as White-Hall." As the tavern was located opposite the armory yard it was convenient for armory workers. It may have served railroad passengers, but travellers were more likely drawn to the more substantial hotels, eating houses and saloons on the Wager Ferry Lot or on Shenandoah Street, nearer the depot.[12]

Pre-Civil War Saloon, Hotel and Eating House Trade

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[10]Deed Book 35, Page 299, Deed of Bargain and Sale, Frederick A. and Anna Marie Roeder to the United States, February 13, 1856;
Reel 25, Vol. 8, Clowe to Craig, July 24, 1855, Pages 748, 749.

[11]Charles W. Snell, "Historic Structure Report. Frederick A. Roeder's Store, Bldg. No. 5 on Wager Lot 16. Historic Data," April 1980, Pages 10-13.

[12]Reel 26, Vol. 4, Huger to Craig, July 21, 1852, Page 331;
Reel 25, Vol. 8, Clowe to Craig, July 25, 1855, Page 748.

A poem in the May 10, 1811, *Farmers Repository*, extolling the "delicate Tavern which Williamson keeps" is the earliest newspaper record found of a tavern at Harpers Ferry. The 'Williamson' is likely Basil Williamson, who began keeping a public house at Harpers Ferry in the first decade of the nineteenth century, probably at the northeast corner of Shenandoah and High streets.[13]

That corner was known as the 'Tavern Stand' for the subsequent three or four decades. In 1824 Catherine Wager advertised the 'Harpers Ferry Hotel,' likely the same structure Basil Williamson had leased at $640 a year, for rent. The corner continued to house a hotel until the late 1830s.[14]

The hotel business boomed at Harpers Ferry during the 1830s and 1840s, a time when turnpike, canal and railroad converged at the junction of the two rivers, making the town a transportation hub, and accommodation for travellers a necessity. In 1830 Major James Stephenson, a former United States Congressman, entertained distinguished guests in present park building 45 after relinquishing proprietorship of the Harpers Ferry Hotel to Capt. Merriwether Thompson; James Fitzsimmons operated the 'Globe Inn' on Block C, Lot 1 from 1832 to 1835, and advertised accommodation for "private families travelling"; and beginning in 1834 Fontaine Beckham and his mother-in-law, Major Stephenson's widow, succeeded Capt. Thompson at the Harpers Ferry Hotel. John Wilson built a hotel, operated

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[13]Farmers Repository. May 10, 1811. Page 3, Col. 3;
Reel 13, Volume 11, Pages 148, 149, 150, Lloyd Beall to Hon'ble William H. Crawford, February 13, 1816. This letter is part of correspondence surrounding Basil Williamson's application for permission to build a tavern on public land adjacent to the house built by Joseph Annin on present Block B. Williamson had left the property he kept as a "tavern at this place about twelve years" because it lacked sufficient accommodation for travellers. Apparently Williamson intended erecting a large tavern on the Block B property, but permission was withdrawn.

[14]Charles W. Snell, "Historic Building Report for Buildings 10 and 10A. John C. Unseld Buildings," May 28, 1958, Pages 9, 10;
Virginia Free Press. July 24, 1834. Page 3, Col. 4.

initally by Isabella Fitzsimmons, on Wager Lot 13 in 1838.[15]

Proximity to the B&O Railroad depot made the lower town region an obvious choice for businesses of this nature. Historian Snell's "Ferry Lot Studies" reveals six hotels, eating houses, and saloons on Potomac Street south of Shenandoah Street alone, between 1838 and 1862. There is little documentation of saloons, likely operated to accommodate armory workers, on Potomac Street above Shenandoah Street during that period.[16]

The U. S. Hotel, also known as the Wager House Hotel, located on Wager Lots 6, 7, and 8, was built by Gerard B. Wager in 1837 and operated until 1862, when Federal troops burned it. John A. Gibson erected the Gault House Saloon on a lot south of the Winchester and Potomac Railroad tracks in 1840-1841. Different proprietors operated it as a saloon until Federal troops burned it in 1862. The National Hotel, also known as the Virginia Hotel and the Virginia House, located on Wager Lot 5, was built by Samuel Gibson in 1834. Various proprietors operated that hotel until its destruction by Federal troops in 1862. Jas. H. Hayman kept a tavern and eating house at the junction of Potomac and Shenandoah Streets from 1838 to 1839. After Hayman moved out, these buildings housed various retail stores.[17]

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[15]Virginia Free Press. June 24, 1829. Page 4, Col. 4;
Ibid. April 7, 1830. Page 3, Col. 5;
Ibid. May 19, 1830. Page 3, Col. 1.;
Ibid. August 25, 1830. Page 3, Col. 2;
Ibid. April 5, 1832. Page 3, Col. 1;
Ibid. May 16, 1833. Page 2, Col. 6;
Ibid. July 24, 1834. Page 3, Col. 4;
Ibid. March 24, 1836. Page 3, Col. 5; This advertisement for the sale of James B. Wager's real estate contains the phrase "known as a hotel for the last 30 years" in reference to the High & Shenandoah streets corner property;
Ibid. July 12, 1838. Page 3, Col. 5.

[16]Charles W. Snell, "Historic Building Site Survey Report for Wager Lot No. 9, the Potomac Restaurant or Western Exchange Hotel, and the Stone House--Dr. Joseph E. Clagett's Drug Store, Ferry Lot Studies," September 5, 1958.

[17]Charles W. Snell, "Business Enterprises and Commercial Development of Harpers Ferry Lower Town Area, 1803-1861," April 9, 1973, Pages 45-46, Page 75;
Charles W. Snell, "Historic Study of Wager Lot No. 13, 1837-1856. Wager Six Acre Reservation Series," September 25, 1958, Pages 5, 13-15;

Buildings 5 and 7 during the Civil War

The Civil War devastated Harpers Ferry, economically, culturally, socially, and physically. The war's effect on the Roeder family was dramatic. In April 1861 Mary Ann Roeder died, and on July 4 that year Frederick Roeder (a loyal Unionist) was killed by a sniper. Within the month, troops occupied the town. Roeder's daughter Mary Louise, and her husband John Kern (also referred to as J.J. Kern and Jacob Kern), took the orphaned Roeder children and fled to Maryland.[18]

With the Kern and Roeder families gone, Buildings 5 and 7 were looted by soldiers and townspeople. Early in the War the military, possibly both Union and Confederate, occupied the property. During February and March 1862 Building 16 was headquarters for Colonel Baxter of the 72nd Pennsylvania Regiment (the Philadelphia Fire Zouaves), and extensive graffiti shows the Fire Zouaves also used Building 5.[19]

In March 1862 the Kerns and Roeders returned to the Harpers Ferry area. Evidence of military occupation of the Roeder property emerged from testimony in post-war claim for damages, including a statement from Mary Louise Roeder Kern that trooops had continued to hold Buildings 5 and 7 on and off until the end of the war.[20]

Post-Civil War Use of Buildings 5 and 7

Snell, "Business Enterprises," Page 52, Pages 59-60.

[18]Snell, "Buildings 16 and 16A," April 1980, Page 40.

[19]Frederick H. Dyer, A Compendium of the War of the Rebellion, Dayton Ohio: The National Historical Society in cooperation with the Press of Morningside Bookshop, 1979, Page 1759;
Greg Byrne and Alan Levitan, "Graffiti Survey, Bldg. #5, Harpers Ferry National Historical Park," Harpers Ferry Center, Division of Conservation, October 1993.

[20]National Archives RG 123 Claim File JC-11802, Roeder Claim, HFD-

Although scant documentation exists on utilization of Building 5 and 7 in the immediate post-Civil War years, photographs and maps show they served as restaurants and saloons for a considerable time in the late nineteenth century (as did park Building 6, a two-story frame structure which stood between Buildings 5 and 7). Notes accompanying the Harpers Ferry National Historical Park architectural base map indicate that Building 6 was built by C. L. Hopwood between 1895 and 1897, but the 1894 Sanborn Map shows a building standing on its site. The structure does not appear in Photograph HF-57 dated 1890-91, suggesting it was erected between 1890 and 1894 (all photographs referenced are included in Appendix III). No other information has been found relating to Building 6, which the Park Service removed in 1957.

Buildings 5, 6, and 7 represented a part of the local hotel, saloon and restaurant business which was slowly rebuilding itself in Lower Town after the Civil War. In 1881, George W. Green, who had been operating the Mountain View Hotel for several years, broke ground for a new hotel on the old Arsenal lot, at the junction of Shenandoah and south Potomac Streets. By 1889 that hotel had become the Hotel Connor; it remained a local landmark for nearly 50 years. Nearby was the Potomac House Hotel. During the 50 year period restaurants were operated by Wm. E. Herrell, John A. Stuart, Julius Tryman, Johanna E. Edwards, Wm. Jackson and Leo O'Beirne, and perhaps others. Appendix IV, a digest of local hotels, saloons and restaurants, identifies holders of the many liquor licenses issued for saloons in the town.[21]

Specific information documenting the uses of Buildings 5 and 7 in the post-Civil War period follows, arranged chronologically:

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[21]Spirit of Jefferson. June 7, 1881. Page 3, Col. 1; Ibid. July 30, 1889. Page 3, Col. 1.

Building 5

1872 -- James Roeder, son of Frederick Roeder, was granted a liquor license, and may have operated a saloon in Building 5 or 7.[22]

1885 -- Thomas J. Burleigh was granted a liquor license for the first time, possibly opening his saloon in Building 5. The newspapers document Burleigh was issued a license each year until 1892 with the exception of 1886.[23]

1891 -- A liquor license was issued to George Longerbeam "in the Burleigh building." Randall's Business Directory for 1892-93, indicates Longerbeam was in Building 5. In 1891, Longerbeam took over Burleigh's business and Burleigh was refunded money for his license for the year, less the two months he was open. Longerbeam was issued licenses until 1895.[24]

1894 -- Sanborn fire insurance map shows Building 5 as a saloon.

1899 -- Burleigh's name does not appear among the names of those who were issued licenses in this year. However, an item in the August 22 Spirit of Jefferson relates Burleigh shot "notorious rough" William "man-eater" Smith at Island Park after Smith had thrown a stone into Burleigh's saloon, attempting to hit Burleigh in the head. Thus it appears Burleigh

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[22]Ibid. May 8, 1872. Page 3, Col. 2.

[23]Ibid. May 12, 1885. Page 3, Col. 3;
Ibid. May 12, 1885. Page 3, Col. 3;
Virginia Free Press. May 16, 1887. Page 2, Col. 4;
Ibid. May 17, 1888. Page 3, Col. 2;
Spirit of Jefferson. June 4, 1889. Page 2, Col. 2;
Ibid. May 14, 1890. Page 3, Col. 2;
Ibid. May 12, 1891. Page 3, Col. 2;
Lack of newspaper notice of a liquor license for Burleigh does not preclude his having been issued one.

[24]Ibid. November 11, 1891. Page 3, Col. 3;
Randall's Business Directory of Winchester, Berryville, and Front Royal, VA, Charlestown and Harper's Ferry, W.VA 1892-'93, John C. Randall, Martinsburg, W. Va., 1892;
Spirit of Jefferson. May 15, 1894. Page 3, Col. 3;
Ibid. May 14, 1895. Page 3, Col. 3;
Information taken from Harpers Ferry Town Council minutes, August 6, 1891.

had returned to the saloon business by 1899, although the location of his saloon is not specified. Announcements of licenses issued to Burleigh appear in 1903, 1905, 1906, and 1907. The Sanborn fire insurance maps indicate Building 5 was being used as a saloon in 1902 and 1907, probably run by Burleigh, but perhaps leased out to someone else.[25]

1902 -- Sanborn fire insurance map shows Building 5 as a saloon.

1907 -- Sanborn fire insurance map shows Building 5 as a saloon.

1910 -- T.J. Burleigh was issued a license to sell liquor "at White-Hall." Why Burleigh would be in business in White-Hall (Building 7) when he owned Building 5 is unclear, although it is possible he rented his own building out at this time. There also may have been some confusion between the buildings, as they were so close to each other and were nearly identical.[26]

1911 -- Burleigh was granted a liquor license on May 2, 1911, but on June 6, 1911, the Jefferson County Court voted the county dry. "Three saloons and a beer depot" in Harpers Ferry were closed.[27]

1912 -- Sanborn fire insurance map shows Building 5 vacant.

In 1912 Burleigh was issued a liquor license, but all licenses in the county were rescinded shortly thereafter due to strong opposition by supporters of prohibition. The 1912 Sanborn map indicates that Building 5 was vacant.[28]

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[25]Spirit of Jefferson. August 22, 1899. Page 2, Col. 1;
Ibid. April 21, 1903. Page 2, Col. 1;
Ibid. April 4, 1905. Page 2, Col. 1;
Ibid. April 3, 1906. Page 3, Col. 2;
Ibid. March 5, 1907. Page 3, Col. 1.

[26]Ibid. May 17, 1910. Page 2, Col. 7-8.

[27]Ibid. May 2, 1911. Page 2, Col. 1;
Virginia Free Press. June 8, 1911. Page 4, Col. 2.

[28]Spirit of Jefferson. June 25, 1912. Page 2, Col. 4.

Licenses were again granted in 1913, despite popular outcry. Although Burleigh received a license in 1913, a B&O railroad map dated the same year shows Building 5 in use as a dwelling (the map is included in Appendix II). It is possible, however, that the map may have been drawn in 1912. In 1914, the state of West Virginia voted for Prohibition and Building 5 never again housed a saloon. Its uses in subsequent years are unknown and it may have remained unoccupied. Mrs. Isabel Kern Flanagan, a descendant of Frederick Roeder, recalled that she and her friend Catharine Burleigh (daughter of Thomas), sneaked in the building and found it an abandoned saloon (see Appendix V). Their adventure probably occurred about 1920.[29]

Thomas Burleigh had long been involved in local politics, and after the enactment of Prohibition, apparently turned his entire focus to civic affairs. When he died in December 13, 1932, the Spirit of Jefferson noted Burleigh had, in addition to participating in various political and community activities, served as mayor of Harpers Ferry for more than thirty-five years and as president of the Bank of Harpers Ferry for twelve years.[30]

No information has been found indicating any type of business established in Building 5 after 1911. The 1922 and 1933 Sanborn maps indicated that Building 5 was vacant. When the State of West Virginia purchased the property from Mary D. Burleigh in 1952, the building had apparently been vacant for quite some time and was badly deteriorated.[31]

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[29]Virginia Free Press. November 16, 1913. Page 2, Col. 2;
Oral history interview conducted August 20, 1992, with Mrs. Isabel Kern Flanagan, great-granddaughter of Frederick A. Roeder. Cassette tape recording and transcript in library, Harpers Ferry National Historical Park. Partial transcript in Appendix V of this report.

[30]Spirit of Jefferson. December 14, 1932. Page 1, Col. 3.

[31]Taken from information accompanying the Park architectural base map.

Building 7

1872 -- James Roeder, son of Frederick Roeder, was granted a liquor license, and may have operated a saloon in Building 5 or 7.[32]

1873 -- The Kern/Roeder family sold the property to Charles L. Hopwood who was listed on the 1870 census as a grocer. It is possible Hopwood operated a grocery in Building 7.

1879 -- Building 7 was sold twice: first from Hopwood to Alexander Murphy in March, then from Murphy to George R. Marquette in July. Marquette apparently leased out the building (see next item).[33]

1882 -- Newspapers relate the Potomac Street saloon of J. H. Renner in the building owned by Mr. Marquette caught fire, but swift action by citizens prevented loss of the property. As far as can be discerned, Marquette owned no other property on Potomac Street. Investigation of Building 7 by Park Architect Krista Pace Copeland in June 1990 revealed some blackening of rafters, perhaps the result of a fire. An account in the February 17, 1880, Spirit of Jefferson documents that, prior to occupying Marquette's building, Renner was proprietor of an oyster saloon in the basement of the Valley House hotel (on Shenandoah Street).[34]

1890-91 -- Photograph HF-57 in the Park library shows Building 7 with the words "oysters and lunches" (?) painted across the facade, indicating the building housed a restaurant. J. H. Renner perhaps operated this

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[32]Spirit of Jefferson. May 8, 1872. Page 3, Col. 2.

[33]Deed Book G, Page 221, Deed of Bargain and Sale, Hopwood and Roeder Heirs to Alexander Murphy, March 15, 1879; Deed Book N, Page 237, Deed of Bargain and Sale, Murphy to Marquette, July 15, 1879.

[34]Spirit of Jefferson. February 17, 1880. Page 3, Col. 1. This item concerns a fire in the basement of the Valley House Hotel and is unrelated to the 1882 fire cited;
Ibid. May 9, 1882. Page 3, Col. 1;
Virginia Free Press. May 13, 1882. Page 3, Col. 3.

establishment.

1894 -- Sanborn fire insurance map shows Building 7 as a saloon.

1902 -- Sanborn fire insurance map shows Building 7 as a saloon.

1904 -- Photograph HF-329 in the Park Library dated c.1904 shows a sign reading "SALOON" hanging on the facade of the Building 7. The proprietor of this saloon is unknown.

1907 -- The 1907 Sanborn fire insurance map shows Building 7 as a restaurant.

1910 -- T. J. Burleigh was issued a license to sell liquor "at White-Hall." Why Burleigh would keep business in White-Hall when he owned Building 5 is unclear, although it is possible he rented his own building out at this time. There also may have been some confusion between the buildings, as they were nearly adjacent and almost identical.[35]

1912 -- The 1912 Sanborn map indicates "hay and feed" as the function of Building 7. This may have been a feed shop or simply storage--perhaps for Alex Murphy, whose stable stood next door on Wager Lot 15, Subdivision 3.[36]

1913 -- The 1913 B&O Railroad map shows Building 7 as a dwelling.

1917 -- The Farmers Advocate noted that "Uncle" Jimmy Small had moved his paint shop and appurtenances to White Hall on "The Bowery" and that, having been troubled with asthma he expected to soon leave for the Soldier's Home in Richmond. James N. "Jimmy" Small was a veteran of Stonewall's Brigade, and from the turn of the century on was well known around Jefferson

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[35]Spirit of Jefferson. May 17, 1910. Page 2, Cols. 7 & 8.

[36]Deed Book N, Page 281, Deed of Bargain and Sale, Special Commissioner George Baylor to Alexander Murphy, December 10, 1884.

County, especially for his talents as a sign painter.[37]

1922 -- Sanborn fire insurance map shows Building 7 in use as a store. At this time it was owned by T. M. Conner, proprietor of the large hotel complex at the corner of Shenandoah and Potomac Streets. Conner apparently rented out the property after purchasing it from George Marquette in 1913, but no information regarding its function during the years of his ownership has been found.

1928 -- Harry Rockenbaugh bought the property from Laura Y. Connor. He was formerly a partner in the poolroom and saloon of the late Leo O'Beirne, grocer and well-known Harpers Ferry citizen. Exactly who occupied Building 7 in 1933 is unknown.[38]

1933 -- Sanborn fire insurance map shows Building 7 as a dwelling.

1941 -- Aldridge T. Rockenbaugh, Harry Rockenbaugh's sole heir, granted the building to Luke Loveless, who in turn sold it to the State of West Virginia in 1952. Like Building 5, Building 7 had apparently been vacant for some time, suffering serious flood damage and deterioration from neglect.[39]

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[37]Farmers Advocate. November 24, 1917. Page 2, Col. 3. The item is the only reference found to "The Bowery," apparently a local term for the lower Potomac Street area.

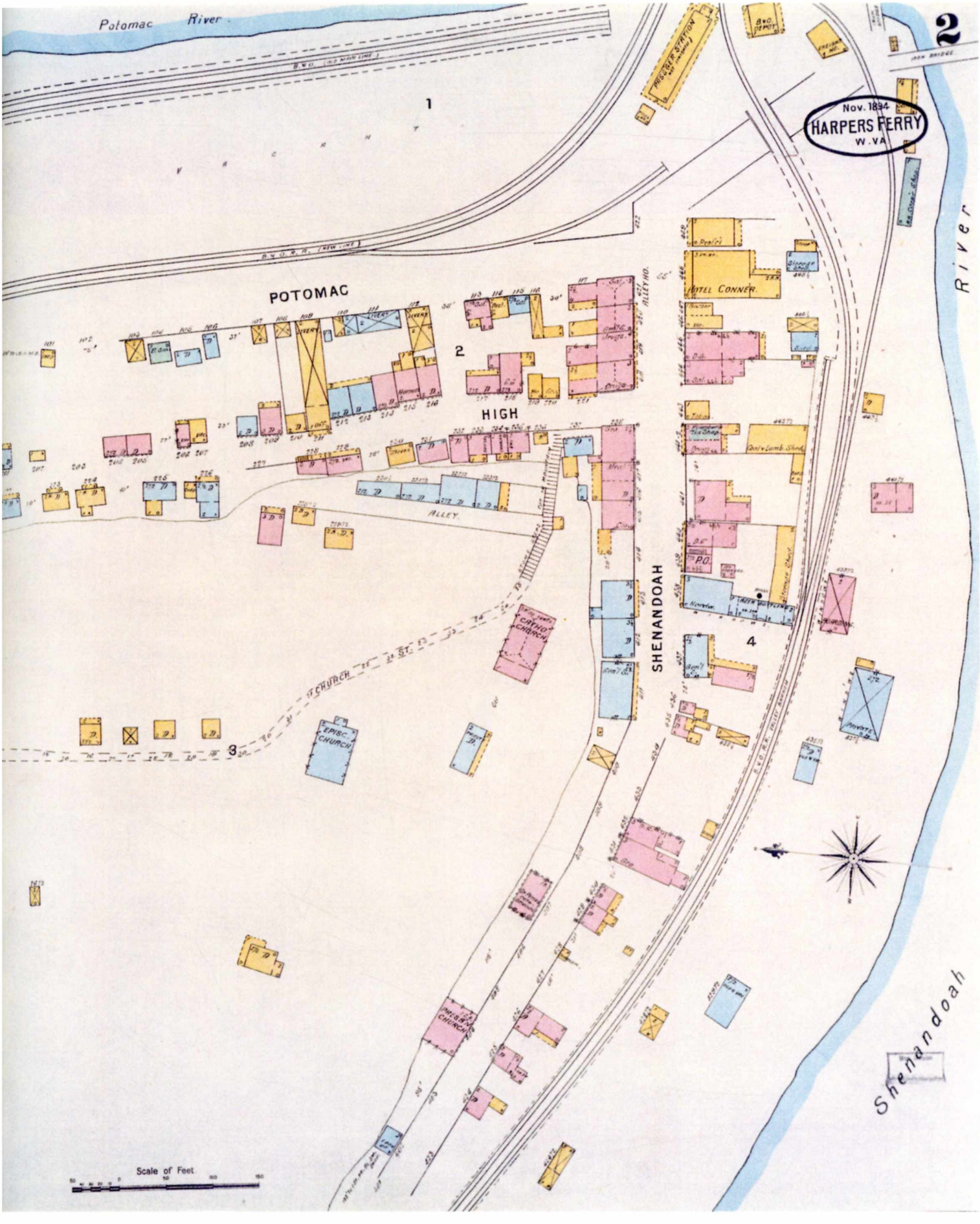
[38]Deed Book 147, Page 371, Deed of Bargain and Sale. Laura Y. Conner to Harry Rockenbaugh, March 28, 1928.

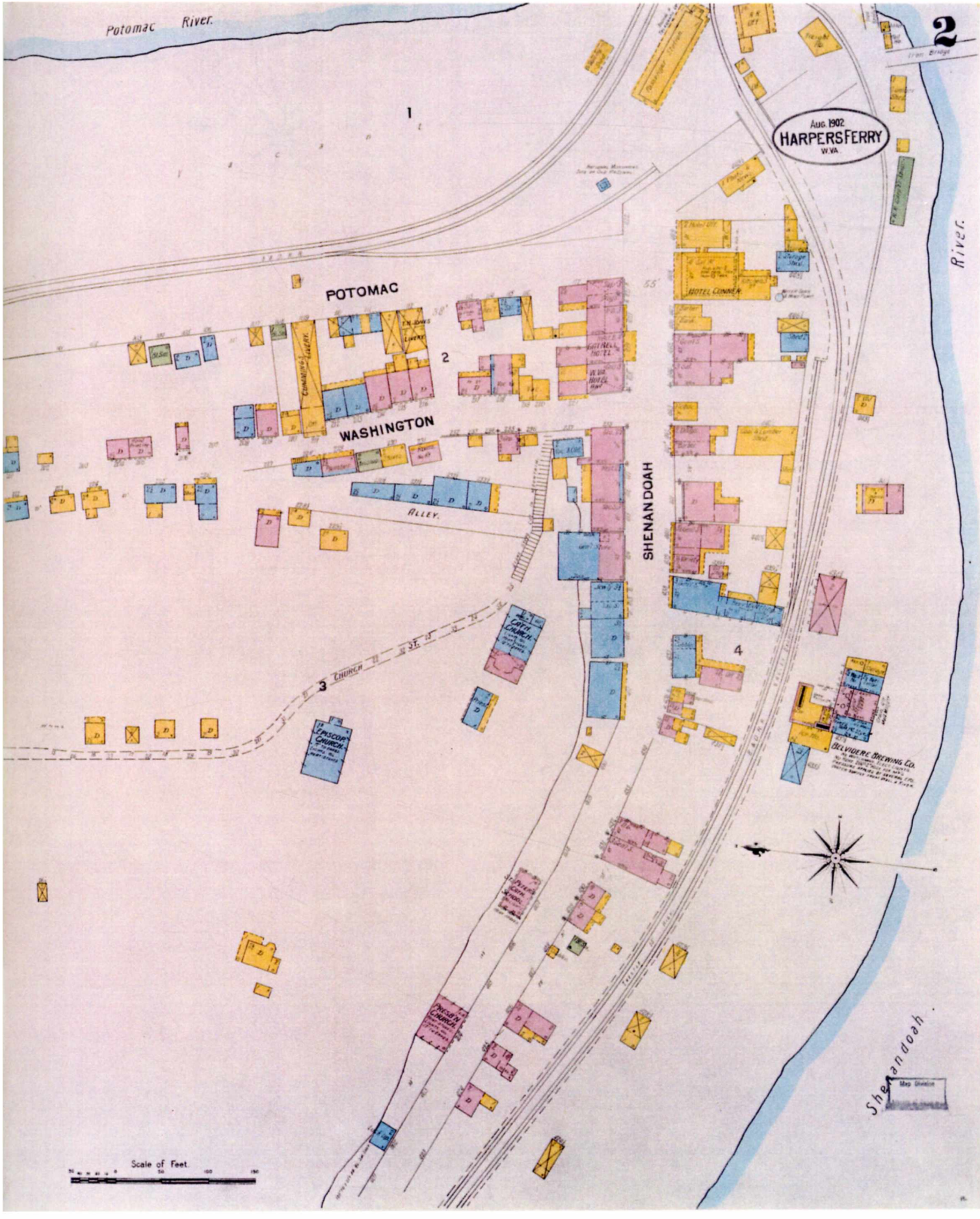
[39]Deed Book 147, Page 371. July 28, 1941;
Deed Book 190, Page 318. December 1, 1952.

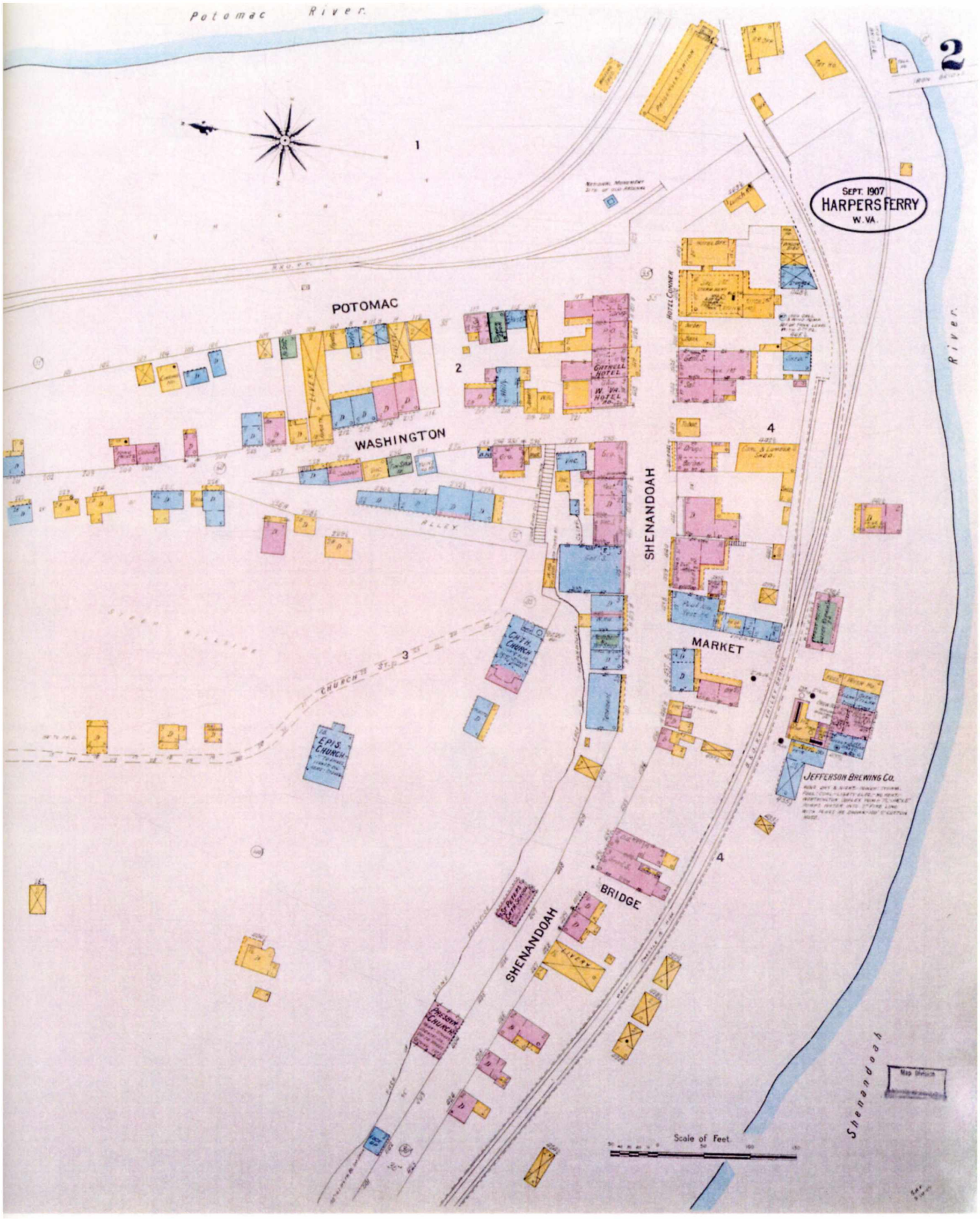
APPENDIX I

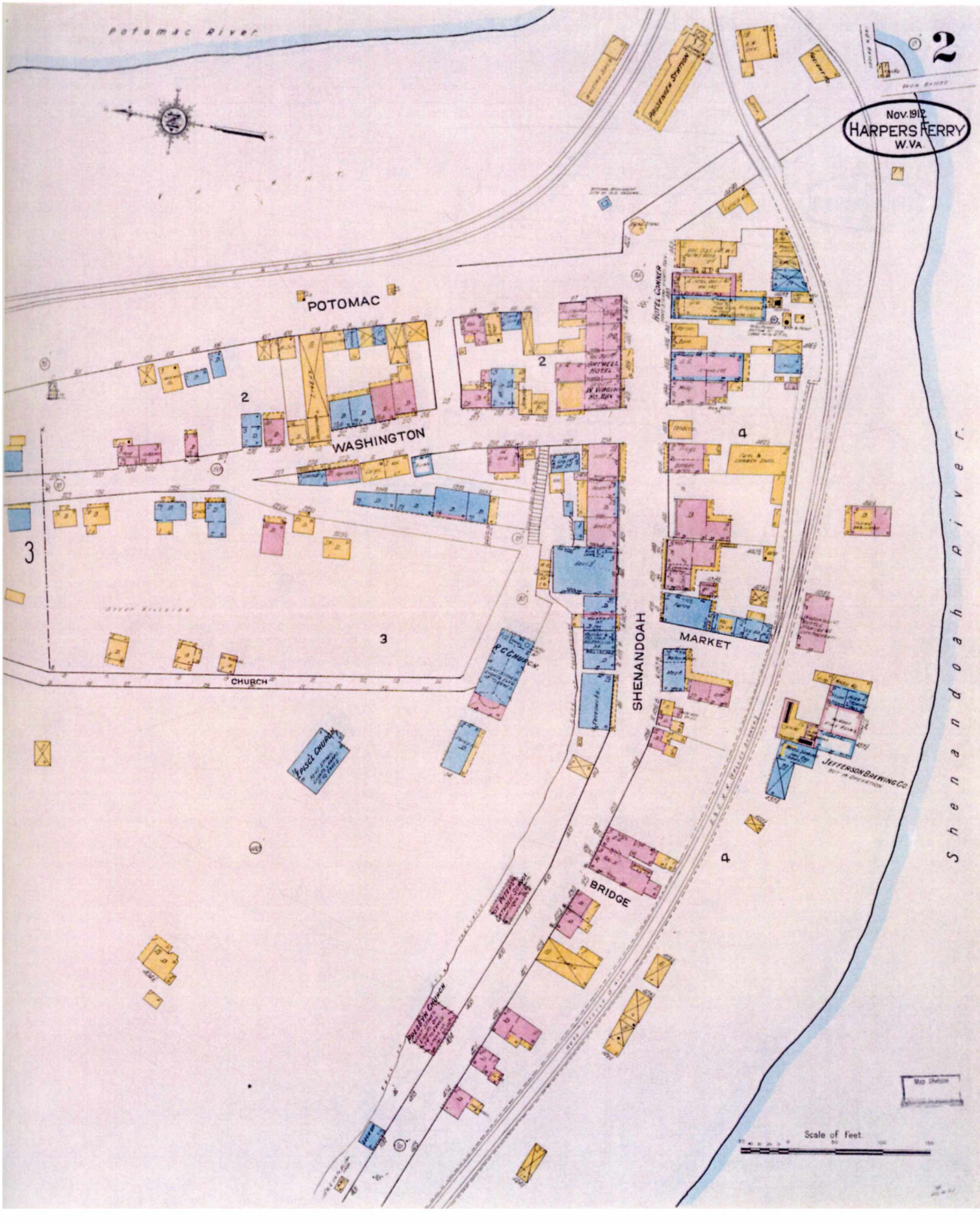
SANBORN FIRE INSURANCE MAPS

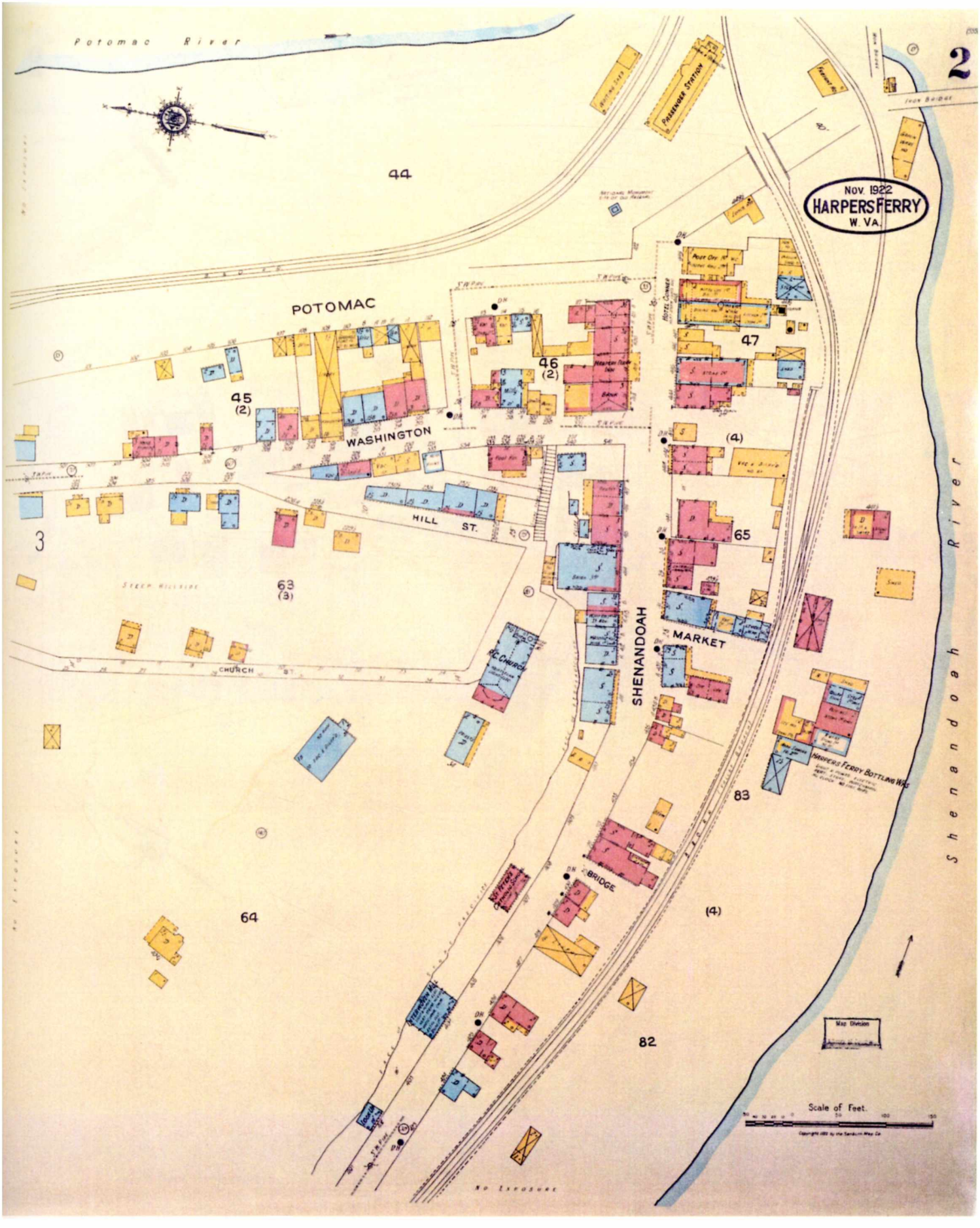
1894, 1902, 1907, 1912, 1922, 1933

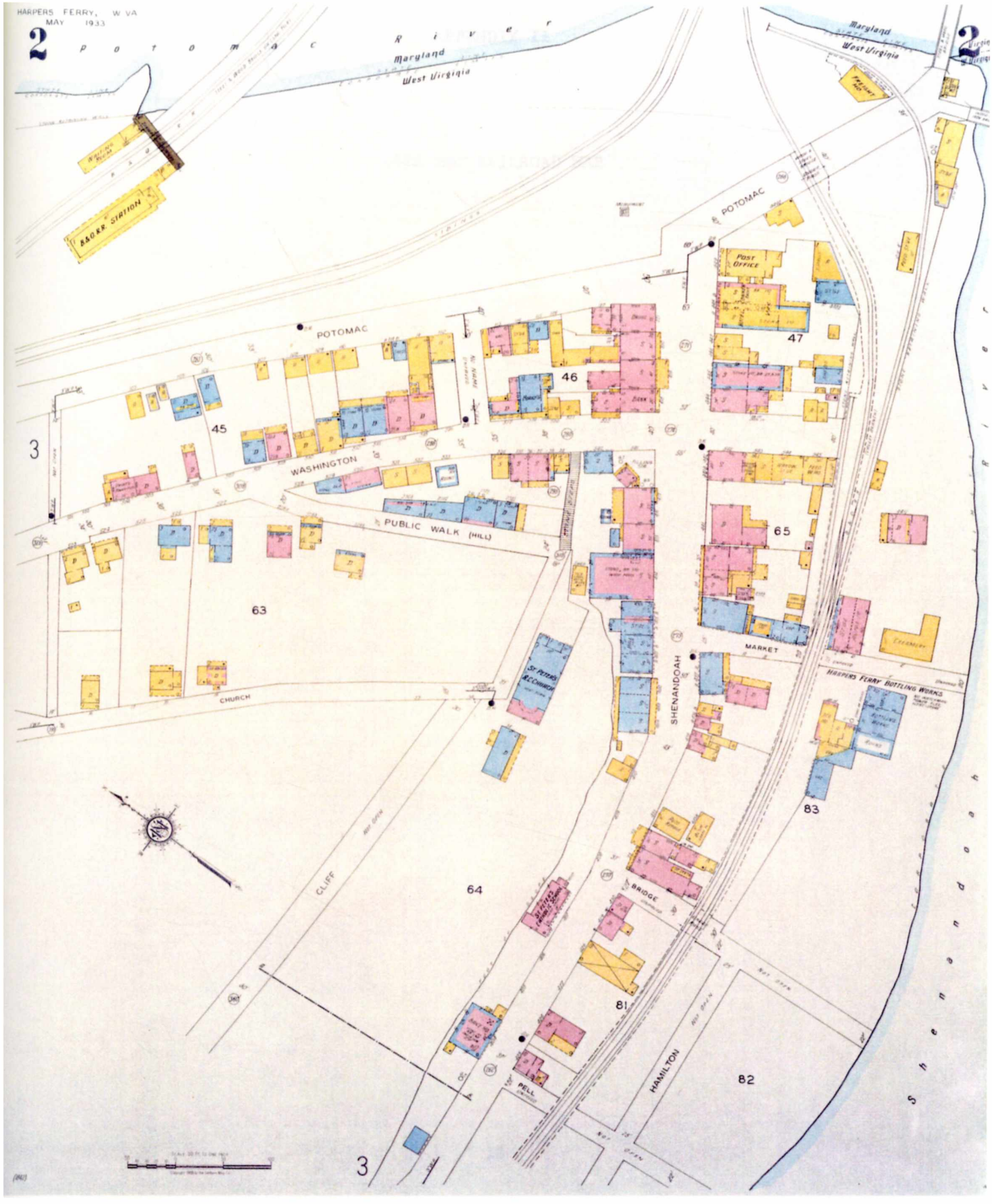

Potomac River
2
Nov. 1894
HARPERS FERRY
W. VA.
POTOMAC
HIGH
SHENANDOAH
HOTEL CONNER
ALLEY
P.O.
CATHO. CHURCH
EPISC. CHURCH
PRESBYN. CHURCH
Shenandoah River
Scale of Feet


Potomac River.
2
Aug. 1902
HARPERS FERRY
W.VA.
1
POTOMAC
2
WASHINGTON
ALLEY.
SHENANDOAH
River.
HOTEL CONNER
4
3
CHURCH
BELVIDERE BREWING CO.
Shenandoah
Scale of Feet.


Potomac River.
2
SEPT. 1907
HARPERS FERRY
W. VA.
POTOMAC
WASHINGTON
ALLEY
CHURCH ST.
CATH. CHURCH
EPIS. CHURCH
PRESBYN. CHURCH
SHENANDOAH
MARKET
BRIDGE
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CATHELL HOTEL
W. VA. HOTEL
JEFFERSON BREWING CO.
Shenandoah River.
Scale of Feet.
Map Sketch

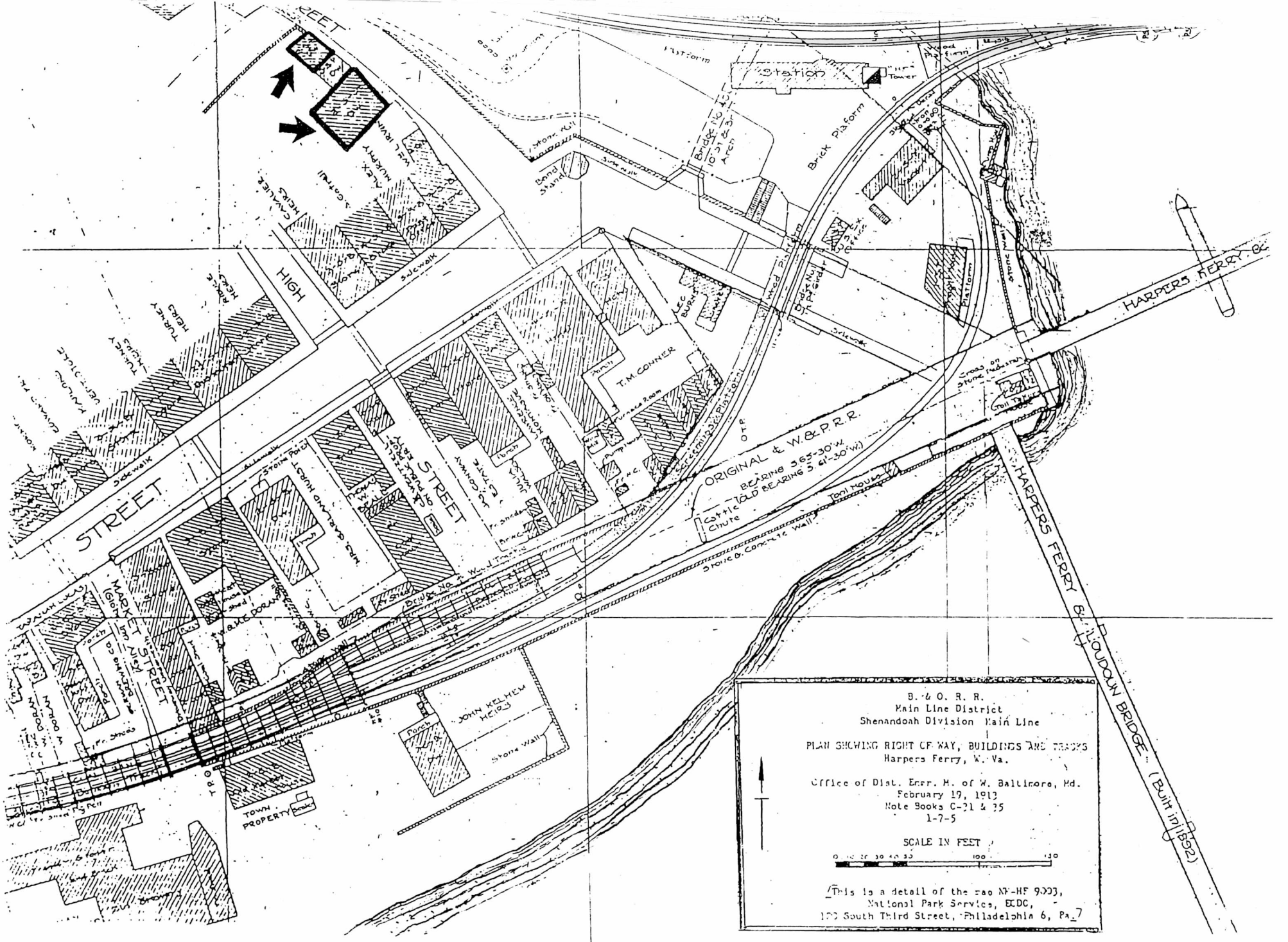

Potomac River
2
Nov. 1912
HARPERS FERRY
W. Va.
POTOMAC
WASHINGTON
CHURCH
MARKET
SHENANDOAH
BRIDGE
Shenandoah River
Scale of Feet


Potomac River
2
Nov. 1922
HARPERS FERRY
W. VA.
POTOMAC
WASHINGTON
HILL ST.
CHURCH ST.
MARKET
SHENANDOAH
R.C. CHURCH
PASSENGER STATION
IRON BRIDGE
BRIDGE
HARPERS FERRY BOTTLING WKS
Shenandoah River
Scale of Feet.
No Exposure
44
45
(2)
46
(2)
47
(4)
65
63
(3)
64
(4)
83
82
3


HARPERS FERRY, W VA
MAY 1933
2
Potomac River
Maryland
West Virginia
BAGGAGE STATION
POTOMAC
POST OFFICE
47
46
45
3
WASHINGTON
PUBLIC WALK (HILL)
63
65
MARKET
CHURCH
ST. PETERS R.C. CHURCH
SHENANDOAH
HARPERS FERRY BOTTLING WORKS
83
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CLIFF
BRIDGE
81
HAMILTON
82
PELL
Shenandoah River

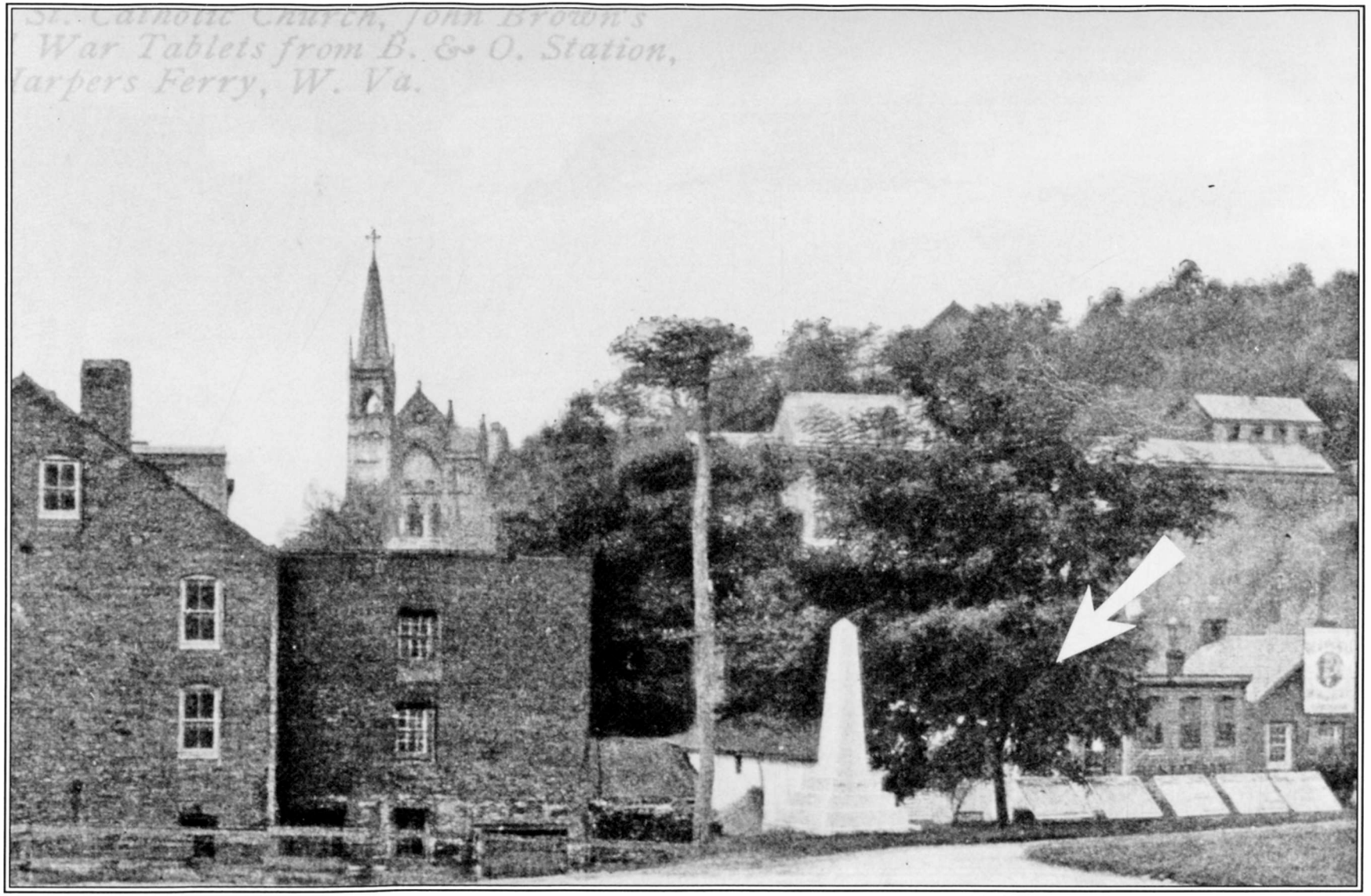
APPENDIX II

1913 B&O RAILROAD MAP

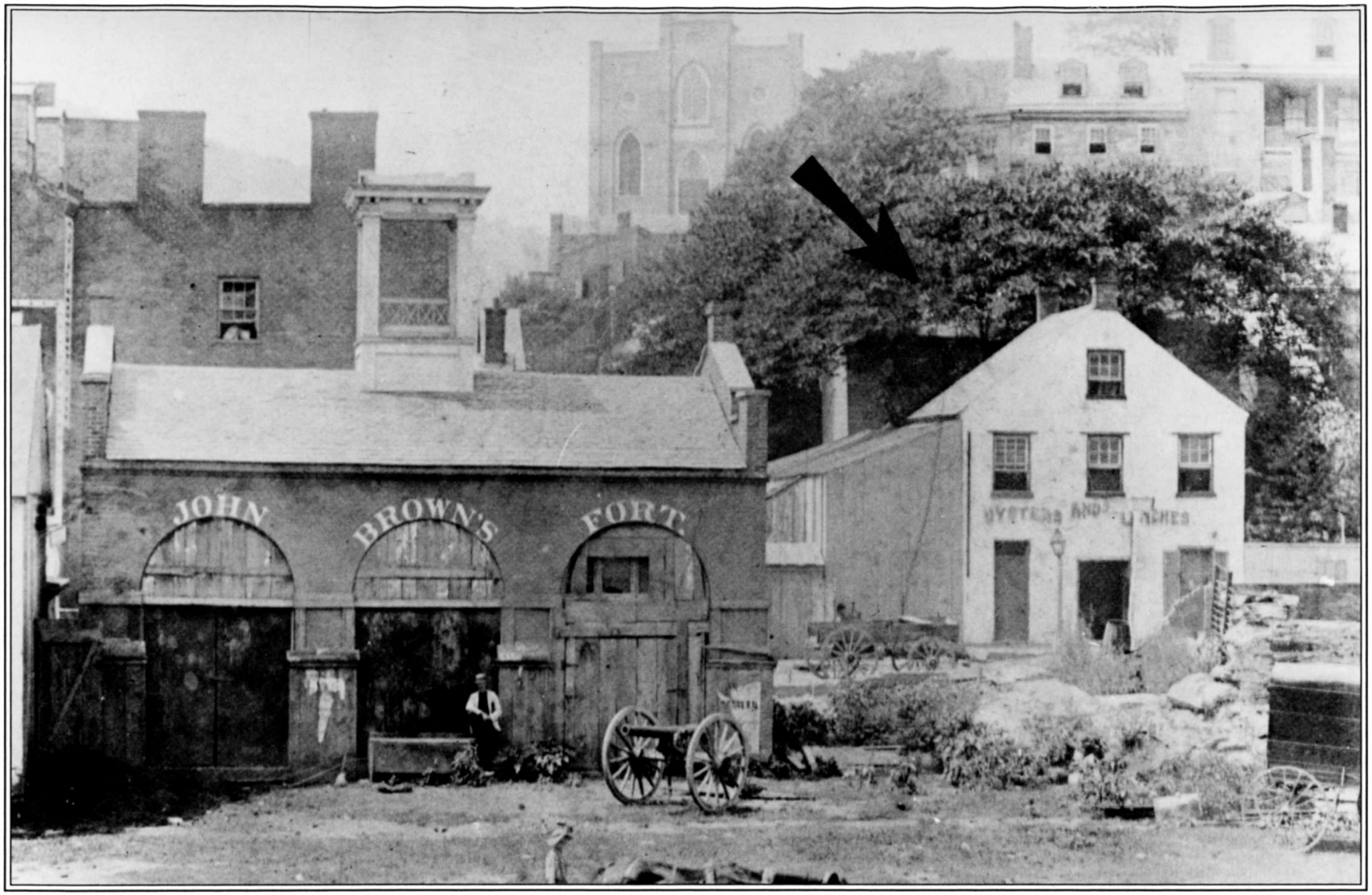

B. & O. R. R.
Main Line District
Shenandoah Division Main Line
PLAN SHOWING RIGHT OF WAY, BUILDINGS AND TRACKS
Harpers Ferry, W. Va.
Office of Dist. Engr. M. of W. Baltimore, Md.
February 19, 1913
Note Books C-31 & 35
1-7-5
SCALE IN FEET
0 10 20 30 40 50 100 150
This is a detail of the rao MY-HF 9.003,
National Park Service, EODC,
100 South Third Street, Philadelphia 6, Pa.
ORIGINAL & W. & P. R. R.
BEARING S 65°-30' W.
OLD BEARING S. 61°-30' W.
HARPERS FERRY & LOUDOUN BRIDGE (BUILT IN 1858)
HARPERS FERRY &
STREET
HIGH
MARKET STREET
Station
Brick Platform
Wood Platform
Bridge No. 10 31 & 32 Arch
Band Stand
Stone Wall
Cattle Chute
Tool House
Stone & Concrete Wall
Stone Arch
Bridge No. 1
Bridge No. 2
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APPENDIX III

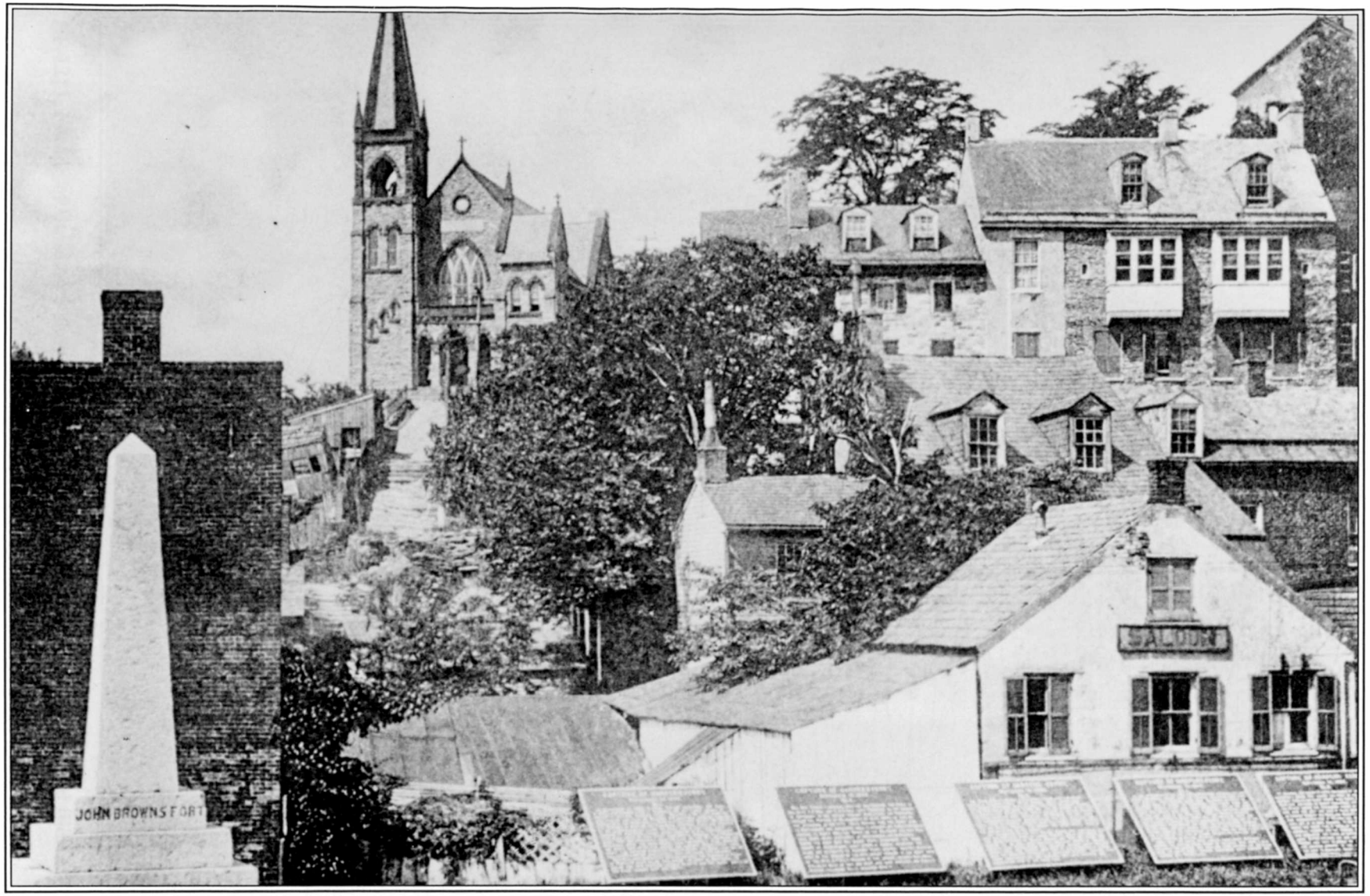
PHOTOGRAPHS



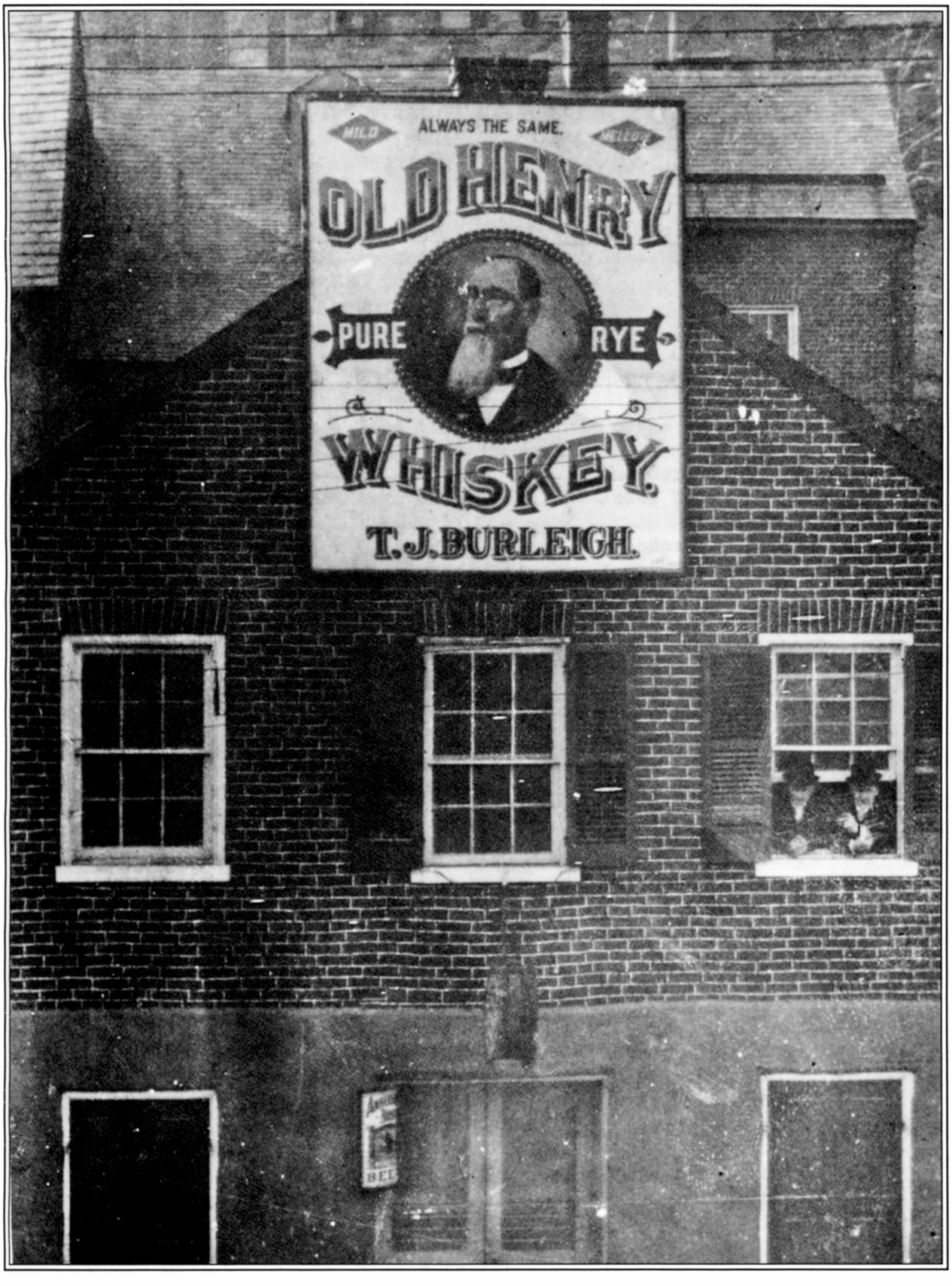
Shenandoah street, Catholic Church, John Brown's Monumnet and War tablets B&O RR Station, No Date on file HAFE NHP HF-433



HF-57, Shows Building 7, c. 1890-91, on file HAFE NHP.



HF-329, Shows Building 7, c. 1904, on file HAFE NHP.



HF-1211, Facade of Building 5 showing T.J. Burleigh Saloon sign, c. 1890-1910, on fileHAFE NHP.

APPENDIX IV

DIGEST FROM WEST VIRGINIA GAZETTEERS: HOTELS, SALOONS, RESTAURANTS 1877-1913

YEAR	HOTELS	SALOONS
1877-8	Wager House, M. A. Krepps	James Conway
	Mt.View Hotel B&O RR George W. Green	
	Valley House, Mrs. E.M.Chambers	
1882-3	Mt. House, G.W. Green	James Conway
		Samuel J. Smith
1891-2	Hill-Top House, Thos.S.Lovett	George Webber
	Potomac House, George McGlincy	
	Hotel Connor, John W. Connor	Theodore M. Connor
	Lockwood House, Mrs. S.E.Lovett	James Conway
1895-6	Summit House, M.C. [sic] Brackett	Theodore M. Connor
	Hotel Conner, Shepherd Gatrell	James Conway
	Hill Top House, Thos.S.Lovett	Charles J. Drew
	Lockwood House, Mrs. S.E.Lovett	George Webber
	Morrell House, Brown McDowell	
1898-9	Summit House, M.C. Brackett	Thomas J. Burleigh
	Hotel Connor, Shepherd Gatrell	Theodore Connor
	Lockwood House, Mrs. S.E.Lovett	James Conway
	Hill Top House, Thos.S.Lovett	O. A. Eubank
	Morrell House, Brown McDowell	
	Potomac House, J. A. Stuart	
1900	Lockwood House, Allan P.Daniels	Thomas J. Burleigh
	Hotel Conner, Shepherd Gatrell	Theodore M. Conner
	Hill Top House, Thos.S.Lovett	James Conway
	McDowell House, Brown McDowell	Harry Rockenbaugh
	Potomac House, John A. Stuart	
	Summit House, Thomas J. Trinkle	
1902-3	Hotel Connor, Theo.M.Connor	Thomas J. Burleigh
	Lockwood House, Allan P.Daniels	Theodore M. Connor
	Hill Top House, Thos.S.Lovett	James Conway
	McDowell House, Brown McDowell	Harry Rockenbaugh
	Summit House, Thomas J. Trinkle	
1912-13	Hotel Connor, Theo.M.Connor	Thomas L. Burleigh
	West Virginia House, Mrs. A.T. Dailey	Shepherd Gatrell
	Lockwood and Annex, A.P.Daniels	
	Hill Top House, Thos.S.Lovett	
	Morrell House, Mrs. S. R. Herrod	

RESTAURANTS:

1891-2	Wm.E. Herrell, John A. Stuart
1895-6	[none]
1898-9	[none]
1900	Julius Tryman
1902-3	Johanna E. Edwards
1912-13	Johanna E. Edwards, Wm. Jackson, Leo O'Beirne

LIQUOR LICENSES/TAVERNS/SALOONS

POST-CIVIL WAR (from History Data Base)

YEAR	NAME	LOCATION
1866	James McGraw J. H. Hodges F. Wolfort	
1867	Patrick O'Beirne[40] James McGraw	
1868	no mention found	
1869	Nathan Gimbel	Ramey House, Shenandoah Street
	James McGraw	
1870	J. McGraw J. Fitzpatrick J. Conway Robert Lucas Thomas Kirwan Matthew Quinn	 Marmion Property Shenandoah House
1871	Gideon Leisenring G. W. Chambers Thos. A. Kirwan R. R. Lucas Matthew Quinn[41]	 Shenandoah Hotel
1872	James McGraw G. W. Chambers James Conway Patrick O'Beirne James R. Roeder Michael Doran	
1873	Patrick O'Beirne James Conway James McGraw Maltby & Moore Thomas H. Trail	
1874	[County Court filed "true bill against George Green for selling liquor without license]	

[40]Patrick O'Beirne's name has been given the "standard" spelling in terms of all HSR work

[41]This license was immediately transferred to Edward Murphy.

no other mention found

1875 "Mr. Green"
James McGraw

1876 James McGraw
George W. Green
James Conway
Reed & Kirwan

1877 James McGraw
James Conway
George W. Green
W. J. Preston

1878 no mention found

1879 James McGraw
James Conway
W. J. Preston
George W. Green
Edward Thompson
James H. Renner

1880 no mention found

1881 no mention found

1882 James McGraw
Mrs. Mary A. Weber (believed in Bolivar)
Smith & Ott
T. M. Connor
T. A. Kirwan
Geo. W. Green

1883 James McGraw
Mary A. Weber (believed in Bolivar)
Smith & Ott
T. M. Conner
James Conway
T. A. Kirwan
George W. Green

1884 James McGraw
Geo. W. Green
Alex. Murphy
T. A. Kirwan
T. M. Connor
James Conway
Smith & Ott

1885 James McGraw

Thos. M. Schoppert
Smith & Ott
John W. Butler
T. M. Connor
James Conway
Thomas A. Kirwan
Thomas A. Burleigh[42]

1886 J. W. Butler — Brooks House
[transferred to F. A. Cromwell]

no other mention found

1887 James McGraw
T. M. Connor
T. A. Kirwan
George W. Green
Thomas J. Burleigh
James Conway
R. Shepherd Gatrell

1888 James McGraw
T. M. Connor
Thos. J. Burleigh
Chas. J. Drew
James Conway
Geo. W. Green
T. A. Kirwan

1889 James McGraw
James Conway
T. M. Connor
Chas. J. Drew
Thos. J. Burleigh
Thos. A. Kirwan

1890 John W. Doll
T. M. Connor
Thos. J. Burleigh
Chas. J. Drew
Jas. Conway

1891 James McGraw
Thos. J. Burleigh
T. M. Connor
Charles J. Drew
John W. Doll
James Conway
George Longerbeam — Burleigh Building

[42]This is the standardized form of "Boerley"

1892	no mention found	
1893	no mention found	
1894	Jas. C. McGraw	
	James Conway	
	Geo. H. Longerbeam	
	W. M. Kain	
	Shepherd Gatrell	
	T. M. Connor	
	Charles J. Drew	
1895	James Conway	
	W. M. Kain	
	C. J. Drew	
	Shepherd Gatrell	
	T. M. Connor	
	George Longerbeam	
1896	6 licenses granted, no names	
1897	no mention found	
1898	no mention found	
1899	5 licenses granted, no names	
1900	no mention found	
1901	James Conway	
	T. J. Burleigh	
	T. M. Connor	
	Harry Rockenbaugh	
1902	James Conway	
	T. M. Connor	Hotel Connor
		saloon in Erwin Bldg.
	Harry Rockenbaugh	
	Shepherd Gatrell	Ames Building
1903	James Conway	
	T. M. Connor	
	T. J. Burleigh	
	Shepherd Gatrell	
	Harry Rockenbaugh	
1904	James Conway	
	T. M. Connor	
	T. J. Burleigh	
	Shepherd Gatrell	
	Harry Rockenbaugh	

1905	James Conway	Conway Building
	T. M. Connor	Hotel Connor
	E. K. Kern	Erwin Building
	Shep. Gatrell	Hotel Gatrell
	H. E. Rockenbaugh	White Hall
	T. J. Burleigh	Burleigh Building
1906	James Conway	
	T. M. Connor	
	T. J. Burleigh	
	Shepherd Gatrell	
	E. K. Kern	
1907	Jas. Conway	Conway Building
	T. M. Connor	Hotel Connor
	Thos. J. Burleigh	White Hall
	Shepherd Gatrell	Hotel Gatrell
	E. K. Kern	Ervin Building
1908	T. J. Burleigh	
	E. K. Kern	
	T. M. Connor	
	Shep. Gatrell	

HF Town Council refused license to Thomas Keating
James Conway did not apply for license

1909 dissent on HF council over license

<u>applications</u> for license:

Shep. Gatrell	Ames Building

note that County Court issued 2 licenses at HF

1910 [April] - note that Shep. Gatrell "will" not apply for bar license

[May] - applications for license:

Thos. J. Burleigh	White Hall
T. M. Connor	Hotel Connor
Shepherd Gatrell	Ames Building

[June] County Court granted above licenses

1911 [May] - HF Council granted licenses:

Shepherd Gatrell
T. M. Connor
T. J. Burleigh

[June] - Jefferson County is "dry." All liquor licenses including 3 HF licenses refused; action will close all county saloons including HF which has licensed saloons without interruption since Civil War

1912 [May] - the following applied (at Charles Town) for license:

Messrs. Burleigh
Connor
Smith
Gatrell

[June] - County Court decides "no license in Jefferson"

[December 14] - HF council granted licenses to:

T. J. Burleigh
T. M. Connor
Shep. Gatrell
Chas. Smith

[December 21] - applicants for license [probably from County]:

T. J. Burleigh	White Hall
T. M. Connor	Hotel Connor
Shepherd Gatrell	Ames Building

1913 [January] - County Court granted licenses at HF:[43]

T. M. Connor
Thos. J. Burleigh
Shep. Gatrell

[June] - County Court issued licenses at HF:

T. J. Burleigh
T. M. Connor
Shepherd Gatrell

1914 [January] - transfer of license of:

Shepherd Gatrell (deceased) to

Charles W. Gatrell
effective during unexpired term of father's license

---

[43]Applicants agreed not to open saloons until January 13, 1913; note that County will likely have saloons until West Virginia Prohibition law goes into effect July 1, 1914.

APPENDIX V

INTERVIEW WITH ISABEL KERN FLANAGAN

I. CONTACTS WITH ISABEL KERN FLANAGAN

In early 1992 Vernon Smith of Denver Service Center, Falls Church, Virginia, while engaged in visitation for his church, found that Mr. Joseph Kern and Mrs. Mildred Butler of Alexandria, Virginia, and Ms. Patricia Kern Jarrell of Alexandria, Virginia, were descendants of Frederick Roeder of Harpers Ferry. He passed the information to Carol Petravage of HFC Furnishings Division who was working on Building 16 (part of Package 118) furnishings; Carol wrote contact letters on April 14, 1992.

Subsequently, Patricia Chickering, Lead Historian of HFNHP Historic Research Staff, followed up the contact. She learned from Joseph Kern that the best source of Roeder/Kern family information was his great-aunt Isabel Kern Flanagan, presently living in Martinsburg. Mrs. Flanagan is the daughter of a son of J. J. Kern, who married Frederick Roeder's oldest daughter, Mary Louise. Thus Frederick A. Roeder was Mrs. Flanagan's great-grandfather. Mrs. Flanagan was born in Harpers Ferry in 1911 and lived there until her marriage to William Flanagan in the late 1940s. Patricia Chickering wrote Mrs. Flanagan on August 4, 1992, followed the letter with a phone call, and set up an oral history interview for August 20.

Patricia Chickering and Michael A. Jenkins visited Mrs. Flanagan at her Martinsburg home on August 20, 1992, and tape-recorded an interview. As a result of the first interview, a plan evolved to bring Mrs. Flanagan to Harpers Ferry, tour the area with her and note her comments. The Harpers Ferry 'tour' took place August 26. Following the 'tour' Carol Petravage and Patricia Chickering felt an additional visit to Mrs. Flanagan would be productive, and arranged that for September 11. At that time Mrs. Flanagan agreed to permit the park to photocopy her Harpers Ferry scrapbook. That was accomplished and a copy is in the park library. Over subsequent months Patricia Chickering spoke with Mrs. Flanagan several times on the telephone and received correspondence from her.

Excerpts from the August 20, 1992 interview relevant to Buildings 5 & 7 follow.

II. PARTIAL TRANSCRIPTION: INTERVIEW WITH ISABEL KERN FLANAGAN, August 20, 1992

PAT CHICKERING: It's August 20, 1992, we are in the sunporch of Mrs. Isabel Kern Flanagan in Martinsburg, West Virginia, early in the afternoon, conducting an oral history interview. I am Pat Chickering, Lead Historian at Harpers Ferry National Historical Park, Sound Engineer is Michael A. Jenkins, the Assistant Lead Historian. We've been talking with Mrs. Flanagan and discussing a few items on Harpers Ferry maps. The last thing we discussed was the group of buildings which are known in Park, in the Park as Package 118; it was all part of the estate of Frederick A. Roeder. Mrs. Flanagan was recounting a story about the

building that is labelled Building 5 in the Park. Could you tell us again, about what you did with that building, Mrs. Flanagan?

ISABEL FLANAGAN: Well, the youngest daughter of Mr. Burleigh that bought my great-grandfather's house, and the property, was my age and we were playmates, and we got into the building that you have referred to as the White Tavern, and it had been boarded up and there was a bar in there; and so we just went in and played; we got on the bar and danced can-can!

PAT CHICKERING: Could you describe the interior furnishings of the building?

ISABEL FLANAGAN: Well, as near as I recall, it's been so long ago . . .

PAT CHICKERING: Oh, excuse me for interrupting, about what year would this have been?

ISABEL FLANAGAN: Oh, gee, I'm 80 years old, and we were in about, maybe, 5th grade;

PAT CHICKERING: About 1920, 1921?

ISABEL FLANAGAN: Oh no, I started in school when I wasn't quite 5; let's see, it was about maybe 1918 roughly; it was about the time that, toward the end of World War I, I suppose . . .

. . .

ISABEL FLANAGAN: . . . Anyhow [PAT CHICKERING: inside of Whitehall Tavern], the only thing I remember there was a bar and there was a big mirror back of it, and I think tables and chairs were piled up; but it was, hadn't been used, dusty.

PAT CHICKERING: There's another small building a little up the street from that, on the corner of the alley; what was that being used for about that time?

ISABEL FLANAGAN: There wasn't actually a building, there was just kind of a roof, a lean-to, because I rented it from Catharine's mother when I got my first automobile, which was an old De Soto back in . . .

PAT CHICKERING: Well, I'm referring to the building that is on the corner of the alley and Potomac Street; it's a stone building. We have photographs of the building I'm talking about; we call it Building 5; and we have photographs of it with a big whiskey sign on it and it says something about Burleigh's Tavern.

ISABEL FLANAGAN: Is there anything between that building and the wall?

PAT CHICKERING: Between the building and the wall--no.

ISABEL FLANAGAN: But see, then, the first building, I'm talking, the building that we went in was an old saloon, but it was the first building because there was just a lean-to from the roof of that building over to the stone wall. It had a, just a door and it slid, and I rented it for my car.

PAT CHICKERING: Okay. Then the first building you're referring to sounds like Building 5. Then the next building is the lean to where you put your car, going down the street. Then there would have been another stone building, painted white.

ISABEL FLANAGAN: I don't remember any other building.

PAT CHICKERING: A smaller one.

ISABEL FLANAGAN: I remember one down, between there and Dittmeyer's Drug Store; where that monument was . . .

. . .

PAT CHICKERING: Have you heard, do you know any family stories, about when they left the Roeder house, why they left the Roeder house; do you know what happened during the war; do you know anything about that?

ISABEL FLANAGAN: Yes. What I heard, and in that report . . . [refers to data on Roeder family given Mrs. Flanagan some years ago by a HAFE source]

PAT CHICKERING: Do you know if they may have -- as far as you know they went back to live in the Roeder house?

ISABEL FLANAGAN: Well, it's vague because my great, my own grandfather, the one that died that I don't even remember, he sued the government for the use, because the Union soldiers and the Confederates, too, but the Union, they use the bakery for, you know, to bake with, and they the soldiers were camped in there and they used it; part of the buildings, one of the taverns, for horses even.

PAT CHICKERING: I have a copy of that claim, back in the office.

ISABEL FLANAGAN: Yes I know, it drug out for years and years;
. . .

PAT CHICKERING: Let me ask you a question about that, then. Thinking of the property, the Roeder property, where was the bakery?

ISABEL FLANAGAN: Right across the back porch, that brick building, I believe it's a 2 story, I believe there's a storage room or something up over it. But it's right across the back porch.

PAT CHICKERING: It was in the 2 story brick building across the back porch.

PAT CHICKERING: When did the Burleighs move in [to Building 16], do you know?

. . .

[Mrs. Flanagan had no first-hand knowledge of when Burleighs moved into Building 16]

. . .

PAT CHICKERING: Do you know where they [the Burleighs] lived? We're talking 1880s, 1890s. . .

ISABEL FLANAGAN: They all lived in that house that I know of. . . Well, Mr. Tom I guess was living there in Harpers Ferry because as I remember Katharine's father was retired; he was an elderly man when I first remember him.

PAT CHICKERING: He would be, yes; this is "old Tom."

ISABEL FLANAGAN: Yes.

PAT CHICKERING: Well, his father, of course, was killed in the Brown Raid.

ISABEL FLANAGAN: I don't, of course, I don't . . .

PAT CHICKERING: And, Brigett then, he had had a saloon and she had been running a boarding house, and one of the accounts credits her with being a really good manager; and apparently . . .

ISABEL FLANAGAN: Apparently she was.

PAT CHICKERING: Apparently she kept the family fortunes going; and then by 1880 bought the Roeder property; then Tom got set up in the Saloon business.

ISABEL FLANAGAN: As I remember him personally he was a retired man; because Dad's brother, Uncle George, had a blacksmith's shop and you were talking about Mr. Tom Burleigh, Katharine's father. My mother would send me to the store, the butcher shop, for meat for our evening meal.

. . .

PAT CHICKERING: Do you remember any family talk about the sorts of things that J. J. or Frederick made and sold in the bakery and confectionery shop?

ISABEL FLANAGAN: Oh yes. I heard dad talk about. They used to make candy. And they had these great big marble slabs. They made even taffy. But dad talked mostly about the cake decorations. He said his father could really decorate a wedding cake. I'll tell you, they made a, he made a lot of little pies, because they did not have diners on the cars, and this is something that people, my age, would really remember; my dad and even Edna, my niece, of course this was much, much later, but the cars not having diners . . . But they used to take my great-great-grandfather's [sic] pies, these trays, basket types, on the trains and sell them all.

PAT CHICKERING: We have references to J. J. catering parties and things, and so, he was generally in the food business.

ISABEL FLANAGAN: Yes, he was a real bona fide German baker. I have one thing; I have his recipe for shortcake. Strawberry . . . Old German shortcake. That's about all.

PAT CHICKERING: Refresh my memory. Where did he conduct this business from,

do you know?

ISABEL FLANAGAN: One side of that house was open.

PAT CHICKERING: From the Roeder house.

ISABEL FLANAGAN: Yes. From what, now, not that I remember, because, you know, the people were living there, when I remember, but from what I've read about it there was one side next to, on the alley side, that was open, that they had I guess like a show room, a store room. Never thought to ask daddy that, about that.

PAT CHICKERING: In other words, it was in Building 16, what we call the Roeder House?

ISABEL FLANAGAN: It was in . . . Oh yes. He had other buildings, though.

PAT CHICKERING: We have references to J. J. Kern's Oyster Saloon. Do you know where that would have been?

ISABEL FLANAGAN: J. J. Kern, a saloon?

PAT CHICKERING: Oyster saloon. This was about late 1870s.

ISABEL FLANAGAN: The only thing I remember about oysters at all is I used to go with my dad over to get a little keg of oysters off of the canal boats. . .

. . .

[end of interview data relevant to Buildings 5 & 7]

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National Archives; Washington D. C. and Suitland Maryland; Record Group 123; Claim File JC11802, Congressional Jurisdiction

OTHER SOURCES

1. History Data Base at Harpers Ferry National Historical Park. This source contains:

- census records for 1820 through 1920, excluding the 1890 census (destroyed by fire) but supplemented by special censusus and voter registration data [it must be noted that earlier historic studies interpreted census data as revealing fairly specific locations of families; because subsequent research has proven this approach unreliable, in terms of this report census data are given the broadest possible interpretation]

- newspaper records from late 18th century to 1955; specifically cited in this document are records of the Virginia Free Press and Spirit of Jefferson of Charles Town, WV

- property records covering Harpers Ferry territory included in Harpers Ferry National Historical Park

- index to Armory records compiled by Paul Lee

- index to park photo collection

2. Tombstone inscriptions in Harpers Ferry and Bolivar cemeteries

3. Oral and written contact with descendants of Roeder and Kern families

4. Photographs in the Park collection

5. Information on file in the office of the Park Architect, including Architectural Data Section of Historic Structures Report for Building 16, HABS site survey for Building 7, List of Classified Structures, and Park architectural base map

6. Harpers Ferry Town Council minutes located in the Town Hall

7. Administrative history of Park buildings; updated by historian Stan Bumgardner in April, 1990

8. Personal communication with Andy Wenchel, H.A.B.S. Survey Team, Harpers Ferry National Historical Park, August 1992

Archeological Investigations

ARCHEOLOGICAL VIEWS OF THE UPPER WAGER BLOCK, A DOMESTIC AND COMMERCIAL NEIGHBORHOOD IN HARPERS FERRY

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National Capital Region
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U.S. Department of the Interior
Washington, D.C.

1994

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Fieldwork was conducted from June-September 1991, largely by archeological technicians Kenneth Kulp, Eric Larsen, Kim Sprow, and Dave Warren-Taylor, joined on various occasions by Brett Burk, Mike Lucas, John Ravenhorst, and Susan Winter. Their skills and dedication carried the project through everything from the disappointments of modern disturbances to the huge privy pit. Bob Newnham of Akron, Ohio, an enthusiastic volunteer, spent his vacation helping at the site.

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Jill Halchin
Survey Archeologist,
Gettysburg National Military Park

CHAPTER 1

PROJECT OVERVIEW

Jill Y. Halchin

In preparation for renovations and new exhibits in Park Buildings 5, 7, 16 and 16A in Lower Town Harpers Ferry, Harpers Ferry National Historical Park, National Park Service archeologists conducted excavations in the yards of these buildings. At the most basic level, the investigation was intended to supply information about site integrity, structures, landscapes, historic residents, and neighborhood activities. Results of these analyses should be applicable to restoration, while simultaneously assisting the planning for the preservation of the remaining cultural resources.

The term used to name the project area, which is not an historic term, is derived from Package 110 reports which used "Wager Block" to refer to the entire block. Because the project reported here, Package 118, deals only with the uphill portion of the block, the term "Upper Wager Block" was chosen. For the most part, the streets and alleys delimiting the block retain their historic names, although the alley at the north end has been known by several. Therefore, its current appellation, Hog Alley, is used throughout this report to avoid confusion.

Historical research shows the project area was an intensively-used residential and commercial area of Harpers Ferry throughout the nineteenth century and the first half of the twentieth century. During the first three and a half decades of the 1800s, the project area contained a tavern which was expanded to a hotel as the town's manufacturing and commerce grew. Following a major land subdivision in the mid-1830s, the urban block developed increasingly, crowded by houses fronting streets and enclosed tiny yards. Although lacking formal connection with the U.S. Armory, the neighborhood's businesses, especially drinking places, were affected by the government installation and its abrupt closing during the Civil War. After the war, the pattern of taverns or saloons continued until Prohibition, while other small businesses such as shoemaking, hatmaking, carpentry, and bakery/confectionery came and went. Buildings doubled as domiciles, with upper floors and sometimes basements used for dwellings by families of shop owners or tenants.

The Upper Wager Block excavations for Package 118 were conducted June through September 1991 with a crew of three technicians and one supervisor from the park archeology staff. Cleaning, cataloging, and analysis of artifacts were under way in the archeology lab by summer 1992, while soil samples were sent to specialists for analysis of parasites and plant remains. Interpretation of bone specimens and artifact analysis were also conducted (see final archeology research report by Halchin).

Package 118 charged archeologists with investigations of Park Buildings 7 (an 1830s stone structure used as a saloon, a warehouse, and other businesses), Park Buildings 16 and 16A (a pre-war brick dwelling and outbuilding), and Park Building 5 (a brick saloon and dwelling). Also, Park Building 15 (used as a dwelling and for small shops) is included in this report because the area to be landscaped under the package includes the backyard of this building as well.

Chapter 2 of this report provides a review of data from historic documents, photographs, and maps outlining property ownership, lot lines, and building dates plus information about the businesses and residents. Other chapters include details on selected topics.

Descriptions of the stratigraphy, features, and artifacts found in the project area are described in Chapter 3. Findings from previous projects in the area are included in order to provide a comprehensive description of the project area. Chapter 3 also relates the field methodology used in 1991 and summarizes previous subsurface investigations.

Interpretation of the stratigraphic and historical data comes together in Chapter 4 on the cultural landscape. The chapter provides a view of the neighborhood during several time periods in a format that may be useful in restoration and interpretation planning.

Not included in this historic structures report, but included in the final archeology research report are analyses of flora, fauna, and material culture. Seeds, pollen, phytoliths and other floral remains, as well as parasites, were selected from three proveniences: two privies and a backyard area. The floral, faunal, and parasitical interpretations provide new insights into the diet and health of residents and, probably, hotel guests and employees. The analyses of the artifact assemblages consist of discussions of ceramic and glass from several proveniences that coincide with specific cultural units. Archeologists present their findings of a 1830s-1840s hotel-era privy; backyard refuse associated with a German immigrant family and their bakery and confectionery business; two trash pits associated with nineteenth-century saloons; and other trash pits and a privy used by the household and business of a saloonkeeper during the late nineteenth and early twentieth century.

The historic structures report and the archeology research report for Package 118 compliment each other. The former provides an overview of the existing built environment and intact cultural resources within the project area. The later consists of a thorough analysis, in an anthropological framework, of material culture excavated for 106 compliance. It is imperative that results from this historic structures report assist in the planning for the preservation of the remaining cultural resources.

CHAPTER 2

HISTORY OF THE UPPER WAGER BLOCK

Jill Y. Halchin

RESEARCH NOTES

During the late 1950s, when Harpers Ferry National Historic Monument was newly-created, a team of historians led by Charles W. Snell collected and indexed thousands of primary documents relating to Harpers Ferry. They produced basic Historic Structure Reports (HSR) History Sections describing owners, tenants, and uses of, construction dates for, and changes to town structures up to the Civil War. These reports and updates still serve as the starting point for historical researchers because they contain information consisting of deeds, court records pertaining to land sales, historic maps, historic and recent photos, newspapers, and some censuses and wills.

Recently, a major research tool, a computerized history database, has been developed by the historians at Harpers Ferry National Historical Park to update the building histories. WordCruncher software facilitates index searches of newspapers, census records, and property files. For the most part, indexed data for the Package 118 historical research was sufficient for basic biographical sketches and chronologies. In some cases, however, it was necessary to examine documents firsthand.

The Registers of Births and Deaths and the Will Books were checked through their indexes with limited results. The Civil War halted much of the customary recordkeeping in Jefferson County for the period 1861 through 1865. Afterward, the courts worked on the backlog of probate cases complicated by the loss of many family papers and personal property.

Many of the relevant historic and modern photographs in the park collection were included in the previous HSRs, but the indexes for the collection were checked again in 1991 for recent acquisitions. Because the dates of most of the historic photographs are in doubt, these views rarely provide conclusive temporal information. Also, the usefulness of the photographs vary because most were taken at oblique angles and show little of the neighborhood.

The few known historic maps drawn during the first half of the nineteenth century were intended for railroad and canal projects along the Shenandoah and Potomac rivers. Thus details and precision were often lacking for properties beyond the armory. Also, proportions and angles were sometimes skewed in indecipherable ways. Between 1894 and 1933 buildings were recorded for fire insurance ratings by the Sanborn-Perris Co. When these maps are studied along with other sources, it is certain that the Sanborns were out of date (sometimes by as much as 10-15 years) in identifying a building's use or the existence of an outbuilding or addition. Like the earlier maps, the Sanborns must be used as clues, not proof.

Despite the many data gaps and the methodological constraints of WordCruncher and the history database, it is possible to write a history of the area, which, if not complete, nevertheless

gives some indication of its past. This serves as a background and as clues for artifactual and other interpretations that are offered in later chapters.

HISTORICAL OVERVIEW

Hotel Era (1803-1837)

Location has been a major factor in the lifeways and development of both Harpers Ferry and the Wager Block in Lower Town. In mid-eighteenth century, millwright Robert Harper, travelling on his way to a new job, saw opportunity in the lands where the Potomac and Shenandoah rivers meet. He purchased 125 acres there in 1751 and, until his death in 1782, he ran a ferry for travelers needing to cross the river. A stone tavern and stable on the hill above the ferry (Harper House) offered food and bed to those passing through (Snell 1973:1-2).

Harper's property was inherited by his niece Sarah Harper and her husband John Wager, Sr., who preferred their established home and business in Philadelphia. The United States government, on the other hand, was interested in Harpers Ferry's water power potential for a federal armory. In 1796, the Wagers sold the government 118¼ acres, retaining just two tracts totalling 6¾ acres, but 6¾ acres with major economic potential. The Wager tracts comprised relatively flat land at river level on the headland at the rivers' junction, virtually insuring that the property would become the commercial heart of Harpers Ferry (Snell 1973:1-2).

The armory's basic buildings, canal and dam, plus an arsenal, barracks, and offices were started in 1798, and production of guns was underway in 1802 (Snell 1973:3). Hall's rifle works was added in the early 1820s. With the gunworks came people: 87 employees by 1808, 271 by 1821, and a peak of 400 in 1858. Indeed, about half of the town's white male inhabitants before the Civil War were armory workers (Snell 1973:4 and Chart II). By the 1820s, Shenandoah water power was tapped at Virginius Island by private entrepreneurs. Mills and machine shops there meant further increasing the community size and economy. The Wagers, through leases to their land, controlled the number of each type of business in town, kept prices up by charging high rents, and required leasees to construct substantial buildings of brick and stone (Snell 1973:5). The Wagers received additional income from the ferry business until 1824, then from a 750-ft wooden toll bridge they had constructed across the Potomac (Snell 1973:11).

Harpers Ferry's beginning as a transportation link matured during the next decades. During the 1820 and 1830s, the town was increasingly linked into the nation's expanding transportation network. A small canal was dug in 1806-1807 to circumvent rough waters in the Shenandoah River, but the larger and longer C&O Canal reached Harpers Ferry in 1833 and stretched westward to Cumberland by 1850. The Potomac ferry was replaced by a bridge in 1828. Improved toll roads from east and west first met at Harpers Ferry in the early 1830s, with the road into Virginia coming in the 1850s. Stagecoaches provided long distance transportation on these roads between 1829 and 1836, but by 1834 railroad tracks stretched from Baltimore to the Maryland bank of the Potomac opposite Harpers Ferry. The line from Winchester, Virginia, came in 1836 (Snell 1973:11-14).

Until this transportation network was fully connected in the 1830s, travelers and visitors found but one commercial establishment offering food and lodging in Harpers Ferry. Until around 1830, they went to the tavern, Park Building 1-A now called the Harper House, and after 1830 to a frame hotel on Shenandoah Street known earlier as the Tavern and later as the Harpers Ferry Hotel. Like other business people in Harpers Ferry, the hotel keepers rented the land from the Wagers. The hotel and its outbuildings are the earliest historic structures known on the Wager Block.

In 1803, the surveyor for an early canal project depicted a cluster of buildings along the Shenandoah Street end of the block plus a smaller structure farther north along the alley later called Potomac Street (Figure 2.1). The cluster of buildings was not labelled as to function, but the Harper House was marked as a tavern. However, an 1836 advertisement indicates the hotel was operating during the century's first decade and it referred to "the spacious frame buildings occupied and known as a Hotel for the last 30 years" (*Virginia Free Press* [*VFP*] 7 April 1836:4). Another advertisement, one seeking a new hotel keeper in 1824, described the Harpers Ferry Hotel as a "noted establishment at Harpers Ferry, Va., consisting of 22 rooms, several of which answer for parlors, and one, 40 by 20 ft, is suitable for public occasions, with all the necessary out-houses" (*Harpers Ferry Free Press* [*HFFP*] 31 March 1824:4). An 1835 railroad map (Figure 2.2) shows the hotel as one huge structure, and another map drawn around 1837 or 1838 (Figure 2.3) also depicts one main building, but with an irregular shape suggesting that much of the original cluster of buildings may have been connected. The outbuildings shown on the 1837 or 1838 map are of particular interest in the Package 118 investigation because some of them stood on the land encompassed by Lots 15 and 16 years later. Obvious but undetermined distortions in the 1837 or 1838 map means the drawing only approximates structures on the hotel backlot. The large building farthest from the hotel was undoubtedly the stable which may have outlasted the hotel and, also, one of the smaller outbuildings perhaps was incorporated in Park Building 15.

The hotel operators who rented the Harpers Ferry Hotel are known through Snell's search of Wager estate accounts, deeds, and newspapers (Snell 1958b:7-10, 1959:3). He found no records before 1814 (Beall 1816). In October of that year, Basil Williamson was granted a three-year lease to the hotel. Little information on Williamson has surfaced. He had come to Harpers Ferry from Washington. His household on the 1810 census included four slaves, suggesting he ran the hotel prior to 1814, and his wife Margaret Wager (*U.S. Census 1810:331; VFP* 6 October 1830:3; *VFP* 29 March 1832:3).

William Graham signed a lease for the hotel extending from November 1817 to early 1823. As documents for these years are scarce, nothing has been found about Graham other than his appearance in the 1830 census and his death at about 50 years old several years after his association with the Harpers Ferry Hotel (U.S. Census 1830:166; *VFP* 5 January 1832:3).

Major James Stephenson and Ann Stephenson took over from April 1824 to April 1830. After a military career spent in western Pennsylvania and Ohio, James Stephenson built considerable political and economic power in the Harpers Ferry region reinforced by close ties with the Wagers. James served as a representative to the Virginia and United States Houses and as a Berkeley County magistrate (Smith 1977:146; Snell 1975:8). The Stephensons' role and

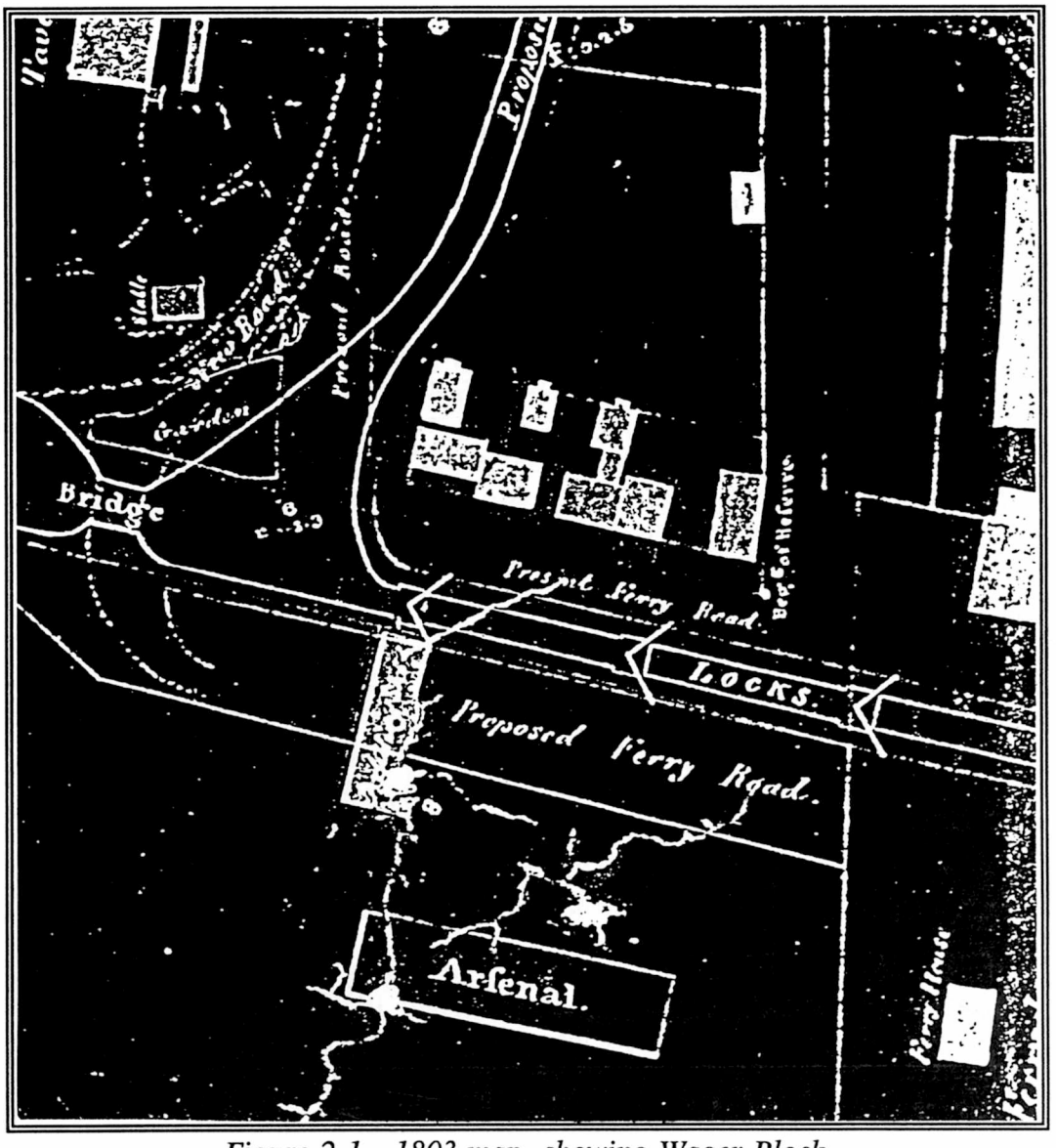


Figure 2.1. 1803 map, showing Wager Block.

status in Harpers Ferry apparently made it possible for them to leave the Harpers Ferry Hotel in 1830 to open another hotel on armory land; a location outside Wager control.

Captain Meriwether Thompson assumed the Harpers Ferry Hotel lease in 1830 and soon advertised that he had made repairs (*VFP* 16 June 1830:3). Thompson was head of a small household in 1830 and apparently was working two jobs at the time as hotel operator and Armory paymaster's clerk (U.S. Census 1830:171; *VFP* 27 October 1830:3).

The final managers of the Harpers Ferry Hotel were Isabella and Nicholas Fitzsimmons, who took over in 1834 (Snell 1959:3). When Nicholas died in early 1837, Isabella advertised that she would continue to run the establishment (*VFP* 20 April 1837:3; *VFP* 23 November 1837:3). That, however, was not to last long. The Wager family property was divided among



Figure 2.2. 1835 map, showing Wager Block.

the three heirs so that James Bate Wager's share could be sold to settle debts. In 1837, the "tavern lot" where the hotel stood was subdivided and sold. When the Fitzsimmons' lease expired in early 1838, the old hotel (or at least the main structure) was demolished to make way for new brick buildings fronting Shenandoah Street (Snell 1958a:9-10).

Subdivision (1837-mid 1840s)

The end of the Wagers' total control in Harpers Ferry did not mean the end of their influence. As late as 1860, family members still owned 19 of the 62 (30 percent) original lots created by the division (Snell 1973:9). As for the Package 118 project area, the 1837 to mid-1840s period was marked by changes in ownership and new buildings.

Economic growth of the Harpers Ferry-Virginius Island-Bolivar area in the mid-1830s was boosted by the end of the Wager land monopoly and the arrival of railroads and canals. Data for several years gathered by Charles Snell (1973: Table 2.1) show something of the changes in Lower Town. In 1835, there were four hotels and 18 stores in Lower Town, all but one on Shenandoah Street along the stage routes. By 1840 there were still four hotels, but three were clustered on the Ferry Lot by the railroad station. Of the two taverns and 29 stores in 1840, several were on High Street and one warehouse faced Potomac Street. An 1844 map

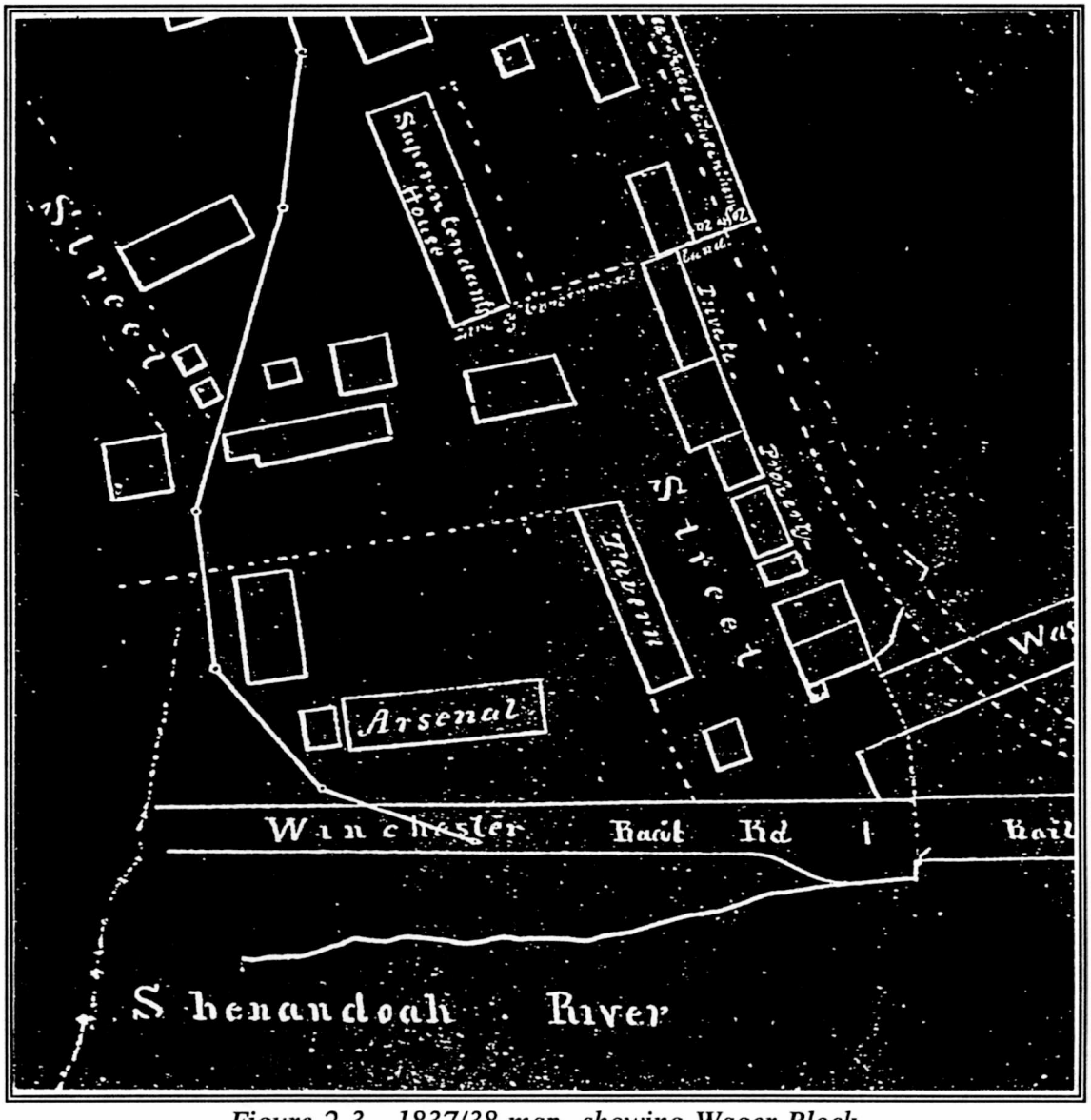


Figure 2.3. 1837/38 map, showing Wager Block.

which focused on part of Lower Town (Figure 2.4) shows house after house along High Street, with stables and sheds on the lower ends of the lots across the canal from the armory. Apparently some of these sheds were "tippling houses" frequented by armory workers; long a source of irritation to the superintendent (Stubblefield 1828).

Park Building 15. In the division of the Wager property, Wager Lot (WL) 15 (the site of the Harpers Ferry Hotel and sometimes called the "Tavern Lot") was subdivided into four sections, three of them L-shaped to provide rear access to the alley later called Potomac Street (Figure 2.5). William Anderson, a dry goods merchant, purchased subdivisions (sb) 2 (fronting on Shenandoah) and 4 (running between High and the alley) (Deed Book 24, 8 February 1841:

Table 2.1. Pre-war businesses and population, Harpers Ferry (adapted from Snell 1973: Chart VIII, 26).

LOCATION	1803	1825	1835	1840	1850	1860
S. Potomac St. (Ferry Lot)	1 warehouse	1 warehouse 1 store	1 hotel 10 stores	3 hotels 1 tavern 10 stores	2 hotels 1 tavern 10 stores	2 hotels 1 tavern 9 stores
Shenandoah St.	1 hotel 1 store	1 hotel 5 stores	3 hotels 7 stores	1 hotel 12 stores	19 stores	17 stores
High St.	1 tavern	1 store	1 store	1 tavern 6 stores	3 taverns 12 stores	1 tavern 10 stores
N. Potomac St.	--	--	--	1 warehouse	1 tavern 1 shop	2 taverns 1 shop
TOTALS	1 tavern 1 hotel 1 store 1 warehouse	1 hotel 7 stores 1 warehouse	4 hotels 18 stores	2 taverns 4 hotels 29 stores 1 warehouse	5 taverns 2 hotels 42 stores	4 taverns 2 hotels 37 stores
POPULATION	1810	1820	1830	1840	1850	1860
Harpers Ferry & Virginius Is.	751	1,377	1,474	1,801	1,747	c. 1,360
Bolivar	--	--	269	515	1,054	c. 1,153

457-458). Even before the lease on the old Harpers Ferry Hotel expired in March 1838, Anderson and partners Samuel B. Anderson (brother) and Dr. George B. Stephenson (son of the former hotel proprietors) advertised for bids from contractors for four buildings on their land (*VFP* 16 November 1837:3). Snell (1980c:12) contends that the large hotel outbuilding on the 1837 or 1838 map (Figure 2.3) was on WL15sb4 and that it had to be razed before construction of new buildings could begin (Snell 1980c:11). However, clues in the archeological and architectural records suggest that the Park Building 15 kitchen was part of a hotel outbuilding (Blee ca. 1978:334), which would place the largest outbuilding farther north on Lot 16.

In March 1841 the partnership which erected Park Building 15 was dissolved and Anderson alone advertised a new, "well finished" stone house, "24 by 40 ft -- 3 stories high -- with a good kitchen attached" (*VFP* 4 March 1841:3; *VFP* 25 March 1941:3). Later advertisements made it clear that Anderson sought to rent individual rooms in Park Building 15 and stressed they were "so constructed to suit small families or for offices" (*VFP* 5 August 1841:3). Indeed, the February 1842 advertisement explained that the "house is now occupied by four distinct families in harmony and good feeling towards each other" (*VFP* 3 February 1842:3).

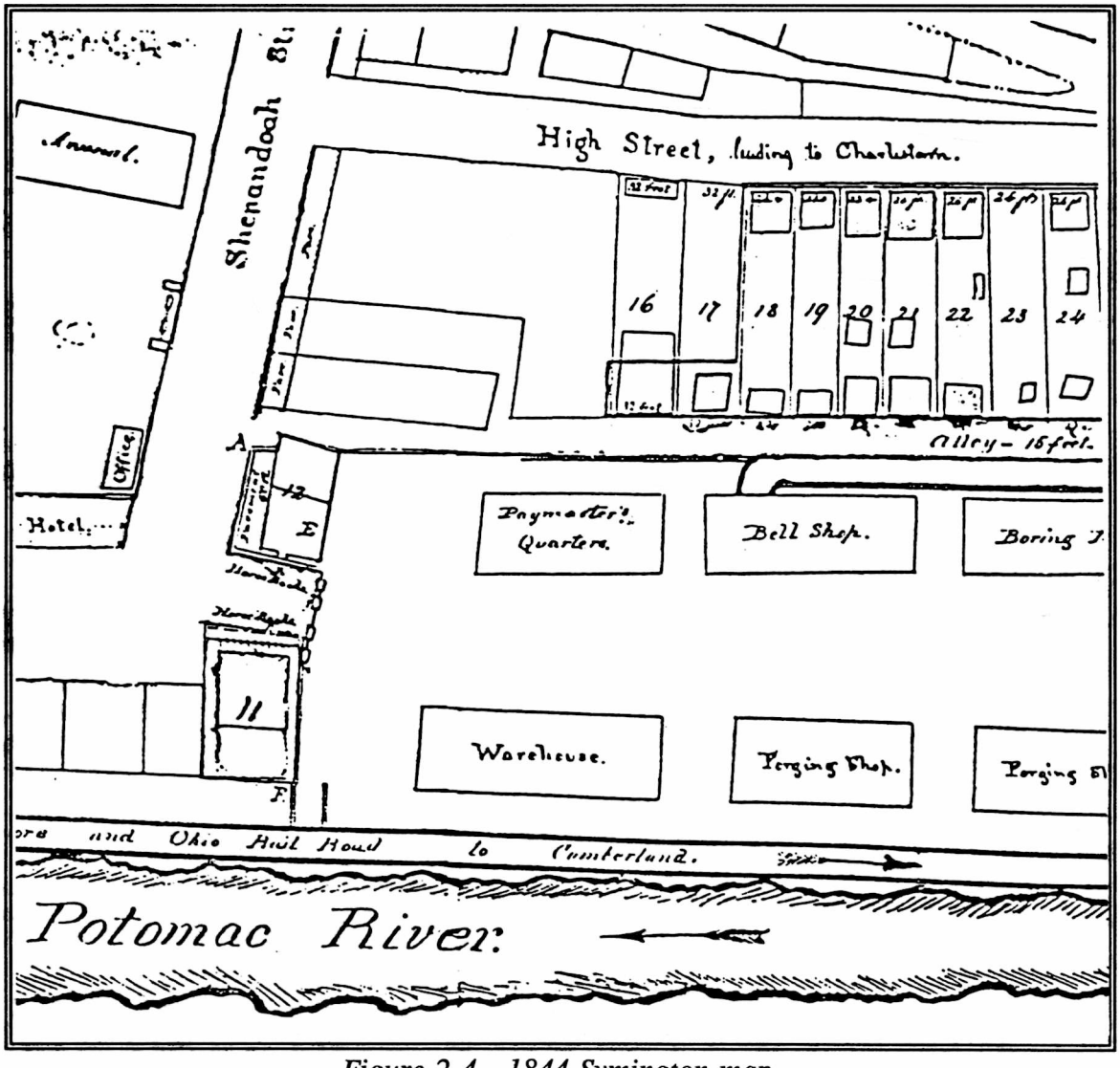


Figure 2.4. 1844 Symington map.

The building was barely finished when Anderson made changes, probably intending to make the building more attractive to business tenants. Five months after he first advertised the house, Anderson published a new notice describing a "newly finished STORE ROOM, 21 by 15 ft, with a dry and first rate CELLAR of the same size" (*VFP* 12 August 1841:3). His February 1842 advertisement gave a detailed description of the building. Anderson added that the central hallway provided privacy to rooms (*VFP* 3 February 1842:3). Within a couple of years the back room on the street level was divided into two rooms "suitable for a small family" (*VFP* 29 February 1844:3).

Six months after Anderson first advertised the new building as ready for occupants, James R. Hayman rented all or much of it. He had previously operated a "restorative and eating" house opposite the arsenal (*VFP* 27 September 1838:3). He also published, with partner

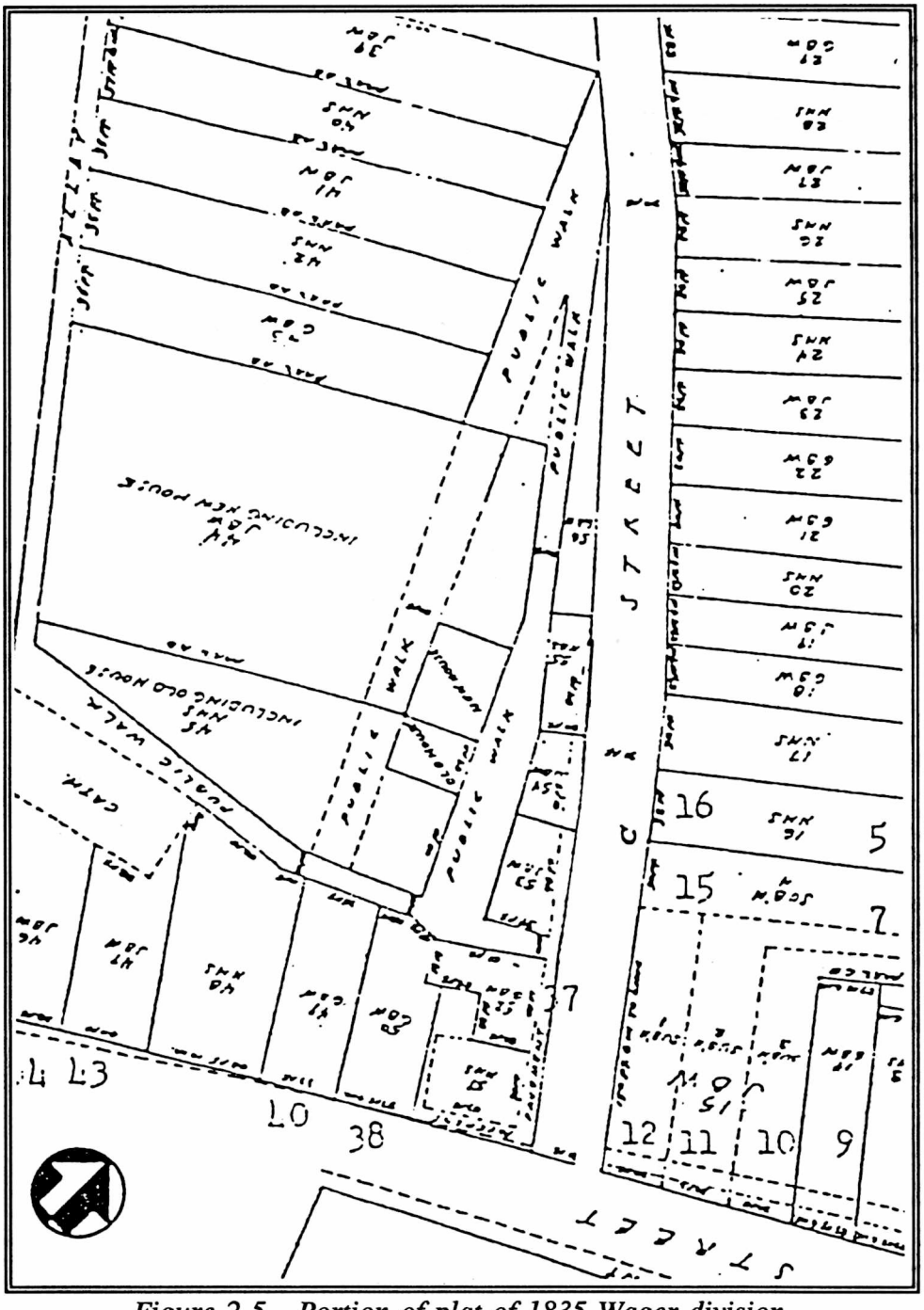


Figure 2.5. Portion of plat of 1835 Wager division.

William S. Smith, the *Harpers Ferry Constitutionalist* during the short time he rented Park Building 15 (*Harpers Ferry Constitutionalist* [*HFC*] 20 April 1839:3).

At first, Hayman advertised a boarding house at No.3 High Street, but later notices for Hayman House emphasized liquor, oysters, and newspapers (*HFC* 23 October 1839:3; *VFP* 29

May 1841:3). Hayman's business failed about 1½ years after he leased Park Building 15. He closed the newspaper and advertised sale of household goods from his Shenandoah Street home, bar fixtures from Park Building 15, and the newspaper press and other equipment (*VFP* 25 March 1841:3; *VFP* 29 May 1841:3). Hayman evidently left town because no further mention of him was found.

Very little is known about the people who rented rooms from Hayman. In fact, only two names were located: Dr. James Garry and Robert Delany (*HFC* 23 October 1839:3; *VFP* 29 May 1841:3). Neither seems to have stayed in town long.

When Anderson next advertised Park Building 15, he noted it was occupied by four families planning to move out (*VFP* 3 February 1842:3). Six months later Henry V. Andrews moved his "fancy store" to the "new store belonging to William Anderson" (*VFP* 11 August 1842:3).

Henry Andrews and his brother Alfred first appeared in Harpers Ferry in the late 1830s, advertising shoe and boot making services. Henry seems to have tried his fancy store in several Lower Town locations with names running from "Pleasant Retreat No.1" to "Social Retreat No.4" (*HFC* 20 April 1839:3; *VFP* 6 December 1838:3; *VFP* 25 November 1841:3; *VFP* 21 April 1842:3). There is no exact twentieth-century equivalent for a fancy store, other than perhaps a local drugstore or gift and card shop. Henry Andrews sold cloth, confections, medicines, books, stationery, and "beverages for temperance people" (*VFP* 6 January 1842:3; *VFP* 21 April 1842:3). As with his other shops, Andrews did not remain long in Park Building 15, and probably left Harpers Ferry soon afterward.

Tailors John Wells and J. Hartshorn advertised in April 1843 that they had taken over the room previously occupied by Andrews (*VFP* 27 April 1843:3). They did not stay long because Anderson again advertised Park Building 15 in early 1844 (*VFP* 29 February 1844:3), but documentary searches have revealed no names of tenants until 1846 when William and Sarah Anderson sold Park Building 15, along with most of WL15sb4 to Susan Downey. The deed for that sale described the "property now occupied by Alfred Andrews as a dwelling house, shoe store, etc." (Deed Book 28, 20 July 1846:174). Snell (1980c:24) considered it likely that the Andrews household moved in as early as 1844, the time of the last vacancy notice. The Andrews household continued to rent from new owner Downey until early 1848, when Alfred died (*VFP* 12 January 1848:3).

The earliest record of Alfred Andrews shows he was in Harpers Ferry at least 10 years before his death in 1848. As he never appeared in the census, little is known about his family. Because Alfred's time in Park Building 15 extended into the later 1840s, probate records for his estate will be reviewed in the next section.

The documentary record reviewed so far for Park Building 15 suggests that the building was rarely fully occupied. However, in a small town, many entrepreneurs found little need to advertise, and when they did they rarely gave location. The censuses did not supply addresses.

Park Building 7. If the documents are somewhat lacking on the occupants and uses of Park Building 15 during the mid-1830s to mid-1840s period, they are nearly silent on Park Building 7, which sits with its back to the buildings. According to the 1837 advertisement soliciting contractors, lot owner William Anderson and his partners wanted a one-story stone structure 24 ft by 40 ft, with cellar and slate roof. Snell (1980b:12) states the second floor of

the existing structure was probably added in the late 1840s by the next owner. This conclusion appears to be based on the advertisement alone. No seam is visible on the exterior and Ramakrishna (1990:8-9) points out there is no documentary evidence to conclude that the building was built one story tall as planned; nor is there any reason to believe someone, other than Anderson, made the change if there was one. The earliest available physical description is dated 1852, and then the words used were "two story stone building" (Huger 1852:331).

In any case, the original building was 24 ft by 40 ft, fronting the alley and straddling the line between WL15sb2 and sb4, both of which Anderson owned. About 18 years after its construction, the front half of Park Building 7 was removed and a new facade constructed.

Anderson, a dry goods merchant, used Park Building 7 as a "warehouse" (Deed Book 29, 2 November 1847:240) for stock for his store in Park Building 11. Park Building 11 was one of two brick buildings Anderson erected in 1838 on Shenandoah Street on the site of the old Harpers Ferry Hotel. Even when Anderson sold most of WL15sb4 with Park Building 15 to Downey, he kept a right-of-way from the rear of Park Building 11, around Park Building 7, to the alley (Deed Book 28, 20 July 1846:174-175). During this period of 1846-1848, if not in other years as well, the right-of-way and Park Building 7 were separated from Park Building 15's portion of the lot by a fence required by the deed. Expenses of constructing and maintaining the fence were to be shared by Downey and the Andersons. But after selling Park Building 7 in 1847, Anderson deeded the right-of-way to Downey leaving Park Building 7 with no yard (Deed Book 30, 1 August 1848:306-307).

Wilson's Stable. WL16 turns up in a few documents from 1838 through the mid-1840s although the evidence is ambiguous. In the Wager property division, WL16 fell to Sarah A. Wager Swayne and her husband Noah H. Swayne. The couple leased Lots 16 and 17 to John G. Wilson for 10 years beginning April 1838 (Deed Book 22, 7 September 1837:340-341).

Wilson had been in Harpers Ferry a number of years by that time. During the 1820s he ran a retail store (merchandise unknown) and one of very a few in town at the time. He supported the powerful Wager clique who saw to it that businessmen like himself held monopolies and received favors such as government supplies and free labor from the superintendent. The clique's power collapsed at the end of the decade (Smith 1977:148,163,170), and Wilson's fortunes evidently suffered a temporary set back. In the 1830s, he operated a boarding house for a while and entered a short-lived partnership in a canal boat business. Advertisements for a dry goods shop started in 1835 and he held the town's postmaster position for a number of years (*VFP* 23 September 1829:4; *VFP* 27 March 1834:3; *VFP* 19 June 1834:3; *VFP* 30 April 1835:3).

Wilson also leased WL13, formerly the southeast corner of the block, where he constructed a 20-room house which is no longer standing. His store was in part of the building and he leased the remainder as a hotel or for other uses (Snell 1958a). He used WL16 or 17 for stables.

Just after the 1840 New Year, "the Stable of Mr. John G. Wilson, 100 ft in length by 40 in width, from the accumulated weight of snow upon the roof, fell in with a tremendous crash" (*HFC* 8 January 1840:3). Considering the large dimensions, it was possibly the old hotel stable which was depicted on the 1837/38 map. In any event, a 40 ft by 100 ft structure would

have overlapped both Lots 16 and 17 (which were 32 ft wide) and would have stretched from High Street to the Alley (Potomac Street).

In late 1844, Armory Superintendent Major John Symington submitted a report which described on WL16 a "large wooden stable 60 by 30 ft and loft above." For WL17 he gave a "small wooden house, 16 by 14 ft 1 story." On his map, Symington showed these two buildings on the alley (east) ends of the lots (Figure 2.4). Considering the smaller size of the 1844 stable, it is reasonable to infer that Wilson built a new stable on Lot 16 to replace the one that was damaged in 1840.

Park Building 16. The first stage of Park Building 16, on the High Street end of WL16, was included on Symington's 1844 map (Figure 2.4). However, because the armory superintendent was not concerned with that newly-built structure, he did not supply a description. Discussion of this building will be included in the next section.

Neighborhood Changes. The decade following the dissolution of the Wager estate in the mid-1830s brought many changes to the Wager Block. Lot 15 was quickly sold and Lot 16 changed owners by the end of the period. The 30-plus-year-old frame hotel on Shenandoah Street was replaced by an urban row of three-story brick houses. Many of the hotel's outbuildings were removed, although it is likely that part of one was incorporated as the kitchen of new stone Park Building 15 on High Street. Also, the hotel stable probably remained until 1840 when its roof collapsed and it was replaced by a smaller stable on WL16. Park Building 7 was constructed as a warehouse on the alley.

Meanwhile, as the town grew, more houses were constructed along the east side of High Street. Along the lower ends of their lots were stables and sheds fronting the alley along the armory canal. These structures opposite the armory were discussed in superintendents' letters which supply details about the general environment of Harpers Ferry and show attitudes of the superintendents toward the town.

In 1828, James Stubblefield proposed that the federal government purchase one acre of the six acre Wager tract. The tract in question stretched about 140 yards along the west side of the armory canal and alley. Stubblefield wanted to settle forever an old U.S.-Wager boundary dispute plus eliminate two or three "tippling houses" which he saw as detrimental to armory worker morals and as fire hazards. He also wanted to create a wider street along the canal for access by armory fire engines (Stubblefield 1828). However, the deal with the Wagers for this land was delayed until it was too late. After 1835 the tract was split among the heirs, leaving the government to deal with numerous lot owners instead of one family (Sullivan 1959:12).

In the mid 1840s, Superintendent John Symington (1844:260-271) resumed the effort to end "the danger and inconvenience of having private property, over which the U. States has no control, so immediately contiguous to public buildings of great value." He, like Stubblefield, noted the lack of fire engine access and the danger of fire from the wood stables and "small shanties" next to the canal. Indeed, his plat shows numerous buildings in the area.

But Symington went much further than Stubblefield did in his arguments. Trash was a problem as the lower ends of the lots, crowded with stables and piles of "wood & other supplies [were] a place of deposit for all the filth and offal made in the vicinity." He claimed that when

owners actually bothered to remove the trash, they dumped it into the armory canal, "thus occasioning labor and expense in cleaning out from time to time." He further suggested this situation was a major cause of "the sickness that at times prevails."

The superintendent also complained of the narrow armory entrance at Shenandoah Street and asserted it was often crowded with horses and wagons and littered with empty packing from nearby stores. It was also "the usual mart where the country people exhibit their products for sale -- rendering the place filthy and frequently interrupting the entrance to the Armory."

Symington hinted at "other reasons" for his request, but did not commit them to paper because his superior in Washington was familiar with the area and the problem.

As he wrote on, explaining his plans for the area, Symington revealed more of his vision of the orderly, controlled industrial environment he saw for the Harpers Ferry Armory. Acquisition of the land along the canal, he argued, would allow him to widen the alley into a 40-ft "avenue" and to "secure some good comfortable dwellings on High Street, suitable for Inspectors and other Officers...". From these houses, looking across the "avenue," these supervisors "could have the Armory buildings always under view..." and the lower ends of the lots would be "neatly cultivated."

It took 12 years for Symington's land acquisition and road-widening plan to be fulfilled. The project brought changes but, as evidenced by maps drawn half a century later, some characteristics of the neighborhood persisted.

Growth (mid-1840s to mid-1850s)

By the mid-1840s, the Wager Block was extensively covered with stone and brick buildings and, in the northeast corner, Wilson's wooden stable. While there were few major physical changes on the block during the next decade, the property changed ownership.

The larger community continued expanding (see Table 2.1). While the Harpers Ferry-Virginius Island population declined slightly (from 1,801 to 1,747), the "suburb" of Bolivar -- more residential -- doubled in size (515 to 1,054) between 1840 and 1850. As for Lower Town businesses, Snell (1973, see also Table 2.1) found continued growth, especially along High Street (Shenandoah and the Ferry Lot were saturated). He counted 2 hotels, 4 taverns, and 42 stores in 1850. Interestingly, the two hotels were relatively large establishments with restaurants. Both were located beside the railroad platform (Snell 1973:15). Travelers with less to spend for food, drink, and a night's sleep would have retired to one of the smaller taverns.

A contemporary newspaper article described other aspects of the community in 1848: "Harpers-Ferry contains some 5 or 6,000 inhabitants, 30 stores, 4 churches, a number of good schools and several very handsome Halls, appropriated to the Sons of Temperance, Odd Fellows and Masonic fraternity." Production had started at the new Virginius Island cotton factory and there was grumbling from the 300 armory workers who were on half pay due to the operation's heavy debts (*VFP* 3 August 1848:2).

Park Building 15. On WL15, both Park Buildings 15 and 7 had new owners, both noted briefly in the preceding section. Susan Downey bought Building 15 and most of its lot in 1846, and Frederick Roeder acquired Park Building 7 in 1847. Changes in ownership, however, meant little change in function, especially for Park Building 15.

Susannah L. Downey was in Harpers Ferry as early as 1830 and probably for a number of years before that. Even at that time she owned property (including a tavern she rented out in Bolivar) and was listed as head-of-household on the census (U.S. Census 1830:165; *VFP* 12 May 1830:2). Apparently much of her income came from a tavern or boarding house type of business in the family home. In 1850 she advertised oysters and a bar at "Our House" in Harpers Ferry, and her will, written in 1852, referred to an unnamed business in her home, which was not in Park Building 15 (*VFP* 15 November 1850:3; Wills Book 15, 18 August 1856:35).

At the time Downey purchased Park Building 15, it was the shop and residence of Alfred Andrews, shoe and boot maker (introduced in the preceding section). Andrews advertised only a few times and other information is scarce. One such notice offered to accept produce from farmers who needed shoes for their "negroes." Andrews died in January 1848 (*VFP* 7 May 1846:4; *VFP* 12 January 1848:3). The appraisal and subsequent sale of his personal property in the next two months provide a partial view of the household belongings in Park Building 15. These include shoemaker's tools and materials, dining and kitchen wares, a moderate quantity of furniture, stoves, a safe, books, a clock, carpets, window blinds, a washing machine, and a cow (Will Book 12, 29 February 1848:1; Will Book 12, 13 March 1848:2-4).

For an unknown period in the 1840s, a Miss Barrick rented a room in Park Building 15, but she left the building and probably Harpers Ferry by August 1849 (*VFP* 30 August 1849:3). Barrick participated in Sons of Temperance processions, including giving a speech at one, and served on a local committee to collect donations for Irish relief. In 1844, the newspaper announced the opening of her Harpers Ferry Female School in the "female apartment" over the Free Church (*VFP* 11 April 1844:2; *VFP* 20 August 1846:2; *VFP* 3 September 1846:2; *VFP* 25 February 1847:1).

The source which mentions Miss Barrick's room in Park Building 15 is the advertisement of G.H. Furtney announcing that he was replacing Andrew's boot and shoe making shop. In fact, from the sale of Andrew's personal property in early 1848, George H. Furtney purchased a number of shoemaker's shop items, the shop partition, and a few household goods. Apparently Furtney stayed less than a year in Park Building 15 because in April 1850, William and John Avis advertised that they were replacing Furtney (*VFP* 18 April 1850:3).

William Avis had been a shoe and boot maker in Harpers Ferry since at least 1836, but the earliest mention of John in any trade is the advertisement for Park Building 15. The partnership lasted about seven months, after which all references to William end. John moved to Charles Town by 1853 to operate a saddle and harness making shop (*SoJ* 10 May 1853:3; *VFP* 21 April 1836:3; *VFP* 22 November 1850:2; *VFP* 10 July 1851:3).

The next known tenant, Philip Engle, rented from 1854 to March 1855 (*VFP* 8 March 1855:2). Engle, a merchant in the 1850 census and an armorer in 1860, married Sarah Ann Strider of Boonsborough in 1836. He was involved in a number of social and political groups and served as constable and school commissioner (U.S. Census 1850:410; U.S. Census 1860:218; *VFP* 12 May 1836:3; *VFP* 1 October 1840:3; *VFP* 12 May 1842:3; *VFP* 28 September 1848:2; *VFP* 12 April 1849:3; *VFP* 20 November 1851:2; *VFP* 16 December 1852:2).

The next person known to have rented Park Building 15 from Downey was a Mrs. Pine. In 1856, Downey advertised the building as vacant, saying that it had been occupied by Pine and

that it was suited for a boarding house (*VFP* 10 April 1856:3). Snell (1980c:25) assumed this meant that Pine ran a boarding house and that she had been there only one year since Engle left. It is possible Mrs. Pine controlled most of the house, while Engle rented the front store room for a shop. The only Mrs. Pine located through WordCruncher was Adaline or Adeline E. Snook, who married Bushrod S. Pine in 1839. He died in 1852 (*VFP* 19 December 1839:3; *VFP* 19 February 1952:2).

Park Building 7. The scarcity of documentation on Park Building 7 continues into the mid-1840s to mid-1850s period. Frederick Roeder, whose household will be discussed later, purchased the building and the land directly under it in 1847 (Deed Book 29, 2 November 1847:240). The building's use changed for a time and it acquired a name that persisted into the next century. An 1855 letter described it as a "two story stone house, occupied now as a Dwelling and Warehouse, and formerly as a Drinking house, known as the "White Hall" (Clowe 1855).[1] Thus Park Building 7 was Anderson's warehouse until 1847, then for some length of time after that it was a "Drinking house." When it was returned to warehouse use in the mid-1850s, part of the building was used as dwelling. Perhaps Roeder rented out the second floor while using the first for storage of flour, sugar, wood, and other supplies needed for his bakery and confectionary business. An 1856 deed describes Park Building 7 as the Roeders' warehouse (Deed Book 35, 13 February 1856:299-300).

Wilson's Stable. It was 1844 when Frederick Roeder signed a lease with the Swaynes to take over Lot 16 (Deed Book 27, 29 January 1844:102-103). Later that year, Symington drew his plan (Figure 2.4) showing what was probably the original portion of Park Building 16 and Wilson's stable on WL16. As Wilson still had a lease for WL17, he removed the Lot 16 stable and erected another on the west end of WL17. Three pieces of evidence strongly support this interpretation and confirm that the final version of Wilson's stable sat on WL17.

First, a letter written in early 1856 stated that Lot 17 then contained a "hotel stable, filled with hay and straw, under careless attendance day and night" (Clowe 1856). Secondly, the follow-up letter in 1857 reported the "stable and fixtures occupying Lot 17 ... have been removed" (Clowe 1857). Thirdly, architect Alan Walmer (1964b:7,9) observed the western 60 ft of the Hog Alley retaining wall was originally part of a stable which sat on WL17. He found two walled-up barn-type windows in the north wall of the first floor addition to Park Building 16.[2]

Park Building 16. Snell (1980d:12) pointed out that in all likelihood it was Frederick Roeder who constructed Park Building 16 between January 1844, when he took over the WL16

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[1]Ramakrishna (1990:10) seems to have misinterpreted another source which cited Huger's letter. As a result, she states that Building 7 was a tavern called White Hall in 1852.

[2]Deciphering the historic record for this period for WL16 is complicated by the fact that previous researchers have not cited the same set of documents or have actually quoted them incorrectly. Hopefully, the hypothesis of three successive stables proposed in this report is more accurate.

lease, and December 1844 when Symington submitted his report and map showing the building. However, Wilson's lease for Lots 16 and 17 stipulated he was to construct substantial buildings on High Street. It is possible he began Park Building 16, although Snell argues this was unlikely due to the fact that the deed ending the lease did not provide compensation for a building (Deed Book 27, 29 January 1844:102-103).

The original version of Park Building 16 comprised the basement and first floor measuring 22 ft 3 inches on High Street and 17 ft 7 inches deep. A space of 10 ft remained between Park Building 16 and WL17 to the north.

Just a couple of years into his lease, Frederick Roeder bought Lot 16 outright, and a few months later he acquired WL17 as well. Wilson's lease to WL17 was continued under Roeder (Deed Book 29, 13 September 1847:303-304; Deed Book 29, 2 January 1848:304-305).

The Roeders enlarged their house the first time by adding one room to the north on both the basement and street levels.[3] The south wall of the stable on WL17 was used as the north wall of the addition. Because this addition crossed the property line onto Lot 17 by 3½ ft, the changes must post-date January 1848 when the Roeders acquired Lot 17.

The small (14 ft 6 in by 11 ft 3 in) two-story Park Building 16A off the southeast corner of Park Building 16 also dates to the Roeder years. Sources are silent about its date of construction and ambiguous about its use. It may have been used for the Roeder business as well as for dwelling (Court of Claims 1906; Flanagan 1992).

In any event, during the mid 1840s, Anna Maria and Frederick Roeder, both from Saxony (Germany), set up home and business in a fairly small house (one room on the High Street level and two in the basement) between the large rental property Park Building 15 and Wilson's stable on WL17. Birth years estimated from census records reveal that by 1848, when the additions may have been made to the house, there were three Roeder children. Another four were born after that. (Of the seven Roeder children recorded by the censuses, all survived to adulthood.) In 1850, the household also included 16-year-old Mary M. Gardner, possibly an apprentice to Anna Maria, whose four children at the time ranged from 1 to 7 years of age. By 1860, the household consisted of the nuclear family of nine people only. But Mary Louise was 17 and Matilda E. was 15, old enough to be doing a large share of the household's domestic work. By that time, too, the two older boys, Augustus H. (apparently known as Herman as an adult) and James A., at 13 and 11 respectively, helped their father in his baking and confectionery business (Court of Claims 1906:4). According to census records, several of the Roeder children attended school and both of their parents were literate (U.S. Census 1850:411B; U.S. Census 1860:193).

Other than the references reporting Frederick Roeder's occupation as confectioner and baker, no documents supply details about that business. Roeder never advertised in the newspapers. A couple of other bakers, competition for Roeder, did so. Frederick Roeder was listed by the census takers in 1850 and 1860 as a confectioner, but other sources used the term "baker" (Barry 1903:108; Court of Claims 1906:3). A probate list included "1 marble slab for

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[3]Previous HSRs have suggested Building 16 was enlarged in one step (in 1848) or two (the addition in 1848 and third floor in 1856-7). However, the two-stage scenario is supported by evidence not cited in these reports. In 1956, removal of the back porch during stabilization exposed a sawtooth brick cornice which defined the roofline of a two-story building created by the first of two enlargements (NHF-312, Figure 2.7).

Candy manufacture" and "1 broken showcase" (Will Book 1864-1881, 3 August 1865:20-21, printed in Appendix 2.A) which may have been used for display of wares. While the evidence for the exact location of the bakery building is uncertain, it was somewhere behind Park Building 16. It had a wood house and shed connected to it (Court of Claims 1906:3,4).

Years later an old friend described Frederick Roeder as "very much respected" and noted that "by industry he had accumulated a considerable property" (Barry 1903:108). The 1860 census valued the Roeder real estate holdings at $2,000 and personal property at $1,850. At that time the Roeders owned WL16 (with Park Buildings 5 and 16), and Park Building 7 next door. They held WL17 for about eight years, had interest in a Camp Hill Lot (*VFP* 24 August 1865:3), and bought and sold lots in Bolivar (Deed Book 27, 28 November 1845:454-5; Deed Book 28, 12 June 1846:148; Deed Book 28, 14 July 1846:189-190, 199-200; Deed Book 30, 7 August 1848:83-84). Frederick Roeder also had $400-$500 available for loans to the Schusters, who operated a hotel in Bolivar, and to Mary and John Hofer (Deed Book 36, 10 November 1856:276; *VFP* 11 July 1874:2). One other reference to Roeder's property is uninformative about location, so it may refer to one of the lots already mentioned. A list of an estate auction in 1850 included a "frame stable on ground of F.A. Reoder [sic] on a lease" (*VFP* 20 December 1850:3). It took Roeder less than two years to pay off a $2,000 loan (Snell 1959:4).

The newspapers reported Frederick Roeder elected town councilman, first in 1851 and again in 1852 and 1857. He served on a local Democratic Party committee (*SoJ* 26 October 1852:2; *VFP* 9 May 1851:2), although he was later "one of the first men in the State of Virginia who dared express sympathy with the Republican party" (Barry 1903:108).[4] Unfortunately, no other written sources concerning any of the Roeders, prior to the Civil War, have been found.

Urban Renewal (mid-1850s - Civil War)

Hog Alley. During the late 1840s, the government began implementation of a plan to purchase land opposite the armory and widen the alley running along the canal. This included the purchase of a 25 ft-wide portion of the east ends of WL17 (with stable on the west end) and WL16 (Park Building 16 in the west end).[5] In the mid 1850s, the plan was modified to include widening of the alley all the way to Shenandoah Street (originally the widened part would have ended with WL16), and the creation of a cross-alley in the location of WL17 (Deed Book 30, 6 June 1848:230-232; Deed Book 35 13 February 1856:299-300; Deed Book 36 26 August 1856:135-137).

To make the cross-alley, the United States purchased, 28½ ft of the original 32 ft width of Lot 17. The Roeders added the remaining 3½ ft strip to Lot 16's north side where they had most likely already built the addition to Park Building 16 already described. By mid-1857 the

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[4]Barry's hyperbole may have been inspired by a long-standing Roeder estate claim still in court when he wrote.

[5]Wilson and the Roeders signed a memorandum of agreement in 1848 in which Wilson relinquished his lease rights to the 25 feet of WL17. However, in 1851, Wilson filed suit in County Court over the property. In response, Roeder spelled out his case in a letter to the newspaper (*VFP* 4 September 1851:3).

stable on WL17 had been razed, except for the foundations which were converted to retaining walls, and the alley was filled to slope from High Street down to the new Potomac Street (Clowe 1857). The second enlargement of Park Building 16, the brick third story, was added after the stable was gone.

Park Building 5. The sale of the 25 ft end section of WL15 meant the Roeders parted with slightly over half of Park Building 7 -- the front half. The government demolished its portion and the Roeders had a new facade constructed on the remainder. At the same time, Snell (1980a:13) argues, the Roeders used the money obtained for parts of WL15, WL16, and WL17 to finance construction of Park Building 5 on the "new" east end of WL16, facing the newly-created Potomac Street. The rear wing of Park Building 5 is definitely an addition but the date of its construction is unknown. A later, somewhat ambiguous, document giving number of rooms in Park Buildings 5, 7, and 16 strongly suggests the addition was built before 1861 (Snell 1980a:15).

The uses of Park Buildings 5 and 7, a matched pair facing the 40 ft wide Potomac Street, are unknown for the years immediately preceding the Civil War. Court testimony given years later indicates that both were leased (Court of Claims 1906:4).

Park Building 15. No information has surfaced concerning Park Building 15 in the years just before the war. It was owned by the heirs of Susan Downey, who died in 1856 (*VFP* 3 July 1856:2). Contrary to suggestions in previous reports, further documentary search shows it unlikely that the Downey daughters lived in Park Building 15. Park Building 15 appeared on the Downey Estate appraisal as "a Leasehold in Harpers Ferry, subject to a groundrent of $40 per annum" (Will Book 15, 18 August 1856:35; Will Book 15, 23 September 1956:72). Later census entries and Downey's will indicate daughters Ellen and Louisa lived elsewhere in the area.

Snell (1980c:25) considered it likely that the residents of Park Building 15 in the late 1850s were the household of George W. Furtney, a shoemaker undoubtedly related to the George H. Furtney who had a shoemaking shop there in 1849. In any event, documentary information about the Furtneys is rare. Other than the 1860 census and the 1848 Andrews probate records, no references to the George W. Furtney family have surfaced.

War and Recovery (1861-1880s)

Many research issues for the 1860s-1880s era are concerned with the difficulties brought by the Civil War and residents' coping strategies. While documentary sources are often few for the pre-Civil War years, they are extremely scarce for the 1860s. Newspaper publication was disrupted by the war, and many public and private records were destroyed or scattered. Indeed, the only known accounts of the Roeder family were recorded 40 years later. The decade after the war saw the return of newspapers.

The buildings in the Package 118 area were sold -- Park Buildings 7 and 15 in 1873, Park Buildings 16 and 5 in 1881.

Civil War. By 1860, Harpers Ferry was already strained by the war not even started elsewhere. The preceding Fall, John Brown's raid brought the first violence and death to the community. The census of 1860 showed the town's population had dropped nearly 400 persons since the last count, returning close to the 1825 figure. Bolivar's size had increased slightly. Snell's data (see Table 2.1) shows slight change in business statistics during the 1850s. He found one less tavern and five fewer stores, but the locational pattern within Lower Town had not changed. The hotels remained on the Ferry Lot, with major stores along Shenandoah Street. Shops lined High Street, warehouses and stables dominated Potomac Street, and upper floors were used for dwellings.

The year 1861 brought more violence to Harpers Ferry and the Wager Block. As the war went on, more residents of the town were killed by shelling and sniping, while others joined armies or fled. Those who returned found homes and shops ransacked by townspeople and soldiers from both North and South. Troops commandeered buildings for dwellings, offices, stables, and storage. Private outbuildings were dismantled for materials and the federal gun works and many private industrial buildings were destroyed. For those residents who stayed, daily life was often one of terror, boredom, and a struggle to answer basic needs. Snipers made the streets dangerous. Spies and accusations of treason added tension and damaged social ties in the community. Food -- the little that was available -- was bought at inflated prices or stolen. Diversions were few (Barry 1903:109; Marmion 1959).

On March 23, 1861, Anna Maria Roeder died. She was buried in the Lutheran cemetery in Bolivar. No record of the cause of her death has been found. During the next couple of months, her seven children and husband had to cope with the second military occupation of Harpers Ferry, this time by Confederates. The troops left in June, but sporadic fighting resumed in the area July 2. On the evening of July 4, Frederick Roeder, walking along the street not far from home, was killed by a ricocheting bullet fired by a soldier celebrating Independence Day (Snell 1980d:38-40).

With both parents gone, responsibility for the household fell to the oldest daughter, Mary Louisa, who was about 18 at the time and recently married to 25-year-old Jacob J. (or John) Kern (Snell 1975:41). Kern had come to Harpers Ferry as a child from Germany. In 1850, at age 12, he was living with John and Christiana Schuster, also German, who ran a hotel in Bolivar and who once borrowed money from Frederick Roeder (U.S. Census 1850:392). Very probably, young Jacob apprenticed in Roeder's bakery.

The family property was taken over in July 1861 (shortly after Frederick's death) by the 72nd Pennsylvania Fire Zouaves, commanded by Col. Baxter. Park Building 16 became officers' quarters and the military post office. Horses were stabled in the first floor of Park Buildings 5 and 7, with feed and other supplies stored in the upper floors. The soldiers even used the bakery -- for its intended purpose (Court of Claims 1906:3,5). The Kern-Roeder household fled, staying in Bolivar while, for part of 1861, some of them went as far as Middletown and Frederick, Maryland (Court of Claims 1906:3). Augustus Roeder enlisted in 1863 at the age of 16, and another brother tried but was rejected because he was too young (Court of Claims 1906:3; Snell 1980d:41-42).

The Kern-Roeder family regained the "home building" (Park Building 16) in late March 1862, but on a number of occasions during the war, soldiers returned to use Park Buildings 5 and 7 (Court of Claims 1906:5). Not only had some of the household's possessions, including

the family bible, been destroyed or stolen, but the buildings were damaged and outbuildings removed. Also, the occupiers left graffiti on the walls. When Frederick's estate was finally probated after the war, assessors found few household goods (Appendix 2.A).

To date, no information concerning Park Building 15 during the war, and the few years following, has surfaced.

Roeder-Kern. Young Mary Louisa and Jacob Kern assumed responsibility for a large household. In 1870 the census showed at least three children had been born to Mary Louisa, 26, and John J., 33. The oldest child, Mary E., 7, was born during the Civil War. She was the only child in the household who attended school in 1870. The census clearly shows all of the Roeder siblings still resided together. Herman (called Augustus as a boy) was 22 and worked for the railroad. James, at 20, was a farm laborer. Julia, just 2 when her parents died, was 10. In addition to income earned by Jacob Kern and his brothers-in-law, the household had a boarder, Philip Gardner, a 27-year-old wheelwright from Maryland and possibly related to Mary Gardner who lived with the Roeders in 1850 (U.S. Census 1870:28). All of this adds up to 12 people living in 11 rooms (basement, attic and 16A included).

Park Building 16 wasn't quite so crowded by 1880. The census taker that year found only the Kern nuclear family -- Jacob, 40, Mary, 35, and their own six children ranging in age from infancy to age 16. Another child, Jonathan, had died in 1875.

Immediately after the Kern household in the 1880 census is one headed by Mary's brother James, who was listed as 30 years old and a laborer (farm laborer in 1870). His wife Mary C. was 28. They were caring for three children of their own, ages 1 through 6 plus a 15 year old nephew, James Allen (U.S. Census 1880:6-7). The order in which the households are listed in the census record suggests that the Kerns were in Park Building 16 and the Roeders in Park Building 5.

Normal lifestyles did not return to Harpers Ferry at war's end. Like many residents, the Kerns and Roeders did what they could to earn money in a town which had lost all of its major industries. Perhaps it was the training J.J. Kern received at the Schuster Hotel and Roeder bakery which gave him a suitable occupation. By October 1865, John J. Kern & Co. opened a restaurant or oyster saloon. Kern's partner was Goldstein and their business was located somewhere on High Street in a restaurant previously operated by an elusive George Clute. Kern's business was still in a High Street building in 1871 (*VFP* 5 October 1865:2; *VFP* 12 October 1865:2; *VFP* 30 May 1871:3).

Oysters "by the plate or can, eat in or take out", plus ale and cigars, were the advertised specialties in the Kern & Co. restaurant. Also, the firm catered a medieval tournament and ball on Bolivar Heights in late November 1865 and Kern served as an aide in that event (*VFP* 5 October 1865:2; *VFP* 12 October 1865:2; *VFP* 30 November 1865:2). By the 1870s, Kern probably ran the business alone -- newspaper items refer to J.J. Kern or Jake Kern. Once, he treated the newspaper editors to ice cream and, on another occasion, took them a "mess of fine bass" (such gifts were a common ploy to get mention in the paper). After receiving the fish, the editor lauded Kern as the "champion fisherman of Harpers Ferry, baker and confectioner" whose oyster saloon was "in full blast" (*SoJ* 18 June 1872:3; *SoJ* 12 November 1878:3).

Evidently, J.J. Kern was running a bakery and confectionary business in addition to the oyster saloon. He was listed in the 1870 census as a confectioner and in the 1880 census as a

baker. Indeed, he made news in 1869 for baking an 85-pound "pyramid cake" for the Lutheran church raffle, and in 1871 he played "quarter master" for Santa Claus. Santa's proclamation (submitted to the paper by secretary Robin Goodfellow) announced that reports of the children of Harpers Ferry and Bolivar had been so good that Santa was "establishing Head Quarters at JAKE KERN'S Store where during the Hollidays [sic] we will dispense our favors in the shape of CONFECTIONARIES, and CANDIES of all kinds' FRUITS, TOYS, and an assortment of good things generally, such as has never been seen out side [sic] of Fairyland." The advertisement closed with a poem repeating the message: "From Elfin land he's coming fast; and soon he will be here ..." (*SoJ* 7 December 1869:3; *SoJ* 19 December 1871:3; U.S. Census 1870:28; U.S. Census 1880:6). It is unknown whether Kern did the baking and candy making at his oyster saloon or whether the Roeder bakery behind Park Building 16 was still standing after the war.

During the early 1870s, Kern's name appeared numerous times in newspaper accounts of local politics and government. As a member of the Conservative Democratic Party, he helped supervise elections. He served as supervisor of the court, Harpers Ferry town councilman, and local circuit court judge (*SoJ* 18 April 1871:2; *SoJ* 8 August 1871:3; *SoJ* 3 October 1871:2; *SoJ* 31 October 1871:2; *SoJ* 11 June 1872:3; *SoJ* 7 January 1873:3; *VFP* 31 August 1872:2; *VFP* 22 February 1873:2; *VFP* 22 October 1875:2).

Apparently the mid 1870s were difficult years for the Kerns and Roeders. In September 1875, a son died. At one point, the newspaper reported the Roeder property had been sold to the state to pay taxes, but apparently the taxes were paid because there is no corresponding deed (Deed Book I, 25 January 1881:104; *SoJ* 28 September 1875:3; *SoJ* 25 January 1876:2; *VFP* 22 October 1875:2). While a newspaper item shows John Kern was still operating his oyster saloon and bakery in 1878, and that he was again elected to the town council in 1879, references to him declined in the mid-1870s and ceased by 1880. His obituary appeared in 1904 (*FA* 6 August 1904:3; *SoJ* 14 January 1879:3).

Other family members, especially James Roeder's family, continued to appear in the newspapers well into the twentieth century, but only the years until 1881 are of interest here. James Roeder, listed as a laborer in the censuses, may have attempted a saloon in 1872 when he obtained a liquor license. Apparently he did not continue the effort because he did not reapply in later years. He next received mention in 1876 when it was reported he had drawn a knife and cut two men for unreported reasons (*SoJ* 20 May 1872:3; *SoJ* 5 September 1876:3). James raised pigs and, as was customary in Harpers Ferry, the animals ran loose in town. About 1881, they were rooting about in Hog Alley -- "where everything was disposed of in those days" -- and were poisoned by paris green (insecticide containing arsenic) in sweepings from the drug store on the north side of the alley (*Harpers Ferry Times* [*HFT*] 26 October 1906:4).

Park Building 15. Virtually nothing is known about the fate of Park Building 15 during the war years and the following decade. Graffiti on the walls shows it was occupied by soldiers during the Civil War. Then, in 1868, Susan Downey's heirs sold Park Building 15 and three properties in Bolivar to pay debts. Joshua and Mary A. Cavalier and Truman W. Potterfield purchased Park Building 15 with all of WL15sb4 except Park Building 7 (Deed Book 3, 28 April 1868:337; Deed Book 4, 13 September 1868:205; *VFP* 13 February 1868:2). The Cavaliers and

Potterfield held the property five years, but no record of occupants or uses has been found. The owners probably did not reside or otherwise use Park Building 15. The purchasers in 1873, remained for a number of years. They are discussed in the next section.

Saloon Era (1880s-1914)

The next 30 years were ones of relative stability for the Upper Wager Block in terms of both physical changes in the buildings and of their ownership. Early in the period all of the Package 118 property changed hands, but the new owners stayed for a considerable time. The mixed residential/business pattern continued, and the businesses were types familiar to the area: saloons, restaurants, a dry goods store. At the end of the era Harpers Ferry prohibited sale of alcoholic beverages and the saloons closed.

Unfortunately, the post-Civil War years at Harpers Ferry have received relatively little attention until recent years, but two types of documentary sources produced during these years, photographs and fire insurance maps, complement newpaper and deed information.

Park Building 15. After a long period of scarcity, documentary references for Park Building 15 are relatively more common for the 1870s. In 1873, after five years of ownership, the Cavaliers and Potterfield sold it to Charlotte R. Hopwood (Deed Book A, 1 May 1873:158). About the same time, her husband, Charles L., purchased Park Building 7, thus reuniting all of WL15sb4 for a short time. The Hopwoods sold Park Building 7 in 1879 (Deed Book G, 15 March 1879:221), but held onto Park Building 15 and the rest of the lot into the twentieth century.

Charles and "Lottie" Hopwood were married in 1867, and Charles ran a dry goods store beginning in 1870 if not earlier (*SoJ* 19 March 1867:3; U.S. Census 1870:15). About the time of the WL15 purchases, Charles broke off a business partnership and moved the family and store to Park Building 15 (*VFP* 28 March 1874:2; *VFP* 2 May 1874:2). The 1880 Census shows Charles was 35, Charlotte 32, and the four children ranged from 5 to 12 years of age. The oldest, Harry, attended school that year.

Except for daughter Bernice, Charles is the only family member to show up in the newspapers. He was a Mason, belonged to Knights Templar and played baseball with the Harpers Ferry Terrors on at least one occasion (*SoJ* 16 November 1880:3; *VFP* 8 June 1878:3; *VFP* 2 August 1888:3). He was involved in Lutheran church activities, including fundraising events and Christmas entertainment (*SoJ* 19 June 1877:2; *SoJ* 1 October 1878:3; *SoJ* 13 January 1880:3). Daughter Bernice played the organ at Easter service and participated in a Sons of Jonadab (temperance) benefit (*SoJ* 17 April 1888:2; *VFP* 14 May 1890:3).

References to the Hopwoods, fairly common in the 1870s and 1880s newspapers, ended in mid-1890. Then, in 1908, came the notice of Charles' death at age 66 in Baltimore (*SoJ* 14 April 1908:3). This strongly suggests that the Hopwoods moved away from Harpers Ferry in the earlier 1890s.

Two of the few alterations made to Park Building 15 may have been the work of the Hopwoods. According to Snell (1980c:15) they probably added the wooden third story to the kitchen wing. A second addition, a narrow two-story wood porch along the south side of the main building may have been constructed in the 1880s. The upper front corner shows in HF-

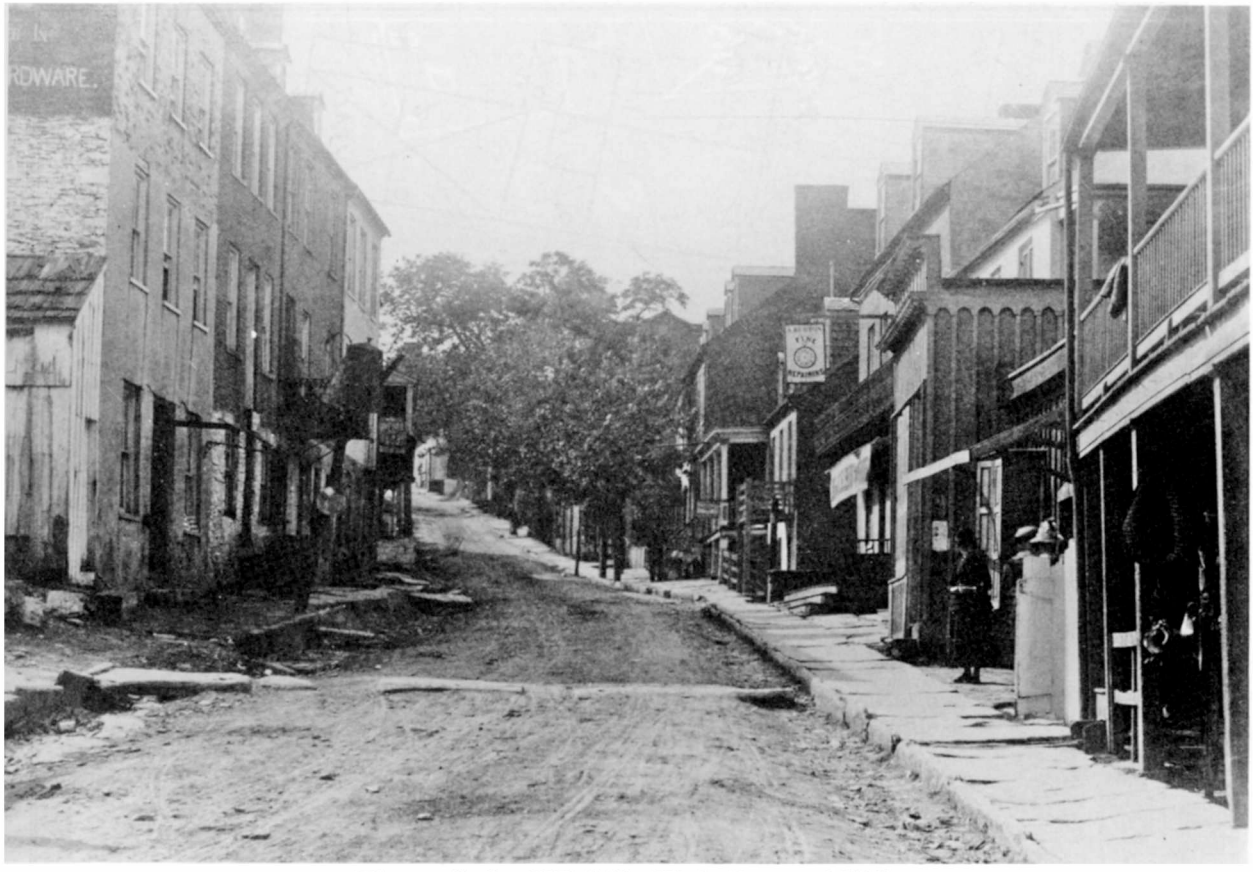


Figure 2.6. HF-648, High Street, 1886.

648 which Snell (1980c:71) dated to 1880 to 1896 (Figure 2.6). The addition was not shown on the 1894 Sanborn map but was depicted on the 1902 map (Figures 2.7 and 2.8).

The earliest of the Sanborn-Perris Fire Insurance Maps, dated 1894 after the Hopwoods probably left Harpers Ferry, shows Park Building 15 as a dry goods store (Figure 2.7). Possibly the Hopwoods rented the building to someone who continued the business, or the Sanborn map was not fully up to date in this case. The 1902 fire insurance map shows the building vacant (Figure 2.8). On the 1907 and 1912 maps, Park Building 15 is marked as a millinery shop (Figures 2.9 and 2.10). Checking and cross-checking with WordCruncher turned up a name that may go with that millinery shop -- Sadie Gorfine. She first advertised her High Street shop, a branch of a Baltimore store, in 1908 (*Farmer's Advocate* [*FA*] 21 October 1908:3; *FA* 12 March 1910:2). In less than two years, however, the announcement came that Nellie McConnell (widowed daughter of T.J. Burleigh, then owner of Park Building 16) would replace Gorfine. In 1911, McConnell and partner Emma Higgins moved their millinery store to another location in Lower Town (*FA* 25 June 1910:2; *FA* 18 March 1911:2).

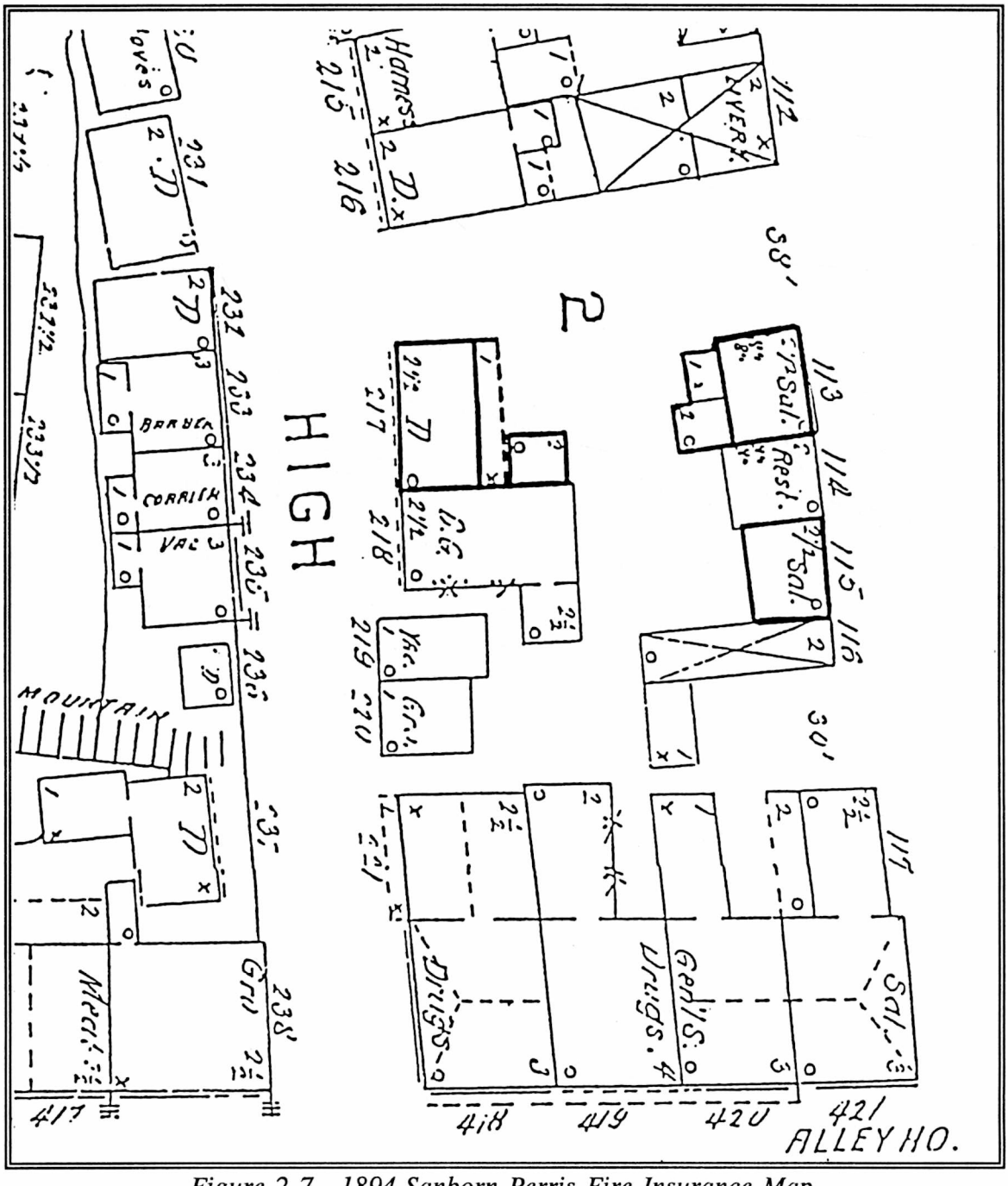


Figure 2.7. 1894 Sanborn-Perris Fire Insurance Map.

Park Building 7. As already noted, the Hopwoods owned Park Building 7 from 1873 to 1879 but nothing is known of how they used it. They sold part interest to Julia and Albert Roeder, children of Frederick and Anna Maria. Alexander Murphy purchased the building in 1879 (Deed Book G, 15 March 1879:221; *VFP* 1 March 1879:3). Four months later, he sold

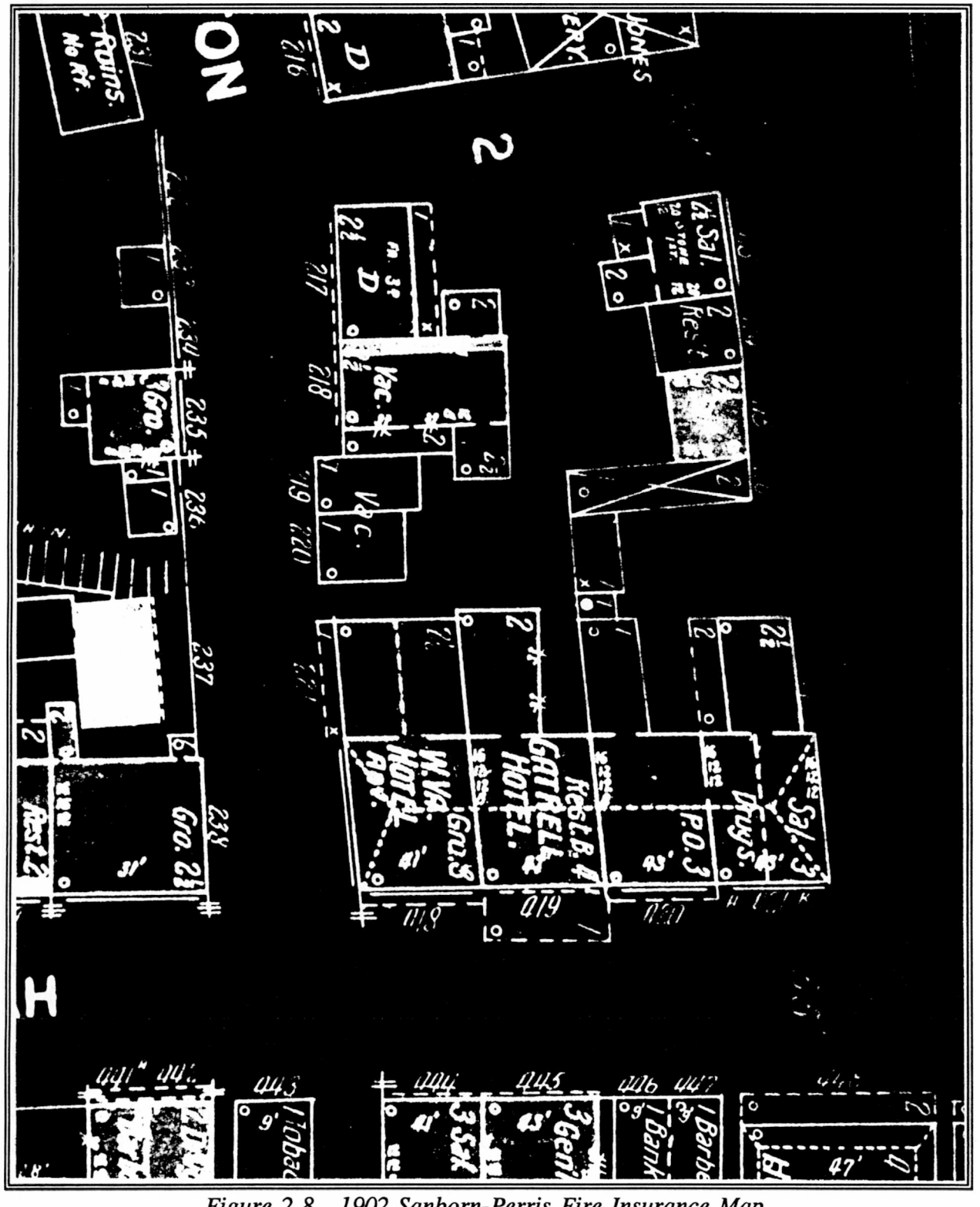


Figure 2.8. 1902 Sanborn-Perris Fire Insurance Map.

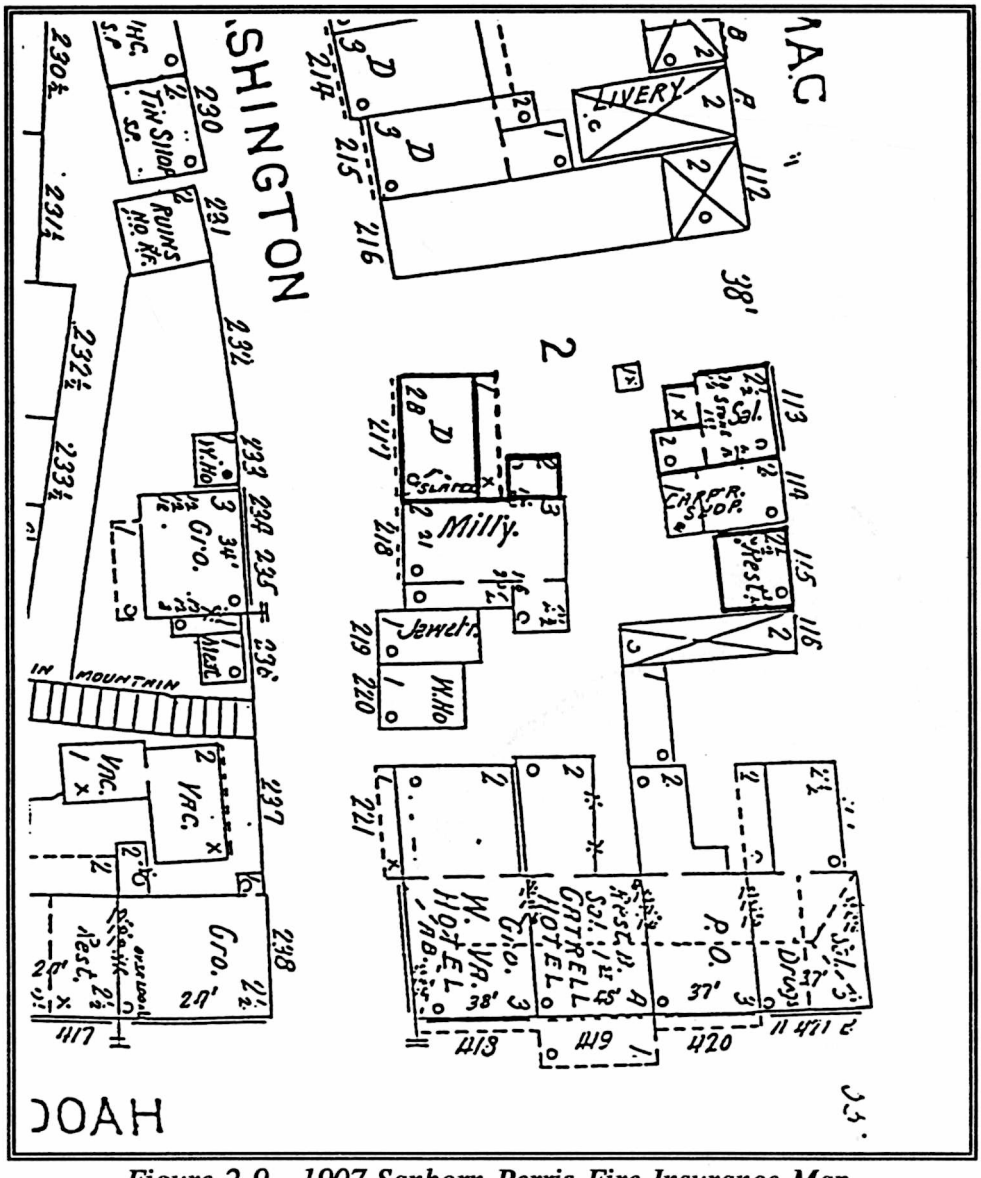


Figure 2.9. 1907 Sanborn-Perris Fire Insurance Map.

the property to George R. Marquette, who held it as a rental property until c. 1913 (Deed Book N 15 July 1879:237; Deed Book 147 28 March 1928:147).

Marquette, telegraph operator and station agent for the B&O Railroad at Harpers Ferry, was involved in banking, real estate and other speculative enterprises (*FA* 4 March 1911:2; *SoJ* 24 June 1884:3; *SoJ* 18 May 1897:2; *SoJ* 25 October 1898:2; *VFP* 3 October 1894:2). Evidently he rented Park Building 7 -- probably for much of the 1880s and into the 1890s -- to Joseph H. Renner, who operated an oyster saloon (Ramakrishna 1990:22; *SoJ* 9 May 1882:3; *SoJ* 4 June 1889:2; *VFP* 13 May 1882:3).

In 1891 at age 53, Renner suffered a paralyzing stroke and apparently retired to live with his daughter's family. He moved away from Harpers Ferry before his death in 1903 (*SoJ* 24 March 1903:3; U.S. Census 1900:75A; *VFP* 9 September 1891:2; *VFP* 19 March 1903:2).

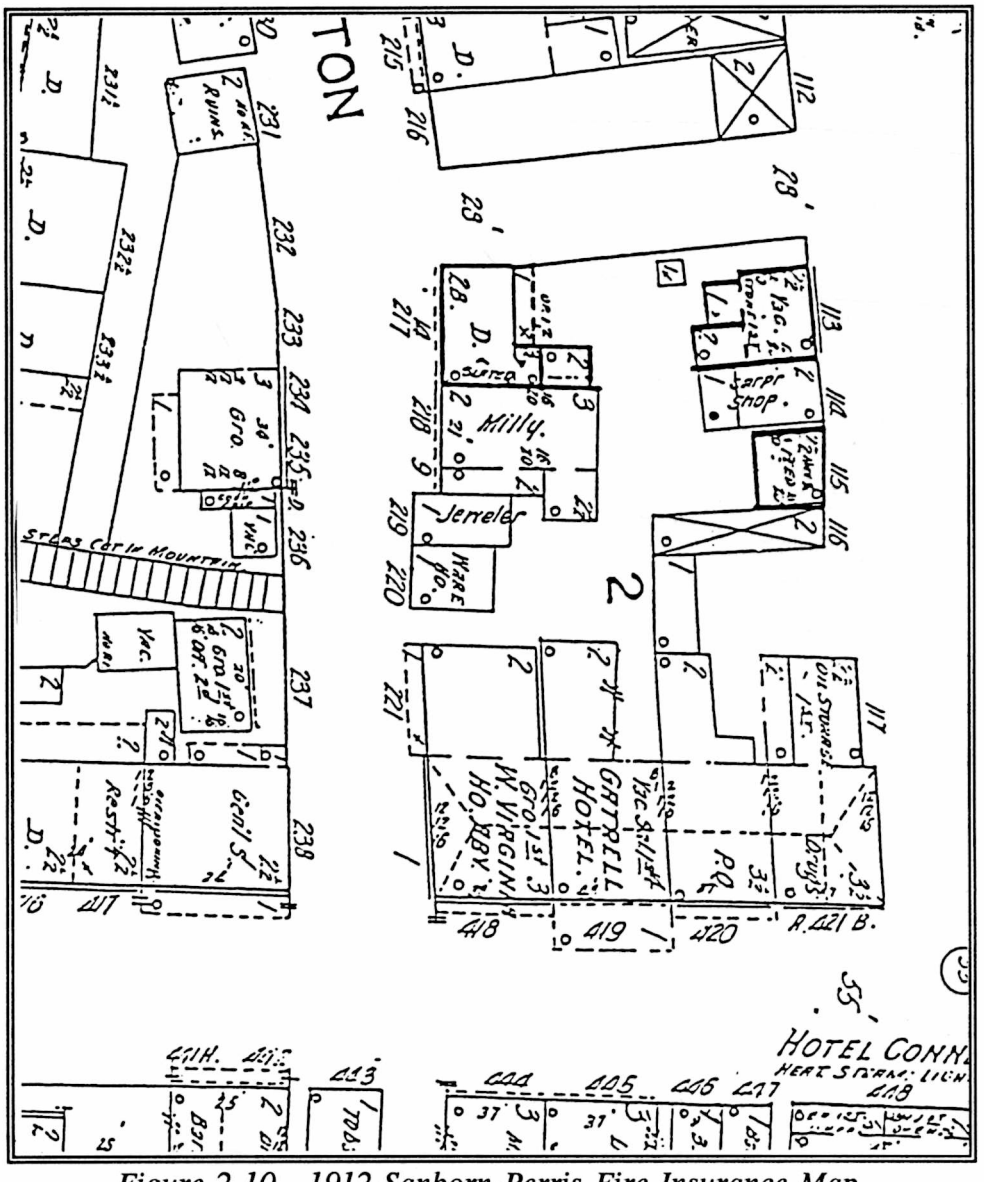

TON
Milly.
Jeweler
GATRILL HOTEL.
W. VIRGINIA HOUSE
HOTEL CONN
Grocery
Restr.
Vac.
Milliner
Harp Shop.
Oil Stoves
Ice Cream
Ice Water
Grocery
Vac. Ground
Vac. Ground
Vac. Ground



Figure 2.11. HF-655, White Hall, c. 1886. Gable end with restaurant sign is visible behind and to the right of John Brown's Fort.

brick buildings around it. (No doubt white was a tradition for the building and the inspiration for the name "White Hall.") Across the front of the building was painted "OYSTERS AND LUNCHES." A plain sign jutted out above the center door. In HF-655 (Figure 2.11) it clearly reads "...RANT & SALOON" and in HF-569 the word "RESTAURANT" is visible, but "SALOON" appears to have been painted over. This suggests, first, that HF-569 is a later photograph, and secondly, a shift in the nature of the business.

The fire insurance maps for 1894 and 1902 (which post-date the photos just discussed) show Park Building 7 as a saloon, but on the 1907 version it is labeled restaurant (Figures 2.7, 2.8, and 2.9). The building's function had reverted to a warehouse before 1912, when the Sanborn-Perris map shows it used for hay and feed (Figure 2.10). Around 1911, Marquette sold Park Building 7 to hotelier T.M. Conner, who may have stored stable supplies there (Deed Book 147, 28 March 1928:371).[6]

During this period, Park Building 7 was hemmed-in by two wooden structures. Photograph HF-96 and the 1894 fire insurance map (Figures 2.12 and 2.7) show both. To the south, on the lower level of Wager Block (not in the Package 118 area) was a long shed filling

[6]According to the deed for the next sale of Building 7, the Marquette-to-Conner sale was unrecorded and occurred about 1913. However, Marquette died early in 1911, meaning the sale took place before then (*FA* 4 March 1911:2).

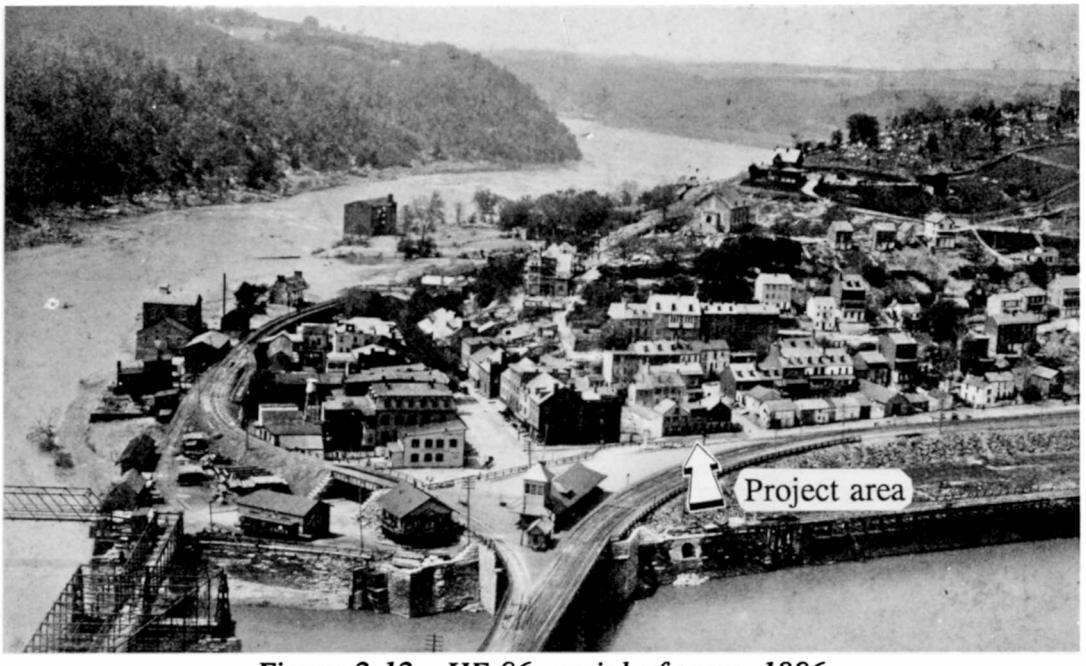


Figure 2.12. HF-96, aerial of town, 1896.

what had previously been an accessway. To the north, on WL15sb4 in the space between Park Buildings 5 and 7, was Park Building 6. Photograph HF-96 and the 1894 Sanborn (Figures 2.12 and 2.7) show both of these wooden buildings.

Park Building 6. Park Building 6 probably was constructed in the early 1890s and certainly by 1894. Previously a one-story wooden privacy fence with a gate hid the space between Park Buildings 5 and 7 from the street. By the time of the construction of Park Building 6 in that space, the Hopwoods were gone, thus Park Building 6 was probably built by the person(s) renting Park Building 15 and its portion of WL15. Who this was is not known. NHF-322 (Figure 2.13) was taken in 1956, just before Park Building 6 was razed. A rear addition shown on the Sanborn maps was gone by the time the photographs were made.

According to fire insurance maps dating to 1894 and 1902, Park Building 6 was a restaurant. After 1906 it was enlarged for use as a carpenter's shop as indicated by 1907 and 1912 insurance maps.

Burleigh. Next door, WL 16 remained in the Kern-Roeder family until 1881, when Bridget Boerly[7] purchased it. Bridget and her husband Thomas had immigrated to the United States from their native Ireland by 1844, the year daughter Mary was born. Both were in their

[7]In earlier references the name was generally given a German spelling of "Boerly" or sometimes a more English "Borley" or "Burley." Later, for the second and later generations, the most common spelling was "Burleigh." However, on one occasion the name was given a distinct Irish accent with "O'Burley."



Figure 2.13. NHF-322, Park Building 6, 1956.

mid-20s at the time (U.S. Census 1850:414B). By 1853, they opened a tavern in a stone building on WL56 Section C, the narrow plot at the intersection of High Street and Public Walk (Snell 1975:60).

Evidently, the tavern was Bridget's responsibility. In a mortgage agreement written in 1853, Thomas stated that Bridget was keeping the "tavern boarding house out of which from her excellent care and labor considerable money was made" (Deed Book 34, 8 July 1854:134-136). Thomas reportedly operated a grocery (Barry 1903:85).

By the time Bridget purchased WL16, she was a widow (Thomas was killed during John Brown's raid) and retired from tavern keeping. Just a year earlier the 1880 enumeration showed her as 60 years old and keeping house. Living with her were Thomas Jr., 28, the youngest of her four children, his wife Mattie, 21, and their daughter Mary E., 2 (U.S. Census 1880:10). Thomas Jr. was listed as a laborer, but later that year he was elected town constable, a post he apparently kept a number of years, even after he opened a saloon in Park Building 5 (*FA* 23 April 1904:3; VFP 16 October 1880:3; *VFP* 14 January 1882:3). Mattie died at age 25 in 1890 and T.J. married Mary (or Cora May or Mame) Stoutzenberger before 1900 (*SoJ* 11 September 1952:A6; U.S. Census 1900:30B; U.S. Census 1910:190; *VFP* 29 January 1890:3). Bridget

Burleigh died in her mid 70s in 1894 (*VFP* 17 October 1894:3), by which time T.J. Burleigh had gained considerable prominence in town.

In addition to his role as constable, by the early 1900s, Burleigh sat on the town council. He was mayor of Harpers Ferry more than 35 years, belonged to the local Democratic Executive Committee 50 years, served many years as Bank of Harpers Ferry president and U.S. Marshal, and captained a volunteer fire department for a time (*SoJ* 22 February 1881:2; *SoJ* 14 December 1932:1).

Apparently, Burleigh's main source of income was his saloon (Figure 2.14, HF-1211, shows his sign on Park Building 5). Beginning in 1885, four years after his mother purchased WL16, he obtained a liquor license. He continued to obtain licenses virtually every year through 1914, when the town went dry.

Evidently the Burleigh saloon was in Park Building 5 from the 1880s, when he started, into the first years of the twentieth century (HF-1211, Figure 2.14). Next door, J.H. Renner's oyster saloon was in Park Building 7 until the early '90s. The 1905 licenses specified that Harry E. Rockenbaugh was in White Hall and T.J. Burleigh was in the Burleigh building (locations were not given most years). In 1909, 1910, and 1912, however, the notices of licenses put Burleigh in White Hall (*FA* 11 March 1905:2; *FA* 8 May 1909:2; *FA* 21 December 1912:2; *SoJ* 17 May 1910:2).

Prohibitionists were making this a period of uncertainty for saloon-keepers. Licenses were sometimes denied, then renewed a few months later. It is no wonder the 1912 fire insurance map (Figure 2.10) shows Park Building 5 vacant and Park Building 7 used for hay and feed storage.

Unfortunately, the enumerator's records for 1890, which was the first time the Burleighs were counted in Park Building 16, are not available. Both the 1900 and 1910 censuses show a large household, including up to seven children, in-laws, and a boarder or servant (U.S. Census 1900:80B; U.S. Census 1910:190).

As one of the town's better-known families, the Burleighs often received mention in the newspapers ranging from illnesses to weddings, a son in college, social and sport events (*FA* 29 August 1903:2; *FA* 3 December 1904:3; *FA* 18 December 1909:2; *FA* 25 December 1909:2; *FA* 3 February 1912:2; *FA* 25 June 1910:2; *VFP* 18 February 1915:3; *FA* 20 November 1909:2).

Physical aspects of the Wager Block can be found in the historic documents. The 1894 and 1902 fire insurance maps give little detail, just buildings and their porches. A privy on the north edge of WL16 near Park Building 5 was first depicted on the 1907 version. Hog Alley wall (which actually existed since 1856) was added on the 1912 map.

The Lower Town streets were dirt (or mud) and gravel until the 1920's. HF-648 (Figure 2.6) is the scene in 1886 looking up High Street. Slate sidewalks lined each side, and a stone slab crosswalk aided pedestrians across the street at the foot of the stone steps. In this photograph, all but the top of Park Building 15 is hidden from view, but much of the front of Building 16 is visible. A banner was hanging from the balcony (for a political campaign?) over

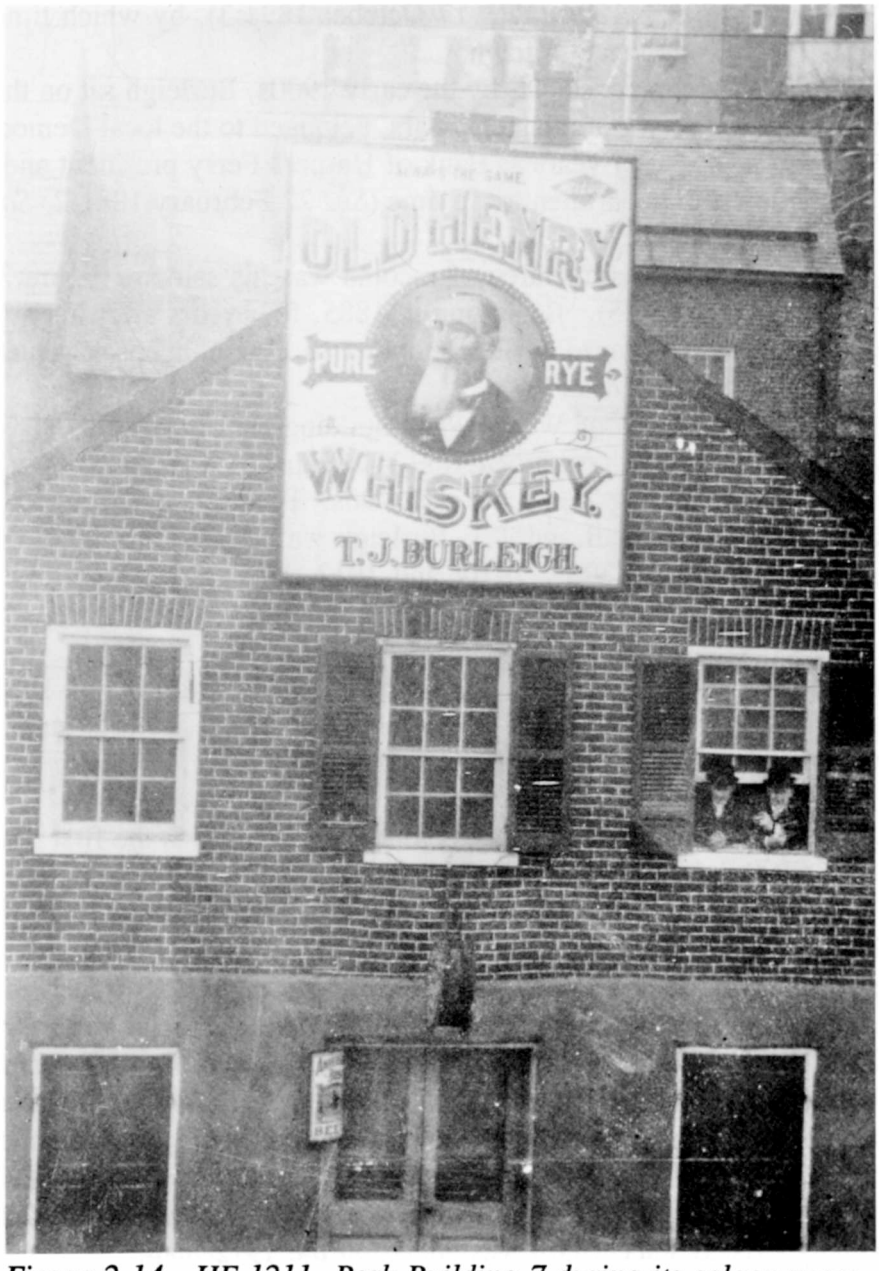


Figure 2.14. HF-1211, Park Building 7 during its saloon years.

an older version of the front porch, which was wooden with two wide steps and no rails. A new front porch with iron railing was installed in 1910 (*FA* 28 May 1910:2).[8]

[8]Architect Alan Walmer (1964:14), on the basis of two photographs (one misdated), stated that the porch was redone in 1892.

In 1903, the Wager block probably got sewer service. The newspaper announced that a contractor was laying sewer pipe out to the river for the owners of properties in the square bounded by Potomac, Shenandoah, and High Streets, which may refer to the Wager Block (*FA* 9 May 1903:2).

Into the Twentieth Century (1914-1956)

Documentary information on the Package 118 area for much of the first half of the twentieth century is scarce. In 1952, the State of West Virginia began purchasing Lower Town properties and soon turned them over to the National Park Service to create Harpers Ferry National Monument.

As for text sources, the U.S. Census enumerators' returns after 1910, were not available for research on this project, and the fire insurance maps ceased after 1933. The few extant photographs and maps suggest this was a period of decline, especially along Potomac Street. Repairs to buildings were few and the additions were simple wooden structures. Some buildings stood vacant.

Although other sources provide few details, the deeds show that WL16 remained Burleigh property whereas the Lot 15 buildings changed hands several times before 1952. Park Building 7, which had been sold around 1911, was sold again in 1928 and 1941. Park Buildings 6 and 15 were sold together in 1923 and 1941, but Park Building 6 was sold separately in 1946 and 1948.

The available photographs show little about the neighborhood, but HF-1220 (Figure 2.15), taken around 1939, is fairly helpful. Wager Block was crowded, at least in terms of structures (not all visible in this photograph). In addition to Park Building 6, other wooden structures sat on the Lower Wager Block lots. Park Building 15, as already noted, had been enlarged by enclosing the areaway on the south side and adding another floor on the kitchen wing. A garage had been erected in the narrow space between Park Building 5 and Hog Alley wall. There was a small addition on the rear of Park Building 7. The high railroad embankment in the foreground of HF-1220, constructed early in the period, covered the ruins of the armory and walled in the river side of Potomac Street.

Lot 15. Little detail about Park Building 15 has surfaced. The fire insurance maps still showed it a millinery shop as late as 1922, but perusal of the newspaper files suggests that the town's milliners were located elsewhere. Therefore, the designation on the map may be an uncorrected carryover from previous editions. The 1933 edition (Figure 2.16) showed Park Building 15 in use as a boarding house.

By 1933 Harry Rockenbaugh had owned all of WL15 for 10 years. Before that, during the first five years of the century, Rockenbaugh kept a saloon in Park Building 7 (*FA* 27 April 1901:2; *FA* 30 April 1904:3; *FA* 11 March 1905:2; *SoJ* 15 April 1902:2; *SoJ* 21 April 1903:2). He went to work as a town policeman in 1910 (*FA* 5 February 1910:2; U.S. Census 1910:192).

In 1923, Rockenbaugh purchased Park Building 15 and part of its lot from the Hopwood heirs. Five years later he acquired Park Building 7 from Conner's widow (Deed Book 123, 28 March 1923:141; Deed Book 147, 28 March 1928:371). But for the 1920s and 1930s, when the Rockenbaughs owned all of WL15, nothing indicates whether or not they personally used

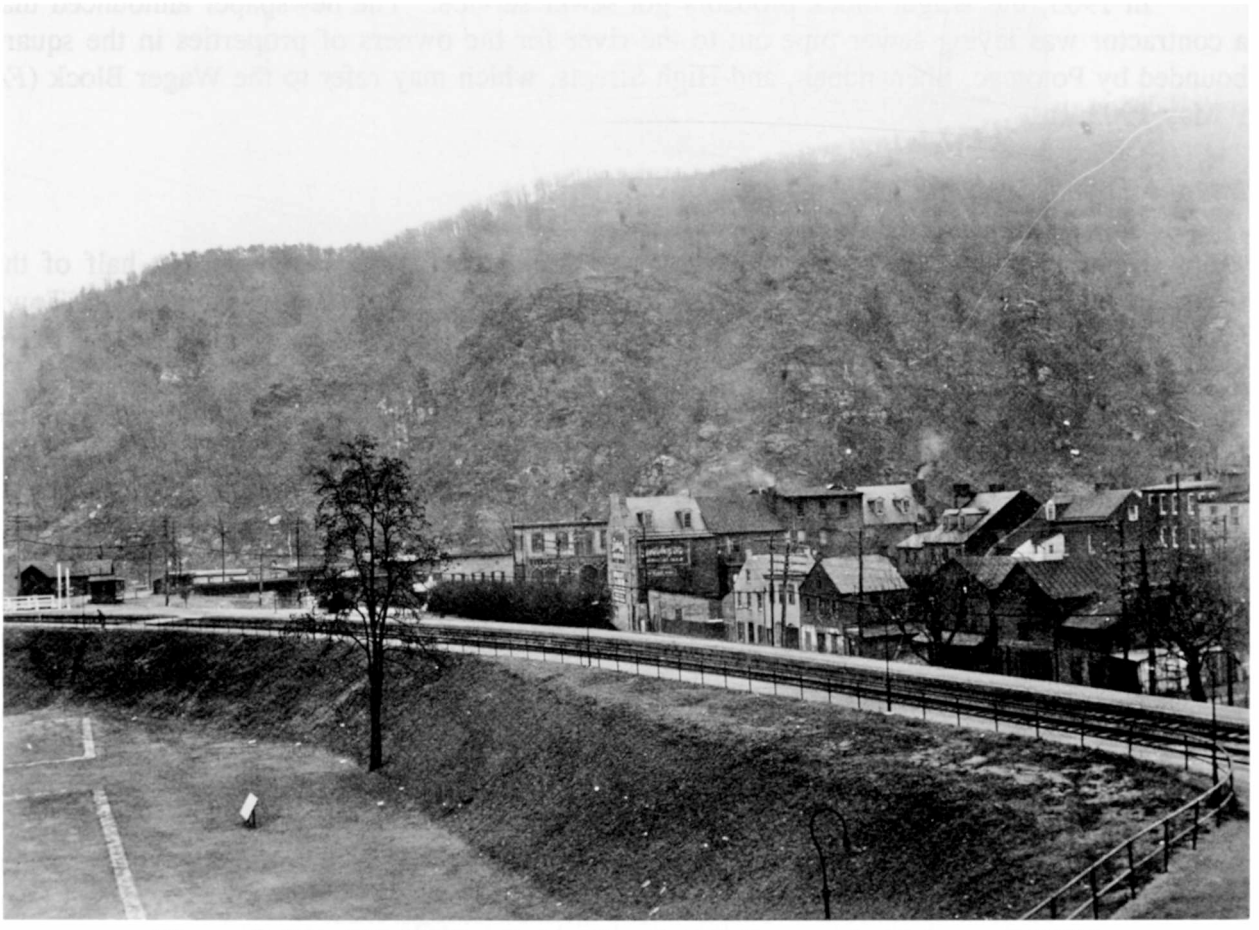


Figure 2.15. HF-1220, neighborhood view from embankment, c. 1939.

any part of it. Apparently Harry died in 1941, shortly after selling Park Building 7. His son Aldridge soon sold Park Building 15 (Deed Book 154, 28 July 1941:535). When the next owner, C.W. Demory, sold Park Building 15 in 1948, the deed referred to it as the former post office building (Deed Book 171, 5 January 1948:17).

Charles Demory probably purchased Park Building 15 as an investment. He had long operated general merchandise stores in Harpers Ferry Lower Town and Camp Hill and owned several buildings on High Street. In 1946 he advertised that he would soon retire (*FA* 12 October 1912:3; *SoJ* 24 August 1920:4; *SoJ* 22 March 1933:1; *SoJ* 21 October 1942:1; *SoJ* 29 May 1946:6). No information has been found concerning the last few years before Park Building 15 was sold to the state by Eben and Mary Fritts who bought it in 1948 from Demory (Deed Book 171, 5 January 1948:17).

Some information about Park Building 7 has already been noted. T.M. Conner purchased it around 1911 and his widow Laura sold it to Rockenbaugh in 1928. The fire insurance maps for this period show it had been changed from feed and hay storage to a store by 1922. During the years when Park Building 7 was owned by Rockenbaugh, a 1933 map shows it as a dwelling with a small shed off the northwest corner. HF-1220 (Figure 2.15) shows

it was still white. The last private owner was Luke Loveless, who purchased Park Building 7 in 1941 (Deed Book 154, 28 July 1941:535).

Park Building 6, which was shown on the 1912 Sanborn map as a carpenter shop, was vacant on the 1922 edition. At the time it was still owned by the Hopwood heirs. They sold it, along with Park Building 15, in 1928 to Rockenbaugh. The 1933 fire insurance map shows it in use for storage (Figure 2.16). It was purchased along with Park Building 15 in 1941 by Demory, but he sold it separately in 1946 (Deed Book 170, 9 August 1946:354). Apparently R.L. Stephenson was acting as an agent, because four days after he acquired it, he sold it to Luke Loveless (Deed Book 170, 13 August 1946:355). As Loveless had purchased Park Building 7 in 1941, this gave him control of the Potomac Street end of WL15. No information about Park Building 6 during the 1940s surfaced in the available documentary sources.

Next door on WL16, Park Building 5 apparently was abandoned, while Park Building 16 remained the Burleigh family residence. After the saloons were closed in 1914, T.J. seems to have limited his activities to the bank and town government (*FA* 7 January 1922:1; *SoJ* 5 August 1919:2). In November 1932, both Thomas Sr. and Thomas Jr. fell seriously ill. Thomas Jr., about 43, died by the end of the month, but his father, 80, lived until December 13. The nature of the illness was not recorded, but the Thomas Sr.'s cause of death was "Fell from bed to floor about 4 weeks ago fracturing rib" (Register of Deaths 1905-1949:19; *SoJ* 23 November 1932:1; *SoJ* 30 November 1932:1; *SoJ* 14 December 1932:1).

Photographs and maps depict little change on WL16 during the 1914-1952 period. According to the Sanborn maps, Park Building 5 was vacant up through 1933 and its condition in the 1950s photographs suggests it remained vacant although the space alongside Hog Alley was filled by a garage.

The Burleighs sold all of WL16 to West Virginia in 1952. By 1957, the rear porch with its second floor gallery was collapsing and the pargetting was deteriorating.

Oddly, the privy shown previously on the fire insurance maps was not on the 1933 version. Yet the photograph NHF-181 (Figure 2.17), shows it still standing in 1956, further evidence that the Sanborn maps must be used with care.

In 1923 the Harpers Ferry town council declared Hog Alley -- called "Burleigh's Alley" at the time -- would be one way. Apparently the volume of motor vehicle traffic and parking in Lower Town were becoming a problem (*FA* 22 September 1923:1). The dirt streets with roaming pigs had gone the way of the neighborhood's drinking establishments.

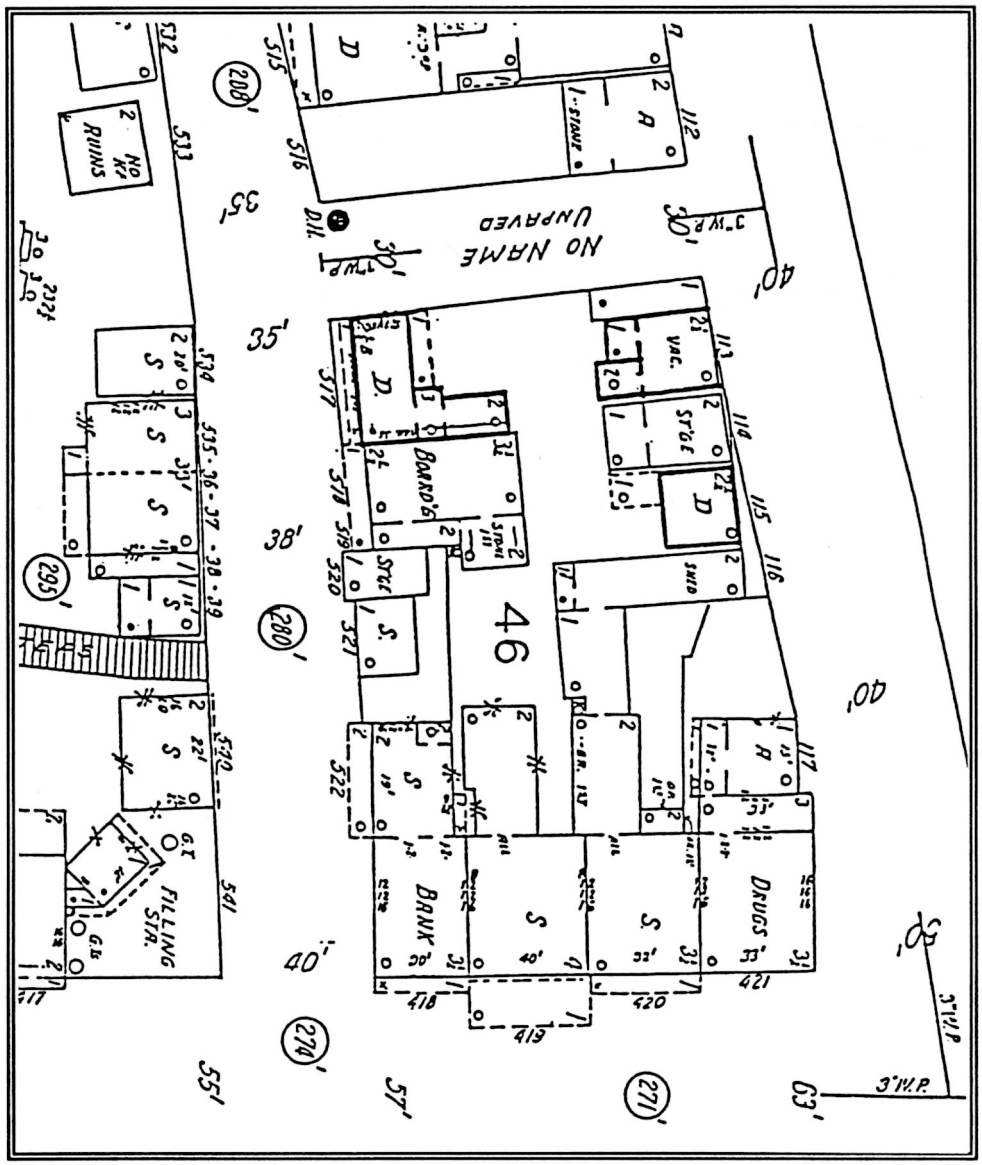


Figure 2.16. 1933 Sanborn-Perris Fire Insurance Map.



Figure 2.17. HF-181, Park Building 5, rear view.

CHAPTER 3

ARCHEOLOGICAL INVESTIGATIONS AND STRATIGRAPHY

Jill Y. Halchin
and
Cari C. YoungRavenhorst

Before presentation of the archeological fieldwork and findings of 1991, mention is needed for three previous investigations of the Upper Wager Block. To one degree or another, all three projects contributed to understanding of the archeological record. Information about features located by Walmer (1964a, 1964b) and Gardner (1974) are incorporated in Chapter 4 which interprets data about structures and landscape features. Package 110 findings will be discussed, albeit briefly, alongside the Package 118 results in the current chapter because the analyses and interpretation in the remainder of the report rely on artifacts from both projects.

PREVIOUS ARCHEOLOGICAL INVESTIGATIONS

Excavations by Historic Architect

During his investigation of Park Building 16 in 1964, Alan Walmer (1964a) undertook excavations under the house (Figure 3.1). In addition to test pits "to locate depth of fndns. & condition of earth," he dug through hearths and cut a trench across both basement rooms. His notes mention artifacts but give no description, provenience, or information about their disposition. He provides imprecise information about the trenches' location, width, depth, and stratigraphy and about the hearths.

Gardner's Excavations

In 1973, William Gardner's (1974) crew from Catholic University excavated large areas of Lots 15 and 16 (Figure 3.1). They dug along a portion of the rear wall of Park Building 7 (shown only in photos, not in the report), in the Park Building 6 area, along the foundation for a rear addition to Park Building 7, along the rear porch of Park Building 16, and the east and north sides of Park Building 16A. Records and provenience controls for this project may be characterized as limited to non-existent. The artifacts are preserved at the Museum and Archeological Regional Storage facility (MARS) in Lanham, Maryland.

Package 110

Under a series of directors from Denver Service Center, a large proportion of the Wager Block was excavated archeologically during the 1970s. During work by Catherine Blee, the

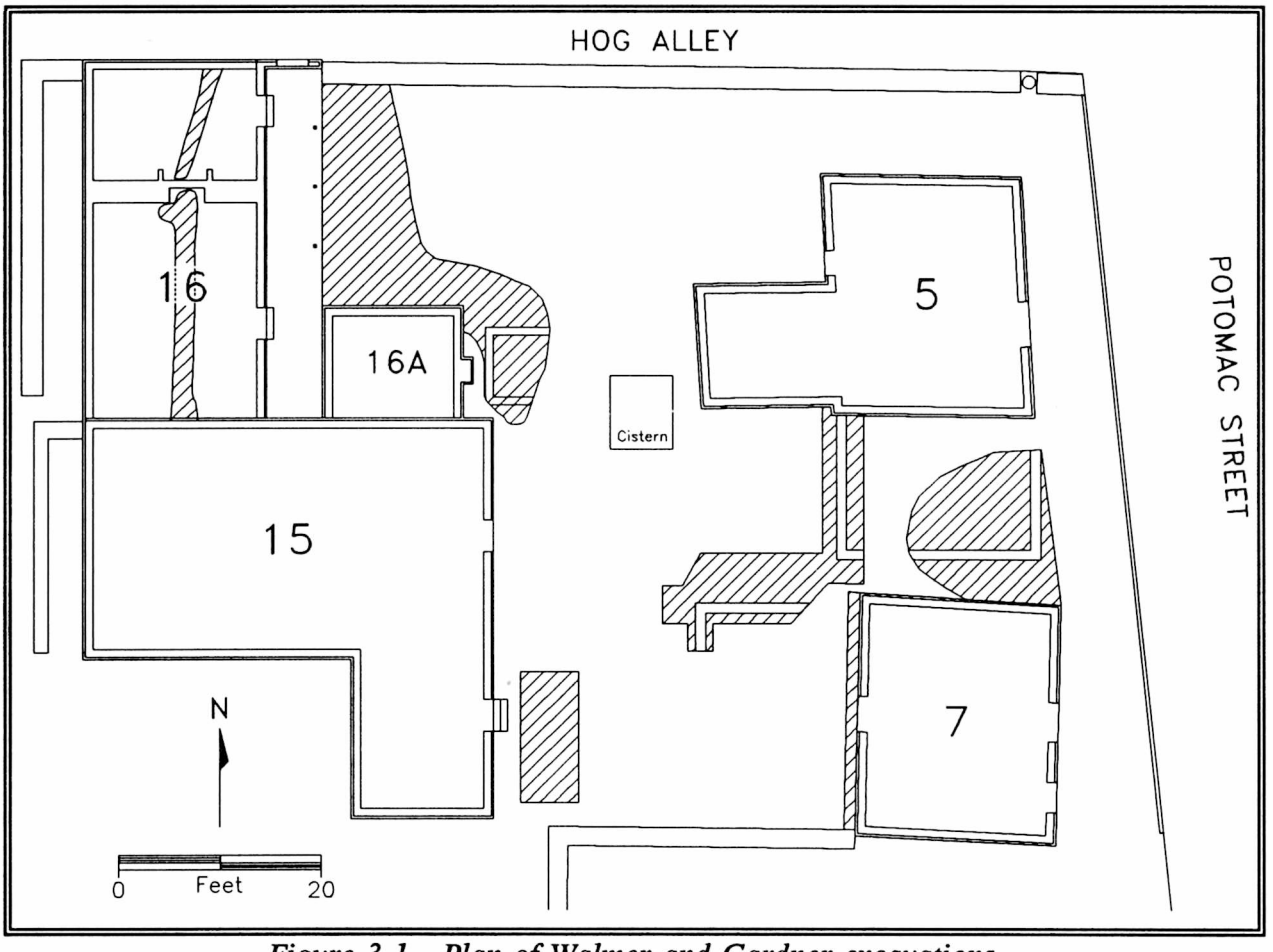


Figure 3.1. Plan of Walmer and Gardner excavations.

emphasis was the Lower Block -- around and under Park Buildings 8, 9, 10, 11, 11A, 12 and 12A -- plus Park Building 15 (Blee ca. 1978). Later, Scott Carpenter followed by John Pousson completed work in the Upper Wager Block in the yards of Park Buildings 5, 7, 15, 16, and 16A (Pousson 1986). Figure 3.2 shows excavation units in the block.

For the purpose of integrating as much data as possible in the current project, pertinent artifacts and field records from the Package 110 investigations were retrieved from storage at MARS. The Package 110 report and field notes were consulted in planning the 1991 strategy and in interpreting the stratigraphy. Artifacts and faunal specimens from a number of Package 110 proveniences were used by Package 118 archeologists in special analyses which provide interpretation beyond that possible in the earlier project (see final archeology research report by Halchin).

Because the Package 118 analysis and interpretation incorporates data from previous archeology in the area and because the Package 110 project report has been published, no lengthy review of Pousson's report will be included in this report.

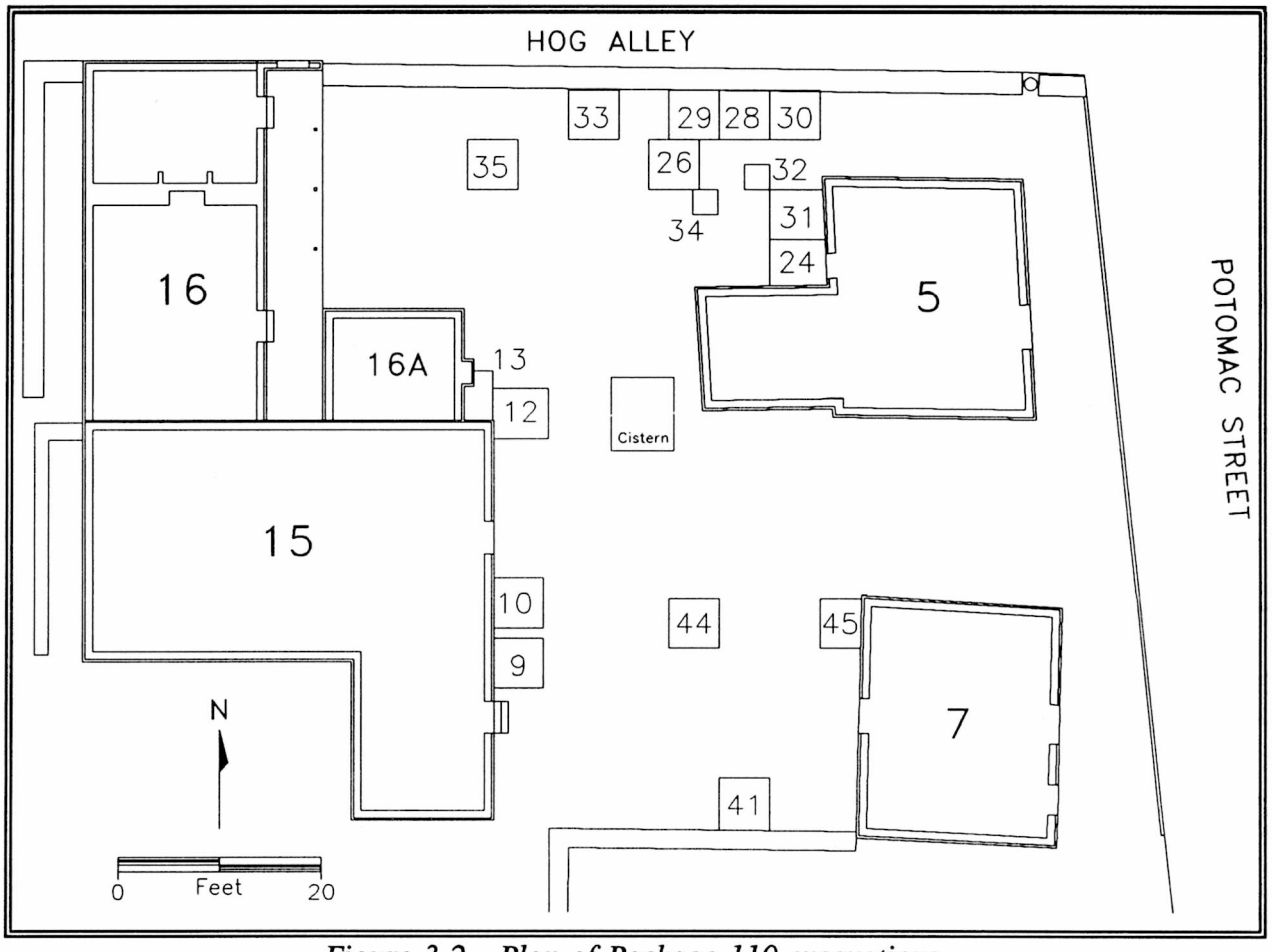


Figure 3.2. Plan of Package 110 excavations.

ARCHEOLOGICAL METHODOLOGY

Data Collection

In preparation for field work in the summer of 1991, all reports, notes, and photographs that describe recent ground-disturbing activities in the area were reviewed to determine where excavation units could be located. Other factors in selections of excavation units included historical and landscape issues. In order to avoid confusion, numbering of excavation units and features was continued from Package 110. Work began in June with two excavation units in Lot 15 between Park Buildings 7 and 15, followed by seven excavation units in Lot 16 between Park Buildings 5 and 16, and two excavation units under Park Building 16.

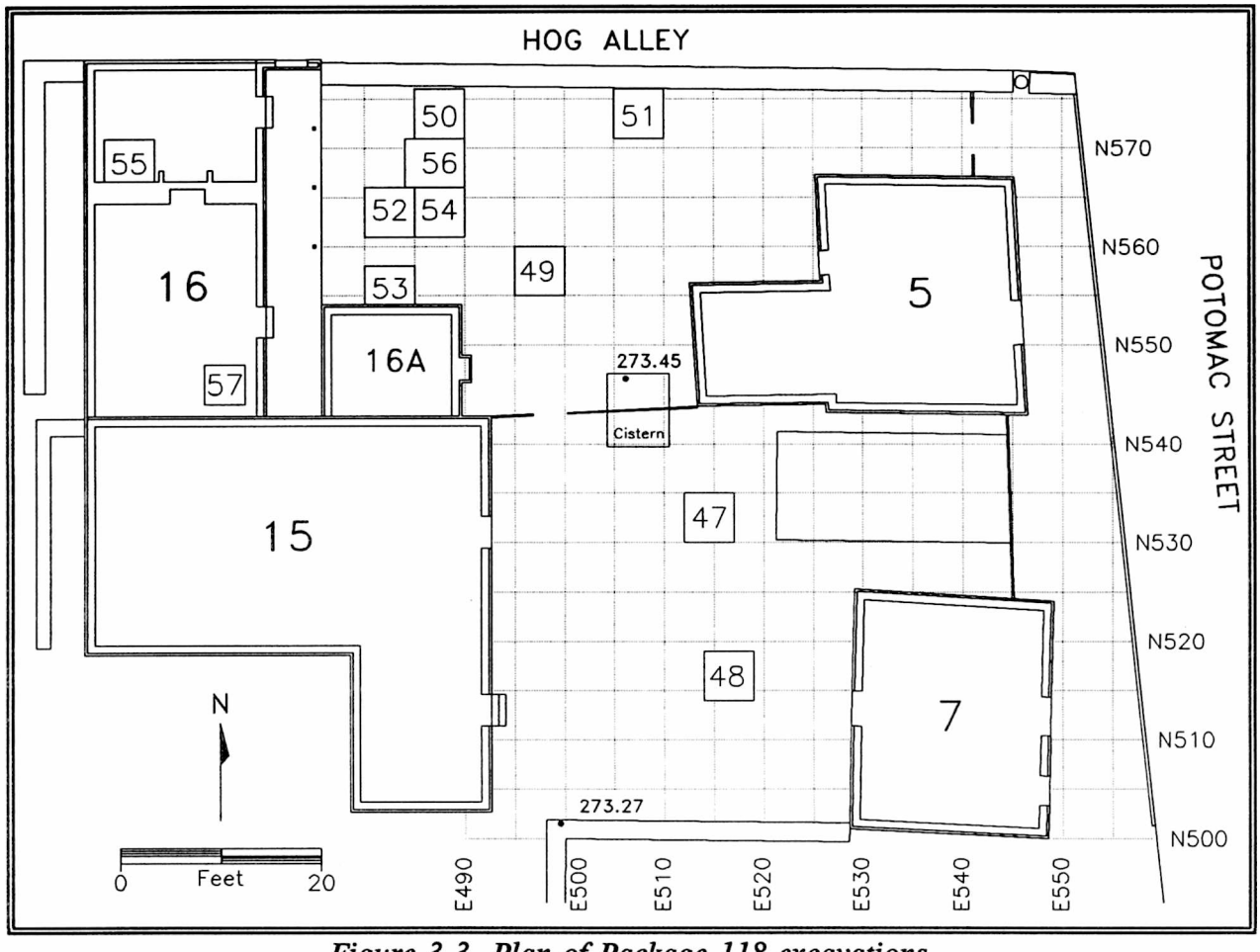


Figure 3.3 Plan of Package 118 excavations.

Grid. The Package 110 datum was reestablished and used to create a baseline for positioning excavation units. This point is the inside corner of two retaining walls marking the south edge of the Upper Wager Block (see Figure 3.3). Once work moved to Lot 16, a second datum on a modern concrete cistern was used for elevations only. Excavation units were laid out using tape and transit methods. Where they abutted Package 110 units, discrepancies of less than one-tenth ft were noted.

Excavation unit designations followed procedures standard at Harpers Ferry. Datum was arbitrarily called N500/E500 so that all excavation units anywhere in the Wager Block would be north and east of 0/0. Each excavation unit was designated by its northeast corner. During Package 110, excavation units were designated by the corner nearest datum, which was 0/0.

Within Unit Proveniences. Using the proveniencing system currently used for archeology at the park, each soil layer in each excavation unit below the sod was considered a single stratum and given a letter (A, B, C, etc.). Any stratum thicker than 0.5 ft was subdivided (B-1, B-2, etc.) into arbitrary levels, usually 0.5 ft unless believed sterile or disturbed. Features were numbered, with strata and levels within each separated whenever the feature proved to be deep

or internally complex. If part of a feature found in the Package 110 investigation was encountered in 1991, the previously-assigned feature number was used.

Excavation. Sod and any modern features such as shale paths were removed without screening or artifact collection. Crew members used shovels, trowels and, where soil was hard or rocky, mattocks and geologist's picks for digging.

Recording. A separate record was kept for each provenience giving elevation readings, soil color and texture, inclusions such as brick, slate, coal, coal cinders, oyster shell, stratigraphic relationships, and a general list of artifacts. A unique number was assigned to each bag of artifacts and soil samples kept.

Photographs and plans were made of the top of each stratum, but additional visual records were made to show details at other points. All profiles were drawn, except when the excavation unit wall was also a stone wall or when it showed only a recent disturbance. In Excavation Unit 51, where profiles would not show two major features, a cross-section was drawn during excavation.

All measurements were made using the engineer's scale which divides a ft into tenths and hundredths, thereby making calculations in terms of decimals. In nine excavation units, elevations were recorded by transit with reference to one of the two datums. For Excavation Units 55 and 57, line-of-sight was impaired by Park Building 16 walls, so depths were read with line levels then tied to the datum by transit.

Artifacts. All soils below the sod were screened through 1/4-inch hardware cloth. Wet privy soil was water screened. All artifacts, historic and prehistoric, were bagged. Materials abundant in Harpers Ferry sites -- brick, slate, coal, coal cinders, oyster shell -- were sampled. Sampling was necessary as well for the abundant floral remains in the two privies (Features 213 and 292).

Soil Samples. Portions of soil from most excavation units were preserved for several types of analyses. In most excavation units, these samples were retrieved from a fresh column cut into the excavation unit wall after excavation was completed. For the privies, this was not possible, so samples were collected of each stratum or level prior to its excavation. Also a sample of screened soil was collected from each provenience to be floated for microflora.

Analysis

Artifact Processing. In the lab, the artifacts were washed (delicate materials were brushed) and rebagged for cataloging and labeling. Cataloging was done according to standards set by the National Capital Region, and information was computerized using the Automated National Catalog System software. The hotel privy (Feature 292) provided an anaerobic environment in which organic materials were well-preserved. Over 30 artifacts of wood, bone, leather, horn, and cloth required expert treatment. They were gently rinsed with water, sprayed with disinfectant to retard fungus, then kept moist and refrigerated. Actual cleaning and preservation was conducted by the conservation division at the Harpers Ferry Center.

Minimum vessel analysis of ceramics and glass was conducted on selected strata and features considered most likely to provide findings significant to interpretation of the site. Recent strata and disturbances as well as features such as post holes and ditches were eliminated from this procedure. The final archeology research report includes chapters presenting the findings and methodology of minimum vessel analysis.

Pollen, Phytolith, Macroflora, and Parasites. Three groups of soil samples were sent to Paleoresearch Labs in Golden, Colorado, where microscopic plant parts and parasites were identified. Samples from Excavation Unit 47 in Lot 15 provided information about changes in general backyard and neighborhood vegetation. The samples from the two privies -- one used in the first three decades of the nineteenth century and the other about one hundred years later -- showed more than vegetation. They proved to be rich repositories of data about diet and health. The final archeology research report includes the report of the methodology, findings, and basic interpretation of these special analyses.

Faunal Analysis. Identification of faunal specimens, butchering practices, and calculations of available meat were conducted by Joanne Bowen in Williamsburg, Virginia. Bones from a number of Package 110 proveniences were included to increase the coverage and sample size. Specimens from recent deposits, disturbances, trenches, post holes, and inadequately-documented excavation units were not included.

Drawings. Maps, plans, and profiles for this report were created by staff archeologist John Ravenhorst using AutoCAD. The illustrations included are intended as representations and not a complete record of all drawings made in the field. In some cases, time constraints and stone walls hampered full recording of Package 110 excavation units. When profiles of such excavation units were needed to fully interpret the site, profiles were recreated using the adjacent profiles, plans, and elevation readings.

STRATIGRAPHY AND ARTIFACTS

Summary of Megastrata

The area presently called the Upper Wager Block cannot be considered a single site. During different periods of the past it has been subdivided, and the lot lines and rights-of-way shifted on occasion. Rather than provide a fragmented, unit-by-unit description of soils, this chapter will describe the deposits and related features in terms of meaningful spatial-temporal units. Details of each excavation unit excavated in 1991 can be found in the excavation summaries in Appendix II. Pousson described the 1979-80 findings, which will be noted in this chapter, as needed, to present a comprehensive overview of the project area. Because the Package 118 data has never been presented, it will be emphasized in the megastrata descriptions which follow. All 110 proveniences were re-evaluated for this report in light of the addition of the Package 118 data, so interpretation sometimes differs from that of Pousson.

Each stratum, level, and feature in Lots 15 and 16 was assigned to a megastratum corresponding to one of the various time periods discussed in the history chapter. By combining strata into larger proveniences, sample sizes are increased and interpretation is streamlined. Unfortunately, repeated episodes of disturbances beginning in the mid-nineteenth century removed many deposits and truncated features. This leaves gaps in the stratigraphic record and forces archeologists to rely on artifacts alone to date some features. For example, grading of Lots 15 and 16 in 1981 removed more than a foot of deposits in some areas. This phenomenon is evident in the various profiles in this chapter.

As with the stratum designations, labeling of megastrata begins at the surface with Megastratum I representing the park years. The discussion in this chapter, however, will follow a chronological sequence. Table 3.1 summarizes the megastrata used in analysis.

Table 3.1. Megastrata for Wager Lots 15 and 16.

Megastratum	Time Period	Cultural Context
I	late 1950s to present	National Park Service
II	early to mid twentieth century	two lots: dwellings, shops
III	late nineteenth century	two lots: dwellings, Burleigh and other saloons
IV	1840s to 1860s	combined with V on basis of artifact analysis
V-A	1840s to 1860	two lots: taverns, Roeder home & bakery, last stable
V-B	late 1830s	subdivision and construction
VI	1800 to late 1830s	backlot & outbuildings of Harpers Ferry Hotel
VII	prehistoric	prehistoric
VIII	prehistoric	sterile

The review of historic documentation shows the Upper Wager Block was not always divided by fences, crowded with buildings, and owned by different people. In fact, it began under a single owner and function early in the nineteenth century, was subdivided with a mixture of residences and small enterprises, then finally reunited under the National Park Service in the mid-twentieth century. Therefore, interpretation for some megastrata will consider the entire area as a single unit, while for other megastrata, the lots are treated individually.

In a few of the 1991 excavation units, the lowest artifact-bearing deposits, Megastratum VII, (see Appendix II) produced prehistoric lithics and ceramics, although a few such materials

appeared higher, especially in Megastratum VI. In any event, the scarcity and dispersion of the prehistoric finds suggests that no coherent prehistoric component exists at the site. Rather, these materials were probably redeposited by high water.

Documented historic use of the Upper Wager Block began in the first years of the 1800s. For more than three decades the area was the backlot of the Harpers Ferry Hotel with service outbuildings. The period ended in the mid-1830s, around the time railroads reached the community. Archeologically, this is Megastratum VI.

Megastratum V dates to the 20-25 years prior to the Civil War. It begins with the razing of the Harpers Ferry Hotel, the subdivision of the area into private lots and construction of Park Buildings 7, 15, and 16 (Megastratum V-B). Park Buildings 5 and 16A were constructed later in the period (Megastratum V-A). The Roeder bakery, White Hall Tavern, and other small enterprises as well as dwellings replaced the hotel complex. Lot 16 started out slightly narrow, but was widened in the mid 1850s when Hog Alley was created.

No evidence was found of any deposits or features resulting from the years of Civil War occupation, or the decade or two afterward. Very possibly in cleaning the yards and removing debris left by soldiers (who dismantled outbuildings and windows), the property owners had the yards graded. Later owners may also have done considerable cleaning. Another possible reason for the stratigraphic gap is flooding. Inundations in 1870 and 1877 could have swept away the 1860s deposits or prompted extreme clean-up measures.

Close analysis of the ceramics and glass showed that the Megastratum IV assemblage closely resembles the pre-war Megastratum V, so the two were combined for interpretation. Megastratum IV was originally thought to encompass the years after the Civil War when families repaired their homes and tried to re-establish businesses.

Megastratum III, marked by the revival of the Potomac Street drinking establishments, is present archeologically in the form of features. This megastratum has been split to reflect artifact evidence. However, IIIA and IIIB no doubt overlap. Generally, function and uses of the two lots during the period differed little from those of the two preceding megastrata -- the pattern of saloons, shops, and dwellings continued. Park Building 6 was constructed at this time.

Megastratum II represents the first half of the twentieth century, when the Burleighs owned Lot 16, and while Lot 15 ownership and residents changed several times. Park Buildings 5 and 7 housed saloons until they were permanently closed in 1914. There is sporadic documentary evidence for other small businesses in addition to domestic uses of the buildings during this period, however the archeological record is sparse.

This gap in materials dating beyond the turn of the century may be attributed to major floods in 1924 and 1936, although too little is understood about the nature of these floods to reach any firm conclusions about their destructive power. More likely, the gap may have been caused by grading and other restoration work not recorded during the early years of park ownership.

The activities producing Megastratum I are attributed to park service maintenance crews, contractors, interpreters, and archeologists.

Harpers Ferry Hotel (1803-1837) -- Megastratum VI

Pousson referred to this layer as Stratum H, considering it to be the "surface of the area prior to its development" (Pousson 1986:70). By this he meant before construction of Park Buildings 7 and 15 but, lacking intensive historic research, he did not emphasize the relationship to the early hotel.

Soils. This deposit was found in many excavation units during Package 110 and 118 excavations, however, no clear surface was discernable, suggesting the upper part of the deposit was removed, possibly when the hotel was razed. Nearly a foot deep in some places, the grayish occupation zone faded into the redder subsoil below (Figures 3.4 and 3.5). Generally it was dark brown (10YR4/3-3/3) homogeneous silty clay. There were fewer inclusions than in layers above, but for the most part the list is the same: shale, brick, charcoal, oyster shell. The notable exception is coal, which was lacking in Megastratum VI.

Features. Only Feature 292 is clearly associated with this megastratum (Figure 3.6). This large privy was near the back of the hotel yard, although the inaccuracies of the old maps hamper accurate assessment of relationships of structures. Although the east edge of the pit was located in 1980 in Excavation Unit 35 (upper wall stains were called Feature 222), the main part of the feature was identified as a privy and excavated in 1991 in Excavation Units 54, and 56. Edges reached into Excavation Units 50 and 52 also.

Due to later disturbances in the area, no evidence of the actual privy shed was found. The Feature 292 pit itself measured 10 ft north-south, 5 ft east-west, and 8 ft deep, including about 4 ft of organic fill (Figures 3.7 and 3.8). Its excavators dug through at least 8 ft of clay to an extremely hard layer of sand and waterworn gravel deposited by the river in the past. Slanting shovel marks were clearly visible on the near-vertical walls of the pit.

No sign of the use of lime or soil to reduce odor was encountered in Feature 292, although the lack of artifacts indicate the privy was cleaned. When use of the privy ended, the upper portion of the pit was filled with coal cinders. In fact, the cinders may have been spread over much of the area at one time, but this layer remained only in the Excavation Unit 35 area (Stratum K). This cinder deposit is considered Megastratum V-B.

Artifacts. Hotel Yard Scatter Assemblage. The Hotel Yard Scatter assemblage within Megastratum VI consists of 1417 artifacts recovered from selected levels of Excavation Units 24, 34, 35, 44, 45, 47, 48, 51, 52, and 53.

Over one-third of the assemblage is ceramic (36.3%, n=514), principally pearlware (n=164) and whiteware (n=161). Decorative techniques of these ceramics include painting, molded designs and transfer prints in various colors. Also identified within the ceramic component are utilitarian earthenwares and stonewares, pieces of a bone china saucer, various pieces of porcelain, 23 pieces of ball clay tobacco pipes and one stoneware marble.

Glass artifacts are only 17% (17.1%, n=242) of the assemblage, nearly half of which are identified as flat (n=100) or window (n=22) glass. Container glass (n=112) constitutes most of the remaining glass component with identified bottle types that include alcohol, wine and extract.

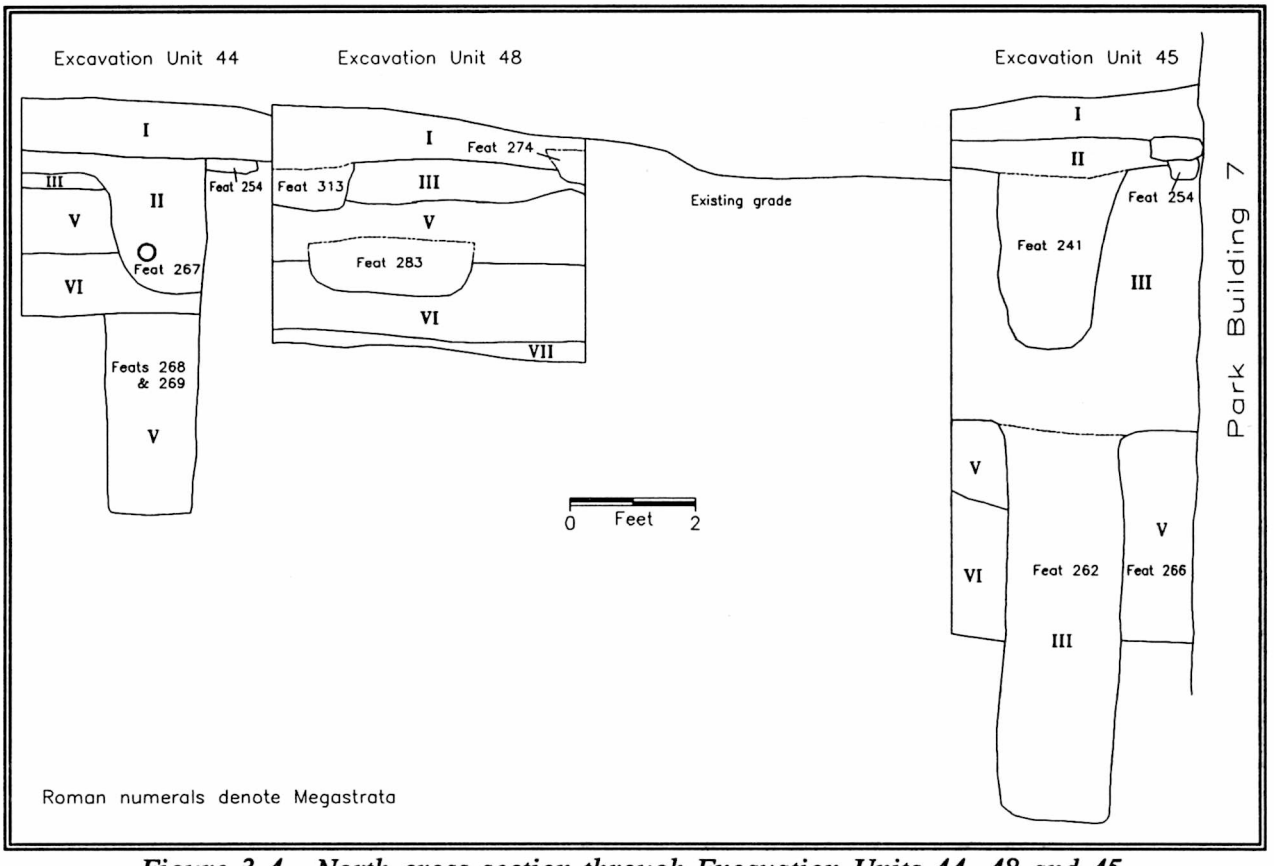


Figure 3.4. North cross section through Excavation Units 44, 48 and 45.

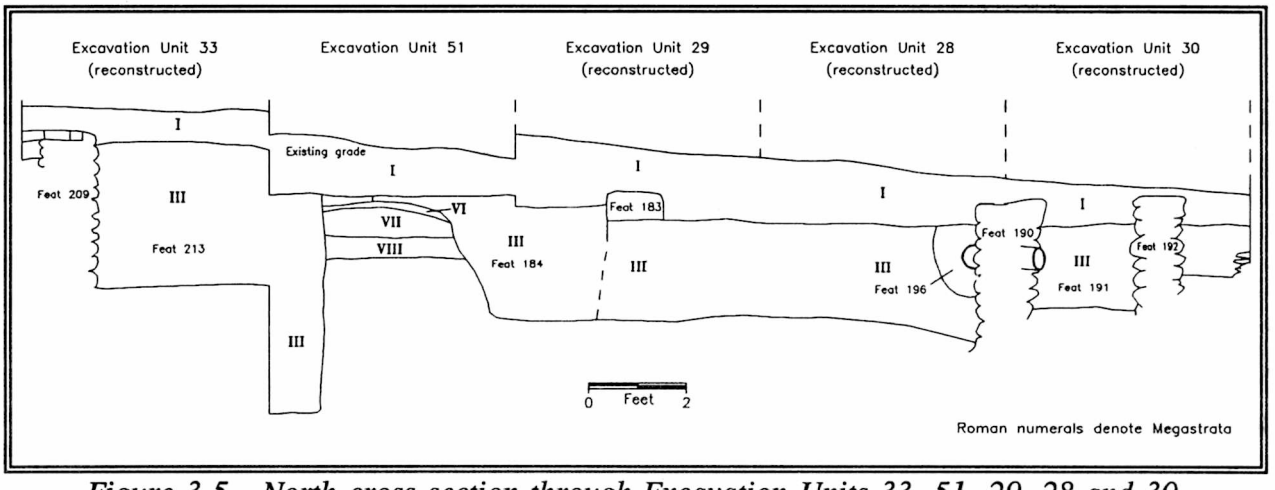


Figure 3.5. North cross section through Excavation Units 33, 51 ,29, 28 and 30.

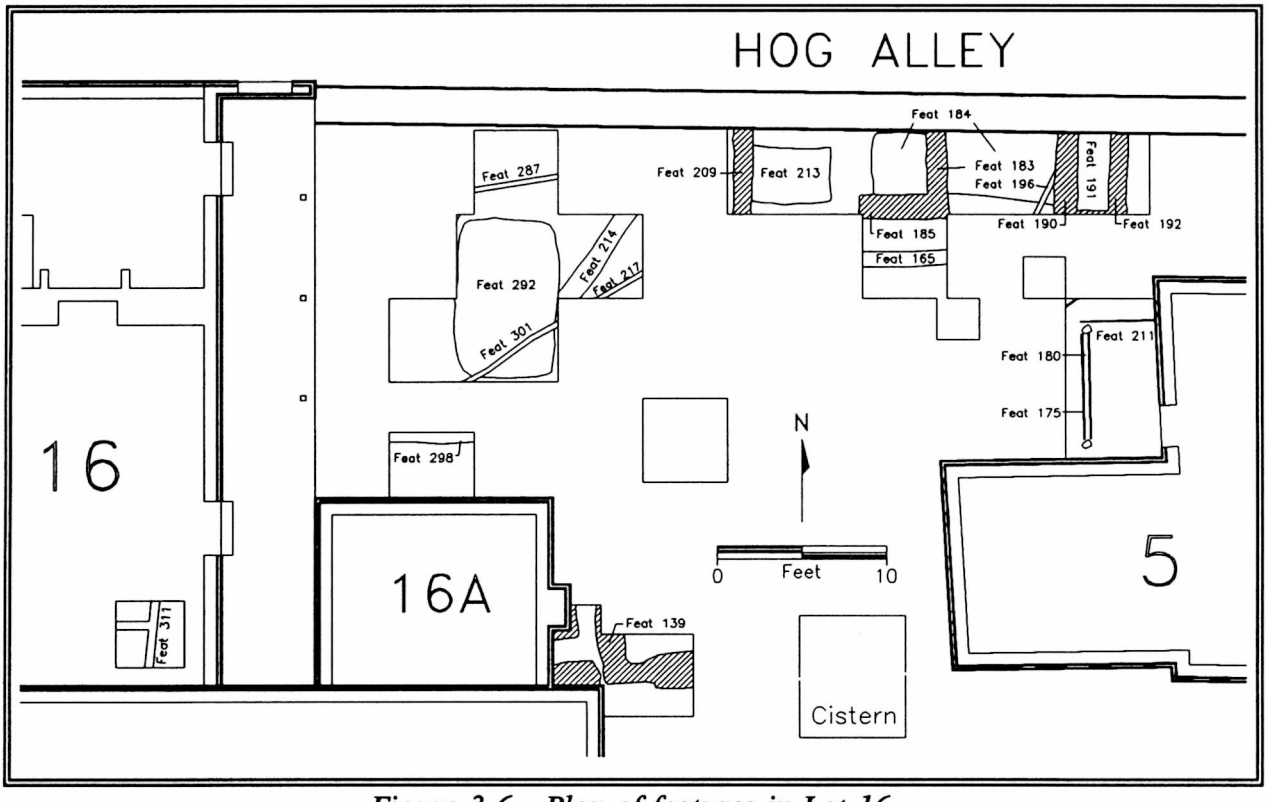


Figure 3.6. Plan of features in Lot 16.

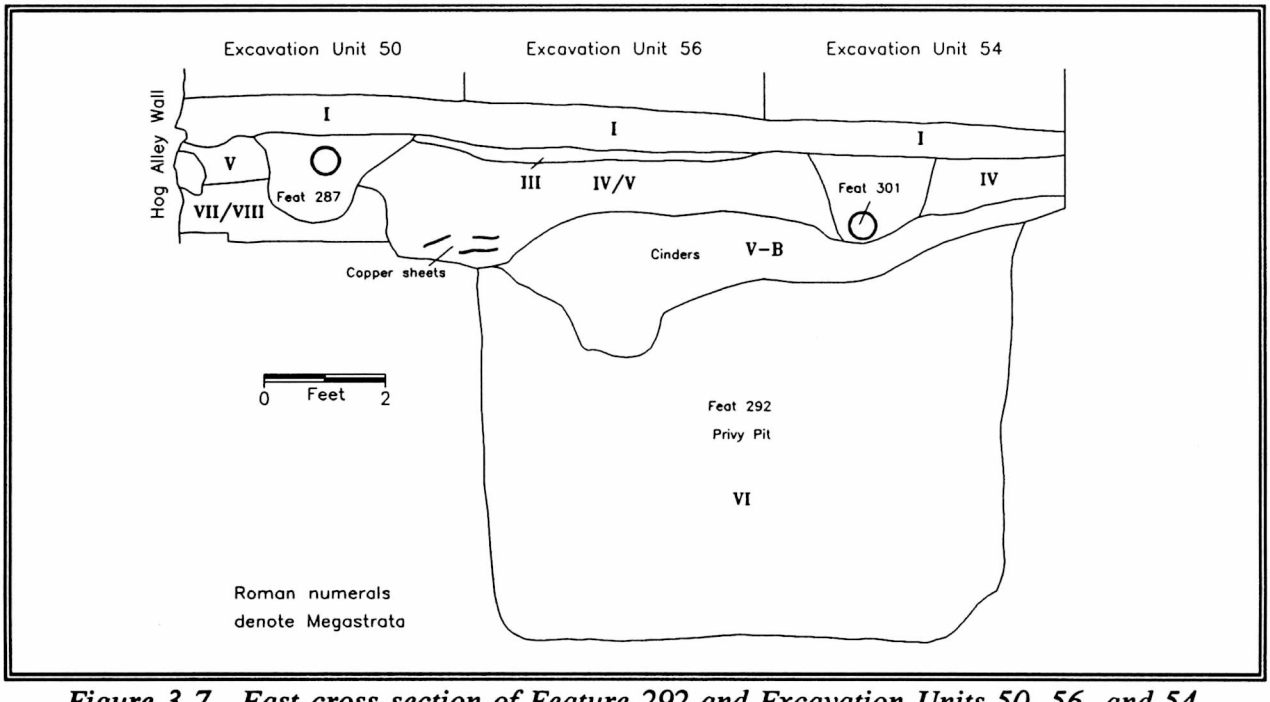


Figure 3.7. East cross section of Feature 292 and Excavation Units 50, 56, and 54.

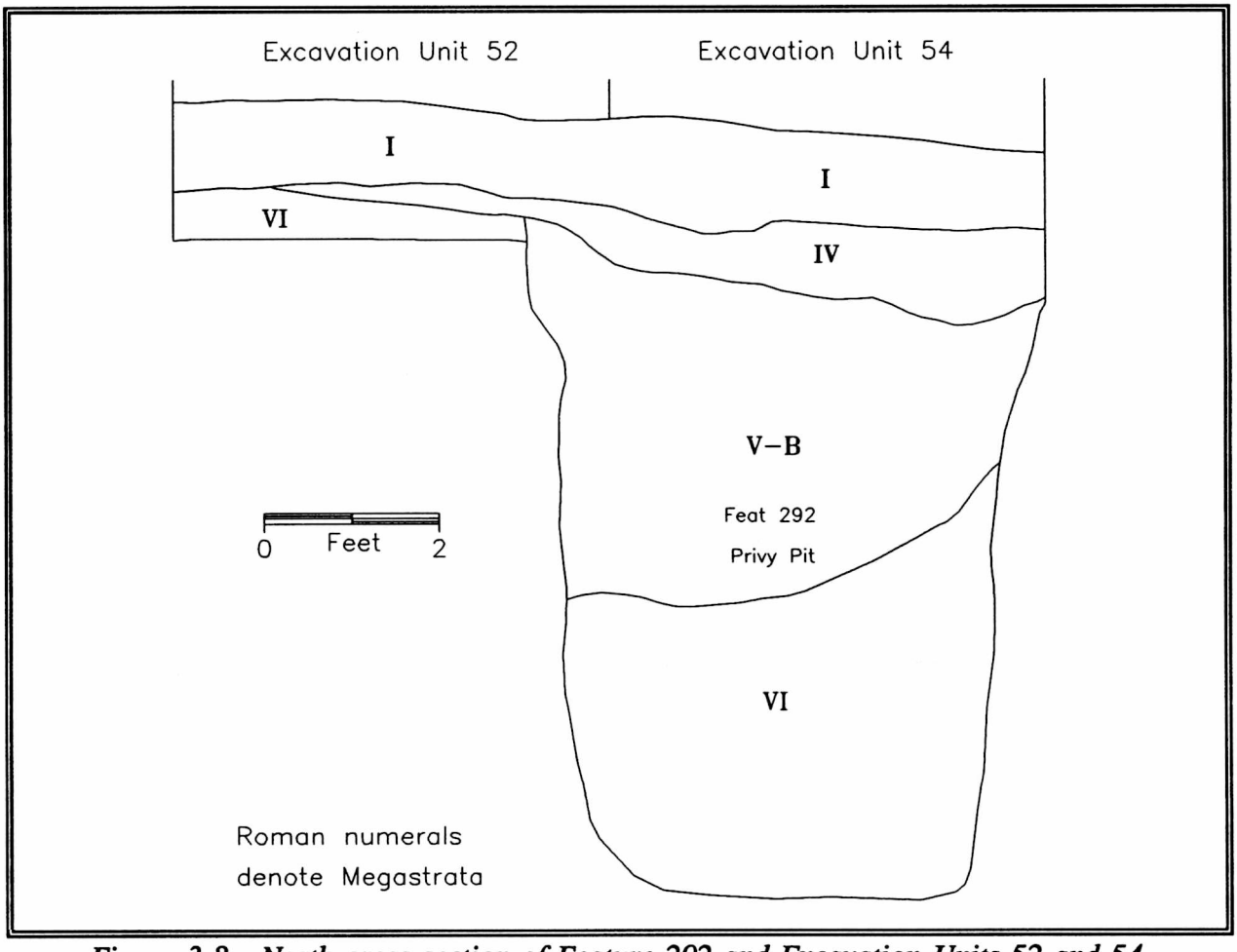


Figure 3.8. North cross section of Feature 292 and Excavation Units 52 and 54.

The assemblage of the Hotel Privy includes 16,703 artifacts recovered from Excavation Unit 35 Level J Feature 222 (excavated during the Package 110 project) and levels of Feature 292 within Excavation Units 50, 52, 54 and 56 (excavated during the Package 118 project). Only a very small proportion (6.9%, n=1160) of the assemblage consists of ceramic (n=363), metal (n=313), glass (n=390) or other synthetic or mineral material. Over 90% (93%, n=15,543) of the assemblage is floral or faunal materials.

Of the 363 ceramic sherds cataloged, 140 were identified as whiteware or other refined paste earthenwares such as pearlware (n=53), creamware (n=50), or porcelain (n=20). Decorative techniques included transfer printing and painting in various colors and molded motifs. Utilitarian coarse earthenwares (n=58) and stonewares (n=10) were also found within the assemblage in small quantities.

There were several interesting items within the metal component (n=313) of the assemblage. Personal and clothing items consist of 18 straight pins, two buckles, four coins and 14 shank buttons. Miscellaneous tools, hardware and other items include a lock plate, two padlocks, a triangular file, a bayonet blade, a musket ramrod and one piece of lead shot. The four coins recovered consist of two Spanish coins, one dated 1777 (Yeoman 1963:2) and the

other dated 1782, a large cent with an illegible date (Yeoman 1963:74-75), and a dime with a partial date of 181? (Yeoman 1963:104). One of the most unusual items cataloged from this assemblage is a small tin lantern with a glass lens, small wick and a fuel reservoir in the base.

There were at least 16 snuff storage bottles and two vials within the glass component (n=390) of the assemblage. Among the other pieces of container glass cataloged were five complete bottles including three amber/brown bottles with chamfered corners and an olive glass wine bottle. Other glass items cataloged include two glass beads, one button and several pieces of tableware.

Other interesting items from the assemblage include two buttons, one of gutta percha and one of jet, and window caulking material. Two gun flints recovered were both made in the French fashion, one consisting of chalcedony and one of chert/flint. Among the many unique and interesting items recovered are several pieces of architectural wood, pieces of printed paper, 15 wooden buttons and a large amount of variously colored and woven fabrics, textiles and string. Unusual wooden items included a tent peg, a bakers sieve, several matches, a small furniture drawer of walnut or hickory wood, a bucket with paint or whitewash, a cane tip with a silver ferrule and a toy top with a metal tip. One item of possible prehistoric manufacture was found -- a bifacially worked triangular piece of quartzite.

Just over 13% of the total assemblage (13.4%, n=2246) is composed of faunal materials such as shell, leather, bone and other animal materials. Oyster shell (n=66), egg shell (n=9) and hair (n=8) were among the unmodified faunal materials recovered. Also found were pieces of woven wool or felt (n=62), fragments of leather shoes and laces, and buttons of shell (n=5), bone (n=42) and/or keratin (n=1). Several items with handles of antler/bone were cataloged including a two-tine fork and a folding knife. Preliminary sorting of the faunal materials divided the bone into identifiable and unidentifiable fragments of bird (n=299), fish (n=92), mammal (n=1363) and bone of unidentified class (n=206). Further discussion of faunal remains may be found in the final archeology research report.

The largest proportion (79.6%, n=13,296) of the assemblage is composed of floral materials. There was a great diversity of seed, nut and other plant remains found. Corn cobs, bark, pine cones, leaves, unidentified dried fruit-like items and a sycamore ball were all cataloged. Abundant nut shells for black walnut, english walnut, almond, hickory, peanut (actually a member of the *Leguminosae* family genus *Arachis*) and chestnut were found. Coconut, brazil nut and hazel nut shells were found in very small quantities. Cherry pits (n=8715) were by far the most numerous floral material recovered. Large quantities of other pit/seeds recovered included plum (n=1574), squash (n=1728), persimmon (n=391) and peach (n=106). Smaller amounts of the seeds for cantaloupe (n=17), black haw/dockmackie (n=72) and grape (n=30) were found. Fairly small quantities of American hophornbeam, horse nettle, raspberry and basswood were recovered. Findings from controlled samples of floral materials are described in the final archeology research report.

Pre-War Changes 1837-1860 -- Megastrata V and IV

This stratigraphic group found largely in WL16 excavation units also includes WL15 Strata D and E and WL16 Stratum D in Pousson's report.

Soils. Very little of 1840s and 1850s occupation was found in the Upper Wager Block, although some features are associated with those years. The layers are not contiguous over the entire upper block or even one lot; rather they are large, dissimilar lenses found in discrete areas. Megastratum V-B represents the construction years early in the period and closing of the privy (Feature 292), while Megastratum V-A includes later changes and a small occupation deposit.

Originally thought to represent a post-war occupation, Megastratum IV is now considered to differ little from Megastratum V. It consists only of a small area over the then-filled privy. The presence of lenses of plaster or mortar and brick fragments suggest building renovations.

On Lot 15, the bottom of Megastratum V was marked by construction rubble (shale spalls, lime, and sand) lying directly above the Megastratum VI silt (Figure 3.4). This was observed in Excavation Units 44 (Feature 265 Level 1)[1], 45 (mortar lens within Stratum F), and 48 (Strata N and O). A micro-thin occupation layer was isolated above the construction layer in Excavation Unit 48 (Stratum M). Strata H and I in Excavation Unit 47 (an uneven compact layer of mostly clay over a sandy layer containing mortar fragments) probably represents a construction episode for nearby Park Building 5 which was built in the mid-1850s. Stratum H was dark brown (10YR3/3) mottled with brown (10YR5/4) and Stratum I was dark yellowish brown (10YR4/4) with very pale brown sand (10YR7/3-7/4).

Encountered in Lot 15 is a deposit of soil (Feature 268) used to fill the privy (Feature 269) which is also found in Megastratum V-A (Figure 3.9). The artifact-poor clay continued east of the pit as Stratum G in Excavation Unit 44, and possibly included Stratum L in Excavation Unit 48.

Adjacently in Lot 16, several of the features discussed below are related to building construction. Strata D, E, and F in Excavation Unit 55, under the north end (1850s addition) of Park Building 16 appeared to be near-sterile clay and shale fill that may have been added prior to construction of the original building or the first addition. Evidently all occupation-related soil that accumulated prior to construction of the addition was removed at some point in the past, because no intact artifact bearing deposits were found in Excavation Unit 55.

The upper two levels of Stratum E in Excavation Unit 50 by the Hog Alley wall and the associated builders' trench (Feature 293) also belong to Megastratum V-A. The compact, dark yellowish brown (10YR4/3-4/4) silty clay of Strata E-1 and E-2 yielded few artifacts and closely resembled the soil below the trench, suggesting the whole area was covered by fill.

Stratum J in Excavation Unit 35 (and a small area in Excavation Unit 50 called Feature 288 Strata B and C) was deposited in the years following subdivision of the lots (Figure 3.8). This thick layer of silty loam overlay the coal cinders used to seal the privy (Feature 292). It was generally dark yellowish brown to dark brown (10YR4/4-3/3) and contained bits of brick, shale, charcoal, plaster, and cinders. The original extent of this deposit is not clear due to more recent pipe trenches and other destruction of early strata. Nevertheless, the profiles suggest that

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[1]Pousson (1986:70-71) interpreted the shale layer in Excavation Unit 44 as a possible paving or walkway around Feature 269, a privy. However, the stones were small and widely-spaced and they rested on a thin layer of mortar, precisely the same sequence found in Excavation Unit 48. Pousson (1986:70-71) did consider the mortar lens within Stratum E in Excavation Unit 45 to be related to the construction of Park Building 7 and Feature 266, the builders' trench.

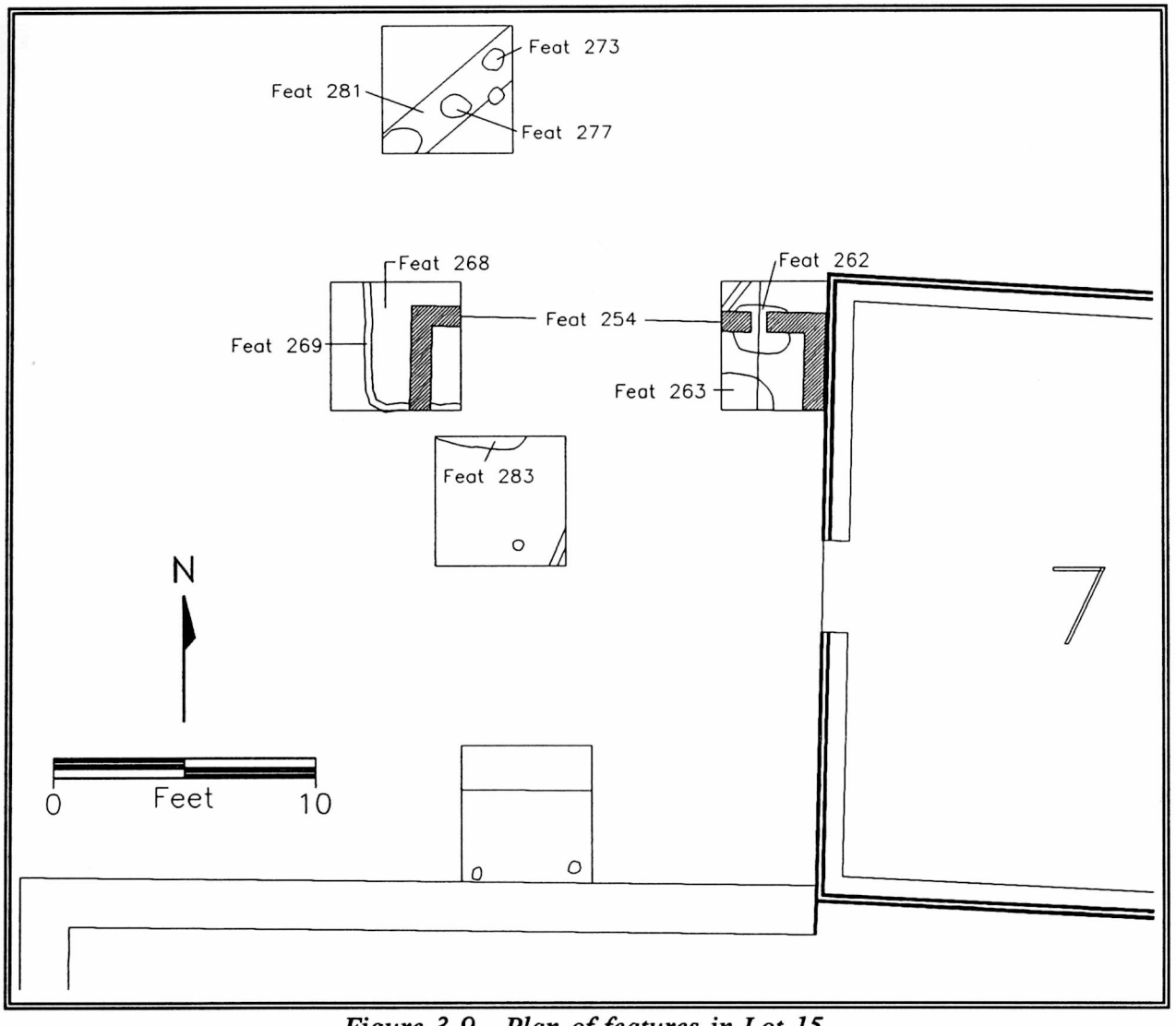


Figure 3.9. Plan of features in Lot 15.

it may have filled a depression immediately east of Feature 292, which was already closed. Two whole bricks and fragments of others at the northwest corner of the deposit in Excavation Unit 50 may be related to a building in the area. Indeed, future excavations may prompt reclassification of the deposit as a feature. The Megastratum IV deposits were found in the same area, overlying Stratum J. The soil (Stratum C in Excavation Units 52, 54 and 56) was generally sandy to clayey loam, brown and dark brown (10YR 4/3 and 10YR 3/3). The presence of building rubble suggests disturbance or construction such as the third floor addition to Park Building 16 and/or the construction of Park Building 16A.

One layer recorded in Excavation Units 24 and 31, just outside the rear door of Park Building 5, is most likely associated with the years after the building's construction in the mid-1850s.

Features. During Package 110 excavations, a wood-lined privy pit (Feature 269) was partially excavated in Excavation Unit 44, located midway between the rear walls of Park Buildings 7 and 15 (Figures 3.4 and 3.9). The pit cut through the shale construction level of Megastratum V-B and Megastratum VI. Excavators dug over four ft into the southwest corner of the feature, recovering a few artifacts from the darker soil around the wood lining (Feature 269) but very little from the clay fill (Stratum G and Feature 268).

Two builders' trenches for the retaining wall off the southwest corner of Park Building 7 (Feature 249) and the rear wall of Park Building 7 (Feature 266) were encountered by excavators. Stratigraphically both belong to Megastratum V.

Feature 283 was found in Excavation Unit 48 while cleaning the unit's north wall prior to recording profiles. Only a narrow edge (0.3 ft) was visible, making interpretation difficult. It appears as a basin-shaped pit about 0.9 ft thick and 2.8 ft wide, beginning with the Megastratum V and cutting VI deposit. It consisted of unblended sandy and clayey soils of dark yellowish brown (10YR 4/4) and brown (10YR 4/3) with tiny pockets of sand and shale, suggesting a relationship with construction. Iron stains and possible wood fragments were observed.

Features in Lot 16 belonging to Megastratum V include the Hog Alley wall and, in one excavation unit, its builder's trench. The northern 62 ft of the wall, designated Feature 195 for Package 110, was the west wall of the stable John Wilson constructed on Lot 17 after the Roeders took possession of Lot 16 in 1844. In Excavation Unit 50, excavators did not push to the base of the wall due to time constraints -- the foundation extended deep into compact clay subsoil. They did, nevertheless, identify the builder's trench (Feature 293), which comprised a thin gravel deposit extending out from the wall in a matrix identical to the near-sterile, silty clay present at that level. Pockets of unmixed lime were present alongside the wall. Stratigraphically Feature 293 marks the mid-1840s.

About 20 ft east of the rear wall of Park Building 16, excavators in Excavation Unit 35 in 1980 found the remains of a iron hoop circumscribing humic soil and pieces of shale, which seemed to be packed along the inside of the hoop. Only a narrow portion of Feature 218 was contained within the unit, but it cut through Stratum K consisting of the cinders used to seal the large privy (Feature 292). Pousson (1986:85) suggests this may have been a stone-lined barrel used for gardening.

Immediately below Feature 218 was Feature 220 (Feature 288-D in Excavation Unit 50). Of unknown extent, this lens of soil extended along the north edge of the unit, dipping in the northwest corner. As observed in the southeast corner on Excavation Unit 50 in 1991, the matrix was indistinguishable from the soils above called Excavation Unit 35, Stratum J and Excavation Unit 50, Feature 228 Strata B and C. However, the surface of Feature 220 was marked by a layer of thick copper sheeting fragments, some of which had curled edges and holes punched in corners, and roofing slate fragments (Figure 3.7). Additional stratigraphic data from Package 118 seems to confirm Pousson's (1986:82) suggestion that Feature 220 is the result of a later construction event such as one of the Park Building 16 enlargements or construction of 16A.

Two features, both found in Package 110 excavation units, provide information about Park Building 5, the last house built in the pre-war years. In Excavation Units 24 and 31, inside the corner formed by the rear wall and addition of the building, excavators found remnants of

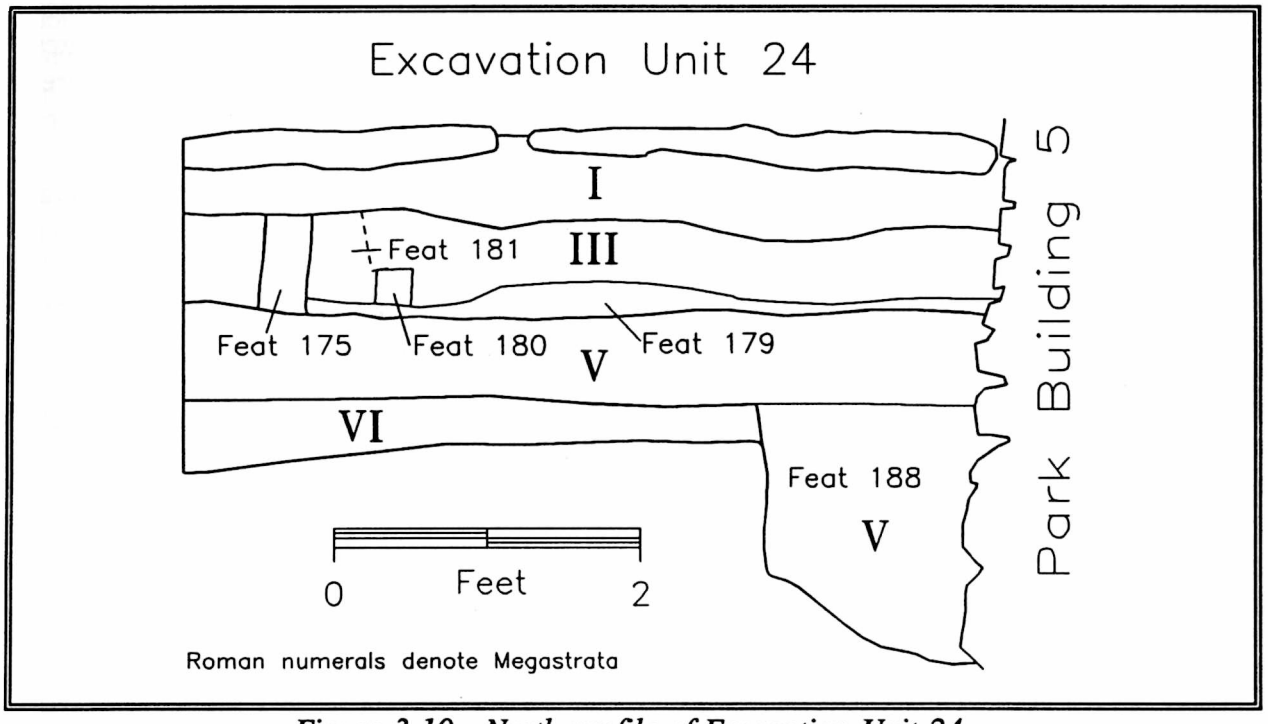


Figure 3.10. North profile of Excavation Unit 24.

the original builders' trenches -- Feature 188 along the west wall and Feature 194 along the wing (Figure 3.10).

In the same excavation units, outside the back door of Park Building 5, evidence of a rear porch was found (Figures 3.6 and 3.10). Feature 175/211 was about 4.5 wide and extended about 9 ft along the back of the building. Vertical board-and-batten sheathing enclosed the outer edges of the porch.

Artifacts. The Roeder assemblage of Megastratum V consists of 4913 artifacts recovered from selected strata and features of Excavation Units 35, 50, 52, 54 and 56.

Just over a quarter of the assemblage is composed of metallic artifacts (28.9% n=1421), mostly nails (n=1165) and unidentified ferric fragments (n=179). Interesting metal artifacts include a knife blade, fragments of a file, a spoon, one piece of lead shot, several straight pins and clothing fasteners (buttons, hook-and-eyes, etc.), crown cap closures, a lock part, and a fragment of a stove plate.

Ceramic artifacts are only 22.4% (n=1100) of the assemblage and consist mostly of whiteware (n=666) with various molded, transfer printed or sponged designs. The remainder of the ceramic assemblage consists of utilitarian earthenwares (n=208) and stonewares (n=14), a mix of pearlware (n=119), creamware (n=23), porcelains (n=8 including toy tea set pieces, bone china and buttons), refined redwares (n=9), and other ceramic items. These items consist of several pieces of clay tobacco pipes -- one with a molded design of a turbaned head, four marbles and one piece of a black basalt cup.

Glass artifacts are 31.8% (n=1563) of the total assemblage. Most of these artifacts consist of flat/window (n=705), unidentified body/rim (n=446), vessel (n=3), or

container/bottle fragments (n=333) of various colors including clear, olive, amber, and shades of green. Identified bottle forms include alcohol, medicinal, wine, and vials. Tablewares (n=17), of both leaded and unleaded glass, include identified forms of tumblers and stemware. One piece of mirror glass, a milk glass lid liner, two marbles, three buttons, and 13 pieces of lamp chimney glass are the only items of note within the glass component.

The faunal component of the assemblage consists of 70 pieces of egg shell, several samples of oyster shell, 696 pieces of bone and several bone artifacts. The bone is mainly large (n=8), medium (n=199), small (n=3) and unidentified mammal (n=208) with small components of bird (n=110), unidentified class bone (n=167) and fish (n=1). Bone artifacts consist of a piece of a bone toothbrush, six bone buttons and/or button parts and one unidentified object of carved bone.

Other items of note within the assemblage include a button and three unidentified objects of jetstone, a limestone marble, slate pencils and a Fox Creek Lanceolate projectile point from the Late Middle Woodland period. Also within the assemblage are samples of coal, slag, cinder, roof slate and brick.

Changing Centuries (1880s - early Twentieth Century) -- Megastratum III

Soils. After a significant chronological gap in stratigraphy, late nineteenth-century occupation of the Upper Wager Block is represented by numerous features and a few occupation deposits. In some cases these are distinguished as III-B for the 1880s-1890s and III-A for the years around the turn of the century.

Behind Park Building 7 (Figure 3.4), Package 118 excavation showed the lowest deposit in the megastratum to be a thick layer of coal cinders (Excavation Unit 47 Stratum G and Excavation Unit 48 Stratum K). Above the cinders, a layer of fill or otherwise disturbed soil was found in Excavation Unit 47 (Stratum F) and Excavation Unit 48 (Stratum H/G), although it is unknown whether they are the same strata. Both were a brown-to-dark yellowish brown (10YR4/4-4/3) sandy silt with river cobbles, brick, coal, and coal cinders. Related deposits showing similar sequences of coal cinder lenses over silty/sandy soils were excavated in 1979-80 in Excavation Unit 44 (Strata C, D, and possibly E) and in Excavation Unit 45 (D, E, and possibly C).

A portion of a probable occupation deposit of Megastratum III was found outside the back door of Park Building 5. There, Stratum C (including the Feature 181 area) pre-dates a wooden porch, which also belongs to the megastratum.

Also included in Megastratum III is a small remnant occupation found under Park Building 16 in Excavation Unit 57, located near the southeast corner of the southernmost room (Figure 3.11). Although the remainder of the excavation unit had been destroyed by recent stabilization and drain installation, an area of just over 1 ft square in the southwest corner of the excavation unit proved to be a stratified occupation deposit about 2.5 ft deep. The upper portion, called Stratum D, was clayey loam (10YR 3/3 mottled with 4/4) and contained charcoal and abundant eggshell. Below this appeared bits of a possible structural feature consisting of a north-south board fragment with lime and, below the wood, a slab of cut limestone jutting from the profile. From the wood down to sterile, the soils were dark, greasy humic loams (10YR 4/4-4/2), compact but friable, with large proportions of coal dust, charcoal, and eggshell

(sometimes appearing as large shell fragments smashed *in situ*). Beginning with the wood and lime, the area was dug as Feature 310.

Features. Two trash pits, Features 262 and 263 were found in Excavation Unit 45 adjacent to the northwest corner of Park Building 7 during Package 110 excavations (Figure 3.9). Pousson (1986) noted that while both began within the same stratum, 262 may have been slightly earlier than 263.

Feature 262 was 3.65 ft deep and about 3 ft in diameter at the top, changing to a square of 1.9 ft by the base (Figure 3.4). Less than half of Feature 263 fell in Excavation Unit 45, but it was at least 2.5 ft deep and approximately 5 ft in diameter at the top.

A post at the end of a brick walk to Park Building 6, first found in 1973 by Gardner (1974), was relocated (Feature 273) in Excavation Unit 47 in 1991. Because grading in the 1980s had further disturbed the area, the stratigraphic origin of the post was uncertain and there was no sign of the brick walk in Excavation Unit 47.

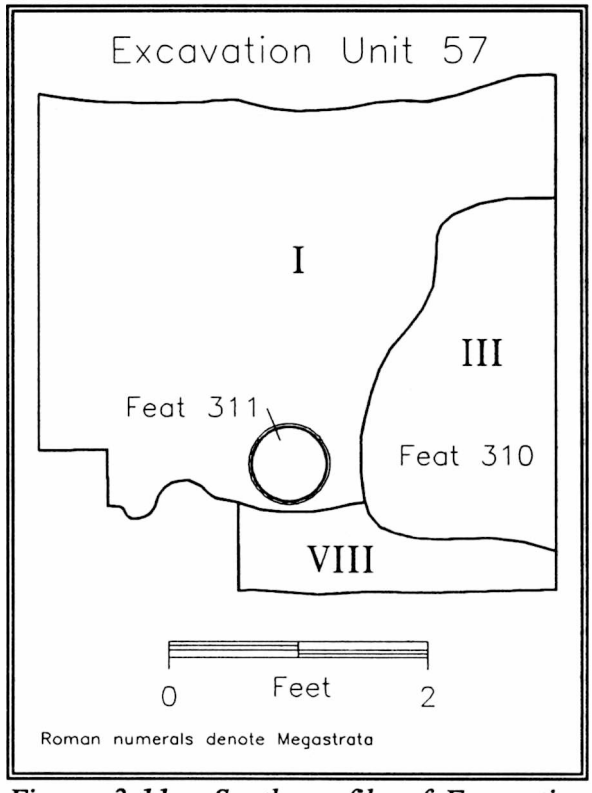


Figure 3.11. South profile of Excavation Unit 57.

A relatively early drain was found crossing Lot 15 in Excavation Unit 47 in a southwest-northeast direction, cutting Stratum G and filled with the cinders of Stratum F. The drain had a square cross section about 0.6 ft wide and 0.6 ft deep, with darker organic sides and bottom, all that remained of the board lining. The fill was waterborne silty sand, also with a high organic content.

Several post holes dating after the drain and deposition of the coal cinders, but probably still within Megastratum III, were also found in Excavation Unit 47. Earthmoving activities in the vicinity have since destroyed the lower 0.5 ft of these post holes, so it is impossible to determine whether they were contemporaneous. Typically, each measured 0.5 ft to 0.8 ft in diameter and contained whole or large pieces of brick, probably used to hold the post while the hole was filled around it. Two of these post holes (Features 277 and 278) were distinctly of this type, however Feature 276 was larger, less distinct, and contained little of the large brick. Two other post holes remnants containing large brick pieces (Features 275 and 279) were located nearby in Excavation Unit 48. Both cut Stratum G, but since the upper layers of the post holes were distrubed, it is unknown what relationship they might have had to each other or to those in Excavation Unit 47.

Another trash-filled feature (Feature 184) dating to the late nineteenth and early twentieth centuries (Megastratum III-B) was found in Lot 16, although interpretation is difficult due to ambiguities in the recording of Excavation Unit 29 and destruction of the tops of features in the

area (Figure 3.5). Re-evaluation of Package 110 field notes and artifacts, combined with Package 118 findings, strongly suggests that Feature 184 was the west end of a long trench alongside the Hog Alley wall used for trash disposal from the 1890s into the early years of the twentieth century. The trench included Stratum D in Excavation Unit 28 and approximately measured 3 ft north-south by 11 ft, and possibly as much as 17 ft east-west. It was over 2 ft deep with its top truncated by grading. The trench cut Megastrata VI and VII and dipped about 1.5 ft into subsoil below the cultural levels.[2]

An unmortared shale pad (Feature 179) may have been a replacement for an earlier wooden porch behind Park Building 5 (Figure 3.10). The pad stretched at least 10 ft north-south and some 3 ft to 4 ft east-west.

Two other possible rear porches for Park Building 5 may date to Megastratum III. The later one consists of a board stain aligned with two post holes (Features 180, 174, 199) which apparently cut through most, if not all, nineteenth century strata. This may have been part of the porch depicted on the Sanborn maps beginning in 1894.[3]

Feature 209 is a stone wall perpendicular to the Hog Alley wall, about halfway between Park Buildings 5 and 16. Although interpreted by Pousson (1986) as belonging to the early twentieth-century privy Feature 213, further excavation of the privy in 1991 suggests Feature 209 may have been an earlier wall reused for the privy. The east and south edges of Feature 213 were not held by stone walls, merely wood. In fact, Feature 209 could be the east wall of an earlier privy west of Excavation Unit 33 or related to one of the early stables. The wall, topped by a single course of brick, was traced downward about 3 ft from the surface in 1980.

The shed for the privy (Feature 213), removed by the park in the late 1950s, is partially visible in a couple of photographs taken at the time (Figure 3.12). It showed up on the Sanborn-Perris maps beginning in 1907 which indicates it was in place around the turn of the century. The door was on the west side, and a path of brick edged with vertical shale (Feature 214) crossed the yard toward Park Building 16. The pit was lined with vertical boards held with wide-spaced horizontal cleats. The upper portion was 4 ft square, but a couple of ft down the walls narrowed to about 3 ft. In 1980 about 3 ft of privy fill was excavated, while a strip about 0.6 ft wide along the east edge was dug 2.5 ft deeper in 1991. An unexcavated portion of the lower part of the privy pit remains for future research.

Unlike the privy (Feature 292) used a hundred years earlier, Feature 213 did not contain the same variety and quantities of artifacts and food remains. It did, however, contain coal and

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[2]The relationship of Feature 184 to stone walls in the area is likewise unclear. Previously it was felt that Feature 183 was a stone privy enclosing fill called Feature 184. Package 118 excavations proved conclusively that Feature 184 was **not** a privy. Interpretation presented in this report considers the very shallow Feature 183 to post-date Feature 184 and its equivalent, Stratum D in Excavation Unit 30. The nature and stratigraphic position of Feature 185, a somewhat deeper east-west stone wall, remains cloudy.

[3]Pousson (1986:82) interpreted the shale pad (Feature 179) and the board-and-post hole configurations as part of the early Feature 175/211 porch. But the view taken in this report that these represent a series of porches is based on re-examination of the artifacts and field notes. Also, Pousson expressed concern that the porch found archeologically was narrower than the one on the Sanborn-Perris maps beginning in 1894. Recent historical research has cast doubt on the accuracy of those maps.

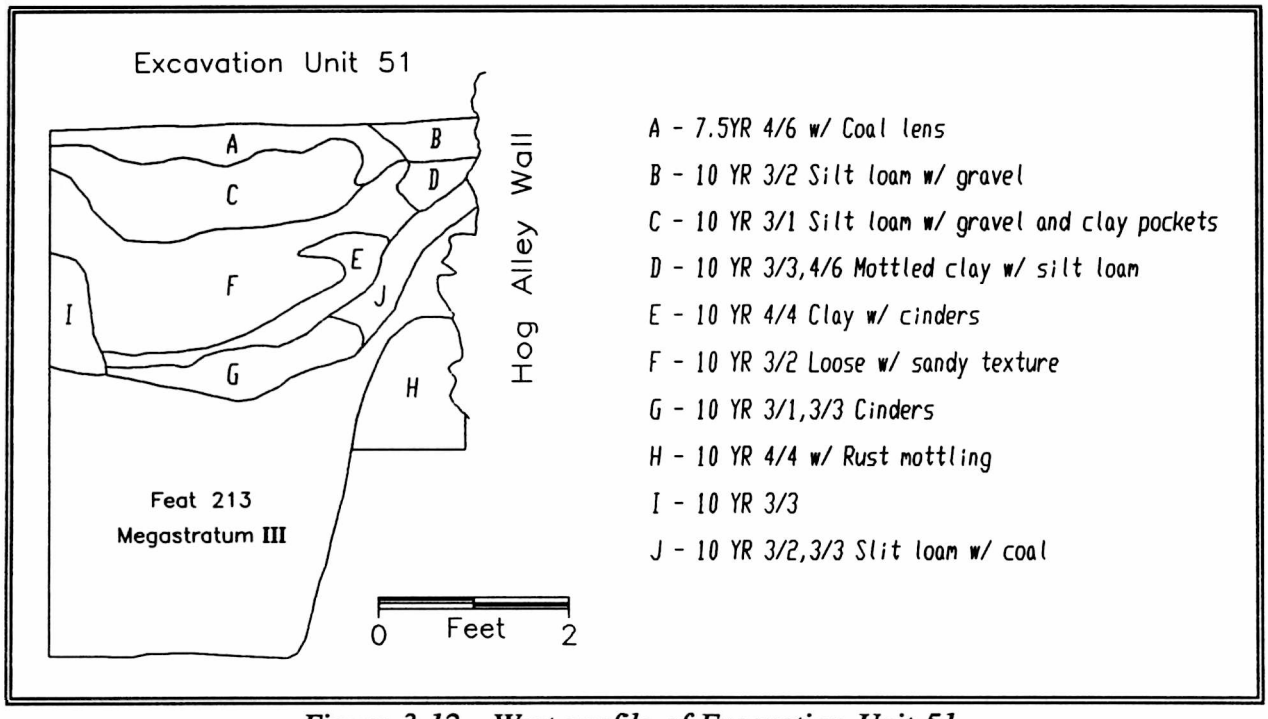


Figure 3.12. West profile of Excavation Unit 51.

cinder waste from stoves. The internal stratigraphy exhibited numerous lenses and pockets sagging toward center of the pit. Irregularities, especially next to Hog Alley wall, point out the possibility the privy was cleaned on occasion. Several feet from the top of the feature (the original surface is unknown due to grading), excavators encountered pieces of several boards lying east-west within the pit. These may be part of the pit lining that collapsed. No layers of lime were noted.

Artifacts. Burleigh Privy Assemblage. The Burleigh privy assemblage from within Megastratum III (1880s - early twentieth century) consists of 3169 artifacts recovered from all levels of Feature 213 within Excavation Unit 51. Only 17.4% (n=553) of the artifacts contained within this assemblage are not faunal or floral remains. Nearly half of the non-organic artifacts are glass (5.7%, n=181) fairly evenly divided between flat (n=63) and unidentified (n=36) glass and container glass (n=79). The only glass item of note is a small milk glass button. Metals made up another 4.9% of the assemblage (n=154) with most of the identified pieces being nails (n=129). Only four metallic items of interest were recovered -- a clothing snap of cupric alloy, a .58 caliber minie ball, a ferric knife, and a coin. The coin, probably a pre-1857 large cent, (Yeoman 1962:65) is copper and is 1⅛ inches in diameter, but due to corrosion no date or design could be discerned. The ceramic component of the assemblage (1.2%, n=37) is over half whiteware (n=25), most of it undecorated, with only nominal representations of pearlware (n=2), creamware (n=1), and porcelain (one button). The remaining ceramics are utilitarian earthenwares (n=8). The only identified vessel form within the ceramic assemblage is a chamber pot of undecorated whiteware. Other items recovered within this assemblage include a brown plastic comb and samples of roof slate, coal, cinder, and brick. The largest

portion of the assemblage is floral remains. Over 80% (82.5%, n=2616) of the assemblage is either wood (n=48) or nut and seed remains (n=2568). Although no analysis has been conducted on the wood, preliminary sorting of the nut and seed remains indicates a large quantity of stone fruit, principally cherry (n=2325), with some plum (n=25) and peach (n=1). Other identified seeds consist of persimmon (n=65), grape (n=37), squash (n=26), unidentified pit/seeds (n=37), and cantaloupe (n=2). Identified nut shells within the assemblage include hazel nut (n=3), brazil nut (n=3), chestnut (n=8), english walnut (n=1), acorn (n=1), and peanut (n=10).

Faunal remains consist of 28 pieces of egg shell, two pieces of oyster shell and 142 fragments of bone. Preliminary sorting of the bone indicates that it consists of large (n=8), medium (n=55), small (n=1) and unidentified (n=46) mammal, bird (n=14), fish (n=7) and unidentified bone fragments (n=11).

Burleigh Saloon Assemblage. The Burleigh Saloon assemblage within Megastratum III (1880s - early twentieth century) totals 1145 artifacts recovered from Strata D of Excavation Unit 28 and selected levels of Excavation Unit 51 Feature 184. Almost half of the artifacts recovered are glass (49.6%, n=568) and nearly another quarter are metal (22.5%, n=258). The remainder of the assemblage consists of ceramics (11.3%, n=129), various synthetic (n=3) artifacts, floral (seven pieces of wood), faunal (shell and bone) and miscellaneous (mortar, cinder, stone) materials.

Glass artifacts of note within this assemblage include three small buttons and a leaded glass marble. Other leaded glass items include a candlestick holder, several pieces of tableware including an etched tumbler rim, and at least one clear, leaded glass vial. Also included in the assemblage are at least four clear strapped flasks, one flask embossed "WARRANTED/FLASK," and several medicinal bottles. An 1893-1897, aqua-blue J.C. McGraw Harpers Ferry Brewery bottle (Hull-Walski and Walski 1993:Figure 17.22), a brown glass bitters bottle, and a bottle with the logo "P. Welty & Co.", were among the recovered embossed pieces.

The majority of the metal component (n=258) of the assemblage are nails (n=169) and unidentified metal fragments (n=18). Interesting metal items recovered include two knife blades, an 1893 Liberty Head penny (Yeoman 1962:93), a door hinge, and two pieces of jewelry -- a man's copper finger ring and a woman's cupric ring with blue plastic beads. The only other metal item with an associated date is a clothing snap stamped "★ PAT SEP 8 85."

The ceramic component of the assemblage consists of whiteware (n=81), other white (n=8), red (n=13) or buff (n=3) paste earthenwares (n=16), stonewares (n=5), items of ball clay (n=6), and porcelain (n=11). One item of note within the earthenwares includes a piece of ca. 1880-1882 majolica with a molded and painted polychrome overglaze decoration in cream, green and pink (Lehner 1988:345-346). Identified forms include a chamber pot, table plates, a cup, and two butter pats. There are five pieces of tobacco pipes in this assemblage, three of ball clay and two of stoneware. One of the stoneware pipe bowls is molded with an overall ribbed design and has "FINEER" near the top edge on one side. Three ball clay marbles and two porcelain marbles are also included. Other porcelain items include two buttons, one doll's leg, the leg of a figurine, and a lightning stopper marked "TRADE MARK" with a spread-winged eagle on top and "PAT'T/K. HUTTER/FEB 7/1893" on the base.

Synthetic items consist of a fragment of a hard rubber ball, a band of plastic, and a piece of bakelite. Stone items include a piece of roofing slate, a slate pencil, and a piece of building shale.

Faunal materials recovered within this assemblage consist of three pieces of shell and 171 fragments of bone. Preliminary sorting indicates that almost half of the bone is mammal (n=81) with a nearly identical amount of bone of unidentified class (n=79). There is only a nominal representation of bird (n=10) and fish (n=1) within the assemblage.

Park Building 7 Saloon Assemblage. The assemblage attributed to the Park Building 7 saloon within Megastratum III (1880s - early twentieth century) consists of artifacts recovered from Excavation Unit 45 Features 262 and 263. There are 949 artifacts within this assemblage. Well over half of these artifacts are glass (68.8%, n=653) with the great majority of these being identified as fragments of window glass (n=550+). Glass artifacts of note consist of one milk glass button, one light blue, round glass bead, a clear glass medicine bottle (three-piece, cup-bottom mold with a wide-mouthed packer finish), and 11 pieces of glass tableware. Over 97% of the metal included within this assemblage are nails (n=82) or unidentified ferric fragments (n=85). The ceramic component of the assemblage is slight (18.1%, n=107) and consists mainly of whiteware (n=51) and utilitarian stone- and earthenwares (n=17). Ceramic items of note include a porcelain doll's head, a porcelain calico button (black dots and circles), three ball clay tobacco pipe fragments, and a gilded porcelain plate and cup. Decorative treatments of the whitewares include underglaze transfer prints in blue, purple and black slips, and sprigging. Other items recovered within this assemblage include a bone handled, full-tanged knife carved with chevrons, a complete bone toothbrush, a bone toothbrush handle, two pieces of leather, and a black rubber comb.

Burleigh Yard Assemblage. The assemblage ascribed to the Burleigh Yard area consists of artifacts recovered from Excavation Unit 30 Level E and Feature 191, excavated as part of the Package 110 project, and Excavation Unit 57 Level D and Feature 310, under Park Building 16, excavated during the Package 118 project (Figures 3.5, 3.11, and 3.6).

The artifacts recovered during the earlier Package 110 project included such items as metal spoons, a plastic medallion, parian doll parts, a metal toy soldier, several marbles, buttons, and beads. Two unique items are an eye glass lens and a piece of 35mm camera film.

Artifacts from the Package 118 excavations also included some marbles, buttons, and beads. Several pieces of a toy porcelain tea set, pieces of plastic combs, tobacco pipe fragments of ball clay, and red/colorless flash glass were recovered during both excavations. Parts of two religious items were recovered: a black glass fragment of a cross/crucifix found during the Package 110 excavations and a fragment from a crucifix figurine of gilded porcelain recovered during the Package 118 excavations.

The Package 118 excavations produced a variety of bone and other faunal remains. There were 205 bone fragments, not including carved or modified artifacts (i.e., buttons, toothbrushes, etc.) The 205 bones were catalogued as identifiable or unidentifiable bird (40), fish (29), mammal (129) or unidentified class (n=7). Clam shell, oyster shell and egg shell were also found in the assemblage.

Early to Mid-Twentieth Century (c.1900-1952) -- Megastratum II

Soils. Only sparse, thin deposits attributable to the first half of the twentieth century were found in either Package 110 or 118 archeological investigations. In many cases, the rubbly nature of these lenses leads to the conclusion that they are disturbed and those that exist are early. Most likely this has resulted from grading and other actions taken in preparing the area for public interpretation.

Features. Features on the other hand, are abundant, especially ones related to sanitation -- sewer lines, drain pipes, and a privy (Figures 3.4 and 3.9). Feature 282 in Excavation Unit 48 proved to contain a 4-inch iron pipe. It runs northeast-southwest behind Park Building 7, and is undoubtedly the same pipe recorded earlier in Excavation Unit 45 (no feature number assigned). A second 4-inch iron pipe (Feature 267) parallels Feature 282 to its west. It was located in Excavation Unit 44 in 1981.

Sometime after installation of these drain pipes, but within the Megastratum II years, a large addition was put on the back of Park Building 7. Feature 254, the brick and stone foundation, was found in Package 110 excavation units and, during grading, John Pousson observed destruction of most of this feature. He also noted a large shale slab near its southwest corner and proposed it was a step outside a door (Pousson 1981).

After removal of the large addition, a 1-inch water pipe was installed, running parallel to the retaining wall, then along the rear wall of Park Building 7 (Pousson 1986).

Straddling the line between Lots 15 and 16, just off the southwest corner of the Park Building 5 wing, is a cistern probably constructed sometime during the first half of the twentieth century. The cylindrical brick vault is now capped by a modern concrete slab. The cistern is 10-12 ft in diameter and has a central brick filter wall. No archeology has been conducted to ascertain its stratigraphic position -- probably a difficult task due to grading around it. No pipes have been clearly associated with the cistern.

In Lot 16, a drainage feature (Feature 190/191) cut through the east end of the trench along Hog Alley wall, including Feature 184 (Figures 3.5 and 3.6). Feature 190 was a box-like construction with drain pipes to conduct water into and out of the silt trap. The floor was mortared and the stone walls were roughly perpendicular to the Hog Alley wall. A 5-inch terracotta pipe (Feature 196) fed water into the box through the west wall near its top, while a 10-inch pipe through the lower south wall provided outflow. The interior of this silt trap was about 2 ft east-west, 4.5 ft north-south and some 2.5 ft deep.

Connections of Feature 190/191 and the various terracotta drains lacing Lot 16 are unknown. Feature 165 is a 10-inch line running east toward Potomac Street north of Park Building 5. Pousson surmised Feature 190/191 drained into it. Sections of two smaller pipes were located in Excavation Units 28 and 32 in 1980. Feature 217, running northeast-southwest through Excavation Unit 35 seems to be the same as Feature 301 in Excavation Unit 54, and may be related to pipe fragments close to Park Building 16A noted by Gardner (1974). In the vicinity, Feature 287 runs parallel to 301 then turns east to parallel the Hog Alley wall. What happens before it reaches Feature 209 is unknown.

Also found in the Park Building 16 yard and belonging to Megastratum II, or an earlier stratum, is brick and shale pavement and a foundation located by Gardner (1974). As mapped

during that investigation, it consisted of a brick walk slightly more than 3 ft wide along the north side and northeast corner of Park Building 16A, plus a layer of shale around the foundation of the small structure at the east end of 16A (Feature 139). Due to insufficient recording of stratigraphic data by Gardner and subsequent destruction by backhoe and grading, the archeological record of the paving and foundation is lost. Excavation Unit 53, at the center of Park Building 16A's north wall, failed to show any paving remained there. Indeed, the feature as reported by Gardner did not have distinct outer edges, suggesting earlier damage.

National Park Service Years -- Megastratum I

Under National Park Service control since the late 1950s, the ground of the Upper Wager Block has been disturbed by building stabilization, restoration, installation of utilities, archeology, and public interpretation activities. The degree to which each event was recorded, photographed, and reported varies considerably; however, the archeological record contains a web of modern cables, drains, post holes, and ditches throughout the area. Rather than give detailed descriptions of such recent features, the discussion that follows incorporates non-archeological sources to give a picture of the situation.

Stabilization and repairs. In 1989, historian Stan Bumgardner and architect Krista Pace collected park administrative records and other sources concerning repairs and changes to the park's historic structures. These documents report the type of work done but no details. Perusal of the indices (on file with the park's historical architect) shows the buildings were reroofed and painted, deteriorating walls were "stabilized" or "rehabilitated," drainage systems were installed, and structures deemed non-historic (i.e., post-Civil War) were removed. Figure 3.13 shows locations of known disturbances.

The stabilization of Park Building 16, in the mid 1960s, included injection of a special concrete mixture into the soil beneath the east wall foundation (*Prepakt Reporter* 1968:6-7). Archeological investigation in 1991 (Excavation Unit 57) encountered this hardened soil and a concrete foundation above it.

In other cases, wall repairs to the historic buildings included digging a ditch along the outside of a wall thereby removing traces of original builders' trenches. Two cases were recorded in 1980. In Excavation Units 9 and 10, a backhoe trench was found along the east wall of Park Building 15. Near the rear door of Park Building 5, Excavation Units 24 and 31 revealed a smaller hand-dug trench.

Concrete floors were poured under Park Buildings 15 and 16A, and a 1920s concrete floor in the north room of Park Building 16 was removed in 1964 (Walmer 1964). A pipe ditch was dug to direct condensation from a large air conditioner installed in Park Building 16A in the early 1980s.

Utilities. In 1979 a trench was dug diagonally through the narrow yard between Park Building 5 and the Hog Alley wall. The sketch made in 1979 by the monitoring archeologist shows a larger area opened near the northwest corner of the building. Water and sewer lines, presumably laid earlier, run through the area (Figure 3.13).

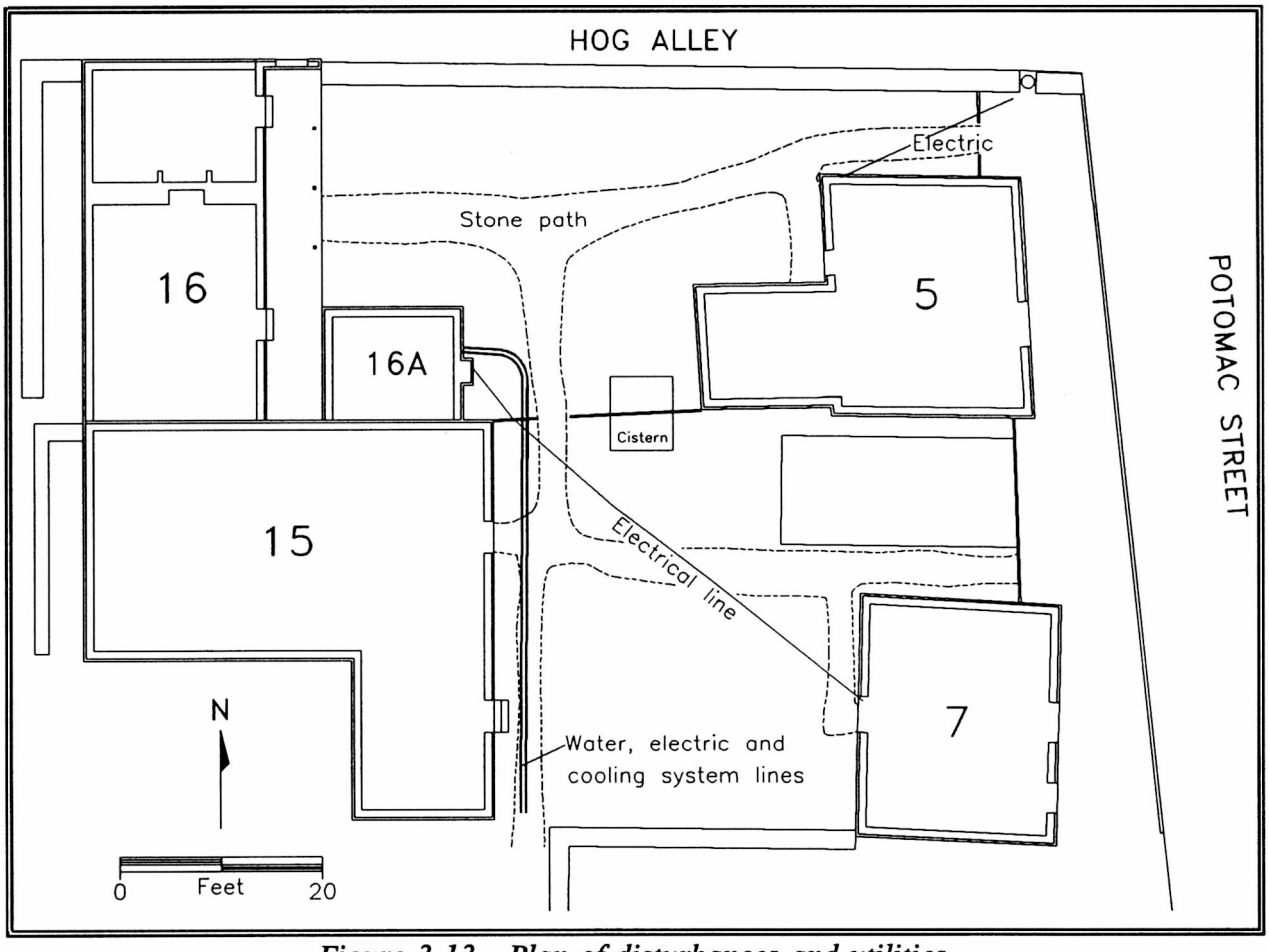


Figure 3.13. Plan of disturbances and utilities.

The following year, a large backhoe trench was dug for electrical and water lines along the rear walls of Park Buildings 15 and 16A. Archeologists were not permitted to complete their excavation unit adjacent to 16A.

During the 1991 season, two electrical lines across Lot 15 from Park Building 5 toward Park Building 16A were noted. The deeper one was found in the corner of Excavation Unit 48, while the ditch for the other line is visible on the surface. Several park maintenance staff members recalled that both were installed during the 1980s.

However, no one working in the park in 1991 had knowledge of a steel utility box encountered in Excavation Unit 47, despite its late stratigraphic position. A ditch extends southward from the box, and no doubt in other directions. The raised pattern on its top resembles telephone junction boxes elsewhere in the park.

Pipes of various types frequently show up in archeological excavations of Lots 15 and 16. While the historic drains will be examined in a later discussion of sanitation, there are recently-installed pipes that should be noted at this point.

In Excavation Unit 57, located in the south basement room of Park Building 16, a T-shaped pipe connection was uncovered. This may be the drain along the "north" wall noted in

the index for 1963 [4]. The perforated terracotta pipe, laid in a gravel-filled ditch, was intended to draw groundwater out of the building. The edge of a gravel bed which probably contained a similar pipe was visible in the north profile of Excavation Unit 55 in the north room.

A deep ditch running east from the back porch of Park Building 16 was found in the 1991 excavations. Artifacts and the uneven soil compaction indicated recent origin, so work on this feature was halted before its contents (wire or pipe) were discovered. No park employees recall anything of the ditch's origin. As Park Building 16 has no electricity, this ditch most likely contains a pipe tied to one or both of the modern drains under the building. The ditch runs directly under the shale path, suggesting it was dug in 1981 when the path was installed.

Grading and landscape features. Grading of the Upper Wager Block was conducted in May 1981 and monitored by John Pousson of Denver Service Center. He noted a number of features impacted by the heavy equipment, made sketches of previously unrecorded features, and recorded excavation for the shale paths. Changes in the surface may be seen in the profiles (Figures 3.4 and 3.5).

Public Interpretation. Evidence of public interpretation in the Upper Wager Block shows such activities have caused minimal damage; nevertheless the impacts are detectable archeologically.

Behind Park Building 16 a faint rectangular depression was visible in 1991. Park staff members report that interpreters sometimes had a large iron rack over a charcoal fire for cooking demonstrations in that location. Again, the disturbance was limited to the sod. Nearby, adjacent to Park Building 16A, a number of candle stubs recalled "Old Time Christmas" celebrations.

[4]Architects in Harpers Ferry call the northeast wall "north" while that same wall is "east" according to the archeologists' grid.

CHAPTER 4

A SMALL TOWN URBAN ENVIRONMENT: CHANGING CULTURAL LANDSCAPE IN THE UPPER WAGER BLOCK

Jill Y. Halchin

The Harpers Ferry Hotel, 1803-1837 (Megastratum VI)

For much of the first 37 years of the nineteenth century, the Harpers Ferry Hotel sat facing Shenandoah Street, one of the main thoroughfares through town. Scarce and skimpy written sources tell us that the main hotel, apparently a rambling collection of frame structures and additions, was serviced from several outbuildings which sat on the Upper Wager Block to the north of the hotel -- in the Package 118 project area. The west side of the hotel property was marked by an unpaved road later known as High Street. On the east ran a narrow alley with "grog shops," shacks, and livery stables on the near side and the U.S. Armory on the far side along the Potomac River. The armory canal separated private and public land.

Little archeological evidence of the hotel outbuildings has been found, although differences in the 1803 and 1837/38 maps show that their number and locations changed over the years. As already noted, distortions in these maps make them unsuitable for precisely locating structures. Blee (ca. 1978:130-136) reported stone foundations and post holes dating to the late eighteenth or early nineteenth century, under Park Building 11A, likely belonging to one of the frame structures which formed the main hotel.

The hotel service buildings probably included a stone structure later incorporated as the kitchen wing for Park Building 15 (Blee ca. 1978:334-335). Also, a long building, no doubt the stable, stood approximately in the area later sold as Lots 16 and 17.

In the stable's vicinity, if not adjoining it, was a large privy (Feature 292), evidently not on either of the maps. However, no evidence of a shed over the 5 ft by 10 ft pit was found archeologically due to ground surface disturbance.

While few features remain from the hotel years, many archeological units in both Packages 110 and 118 hit a thick grayish silty-to-clayey layer containing artifacts relating to the hotel. No distinct occupation surface with sheet refuse was ever encountered, pointing to some type of cleanup in the late 1830s after the hotel was razed. The privy, however, preserved a large amount of kitchen waste and other items. The loss of original ground surface means a lack of information concerning the grade of the hotel property.

One final note on the hotel years should be recorded. During excavations it was observed that coal was absent from Megastratum VI deposits. Very possibly, coal was little used in Harpers Ferry until the railroads reached the town in the mid-1830s, about the time the hotel closed.

Prosperity, Late 1830s (Megastratum V-B)

Beginning in the late 1830s, new brick and stone buildings replaced the hotel complex, although the stable and privy may have remained. John Wilson, who had new buildings on Shenandoah Street was operating this new complex (Figure 4.1). The subdivision of the Wager land gave Lower Town a formal spatial organization it had previously lacked. While older buildings and topographic features such as bedrock cliffs were incorporated into the new plan, new traffic patterns and focal points were created. The lots were long, narrow urban plots intended to put many building fronts along each street. In the case of the Upper Wager Block, this meant larger storefronts and dwellings on High Street, with the stables and warehouses on the lower end of the lots facing the alley along the armory.

Did the division of the area into discrete parcels lead to landowners installing fences around their properties? Provisions in a Park Building 7 right-of-way deed and a line of stones south of Park Building 15 (Feature 139) show a fence along that accessway (Blee ca. 1978:310). Archeological investigations have avoided fence lines due to the presence of NPS fences. When considering property lines, it should be remembered that Frederick Roeder owned Park Building 7, sometimes using it as a warehouse for his bakery/confectionery business which was located behind Park Building 16. Unless he had permission to cross Lot 15, he had to move supplies out the front of Park Building 7 and up the street to the lower end of Lot 16.

Lot 15. Lot 15 deposits belonging to Megastratum V do not appear to be occupation layers. Some resulted from construction of Park Building 7, and perhaps Park Building 15, at the beginning of the period in the late 1830s (Megastratum V-B).

Feature 269, probably a privy, belongs to the years after construction of Park Buildings 7 and 15, although it cannot be assigned specifically to V-A, or V-B, or both. Relatively little of the feature was excavated in 1980, making it very likely that deposits from privy use are preserved intact for future research into the pre-Civil War years in Harpers Ferry.

Gardner's excavations uncovered part of the original Park Building 7 -- a "deeply buried foundation wall" that starts somewhere under Potomac Street and runs about 6 ft west from the modern sidewalk parallel to Park Building 7's north wall (Gardner 1974:32, Figure 24). This served as a retaining wall for steps down to a cellar door. Other evidence of the original front half of the building may remain under the street.

Lot 16. As discussed in Chapter 2, John Wilson apparently had stables on Lots 16 and 17 for many years. He leased the lots in 1838, and gave up Lot 16 in 1844 and Lot 17 in 1856. The 40 ft by 100 ft dimensions of the 1840 stable (if not exaggerated by the newspaper) means the structure was too large to be contained on one lot. However, the 30 ft by 60 ft stable recorded in 1844 was located on the lower end of Lot 16. So far, only one possible remnant of one of these early stables has been found archeologically. When uncovered in 1980, the stone wall jutting south from the Hog Alley wall (Feature 209) was assumed to be part of a privy (Feature 213), but the lack of stone on the other privy edges casts doubt on this interpretation. This unidentified wall is just under 70 ft west of the original Potomac alley, posing the possibility it belongs to the 1844 stable.

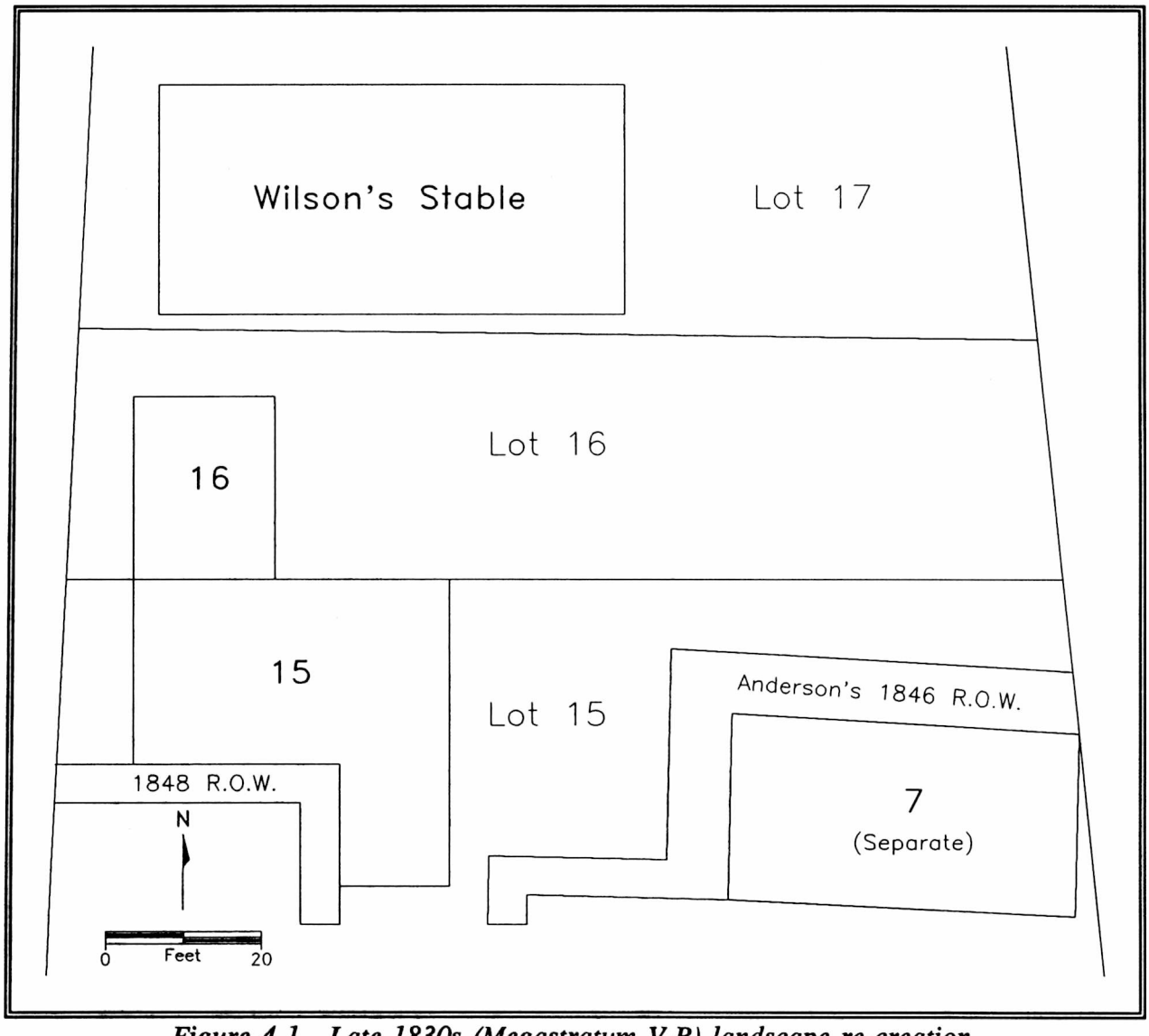


Figure 4.1. Late 1830s (Megastratum V-B) landscape re-creation.

The last of Wilson's stables, how ever many existed, stood on Lot 17. Because it was most likely constructed in the mid-1840s, not long after the first stage of Park Building 16 was erected, it has been assigned to Megastratum V-A.

Park Building 16 began around 1844 as two rooms, one per floor, sharing a wall with Park Building 15. Architect Walmer's tests in 1964 showed no substantial foundation for Park Building 16.

Park Building 16A dated from Megastratum V, but excavations so far have revealed only disturbed soil and fill along walls. A concrete floor prevents archeological testing inside. Considering the fact that it is detached from the main building and the war claims testimony about the bakery behind Park Building 16, it has been argued that Park Building 16A was the bakery and that it was constructed at the same time or very shortly after Park Building 16 was started. One characteristic of Park Building 16A challenges this interpretation: the small

chimney appears too small for a wood-fired bake oven or a fireplace for boiling candy. Family descendent Isabel Flanagan (1992) asserts that Park Building 16A was the bakery, but many of her recollections of family stories, such as the location of the shops, are ambiguous or contradictory.

Two other features possibly dating to the Roeder years are a small stone foundation off the east end of Park Building 16A (Feature 139) and a stone paving alongside Park Building 16A. Since Gardner uncovered both, they have been graded away. One possible interpretation of Feature 139 is that it was an external bake oven.

More Changes, 1840s-1860s (Megastratum V-A)

Construction and implementation of the neighborhood renewal plan of Armory Superintendent John Symington during the mid- to late 1850s again changed the physical character of the neighborhood (Figure 4.2). First, 25 ft was trimmed from the front of the lower ends of the lots for widening Potomac Street, and a wall was erected between the street and the armory canal. Second, Lot 17 was turned into an alley. Third, Park Building 16 was enlarged and Park Building 5 constructed. The overall effect of these changes was to compress residents' and business activities into smaller yards within an urban block of narrow lots bounded by streets. Through its part, the government intensified the pattern begun with the division of the Wager Reservation in order to install social controls through organization, privatization of property, and creation of boundaries between government and civilian areas.

Lot 16. As already discussed, documentary and architectural data show Park Building 16 was extended the first time to the Wilson stable wall, probably after the Roeders bought Lot 17 in 1848. Sheet copper and roofing slate fragments found in Feature 220 in Units 35 and 50 suggest the buildings on Lot 16 had slate roofs during the period; a logical decution considering that Roeder operated a bakery which would have produced smoke and sparks up its chimney.

Construction of Hog Alley involved demolition of most of Wilson's hotel stable on Lot 17. Its north and south foundations were extended eastward to Potomac Street to serve as retaining walls for Hog Alley. The break between the earlier and later wall segments were noted in Unit 28 (Pousson 1986). The bottom of the wall found in that unit showed the later extension was about 1 ft shallower than the stable wall. Next, Park Building 16's third story was added, its north wall resting atop the old stable foundation. The bakery in Park Building 16A had a wood house and shed attached to it. Megastratum IV, originally believed to represent a post-war occupation, actually dates to the pre-war Roeder years. The inclusion of a significant quantity of building rubble in this stratum suggests association with one of the 1850s construction episodes involving Park Buildings 16 and 16A.

The Roeders constructed Park Building 5 on the lower end of Lot 16, fronting the newly-widened Potomac Street like a twin to Park Building 7 next door. Excavations in 1980 revealed a rear porch (Feature 175) that was probably an original detail of the house. It was about 5 ft deep and probably extended to the northwest corner of the house. Either it was an enclosed porch or a low stoop edged with vertical board-and-batten sheathing.

Despite the large proportion of the lot already explored archeologically, no privy dating to Megastratum V has been found. In can be hypothesized that a Roeder privy was located at

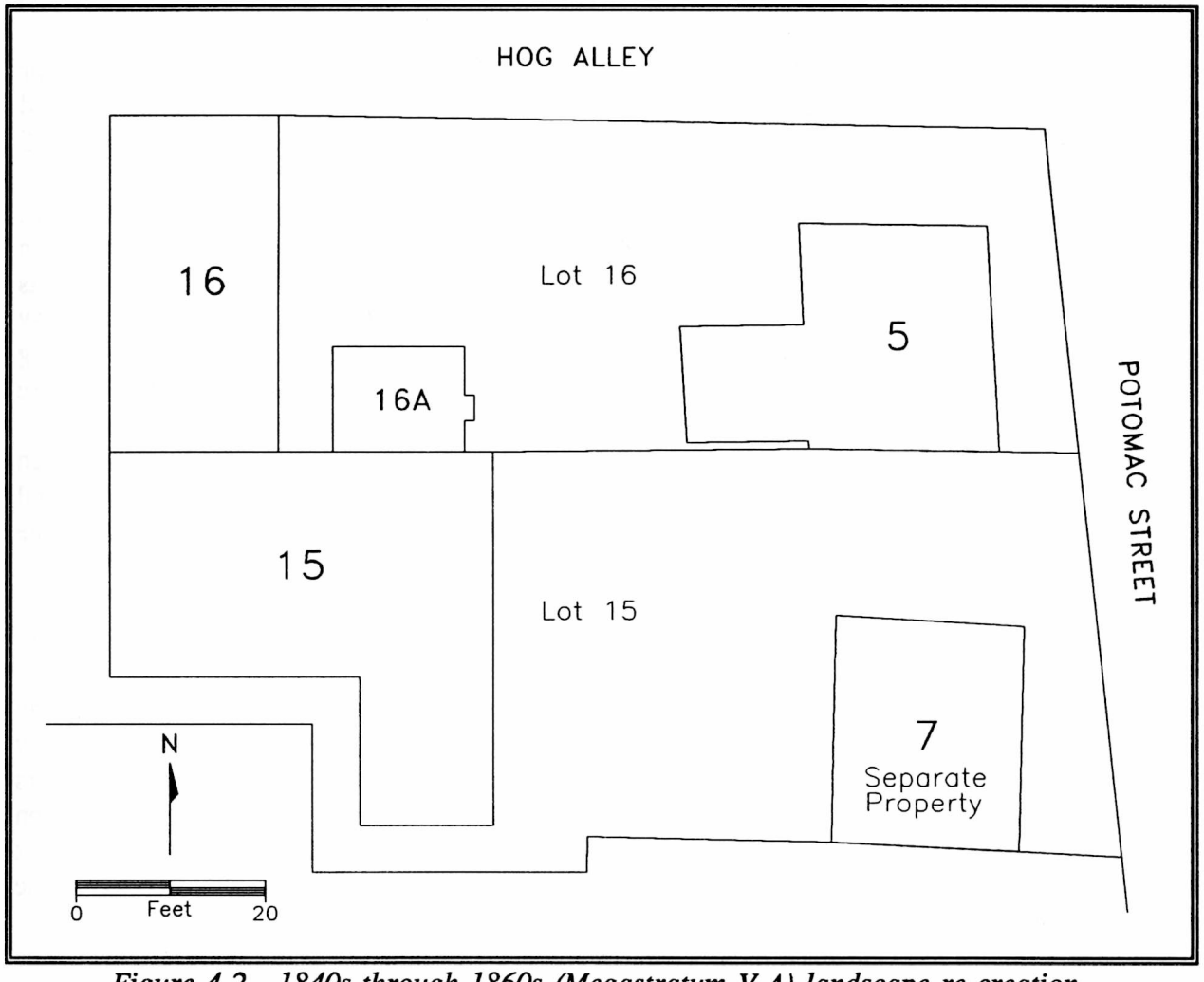


Figure 4.2. 1840s through 1860s (Megastratum V-A) landscape re-creation.

the lower (east) end of the lot, perhaps in the area affected by the street-widening or construction of Park Building 5, or along Hog Alley wall in the narrow sideyard north of Park Building 5.

Lot 15. The widening of Potomac Street meant the Roeders lost the front half of Park Building 7 -- sometimes a bakery and confectionary warehouse, and sometimes the White Hall drinking establishment. The building's replacement facade was nearly identical to the new Park Building 5.

No documentary or archeological evidence has yet been found concerning the actual Park Building 15 structure from the mid-1840s through 1850s. Nor are there any yard deposits other than those that appear to be fill. The privy (Feature 269) between the buildings may have remained open during the period.

Post-War Shock

Beginning in late July 1861, Federal troops used the Upper Wager Block buildings for officers' quarters, post office, bakery, stables, and storage. Yet no deposits or features related to that occupation have been found archeologically -- graffiti on the walls of Park Buildings 15 and 16 is the only physical evidence.

According to war claims testimony given by family members (many years after the fact), the soldiers removed windows and dismantled outbuildings for materials to be used in constructing army camps. Park Buildings 5 and 7 undoubtedly suffered from their time as stables and feed storage. J.J. Kern estimated repairs at $1,000 and he valued the entire property with three buildings at $2,000 in currency of the period (Court of Claims 1906). Considering the lack of information on Park Buildings 5 and 7 from the post-war years, it may be those structures remained in poor condition until the 1880s when the Burleighs purchased the property. Like the war years, archeological evidence of the decades following the war has so far been elusive. Several possibilities for loss of the strata can be suggested: clean-up after the Civil War occupation, the 1870 flood (which reached some five ft above datum and well into the lower floors), and purchase by new owners in the 1880s.

Economic Revival and Saloons, Late Nineteenth Century (Megastratum III)

Both the documentary and archeological records revived in the 1880s, giving the impression of economic renewal in the Upper Wager Block. After many years of ownership by the Downey and Roeder-Kern families, the properties changed hands. Possibly the new owners made repairs, and there was more construction on WL15. Visually this revival in construction changed the appearance of the neighborhood, further covering land with buildings -- buildings of light frame construction that lacked the statement of permanence and wealth implied in the earlier stone and brick buildings surrounding them (Figure 4.3).

The scope of the landscape data is limited to what can be seen in the photographs (some of uncertain date) and excavations of foundations. As with earlier megastrata, Megastratum III yard deposits are rarely encountered in excavations, making it impossible to determine the grade at the time. However, several trash pits and a small sample of Park Building 16's basement provide critical data.

Lot 15. The two trash pits within 5 ft of the rear wall of Park Building 7 (Features 263 and 264) seem to be related to a saloon in that structure. Determination of responsibility for the pits is problematic, because Park Building 7 owners had no right to use any land around the structure during this period. Only for some five to six years in the mid-1870s did both Park Building 15 and its lot and Park Building 7 belong to the same owners -- Charles and Charlotte Hopwood. Nevertheless, the preponderance of tumbler and bottle glass in both pits point to an association with the saloon in Park Building 7.

Sometime after use of the pits, a large addition was constructed on the rear of Park Building 7. Traced by Gardner and Package 110 excavators, although largely destroyed by the 1981 grading, this shallow brick-over-stone foundation could have supported only the lightest of frame sheds, probably one story. It reached about 17 ft into the backyard virtually filling the

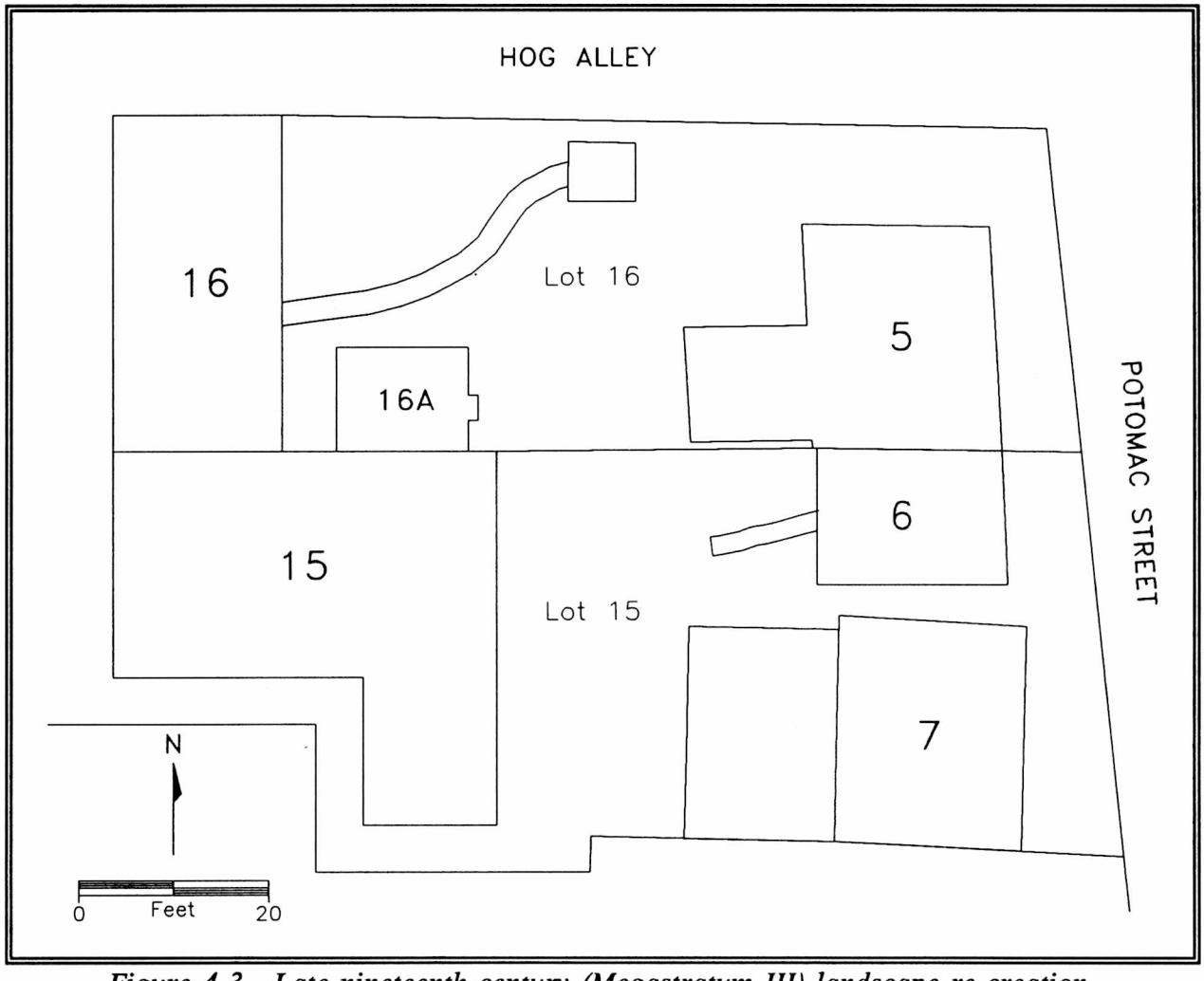


Figure 4.3. Late nineteenth-century (Megastratum III) landscape re-creation.

space between Park Buildings 7 and 15. Plaster remaining on the west wall of Park Building 7 shows the framing boards were exposed on the interior. Possibly this addition did not last long -- it never appeared on any Sanborn map between 1894 and 1933, nor did it show in any known historic photograph (admittedly, camera angles are not the best for including it).

What may be one of the earliest drains in the neighborhood (Feature 281) runs southwest to the north edge of Lot 15. Installed somewhat earlier than the iron and terracotta pipes, it appeared to be a board-lined trough, or pipelike affair made of boards, and it had become filled by sediments.

As best as can be determined from deeds and maps, the space between Park Buildings 5 and 7 remained open, but fenced from the street during the late nineteenth century. However, the only excavations in that area were conducted by the Gardner project, and it is not clear how deeply he dug. He did, nevertheless, trace the outline of the foundation for Park Building 6 (Gardner 1974, Figure 3), a two-story frame building constructed before the late 1890s, as shown by photographs. The brick and shale foundation of the building did not extend the full width of the space between Park Buildings 5 and 7. Instead the south end doors of the building

gave access to an enclosed alley alongside Park Building 7.[1] Gardner also found a brick walk stretching southwest from a door in the rear (west) wall of Park Building 6, ending at a post about 10 ft from the door. Despite the loss of stratigraphic evidence, the feature can be dated to the late nineteenth century (Megastratum III) on the basis of evidence in photographs and maps which show an addition covered the area of the walk during the twentieth century. This addition was built sometime before the 1907 Sanborn-Perris map, and it stood into the 1950s (NHF-289).

Several other small post holes from unknown uses (perhaps fences, pens, or clotheslines) have been excavated in the Lot 15 yard. Too few post holes have been found to discern clear patterns, and the tops of all so far have been cut, making it impossible to determine contemporaneity. Nevertheless, they appear to belong to the years of Megastratum III.

Lot 16. Evidently the area along the Hog Alley wall near the Park Building 5 end of the lot was used for trash from the Burleigh saloon in that building. As explained in Chapter 3, interpretation of the trash area is confused by ambiguous field records from Unit 29. The entire area may have been a long open trench about 3 ft wide or there may have been more than one trash pit along the wall during the period.

A small piece of a roughly contemporaneous domestic deposit was located under Park Building 16. Curiously, Stratum D, Feature 310, lay below the floor level suggested by the plaster line on the walls. Because the presence of intact strata with charcoal lenses and eggshell argue against displacement, it may be that it was a root cellar gradually filled up with floor sweepings. Alan Walmer's notes on his architectural investigation in 1964 report very briefly a conversation with Mae Ramey, granddaughter of Frederick and Anna Maria Roeder. According to Mrs. Ramey's mother, a Roeder, the room was the kitchen and dining room.

Sanitation: Sewers and Shades on Saloons, Early to Mid-Twentieth Century (Megastratum II)

During the first half of the century, a few additions were made, but by and large the major changes seem to have been in building uses (Figure 4.4). Park Buildings 5, 6, and 7 shifted away from saloons to shops, storage, and/or abandonment.

In 1903, the newspaper announced that the property owners of the square bounded by Potomac, Shenandoah, and High Streets had hired a contractor to lay sewer pipe out to the river (*Farmer's Advocate* 9 May 1903:2). Iron and terracotta drains appear archeologically in the Upper Wager Block about that time. Later disturbances altered the historic grade and obscured stratigraphic relationships of the pipe trenches, but artifactual data confirm their twentieth-century origin.

Lot 15. The 1933 Sanborn-Perris map shows a small shed off the northwest corner of Park Building 7. This might be an incorrect version of the larger addition, or a late privy shed, or it could be yet another structure. Photographs taken during the late 1950s show the large

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[1]Gardner (1974:32) interpreted the brick paving of this alley as a very late sidewalk, but photographs show the area was covered by Building 6.

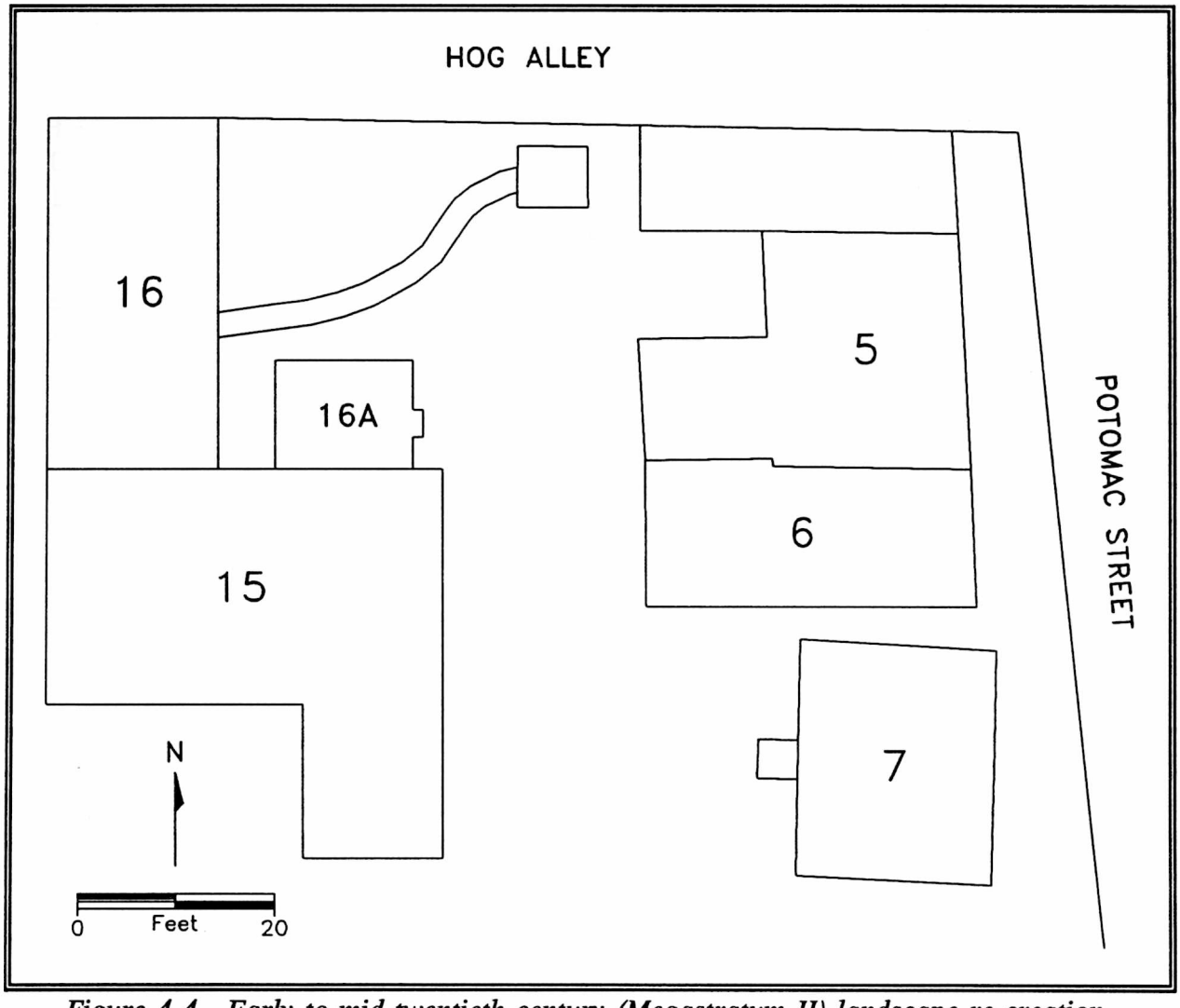


Figure 4.4. Early to mid-twentieth-century (Megastratum II) landscape re-creation.

frame addition was gone, replaced by a small bathroom shed (with plumbing) against the rear door of the building. During grading in 1981, it was observed that the door and grade outside had been lowered for installation of this very late bathroom (Pousson 1981). Next door, Park Building 6 was extended even farther into the yard sometime during the first decade. It showed up on the 1907 Sanborn map. Neither the Park Building 7 bathroom nor the Park Building 6 addition has been recorded archeologically, and it is likely that any foundations have been graded away.

At least two iron drain pipes (Features 267 and 282) cross Lot 15, running from southwest to northeast down the slope toward Potomac Street, including a smaller iron water pipe found in Package 110 units.

Lot 16. Although some of the pipes running through the Lot 16 yard date to the park years, several terracotta pipes and a silt clean-out pit belong to the first years of the century.

Encountered in several excavation units, the pipes' functions and relationships with each other are unknown. They include Feature 217/299 and 287 in the upper yard behind Park Building 16 and Feature 196, which emptied into Feature 191.

Feature 191 was a small rectangular stone box with a mortar bottom adjacent to the Hog Alley wall. According to Pousson (1981), outflow from Feature 191 went into the 10 in terracotta pipe, Feature 165. Pousson suggested it was built as a place for silt to settle and be cleaned out. The large proportion of personal items and children's toys found in Feature 191 suggests this drainage feature remained open in an area where children played.

Given the reference suggesting installation of sewer lines in 1903, and the presence of several lines in the backyard, it seems odd to find hints that the Burleighs did not have indoor plumbing. In response to a question about the matter, Isabel Kern Flanagan (1992) reported she had no recollection of a bathroom in the house when she visited as a child. Also, Privy 213 appears to have been used well into the twentieth century: its shed is visible in photographs taken in the late 1950s. Remnants of a brick walk from the Park Building 16 porch to the privy were found in 1980.

Maps and photographs show a simple frame garage was installed in the space between Hog Alley wall and Park Building 5. Because of construction and demolition of the garage and utility lines in this space (Pousson 1981) no archeological tests have been conducted here.

CHAPTER 5

SUMMARY AND CONCLUSIONS

Jill Y. Halchin

INTRODUCTION

Package 118 and previous archeological projects in the Upper Wager Block have revealed strata that reflect long-term and intensive use of the area in historic times and up to the present. Information from recent park records, photographs, and archeology reports help identify many of the disturbances (Chapter 4). In addition to being a legitimate part of the archeological record, these stratigraphic gaps and the loss of associations pose problems for archeological interpretation.

The Package 118 area illustrates clearly the need for increased awareness and sensitivity to cultural resources during planning and execution of restorations, utility installations, and interpretive activities. In providing a summary of all known disturbances, this report serves as a guide to those areas that may remain relatively intact. Hopefully, too, it demonstrates some of the practical considerations involved in protecting non-renewable archeological resources.

On the basis of investigations so far, several specific areas of the Upper Wager Block can be named as potentially sensitive archeologically. This is not to say, however, that all other areas may be altered without additional archeology. In an intensively-used site, any area may offer some degree of potential for increasing knowledge of the past.

Lot 15 has been repeatedly disturbed by twentieth-century projects, including trenches, grading, and excavations. Fortunately, most of the five excavation units dug under Packages 110 and 118 do provide -- through detailed notes, photographs, and soil samples -- significant information about the yard. As for relatively undisturbed areas of Lot 15, the center yard should be protected, especially the area around the pre-war privy. Also, some of the space between Park Buildings 5 and 7, where Park Building 6 once stood, may contain important deposits, despite the fact that previous archeology has been done in the area.

The story for the Lot 16 backyard is similar to that of Lot 15 in terms of types of disturbances, including those alongside buildings and those caused by utility lines. On the level space behind Park Building 16 -- the area of the hotel privy -- there is little damage other than the missing mid-nineteenth-century strata and recent grading. The 5 ft wide strip along the Hog Alley wall must be considered especially sensitive because of the tendency of Harpers Ferry residents to place privies and other utilitarian features along lot edges. To date, one privy, a trash pit, and other features have turned up adjacent to the former stable wall.

Future restoration work under Park Building 16 should proceed only after additional archeological excavation. While much of the two excavation units tested in 1991 proved disturbed, the remnant of apparently intact deposits near the south end of the structure holds out hope of more to be found. Indeed, the nature of these unexpectedly deep domestic deposits indicates the need for further testing.

Virtually nothing is known of the areaway in front of Park Building 16. Recorded clues suggest that a wall or doorway once isolated the building entrance to the north room and that the original front porch was smaller than the current one. Also, a stone floor was located to the areaway. While there may be only fill and bedrock under that floor, there may also be artifacts or information about the building's construction.

The ground under Park Building 5 and the cellar of Park Building 7 have never been probed archeologically. Assessment should be done whenever plans are made to remove the flooring for repairs or other reasons.

A couple of cautions remain concerning the extent of archeological knowledge of the Upper Wager Block. First, there has been no archeological testing of the current fence lines between Lots 15 and 16, or along Potomac Street, to verify if and when fences stood there in the past. Should the existing fences be removed, archeologists should search for post holes. Secondly, the basis for the stone walks and pavement on the two lots is currently unknown. It is clear, however, that stone and brick paving once existed alongside Park Building 16A, but its stratigraphic relationship is lost to grading. A brick walk led from the back porch of Park Building 16 to the privy that was used into the twentieth century. Outside the rear door of Park Building 5 was a stone pad, replaced over the years by a wooden porch, then another stone pad. For Lot 15, there is archeological evidence for a brick walk from the rear of Park Building 6 out into the yard during the late nineteenth century. Also, the brick paving destroyed by the 1981 grading between Park Buildings 5 and 7 may have been a floor for the utilitarian Park Building 6. Presently the area has a cobblestone paving.

The various chapters of this report have presented archeological and historical data about part of Harpers Ferry's lower town -- a mixed commercial and residential area dating to the town's beginning in the late eighteenth century. As already noted, the archeological record of the Upper Wager Block is far from complete, with major gaps existing for the 1860 through 1870s period, and again for the last few decades prior to National Park Service ownership. Nevertheless, the strata and features that have been found can be grouped into units that represent reasonably discrete cultural periods in the neighborhood's past -- Hotel Era, 1840s to 1850s, 1880s through early 1900s, and National Park Service.

Documentary evidence suggests that the hotel was established in the early years of the nineteenth century, probably more as a tavern providing limited options in food, drink, lodging, and stable/livery services to travelers, newcomers, and town residents. The managers -- who leased the property from the town patriarchs, the Wagers -- came to present the hotel as a high class establishment offering a choice in meals (dinner vs. supper), large rooms for banquets or other special events, and a bar. Perhaps the motivation for the improvements was the growth of competition from later hotels, which, like the Harpers Ferry Hotel, clustered along the main road through town.

The archeological evidence shows that the hotel operators used material items -- food and food service goods -- in order to present, by the standards of the day, physical proof of the hotel's quality. Ceramics and glass from the hotel's backlot and privy, consisted of high proportions of relatively expensive goods such as leaded glass bar tumblers, gilded teawares (including porcelain), and transfer printed dishes. While the proprietors served other meats, beef roasts were common fare on the hotel tables. Tobacco pollen and a large number of snuff

storage bottles suggest that the hotel provided patrons with snuff and possibly other tobacco products (see archeology research report).

Findings from the hotel proveniences tell something of the realities faced by residents and visitors in early Harpers Ferry. Poor sanitation practices and ineffective medical treatments meant physical suffering was common. Evidence of medicine bottles and documentary references to doctors at the hotel and boarding house suggest that treatment was attempted. However, the antebellum years were ones of transition in American medicine, so it is uncertain whether the treatment was prepared by trained doctors or someone else.

During the late 1830s and early 1840s, the hotel operation was replaced on Lot 15 and Lot 16 by new stables and three brick buildings that served as places of business and residence. In the late 1850s, a fourth structure was built, the stable lot was converted to an alley, and the former canal alley was widened to become Potomac Street. Businesses and residents came and went, so typical of early Harpers Ferry, but the Roeders and their bakery and confectionery operation provided a stable core for the neighborhood for many years. One archeological provenience for the period -- albeit a small one -- appears to be associated with the family.

Although the picture is not clear, it is certainly possible to provide a limited interpretation of the family and its business based on archeological and documentary data collected to date. Ceramic and glass data from the Roeder assemblage show a variety of decorative types and colors on dishes and a relatively low number of teawares. It is possible that this pattern could reflect something of the way the immigrant German family used material goods in social situations (see archeology research report). The data suggest that the Roeders lacked much interest in setting their table with matched dishes and in taking tea in the customary English-American fashion. In fact, on the one social occasion recorded -- Joseph Barry's chat with Frederick Roeder -- Roeder served his guest schnapps, not tea (Barry 1903). Reports that the Roeders were prosperous defeat any argument that they could not afford to buy sets of dishes, special tea service items, or the tea itself. They chose to use their money in other ways. The data for diet is very skimpy, although the faunal materials suggest the Roeders rarely ate wild game, and most likely did not raise or butcher any livestock of their own. Evidently they ate a variety of meats, dominated by beef (also see archeology research report).

Unfortunately, neither archeological or historical research conducted for this report can resolve two issues which have plagued interpretation of the Roeders in the past. One of these issues is the nature of the family business and the other is the location of the bakery and shop. Some historic documents refer to Frederick Roeder as a baker, others as a confectioner. Archeological evidence is slight; i.e. many of the tools and supplies involved in these activities were common in households of the time, and many were made of wood and other perishable materials. However, the post-war inventory of the remnants of Frederick Roeder's possessions listed a marble slab for candy-making, while the 1850 Census of Manufacturers showed he had no flour, but plenty of sugar on hand. Pollen and phytolith evidence suggests flour was spilled behind Park Building 7, Roeder's warehouse (see archeology research report), and it is known that Roeder borrowed money from Virginius Island miller Abraham Herr. One conclusion is that Roeder made both baked goods and candies -- again the use of diversity by a small Harpers Ferry business -- depending on seasonal demands and/or availability of ingredients.

In any event, Roeder was sometimes assisted by his two older sons and possibly by future son-in-law Jacob Kern. References to a shop show that some customers went to the Roeders to

make purchases or perhaps to have their bread and pies baked for them (a common practice at the time). Finally, sales at the armory gate ,to local hotels and boarding houses and possibly at the train station, all common strategies, also likely contributed to the till.

Documentary sources and oral histories provide ambiguous statements concerning the location of the Roeder shop and workshop, and archeological excavations have not revealed any information due, at least in part, to past episodes of destruction on the lot. As for the location of the bakery, it appears to have been behind the main house at the time of the war, but exactly which building behind the main house is unclear. Possibly the foundation east of Park Building 16A (Feature 139) was an external bake oven. Were confections made in the same workplace? The documents provide no clues. A family member's report of the post-war Kern years appears to place the retail shop on the first floor of Park Building 16. However, Snell noted that the north ground-floor room, isolated from the rest of the house, is a likely possibility.

The hiatus in official records and newspapers for Harpers Ferry during the Civil War, compounded by the destruction of family and business papers, cuts into understanding of the town's past. In some areas of town, archeological evidence of the war remains, but excavations in the Upper Wager Block have shown that deposits for the 1860s and 1870s are missing. The area's archeological record picks up again about the time the town itself showed signs of economic recovery. Perusal of the newspapers of the late 1870s and 1880s show renovations to various Harpers Ferry buildings damaged during the war, and a burgeoning tourist industry. Despite attempts to attract manufacturing through advertisements, the town's revival of industrial production was limited to the flour mill and the Savery pulp mills, plus a brewery and bottling works in town. Of these, only the bottling works was ever profitable and long-lived, and none employed more than a handful of men.

Well past the turn of the century, the neighborhood of the project area continued with small shops, drinking and dining establishments, and residences. Potomac Street remained a sort of back street with saloons, small restaurants, other businesses, and livery stables (which soon became garages for automobiles). New frame buildings and sheds were constructed, intensifying the crowded urban environment of the block.

Beginning most likely just after the turn of the century, modern sanitation came to the neighborhood. The terracotta and iron pipes crisscross and branch throughout the project area, although the loss of stratigraphic relationships compound problems of dating the pipes. The Burleighs, however, never installed plumbing in Park Building 16, using instead a privy beside the Hog Alley wall. Evidently the family paid for that resistance with illness as samples contained high parasite levels in samples from the privy (see archeology research report). Indeed, marbles and toy dishes found in the Burleigh proveniences attest to the fact that children certainly had opportunity to come in contact with soil containing parasites. It is also possible that the unknown ailment that resulted in the deaths of Thomas Burleigh and his eldest son were contracted through the privy.

Despite the small sample sizes, the artifactual evidence for the Burleighs allows for limited observations. An analysis of ceramic and glass from several proveniences dating to the late nineteenth through early twentieth century, found that the assemblages seem to be of mixed domestic and business origins (see archeology research report). The businesses, of course, were saloons in Park Buildings 5 and 7.

Despite the possibility of mixed assemblages, the provenience associated with the Burleigh saloon in Park Building 5 yielded enough ceramics, in addition to the bar tumblers, to suggest that Burleigh served food along with drinks (corroborated by the presence of butchered bone). The Burleighs seem to have preferred the plain molded dishes popular in the late nineteenth century for both domestic and business uses. Compared to a contemporary boardinghouse one block away, the Burleigh ceramics were largely printed wares and evidence of drinking behavior was in the form of bottles. Possibly the boardinghouse proprietor created a formal atmosphere for the non-kin strangers living there by setting the table with decorated dishes. On the other hand, the Burleigh household meals served on plain wares would have been guided by family customs more than late Victorian etiquette (see research report).

Faunal remains show something of the Burleighs and their town at the turn of the century. Interestingly, the saloon trash pit, the yard, and privy showed, respectively, higher to lower percentages of beef usage. While small sample size or refuse disposal practices could account for such differences, it is also possible that the numbers indicate that the Burleighs ate a more varied diet whereas the saloon fare was mostly beef. Presence of a few pig foot bones suggest at least some participation in competitive hog-raising popular in the town during the period. But, despite their effort to replicate rural ways of acquiring pork, the Burleighs, and no doubt their neighbors, ate large quantities of beef sawn into individual portions by professional butchering firms operating under industrial principles (see archeology research report).

Research conducted to date seems to show the northern end of the Wager Block -- like the rest of Harpers Ferry -- to be a blend and a battleground of urban and small town characteristics. For example, the crowded land and mixed domestic and commercial buildings alongside industries contrast with the failure of the industrial trend and resistance shown in such things as Armory work actions, pig-raising, and the fight over Prohibition. This report documents the material culture remains related to Package 118. Hopefully, this report also contributes insight into the interactions of cultural and historical forces that shaped the town.

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20 May 1872:3.

19 June 1877:2.

1 October 1878:3.

13 January 1880:3.

17 February 1880:3.

16 November 1880:3.

22 February 1881:2.

9 May 1882:3.

24 June 1884:3.

17 April 1888:2.

4 June 1889:2.

18 May 1897:2.

25 October 1898:2.

7 January 1902:2.

21 April 1903:2.

14 April 1908:3.

17 May 1910:2.

5 August 1919:2.

24 August 1920:4.

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29 March 1832:3.

27 March 1834:3.

19 June 1834:3.

30 April 1835:3.

7 April 1836:4.

21 April 1836:3.

12 May 1836:3.

20 April 1837:3.

16 November 1837:3.

23 November 1837:3.

27 September 1838:3.

6 December 1838:3.

19 December 1839:3.

1 October 1840:3.

4 March 1841:3.

25 March 1841:3.

29 May 1841:3.

5 August 1841:3.

12 August 1841:3.

25 November 1841:3.

6 January 1842:3.

3 February 1842:3.

21 April 1842:3.

12 May 1842:3.

11 August 1842:3.

27 April 1843:3.

29 February 1844:3.

11 April 1844:2.

7 May 1846:4.

20 August 1846:2.

3 September 1846:2.

25 February 1847:1.

12 January 1848:3.

3 August 1848:2.

28 September 1848:2.

12 April 1849:3.

30 August 1849:3.

18 April 1850:3.

15 November 1850:3.

22 November 1850:2.

10 July 1851:3.

20 November 1851:2.

16 December 1852:2.

8 March 1855:2.

10 April 1856:3.

3 July 1856:2.

5 October 1865:2.

12 October 1865:3.

30 November 1865:2.

13 February 1868:2.

30 May 1871:3.

28 March 1874:2.

2 May 1874:2.

8 June 1878:3.

1 March 1879:3.

16 October 1880:3.

14 January 1882:3

29 January 1882:3.

13 May 1882:3.

2 August 1888:3.

29 January 1890:3.

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9 September 1891:2.

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APPENDIX I

ADDITIONAL ARCHITECTURAL PROBES AT PARK BUILDING 5

Anna C. Borden, Michael T. Lucas and Jennifer A. Shamburg

Two test units (Excavation Unit 58, 7 ft by 3 ft, and Excavation Unit 59, 3 ft by 4 ft) were excavated along the western foundation wall of Park Building 5 (Figure I.1) with the intent of exposing the wall for the Denver Service Center Architectural Team. The archeological investigations were warranted as an aide to future stabilization of Park Building 5 associated with the Package 118 Historic Structures Report. Excavations were conducted by Anna Borden and Jennifer Shamburg under the direction of Michael Lucas. The field project extended from June 1 to June 8 1993 and artifacts will be processed according to existing laboratory priorities. While 100% of the artifacts from these excavations have been recovered and will be processed, no further analyses are planned. The following is a brief summary of the field work and hypotheses.

SOIL STRATIGRAPHY

The stratigraphy in Excavation Units 58 and 59 is straightforward below the 1.8 ft to 2.2 ft of National Park Service (NPS) fill. In Excavation Unit 58, the intact stratigraphy begins with stratum F, 271.90 ft above mean sea level (amsl), with strata D and E being an interface between NPS activity and historic activity. Stratum F has a date range of 15-20 years, from the early 1850s to the mid 1860s, or to the end of the Civil War. Excavations ended with the removal of this stratum due to time constraints. In Excavation Unit 59, the intact stratigraphy begins with stratum E, 271.86 ft amsl. Although C and D have not been included in the activities of the National Park Service, they too are an interface between NPS and historic activity. Stratum E (same as Excavation Unit 58:F) has high concentrations of artifacts possibly associated with the Roeder's occupation in the 1840s-1860s. Stratum F appears to be an intact fill layer from the early nineteenth century; Stratum G is another occupation zone from the first quarter of the nineteenth century, while Stratum H is the interface between historic deposits and subsoil, where the bottom of the foundation is located.

FEATURES

The features in Excavation Units 58 and 59 were many and varied. Feature 314 is a trench for two electrical conduits, spanning the length of Excavation Unit 59 and the width of Excavation Unit 58. Feature 315, directly to the east of Feature 314, is a trench for a clay sewer pipe. Feature 316 is the clay sewer pipe; this runs the length of Excavation Unit 59, into Excavation Unit 58, and abruptly ends broken off in a possible drain. Features 317 and 318 are

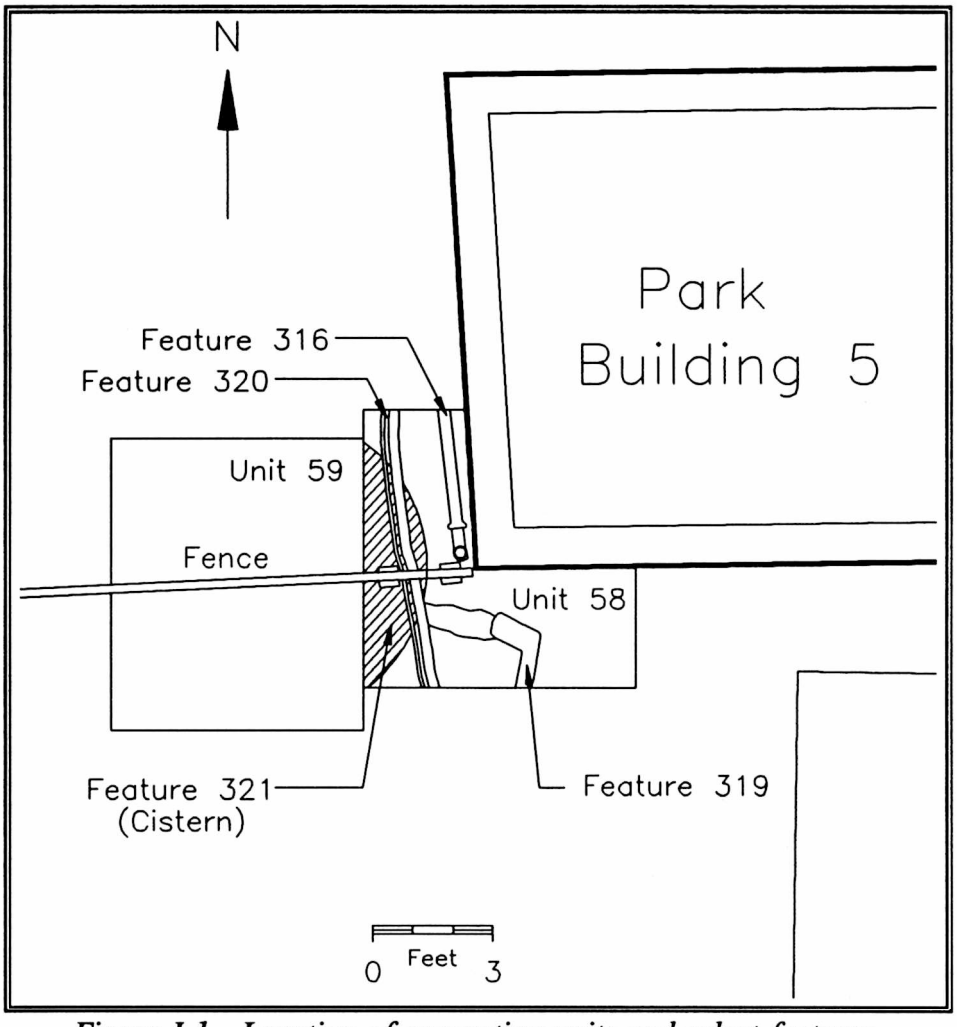


Figure I.1. Location of excavation units and select features.

very similar concrete footers and their two respective fence posts. The concrete portions were removed by NPS masons. Feature 319, found only in Excavation Unit 58, is a brick structure with a concrete cap. It abuts the cistern, and only a portion of it was uncovered in Excavation Unit 58. It may be a drain associated with the cistern or the sewer pipe; the possibility also exists that it is a privy. Feature 320 consists of 2 electrical conduits; one is a 3 inch grey PVC pipe, the other a 1 inch grey PVC pipe. These spanned both units. The brick beehive cistern was designated Feature 321. It was found 272.54 ft amsl, and was not excavated to the bottom. Only in Excavation Unit 58 is an extension of the possible drain, a concrete base extending from the drain to the cistern designated Feature 322. This had no overlying bricks or concrete cap. Associated with the fencepost (Feature 317) was a post hole, Feature 323. Feature 324 was confined to Excavation Unit 59; it is likely a builder's trench associated with the cistern. Feature 325, only in Excavation Unit 58, is a builder's trench for the brick and stone wall/foundation of Park Building 5.

APPENDIX II

EXCAVATION SUMMARY

EXCAVATION UNIT COORDINATES

Unit	Coordinates		Unit	Coordinates	
47	N 535	E 517	53	N 558	E 485
48	N 519	E 519	54	N 566	E 490
49	N 560	E 500	55	N 571	E 459
50	N 576	E 490	56	N 571	E 490
51	N 576	E 510	57	N 548	E 468
52	N 566	E 485			

FEATURE SUMMARY

Feat	Provenience(s)	Description
271	47.B	steel utility juncture box in Lot 15 backyard
272	47.C	N-S trench for Feature 271 utility line
273	47.D	post hole
274	48.A	temporary electric line from Bldg. 7 to Bldg. 16, 1960s or 1970s
275	48.G	post hole
276	47.F	post hole
277	47.F	post hole
278	47.F	post hole
279	48.J	post hole
280	47.G	post hole?
281	47.G	SW-NE wood-lined trench or wooden pipe, filled with water-borne soil
282	48.F.2	SW-NE trench with 4-inch iron pipe
283	48.L	edge of pit or other feature? found during cleanup of north profile
284	49.A	large modern disturbance (bulldozer?)
285	49.A	modern post hole with large rocks, for temporary electric box, 1980s
286	49.A	backhoe trench for cooling system lines
287	50.C	N-S trench with glazed terracotta pipe
288	50.C	occupation deposit, mid-19th century
289	50.D	rodent burrow
290	51.C.2	occupation deposit, late 19th century
291	50.E.2	construction rubble? small-medium shale
292	52.D, 54.C, 56.C	5x10-foot privy pit, 1830s, 1840s
293	50.E.3	builder's trench for Lot 17 stable (Hog Alley Wall)
294	52.B	backfill from Gardner's excavation
295	52.B	backfill from Gardner's excavation
296	53.A	rodent burrow
297	53.A	disturbance
298	53.C	modern N-S utility trench to Building 16
299	54.B	= Feature 217, trench for Feature 301 pipe
300	53.G	linear stain, prehistoric?
301	54.C	contents of pipe in Feature 299
302	54.C	rodent burrow
303	54.C	rodent burrow
304	56.C	rodent burrow
305	55	west foundation of Bldg. 16, mortared shale
306	56.B	disturbance
307	56.B	backfill in Unit 35 (dug in 1980)
308	56.C	rodent burrow
309	57.A	intruded concrete stabilizer under east wall of Bldg. 16, late 1960s
310	57.D	occupation deposit

STRATIGRAPHY SUMMARY

Stratum	Mega	Texture, Inclusions, Comments	Munsell
47.A	I		
47.B.271	I	steel telephone or electric box	
47.B	I	compact silt; gravel, brick, sand	10YR3/3 10YR4/4 10YR4/6
47.C	I	silt, clay; brick, gravel, sand, coal rubble	10YR2/2 10YR3/3 7.5YR4/6
47.C.272	I	sandy silt loam; sand, brick, mortar, cinders trench for Feat. 271	10YR3/2 10YR3/3 10YR5/6
47.D	III	silt loam, clay; brick occupation	10YR3/2 10YR4/4 10YR4/6
47.D.273	III	silt; whole bricks post hole; post at end of brick walk recorded by Gardner	10YR3/2 10YR4/6
47.E-1	I	silt; rocks in north wall transition from D, E-1 ended on mortar lens	10YR3/2 10YR4/4 10YR4/4
47.E-2	I	silty-clayey; bricks, coal, gravel large section of wall plaster on top in NE corner	7.5YR4/4 10YR3/3 10YR4/4
47.F.276	III	clay and silt; brick, coal post hole in SW corner	7.5YR4/64 10YR3/3
47.F.277	III	clay and silt; whole bricks post hole near center of unit	10YR4/3 7.5YR4/4
47.F	III	sandy silt; shale, cobbles, brick, cinders fill, resurfacing layer; layer filled F. 281 and surface on both sides	10YR4/3-4/4
47.F.278	III	silt; coal, oyster post hole	10YR3/3
47.G	III	coal cinders cut by F. 281	2.5YR3/0 10YR3/3
47.G.280		silt; gravel, brick, cinders, charcoal post hole?	10YR4/4 10YR3/3
47.G.281		humic silt loam SW-NE trench, aligned w/post holes, wood-lined?; filled by water-borne sediments	10YR3/3
47.H	V	loam sand clay; brick, oyster, cobbles irregular layer, fill?	10YR3/3 10YR5/4
47.I	V	sandy; shale, pebbles, mortar construction layer? uneven, compact	10YR4/4 10YR7/3-7/4

STRATIGRAPHY SUMMARY

Stratum	Mega	Texture, Inclusions, Comments	Munsell
47.J-1	VI	silty clay; shale, brick, oyster occupation	10YR4/3
47.J-2	VI	silty clay; shale, brick, charcoal occupation	10YR3/3
47.J-3	VI	silty clay; shale, brick, charcoal occupation	10YR3/3
47.K-1	VII	silty clay; shale, brick, charcoal occupation	10YR3/3
47.K-2	VIII	silty clay; iron concretions prehistoric; homogeneous clay; only SE quadrant was tested	10YR4/4
48.A	I	silt sand clay; gravel, coal, brick, plaster, shale	10YR3/3
48.A.274	I	sand; plastic flagging tape temporary electrical line	10YR4/4 10YR3/2
48.B	I	silt loam; brick, mortar, oyster, gravel, coal soil spread during recent grading	10YR3/2 10YR4/4 10YR6/6
48.C	I	silt loam; brick plaster cinder gravel coal rubble spread during grading	10YR3/3 10YR4/3
48.D	I	cinders, silt; cinders coal gravel, brick small disturbance in NW corner	10YR3/2 10YR4/4
48.E	III	silt; coal and brick flecks	10YR5/4 10YR4/3
48.F-1	II?	silt; gravel plaster brick coal cinder pipe trench, continuation of St. C	10YR3/3 10YR4/4
48.F-2	II?	silt; gravel plaster brick coal cinder pipe trench, continuation of St. C	10YR3/3 10YR4/4
48.F-2.282	II?	mixed; shale, coal, cinders pipe trench, 4" iron pipe; same pipe found in Unit 45 (unnumbered there)	10YR3/3 10YR4/4
48.G	III	sandy silt; coal flecks, gravel, large shale possible fill	10YR4/4 10YR4/3
48.G.275	III	silt loam; whole bricks post hole	10YR3/3
48.H	III	silt loam thin surface stain over St. G; level report form completed during paperwork check	10YR greyish

STRATIGRAPHY SUMMARY

Stratum	Mega	Texture, Inclusions, Comments	Munsell
48.I	I	silt loam; cinders coal shale small disturbance in NW corner	10YR3/3 10YR4/4
48.J	III	silt loam; coal gravel cinders brick charcoal lens of loose soil above post hole	10YR3/3
48.J.279	III	humic silt loam; brick chunks, shale, wood post hole	10YR3/2
48.K	V	silt, cinders; coal cinder, ash, shale thin soil deposit covering cinder layer	2.5YR2/0 10YR7/4 10YR3/3
48.L	V	clay loam; small shale, cobbles possible fill, thickest along north	10YR4/3
48.L.283	V?	silt, clay loam; small shale, wood?, iron stains edge of pit? narrow strip along N wall; found under pedestal during profile cleanup	10YR4/4 10YR4/3
48.M	V	silt loam, clay; shale plaster charcoal brick thin occupation layer; over construction stratum N	10YR3/3 10YR4/4
48.N	V	sand and silt; shale shatter, lime construction level (Bld. 7)	10YR4/4
48.O	V	sandy silt; brick mortar gravel construction level (Bld. 7)	10YR4/4-3/3
48.P-1	VI	silt loam; brick charcoal mortar flecks, shale occupation	10YR4/3 10YR4/4
48.P-2	VI	silt loam; shale gravel charcoal flecks oyster occupation	10YR4/3 5Y6/3
48.P-3	VI	silt loam; shale gravel charcoal flecks occupation	10YR4/3 5Y6/3
48.Q	VII	silty clay; small shale charcoal iron concret.	10YR4/4 10YR3/3
49.A.284.1	I	loam; brick, shale, mortar, cinder block continuation of grading disturbance, east side	10YR3/2
49.A.284.2	I	loam; brick, shale, plaster, charcoal continuation of grading disturbance, east side	10YR3/3 7.5YR4/4
49.A.285	I	silt loam; brick, large shale post hole, pole (removed) shimmed by rocks, NE	10YR3/3
49.A.286	I	clay, silt loam; shale backhoe trench for cooling lines, SW corner	7.5YR4/4

STRATIGRAPHY SUMMARY

Stratum	Mega	Texture, Inclusions, Comments	Munsell
49.A-1	I	loam; brick, gravel, shale rubbly layer spread during grading	10YR3/2
49.A-2	I	loam; brick, gravel, shale, mortar rubbly layer spread during grading, east half	10YR3/2
49.B-1	I	silty loam; brick, shale, mortar, charcoal rubbly layer, west half	10YR4/4 10YR4/3 10YR4/6
49.B-2	I	silty loam; brick, shale, oyster rubbly layer, west half	10YR4/4 10YR4/3 10YR4/6
49.B-3	I	silty loam; brick, shale spalls, charcoal rubbly layer, full unit	10YR4/3
49.C	I	silty loam; brick, shale, coal cinders disturbed, occupation	10YR4/3
49.D	VII	silty clay; shale (few)	10YR4/4 10YR3/3
49.sod	I	shale walk sod and shale-over-sand walk	
50.A	I	humic silt loam; gravel, bick, mortar, coal	10YR3/2
50.B	I	silt loam, clay; gravel, brick, shale, cinder disturbed, clay lens near center	10YR3/2 10YR4/4
50.C	IV?	sandy silt loam; coal charcoal shale brick cinder south of Fea. 289 trench	10YR3/3 10YR4/3
50.C.287.1	II	loam, clay; brick chunks, gravel, slate, coal trench for glazed terracotta pipe; machine-made bottle	10YR3/2 10YR3/2 10YR4/5
50.C.287.2	II	silt; bricks cinder coal trench for glazed terracotta pipe	10YR4/3 10YR4/2 10YR5/6
50.C.288.A	IV	clay remnant occupation	7.5YR4/6
50.C.288.B	V	clay; brick cinder plaster remnant occupation	10YR3/2 10YR4/3
50.C.288.C	V	silt; charcoal plaster shale lime remnant occupation	10YR4/4 10YR3/3
50.C.288.D	V	silt loam; plaster brick charcoal remnant occupation; same as 35.220	10YR4/4

STRATIGRAPHY SUMMARY

Stratum	Mega	Texture, Inclusions, Comments	Munsell
50.D	V	sandy silt loam; coal cinders shale brick plaster north of Fea. 289 trench	10YR4/3 7.5YR4/6
50.D.289	00	humic silt loam; shale, brick rodent burrow	10YR3/2
50.E-1	V	silt loam; shale, brick charcoal plaster bits occupation	10YR4/3-4/4
50.E-2	V	silt to clay; shale, brick charcoal flecks, lime occupation (near sterile)	10YR4/3
50.E-2.291	V	; shale line of small-medium shale, construction rubble?	
50.E-3.293	V	silt ill-defined trench for Hog Alley wall	10YR3/3
50.E-3	V	silty; shale spalls extension of Hog Alley Wall trench	10YR4/3
50.E-4	VIII	silt sterile; homegeneous deposit; only a strip through unit center was tested	10YR4/4
50.F.292.A	VI	silt two patches of dark soil on upper privy wall	10YR2/1
50.F.292.B	VI	clay; brick, shale, wood, charcoal flecks thin layer on upper privy wall	10YR4/3
50.F-1	II	mixed; bricks charcoal plaster cinder coal trench for glazed terracotta pipe	10YR4/3 10YR4/2 10YR5/6
50.F-2	II	mixed; bricks cinder coal trench for glazed terracotta pipe	10YR4/3 10YR4/2 10YR5/6
50.G	III?	silt, clay; bricks cinder coal slate charcoal fill over Fea. 292	10YR3/3 10YR4/4
50.H-1	V	coal cinders; coal fill used to close privy	black
50.H-2	V	coal cinders; coal, iron lumps fill used to close privy	black
50.H-3	V	coal cinders; coal, iron lumps fill used to close privy	black
50.I	VIII	silt, clay; shale sterile	10YR4/4 7.5YR4/6 10YR3/3

STRATIGRAPHY SUMMARY

Stratum	Mega	Texture, Inclusions, Comments	Munsell
51.A	I	sandy loam; mortar shale cinders sod	10YR3/3 10YR3/2 10YR4/4
51.B	I	sandy loam; mortar shale cinders disturbed by 1980 grading	10YR3/3 10YR3/2 10YR4/4
51.C-1	I	sandy loam,clay; brick, gravel, cinders disturbed by 1980 grading	10YR5/4 10YR3/1-3/2
51.C-2	I	sandy loam,clay; brick, shale, cinders disturbed by 1980 grading	10YR3/3 10YR3/1-3/2
51.C-2.183	II	silt; brick, shale spalls E-W stone wall, (soil around stones)	10YR3/3
51.C-2.184.A	III	silt loam, clay; shale, brick, coal, cinders trash pit	10YR4/3 10YR4/6
51.C-2.184.B-1	III	silt loam; shale spalls, brick, cinders trash pit	10YR3/2
51.C-2.184.B-2	III	silt loam; shale spalls, brick, cinders trash pit	10YR3/2
51.C-2.184.B-3	III	silt loam; shale, brick, cinders trash pit	10YR3/3 10YR3/2
51.C-2.184.C	VI	sandy silt; shale, brick occupation; excavated as feature, but really occupation	7.5YR5/6
51.C-2.184.D-1	VII	silt loam; shale sterile; excavated as feature	10YR4/2-4/3
51.C-2.184.D-2	VII	silt loam; shale sterile; excavated as feature	10YR4/3
51.C-2.184.E-1	VIII	silty clay; shale sterile; excavated as feature	10YR4/4-4/6
51.C-2.184.F	III	silty clay; brick, shale trash pit	10YR4/4 7.5YR4/6
51.C-2.184.G-1	III	silty clay; brick, shale, charcoal flecks trash pit	10YR4/3 10YR5/6
51.C-2.184.G-2	III	silty clay; shale, charcoal flecks trash pit	10YR3/3
51.C-2.184.G-2	III	silty clay; shale, charcoal flecks trash pit	10YR3/3

STRATIGRAPHY SUMMARY

Stratum	Mega	Texture, Inclusions, Comments	Munsell
51.C-2.184.E-2	VII	silty clay; shale more of E-1, temporary balk to hold Fea. 213	10YR4/4-4/6
51.C-2.290.A-1	III	clay; shale spalls N-S linear area between Fea. 184 and 213	10YR4/6
51.C-2.213.A-1	II	humic silt loam; charcoal, brick, wood privy lining privy, wood lined	10YR3/2
51.C-2.213.A-2	II	humic silt loam; charcoal, brick, wood privy lining privy, wood lined	10YR3/2
51.C-2.213.A-3	II	humic silt loam; charcoal, brick, wood privy lining privy, wood lined	10YR3/2
51.C-2.213.B-1	II	silt loam; shale spalls, brick remnant of earlier privy fill left after cleaning	10YR3/2 7.5YR4/6
51.C-2.213.B-2	II	silt loam; shale spalls, brick remnant of earlier privy fill left after cleaning	10YR3/2 7.5YR4/6
51.C-2.213.C	II	silt loam; brick privy fill, lens	10YR3/3
51.C-2.213.D-1	II	silt loam; charcoal privy fill	10YR3/2-3/3
51.C-2.213.D-2	II	silt loam; charcoal privy fill	10YR3/2-3/3
51.C-2.213.D-3	II	silty clay; charcoal privy fill	10YR3/2-3/3, 10YR4/4
51.C-2.213.D-4	II	silty clay; charcoal, wood, brick, shale privy fill	10YR3/3-3/2
51.C-2.213.D-5	II	silty clay; E-W horizontal boards privy fill	10YR3/3-3/2 10YR4/2-4/4
51.C-2.213.D-6	II	silty clay privy fill	10YR3/3-3/2
51.C-2.213.E-1	II	silty clay; shale spalls, brick privy fill	10YR4/2
51.C-2.213.E-2	II	silty clay; shale spalls privy fill	10YR4/2
51.C-2.213.F-1	II	silt; shale spalls privy fill	7.5YR2/0 10YR3/2

STRATIGRAPHY SUMMARY

Stratum	Mega	Texture, Inclusions, Comments	Munsell
51.C-2.213.F-2	II	silt; shale spalls, charcoal privy fill; lowest level excavated due to narrow space	7.5YR2/0 10YR3/2
51.D	VII	silty clay; shale spalls	10YR4/4
51.E	VII	clay; iron concretions, charcoal flecks	7.5YR4/6
52.A-1	I	humic silt loam; coal brick gravel plaster, cement	10YR3/3
52.A-2	I	silt loam, clay; coal brick gravel plaster, cement	10YR3/3 5YR4/6
52.B	I	silt loam, clay; brick, shale spalls west side, probably Gardner excavations	10YR3/3 5YR4/6 10YR4/4
52.B.294	I	silt loam, clay; shale, brick Gardner excavation	10YR3/3 5YR4/6
52.B.295	I	silt loam, clay; shale Gardner excavation	10YR3/2 10YR4/3 7.5YR4/6
52.C-1	IV	silt loam, clay; shale, rebar, ash lens rebar pin from Gardner?	10YR3/3 10YR4/6
52.C-2	IV	silt loam, clay; shale, charcoal	10YR4/3 10YR4/4
52.D	VI	clay; small shale, charcoal, brick occupation	10YR4/4
52.D.292.A	V	cinders cinder fill in privy	black
52.D.292.B-1	V	cinders cinder fill in privy	black
52.D.292.B-2	V	cinders cinder fill in privy	black
52.D.292.AAA	VI	clay, cinders sample of privy fill (post hole digger)	black
52.D.292.B-3	V	cinders cinder fill in privy	black
52.D.292.B-4	V	cinders cinder fill in privy	black

STRATIGRAPHY SUMMARY

Stratum	Mega	Texture, Inclusions, Comments	Munsell
52.D.292.C	VI	clay loam thin layer of stained soil on upper privy wall	10YR4/2
52.D.292.D	VI	clay loam; shale, rust stains upper privy fill and wall slump	10YR4/2 10YR5/4-4/4
52.E	I	clay; shale, mortar pipe trench	10YR3/4
53.A.296	00	humic loam; brick, charcoal rodent burrow	10YR3/2 10YR4/3
53.A.297	I	silt loam, clay; shale, brick disturbed	10YR3/2 7.5YR4/6 5YR4/6
53.A	I	clay loam, clay; brick, plaster, gravel, coal disturbed by grading	10YR3/2 7.5YR4/6
53.B	I	clay, silt loam; plaster, sand, brick, charcoal disturbed during construction of path, Fea. 298	7.5YR4/6, 10YR3/3
53.C	I	clay; gravel, plaster, coal, brick pipe trench	7.5YR4/6, 10YR3/3
53.C.298.A-1	I	clay; shale, gravel, charcoal, brick trench under shale walk	7.5YR4/6
53.C.298.A-2	I	clay; shale, brick trench under shale walk	7.5YR4/6
53.C.298.A-3	I	clay; mortar, brick, cinder, shale, clay trench under shale walk	7.5YR4/6 5YR4/6 10YR3/3
53.C.298.A-4	I	clay; mortar, brick, concrete reinforc. trench under shale walk	7.5YR4/6
53.C.298.A-5	I	clay, sandy; shale, brick trench under shale walk	7.5YR4/6 5YR4/6 10YR3/3
53.D	I	sand and clay; burnt shale, brick chunks, charcoal restoration of Bld. 16-A	10YR5/4 10YR4/3 10YR4/4
53.E	I?	sandy loam; shale, brick, mortar restoration of Bld. 16-A	10YR3/2
53.F	I?	silty loam; charcoal, shale, brick fire, possible late 1950s cleanup	2.5Y2.5/0 10YR3/2
53.G.300	VII	clay loam; charcoal possible prehistoric feature	10YR3/3

STRATIGRAPHY SUMMARY

Stratum	Mega	Texture, Inclusions, Comments	Munsell
53.G-1	VI	silty clay; brick, shale occupation	10YR4/3 7.5YR4/6
53.G-2	VI	sandy clay loam; brick, shale, charcoal occupation	10YR3/3 10YR4/4
53.G-3	VII	clay; shale, cobbles	10YR4/4
53.G-4	VII	clay; shale, charcoal	10YR4/4
53.G-5	VII	clay; gravel charcoal cobbles concretions	7.5YR4/6
53.G-6	VIII	clay; gravel,charcoal flecks sterile	7.5YR4/6
53.sod	I	sod and shale-over-sand walk	
54.A-1	I	silt loam; brick mortar gravel oyster slate disturbed by grading	10YR3/2
54.A-2	I	sandy loam clay; brick mortar shale spalls disturbed by grading	10YR3/2 10YR4/4
54.A-3	I	sandy loam,clay; brick mortar shale spalls disturbed by grading	10YR3/2 10YR4/4
54.B	II?	clay loam; mortar clay fill over slumping privy?	10YR4/4 7.5YR4/6
54.B.299	I	sandy loam; mortar brick shale pipe trench for Fea. 301 - same as 35.217	10YR3/3
54.B.301	II?	; mortar contents of 6" terracotta pipe in Fea. 299(217)	10YR3/2
54.C.304	00	sandy loam; gravel, cinders rodent burrow	10YR5/8 10YR3/3
54.C.302	00	sandy silt loam; shale spalls, mortar, brick rodent burrow	10YR4/3
54.C.303	00	silt loam; cinders rodent burrow	10YR4/3
54.C.292.A-1	V	cinder; cinders fill used to seal privy	black

STRATIGRAPHY SUMMARY

Stratum	Mega	Texture, Inclusions, Comments	Munsell
54.C.292.A-2	V	cinder; cinders fill used to seal privy	black
54.C.292.A-3	V	cinder; cinders, coal ash, brick fill used to seal privy	black
54.C.292.A-4	V	cinder; cinders, coal ash, brick, boards fill used to seal privy	black
54.C.292.C	VI	clay loam; cinders thin layer of wall slump on east upper privy wall	10YR4/2
54.C.292.D	VI	clay loam; shale spalls, wood, sticks wall slump mixed with privy fill	10YR4/2 10YR5/4-4/4
54.C.292.E	VI	organic; shale spalls, wood privy fill	2.5Y3/2
54.C.292.F-1	VI	organic, clay; shale spalls, wood, twigs, brick privy fill	10YR3/1 and black
54.C.292.F-2	VI	organic, clay; shale spalls, wood shavings, brick privy fill	10YR4/2 2.5Y3/2
54.C.292.F-3	VI	organic, clay; shale, wood shavings, brick, gravel privy fill, large shale in east half	10YR4/2 2.5Y3/2
54.C.292.F-4	VI	organic, clay; shale, twigs, brick privy fill, large shale in east half	10YR4/2 2.5Y3/2
54.C.292.G-1	VI	organic; shale privy fill, large shale in north center	black
54.C.292.G-2	VI	organic; small shale, gravel, twigs privy fill	black
54.C.292.G-3	VI	organic; small shale, brick, leaves privy fill	black
54.C.292.H-1	VI	clay, organic; small shale, gravel wall slump with lenses of privy fill	2.5Y5/2-4/2
54.C.292.H-2	VI	sandy clay; small shale, gravel wall slump with lenses of privy fill	2.5Y5/2-4/2
54.C.292.I	VI	organic bottom of privy fill	black
54.C.292.J	VIII	hard silty sand; small shale, waterworn gravel sterile, naturally-concreted river deposit	5Y4/1-4/2

STRATIGRAPHY SUMMARY

Stratum	Mega	Texture, Inclusions, Comments	Munsell
54.C-1	IV	sandy loam; shale, mortar occupation?	10YR4/3
54.C-2	IV	sandy loam; mortar gravel brick occupation?	10YR4/3
55..305	V	mortared shale foundation for W wall of Bld. 16; does not appear to be repointed	
55.A	I	clay loam; mortar, gravel, brick, coal disturbed by removal of concrete floor	7.5YR4/62
55.B	III?	clay loam; mortar, brick, coal possible under-floor deposit	10YR3/3
55.C	III?	sandy clay loam; charcoal brick plaster sand possible under-floor deposit	10YR4/3
55.D	V	clay loam; large shale sterile fill with vertical shale	10YR4/4
55.E-1	V	sandy clay loam; large shale fill on east side with vertical shale; artifacts may be due to rodent activity	10YR5/4-4/4
55.E-2	V	sandy clay loam; large shale fill on east side with vertical shale	10YR5/4-4/4
55.E-3	V	sandy clay loam; large shale fill on east side with vertical shale	10YR5/4-4/4
55.E-4	V	sandy clay loam; large shale, bedrock fill on east side with vertical shale	10YR5/4-4/4
55.F-1	V	silt loam; shale, linear lime lens, charcoal fill on west side	10YR4/3-4/4
55.F-2	V	silt loam; shale, linear lime lens, charcoal fill on west side	10YR4/3-4/4
55.F-3	V	silt loam; shale, linear lime lens, charcoal fill on west side	10YR4/3-4/4
56.A-1	I	silt loam; shale spalls, brick disturbed by grading	10YR3/2
56.A-2	I	silt loam; shale spalls, brick & mortar lens disturbed by grading	10YR3/2
56.A-2.287	II	sandy loam; shale spalls, gravel, TC pipe pipe trench, may connect with Fea. 287	10YR3/2 10YR4/4

STRATIGRAPHY SUMMARY

Stratum	Mega	Texture, Inclusions, Comments	Munsell
56.B	II?	clay loam; coal, brick, gravel fill over slumping privy?	10YR4/4 7.5YR4/6
56.B.306	I	sandy loam; brick, mortar disturbance	10YR3/3
56.B.307	I	edge of backfilled Unit 35	
56.C	IV	sandy clay loam; shale, brick, oyster, mortar occupation	10YR4/3 10YR3/3
56.C.308	00	silt loam; cinder rodent burrow	10YR3/2
56.C.292.A-1	V	cinders; cinders fill used to seal privy	black
56.C.292.A-2	V	cinders; cinders fill used to seal privy	black
56.C.292.A-3	V	cinders; cinders, boards fill used to seal privy	black
56.C.292.B	VI	sandy clay laom; cinders thin layer on upper privy walls	10YR3/3
56.C.292.C	VI	clay; cinder, brick, shale, gravel irregular wall slump along east wall	10YR4/4
56.C.292.D	VI	clay; shale spalls, brick wall slump with some privy fill	10YR3/3
56.C.292.E	VI	clay; shale spalls, brick, wood, sticks upper privy fill, incl. soil added to seal privy?	10YR4/2 10YR3/2
56.C.292.F-1	VI	organic, clay; shale, brick, gravel, twigs, boards privy fill, most rocks and bricks on east side	10YR3/1 black
56.C.292.F-2	VI	organic, clay; shale, twigs, corncob, sticks privy fill	10YR4/2 10YR3/2 2.5Y3/2
56.C.292.F-3	VI	organic, clay; brick, shale, wood shavings privy fill	10YR4/2 10YR3/2 2.5Y3/2
56.C.292.F-4	VI	organic, clay; brick, shale, wood shavings privy fill	10YR4/2 10YR3/2 2.5Y3/2
56.C.292.G-1	VI	organic, clay; shale, lime? & newspaper clumps privy fill	black

STRATIGRAPHY SUMMARY

Stratum	Mega	Texture, Inclusions, Comments	Munsell
56.C.292.G-2	VI	organic, clay; shale privy fill, west half	black
56.C.292.G-3	VI	organic, clay; shale privy fill, west side	black
56.C.292.H-1	VI	clay, organic; gravel, waterworn pebbles wall slump along east side, organic lenses	2.5Y5/2-4/2 black
56.C.292.H-2	VI	clay, organic; gravel, waterworn pebbles wall slump along east side, organic lenses	2.5Y5/2-4/2 black
56.C.292.J	VIII	hard silty sand; small shale, waterworn pebbles sterile, naturally concreted river deposit	5Y4/1-4/2
56.C.304	00	sandy silt loam; shale spalls, cinders rodent burrow; also in Unit 54	10YR 3/2
57..312	III?	clay; charcoal, lime bottom of square post hole? under Fea. 310	10YR4/3
57.A	I	sandy clay loam; small shale coal mortar brick disturbed during stablization	7.5YR4/4
57.A.309	I	concrete concreted foundation under east wall of Bld. 16	
57.B-1	I	sandy clay loam; small shale coal mortar brick disturbed during stabilization	10YR4/4 7.5YR4/4
57.B-2	I	sandy clay loam; shale lime mortar brick disturbed during stabilization	10YR4/3 10YR4/4
57.B-3	I	sandy clay loam; shale lime concrete brick disturbed during stabilization	10YR4/3 10YR3/3
57.B-4	I	sandy clay loam; shale, brick, plaster, coal disturbed during stabilization	10YR4/4 7.5YR4/6
57.B-5	I	clay, clay loam; shale, brick, plaster, coal disturbed during stabilization	7.5YR4/6 10YR4/4
57.C-1	I	clay; small shale disturbed during building stabilization	7.5YR4/6
57.C-2	I	clay loam; lime, coal, gravel disturbed during building stabilization	7.5YR4/6 10YR3/3
57.C-3	I	clay; lime, coal, cut limestone disturbed during building stabilization	7.5YR4/6

STRATIGRAPHY SUMMARY

Stratum	Mega	Texture, Inclusions, Comments	Munsell
57.C-4	I	clay; lime, coal disturbed during building stabilization	7.5YR4/6
57.D-1	III	clay loam; charcoal, eggshell occupation, remnant in SW corner	10YR3/3
57.D-2	III	clay loam; charcoal, eggshell occupation, remnant in SW corner	10YR3/3 10YR4/4
57.D-2.310.A	III	loam; lime, wood lime concentration adjacent to N-S board	10YR4/3 10YR4/4
57.D-2.310.B	III	humic sand loam; coal flecks, eggshell occupation	10YR3/2
57.D-2.310.C	III	sandy clay loam; shale, brick, lime, cut limestone occupation, large cut limestone slab fragment	10YR4/2-4/3
57.D-2.310.D	I	sandy clay loam; gravel disturbed occupation	10YR4/2-4/3
57.D-2.310.E	III	clay loam; board, charcoal, eggshell occupation	10YR4/4
57.D-2.310.F	III	clay loam; eggshell, brick, coal occupation	10YR4/4
57.D-2.310.G	III	clay loam; brick, oyster, eggshell, coal occupation	10YR4/3 10YR4/6 7.5YR4/6
57.D-2.310.H	III	clay loam; whole brick, eggshell, small shale occupation	10YR4/3 10YR4/6 7.5YR4/6
57.E-1	I	clay loam, clay; lime, coal, plaster disturbed during building stabilization	10YR4/4
57.E-2	I	clay, clay loam; lime, plaster, brick disturbed during building stabilization	10YR4/4 10YR3/2
57.F	I	clay loam; shale, brick disturbed during building stabilization	10YR4/3 10YR4/4
57.G	I	gravel gravel over and around drain pipe Fea. 311	
57.G.311.A	I	gravel gravel over and around T-shaped drain pipe	
57.H	I	sandy clay loam; gravel, lime, sand soil hardened by concrete from east foundation	10YR3/3 10YR4/3
57.I	VIII	clay, sterile	10YR5/6-4/6

ELEVATION SUMMARY

Stratum	Top	Bottom	Stratum	Top	Bottom
47.sod	272.33	272.28	49.sod	273.10	272.53
47.A	272.28	272.23	49.A-1	272.53	272.06
47.B	272.23	271.85	49.A-2	272.04	271.60
47.B.271	271.86	270.69	49.A.284.1	271.60	271.22
47.C	271.85	271.65	49.A.284.2	271.22	270.52
47.C.272	271.81	270.56	49.A.285	271.15	270.03
47.D	271.65	271.53	49.A.286	271.23	269.91
47.D.273	271.58	270.94	49.B-1	272.07	271.55
47.E-1	271.53	271.30	49.B-2	271.55	271.25
47.E-2	271.30	271.17	49.B-3	271.25	270.60
47.F	271.17	270.49	49.C	270.75	270.51
47.F.276	271.22	270.96	49.D	270.51	270.33
47.F.277	271.15	266.22			
47.F.278	270.99	270.56			
47.G	270.77	270.49	50.sod	274.21	274.03
47.G.280	270.98	***.**	50.A	274.03	273.67
47.G.281	270.43	270.15	50.B	273.67	273.32
47.H	270.49	270.32	50.C	273.25	272.66
47.I	270.32	270.12	50.C.287.1	273.32	272.42
47.J-1	270.12	269.59	50.C.287.2	272.42	272.21
47.J-2	269.59	269.09	50.C.288.A	273.18	273.14
47.J-3	269.09	268.84	50.C.288.B	273.14	272.80
47.K-1	268.84	268.60	50.C.288.C	272.80	272.06
47.K-2	268.56	268.16	50.C.288.D	271.89	271.20
			50.D	273.36	273.08
48.sod	272.08	271.98	50.D.289	273.00	272.61
48.A	271.98	271.93	50.E-1	273.08	272.80
48.A.274	271.18	271.03	50.E-2	272.80	272.42
48.B	271.93	271.43	50.E-2.291	273.00	272.78
48.C	271.39	271.37	50.E-3.293	271.90	271.73
48.D	271.63	271.36	50.E-3	272.31	271.94
48.I	271.42	271.27	50.E-4	271.94	271.63
48.E	271.57	271.50	50.F-1	272.76	272.41
48.F-1	271.18	270.95	50.F-2	272.48	272.32
48.F-2	270.95	270.54	50.F.292.A	271.40	271.17
48.F-2.282	270.54	270.12	50.F.292.B	271.25	271.14
48.H	271.39	271.34	50.G	272.66	272.23
48.G	271.25	270.99	50.H-1	272.41	271.80
48.G.275	271.30	270.85	50.H-2	271.69	270.73
48.J	271.35	271.22	50.H-3	270.61	270.36
48.J.279	271.26	271.09	50.I	272.60	272.01
48.K	270.99	270.49			
48.L	270.49	270.22			
48.L.283	270.25	269.48	51.A	272.31	272.23
48.M	270.22	270.11	51.B	272.23	272.04
48.N	270.11	269.96	51.C-1	272.10	271.36
48.O	269.96	269.92	51.C-2	272.02	271.38
48.P-1	269.92	269.56	51.C-2.183	271.34	271.29
48.P-2	269.56	269.13	51.C-2.184.A	271.35	271.30
48.P-3	269.13	268.55	51.C-2.184.B-1	271.32	270.81
48.Q	268.55	268.36	51.C-2.184.B-2	270.68	270.37

ELEVATION SUMMARY

Stratum	Top	Bottom	Stratum	Top	Bottom
51.C-2.184.B-3	270.37	269.73	53.A.296	273.74	273.68
51.C-2.184.C	272.60	270.42	53.A.297	273.90	273.70
51.C-2.184.D-1	270.42	270.36	53.B	273.79	273.62
51.C-2.184.D-2	270.36	270.09	53.C	273.34	273.21
51.C-2.184.E-1	270.10	269.95	53.C.298.A-1	273.21	272.84
51.C-2.184.E-2	271.28	271.09	53.C.298.A-2	272.84	272.45
51.C-2.184.F	269.73	269.49	53.C.298.A-3	272.45	271.87
51.C-2.184.G-1	269.49	269.08	53.C.298.A-4	271.87	271.32
51.C-2.184.G-2	269.08	269.00	53.C.298.A-5	271.32	266.07
51.C-2.184.G-2	***.**	***.**	53.D	273.61	273.32
51.C-2.213.A-1	271.33	270.76	53.E	273.32	273.22
51.C-2.213.A-2	270.76	270.42	53.F	273.22	272.89
51.C-2.213.A-3	270.49	264.73	53.G-1	272.89	272.50
51.C-2.213.B-1	270.79	270.42	53.G-2	272.50	272.03
51.C-2.213.B-2	270.42	269.98	53.G-3	272.03	271.65
51.C-2.213.C	270.42	270.26	53.G-4	271.65	267.04
51.C-2.213.D-1	270.07	269.82	53.G-5	271.33	270.79
51.C-2.213.D-2	269.82	269.55	53.G-6	270.79	***.**
51.C-2.213.D-3	269.55	269.09	53.G.300	271.99	271.83
51.C-2.213.D-4	269.09	268.75			
51.C-2.213.D-5	268.75	268.38			
51.C-2.213.D-6	268.38	267.95	54.sod	273.69	273.65
51.C-2.213.E-1	268.47	268.11	54.A-1	273.65	273.18
51.C-2.213.E-2	268.11	267.86	54.A-2	273.18	273.04
51.C-2.213.F-1	267.86	267.37	54.A-3	272.87	272.60
51.C-2.213.F-2	267.37	266.92	54.B	273.09	272.88
51.C-2.290.A-1	***.**	***.**	54.B.299	273.12	***.**
51.D	269.94	269.41	54.B.301	***.**	***.**
51.E	269.04	***.**	54.C-1	272.77	272.42
			54.C-2	272.42	272.02
52.sod	274.05	274.00	54.C.292.A-1	272.02	271.41
52.A-1	274.00	273.55	54.C.292.A-2	271.41	270.81
52.A-2	273.55	273.30	54.C.292.A-3	270.81	269.83
52.B	273.48	273.02	54.C.292.A-4	269.83	268.56
52.B.294	272.64	272.59	54.C.292.C	270.75	269.57
52.B.295	273.40	273.18	54.C.292.D	269.57	268.70
52.C-1	273.27	273.14	54.C.292.E	268.70	268.06
52.C-2	272.97	272.53	54.C.292.F-1	268.06	267.81
52.D	273.22	272.61	54.C.292.F-2	267.81	267.59
52.D.292.A	272.93	272.10	54.C.292.F-3	267.59	267.10
52.D.292.AAA	270.66	***.**	54.C.292.F-4	267.10	266.44
52.D.292.B-1	272.10	271.55	54.C.292.G-1	266.44	266.04
52.D.292.B-2	271.55	270.66	54.C.292.G-2	265.97	265.60
52.D.292.B-3	270.66	269.95	54.C.292.G-3	265.62	265.47
52.D.292.B-4	269.95	***.**	54.C.292.H-1	266.33	265.55
52.D.292.C	270.95	268.86	54.C.292.H-2	265.55	265.50
52.D.292.D	268.86	268.51	54.C.292.I	265.50	264.79
52.E	272.60	272.46	54.C.292.J	264.93	264.86
			54.C.301	272.25	***.**
53.sod	273.99	273.71	54.C.302	272.42	271.79
53.A	273.92	273.79	54.C.303	272.24	271.70

ELEVATION SUMMARY

Stratum	Top	Bottom	Stratum	Top	Bottom
55.A	282.60	276.87	57.A	275.42	275.33
55.B	276.87	276.81	57.A.309	***.**	***.**
55.C	276.76	276.76	57.B-1	275.33	274.85
55.D	276.76	276.63	57.B-2	274.85	***.**
55.E-1	276.61	276.20	57.B-3	274.67	274.33
55.E-2	276.20	275.67	57.B-4	274.33	273.83
55.E-3	275.67	275.31	57.B-5	273.77	273.22
55.E-4	275.37	***.**	57.C-1	275.33	274.60
55.F-1	276.63	276.24	57.C-2	274.60	274.27
55.F-2	276.24	275.66	57.C-3	274.27	273.78
55.F-3	275.66	275.37	57.C-4	273.78	273.52
55..305	276.89	***.**	57.D-1	274.46	274.01
			57.D-2	274.01	273.44
56.sod	273.91	273.87	57.D-2.310.A	273.44	273.22
56.A-1	273.86	268.73	57.D-2.310.B	273.22	273.17
56.A-2	273.36	***.**	57.D-2.310.C	273.17	***.**
56.A-2.287	273.57	272.75	57.D-2.310.D	272.84	272.63
56.B	273.21	273.01	57.D-2.310.E	272.68	272.61
56.B.306	273.24	272.44	57.D-2.310.F	272.61	272.44
56.B.307	272.98	***.**	57.D-2.310.G	272.44	272.28
56.C	273.01	272.16	57.D-2.310.H	272.28	271.83
56.C.292.A-1	272.26	271.10	57..312	271.80	271.56
56.C.292.A-2	271.10	269.73	57.E-1	273.82	273.42
56.C.292.A-3	269.73	268.50	57.E-2	273.42	273.26
56.C.292.B	271.18	270.00	57.F	273.36	273.03
56.C.292.C	270.40	269.80	57.G	273.21	272.61
56.C.292.D	269.80	269.49	57.G.311.A	272.61	272.23
56.C.292.E	269.22	***.**	57.H	272.31	272.12
56.C.292.F-1	268.36	268.00	57.I	271.97	271.51
56.C.292.F-2	268.00	267.71			
56.C.292.F-3	267.71	267.04			
56.C.292.F-4	267.04	266.38			
56.C.292.G-1	266.38	***.**			
56.C.292.G-2	266.01	***.**			
56.C.292.G-3	265.56	265.44			
56.C.292.H-1	266.16	***.**			
56.C.292.H-2	265.50	265.50			
56.C.292.J	264.97	264.91			
56.C.304	271.81	271.34			
56.C.308	271.74	271.70			

ARCHEOLOGICAL INVESTIGATIONS OF PARK BUILDINGS 5 AND 7 PACKAGE 118, SITE 46JF200 HARPERS FERRY NATIONAL HISTORICAL PARK

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John W. Ravenhorst
Archeological Specialist

Paul A. Shackel
Principal Investigator

November 1994

MANAGEMENT SUMMARY

The Division of Archeology at Harpers Ferry National Historical Park investigated two 5ft by 5ft excavation units behind Park Buildings 5 and 7 (Figure 1). Archeological excavations were conducted by Mia T. Parsons, John W. Ravenhorst, and Park volunteer Guian McKee from August 22 through October 23, 1994. The project is part of construction Package 118, with the Archeology Division at Harpers Ferry National Historical Park working in conjunction with the architects from the Williamsport Training Center. Restoration plans for Park Buildings 5 and 7 include trenching around the foundations of the structures in order to insert a waterproofing application for the stabilization of the buildings. The archeological goals include: identifying cultural resources, collecting and analyzing the material culture; identifying and interpreting the soil stratigraphy; and determining the depths of the buildings' foundations. The results of these analyses should be applicable to restoration and planning of an updated cultural landscape interpretation of the yards surrounding Park Buildings 5 and 7.

The fieldwork was a continuation of investigations of the portion of Package 118 designated as site 46JF200. Excavation Unit 60 was located adjacent to the west wall of Park Building 7, (an 1830s structure used as a tavern, a warehouse, and other businesses). Excavation Unit 61 was located along the north wall of Park Building 5, (an 1830s tavern and dwelling). The excavation units were placed adjacent to the building walls in areas that had not been sampled during previous investigations, but contained potential, undisturbed cultural deposits (See final archeology report by Halchin). During the span of the project the units were laid into the established grid system, excavated, and documented.

Evidence from the excavations indicates that five utilities were located in the areas of the investigation, including: a water line, a phone line, an electric line, and a sewer line in Excavation Unit 61 and a severed water line in Excavation Unit 60. In excavating unit 60, behind Park Building 7, several features were encountered. An earlier excavation unit, a shale stone wall, a builder's trench, a wood-lined privy, and a privy shaft were identified. Along with the modern utilities located in Excavation Unit 61, a stone walkway was located. Excavations were halted when culturally sterile soil was reached. After the field work was completed and the units documented, the information from the investigation was organized and interpreted. The artifacts will be processed and analyzed in the archeology lab at Harpers Ferry National Historical Park.

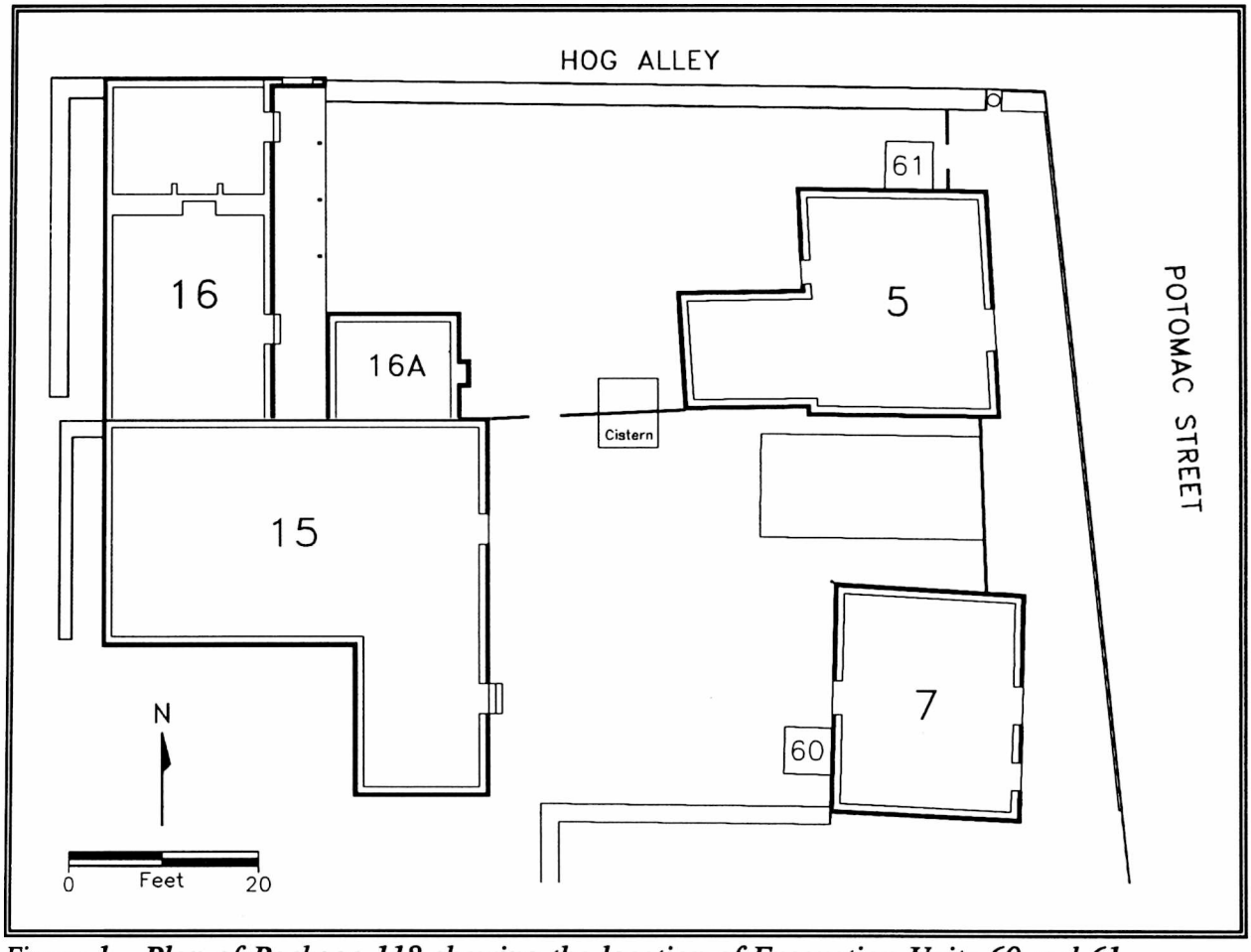


Figure 1. Plan of Package 118 showing the location of Excavation Units 60 and 61.

HARPERS FERRY NATIONAL HISTORICAL PARK
EXCAVATION UNIT SUMMARY

SITE: 46JF200 PARK BUILDINGS 5 AND 7
UNIT: 60 **N** 509.9 **E** 528.8
RECORDER: MIA T. PARSONS
DATE: 10-19-1994

Excavation Unit 60, a 5ft by 5ft excavation square, was placed adjacent to the west wall of Park Building 7 (See Figure 1), in order to meet the specifications of the architects from the Williamsport Training Center. A portion of the restoration plan for Park Buildings 5 and 7 includes hand-trenching around the foundations of the structures in order to insert a water proofing application around the walls. Although several seasons of archeological excavations have been completed in the areas behind Park Buildings 5 and 7, the area where Excavation Unit 60 was placed, on the southern corner of the west wall of Park Building 7, had not been examined. As a part of construction Package 118, unit 60 was studied in compliance with section 106 of the National Historic Preservation Act, assuring that the site was protected and documented, and the cultural resources evaluated in the proper manner.

Excavation began on August 22, 1994. The sod was removed to expose Stratum A, a mixture of 10YR 3/3 clayey silt and 10YR 5/8 clay. Stratum A was a fill layer with the upper fraction containing modern debris (pull tabs, plastic, etc.) and was probably associated with the park service efforts to lay sod in this area.

Stratum B was a fill level containing a soil matrix of 10YR 4/2 clayey silt, mottled with 10YR 4/4 silty clay, and 5YR 3/4 clay. Pockets of ash and crushed pargeting were uncovered throughout this stratum. A 1985 nickel was excavated near the lowest depth of Stratum B. Two features were uncovered within Stratum B. Feature 326 was made up of 10YR 4/6 silty clay and appeared to be a shallow trench running north/south across the center portion of unit 60. Modern plastic was among the artifacts recovered from the feature. The function of Feature 326 remains unknown. Feature 327, a shale stone wall with a depth of approximately 3ft, was also found at this level but, as can be seen on the profile drawing of the south wall (Figure 2), the soil between Stratum A and Feature 327 was a mixture of fill related to Feature 327 and Feature 332 that was excavated as a portion of Stratum B. The shale stones that made up Feature 327 extended west from Park Building 7 but were not articulated or abutted with the building. The feature appears to have been partially pushed over with a force coming from the south. A cut-off water line pipe extended 2ft from the west wall and several of the upper courses of shale appear to have been removed from Feature 327 in this area, either for the trenching to put in the water line or for the purpose of cutting the line. The wall could have served as a retaining wall or be related to a garden, the function is unknown at this point.

Stratum C was a hard packed deposit with a soil matrix of 10YR 4/6 silty clay. The deposit was thick in the northwest and plunged in the northeast corner. Pockets of ash were uncovered within this stratum. This stratum appears to be fill. Features 328 and 329 were excavated at this level.

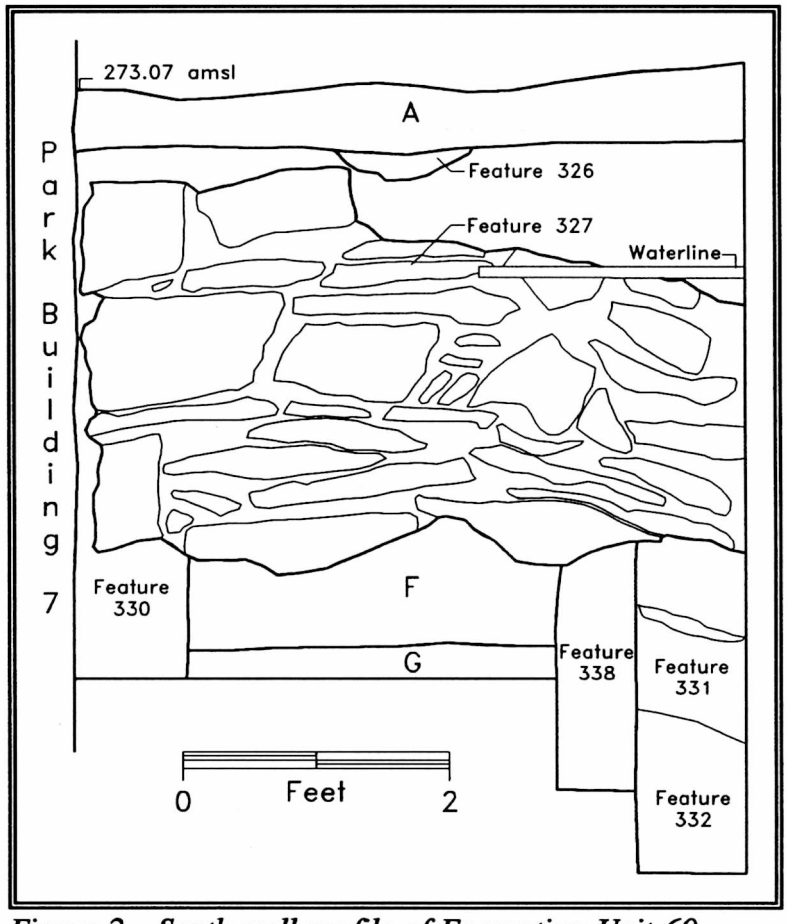


Figure 2. South wall profile of Excavation Unit 60.

Feature 328 consisted of 10YR 4/2 clay silt and 10YR 5/6 clay. As this pit-like feature was excavated next to the shale stones of Feature 327, a portion of a plastic milk jug was found at the base of the pit. Feature 328 is believed to be the result of an earlier archeological survey conducted by William M. Gardner in 1973 and 1974 through Catholic University of America.

Feature 329 was an amorphous soil anomaly located along the west wall of the unit. The soil in the feature was made up of 10YR 4/3 clayey silt. The loose soil contained a high percentage of pargeting. Feature 329 was identified as a rodent burrow (Figure 3).

Stratum D was most clearly defined in the north wall profile (Figure 4). The soil was a mixture of 10YR 4/4 clayey silt and 7.5YR 5/6 sandy silt. This stratum contained an abundance of oyster shells and fragments of pargeting. The nature of the inclusions and the vertical location of the deposit, combined with artifact content characterize the probable remnants of an occupation zone associated with the late nineteenth century usage of Park Building 7.

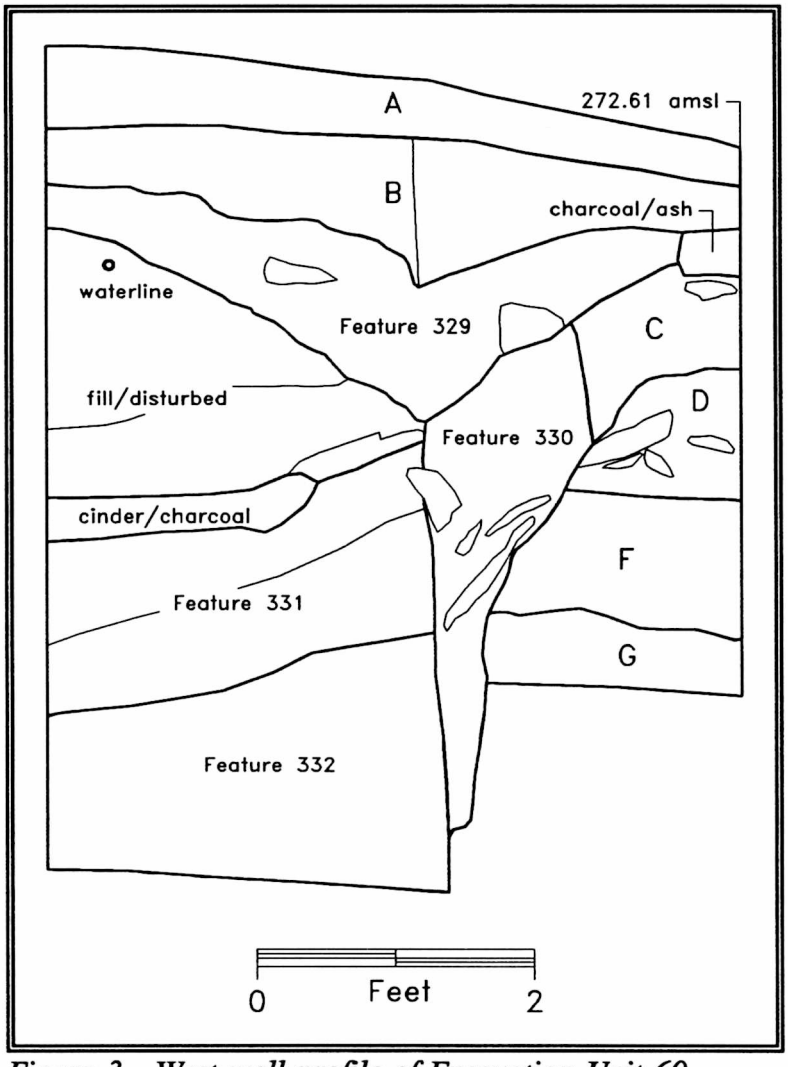


Figure 3. West wall profile of Excavation Unit 60.

Stratum E was thickest along the east wall of the unit and extended to the west, 4ft across the unit. The soil consisted of 10YR 4/2 sandy silt and 10YR 4/4 silt with inclusions of shale and brick fragments. This stratum was probably a fill episode, possibly deposited with the purpose of leveling the ground surface directly behind Park Building 7, above Feature 330.

Feature 330 consisted of a soil matrix of 7.5YR 5/6 silty clay. The feature was identified as the western edge of the pit into which Park Building 7 was constructed (Figures 4 and 5). The construction of the foundation was implemented from the inside of the building. The feature was excavated to a depth of 1ft before a 1.5ft by 2.5ft test window was placed in the northeast corner of Excavation Unit 60. At this point the soil making up Feature 330 was culturally sterile, containing a few scattered shale spalls. The test window revealed the building pit to extend approximately 1.2ft from the west wall of Park Building 7 while the remainder of the soil was sterile. Excavation of the window ceased when a portion of the foundation footer was unearthed at 8ft below the existing ground surface in the northeast corner.

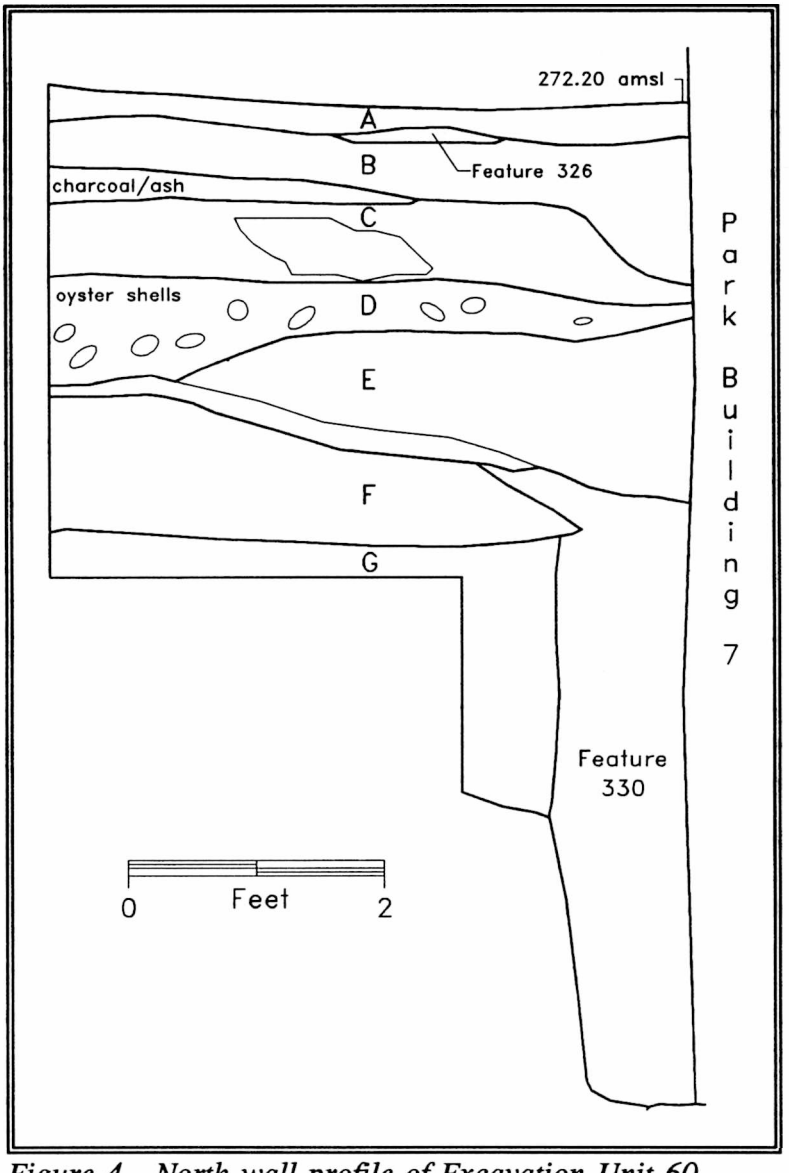


Figure 4. North wall profile of Excavation Unit 60.

Feature 331, located against the west wall of Excavation Unit 60, was made up of 10YR 3/2 silt with inclusions of charcoal, mortar, brick fragments and roots (See Figure 3). Feature 331 was taken down 1.3ft when Feature 332, a wood lined privy was encountered (Figure 5). The soils of Feature 331 have been identified as fill for the portion of the privy shaft just above the wood lining of Feature 332. The fill was either an intentional deposit or was the result of flooding.

Feature 332 was defined by the wood lining and two vertical wooden beams located in the northeast corner of the privy frame. The soil excavated as Feature 332 was everything located within and including the decayed wood. The soil was made up of 10YR 3/2 silt and 10YR 4/3 clayey silt. At this stage of excavation there was no indication that these soils contained privy matter. It is more likely that the first foot of Feature 332 was deposited fill.

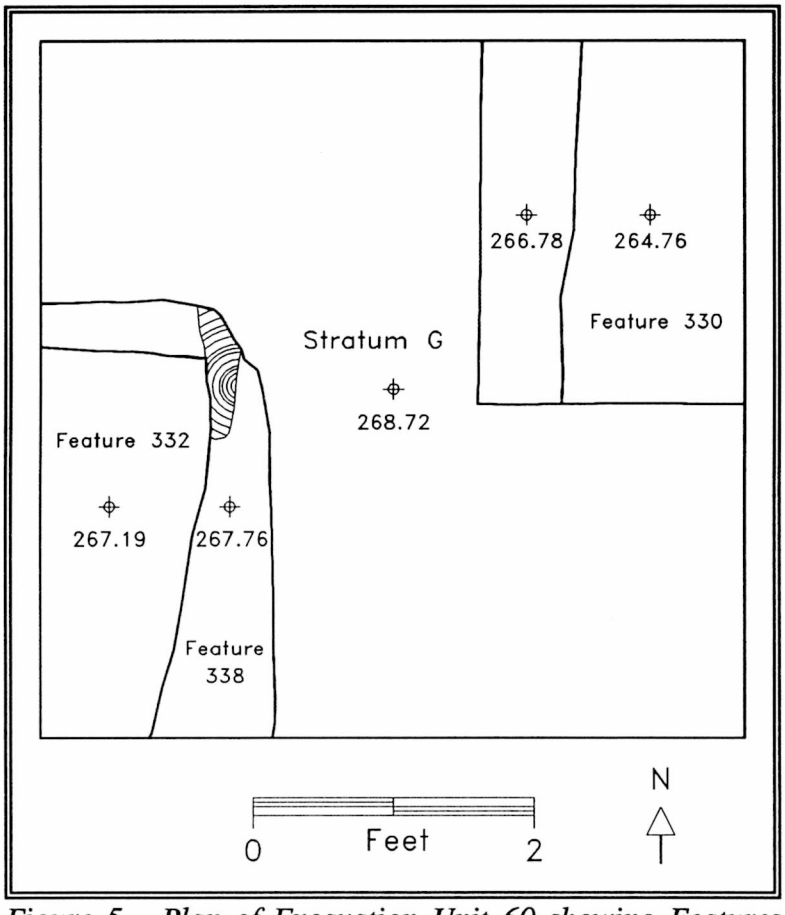


Figure 5. Plan of Excavation Unit 60 showing Features 330, 332, and 338.

When an additional 0.5ft arbitrary level was excavated beyond the first foot of Feature 332 a more distinct indication of privy matter began to appear, including small seeds, small animal bones and fish bones. Excavation of Feature 332 ceased at this level since the goal of defining the function of the feature had been accomplished.

Feature 338 contained the soil that had been packed into the shaft surrounding Feature 332 (See Figures 2 and 5). The soil was a 10YR 4/6 silty clay that appeared fill-like. In several areas shale spalls were discovered at a vertical angle as if they had been packed into the shaft that had initially been dug for the construction of the privy.

Stratum F consisted of a mixture of 10YR 4/3 clayey silt, 10YR 5/4 silt, and 10YR 4/6 clay. Charcoal flecks, mortar and brick fragments, as well as shale spalls were scattered throughout the stratum. The stratum was cropped in the northeast corner, the area where Feature 330 intrudes. Also, in the west wall, Stratum F was truncated by the placement of Features 332 and 338. In the south wall the stratum was cropped to the east and west, with Feature 327 directly above, Feature 330 to the east, and Feature 338 to the west. There were no distinguishable characteristics that define this stratum, although it has been potentially defined as either a flood deposit or an occupation zone related to a time period prior to the construction of Park Building 7.

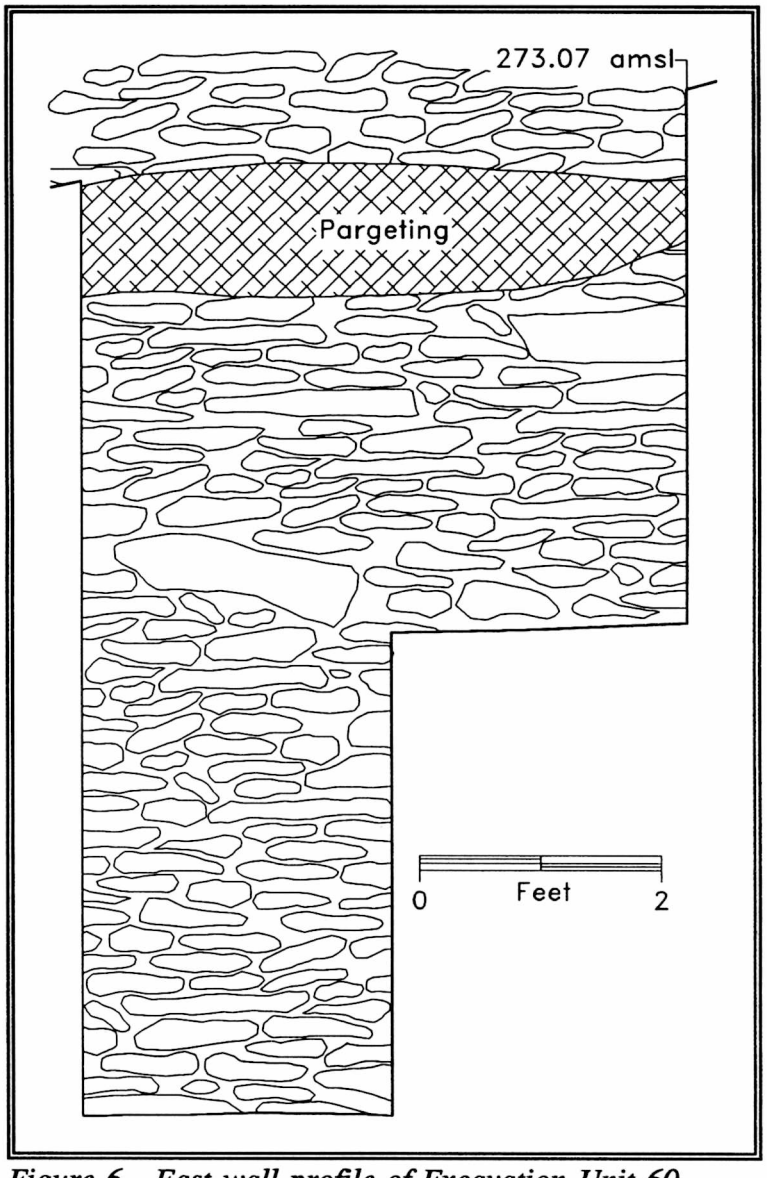


Figure 6. East wall profile of Excavation Unit 60.

Stratum G was identified as a hard packed combination of 7.5YR 5/6 clay, and 10YR 4/4 silty clay. The first arbitrary 0.5ft level was excavated across the unit with no cultural material retained. At this point a 1.5ft by 2.5ft window was placed in the northeast corner (See Figure 5). The window was excavated to a depth of 8ft below the surface (Figure 6). Stratum G continued down along the western edge of the window as a hard packed sterile soil. At 5.6ft below the ground surface excavation of Stratum G ceased and the window continued with the removal of Feature 330 until the foundation footer was uncovered. Excavation was complete at this time with Stratum G and Feature 330 continuing to an unknown depth.

HARPERS FERRY NATIONAL HISTORICAL PARK
EXCAVATION UNIT SUMMARY

SITE: 46JF200 PARK BUILDINGS 5 AND 7
UNIT: 61 **N** 572.15 **E** 539.57
RECORDER: MIA T. PARSONS
DATE: 10-20-1994

Excavation Unit 61 was a 5ft by 5ft square placed to the north of Park Building 5. The north wall of the building served as the southern boundary for the excavation unit (See Figure 1). Since no prior archeological record has been documented for this particular area it was necessary to excavate the unit before the architects from the Williamsport Training Center could begin the restoration work.

Excavation began with the removal of Stratum A, 10YR 3/3 silt and 10YR 5/6 silty sand. Shale stones and bricks that formed a modern walkway constructed by the National Park Service were also removed. Stratum A was a modern fill, containing a variety of debris including plastic. Stratum A was removed to reveal Feature 333.

Feature 333 consisted of a 10YR 6/8 sand that extended over all but the northern most 0.5ft of the unit. The feature was a bedding laid out for the surface walkway excavated in Stratum A (Figures 7 and 8).

Feature 334 was located directly below Feature 333 and covered roughly the same surface area. The feature was made up of 10YR 4/2 silty sand mixed with 80% small angular gravel. Along with Feature 333, this feature was created by National Park Service efforts to serve as a pad for the walkway.

Stratum B was made up of 10YR 3/2 sandy silt mottled with 10YR 5/8 clay. The deposit was identified as a fill level with the presence of modern trash. Feature 335 was discovered within Stratum B.

Feature 335 consisted of 10YR 4/2 silt and 10YR 6/6 clay. The feature was excavated as a trench which contained a telephone utility line and an electrical conduit installed in 1978. The feature ran at a slight southwest to northeast angle along the north wall of unit 61. The utility lines were located between 1.4ft and 1.6ft below existing ground surface (Figures 9 and 10).

Feature 336 was excavated at the interface of strata B and C. This feature was made up of a single course of shale spalls laid east-west across the center of unit 61. Oyster shells and charcoal/ash were located on top of and between the stones. The feature was a walkway associated with the earlier use of Park Building 5.

Feature 337 was identified as a trench running along the south wall of unit 61, against the north wall of Park Building 5. The trench was excavated to uncover a water pipe with a depth of approximately 1.6ft below ground surface in the SW corner and 1.9ft below ground surface in the southeast corner. The water line predates the time period of the National Park Service at Harpers Ferry (See Figure 11).

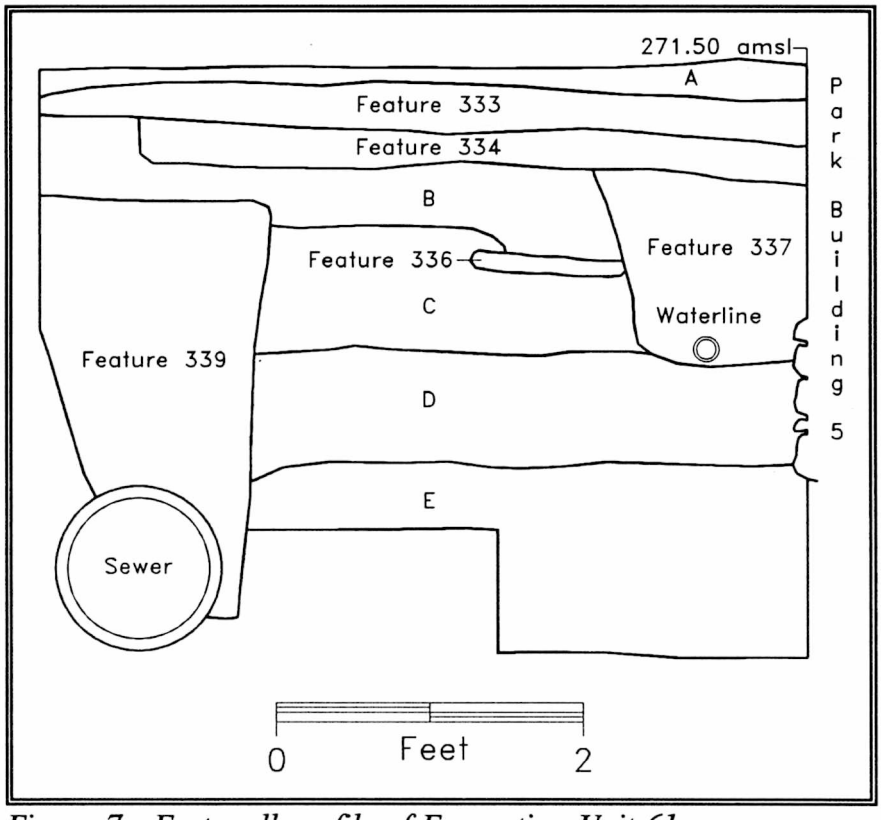


Figure 7. East wall profile of Excavation Unit 61.

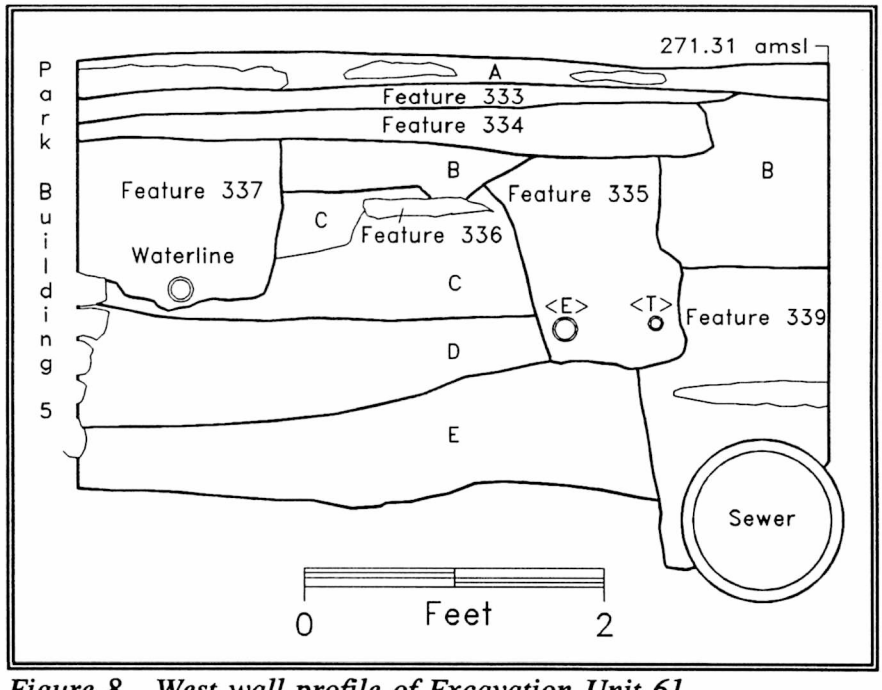


Figure 8. West wall profile of Excavation Unit 61.

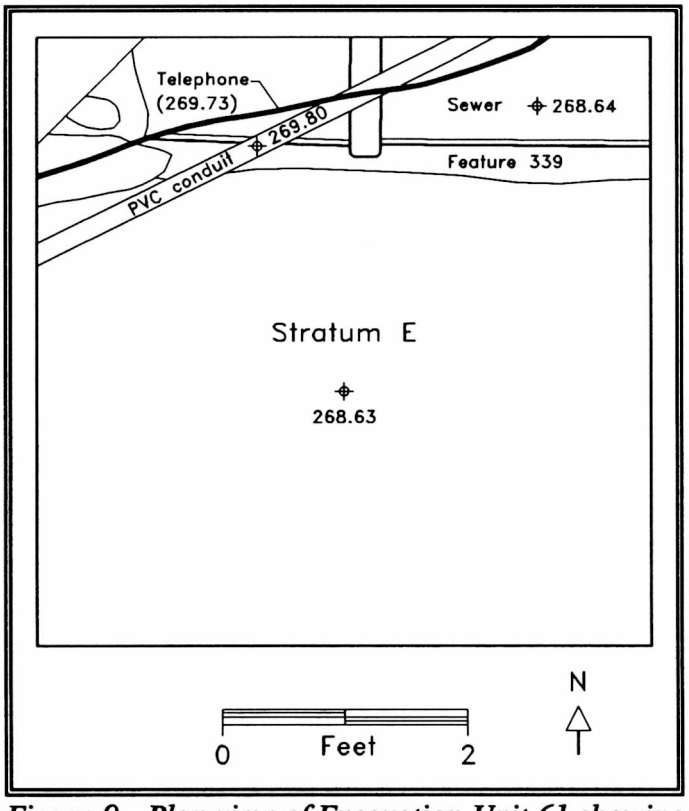


Figure 9. Plan view of Excavation Unit 61 showing utilities and Feature 339.

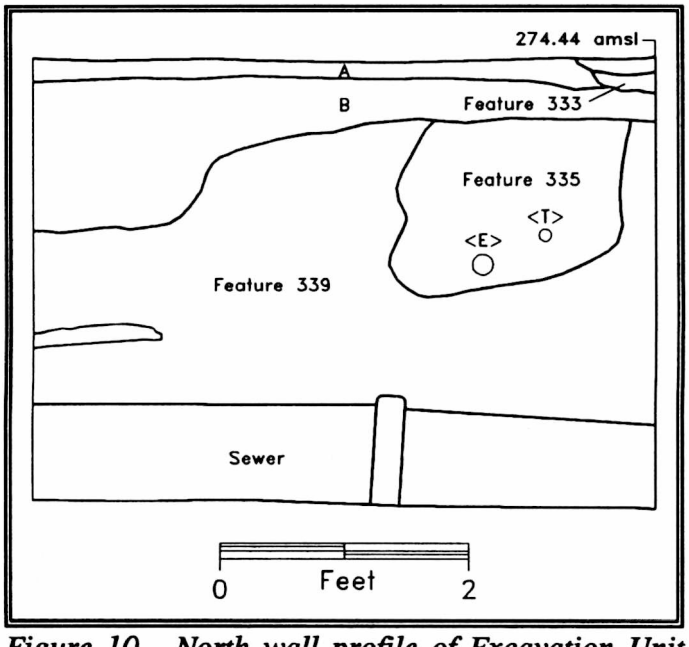


Figure 10. North wall profile of Excavation Unit 61.

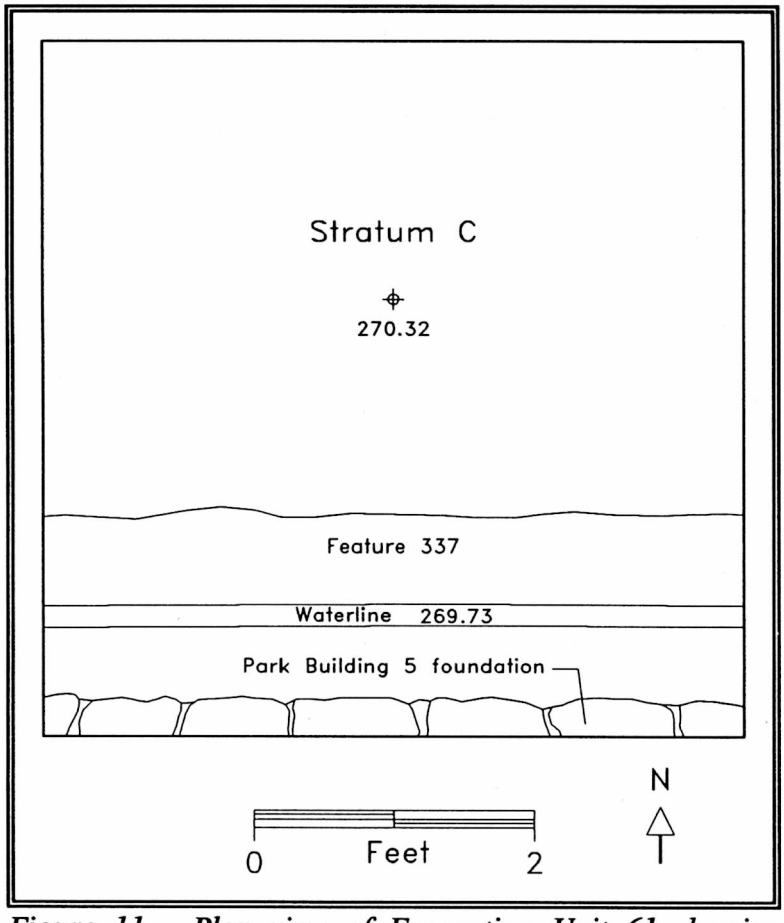


Figure 11. Plan view of Excavation Unit 61 showing Feature 337.

Feature 339 was located at the Stratums B and C interface and ran east-west along the edge of the north wall of unit 61. The fill-like soil was a combination of 10YR 4/3 silty clay, 10YR 5/6 clay, and 7.5YR 5/6 clay. The feature extended approximately one foot out from the north wall. Excavation of the trench revealed a clay sewer pipe approximately 2.5ft below the ground surface in the NW corner and 2.8ft below ground surface in the NE corner. The trench was excavated to a depth of 0.7ft below the top of the sewer pipe (See Figures 9 and 10).

Stratum C was cut through by several modern disturbances and is only captured in the east and west wall profiles (See Figures 7 and 8). The soil consisted of a 10YR 4/4 clay silt containing a scatter of oyster shell, pargeting, brick fragments, and shale spalls. The stratum was probably an occupation level associated with the early history of Park Building 5.

Stratum D was made up of a mixture of 10YR 3/4 silty clay and 10YR 3/2 silt. The soils appeared to be swirled in some areas and had an organic odor. The stratum contained inclusions of brick fragments, charcoal flecks, and shale spalls. Stratum D was an alluvial deposit.

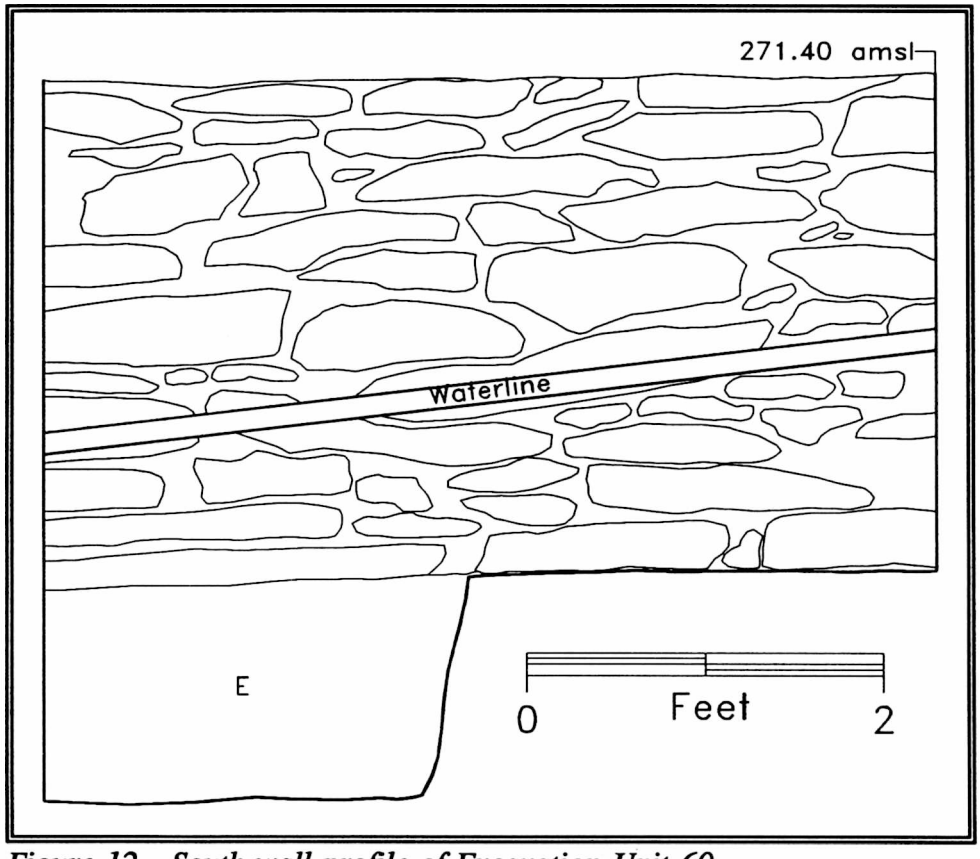


Figure 12. South wall profile of Excavation Unit 60.

Stratum E was composed of 10YR 5/4 silty clay. After excavating a 0.5ft arbitrary level and finding no evidence of cultural material, a 2ft by 2ft window was excavated to a depth of one foot in the southeast corner of the unit. In excavating the window, the bottom of the Park Building 5 north wall foundation footer was exposed. The footer extended to approximately 2.7ft below existing ground surface in the southeast corner (Figure 12). At this point a core sample was taken to a depth of 1ft below the window floor. Excavation ceased at this level with Stratum E continuing to an unknown depth beyond the core sample.

HARPERS FERRY NATIONAL HISTORICAL PARK
EXCAVATION UNIT SUMMARY FORM

SITE: 46JF200 PACKAGE 118, PARK BUILDINGS 5 and 7
EXCAVATION UNIT 60, (N 509.9 E 528.8)

STRATUM	MUNSELL	TEXTURE	ELEVATION AMSL TOP	BOTTOM	DESCRIPTION
A	10YR3/3 10YR5/8	CLAYEY SILT CLAY	272.82	272.41	SOD LAYER, MODERN ACCUMULATION
B	10YR4/2 10YR4/4 5YR3/4	CLAYEY SILT SILTY CLAY CLAY	272.41	271.29	20TH - CENTURY FILL
F-326	10YR4/6	SILTY CLAY	272.35	272.18	NORTH/ SOUTH RUNNING SHALLOW TRENCH, UNDETERMINED PURPOSE
F-327	NA	NA	272.02	269.27	SHALE STONE WALL ABUTS TO WEST WALL OF BUILDING 7. POSSIBLE GARDEN OR RETAINING WALL, CONSTRUCTED AFTER PRIVY FILLED
C	10YR4/6	SILTY CLAY	271.29	270.79	HARD PACKED FILL EPISODE MIXED WITH POCKETS OF ASH.
F 328	10YR4/2 10YR5/6	CLAY SILT CLAY	271.43	269.62	PIT EXCAVATED IN THE EARLY 1970S PROBABLY BY GARDNER.
F 329	10YR4/3	CLAYEY SILT	272.04	271.47	LOOSE LOAMY SOIL, RODENT BURROW
D	10YR4/4 7.5YR5/6	CLAYEY SILT SANDY SILT	270.79	270.34	POSSIBLY OCCUPATION ZONE ASSOC. WITH BUILDING 7, CONTAINS OYSTER SHELL AND PARGETING
E	10YR4/2 10YR4/4	SANDY SILT SILT	270.34	269.57	HARD PACKED SOIL WITH LAYER OF SHALE SPALLS, POSSIBLY FILL USED TO LEVEL GROUND SURFACE.
F 330	7.5YR5/6	SILTY CLAY	269.15	264.40	BUILDER'S TRENCH RUNNING NORTH/ SOUTH ALONG THE WEST WALL OF BLDG 5. EXCAVATED TO APPROX. 8FT BELOW SURFACE.
F 331	10YR3/2	SILT	268.98	268.43	DISTINCT AREA OF FILL ABOVE F332
F	10YR4/3 10YR4/6	CLAYEY SILT CLAY	269.57	268.88	MIXTURE OF CLAYS AND SILTS,APPEARS TO BE AN ALLUVIAL DEPOSIT
G	7.5YR5/6 10YR4/4	CLAY SILTY CLAY	268.88	267.95	HARD PACKED STERILE SOIL WITH A FEW SHALE STONES IN THE UPPER LEVEL.
F 332	10YR3/2 10YR4/3	SILT CLAYEY SILT	268.43	267.24	NE CORNER OF WOOD LINED PRIVY. TWO WOOD BEAM FEATURES FOUND AT NE CORNER.
F 338	10YR4/6	SILTY CLAY	270.49	267.69	FILL AREA BETWEEN F332 AND STERILE SOIL. PRIVY SHAFT.

HARPERS FERRY NATIONAL HISTORICAL PARK
EXCAVATION UNIT SUMMARY FORM

SITE: 46JF200 PACKAGE 118, PARK BUILDINGS 5 AND 7
EXCAVATION UNIT 61, (N 572.15 E 539.57)

STRATUM	MUNSELL	TEXTURE	ELEVATION AMSL TOP	BOTTOM	DESCRIPTION
A	10YR3/3 10YR5/6	SILT SILTY SAND	271.36	271.15	MODERN SURFACE CONTAINING SHALE STONE AND BRICK WALK WAY
F 333	10YR6/8	SAND	271.18	271.05	SAND PAD RELATED TO SURFACE WALK WAY.
F 334	10YR4/2	SILTY SAND	271.05	270.88	GRAVEL FEATURE SERVES AS A BASE FOR THE SAND OF F333, ALSO RELATES TO THE SURFACE WALK WAY.
B	10YR3/2 10YR5/8	SANDY SILT CLAY	271.15	270.33	MODERN FILL DEPOSIT, MOTTLED WITH INCLUSIONS OF MODERN TRASH
F 335	10YR4/2 10YR6/6	SILT CLAY	270.68	269.47	TRENCH FOR PHONE AND ELECTRIC UTILITY LINES.
F 336	NA	NA	270.54	270.34	SHALE STONES RUNNING E/W THROUGH CENTER OF UNIT, PROBABLY EARLIER WALKWAY ASSOCIATED WITH BLDG 5.
F 337	10YR4/3	CLAYEY SILT	270.78	269.80	TRENCH FOR WATER LINE RUNNING E/W APPROXIMATELY 0.5 FT FROM BLDG 5.
F 339	10YR4/3 10YR5/6 7.5YR5/6	SILTY CLAY CLAY CLAY	270.33	267.93	SEWER LINE TRENCH. SEWER PIPE RUNS E/W ALONG THE NORTH WALL OF THE UNIT.
C	10YR4/4	CLAYEY SILT	270.45	269.72	POSSIBLE OCCUPATION ZONE, CONTAINS HISTORIC ARTIFACTS AND OYSTER SHELL, ONLY A SMALL PORTION INTACT
D	10YR3/4 10YR3/2	SILTY CLAY SILT	269.67	268.95	POSSIBLE ALLUVIAL DEPOSIT, AREAS OF DARK FLOOD LIKE SWIRLS
E	10YR5/4	SILTY CLAY	268.95	268.21	STERILE SOIL CONTAINING A FEW SHALE SPALLS

MUNSELL SOIL COLOR CODES

10YR 3/2	VERY DARK GRAYISH BROWN
10YR 4/2	DARK GRAYISH BROWN
10YR 3/3	DARK BROWN
10YR 4/3	BROWN/DARK BROWN
10YR 3/4	DARK YELLOWISH BROWN
10YR 4/4	DARK YELLOWISH BROWN
10YR 4/6	DARK YELLOWISH BROWN
10YR 5/4	YELLOWISH BROWN
10YR 5/6	YELLOWISH BROWN
10YR 5/8	YELLOWISH BROWN
10YR 6/6	BROWNISH YELLOW
10YR 6/8	BROWNISH YELLOW
7.5YR5/6	STRONG BROWN
5 YR 3/4	DARK REDDISH BROWN

Chronology of Development

B. Construction Chronology of the Development of Buildings 5 and 7

Part 1: Nineteenth Century Appearance

Exterior:

Conclusive documentation as to the original appearance of Buildings 5 and 7 does not exist. However, some of the original appearance of Building 5 can be determined from the earliest photographs of the building,[9] these photographs date from 1859 to 1865, several years after the circa 1856 construction date. These photographs reveal only partial views of the building (see photo below which shows only the chimneys of Building 7). Therefore, much of the original appearance of Buildings 5 and 7 can only be inferred from what these photographs show in conjunction with the remaining physical evidence.



View of Building 7 chimney, 1859, HF-64.

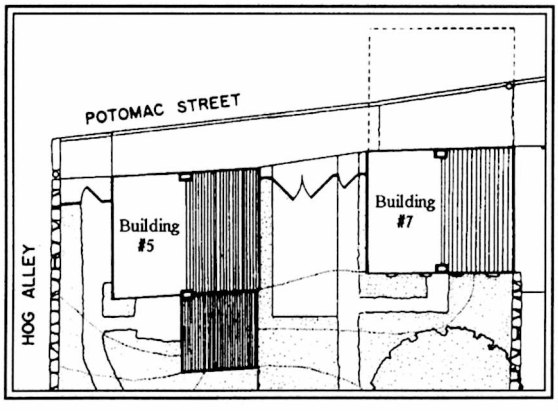
Even less is known about the original appearance of Building 7. Based on a newspaper advertisement, Snell states in his historic structures report, that Building 7 was constructed in 1838-1839 as a one story structure, well before the 1859-65 period when the earliest photographs of the building were taken.[10] A letter written in 1852 indicates that Building 7 was a two-story structure, but there is not clear evidence as to whether this description represents a change from the

9 These earliest photographs include the following: HF-55 (1865 or 1873-75), HF-64 (1859), and HF-1200 (1862).

10 These earliest photographs include the following: HF-55 (1865 or 1873-75), HF-64 (1859), and HF 1200 (1862).

original one-story building, as the newspaper article Snell cites suggests, or was Building 7 always two stories[11].

Evidence does exist, however, to indicate that Building 7 was significantly modified before the first photographs were taken. In 1856 the front half of Building 7 (24' wide by 20' deep), along with a portion of the building's lot, were sold to the United States government[12]. At this time, the government removed the front part of Building 7 in order to widen what is today Potomac Street. Snell contends that the owner of Building 7 constructed Building 5 at this time in order to make up for the lost space caused by the demolition of the front portion of Building 7. It appears that Building 5 was originally constructed to match the size, shape, and general appearance of the modified Building 7.



Site plan from 1992 HABS drawings, showing original "foot print" of Building 7, on file HAFE NHP.

At the time Building 5 was constructed, Buildings 5 and 7 were both masonry structures with two full floors and a finished attic space. During the time of the modifications, Building 7 was reduced in size to about 24' (the dimension along Potomac Street) by 20'. This is about the same size of Building 5 when it was originally constructed (before the annex was added prior to 1861) (see diagram at left). There is no reason to believe that the original masonry material is not still in place in both buildings. Based on the material found in the buildings today, Building 7 was originally stone, and Building 5 was constructed of stone at the first floor and the upper floors were constructed of brick. The front wall of Building 7 was added when the building was reduced in size. Like the walls of Building 5, the front wall of Building 7 was constructed of stone at the first floor and the upper floors were constructed of brick.

Assuming the owner of Building 7 constructed Building 5 to match the modified Building 7, it can be speculated that the materials from the demolished portions of Building 7 were used in the construction of Building 5. The stone from the demolished portion of Building 7 was probably used for the new foundation and first floor front wall of Building 7 and any remaining stone was used for the foundation and first floor walls of Building 5.

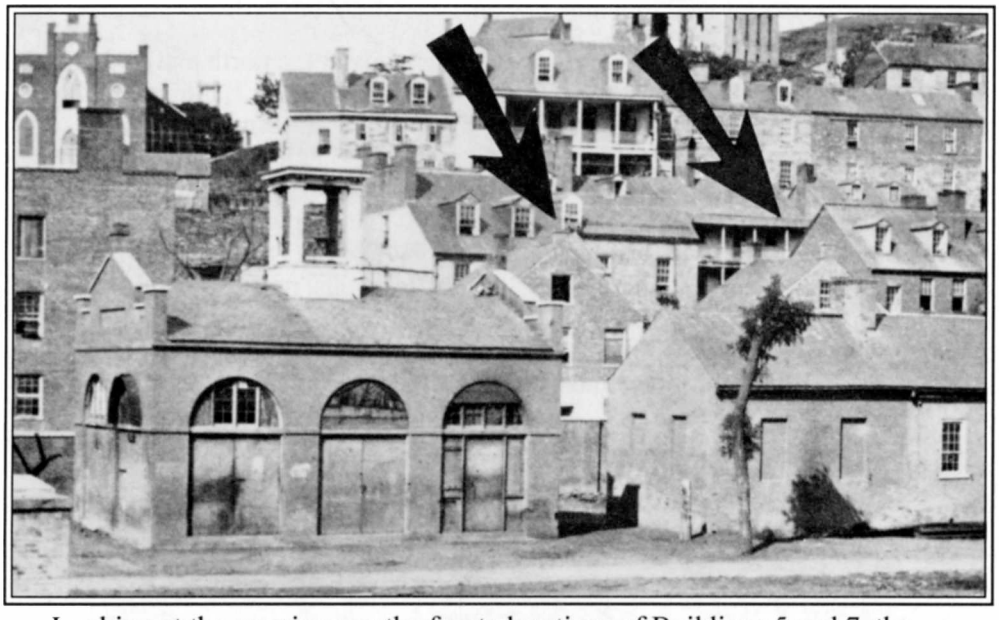
The early photographs, HF-1200 in particular, show that each building had a gable roof covered with what appears to be most likely slate or wood shingles. Brick chimneys were centered in the east and west gabled ends of the buildings, just as they are today. In the earliest photographs, the fronts of both buildings,

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11 Chickering, Historic Structure Report, History Data Section, p. 10.

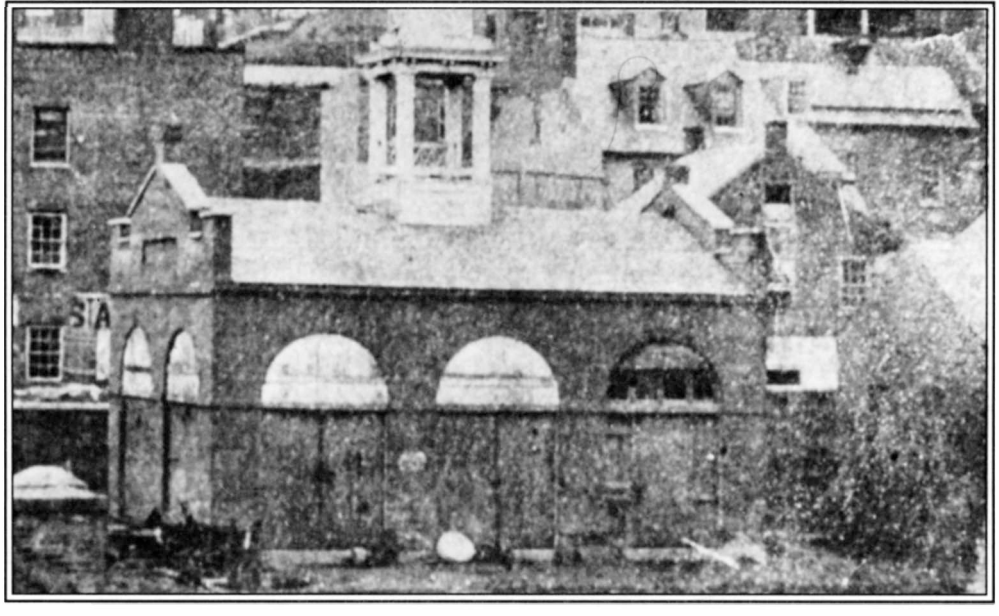
12 Snell, Historic Structure Report, White Hall Tavern, Bldg. No. 7, p. 7.

above the first floor, appear to be constructed of plain brick. At the first floor, however, the front of Building 7 appears to be bright white, in contrast to the darker appearance of the unpainted brick above. The cause of this change in color is unclear and it cannot be determined from these photographs whether or not the first floor masonry was whitewashed or stuccoed. The first floor of Building 5 is not visible in these photographs.



View of Buildings 5 and 7, c. 1862, HF-1200, on file HAFE NHP.

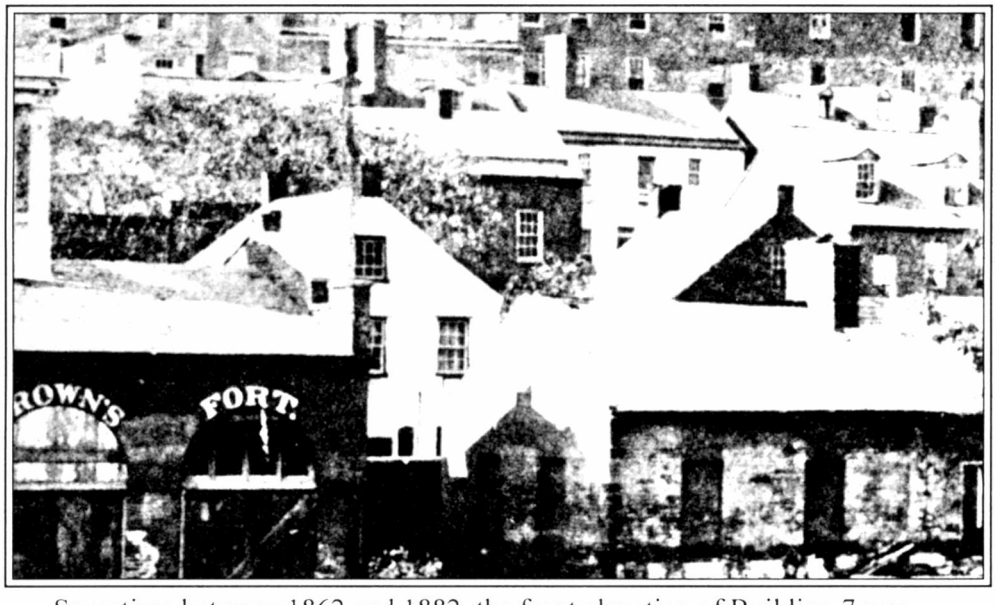
Looking at the openings on the front elevations of Buildings 5 and 7, the earliest photographs, HF-55 (below) and HF-1200 (above), are consistent with today's pattern of one central window at the attic level and three openings at the first and second levels of both buildings. However, the information provided by the photographs is incomplete. In Building 7, the attic opening is completely dark



View of Building 7, showing missing attic sash, c. 1865, HF-55, on file HAFE NHF.

not providing information as to the sash and the number of lights. There is however, a window frame present in this opening. It is possible that there was not a sash in the window, or there was a shutter on the window in the closed position. However, none of the other windows have shutters at this time. The window at the attic level of Building 5 is a six-over-six window, which matches the predominate type of window in use in Lower Town at the time. Most likely, the attic sash has been removed for some reason.

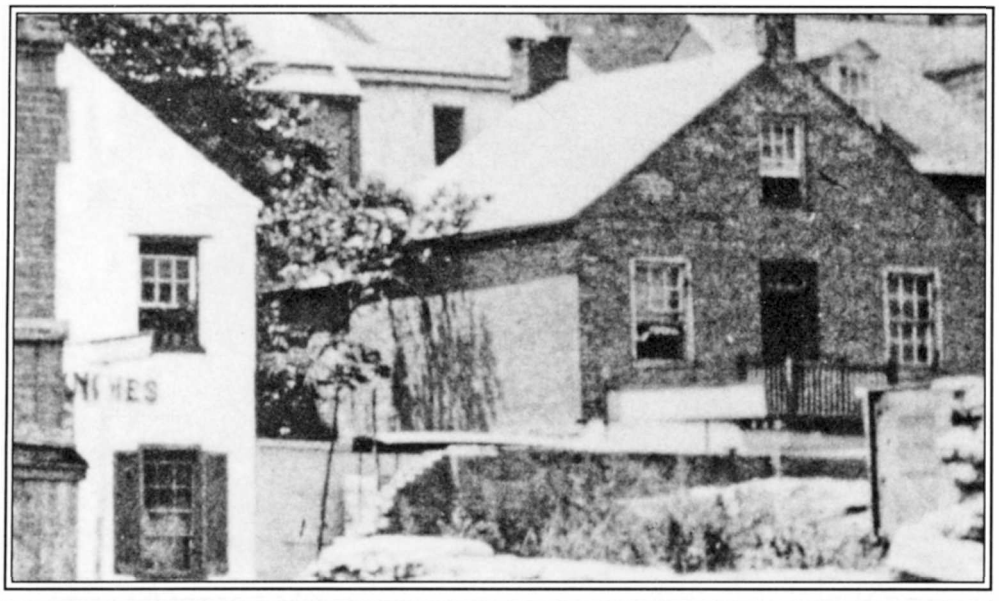
These early photographs also indicate one window at the north end and one at the center of the front elevation at the second floor of Building 7, indicating that the present arrangement of three windows was a likely arrangement when the building was first modified. Although photograph HF-55 clearly shows a six-over-six window at the north end, this window seems to be missing in the earlier HF-1200 photograph, and therefore, the six-over-six window may be a post-war replacement window in Building 7's "new" (circa 1856) front wall. It should be noted, however, that in the earliest photographs, most of the Harpers Ferry Buildings did have six-over-six windows. None of Building 7's first floor openings are visible in any of the earliest photographs, although photographs HF-55 and HF-1200 show some indication of an opening at the center of the building.



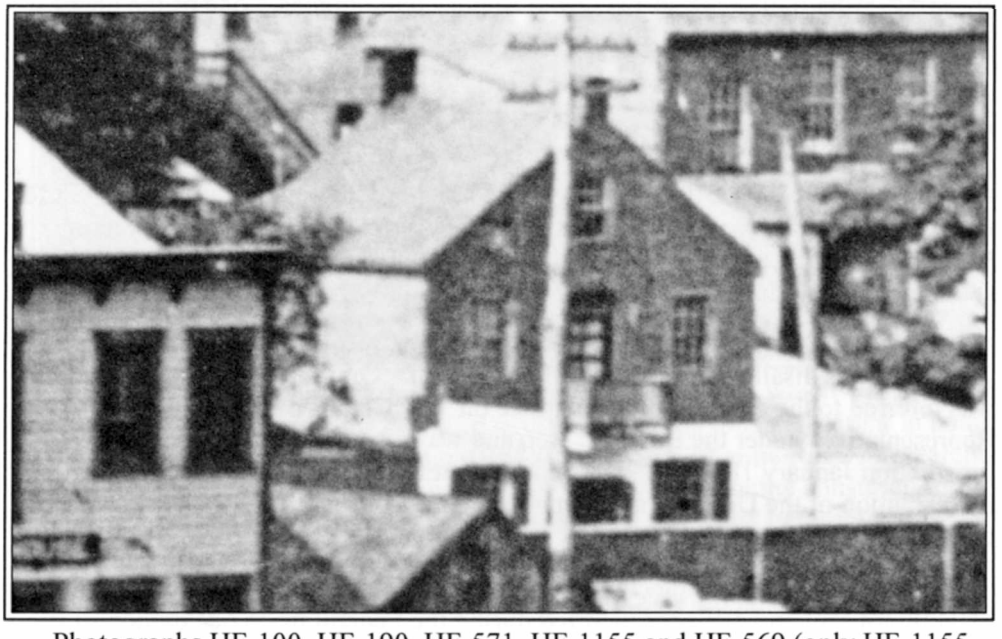
View of Building 7 showing stucco on entire structure, HF-379, on file HAFE NHF.

Sometime between 1862 and 1882, the front elevation of Building 7 was completely stuccoed (or whitewashed). This is clearly depicted in HF-379 (above). In this photograph, the attic window, and the second floor central and north windows have sashes in them. The second floor windows have 6 over 6 windows and the attic window is a 6 over 3 configuration.

Later photographs, dating from the 1880s to 1900, provide more information as to how the buildings looked later in the nineteenth century. These photographs were taken at least 40 years after Building 5 was constructed and Building 7 was modified, and thus, there is as an even greater chance that the details indicate modifications and not the original or Civil War era appearance.



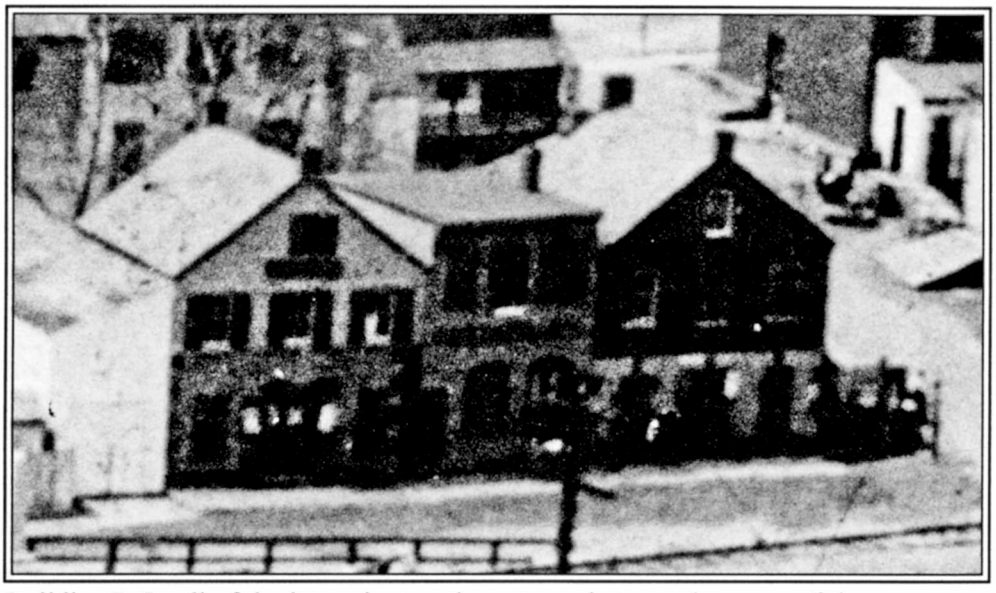
Enlarged view of Building 5 balcony, c. 1890, HF-571, on file HAFE NHP.



Enlarged view of Building 5 balcony showing door configuration, c. 1890, on file HAFE NHP.

Photographs HF-100, HF-190, HF-571, HF-1155 and HF-569 (only HF-1155 and HF-571 shown above) show that there was a balcony at the second floor level on the front elevation of Building 5, and a central door provided access to the balcony. There was a window on each side of the balcony. The doorway had a four light transom window. The door appears to be a raised panel configuration with three pairs of panels visible on the top half of the door in HF-571, however, the appearance of the bottom half is unclear. The balcony is outlined by a balustrade. The door, door frame, railing, and balcony posts appear to be painted a darker color than the balusters, window frames and sash. In photograph HF-96, dated 1896, the balcony has been replaced by a window. Photograph HF-96 also shows Building 6 which was constructed on the lot between Building 5 and

Part I. Developmental History



View of Building 5 showing the altered front facade, c. 1896, HF-96 on file HAFE NHP.

Building7. In all of the later nineteenth century photographs, none of the upper floor windows had shutters.

Nineteenth - Century Interior Appearance:

After the Civil War, the children of Frederick Roeder made a claim for rent for the use of Buildings 5 and 7 by Federal Troops.[13] The following is an excerpt from the "statement of case" description of the court proceedings that took place to settle the Roeder claim:

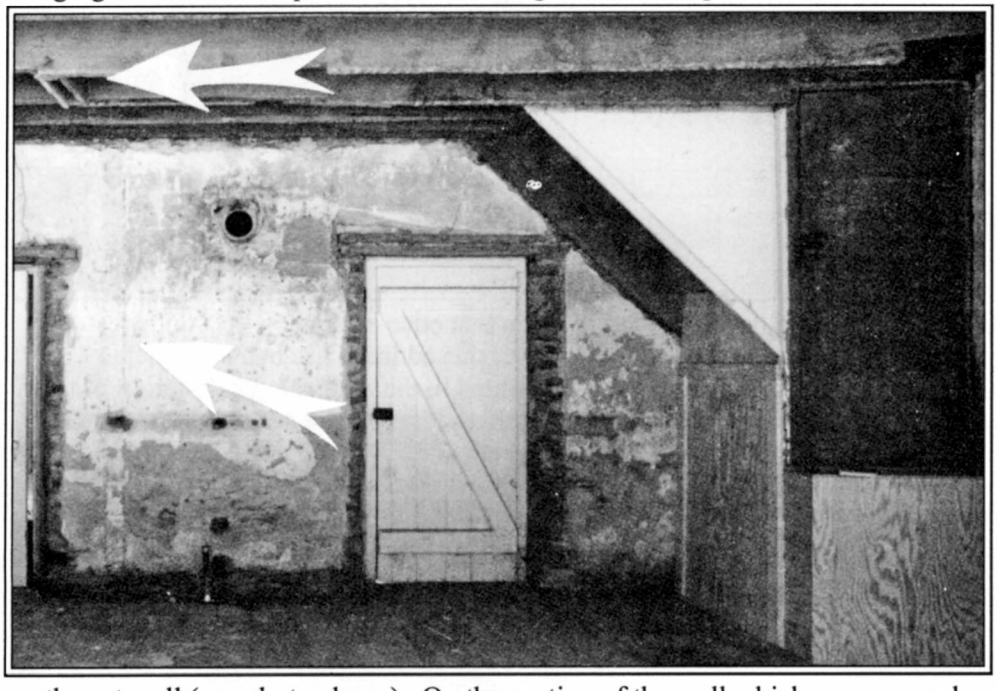
"This claim was first filed before the Quartermaster-General under the act of 1864, and was disallowed for want of jurisdiction. On March 11, 1902, the claim was referred to the court by the committee on War Claims of the House of Representatives under the Bowman Act, and was dismissed for want of jurisdiction January 18, 1904. The claim was referred to this court March 3, 1905, by resolution of the United States Senate under act of March 3, 1887, known as the Tucker Act."

The case the Roeder heirs made was for the United States to pay the family $504.00 for rent and damages incurred during the Federal troop occupation of the structures (July 25, 1861 to March 25, 1862). The Roeder children gave testimony as to the size and value of the structures the troops occupied (Buildings 5 and 7). Mary L. Kern, the daughter of Frederick Roeder, states in her testimony that of the buildings on Potomac street one had seven rooms and the other had five during the soldiers occupation. This information gives a clue as to the Civil War era floor plans of the two structures.

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13 Park document number HFD-687 the Roeder Heirs' War Claim.

Currently, Building 5 has six rooms and Building 7 has three. During investigation of the two structures several ghost marks of removed walls were found. On the first floor of Building 5, there is a ghost mark on the southwest wall (see photo below) that is 4 1/2" wide. It appears that this mark was left by a partition that ran perpendicular from the southwest wall to the northeast wall and divided room RM101 approximately in half. If this wall actually did divide the room in half, it would raise the total number of rooms in Building 5 to seven rooms. In between the ceiling joists in this room there are two sections of paired bridging boards. These paired boards are aligned with the ghost mark on the

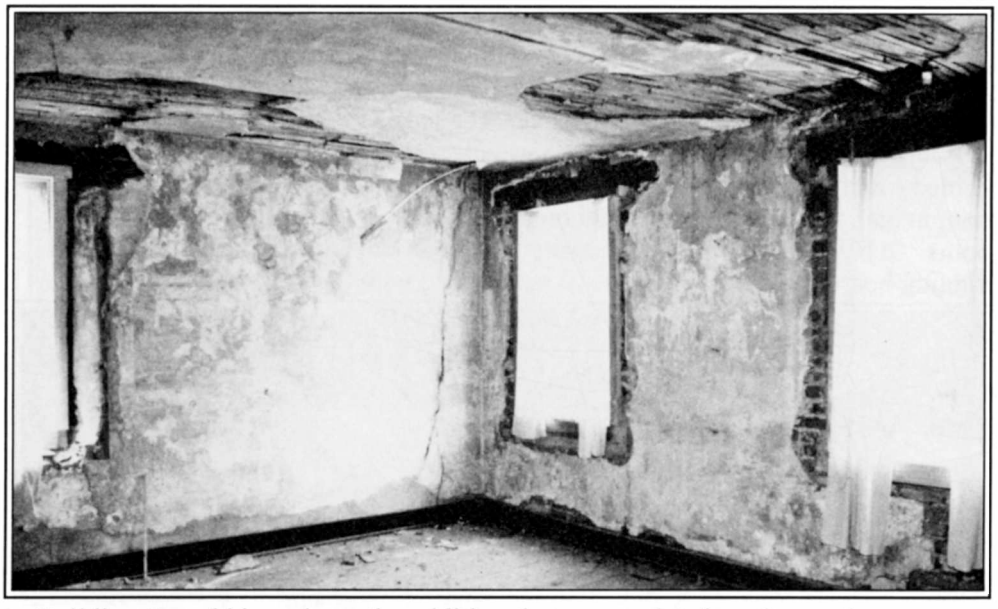


View of Building 5 interior showing ghost marks on SW wall, 1994, WPTC photo.

southwest wall (see photo above). On the portion of the wall which was covered by the partition are remnants of a blue paint finish. This finish is similar in color to the original circa 1856 color identified by the North Atlantic Region researchers during their paint and plaster analysis. This finding can date the construction of the partition to after the first finish campaign in the room and before the 1862 troop occupancy of the structure.

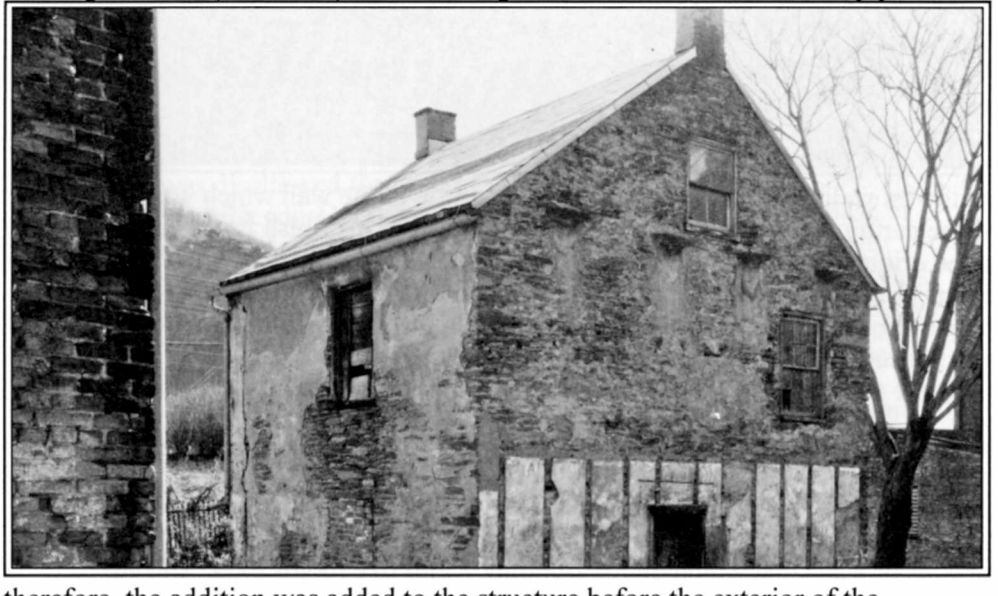
In Building 7 the information from the testimonies did not prove as conclusive as for Building 5. In the testimony it was stated that one building had seven rooms and the other had five. It has been adequately proven that Building 5 had seven rooms therefore, Building 7 must be the building with five rooms. As stated previously, Building 7 currently has three rooms. Theoretically there should be remains of walls that would divide Building 7 into five rooms total. During investigation several ghost marks of possible partitions were found. All of the identified ghost marks were on the second floor. Unfortunately only one pair made a complete partition, which only gives a total four rooms in the building. These marks are nearly centered on the southwest wall and ceiling. The marks themselves are 4" wide and are recessed in the plaster denoting the partition was in place during a series of plaster campaigns. A possible location for the fifth room

Part I. Developmental History



View of ghost mark on the ceiling of room RM 201, 1990, Krista Copeland photo.

in Building 7 could have been the addition that once existed on the southwest elevation of the structure. The foot print of this addition has been revealed by archeological investigation and is documented in the Archeological section of this report. All that remains above ground of this addition are a series of plaster panels on the exterior masonry. The "panels" are separated by ghost marks of 2" wide framing material (see below). Where the ghost marks are there is not any plaster

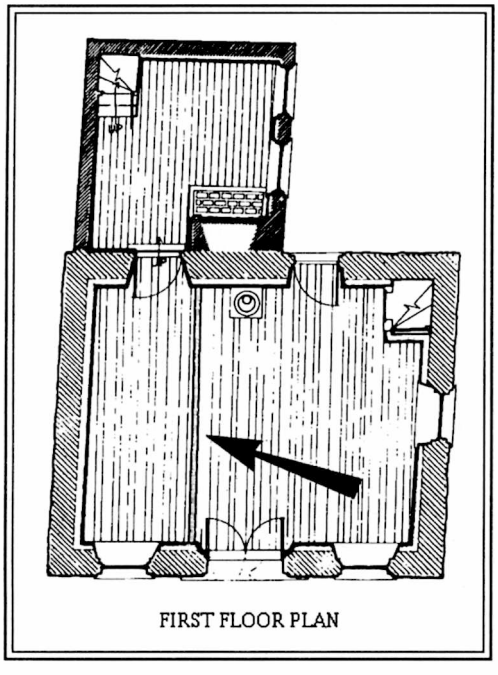


Rear view of Building 7, 1958, NPS photo, on file NPS photo collection.

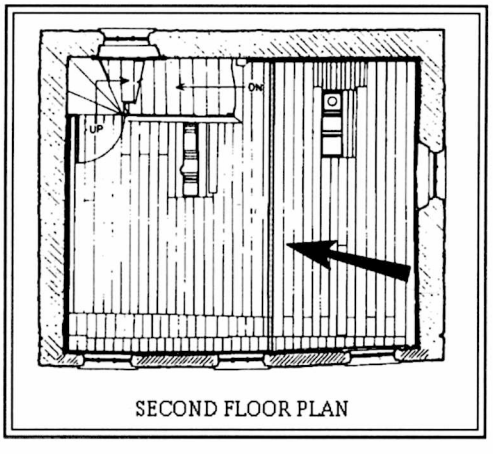
therefore, the addition was added to the structure before the exterior of the building was stuccoed. In historic photograph HF-1200 (circa 1862), stucco first appears on the structure. The photograph only shows a partial view of stucco on the first floor of the northeast elevation (front). Whether the rear of the structure was stuccoed at this time can not be determined. If it is true that the rest of Building 7 was stuccoed at this time then the addition on the rear of the building

predates 1862 and this may account for the fifth room referred to in the above mentioned testimony

The exact construction date of the two story, half-gable annex on the west elevation of Building 5 is unknown. However, with the testimony mentioned previously and the following interpretation of the extant ghost marks, Building 5 had a total of seven rooms during the 1862 military occupation of the structure. The only way Building 5 could have this many rooms at this time would be if the annex had been constructed. There is a distinct building joint between the two structures signifying the two parts of the structure were built at different times. The building technology and materials found in the annex support a mid-nineteenth century construction date. Much of the exterior of the annex has been rebuilt since the Park acquired the property in 1953, therefore only minimal original nineteenth century fabric remains.



FIRST FLOOR PLAN



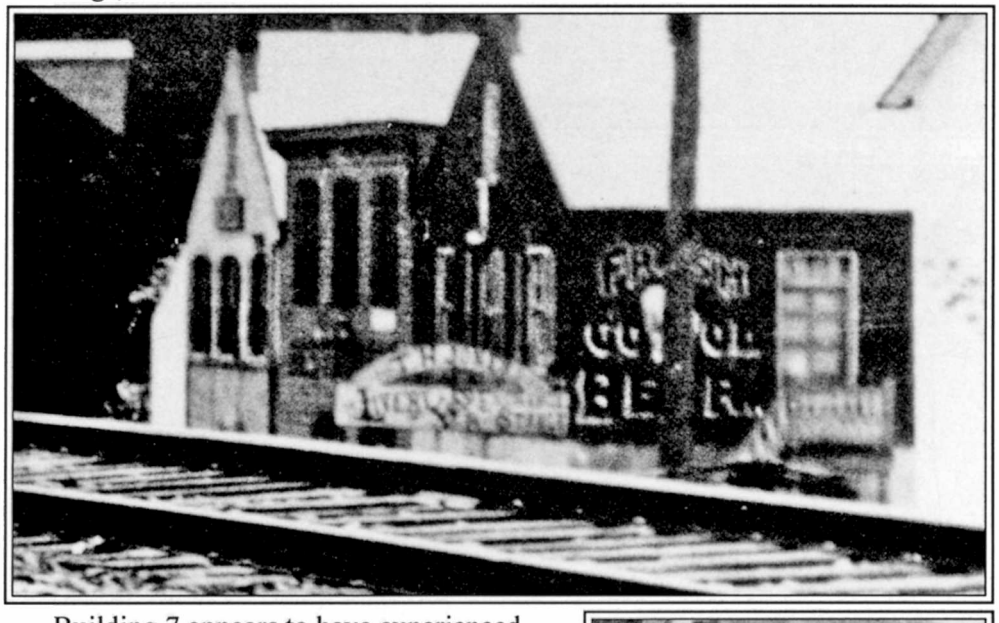
SECOND FLOOR PLAN

Left, Building 5, 1992 HABS floor plan with dashed-in speculative historic wall locations.

Right, Building 7, 1992 HABS floor plan with dashed-in speculative historic wall locations.

Part 2: Twentieth Century Appearance

By the early 20th century, Building 5 had undergone some alterations. The door (D203 see floor plan in Physical Description section) that once occupied the center of the front facade of the second floor, appears to have been moved to the north side of the structure. The door is clearly depicted in HF-1751 (c.1901-1907), the size and style of this door matches that which is depicted in HF-1155 (page38). Therefore, it stands to reason that this could be the same door in a new location. The new balcony location has a flight of stairs leading from it to the ground which suggests that the rooms on the second and third floor were used as an apartment with a separate entrance. The balusters in the railing that leads to the ground are set perpendicular to the top and bottom rails versus being plumb (perpendicular to a horizontal level plane). This suggests that the bannister is reused, therefore supporting the idea that balcony and door are reused as well. Also in photograph HF-1751 (below) there are three windows across the front facade of both buildings, all of these windows have louvered shutters.



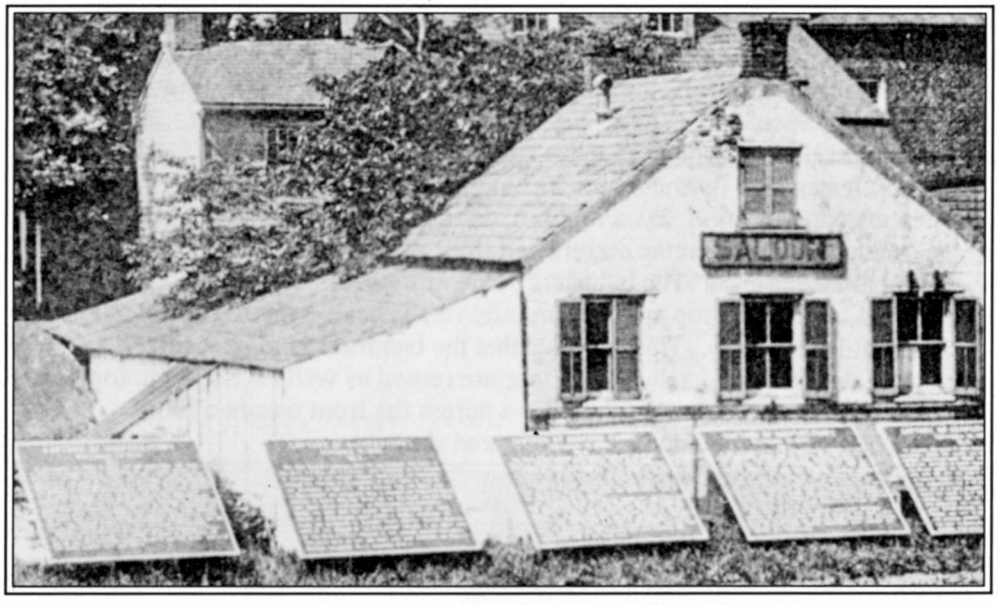
View of Buildings 5 and 7, c. 1901-1907 HF-1751, on file HAFE NHP.

Building 7 appears to have experienced minimal alteration during the 1890s to late 1930s period. In HF-1220 dated 1939 (on the following page), it still retains the 1 1/2 story shed addition on the southern side that is depicted in HF-569 (at right) dated 1890. The only other visible alteration is the replacement of the early 6 over 6 windows on the second floor with 2 over 2 windows as depicted in HF-329 (on the following page) dated 1904. In HF-1220 (on the following page), Building 5 still retains the second floor entry on the northwest elevation but, the balcony has been

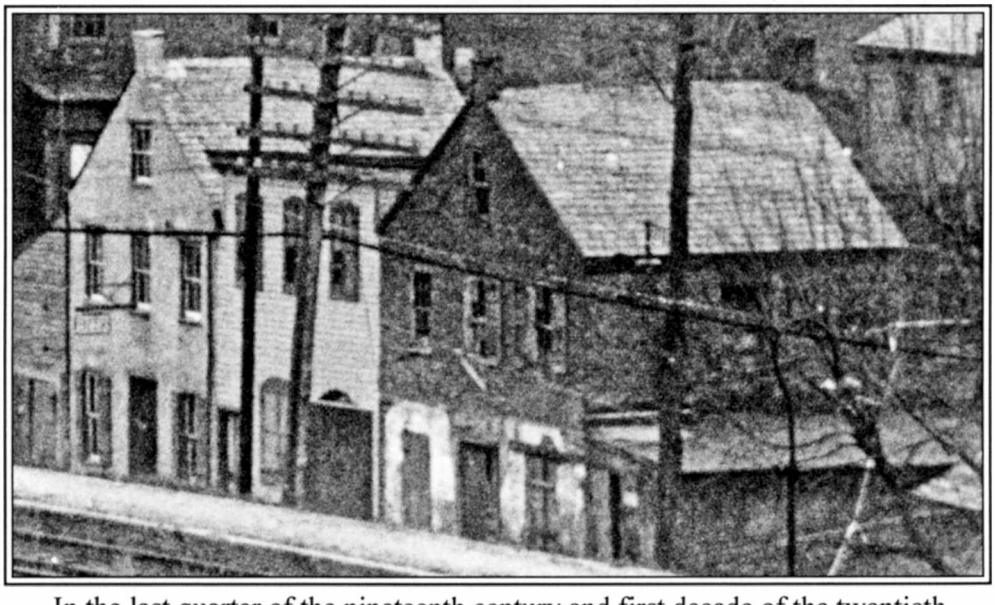


View of Buildings and 7, c. 1890, HF 569, on file HAFE NHF.

removed. In the place of the balcony was a one story shed roof garage addition. A tar line is still visible from the roof of this addition.



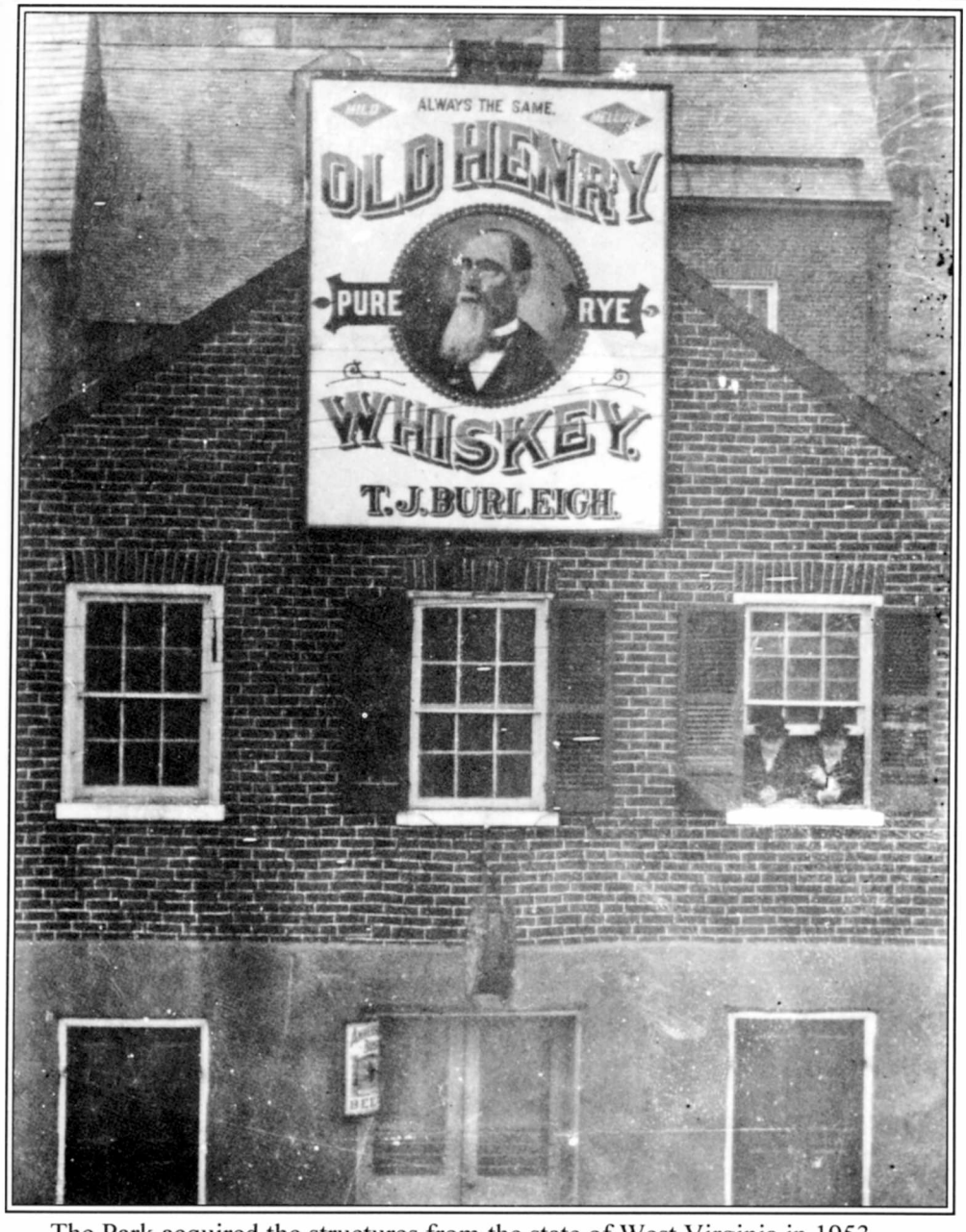
View of Building 7 from a postcard, c. 1904, HF-329, on file HAFE NHP.



View of Buildings 5 and 7, c. 1939, HF-1220, on file HAFE NHP.

In the last quarter of the nineteenth century and first decade of the twentieth century Building 5 was known as "Burleigh's Saloon".[14] During this time there was a large advertisement bill-board on the front (northeast) elevation of the building. This sign is clearly shown in historic photograph HF-1211 (on the following page).

14 Chickering, Historic Structure Report, History Data Section, p. 11.

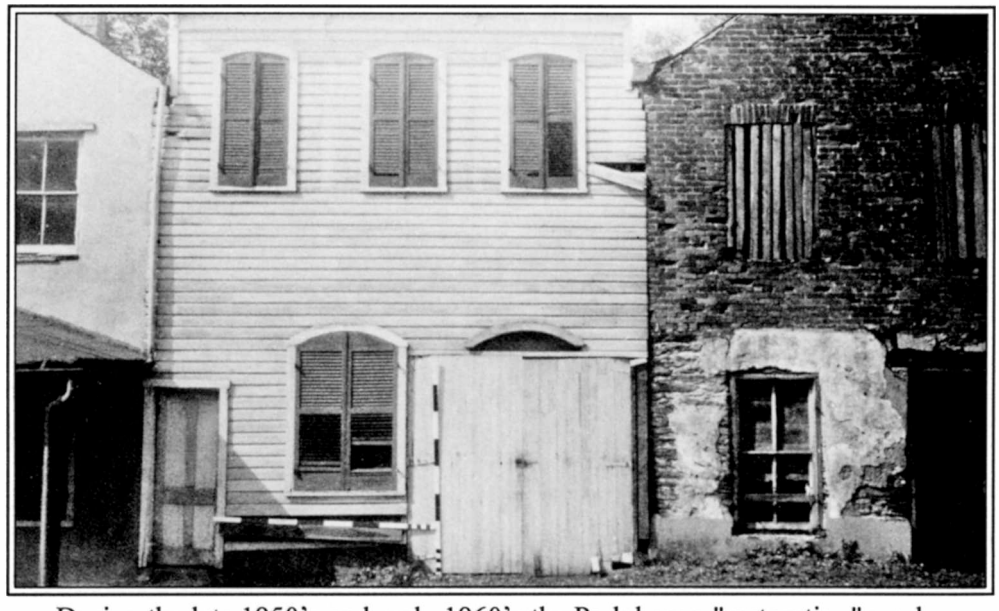


View of Building 5 showing historic 19th century signage, HF-1211, on file HAFE NHP.

The Park acquired the structures from the state of West Virginia in 1953. There are a series of Park acquisition photographs that depict the dilapidated condition of the structures due to flooding and neglect. Building 7 had a one story hip-roofed porch added to the front facade. This was added sometime between 1939 and 1954 (when the acquisition photographs were taken). Both Buildings had been abandoned and were severely deteriorating.

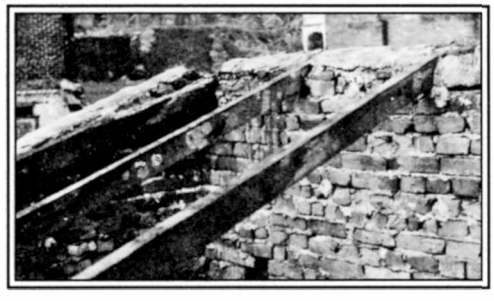
As part of the early interpretive program for Lower Town, all buildings not associated with the Civil War or additions made to buildings after the Civil War were torn down or removed. At this time Building 6, which stood between

Buildings 5 and 7 was removed. Park acquisition photograph NHF-322 (below) shows the front elevation of Building 6 prior to its razing. This program brought changes to both structures. The north elevation shed roof garage addition on Building 5 was removed by 1957 (NHF-185). Building 7's front porch, south elevation shed roof addition, and rear addition (of which no photographs exist) were removed. The tar line from the front porch roof is still visible at this time.

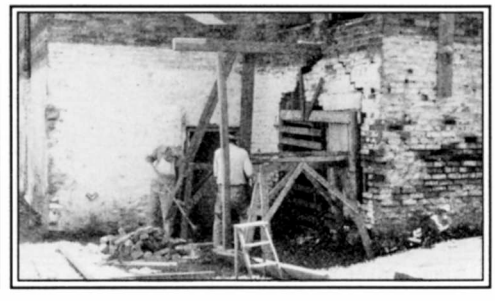


View of Building 6, and Building 7's hipped roof porch, August 6, 1957, HF-322, on file HAFE NHP.

During the late 1950's and early 1960's the Park began "restoration" work on the two structures. The Building 5 annex underwent substantial structural repairs. The roof framing structure for the annex was repaired during this period as shown in NHF-189 dated November 7, 1956. The northwest elevation was almost entirely rebuilt as seen in NHF-186 dated July 18, 1957 and other structural repairs were yet to be made.



Exposed rafters in the Annex, Building 5, Nov. 7, 1956, NHF 189, on file HAFE NHP.

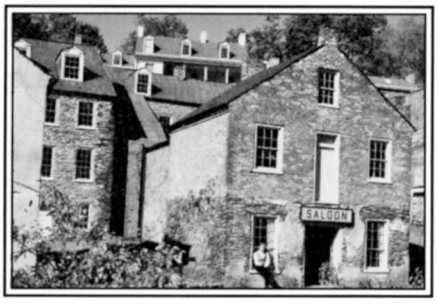


Masons making repairs to the Annex, Building 5, July 18, 1957, NHF 186, on file HAFE NHP.

In 1957, both structures had their slate roofs removed and roll roofing material applied as a temporary roofing material. In 1961, Building 5 was repointed (photograph NHF-1863, dated Oct. 1961). In October 1963, according to Park Maintenance Records, the roll roofing was replaced by slate shingles. The gutters and downspout were also replaced at this time.

In the 1970's more changes were made to the structures. The exteriors of the buildings were returned to their "nineteenth century" appearance. In Building 5, the second story door opening was returned to the front elevation from the

northwest elevation as seen in NHF-3449 (at right). Building 7 had the lefthand window on the first floor front facade replaced with a door and transom window combination (NHF-3656) (at right). Windows in both structures were replaced during this period although, no exact date has been established. In 1975, a new bar joist supported flooring system was installed in both buildings. [15] This new floor required the removal of the old flooring system and the installation of concrete slab floors and concrete block walls in the basement areas of both structures. New furred out gypsum board walls and ceilings were installed at this time. During the 1980s, portland cement based stucco was applied to the exterior of Building 5. This stucco was scored to represent ashelar masonry.



View of Building 5, June, 1974, NHF 3449.



View of Building 7, June, 1975, NHF 3656.

In the summer of 1993, the drywall and the furred out studwalls were removed from both structures. This was the first step in the condition assessment of the structures for Park Development Package 118. During the course of Fiscal Year 1995-1996 the Buildings will be altered again. This time the work will be performed the Williamsport Preservation Training Center day labor construction teams who will use their skills to preserve the remaining existing original fabric and stabilize the structures.

15 Park Maintenance Records-4/10/75

Physical Description

C. Physical Description of Existing Conditions of Building Five

The following is an account of the current physical condition of Building 5. The text is based on work done within the Inventory Condition Assessment Program completed by Krista Copeland and Michael A. Jenkins in the summer of 1990. Through on-site inspection, this information has been updated through July of 1994 by Michael Seibert, Research Architectural Historian, WPTC, and Thomas Vitanza, Senior Historical Architect, WPTC, for the submission into the Historic Structures Report as part of Park Development Package 118.

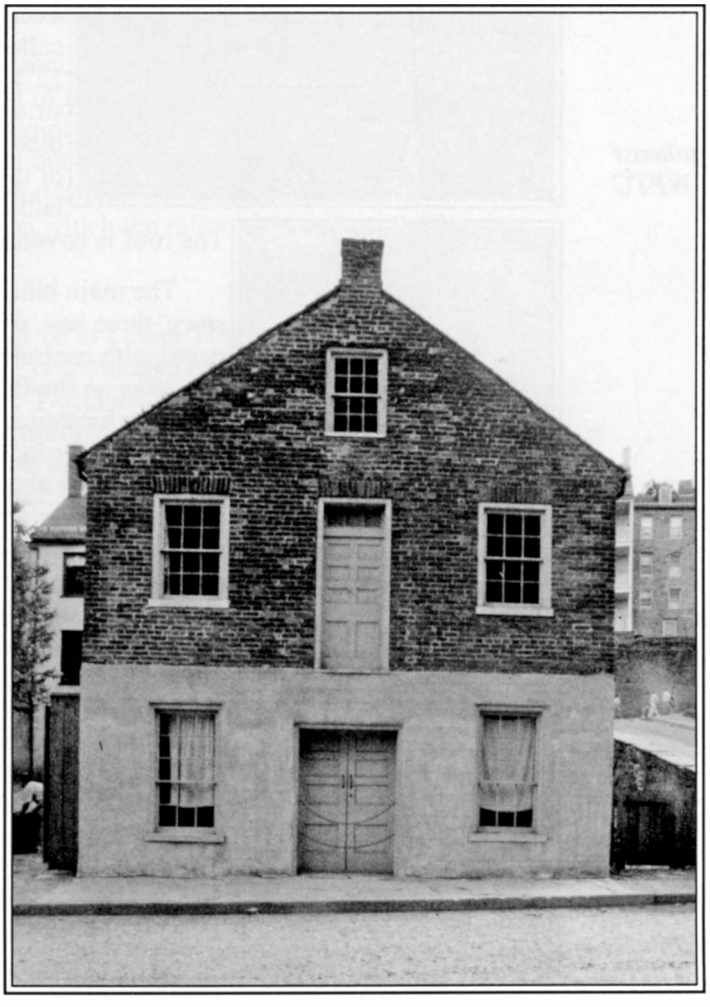
Physical Description: Building 5

Identification of Character Defining Features

* - Denotes historic fabric.

Exterior:

- -2 1/2 story, three bay facade, gable front, zero setback from sidewalk.
- -Jack arches over second story windows and central door.
- -Two part structure: square plan main block, rear ell or "annex".*
- -Slate covered gable roof on main block, slate covered half gable on annex.
- -Chimneys centered on both gable ends of main block.*
- -First story of main block stone masonry covered with stucco, scored to represent ashlar masonry.
- -Second story of main block and all of annex red, hand made, soft brick, laid in various common bond patterns.*
- -Multiple light, double hung windows; wood panel and wood vertical plank doors
- -Corbeled sawtooth brick cornice under eaves of main block*.



Building 5 northeast elevation 1994, WPTC photo.

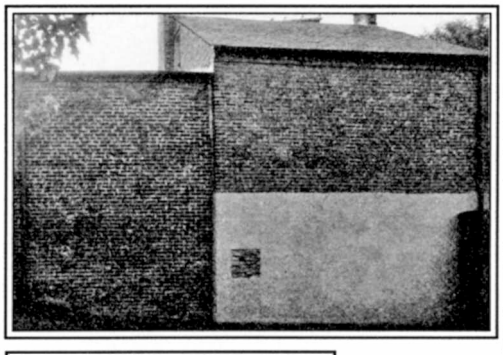
Part 1. Developmental History

Interior:

- -Configuration of floor plans (room to room plan, no hallways).*
- -Smooth plaster walls and ceilings (with extant Civil War era graffiti).*
- -Painted wood paneled doors, wood vertical beaded doors, painted base-boards (second floor*)
- -Bare (unfinished), face nailed, wood plank floors (second and third floors*)
- -Wood frame stairs and stair enclosures, steep risers and winding treads (upper portions of first floor stairs and second floor stair*)

Exterior Envelope:

General Appearance Summary:



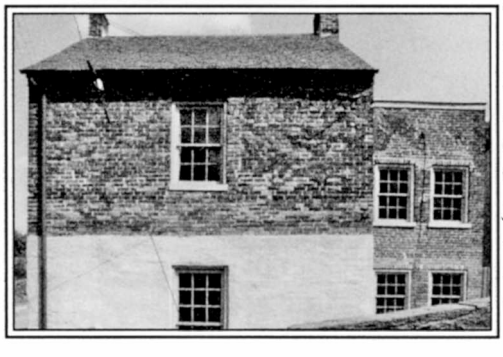
Building 5 southeast elevation 1994, WPTC photo.

Building 5 is a two and one half story structure which consists of two parts: a main block (approximately 24' x 20') which fronts Potomac street and a rear, half gable, two story addition called the annex (approximately 13' x 12'). The building is a masonry structure. The first floor of the main block is stucco covered stone. The rest of the main block and annex is brick laid in various common bond patterns. The roof is covered with black, feather edged, slate.



Building 5 southwest elevation 1994, WPTC photo.

The main block faces northeast and has a two story, three bay, gable front facade (photo previous page) with centrally positioned doors flanked by two windows on the first and second floors and a single centrally located attic window. The front facade also has a centrally-located false chimney. Notable characteristics about the facade are: jack arches over the second floor windows and door, scored stucco to represent ashlar masonry, double first floor front door, and straight running bond over the attic window. The southeast elevation (photo above) of the main block does not have any windows nor does the southeast and southwest elevations of the annex.

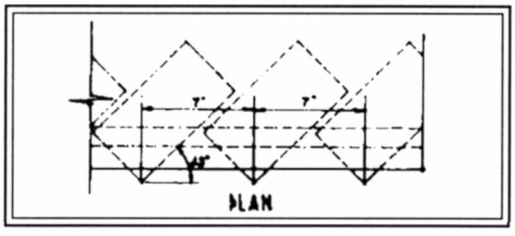


Building 5 Northwest elevation 1994, WPTC photo.

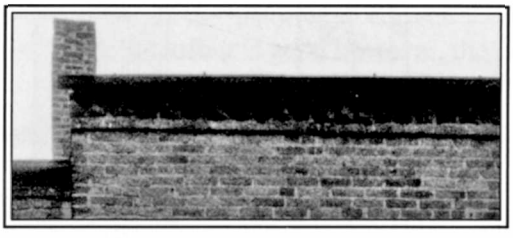
The southwest elevation (at left) of the main block has a door on the first floor and the only windows are in the gable and flank the centrally located rear chimney. The northwest elevation of the annex (at left) has two pairs of windows on each floor. The northwest elevation of the main block has single, centrally located windows located on the first and second floors and a

noticeable tar line along the second floor line where a shed roof addition was once attached to the structure.

Under the eaves of the northwest and southeast elevations of the main block is a corbeled, sawtooth, brick cornice (see diagram and photo at right). This decorative detail is comprised of three brick courses. The first course is a full stretcher course that is stepped out approximately one quarter of a brick width. The second course is the saw tooth course, here the bricks are laid diagonally so there is one corner that points toward the face of the wall and protrudes beyond the first course. The third course is another stretcher course that is laid flush with the protruding points of the sawtooth course.



Cornice detail,1956 HABS drawings, on-file HAFE NHF.



Cornice detail, 1994 WPTC photo.

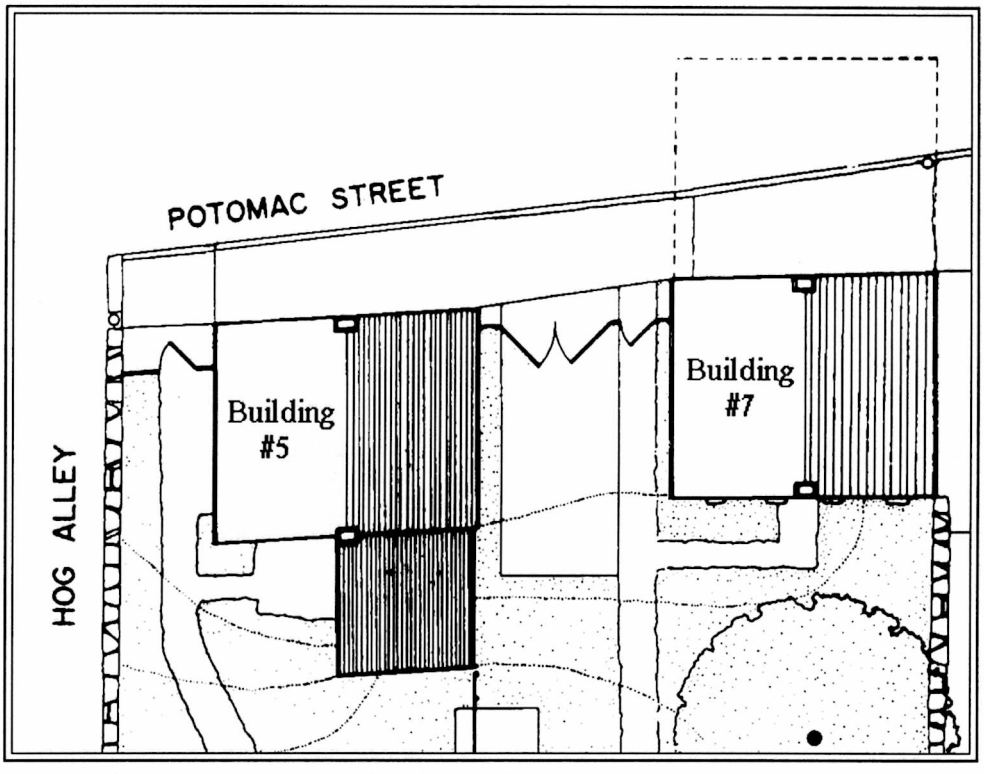
This corbeled cornice provides a "shelf" on which the rafter plate and roof rafters rest. On the southeast elevation of the annex under the eave is another corbeled brick cornice. This detail is simply a two course design. The first course is a full stretcher course that is stepped out one quarter of a brick width. The second course is a full header course that is stepped out approximately 3/4". This cornice detail also provides a "shelf" on which the rafter plate and roof rafters rest.

Site:

Building 5 is located on Wager Lot 16 in Lower Town, Harpers Ferry (see site plan on following page). The building is positioned on the southern corner of Potomac street/Hog alley intersection. The site is defined by a rubble stone (Harpers phylite) retaining wall to the northwest along Hog alley, an irregular flagstone sidewalk along Potomac street to the northeast, a cobble stone driveway (shared with Building 7) to the southeast, and the sloping yard to the southwest (shared with Building 16). There are several fences and gates on the site. There is a fence with a gate that extends from the northern corner of the building to the stone retaining wall along Hog alley. A fence and gate extends from the eastern corner of the structure to Building 7, and another fence extends from the southern corner of the annex to Building 16. To the west of the annex there is an underground cistern.

The yard to the southwest of the building slopes toward the structure. This is the cause of serious water damage to the annex's masonry foundation and walls. After periods of rain there are puddles of water in the crawl space below the first floor. The flagstone sidewalk along the front facade is creating a possible splash-back condition which is also causing premature deterioration of the masonry walls. The path that leads to the rear of the structure between the Hog alley retaining wall and the building, drains toward the structure; a condition which is also contributing to the deterioration of the masonry walls of the structure.

Part 1. Developmental History



1992 HABS site plan showing location of Building 5, on file HAFE NHP.

The site has been extensively reworked since Park acquisition of the property. The fences, walk ways, and cobble stone paving were part of Park Development Package 110 (1978-1982). Most recently, in the summer of 1991, the site was the scene of archeological investigations as part of Park Development Package 118. As part of the preparation for WPTC construction work, two 5' square test pits were excavated adjacent to each structure during the summer of 1994.

Walls:

The exterior walls and foundation of the main block of the structure are masonry construction: stone (rubble stone, mostly Harpers phylite) on the first floor, brick of various bonding patterns on the second floor and running bond brick chimneys. The first floor walls were covered with modern portland cement based stucco sometime between 1978-1982. The main block is the original construction dated 1856. The rear annex (southwest facade) is all brick construction laid in various common bond patterns. The annex was constructed sometime prior to 1861.[16] Deteriorated masonry was repaired by private contractor in 1961. This repair work included the structural rebuilding of the north corner of the annex and the installation of steel lintels over the windows and doors in the annex first floor, northwest elevation. Replacement of deteriorated brick

16 HFD-687- Roeder Heirs' war claim described Building 5 with seven rooms, therefore the annex was constructed prior to 1861.

and repointing of the structure was also completed at this time. The current condition of the masonry is fair, there are some areas of brick and pointing deterioration. The building joint between the main block and the annex needs to be made weather tight.

Roof:

The roof is currently black slate. The slates are approximately 10" to 12" wide and have smooth faces with feathered edges. This is replacement roofing material that was installed in the fall of 1963 (the roof was covered with roll roofing by the Park as a temporary stabilization effort in 1956, slate is the historically correct roofing material). The current condition of the slate roofing is good however, the flashing around the chimneys is failing.

The roof framing in the annex is possibly reused timber. It bears the marks of previous treatment: stray mortise pockets, erratic lath marks, etc. Several ceiling joists and other framing members appear to be replacements.

The current roof drainage system was installed in 1963 during Park stabilization of the structure. This system is undersized for the structure and is not properly positioned (water running off the roof runs behind the gutter). The downspouts do not have leaders to carry the water away from the building.

The space between the rafter tails above the corbeled, saw-tooth brick cornice is open, thus allowing birds and insects to enter the structure. Currently there are not any barge boards on the structure and there is a space between the bottom of the slate roofing and the top of the masonry. This condition is also allowing bird and insect infiltration.

Interior Envelope:

Floors:

In the crawl space below the first floor, there is a poured concrete floor which the Park installed in 1975. During this time, concrete block (CMU) walls which support the steel bar joists that carry the first floor were installed. The condition of this floor system is good.

Room RM101 flooring is replacement tongue and groove pine flooring laid over 3/4" plywood substrate and steel bar joists (supported by CMU walls in the crawl space), which were installed in 1975. The boards are laid in a random width configuration ranging in width from 4 3/4" to 8" and run in an northeast-southwest orientation. The boards are unfinished and are faced nailed to the substrate with reproduction square headed nails. There is a patched section of flooring in the north corner of the room that does not match the species or thickness of the rest of the replacement pine flooring. This appears to be a more recent repair. In room RM102, the flooring is also replacement tongue and groove pine flooring. The floor in this room is laid over 2"x4" sleepers that are laid directly on the concrete on-grade slab which was poured in 1975. The boards are laid in an northeast-southwest orientation and are 5 1/4" wide. The boards are unfinished and are face nailed with reproduction square head nails to the sleepers. The

condition of the flooring is good, with only a few water-damaged areas in room RM101.

Rooms RM201 and RM202 have what appears to be reused, tongue and groove, pine flooring. The floor boards are random width ranging from 6"-7" wide. The boards are laid directly over the floor joists and are attached by face nailing with machine cut square head nails. There are two series of nailing patterns: the current nailing pattern (which aligns with the existing joists), and a nailing pattern of the previous use of the boards (which does not align with the existing joists). Sample nails from these rooms are typical to the middle nineteenth century. Therefore, the flooring material maybe original to the construction of the main block of the structure and just reused from another structure.

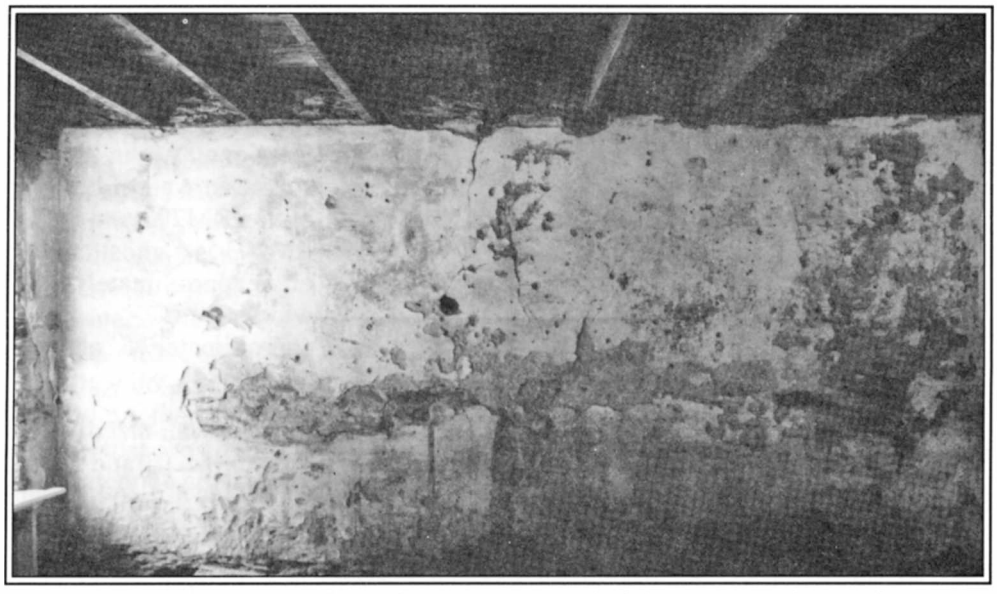
In room RM 203 the flooring appears contemporary to the construction of the annex, which dates to pre-1861. This flooring is made of 5" pine, tongue and groove, unfinished, flooring. As with the other floors the boards are oriented in an northeast-southwest direction and are nailed directly to the floor joists. There is only one pattern of nails in this room. The dating of the sample nails from this floor support the last quarter of the nineteenth century as the construction time period of the annex. As with the first floor flooring, the boards on the second floor are unfinished and are oriented in an northeast-southwest direction. The joists supporting the flooring in rooms RM 201 and RM202 are sagging, therefore the floors tend to slope toward the center of the structure. The condition of the flooring in rooms RM201 and RM202 ranges from fair to poor with some boards being heavily damaged. The condition of the flooring in room 203 is poor, boards are cupped and heavily damaged. The floor framing is not securely anchored to the southwest wall (the southwest wall has appeared to have moved outward).

Room 301 has what appears to be original (circa 1856) tongue and groove, pine flooring. This flooring is random width, with board sizes ranging 3" up to 12" across. This floor is also unfinished and is oriented in an northeast-southwest direction. The condition is fair with minimal damage and only one patch in the area of the stair landing. The evidence is inconclusive as to whether or not this may be a sign of possible modification to the structure.

Interior Walls:

The walls in room RM101 have recently been exposed. Since approximately 1975, the historic wall surfaces were covered by Park installed stud walls that were finished in drywall for exhibit use. During the summer of 1993 the furred out walls were removed to allow for the assessment and treatment of the underlying, deteriorating historic plaster. The exposed historic plaster consists of several plastering campaigns. The current finish over the majority of the wall is a dirty cream colored painted finish. The plaster is a lime-sand base with very little animal hair reinforcement applied directly over the stone masonry.

The original finish has been identified by North Atlantic Region conservator Judith Quinn and Historical Architect, Millan Galland. The circa 1856 finish colors were white (Munsell No. N 9.5) for the plaster and blue gray (Munsell No. 10B 6/2) for the woodwork.



Building 5 SE interior wall, showing deteriorated plaster, 1994, WPTC photo.

The condition of the plaster in room RM101 is fair to poor. There exists a four foot high band of deterioration that wraps around the entire room that is assumed to have been caused by standing flood water in the building (see photo above). Room RM101 has a visible dirt line about 5' above the floor which represents the highest level of flood waters in most recent history.

No trim is present in room RM101 however, there is evidence of chair rail on the northwest, southwest and part of the northeast walls. According to the 1950s era HABS drawings there was wainscot on the walls in room RM101. There appears to have been baseboard around the entire perimeter of the room at one time.

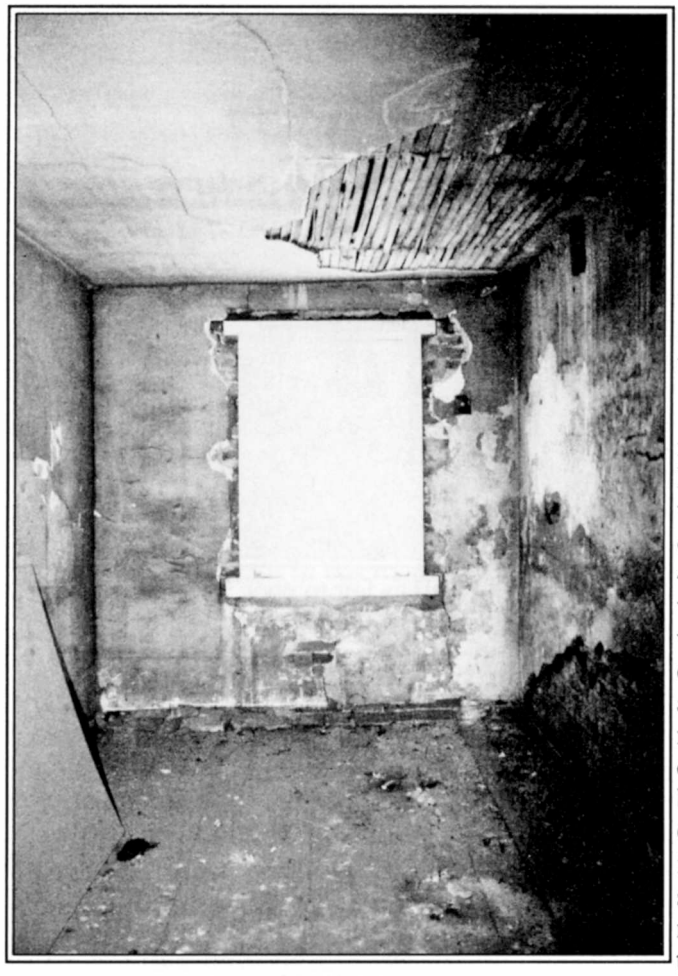


Building 5 Annex SE interior wall, efflorescence present, 1994, WPTC photo.

The walls in room RM102 are still covered with Park installed studwalls and finished drywall. There are patches of efflorescence along the lower third of the walls. Due to poor drainage, moisture seeping through the walls is causing the efflorescence. The finish on the walls is circa 1975. There are some places where the plaster finish has been removed and the brick wall and wire lath is exposed (this on the common wall between the main block and the annex). The overall condition of these walls is fair to poor.

The walls in rooms RM201 and RM202 appear to be contemporary with the construction of the main block of the structure. The walls are covered with plaster applied to circular sawn wood lath substrate nailed to wood studwalls on the interior walls and plaster on brick substrate on the exterior walls (photo on following page). The lath is nailed with machine made cut lath nails.

Part 1. Developmental History



Plaster conditions in Room RM201, (typical conditions for rest of second floor, 1990, Krista Copeland photo.

Wood 1" x 6" beaded (3/4" bead) baseboard is intact in about 2/3 of the original locations. Along the southeast wall of both rooms RM202 and RM203 is a ghost mark of an approximately 2" wide peg rail approximately 6' above the floor.

The wall that divides rooms RM201 and RM202 is a 2" x 4 " stud wall. The studs are set on 24" centers with their 4" face parallel to the wall surface. These walls are covered with circular sawn wood lath and plaster. Walls in room RM203 are also covered with plaster on brick. The original 1" x 6" (3/4" bead) baseboard is still intact along the southeast and part of the northeast wall. All of the walls on the second floor have examples of graffiti from various time periods. Much of this graffiti dates to the Civil War. Between 1862 and 1865 the building was used as a barracks for Union soldiers. In the annex, room RM203 there is 1920's era graffiti that talks about the prize fighter Jack Dempsey. The overall condition of the plaster throughout the second floor is poor.

The walls in the attic, room 301, covered with plaster over wood lath substrate (the lath is attached with machine made cut lath nails) on the northwest and southeast "knee" walls. On the northeast and southwest gable end walls the plaster is applied directly over the brick. The "knee" walls are constructed of 2" x 4"s set on 24" centers with their 4" faces parallel with the wall surface. These walls also contain graffiti, the majority of which is from the Civil War soldier occupation. The walls have been finished with various coatings of whitewash. Wood baseboard is intact in all of its original locations. The current condition of this plaster is considered poor.

Interior Ceilings:



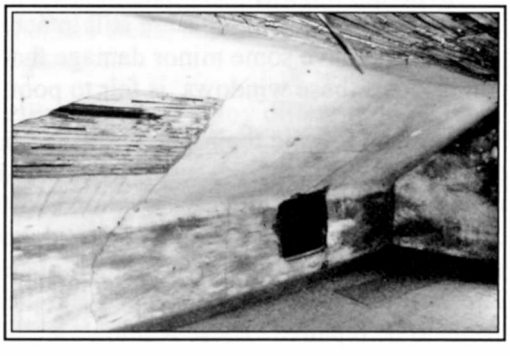
Exposed ceiling joists in room RM 101, note wall braces between joists, 1994, WPTC, photo.

The ceiling in room RM101 has been removed and the joists have been left exposed (photo at right). The joists have vertical saw marks from a power driven "sash" saw or vertical saw. The joist dimensions are 2" x 9". These joists run full span and are sagging in the center. There are some stray notches on the underside of these joists but, they do not appear to be reused. The joist that runs along the northeast wall is pierced by two tenons that are aligned with the double door below. These tenons are the remains of the cantilevered support structure for the second story porch that was on the front facade during the nineteenth century. The ceiling in room RM102 is a replacement ceiling installed by the Park in approximately 1975. Currently there is an electric heater mounted to the ceiling in the northern corner of this room. The condition of this plaster is good.



Ceiling in room RM 203, 1990, Krist Copeland photo.

The ceilings on the second floor in rooms RM201 and RM202 are contemporary with the original construction of the structure (c. 1856). The ceiling joist dimensions are 2"x 8 1/2". The joists have vertical saw marks from a power driven "sash" saw or vertical saw. The ceilings are covered with plaster on circular sawn wood lath substrate and attached with machine made cut nails. The ceiling in room RM203 is only the lath substrate, the plaster has been completely removed (photo at right). The construction however, appears to be contemporary with the construction of the annex. All of the ceilings on the second floor are in poor condition.



Ceiling in room RM 301, 1990, Krista Copeland photo.

The ceiling in room RM301 (the attic) is also covered with plaster over circular sawn wood lath, attached with machine made cut lath nails (bottom photo). The lath substrate is attached to rafters that are tapered from 6 1/2" thick at the rafter plate to 4 1/2" thick at the ridge by 5" wide. The rafters have vertical saw marks made from a power driven "sash" saw or vertical saw. The rafter pairs are joined by dovetailed collar ties and pegged, open mortise and tenon joints at the ridge. The plaster is covered with Civil War graffiti that is under one layer of a lime based white wash. The plaster keys that are securing the brown coat to the

wood lath substrate are breaking due to the environmental conditions within the structure. The overall condition of this plaster is poor.

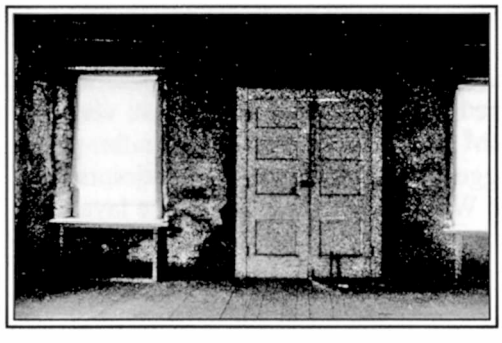
Interior Windows:

The windows in room RM101 (W101, W102, W103) are replacement double hung 9 over 6 lights (the glass used in these windows is a combination of modern plate glass and reproduction antique glass panes) configuration installed by the Park in approximately 1975. The windows currently have no hardware, sash cord, weather seal, or other operable components. No interior trim is present on the windows, except for the simple beaded trim along the exterior masonry opening. The interior window openings are battered and still retain wooden nailing blocks set in the masonry to attach trim to the sides of the opening. All windows in room RM101 have retained their original wooden lintels. All windows in room RM101 are experiencing various degrees of water damage and rot along the bottoms of the stiles and rails. Room RM102 (W104, W105) also has replacement double hung 6 over 6 configuration windows installed by the Park. For structural purposes steel lintels were installed over these windows. These windows are secured shut and have no trim or casing. The exterior sills need to be reworked, they are beginning to check and rot. The windows need to be scraped and painted. These windows are in fair condition.

The second floor windows in rooms RM201(W201), RM202(W202, W203), and RM203 (W204, W205) are wood, 6 over 6 lights (the glass used in these windows is a combination of modern plate glass and reproduction antique glass panes), double-hung, replacement windows. These were installed by the Park. Windows W202 and W203 have rotted sills. The windows are secured shut, and no operable components or hardware exist. The windows do not have any trim. The original wooden lintels are still intact. These windows need to be scraped and painted, and have some minor damage that needs to be repaired. The current condition of these windows is fair to poor.

The windows in the room RM301 (attic) are of two varieties. On the northeast elevation (W301) there is a single, double-hung, six over six, wood, replacement window. On the southwest elevation (W302, and W303) there are two, double-hung, four over two, wood, replacement windows. The glass used for these windows is a combination of modern plate glass and reproduction antique glass. These windows need to be scraped and painted, and have some minor damage that needs to be repaired. These windows are in fair condition.

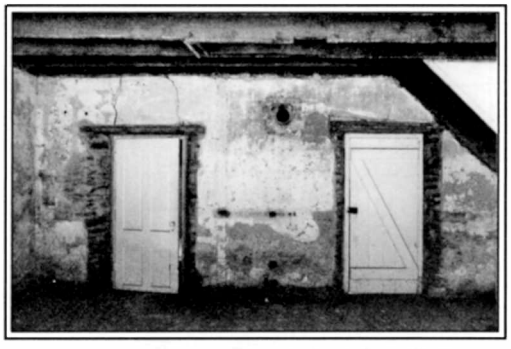
Interior Doors:



Door D101 in room RM 101, 1994, WPTC photo.

On the first floor there are a variety of door types and styles. The main entry door on the front facade (D101) is a four panel (raised), double door. The door has a pull chain lock mounted on the interior to secure a single leaf at the header and a BEST^{tm} rim lock to secure the leaves together. The door is a

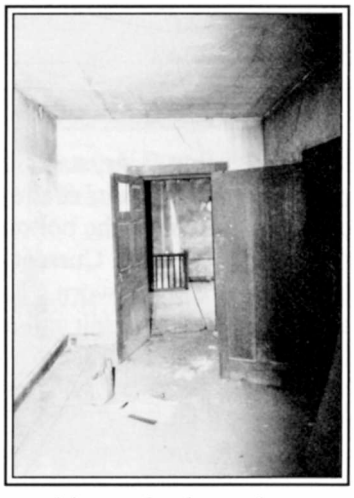
replacement installed by the Park. The door is in good to fair condition.



Doors D102 and D103 in room RM 101, 1994, WPTC photo.

The door to the second floor stairway (D102), is a tongue and groove, beadboard door with two horizontal, beaded, battens. This door has a brown and black "marbled" porcelain knob on the room RM 101 side and no knob on the stair way side as part of a two piece cast box lock door latch system. There is a square sliding deadbolt set below the box lock. The condition of this door is fair.

D103 is a wood, tongue and groove, beadboard, replacement door with a "Z" batten reinforcement. It has metal weatherstripping with a rubber seal and is secured by a BEST[tm] rim lock. The condition of this door is fair to good (photo of D102 and D103 above right).



Doors D201 and D202 in room RM 201, 1990, Krista Copeland photo.

D104 is a wood, four panel (raised), door with porcelain doorknobs and a non-operational skeleton key lock. Besides the fact that the hardware needs to be refinished the door is in fair to good condition.

In room RM102, the stairway door (D105) is a wood, tongue and groove, beadboard, replacement door with two horizontal batten reinforcements. The door scrapes the stair tread, and needs to be removed and refitted. The condition of this door is good.

On the second floor there are, as with the first floor, many different door types. D201 is a wood, two panel door, that appears to be contemporary with the construction of the main block of the structure. (photo above) The door opening is cased on both walls with 4" plain faced trim with 4" square corner blocks. This door is in fair condition.

D202 is a wood, six panel (raised) door with simple 4" by 1" plain faced trim in place (photo above). One of the upper panels is missing and the door needs some other repairs. The condition of this door is fair to poor.

D203 is a replacement (installed by the Park) wood, eight panel door with a horizontal three light transom. The door is fixed and has no hardware or trim. The condition of this door is fair. The door to the stairway in room RM202 (D204) is a wood, tongue and groove, bead board, door with a grained finish, and has two horizontal reinforcement battens (see photo in stair section). The hardware for this door consists of a brown grained porcelain doorknob set with a two piece cast box lock. The trim is in place and the hardware needs refinishing. The current condition of this door is fair.

Contemporary Access Panels:

An access panel exists from the first floor into the crawl space underneath the stairway (S101) in room RM101. Another access panel to the crawlspace is located in the floor of room RM101 to the right of the main entry. This panel is approximately 2' x 3'.

Finishes:

Walls, ceilings, windows, doors, and trim throughout the building are painted. The finishes are in fair to poor condition on the first floor and poor condition on the second and third floors. All the floors are unfinished. No decorative paint schemes are currently exposed except for Door D204, its associated trim, and the S201stair enclosure have been grained.

Staircases:

On the first floor, stair S101 is enclosed with tongue and groove beadboard paneling on both sides of the non-bearing wall. Originally the stair was an "L" configuration, now the bottom four steps are missing, these steps made up the short leg of the "L". Currently, six treads (including three winders) are still in place and are badly worn. The stair is narrow, 2' 10" wide, and has a 9" rise and an 8 1/2" run. The stair rail at the top of the stair on the second floor is in place, though it is not very secure. The stair rail is made up of a rectangular profile handrail (1" x 1 1/2") with simple 7/8" square balusters, many of which are missing. The rail is 2' 5" high and 3' 5" long (see photo on following page). The newel is a plain 4" square post. The stair enclosure is a wall that is constructed of random width, beaded, vertical boards that are cut at a miter at the bottom where they abut a piece of trim that follows the angle of the stair stringer. The stair appears to be contemporary with the construction of the main block of the structure. The overall condition of the stair is poor.



Stair S102 stairrail in room RM 203, 1990, Krista Copeland photo.

In room RM 102, stair S102 is a wooden, enclosed stair. The first three steps are replacements installed by the Park. The rest of the stair is contemporary with the construction of the annex. The original stair rail at the top of the stair, on the second floor, is in place, but is unstable. The stair enclosure is a wall that is constructed of random width, beaded, vertical boards that are cut at a miter at bottom that abut a piece of trim that follows the angle of the stair stringer. The top tread in RM102 is badly worn from being scraped by the door of the stair enclosure. The stair is an "L" configuration and consists of 10 treads with 4 winders. The stair itself is narrow, only 2'7" wide, and steep, 10" rise, 10 1/2" run. The stair rail is similar to the S101 rail. The handrail has an eggshaped profile with a beaded bottom edge. The balusters are 7/8" square and are spaced 3 3/4" apart. Where the balusters meet the floor a piece of reused chair rail is used as base molding. It is uncertain if the profile of this chair rail is the same as the original chair rail.

The newel post is 2 7/8" square and is chamfered on all four corners. The chamfer stops 3" from the top of the post. The post cap is 4" square, 1" thick and is chamfered to mimmick a hipped roof form. The overall dimensions are 2' 4" high and 5' 2" long. The overall condition of the stair is fair.



Stairs S101 and S102 in room RM 202 note historic stairrail, 1990, Krista Copeland photo.

On the second floor, stair S201 is contemporary with the construction of the main block of the structure (photo at right). The stair is an "L" configuration and consists of 12 treads with 6 winders with a 8 1/2" rise and 10" run. The stair itself is 2' 7" wide at the second floor opening and 3' 7" at the attic floor. The stair enclosure is a wall that is constructed of random width, beaded, vertical boards that are cut at a miter at bottom that abut a piece of trim that follows the angle of the stair stringer. The enclosure wall and the enclosure door D204 have been grained. The stair is in fair condition.

Fireplaces / Chimneys:

Stove pipe access to a common flue exists in rooms RM101, RM202, and RM203 on the southwest wall of the main block. The flue does not protrude into the room on the first floor, but does on the second and third floors. In the annex, there is a bricked-in fireplace on the northeast wall of room RM102. According to 1950s HABS drawings this fireplace opening measured 3' 5" wide, 4'1" high, and 1'6" deep. On the second floor of the annex there is a stovepipe access in the north corner of room RM203 (see photo at right).



Chimney flue in room RM 203, 1990, Krista Copeland photo.

The exterior portions of the chimneys have been rebuilt by the Park. The front chimney is false and rests on top of the front facade wall. The chimney rises seven courses above the ridge of the roof. The top course is corbeled out approximately one quarter of a brick width over the body of the chimney. The rear chimney rises nine courses above the ridge. The top course also protrudes approximately one quarter of a brick width over the body of the chimney. This chimney serves as the common flue for the building. Neither of these chimneys are at the proper height according to historic photographs. Each chimney appears to have lost 2 to 3 courses over time. Both chimneys are in poor condition.

Part 1. Developmental History

Utility Systems:

Plumbing:

No plumbing is present in the structure.

Electrical:

There is evidence of early electric service still visible in the structure. Two pieces of ceramic tube insulators are still in place and can currently been seen from room RM101. The insulators are located just to the southeast of center where they carried wires into the partition on the second floor.

Currently, electrical service is only present in rooms RM102 and RM203. In room RM102 there exists an electric heater suspended from the ceiling in the north corner of the room. The service enters the structure through the brick wall along the southeast wall of the stairway enclosure. The main electrical box is located at the southwest corner of stairway S102 directly above the fifth tread. A 3/4" conduit feeds up to the second floor along the wall to a junction box located below window W205. No equipment is connected to this junction box. This system is currently supplied with power (as of November 1994).

HVAC:

The heater in room RM102 is the only equipment in the structure.

Fire / Life / Health / Safety:

Fire Egress:

There are two exterior exits from the first floor. These are doors D101 and D103. Only the front room RM101 is planned for public use.

Intrusion System:

No intrusion system currently exists for this building.

Fire Detection / Smoke Control:

No fire detection or smoke control systems currently exists for this building.

Fire Suppression:

No Fire suppression system currently exists for this building.

Seismic:

Room RM203 has a tie-rod located at floor level which runs northeast to southwest through the building from the exterior into room RM202, 3'-9" (see figure 5-13). Also in this room is a wooden bracing structure which appears to be supporting roof framing members. The rear annex

of the building has separated from the main block +/- 2". The southwest wall of room RM 203 has separated from the floor framing. According to Jerrold Johnson's structural analysis, he recommends, "the steel rod and temporary support structure that exist in the second floor space of the annex and in the second floor of the main building are now not needed from a structural standpoint. They do not do any damage by remaining in place. We recommend leaving them in-place."

Handicapped Access:

The building is not accessible to the disabled. The paving stones immediately in front of the front door (D101) to the building should be lifted and reset so that they slope away from the structure.

Public Health:

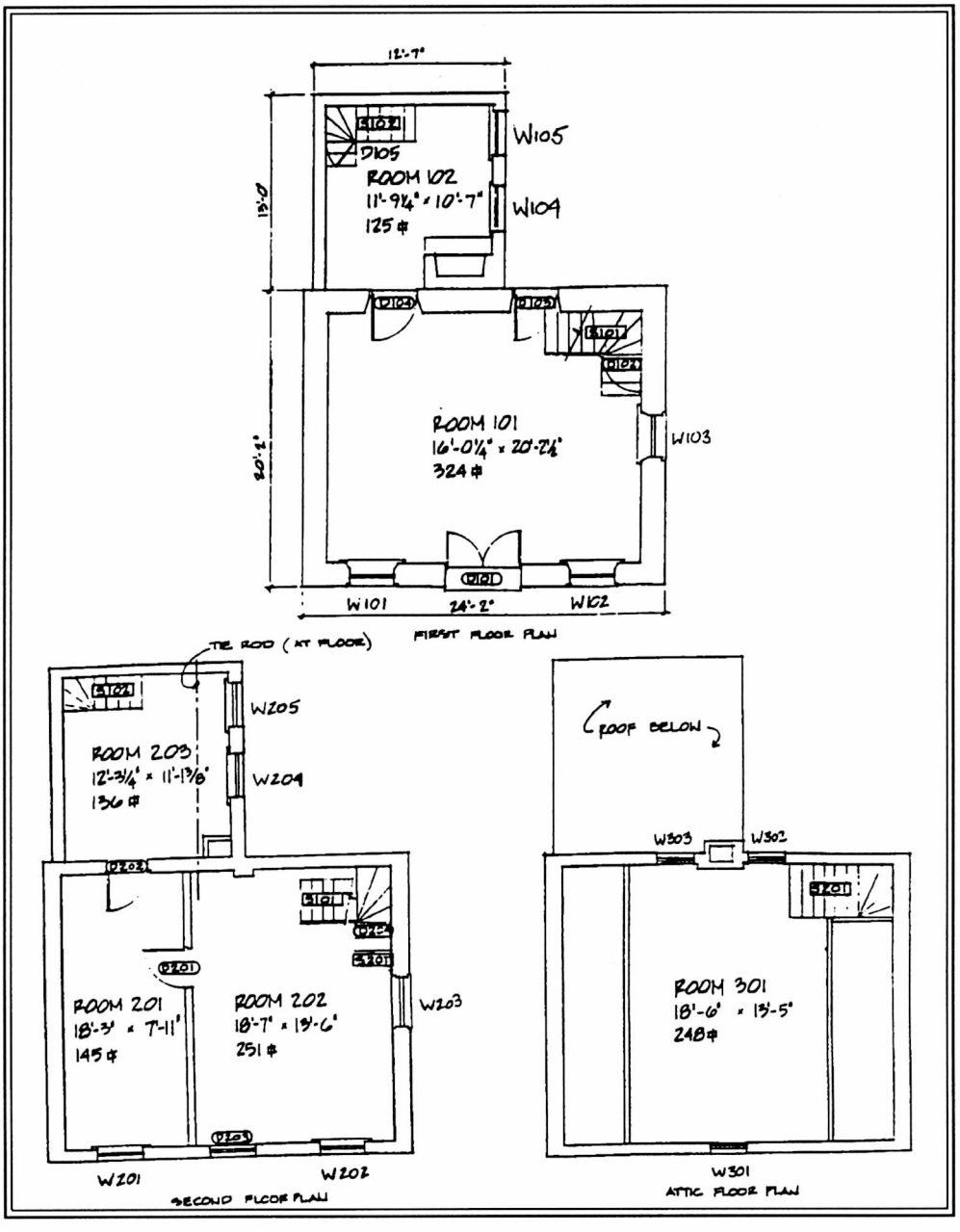
There is no food, water, or sewer service associated with this building. No public health problems exist in this structure.

Hazardous Materials:

During professional inspection of the structure no asbestos or radon gas was present. The presence of lead based paint was detected on various layers of historic paint on the woodwork and the plaster.

Part 1. Developmental History

Building 5 floor plans with room, window, door, and stair references:



D. Physical Description and Existing Conditions of Building Seven

The following is an account of the current physical condition of Building 7. The text is based on work done within the Inventory Condition Assessment Program by Krista Copeland and Michael A. Jenkins in the summer of 1990. Through on-site inspection, this information has been updated through July of 1994 by Michael Seibert, Research Architectural Historian, WPTC, and Thomas Vitanza, Senior Historical Architect, WPTC, for the submission into the Historic Structures Report as part of Park Development Package 118.

Physical Description: Building 7

Identification of Character Defining Features

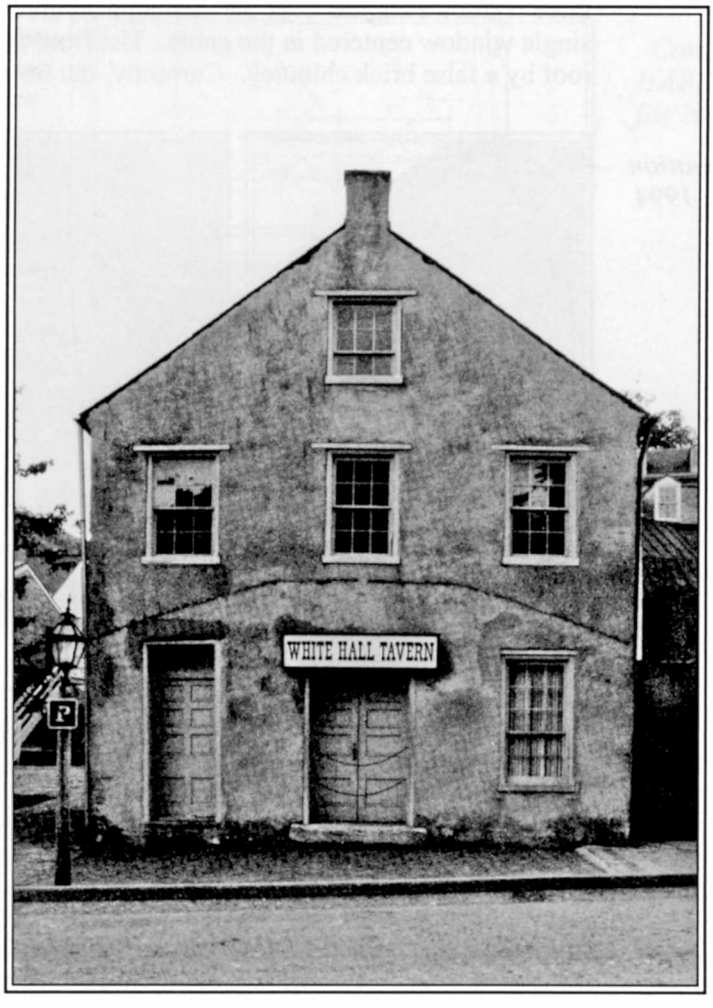
*-Denotes historic fabric.

Exterior:

- -2 1/2 story, three bay facade, gable front.
- -Small rectangular plan.*
- -Slate covered gable roof.
- -Chimneys centered on the gable ends.*
- -Stone masonry construction, except for second floor front facade which is brick masonry construction.*
- -Stucco covered on all elevations except for second floor front elevation which was exposed brick, stucco scored to represent ashlar masonry (SE elevation*).
- -Multiple light, double hung windows, painted wood panel doors, painted baseboard.
- -Exposed brick, corbeled, sawtooth brick cornice under eaves.*

Interior:

- -Smooth plaster walls and ceilings (with one identified example of extant Civil War era graffiti).*



Building 7 northeast elevation, 1994, WPTC photo.

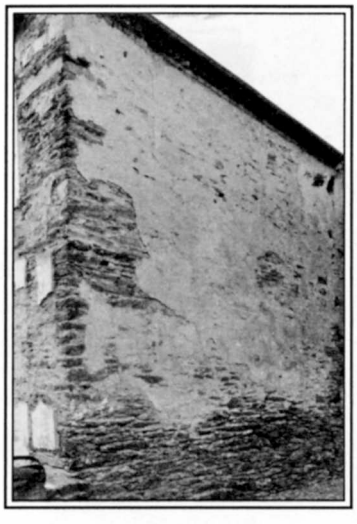
- -Painted wood panel doors.*
- -Bare (unfinished), face nailed, wood plank floors (second and third floors*)
- -Wood frame stairs and stair enclosures, steep risers and winding treads.*
- -Configuration of floor plan - no interior hallways.*

Exterior Envelope:

General Appearance Summary:

Building 7 is a two and one half story structure which is rectangular in plan (20' x 24') which faces northeast and fronts Potomac street. The building is a masonry structure built of Harpers phylite and brick. In early photographs the building was covered with stucco on all walls except for the second floor of the front facade which is constructed of brick (this was after 1856 when Building 5 was constructed, from the front the two buildings appeared almost identical).

The building has a three bay, gabled front facade.(see photo previous page) The first floor has a central double door which is flanked by a door to the southeast and a single window to the northwest. On the second floor there are three windows aligned over the openings on the first floor. On the third floor is a single window centered in the gable. The front facade is capped at the peak of the roof by a false brick chimney. Currently, the front facade is covered with stucco.



Southeast elevation Building 7 (left), 1994, WPTC photo.



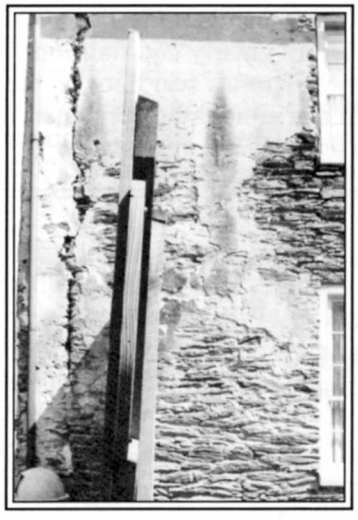
Southwest elevation Building 7 (right), 1994, WPTC photo.

The southeast elevation (left photo) of the structure does not have any windows. Some evidence can be seen on this elevation of scoring to represent ashlar masonry. On the southwest elevation, (right photo) there is a centrally located door on the first floor, a window on the southeastern side of the elevation on the second floor, there is a centrally located window in the gable, and brick chimney located at the peak of the roof. At about the third floor / second floor ceiling level are four protruding stone ledges, their function has not been determined. Also on this elevation are panels of applied plaster that were once and interior wall surface of an addition attached to this elevation. The pattern of these panels was created by wood framing members of the addition which have since been removed.

On the northwest elevation there are two centrally located windows (photo on following page). On this elevation, approximately 18" from the front corner of the

Physical Description: Building 7

structure, is visible building joint which is from the 1856 alterations to the structure (left photo). The most visible portions of this joint are where window openings once existed in the structure before it was shortened. Currently, most of the stucco has fallen off the walls exposing the richly textured stone walls. The front facade is still covered with sound, poorly patched, stucco.

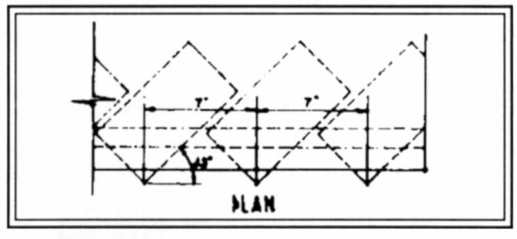


Northwest elevation Building 7, building joint detail, (left), 1994, WPTC photo.



Northwest elevation Building 7,(right), 1994, WPTC photo.

Under the eaves of the northwest and southeast elevations of the main block is a corbeled, saw-tooth, brick cornice (see photo and diagram at right). This detail appears to have never been stuccoed. The cornice detail is comprised of three brick courses. The first course is a header course that is stepped out approximately one quarter of a brick width. The second course is the saw tooth course, here the bricks are laid diagonally so there is one corner that points toward the face of the wall and protrudes beyond the first course. The third course is stretcher course that is laid flush with the protruding points of the sawtooth course. This corbeled cornice provides a "shelf" for the rafter plate upon which the roof rafters rest.



Cornice detail 1956 HABS drawings, on file HAFE NHP.

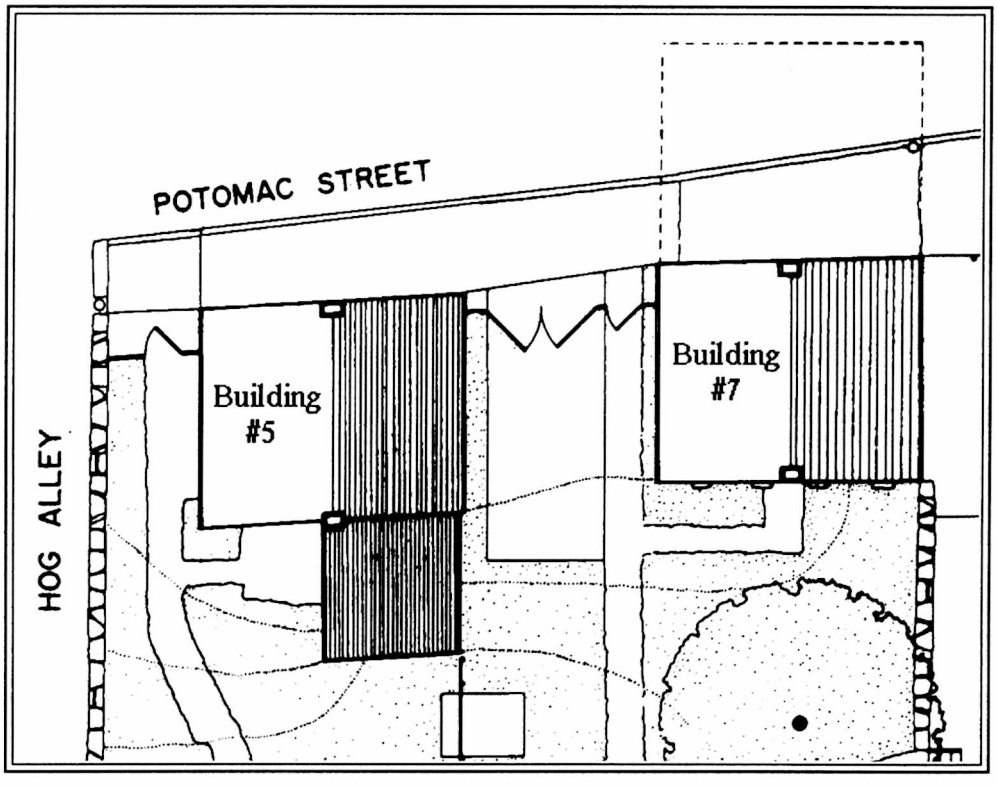


Cornice detail, 1994, WPTC photo

Site:

Building 7 is located on subdivisions no. 2 and 4 of Wager lot no. 15 in Lower Town, Harpers Ferry. The building is positioned southeast of Building 5 and approximately halfway between the intersection of Potomac street and Shenandoah street and Potomac street and Hog alley. The site of Building 7 is relatively flat with only a small rise on the southwest side of the building which may be the cause of some drainage problems. There is 7' high vertical board fencing on each side of the structure. This was constructed as part of Park Development Package 110 (1978-1982). The building is also flanked by two cobble stone driveways. In the backyard of the structure is a retaining wall that extends from the south corner of the structure to the southwestern end of the lot.

The only vegetation on the lot other than grass is a small maple tree in the yard behind the structure. There is an irregularly laid flagstone path that leads from the sidewalk in front of the structure to the rear door on the southwest elevation. Puddling occurs along this path and around the perimeter of the structure, therefore, drainage tends to be problematic in this area.



1992 HABS site plan showing location of Building 7, on file HAFE NHP.

Walls:

The exterior walls and foundation of the structure are masonry construction. The walls and foundation are stone except for the second floor portion of the front elevation, which is brick construction. The stone walls are comprised of Harpers phylite stone and are laid in a coursed rubble pattern. The brick work on the front facade is covered with stucco on the exterior and plaster on the interior. Therefore, it is not possible to determine the bond pattern of the brick work. The cornices for the northwest and southeast walls are exposed brick and are laid in a corbeled saw-tooth brick configuration. In historic photographs HF-55 and HF-1200 all of the walls appear to be stuccoed except for the second floor brick section. Later the entire structure was stuccoed as seen in historic photographs HF-569 and HF-96 (Chronology of Development Section). Currently, the front facade is stuccoed with a portland cement-based stucco and the other three elevations are covered with remnants of the original lime-sand based stucco. The stucco on the front facade shows imprints from the "german" siding that covered Building 6. This evidence shows that the last time stucco was applied is when Building 6 was still standing (this structure was torn down by the Park in 1956). On the southeast

elevation there exist faint remains of scoring in the stucco that represent ashlar masonry. The horizontal score marks are 12" apart. Only one vertical score mark is visible, therefore it is nearly impossible to define the length of the ashlar "blocks" the score lines defined. Other examples of this faux ashlar motif have blocks that 12" high by 20"-24" long, this could be a possible size for the blocks on this structure.

The majority of the historic plaster has weathered away. This has exposed the underlying stone construction which is laid with lime and earth based mortar. This mortar is very susceptible to the elements and has weathered and eroded badly. To make this condition worse, birds and insects have begun building nests in the voids between the stones, thus expediting the deterioration of the structural integrity of the masonry.

On the southwest elevation of the structure there are remains of 12 historic interior plaster panels that were areas between studs of the rear addition. This area was plastered when the shed addition was constructed on the rear of the building. The panels range in width from 8" to 22" and are no higher than 9' 4". A photograph of these panels can be found in the "Development al History - Chronology of Development" section on page 41.

Roof:

The roof is currently black slate. The slates are approximately 10" to 12" wide and smooth faces with feathered edges. This is replacement roofing material that was installed in the fall of 1963. Prior to this time, the Park covered the roof with roll roofing as a temporary stabilization effort in 1956. The slate is the historically correct roofing material. The current condition of the slate roofing is good however, some of the flashing is in poor condition.

The current roof drainage system was installed in 1963 during Park stabilization of the structure. This system is undersized for the structure and is not properly positioned (water draining off the roof runs behind the gutter). The downspouts do not have leaders to carry water away from the building therefore, ponding is occurring at the base of the building.

Currently the space between the rafter tails and the corbeled saw-tooth brick cornice is open, thus allowing birds and insects to enter the structure. There are not any barge boards on the gable ends of the structure. Therefore, there is a space that runs between the top of the wall and the bottom of the roof on the gable ends of the structure. Birds and insects are entering the building through this space. Also as a result of this opening the roof sheathing has been exposed to the weather which has caused deterioration in some areas.

The roof framing is in good condition. The original framing is still intact, however, some collar ties are missing. According the Structural Analysis Report the missing collar ties pose no threat to the structural integrity of the roof system.

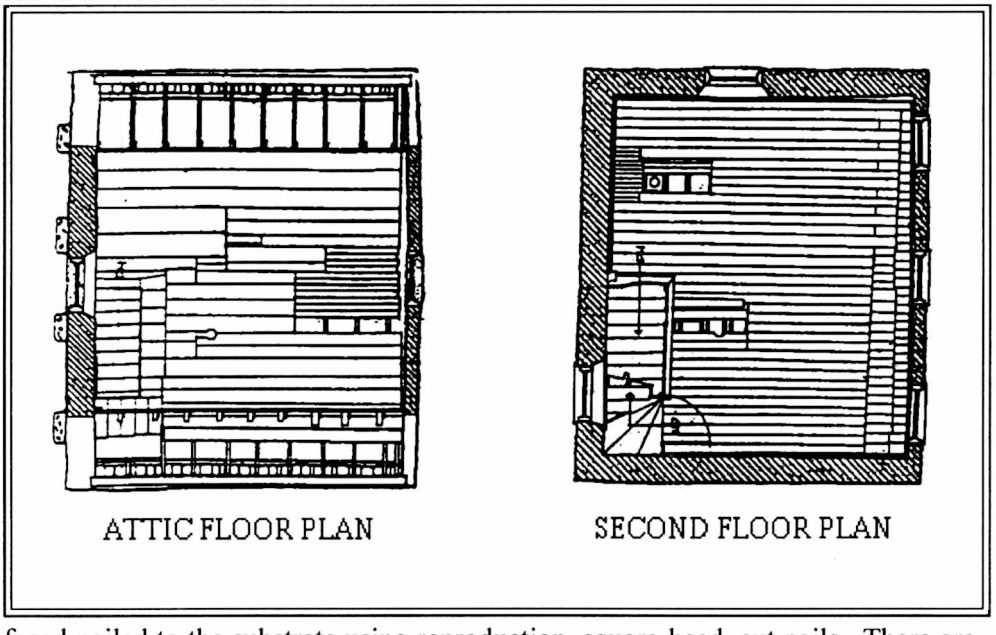
Part 1. Developmental History

Interior Envelope:

Floors:

The basement RM001 currently has a concrete floor that was installed in 1975. This was done in conjunction with the Park installation of the concrete block walls to support the steel first floor joists. The condition of this floor system is good.

Room RM101 flooring is replacement tongue and groove pine flooring laid over 3/4" plywood substrate and steel bar joists (which are supported by CMU walls in the crawl space), which were installed in 1975. The boards are laid in a random width configuration ranging in width from approximately 3" to 12" and run in an northeast - southwest orientation. The boards are unfinished and are



1992 HABS floor plans showing modifications to flooring, on file HAFE NHP.

faced nailed to the substrate using reproduction, square-head, cut nails. There are a few places where this floor is rotting along the perimeter of the room. The overall condition of this floor is good.

Room RM 201 flooring appears to be original to the building. The flooring shows evidence of being drastically altered, possibly during the 1856 modification to the structure. Along the northeast wall of room RM 201 about 18" from the wall there is a continuous cut that runs the length of the wall. The face nailed flooring laid in a random width configuration with boards ranging from 5" to 7" wide and run in an northeast-southwest orientation (see HABS floor plans, above). There is some weakening to the floor due to a fire on the first floor that happend in 1882. The boards are unfinished. There is a hole in the floor that is approximately 2' x 3' near the center of the room that assumedly was created by the fire that happened on the first floor in 1882[17].

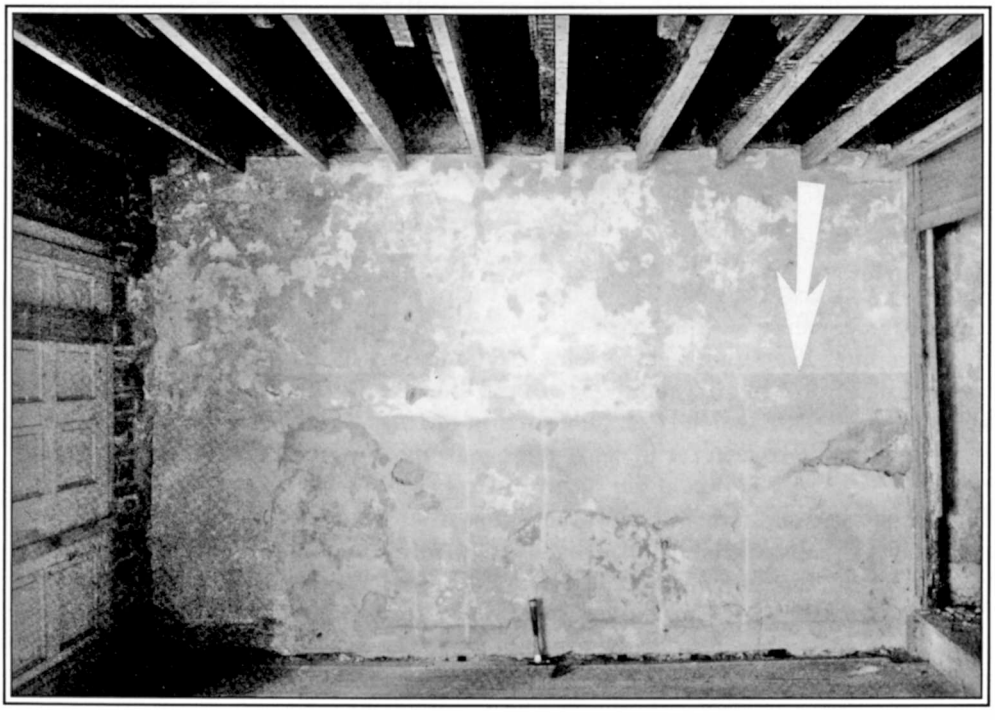
17 Chickering, Historic Structure Report. History Section, Package 118, p.14

The overall condition of this floor is fair to poor.

Room RM 301 flooring appears to be original to the building. The flooring appears to have been made up of scraps of various width boards ranging from 3" to 18" (see HABS floor plans, above). The flooring is tongue and groove and is unfinished. The boards are oriented in an northeast - southwest direction. The overall condition of this floor is fair.

Interior Walls:

The walls in room RM101 have recently been exposed. Since approximately 1975, the historic wall surfaces were covered by Park installed stud walls that were covered with finished drywall for exhibit use. During the summer of 1993, the furred out walls were removed to allow for the assessment and treatment of the underlying, deteriorating historic plaster. A visible dirt line 4' 8 1/2" above the floor has been revealed indicating past flooding levels. The exposed historic plaster consists of several plastering campaigns. The current finish over the majority of the wall is a dirty cream color. The plaster is a lime-sand base with minimal animal hair reinforcement applied directly over the stone masonry. The northwest, southeast, and southwest walls date to the original construction of the building (c. 1838). The northeast wall (front facade) dates to the 1856 alterations. In order to determine the proper colors for the 1856 period of significance (as defined by this Historic Structures Report) samples were taken from the northeast wall. The original 1856 finish has been determined by North Atlantic Region conservator Judith Quinn and Historical Architect, Millan Galland. The identified circa 1856 finish colors were light blue (Munsell No. 5PB 8/6) for the plaster and blue green (Munsell No. 7.5BG 8/2) for the woodwork.



Southeast interior wall room RM 101 showing deteriorated plaster and dirt line from flood waters, 1994, WPTC photo.

Part 1. Developmental History

The condition of the plaster in room RM101 is fair to poor. There exists a 4' high band of deterioration that wraps around the entire room that is assumed to have been caused by standing flood water in the building. In the photos of room RM101 there is a visible dirt line about 4' 8 1/2" above the floor which represents the highest level of flood waters in most recent history (see photo on previous page). No trim exists however, there is evidence that there was once baseboard around the perimeter of the room.

The northwest, southeast, and southwest walls in room RM201 are contemporary with the original construction of the building (c. 1838) and are covered with plaster on stone. The northeast wall was constructed during the 1856 alterations to the structure and is plaster on brick. The plaster in this room is in fair to poor condition. On the northwest and southeast walls of this room the building joint from the 1856 alterations is clearly noticeable. On the northwest and southeast walls of this room, approximately 5' from the southwest wall is a ghost mark of an earlier partition wall (the two marks are linked by a corresponding ghost mark that runs across the ceiling, see photo on following page) On the northwest wall there is another ghost mark of an earlier partition that was approximately 25" from the c. 1856 northeast wall. Along the floor there is 1"x 6" beaded baseboard with a 3/4" bead along the full perimeter of the room. At the base of the baseboard is a 1" square profiled shoe molding.

The walls in room RM 301 are made up of various materials. The northeast and southwest gable end walls are plaster over brick and plaster over stone respectively. The northwest and southeast knee-walls are made of horizontal whitewashed planks,approximately 6" to 8" in width, some of which are missing (see photo of attic on page 74). The planks are attached to 2" x 4" studs set on 24" centers with their 4" face perpendicular to the wall plane. The knee-wall studs are tied into the roof rafters and floor joists.

Interior Ceilings:

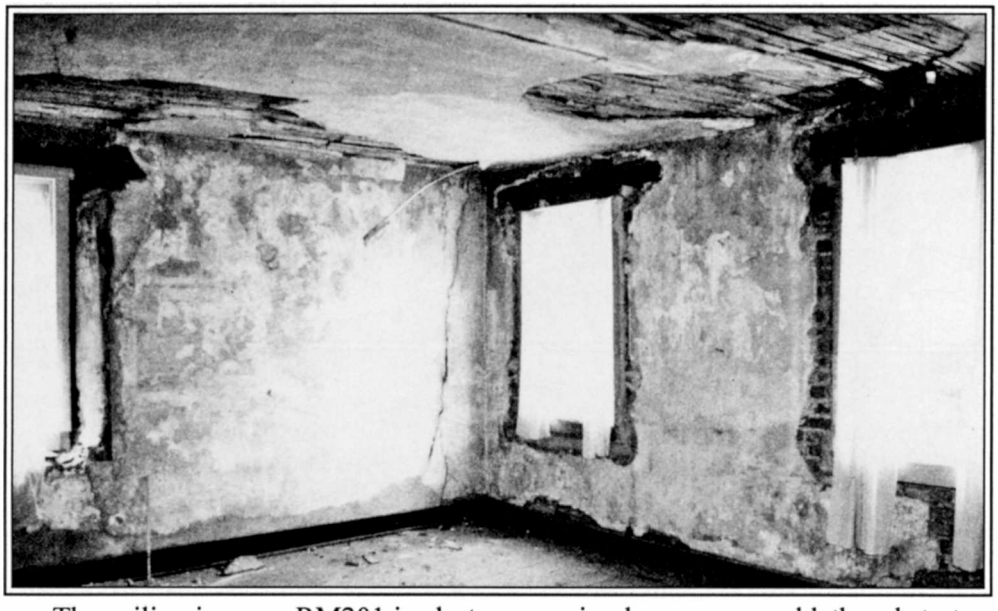
The ceiling in room RM101 has been removed and the joists have been left exposed. The joists have vertical saw marks from a power driven "sash" saw or vertical saw.

The second floor framing system is somewhat unusual. All but two of the oldest joists were constructed in pairs. In the paired joist systems, the individual joists do not span the full distance of 20', but were constructed with a very long overlap splice, averaging 5' to 6' long. Each member of the pair spans approximately 14' to 16' (about 75% of the total span). The joists rest on a 3/4" wood-bearing plate which is set on a shelf in the masonry of the wall. The bearing plate is rotted. Between the joists is stone masonry in-fill. At mid-span the joists rest on a 5 1/2" x 4 3/4" summer beam which is beaded on the bottom corners. The second and sixth joist systems (counting from front wall toward rear wall) span the entire 20' width. The only other joists that are not paired are the joists that span from the northwest wall to the stair S101 framing. Between the joist closest to the front wall and the front wall itself are the ends of the joists that were once the support members for the hipped roof porch that was once attached to the front of the structure.

Physical Description: Building 7

Jerrold Johnson, DSC structural engineer, in his structural analysis, concludes that due to differences in joist dimensions and the existence of some single span joists, the original framing system has been changed over the life of the structure. His theory is that a problem existed with the original members, most likely severe sagging of the floor over the unsupported span. This led to the eventual replacement of the floor framing system in an attempt to strengthen the floor. According to Johnson, these alterations were made prior to the 1856 shortening of the structure by the Federal government. Johnson's theory about the sequence of alterations does not explain why the existing flooring has only one series of nail holes, and that there is a cut line in the floor boards visible on the second floor that runs from the northwest to southeast walls. This cut was more than likely made as a separation point in the pre-1856 floor system when the front portion of the structure was dismantled. For further discussion of Johnson's theory, see Jerrold Johnson's report Appendix C.

Attached to the original joists are modern 2" x 10" joists that were installed by the Park in 1975. The modern joists were installed to provide a level surface for the finished drywall ceiling for which was installed for the previous tavern scene exhibit.



Room RM201, note ghost mark in upper center of photo, 1990, Krista Copeland photo.

The ceiling in room RM201 is plaster over circular sawn, wood lath, substrate that has been attached with machine made cut lath nails. This plaster appears to be contemporary with the original construction of the building (c. 1838), but, it may date to the time of the alterations (c.1856). According to the Structural Analysis Report, the ceiling joists span the entire width of the building and their dimensions are 2"x 8 1/2". The joists have vertical saw marks from a power driven "sash" saw or vertical saw. Across the ceiling in a northwest-southeast direction is a ghost mark of an earlier partition. This mark corresponds to similar marks found on the northwest and southeast walls. The condition of the plaster on the ceiling is fair to poor (see photo above).

The ceiling in room RM301 is non-existent and appears that historically there was never one in place. The exposed roof rafters are covered with whitewash as are the other surfaces in the attic (knee walls, gable walls). The rafters appear to be original to the structure (see photo of attic below). The rafters have vertical saw marks made from a power driven "sash" saw or vertical saw. The width of the rafter remains a constant 5" but, thickness is tapered over the length of the joists from approximately 6 1/2" at the rafter plate to approximately 4 1/2" at the ridge. The rafter pairs are joined by dovetailed collar ties (some of which are missing) and pegged, open mortise and tenon joints at the ridge.



Room RM301 (attic), note whitewashed timbers (no plaster), 1990, Krista Copeland photo

Interior Windows:

The windows in room RM101 (W101 and W102) are replacement, double hung, nine over six (a mixture of plate glass and reproduction antique glass panes) configuration installed by the Park in approximately 1975. The windows retain their original wooden lintels. The windows currently have no hardware, sash cord, weather seal, or other operable components. No interior trim is present on the windows except for the simple beaded trim along the exterior masonry opening. The walls around window W101 are splayed out on the interior and appear to have been trimmed out with wood panels and casing. Window W102 has splayed walls as well but they are covered with finished plaster instead of wood panels with wooden casing on the wall around the interior opening. Both windows in this room are experiencing various degrees of rot and weathering damage, especially along the bottom sash rail where it rests on the sill.

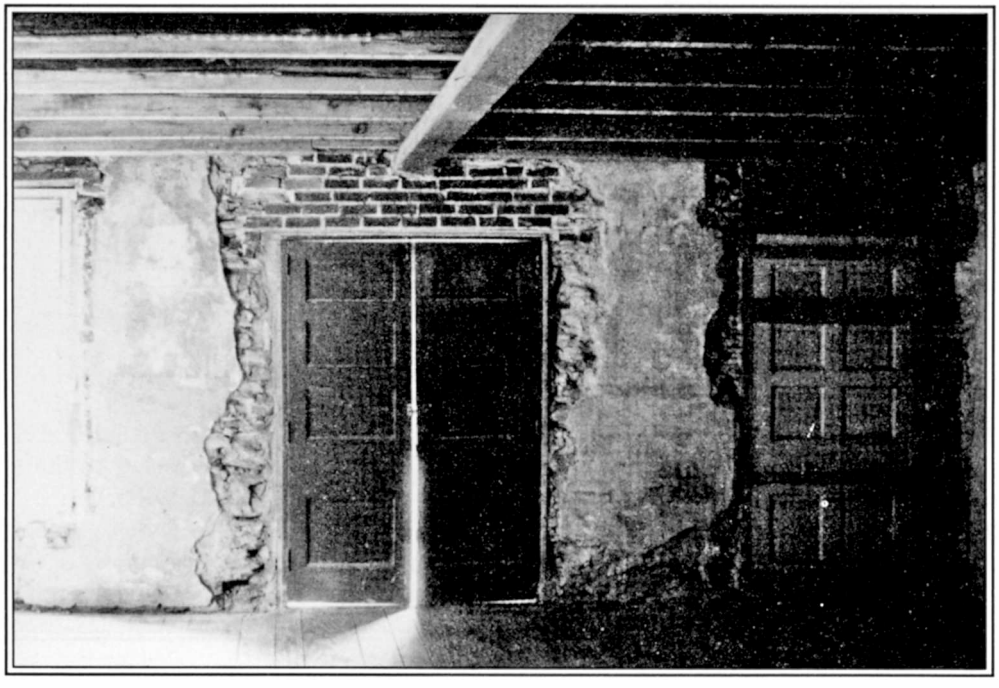
The windows in room RM201 (W201, W202, W203, W204, and W205) are all replacement, double hung, six over six (a mixture of plate glass and reproduction antique glass panes) configuration installed by the Park in 1975. The windows on the front elevation (W201, W202, and W203) have steel replacement lintels. Windows W204 and W205 have retained their original wooden lintels.

The windows currently have no hardware, sash cord, weather seal, or other operable components. No interior trim is present on the windows except for the simple beaded trim along the exterior masonry opening. All of the windows in this room are experiencing various degrees of rot and weathering damage, especially along the bottom sash rail and stiles where they rest on the sill.

The windows in room RM301 (W301, and W302) are replacement, double hung, six over three configuration (a mixture of plate glass and reproduction antique glass panes) installed by the Park in 1975. Window W301 has retained its original wooden lintel but, window W302 has a replacement steel lintel. The windows currently have no hardware, sash cord, weather seal, or other operable components. No interior trim is present on the windows except for the simple beaded trim along the exterior masonry opening. All of the windows in this room are experiencing various degrees of rot and weathering damage, especially along the bottom sash rail and stiles where they rest on the sill.

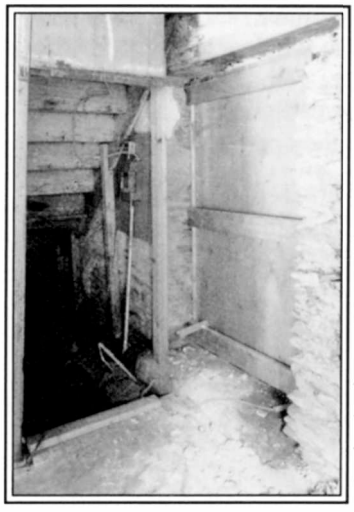
Interior Doors:

On the first floor there are a variety of door types and styles. The main entry door on the front facade (D101) is a double door with four raised panels on each leaf. The door has an interior pull chain lock to secure a single leaf at the header and a BEST[tm] rim lock to secure the leaves together (see photo below). The door is a replacement installed by the Park. The door has a threshold made of single piece of stone that is approximately 48" wide, 18"deep, and 12" thick. Door D102 is a single door with four raised panels and a four light transom in the top of the opening. This door is a fixed, non-operable, replacement installed by the Park (see photo below of interior elevations of D101 and D102). The door has a threshold made of a single piece of stone that is approximately 30" wide, 18" deep, and 6" thick.



Doors D101 and D102, 1994, WPTC photo.

Part 1. Developmental History

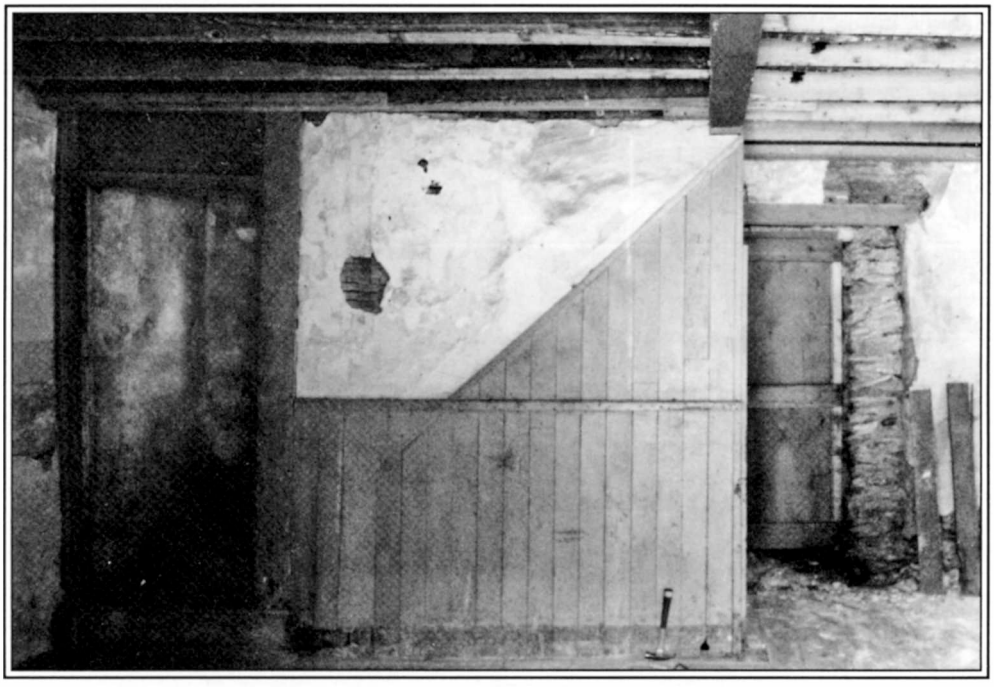


Door D103 room RM 101, 1994, WPTC photo.

The rear door (D103)(see photo at right) is an altered opening that is was filled with a sheet of plywood in 1975. The physical evidence indicates the current configuration is the product of at least two campaigns of modification to the original opening. There is a 1' wide space on the northwest side of the door that has been in-filled, thus making the opening smaller. The original beaded wood lintel is still in place and gives evidence of the original size of the opening.

From the existing evidence it can be determined that the original opening was approximately 5' 0" wide. This is wide enough for a double door. Given the structure was built as a warehouse and that the front door D101 is a 5' 0" opening and has double doors, it can be assumed that the rear door was a double door configuration as well.

Currently there is not a door in position D104 that closes off the stair (S001) enclosure to the basement. The door frame is present and there is evidence of hinges, but no door has been located for this position.



Stair S201 and door D201 in room RM201, 1990, Krista Copeland photo.

The door which closes off the stair (S101) to the second floor is present in the structure but it is not installed in the opening. The loose, non-installed door (tentatively D105) has four raised panels and appears to be of similar style to those which appear to be contemporary with the construction of the structure.

On the second floor there is only one door (D201). This door is located on the stair (S201) enclosure that goes up to the third floor (see photo below). The door is made up of two vertical raised panels and appears to be contemporary with the construction of the structure.

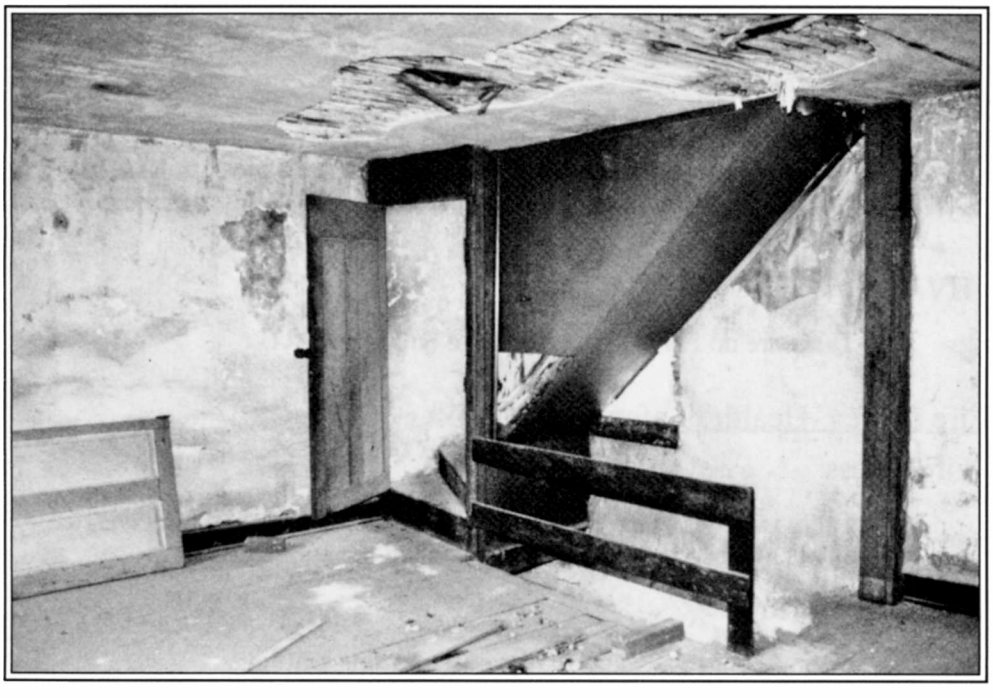
Finishes:

Walls, ceilings, windows, doors, and trim throughout the building are painted. This is in fair to poor condition on the first floor and poor condition on the second and third floors. All the floors are unfinished. No decorative paint schemes are currently exposed.

Staircases:

In the basement is stair S001. Currently, no proper staircase exists. There is, however, a makeshift wood 2"x4" ladder that provides access to the basement.

On the first floor, stair S101 is located in the southern corner of room RM101. The stair is an "L" configuration with 12 treads and 4 winders. The stair is 2' 9" wide on the first floor and 3' 6" wide on the second floor. The rise is 8 1/4" with a 10 1/2" run. The steps are heavily worn. The stair appears to have been altered. There is evidence of an earlier stringer in the opposite corner (north) of room RM101. The ghost mark in the plaster shows the presence of this stringer angled in the opposite direction of the existing stair. This evidence suggests that the stair to the second floor was originally in a different location. The stair is enclosed by a vertical board partition that has plaster above the chair rail trim and a piece of trim that follows the stringer line behind the wall. The condition of this stair is fair to poor (see photo below).



Stair S101 in room RM101, 1994, WPTC photo.

On the second floor, stair S201 is located in the southern corner of room RM201. The stair is an "L" configuration with 12 treads and 4 winders. The stair is 2' 10" wide on the second floor and 2' 6" wide on the third. The rise is 8" with a 9 1/4" run. The steps are in fair condition. There is low clearance between the stair treads and the floor above. The stair is enclosed by a vertical board enclosure that has been covered with 1/4" plywood. The overall condition of the stair is fair (see photo of stair S101 in the section on doors).

Fireplaces / Chimneys:

There is a common flue on the southwest side of the structure. The only access to this flue is a stove pipe access in the southwest wall of room RM201. The flue does not protrude into the room. The smoke exits through a chimney located on the southwest elevation. The portion of the chimney above the roof line has not been stuccoed. It rises seven courses above the roof ridge, the top two courses protrude approximately one quarter of a brick width over the body of the chimney. The chimney on the northeast elevation is false and therefore, non-functioning, and is currently capped. This chimney has been stuccoed. It appears to also rise seven courses above the roof ridge. The top course protrudes approximately one quarter of a brick width over the body of the chimney. Both of the chimneys have flashing around their bases where they meet the roof. This flashing was installed in 1963 when the roofs were covered with slate shingles. When compared to historic photographs, the chimneys appear to be 2 to 3 courses shorter now than in the past.

Utility Systems:

Plumbing:

No plumbing is present in the structure.

Electrical:

Electrical service enters the building through the southwest wall. There is a panel box located on the southwest wall of room RM101 within the S001 stair enclosure. Power is not currently supplied to this panel box.

HVAC:

There are no HVAC fixtures in the building.

Fire / Life / Health / Safety:

Fire Egress:

There is only one exterior exit from the first floor, this is door D101. Only the front room (RM101) is planned for public use.

Intrusion System:

No intrusion system currently exists for this building.

Physical Description: Building 7

Fire Detection / Smoke Control:

No fire detection or smoke control systems currently exist for this building.

Fire Suppression:

No Fire suppression system currently exists for this building.

Seismic:

A vertical building joint exists on both the northwest and southeast elevations. This is a result of building alterations in 1856 and does not represent a structural problem.

Accessibility:

The building is not accessible, neither are the paths leading to it.

Public Health:

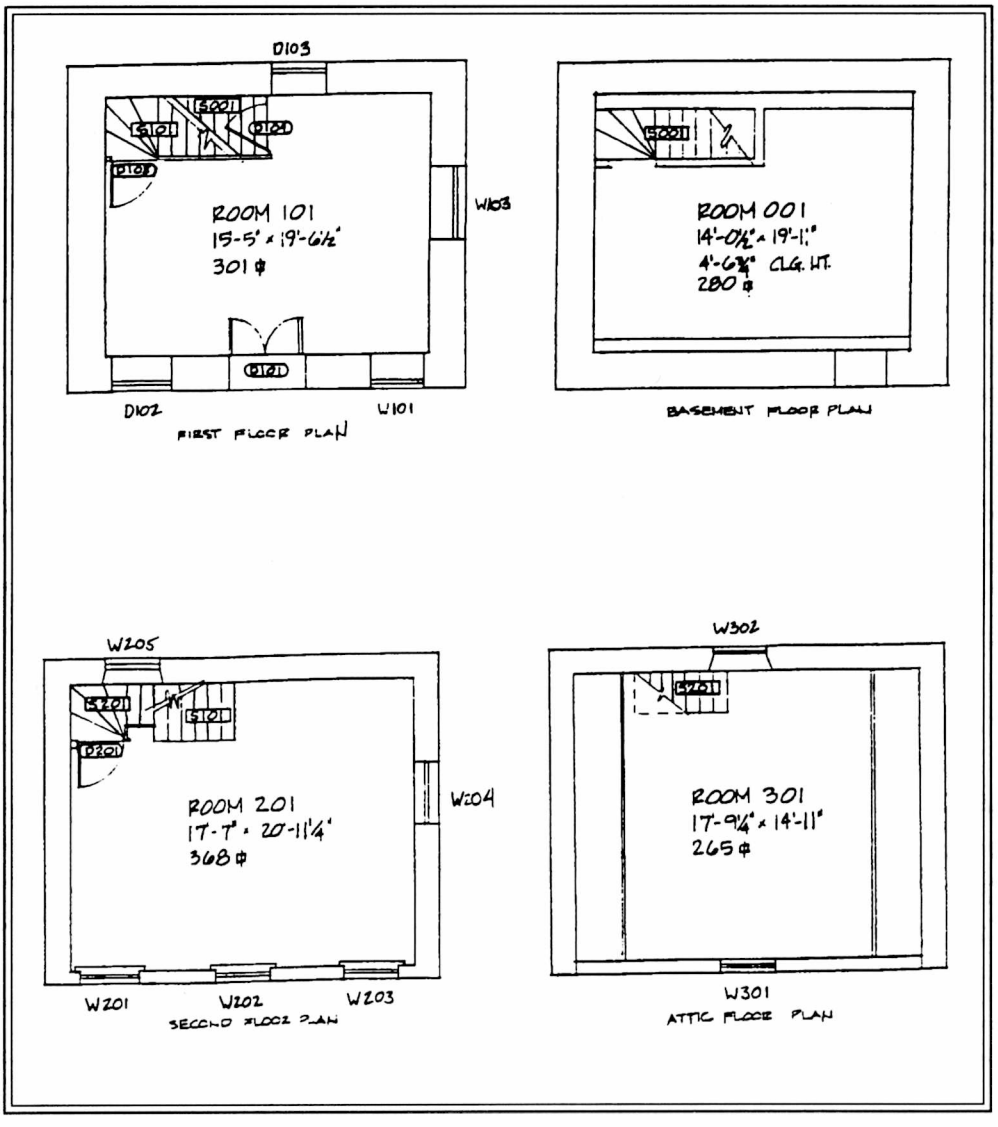
There is no food, water, or sewer service associated with this building. No public health problems exist in this structure.

Hazardous Materials:

During professional inspection of the structure, no radon gas was present. Evidence of asbestos was found in the chimney flue in room RM201 (5-10% chrysotile asbestos). The presence of lead based paint was detected on various layers of historic paint on the woodwork and the plaster. For more information see report in the Appendix.

Part 1. Developmental History

Building 7 floor plans with room, window, door, and stair references:



Treatment and Use

Part II: Treatment and Use

A. Treatment Philosophy for Buildings 5 and 7

Buildings 5 and 7 have not seen drastic modifications which would alter the public understanding or impact the historic scene. It is determined, therefore, that preservation of the buildings is the appropriate treatment. There is no planned "major intervention" or destruction of later period accretions having some cultural value in themselves, which are treatments that apply to restoration. The following are excerpts from park planning document that outline treatment guidelines.

The Development Concept Plan (DCP) of March 1980 called for restoring the historic structures and scene of Lower Town. It states that:

> "Greater importance will be placed on the history of Harpers Ferry during the 19th century. This will achieve a greater preservation of the Lower Town historic structures, much as they are, and avoid extensive alterations and reconstruction required to create a more limited scene as of the time of the John Brown Raid and the Civil War."
>
> "Existing restored buildings and those to be restored will be adaptively used and preserved for period interior presentation. Lower floors will be used for park interpretation with full public access. Upper floors and basements above the flood- plain will be used for park administration, storage, and residence needs."
>
> "In the Lower Town nearly all historic park structures will be part of the interpretive story as well as a backdrop for interpretative activities. The historic character will represent the 19th century and buildings will be used mainly for interpretive demonstrations, furnishings, audiovisual presentations, and exhibits."

The List of Classified Structures dated June 13, 1991, assigns Buildings 5 and 7 numbers 00546 and 00621 respectively, and lists the approved ultimate treatment for the structures as restoration. Inspection of the buildings by the Park Historical Architect and historical research by contract with University of Maryland which took place during 1991, determined the appropriate treatment for the building to be preservation. The definition of preservation is taken from NPS-28, Release Number 3 (1985):

> "Preservation shall maintain the existing form, integrity, and materials of a structure. Substantial reconstruction, restoration of lost features, or removal of accretions are not included in a preservation undertaking. Preservation includes techniques of arresting or retarding deterioration through a program of on-going maintenance. Use of destructive techniques such as archeological excavation shall be limited to providing sufficient information for preservation."

Part II: Treatment and Use

This treatment strategy allows for the stabilization of the structure, establishment of weather resistant conditions, and protection and repair of historic fabric. When complete, the structure will be easily maintained using accepted preservation maintenance techniques.

Following the above mentioned guidelines, Buildings 5 and 7 will be preserved. However, for the completion of Park Development Package 118, some rehabilitation work will be needed on the interior of the structures to accommodate the current ultimate use of the buildings. The following section outlines the ultimate use for Buildings 5 and 7.

B. Ultimate Use for Buildings 5 and 7

BUILDING 5: THE ROEDER STORE

1. Ultimate Use for Building 5:

a. Park Planning Document:

The Interpretive Prospectus (IP) for Harpers Ferry NHP was approved in 1980. It defines visitor uses as, for the most part, limited to the first floor with the upper floors designated for adaptive uses such as offices, quarters, and storage. Specifically concerning Building 5, the IP states that the building "has potential for becoming a contact point for visitors arriving by train...if use of this form of transportation increases."

b. Recommended Ultimate Use Description:

CRAWL SPACE UNDER FRONT ROOM FIRST FLOOR:

- No use area.

FIRST FLOOR, ROOM 101 (Front Room):

- Visitor contact station with exhibits, ranger stationed on-site from time to time, public allowed only in front room.

FIRST FLOOR, ROOM 102 (Rear Room):

- NPS office, light storage only (loads limited according to structural engineer's specifications), no public access to this area.

SECOND AND THIRD FLOOR, ROOMS 201, 202, 203, and 301 (Attic):

- Preserve existing fabric; no use area.
- Off limits to general public and NPS employees; access only for park maintenance, security staffs and further fabric study. Load limit allows six (6) persons at a time total on the second floor; no storage on the second or third floor. Floor loading limitations will be posted by placement of a permanent sign by WPTC. Sign will read "DANGER! - UNSAFE Not To Be Used For Anything".

***NOTE**: All specifications for materials or methodology will be part of the annotated day-labor construction drawings. Specifications are not part of this Architectural Program.

BUILDING 7: WHITE HALL TAVERN

1. Ultimate Use for Building 7:

a. Park Planning Document:

The Interpretive Prospectus (IP) for Harpers Ferry NHP was approved in 1980. It defines visitor uses as, for the most part, limited to the first floor with the upper floors designated for adaptive uses such as offices, quarters, and storage. According to the IP the historic furnishings in Building 7 will be retained: Building 7 will continue to represent a 19th century tavern scene.

b. Recommended Ultimate Use Description:

BASEMENT, ROOM 001:

- Maintained only, not for storage. Fabric maintained for future investigation.

FIRST FLOOR, ROOM 101:

- To be used as a representational exhibit depicting an 19th century tavern scene based on comparable research.
- No visitor access. Display viewed from outside through windows and open doors except on special occasions when staffed by Park employee. Staff will enter through D103.
- A full height, portable viewing and security barrier will be designed for the door openings in this area (D101, D102).

SECOND AND THIRD FLOOR, ROOMS 201 and 301 (Attic):

- Preserve existing fabric, no use.
- Off limits to general public and NPS employees; access only for park maintenance and security and further fabric study. Load limit allows six (6) persons at a time total on the second floor; floor loading has been determined low; no storage on the second or third floor. Floor load limitations will be posted by placement of a permanent sign by WPTC. Sign will read: "DANGER! - UNSAFE Not To Be Used For Anything".

***NOTE:** All specifications for materials or methodology will be part of the annotated day-labor construction drawings. Specifications are not part of this Architectural Program.

Part II: Treatment and Use

C. Requirements for Treatment

Building 5: The Roeder Store

a. RECOMMENDED TREATMENT -ARCHITECTURAL PROGRAM:

TREATMENT RECOMMENDATIONS: INTERIOR:

CRAWL SPACE UNDER ROOM 101:

New sloping slab (approx. 1/2" per foot, no more than 4"-6" thick) will be applied over existing slab; no vapor barrier will be installed. This slope will direct any water toward a sump pit for ease of water removal via a portable pump.

***NOTE:** existing slab will be altered to create a shallow pit in order to facilitate the collection of water that enters the crawl space area (detail drawings will be developed); existing pit may be enlarged.

Interior foundation wall will be repointed and damaged masonry will be repaired. Any voids will be repaired with stone or brick infill to match adjoining masonry.

FIRST FLOOR, ROOM 101:

Structural:

Existing subfloor and finished floor will be removed. Subfloor will be replaced with new T&G subfloor decking. Any finished flooring that can be reused will be salvaged.

Existing steel joists to be reused; prep, prime and paint (using an epoxy-based paint), no additional joists will be added.

New floor system will incorporate pressure-treated 2"x4"s for sleepers over steel joists. Existing subfloor will be replaced with a T&G subfloor system. Finished flooring will be T&G system and will match the species and character of existing.

New flooring system will also have removable planking screwed along north and south walls to provide access for cleaning the slab in the crawlspace. The removable section will have an 18" optimum width; the random width boards will ultimately define the width of the openings.

Floor area under rebuilt NW stairway (S101) will be used for additional venting area between crawl space and 1st floor. This will be detailed in the drawings.

New finished flooring system will be held back 2 to 4 inches from interior wall surface, floor edge will be detailed with curb stop or baseboard. Detail to be developed by WPTC.

A centrally located two foot square floor hatch will be positioned over the sump pit for clean out purposes; its location will be coordinated with park use plans for the area.

Ceiling joists: Add blocking to ceiling joists. No leveling required. Joists may require "sister" (supplemental) joists added to support rotted ends. The 3/4 inch bearing plate is also deteriorated. Impervious plastic blocking will be used to shim and separate joists from plates. Stone will have to be removed from between joists to allow for this work. Stone supports brick wall above. Do not remove stone all at once. Remove every other sector, repair joist ends, replace stone and then proceed to remaining sections repeating this operation. This will be shown on the drawings.

Stair 101:

Reinforce existing framing by adding a new central stringer, rebuild missing risers and treads into Room 101, install new louvered door under stair (at D106) to swing out from wall, hardware will be generic late 19th century with black finish; utility closet will be installed under stair with venting along wall edge.

Remove existing electrical panels, etc. from beneath the stair; replace with new equipment as per electrical plan.

Windows: New interior casings will be provided including sills, jambs, and interior trim for W101, W102, W103. Painting as per finished paint schedule. See Exterior Treatment for other work.

Doors: New interior casings will be provided including interior trim, jambs, headers, etc., for Doors 101, 102, 103, 104, 106.

Interior Finishes:

Interiors will be HEPA vacuumed after all work is completed to remove any lead dust residues on the buildings' interior surfaces.

Floors: As per NCR 1993 review comments, floors will remain unfinished wood.

Walls: plaster over stone or brick substrate: all sound plaster shall be retained, deteriorated plaster will be removed to expose sound substrate. Patching will be used to replace missing plaster. Finish texture to be rough float finish to match adjoining plaster; use wood tools to float finished surfaces. Loose surface material will be removed prior to painting.

Walls will be painted using a lime based calcimine paint to match Munsell Color Standard N 9.5/ (Neutral white), circa 1856 plaster finish color.

Ceiling: install wire lath (zinc coated or stainless steel) on joists, no leveling required. Plaster with traditional three coat plaster method. Finish texture to be rough float finish; use wood tools to float finished surfaces. Ceiling will be boxed at D102 opening as per existing evidence at ceiling joists.

Install 6 inch, R-19, foil backed fiberglass batt insulation between existing joists in Room 101.

Ceiling to be painted to match the walls, Neutral white (N 9.5).

Woodwork: Will be painted to match Munsell Color Standard 10B 6/2 (Blue Gray) circa 1856 woodwork finish color.

Painting: Will be specified as superior grade for prime coat (oil) and two finish coats (latex), as manufactured by Pratt & Lambert, Sherwin Williams, or Benjamin Moore.

Furnishings: Design or construction of any "fixed" furnishings which are to be used in the space are not included in this Task Directive Scope of Work. These items will be tasked out to WPTC at a later date.

FIRST FLOOR, ROOM 102:

Structural: No work required.

Interior Finishes:

Patch chipped plaster on walls and ceiling, paint walls and ceiling same color as Room 101.

Paint woodwork same as Room 101.

Remove defunct mechanical and electrical equipment.

Replace existing panel door at D105 with new louvered door to enhance ventilation at stair S102.

SECOND FLOOR SYSTEM, ROOMS 201 & 202:

Structural:

Existing floor joists will be structurally repaired at the ends to bear fully at masonry wall joist pockets. Treatment to be determined in the field with concurrence between Project Leader and Project Architect.

Interior Finishes:

Conservation of plaster containing Civil War graffiti is not part of WPTC day-labor project. Plaster will be protected from potential construction impacts during the construction phase.

All other finishes will remain untouched; documents will note that all finishes will be protected from potential construction impacts.

ROOM 203:

Structure has been determined adequate by structural engineer.

THIRD FLOOR, ROOM 301 (Attic)

Structural:

Inspect brick walls at attic gable ends. Check for missing or loose units, especially along the gable eave slopes, repair as necessary.

Roof Framing: Previously assessed as not needing any repairs, existing structure is adequate.

Openings between rafter tails and rafter plate will be infilled with screening to reduce insect and bird infiltration.

Interior Finishes:

Conservation of plaster containing Civil War graffiti is not part of WPTC day-labor project. Documents will note that plaster will be protected from potential construction impacts during the construction phase.

All other finishes will remain untouched; documents will note that all finishes will be protected from potential construction impacts during construction phase.

Note: All rooms will be cleaned of non-historic residual dirt, dust and debris using the HEPA vacuum.

TREATMENT RECOMMENDATIONS - EXTERIOR:

FOUNDATION:

Excavate along all walls to uncover foundation walls down to footing or bottom of wall. Rake out and repoint all foundation walls, repair masonry as necessary, fill all voids with stone / brick masonry. Install vertical drainage matting and waterproofing materials against wall surfaces prior to backfilling of trenches.

Install subsurface building drains as per site work drawings.

WALLS:

Replace any damaged or deteriorated bricks, repoint as needed, no cosmetic repairs will be made; will remove existing paint and tar splatters from bricks if possible.

Areas of brick replacement will be indicated on photo-elevations included with the drawings.

Replacement Brick: Reuse existing by reversing (if sound); determine if salvaged replacement brick are available from another source in the park; replacement brick will be custom made to match adjoining brick types (submittal required).

STUCCO:

According to the Condition Report on the Plaster, Stucco, and Mortar in Buildings 5 and 7 by the NAR, the portland cement-rich stucco on the exterior of the first floor of building 5 should be removed and replaced with a lime-rich stucco that would be more elastic and would allow transpiration of water vapor from the walls. The stucco will be scored to represent ashlar masonry.

Stucco was present on the structure as early as 1889-1892 according to historic photograph HF-190. It is generally accepted now that the exterior was

historically stuccoed. Therefore, the above treatment described in the NAR report is necessary both historically and functionally.

ROOF SYSTEM:

Raking cornice boards (barge board, gable end fascia) will be installed on gable ends to help stop bird and insect infiltration. This detail appears in photograph numbers HF-1200 dated 1862, HF-100 dated 1889, and HF-1211 dated 1890-1910.

Slate shingles are in good condition and will be repaired where necessary.

Existing roof drainage system will be replaced. Gutters will be redesigned with half round galvanized steel gutters and downspouts sized to handle capacity storms (10 year storm).

CHIMNEYS:

Masonry repairs are required. These will be detailed by WPTC. Work will include repointing, replacement of deteriorated bricks, and the addition of screened chimney caps and new flashings.

Chimney caps will be added dependent on use. False chimney (front wall) will be capped with a sheet of lead coated copper. Chimney used for ventilation (rear wall) will have elevated chimney cap, possibly stone set on brick piers.

Existing chimney flashing will be replaced with new lead coated copper step flashings.

WINDOWS:

Inspect frames and sills, etc. Replace all deteriorated sills with new black walnut sills. New sills will provide positive drainage and have a drip kerf milled on the underside. If existing sills are consolidated, a drip kerf will have to be installed; treatment determined on-site.

Install flexible non-metallic weatherstripping at sills (bottom rail), meeting rails, and heads (top rails) of window sash. None at jambs/ stiles.

Repair masonry openings under sills and around jambs and heads with installation of a flexible backer rod and then grouting between frame and wall on both sides.

Repair all windows to operable condition. Sash will be removed, inspected, repaired, reglazed, prepped, primed, painted, and reinstalled. All work will be back primed. Sash repairs include replacing the lower rail and repairing the stiles as necessary. Most show evidence of deteriorated lower sash.

Any broken glass will be replaced with same type as removed. Minor cracked glass will be left in place; replace only if a total break or missing glass.

Sash locks will be used on first floor and other vulnerable locations. Type to be selected by project architect. Black finish will be specified.

SHUTTERS:

Shutters are present on the front facade (northeast elevation) of the structure in historic photograph HF-1211 dated 1890-1910. The configuration represented in this photograph will be reproduced; raised two panel shutters on the first floor, and two panel operable louver shutters on the second and third floors.

If placement of shutters allow windows to be left open for ventilation, interior screens will be provided.

Signs of shutter hardware on the other windows will be researched, currently there is not any photographic evidence that shows shutters on the other elevations (fabric was replaced in the 1970s - no physical evidence remains).

DOORS:

Inspect and repair any damaged areas on the doors, frames and surrounding trim; WPTC will prepare a repair schedule.

Scrape, prime and paint doors with proper colors as per Munsell Color Standards derived from NAR report.

Door hardware will be maintained. Project architect will coordinate with HAFE (G. Bowers) to determine need for deadbolts, etc. (BEST^{tm} lock system).

Where missing, late 19th century type hardware with black finish will be selected.

PAINTING: Exterior paint schedule for woodwork to be developed.

EXTERIOR SIGNAGE:

Install appropriate sign based on historic photographs in Chronology of Development section of the HSR (specific signage not yet determined).

UTILITIES:

Electrical: Jeff Young consulting, NCR-PDS.

As per park memo of 06/15/94 with revisions made on-site by park 06/17/94. Service will be extended throughout the building. Special emphasis will be placed on integration of elements on first floor. Second and third floor conduit will be surface mounted. Fixtures will be simple utilitarian design. See electrical plans for details.

Task heating and lighting using portable fixtures.

Task lighting combined with some permanent light fixtures (surface mounted track lighting).

Lightning protection not required, as per HAFE.

HVAC: Limited to temperature controlled exhaust fan in the attic that vents to daylight. Temperature control as per the HFC Graffiti Survey Recommendations.

Plumbing: No plumbing required.

Security: John Garner consulting, NCR-OM)

Tied into park wide system via dedicated telephone line.

Motion detectors will be installed in Rooms 101, 102 (Type to be specified)

Magnetic contacts will be installed at all perimeter doors and windows at Rooms 101, 102, 201, 202, 203, 301. (Type to be specified)

Fire Detection: Heat detectors (no suppression devices) will be installed in all rooms (type to be specified).

Telephone: Three jacks and lines; 1 for alarm, 1 for telephone system, 1 for extra line.

Notes on Utilities:

WPTC will install conduit, boxes, and faceplates. CONTRACTOR will install system wiring, panel boards, control boards, disconnects, other code required features, etc. and device heads at designated locations.

Second and third floor devices and conduits will be surface mounted as per approved project documents and Project Architects' direction. The intention is to avoid damage to existing fabric and use existing holes through walls, floors, etc.

SITE WORK :

Site drainage as per site plan, landscape details, and revised designs.

Downspouts need splash blocks or leaders to carry water away from structure.

WPTC project limit is street side of sidewalk curb. Gutter and street work not included in WPTC scope of work.

New brick ramp will be installed at northwest end of sidewalk (where it ends at Hog Alley). It will be designed so that no handrail is necessary. It may be necessary to remove large stoop stone at Hog Alley.

b. IMPACT OF RECOMMENDED TREATMENT ON INTEGRITY OF THE HISTORIC STRUCTURE.

The work described here will follow the outline presented in Part II, Section C, Requirements for Treatment.

Summary of Current State of Integrity of Historic Structure: Building 5, The Roeder Store:

Portions of the historic fabric have been lost to earlier work efforts. This means the historic integrity (historic essence) of the structure has been diminished. Much still exists from the historic period and has integrity, these elements have been identified in the section, Physical Description and Existing Conditions of Building 5 - Character Defining Features, p. 49. Areas which have been heavily impacted and/or lost include original interior and exterior finishes, original interior and exterior architectural detailing, and original doors, windows, hardware, roofing, etc. Some things which have been lost and/or added over the course of time are part of the evolution of the structure and should now be preserved. This would include the alteration of the layout of the room pattern (interior wall partitions, stair locations, etc.) and alteration of original fenestration positions (door and window locations, etc.). Previous "restoration" campaigns have included dismantling and reconstruction of exterior partition walls, reroofing, replacement of windows and doors and landscaping; while these efforts have maintained the visual character of the place they have also contributed to the loss of historic integrity of the structure.

The discussion of the impact of the recommended treatment on the integrity of the historic structure will focus on those elements which still maintain their integrity. Work which will have an impact on those items which are considered non-historic will not be individually discussed. The recommended treatment of the structure is preservation, that includes preservation of all existing features, even those that have been recently introduced in late twentieth century NPS restoration and/or preservation projects.

Interior

Crawl space: no impact, see Foundation.

First Floor, Room 101: structural: no impact - historic framing system and floor have been previously removed, repairs to existing system will retain visual character; ceiling joists - no impact, historic fabric will remain in place with minimal intervention, bearing plate will be replaced, stone work will be repaired.

Stair 101: No impact - will retain visual character, existing historic staircase structure will be reinforced, historic framing will remain in place.

Windows: No impact - existing are non-historic, "restoration" of interior architectural casework will enhance visual character of the space.

Doors: No impact - existing are non-historic, "restoration" of interior architectural casework will enhance visual character of the space, historic doors will be repaired/ reused.

Interior Finishes: No impact - visual character of existing will be retained; existing floor and ceiling are/ will be replacements but visually preserve the character of the space based on documentary and physical evidence, existing historic wall plaster will be conserved in place and will be repaired and/or replaced (if missing) to retain maximum fabric integrity. Color for the woodwork and the walls and ceiling are based on paint analysis of historic finishes.

First Floor, Room 102: Structural - no impact;

Interior finishes - no impact; visually will retain existing "historic" character, room has had previous "restoration" treatment which will be preserved.

Second Floor and Third Floor Rooms: Structural - no impact, minimal structural reinforcement, historic framing will remain in place. Third floor attic brick gables will be repaired, visual character will be retained. Interior Finishes - no impact, all existing historic finishes will remain in place and efforts will be taken to protect them during other phases of the work.

Exterior

Foundation: No impact as all work is of a preservation nature, minimal fabric will be disturbed, repointing of joints and new exterior parging will be installed to protect historic masonry foundation and assist in the waterproofing of the foundation, all work is reversible.

Walls: Minimal impact, deteriorated masonry will be replaced with masonry units which will match the existing adjoining fabric, treatment indicates reuse of existing fabric if possible, repointing will be conducted only where necessary with joints and mortar specified to be compatible with surrounding extant historic fabric.

Wall Stucco: Minimal impact, enhancement of visual character; by removing the inappropriate non-historic existing portland based stucco and replacing it with a more compatible and accurately scored lime-based stucco both the visual appearance and the performance of the structure will be improved.

Roof System: Minimal impact, repair work to existing non-historic slate roof, flashings, gutters and downspouts will not change the visual character of the roof. Since this is a replacement roof system (based on the historic) it has no historic integrity. Visual character of the roof will be improved by the reintroduction of the long missing raking cornice boards (barge board, gable end fascia). Other work (insect screening) will have no impact on integrity or character.

Chimneys: Some impact, substantial masonry repairs are required including partially dismantling and reconstruction of the extant historic chimneys, reconstructed chimneys are designed to replicate historic chimneys based on documentary evidence. Introduction of non-historic chimney cap elements will have some minimal visual impact on the roof scape; note: most other chimneys in surrounding lower town have chimney caps. These new chimney caps are designed to replicate the pattern and scale of the historic chimney caps.

Windows: No impact, existing are non-historic, visual character will be maintained and improved.

Shutters: No impact, reintroduction of this long missing element will have no negative impact and will enhance the visual character of the structure, shutter design and placement is based on documentary evidence.

Doors: No impact, existing are non-historic, visual character will be maintained and improved.

Exterior Painting: No impact, color schedule is based on paint study and recommendations by NPS professionals, will enhance visual character.

Exterior Signage: Minimal impact, reintroduction of visually significant elements will enhance the streetscape of lower town, design based on documentary evidence.

Utilities: The introduction of required modern utilities will have a moderate visual impact on the character of the interior spaces, they will not have any significant impact on the historic integrity of the structures as the introduction of these systems (electrical, security, telephone, fire detection, ventilation) has been designed to create minimal disturbance of the remaining historic fabric and all work is easily reversible.

Site Work: The concern here is with preservation of the cultural landscape and any below grade undisturbed archeological resources which may be encountered as there will be no direct impact on the historic integrity of the fabric of the structure. Since most existing site work dates from earlier NPS interventions, there really is no impact on the integrity of the historic cultural landscape. Most of the ground disturbing activities associated with this project are in connection with previously disturbed and documented areas. Since measures are being taken in identified archaeologically sensitive areas there should be no impact on the integrity of undisturbed archeological resources.

Summary: The preservation work being carried out at this structure will have very little impact on the integrity of the historic fabric. Very little historic fabric is being removed as a result of this project. Where intervention does occur it is in the mode of preservation of extant fabric. This helps maintain the integrity of the historic fabric by increasing its life expectancy. The visual appearance of the structure will be positively impacted. The reintroduction of some long lost elements along with the general sprucing up of the interior and exterior will enhance the visitors experience in association with the story being told at this structure.

All work performed on historic fabric will be in accordance with the most current version of the Secretary of the Interior's Standards for Rehabilitation.

c. CODE COMPLIANCE ISSUES

CODE COMPLIANCE ISSUES - CONSIDERATIONS AND RECOMMENDATIONS

INTRODUCTION: The structure known as Building 5 will undergo the proposed rehabilitation in order to make the structures partially functional for park use. Currently, the structure is not being used. As a result of the proposed rehabilitation work the first floor area of the structure will become usable space. Visitor and NPS employee access will remain restricted. This section of the report will address the code compliance issues associated with the proposed rehabilitation.

The overall intention of the project is to preserve the integrity of the existing structure. This denotes minimal fabric intervention other than stabilization, conservation and preservation techniques, and replacement of deteriorated material only where necessary to accommodate the intended use. There will be no structural systems upgrade made to the building, nor will there be any plumbing or mechanical systems installed.

INTENDED USE: Both buildings will be used on their first floors; neither structure will experience any use above the first floor. The second and third floors of each structure will be preserved intact for future research and will not be used for any park function. This project does not provide for any improvements to the interior spaces above the first floor level. To emphasize the recommendation that the spaces should never be used for any park function, except research, those spaces will be posted to alert people that the areas are closed.

> Building 5, The Roeder Store, will use the first floor as a visitor contact facility with exhibits; a ranger will be periodically stationed in the building. The visitor contact facility is being designed so it will be operational in the event a ranger is not available. The visiting public will be allowed access to Room 101 only (the room immediately accessible from the sidewalk on Potomac Street), Room 102 is reserved for NPS use as light storage and a staging area.

CODE COMPLIANCE ISSUES: the following items will be addressed:

A. General Code Compliance;

B. National Building Codes and Standards;

C. Disabled Access Legislation;

D. Cultural Resource & Historic Preservation.

Federal legislation and NPS policies clearly stipulate that as the building is rehabilitated, attempts shall be made to meet the applicable nationally accepted model building codes to the maximum extent feasible.

Compliance with the nationally accepted codes does not automatically trigger a complete upgrade. Alternative criteria do exist for minor alterations and for

historic buildings. These criteria encourage flexibility in the literal application of the code intent.

A. CODE COMPLIANCE

The **Public Buildings Amendment Act of 1988** instructs Federal agencies to follow, "to the maximum extent feasible", as determined by the Administrator or head of the agency, the "...nationally recognized model building codes and other applicable nationally recognized codes such as electrical codes, and fire and life safety codes."

This project: The law clearly indicates it shall be the intent of the National Park Service to adhere to the pertinent national, state and local codes to the maximum extent feasible. West Virginia adopted the National Building Code (1990), now the Building Officials & Code Administrators (BOCA) National Building Code. According to the Jefferson County Planning Commission, the West Virginia State Legislature has allowed the individual counties to determine whether or not they will enforce the building code. Jefferson County (the location of Harpers Ferry) has not adopted any code, to date. Because of this the Federal government, in this case the National Park Service, would be the "authority having jurisdiction" within the park boundaries. For those project assigned by the regional office or park, the regional office assumes the role of the local jurisdictional authority and retains code review and waiver granting responsibility. (The park safety officer, with regional oversight may participate and/or act as the code reviewing authority.)

B.NATIONAL BUILDING CODES AND STANDARDS

1.Building Officials and Code Administrator's (BOCA) National Building Code/ 1993

The BOCA code is the national model building code used in West Virginia and other Mid-Atlantic states. It regulates issues such as occupancy, construction types, life safety and egress, etc. The BOCA is the base model building code from which the state and local building codes are supplemental additions, exceptions, and modifications. It is revised every three (3) years.

This Project: The BOCA is the applicable model building code for Harpers Ferry NHP, and will provide the basic code criteria and standards for all rehabilitation work, if applicable. While the BOCA refers primarily to new construction, existing and/or historic structures are given consideration in Chapter 34, Existing Structures.

Section 3406.0 Historic Structures

3406.1 Compliance The provisions of this code relating to the construction, repair, alteration, addition, restoration, and movement of structures **shall not be mandatory for existing buildings and structures identified and classified by the federal, state, or local government authority as historic buildings** (emphasis added) where such buildings are judged by the code official to be safe and in the interest of public health, safety and welfare regarding any proposed construction, alteration, repair, addition, and relocation.

Most code compliance questions are not applicable due to the historic nature of these structures, the minimal scope of the work, and the limited use and small size of these structures. Issues which have been examined include:

1. Exiting requirements (egress) for the structure:

   Building 5: due to the nature of the public space involved (one room at the main entry) and its proposed use, it has been determined that exiting routes from the structure would be readily apparent to any visitor; visitors are within twenty (20) feet of the exit at all times they are within the public space;

2. Seismic requirements for the structures; Jefferson County, West Virginia is located in a zone where the Contour Map of Effective Peak Velocity-Related Acceleration Coefficient (BOCA 1612.1.3 (1)) indicates a rating of less than 0.05; this allows exemptions from requirements of this section of the code (1612.1, Exceptions, 1 & 4).

   Building 5: exempt, see BOCA 1612.0 Earthquake Loads.

2.National Fire Protection Association 101 (NFPA-101), Life Safety Code, 1994

The nationally accepted model code for life-safety and fire protection in buildings. Sometimes referred to as the Life Safety Code, it remains the industry-accepted baseline for determining the safe occupancy of buildings.

This project: NFPA-101 is considered the minimum criteria for life-safety in Building 5 according to NPS guidelines. Provisions for the protection of visitors, employees, structures and artifacts have been made:

Building 5: Fire and smoke detection system in the form of smoke detectors being installed at appropriate locations throughout the building.

Individual structure systems are tied into park-wide alarm relay system.

3.National Fire Protection Association 70 (NFPA-70), National Electric Code, 1994

The nationally accepted model code for construction of electrical systems in buildings. It remains the industry-accepted baseline for determining the safe occupancy of buildings.

This project: NFPA-70 is considered the minimum criteria for electrical systems construction work in Building 5 according to NPS guidelines. Provisions for the protection of visitors, employees, structures and artifacts have been made:

Building 5: All electrical, security and fire detection systems work will be in accordance with this code.

C. UNIVERSAL (DISABLED) ACCESS LEGISLATION

General: According to current laws and policies, access must be provided from the point of access, onto the site and into or through the historic building or historic landscape. Once at a program destination and depending on the public services offered, different levels of access may be required.

When a building is undergoing rehabilitation, all areas that are being altered must be made accessible to disabled people. Areas of work that do not trigger compliance are re-roofing, installation of new mechanical and electrical systems, and general maintenance.

1.Section 504 of the Rehabilitation Act of 1973 (amended 1978)

This act requires that "no otherwise qualified individual shall, solely be reason of his or her handicap, be denied the benefits or participation in any program or activity funded or conducted by a Federal agency" or a beneficiary of federal assistance.

This means that any program or service provided to the general public must be made accessible to and usable by people with disabilities to "the maximum extent possible". In addition to the public spaces, employee and administrative spaces must also be accessible to employees and the public who are disabled.

This project: NPS is required to provide universal disabled access to the programmed public and employee spaces within the building. Some limited flexibility in conformance exists with respect to historic structures. The applicable criteria for accessibility is the **Uniform Federal Accessibility Standards**. (**UFAS** - see below)

2.Uniform Federal Accessibility Standards, 1988

The minimum standards for accessibility in Federal facilities, adopted in 1988, with provisions for new construction and alterations. Historic structures are allowed certain alternative solutions to meet the intent of the standards.

This project: The NPS has adopted the UFAS as the minimum accessibility standards for all projects.

> Building 5: Site work designed to be fully accessible; public access through fully accessible main entrance (D101) by way of the fully accessible sidewalk. Employees enter through main service entrance (D103) which would also be used be able bodied employees. Entrance is reached by way of a fully accessible pathway from an accessible parking space, as would an able bodied employee. No access is permitted above the first floor level.

3.Americans with Disabilities Act of 1990 (ADA)

Civil Rights Legislation requiring access to "public" facilities, services, transportation, programs and employment. Expanding the definition of public facilities over and above Federally funded facilities.

This Project: the guidelines for ADA compliance (ADAAG - Accessibility Guidelines for Buildings and Facilities) are closely modelled on the Uniform Federal Accessibility Standards. Again, some flexibility exists for compliance in historic buildings, and sites. The ADA does not yet apply to Federally owned or funded programs directly, but the NPS now recommends that all rehabilitation comply with ADAAG. However, since the UFAS remains the legal standard for the government some of the less stringent areas of the ADAAG may not be used as exceptions to the UFAS.

D.CULTURAL RESOURCES & HISTORIC PRESERVATION

1.National Historic Preservation Act of 1966, as amended (NHPA)

The entire lower town of Harpers Ferry is listed on the National Register of Historic Places with numerous significant or contributing structures. This status subjects the NPS to follow the NHPA and the Secretary of the Interior's Standards for Rehabilitation (36 CFR 67), and NPS-28, Cultural Resource Management Guidelines.

The national policy of historic preservation requires Federal agencies to assess the effects of their actions on registered historic properties and sites and to minimize harm to such properties through adherence to certain preservation standards.

2.Secretary of the Interior's Standards for Rehabilitation

(36 CFR 67)

The standards and guidelines used to review work undertaken on historic buildings and sites.

This project: All work carried out on this building by the NPS will be subject to NPS policies and management guidelines (including NPS-28), which reference these standards.

Work outlined in this report as "Recommended Treatment - Architectural Program" and as indicated in the project drawings, "Rehabilitation of Buildings 5 and 7", (385/80072), will be reviewed according to the 1990 Programmatic Agreement Among the National Park Service (U.S. Department of the Interior), The Advisory Council on Historic Preservation, and The National Conference of State Historic Preservation Officers.

Under Section C.1., "Project Review-Programmatic Exclusions", certain undertakings are permitted without further review by the Council or the SHPO's provided:

-that these undertakings are based upon information adequate to identify and evaluate affected cultural resources;

-that the NPS finds that their effects on cultural resources in or eligible for the National Register will not be adverse based on criteria in 36 CFR Part 800.9; and

-that decisions regarding these undertakings are made and carried out in conformity with applicable policies, guidelines, and standards as identified in

Stipulation A. and with the NPS process for the "Assessment of Actions Having an Effect on Cultural Resources" (also known as the "XXX process" or "Section 106") to be included in NPS-28.

The work tasks recommended by this report and the accompanying project drawings are of such a nature that they are within the parameters set forth in the following Programmatic Exclusions:

a. preservation maintenance (housekeeping, routine and cyclic maintenance, and stabilization) as defined in NPS-28;

f. rehabilitation and widening of existing trails, walks, paths, and sidewalks within previously disturbed areas;

h. placement, maintenance, or replacement of utility lines, transmission lines, and fences within previously disturbed areas;

i. rehabilitation work limited to actions for retaining and preserving, protecting and maintaining, and repairing and replacing in kind materials and features, consistent with the Secretary of the Interior's Standards for Rehabilitation and the accompanying guidelines;

j. health and safety activities such as radon mitigation, and removal of asbestos, lead paint, and buried oil tanks;

k. installation of fire detection and suppression systems, and security alarm systems, and upgrading of HVAC systems.

Prior to the commencement of rehabilitation work at Building 5, the Superintendent of Harpers Ferry National Historical Park is responsible for initiating the "Assessment of Effect" forms and obtaining approval from the proper authorities for the work described.

Note: This section has been based on the report, Summary of Legislation, Policies, Codes and Regulations pertaining to buildings at the Presidio of San Francisco, prepared by Robert A. Wallace, National Park Service Architect, Presidio Project Office, San Francisco, California, July, 1993.

Part II: Treatment and Use

Building 7: White Hall Tavern

a. RECOMMENDED TREATMENT - ARCHITECTURAL PROGRAM:

TREATMENT RECOMMENDATIONS: INTERIOR:

BASEMENT, ROOM 001:

Structural:

Repoint, repair and replace visible stonework. Fill voids along base of walls around first floor all sides by repairing stone masonry.

Remove 10 linear feet of CMU wall along SW wall at S001. Repoint and repair newly exposed stone walls.

Repair existing framing, provide and install new support for timber floor beam on NE end. Design will be for use of durable and low maintenance material and details, on north wall.

No modifications to existing slab.

FIRST FLOOR, ROOM 101:

Structural:

Retain existing floor, make dutchman repairs along perimeter where needed.

Repair with T&G flooring of matching species, figure and board width.

Existing steel joists to be reused; prep, prime and paint (using an epoxy-based paint), no additional joists will be added.

Flooring system will be modified to include removable planking screwed along northwest and southeast walls to provide access for cleaning the slab in the basement. The removable section will have a 12" minimum width, a 24" maximum width, 18" being the optimum width; the random width boards will ultimately define the width of the openings.

New finished flooring system will be held back 2" to 4" maximum from interior wall surface, floor edge will be detailed with curb stop or baseboard. Detail to be developed by WPTC.

Ceiling joists: Add blocking to ceiling joists. Joists may require "sister" (supplemental) joists added to support rotted ends. The 3/4 inch bearing plate is also deteriorated. Impervious plastic blocking will be used to shim and separate joists from plates. Stone will have to be removed from between joists to allow for this work. Stone supports brick wall above. Do not remove stone all at once. Remove every other sector, repair joist ends, replace stone and then proceed to remaining sections repeating this operation. This will be shown on the drawings.

Recut existing 2 x 8 leveling joists so new ceiling meets old plaster line which defines ceiling level. Current ceiling is 1 to 2 inches too low along wall edges. Bolt leveling joists to ceiling joists as per plans.

Bolt ceiling joists at central overlap as per plans to draw joists together. Provide 1/2 inch blocking (spacers) between overlapping sections to prevent new stresses from being introduced into the members and thereby maintaining extant deformation.

Stair 001: Install new access stair with rails to basement; permanent light fixture on a switch for entry to basement, rebuild existing stair enclosure, complete detailing, construct new louvered door for this opening D104 at top of S001.

Stair 101: Reuse existing 4 panel door at opening D105 at bottom of S101. Provide structural bracing at back of stair partition.

Windows: New interior casings will be provided including sills, jambs, and interior trim for W101, W102. Painting as per finished paint schedule. See Exterior Treatment for other work.

Doors: New interior casings will be provided including interior trim, jambs, headers, etc., for Doors 101, 102, 103, 104, 105.

Interior Finishes:

Interiors will be HEPA vacuumed after all work is completed to remove any lead dust residues on the buildings interior surfaces.

Floors: As per NCR 1993 review comments, floors will remain unfinished wood.

Walls: Plaster over stone or brick: all sound plaster shall be retained, deteriorated plaster will be removed to expose sound substrate. Patching will be used to replace missing plaster. All new plaster will be tinted to suggest an aged plaster which matches adjoining plaster areas. Walls will not be skim coated to create a smooth or even appearance, nor will they be painted, whitewashed or finished in any manner. Use wood tools to float finished surfaces; "rough texture finish" to be used. Exposed repaired plaster will be presented as the finished wall surface.

Ceiling: Install wire lath (zinc coated or stainless steel) on recut levelled out ceiling joists and plaster with traditional three coat plaster method, brown scratch coat and two finish coats. Use wood tools to float finished surface. Leveling of the ceiling is not desired.

Ceiling will not be painted, as per wall finish; "rough float finish" to be used.

Install 6 inch, R-19, foil-backed, fiberglass insulation between existing joists.

Woodwork: All painted interior wood trim and architectural elements will be painted to match Munsell Color Standard 7.5 BG 8/2 (Blue Green), circa 1856 woodwork finish color.

Painting: Will be specified as superior grade for prime coat (oil) and two finish coats (latex), as manufactured by Pratt & Lambert, Sherwin Williams, or Benjamin Moore.

Interior Furnishings: Design or construction of any "fixed" furnishings which are part of a future exhibit (counters) are not included in this Task Directive Scope of Work. These items will be tasked out to WPTC at a later date.

SECOND AND THIRD FLOOR, ROOMS 201 and 301 (Attic):

Structural:

The construction joint between the front wall and the side walls will be repointed. WPTC will install monitoring devices for tracking of wall joint movement. "Avongard" type Crack Monitors will be installed at select locations along the construction joint line.

Existing second floor joists will be structurally repaired at the ends to bear fully at masonry wall joist pockets. Treatment to be determined in the field with concurrence between Project Leader and Project Architect. Existing supplemental 2 x 8s (used for levelling) will be recut to provide support for new lath and plaster ceiling.

Retain existing floors.

Roof Framing: Replace missing collar ties using half lap dovetail connection as per existing.

Openings between rafter tails and rafter plate will be filled with screening to allow ventilation and reduce bird and insect infiltration.

Interior Finishes:

Plaster: Conservation of plaster containing graffiti is not part of WPTC day-labor project. Plaster will be protected from potential construction impacts during the construction phase.

All other finishes will remain untouched. Documents will note that all finishes will be protected from potential construction impacts during construction phase.

Note: All rooms will be cleaned of non-historic residual dirt, dust and debris using the HEPA vacuum.

TREATMENT RECOMMENDATIONS - EXTERIOR:

FOUNDATION:

Determine need for building drains.

Excavate along all walls to expose below ground portions of walls. Repoint and replace any missing or damaged mortar in foundation walls. Install reversible waterproofing treatment prior to back-filling.

WALLS:

Repoint building joint on both the northwest and southeast elevations inside and out, keeping the pointing back from the surface approximately 5 inches on the exterior and interior.

STUCCO:

Remove loose stucco from wall surfaces. Stucco will not be replaced as per NAR report recommendations, "It is not recommended to undertake an extensive conservation program to reattach the existing stucco that has delaminated." Securely attached stucco will remain.

Rake out and repoint stone walls. Mortar to be held back minimum 5/8 inch from surface to allow for future application of replacement stucco. Areas of secure stucco will remain. There will be no conservation of the remaining exterior stucco.

ROOF SYSTEM:

Slate shingles are in good condition and will be repaired where necessary.

Raking cornice boards (barge board, gable end fascia) will be installed on gable ends to help stop bird and insect infiltration. This detail appears in photograph numbers HF-1200 dated 1862, HF-100 dated 1889, and HF-1211 dated 1890-1910.

Existing roof drainage system will be replaced. Gutters will be redesigned with half round galvanized steel gutters and downspouts sized to handle capacity storms (10 year storm).

CHIMNEYS:

Masonry repairs required, will be detailed by WPTC. Work will include repointing, replacing deteriorated bricks, addition of screened chimney caps and new flashings.

Flashing and counter-flashing will be replaced with new lead coated copper flashings.

Type of chimney caps added is dependent on use. False chimney (front wall) will be capped with a sheet of lead coated copper. Chimney used for ventilation (rear wall) will have elevated chimney cap, possible stone slab set on brick piers, and bird screening.

WINDOWS:

Inspect frames and sills, etc. Replace all deteriorated sills with new cypress sills. New sills will provide positive drainage and have a drip kerf milled on the underside. If existing sills are consolidated a drip kerf will have to be installed; treatment determined on-site.

Install flexible non-metallic weatherstripping at sills (bottom rail), meeting rails, and heads (top rails) of window sash. None at jambs / stiles.

Repair masonry openings under sills and around jambs and heads with installation of a flexible backer rod and than grouting between frame and wall on all exposures.

Repair all windows to operable condition. Sash will be removed, inspected, repaired, reglazed, prepped, primed, painted, and reinstalled. All work will be

back primed. Sash repairs include replacing the lower rail and repairing the stiles as necessary. Most show evidence of deteriorated lower sash.

Any broken glass will be replaced with same type as removed. Minor cracked glass will be left in place; replace only if a total break or missing glass.

Sash locks will be used on first floor and other vulnerable locations. Type to be selected by project architect. Black finish will be specified.

SHUTTERS:

Shutters are present on the front facade (northeast elevation) of the structure in historic photograph HF-96 dated 1896, HF-571 and HF-569 dated 1890, and HF-329 dated 1904. The configuration represented in this photograph will be reproduced; raised two panel shutters on the first floor, and two panel operable louvered shutters on the second and third floor.

There is no existing evidence of shutters or shutter hardware on any other elevation.

DOORS:

Inspect and repair any damaged areas on the doors; schedule will be prepared by WPTC.

Scrape, prime and paint doors with proper colors as per selected Munsell Color Standards derived from NAR report.

Door hardware will be maintained. Project architect will coordinate with HAFE (G. Bowers) to determine need for deadbolts, etc. (BEST^{tm} system).

Where missing, late 19th century type hardware with black finish will be selected.

PAINTING:

Exterior paint schedule for woodwork to be developed.

EXTERIOR SIGNAGE:

Remove existing sign; replace with more appropriate sign based on recommendations in HSR (not yet determined). Photograph HF-655 (1888-90) indicates a sign board cantilevered or hung perpendicular to the front wall of the structure. It reads "(Restau)RANT & SALOON".

UTILITIES:

Electrical: Jeff Young, consulting EE, NCR-PDS.

As per park memo of 06/15/94 with revisions made on-site by park 06/17/94, see electrical plan. Service will be extended throughout the building. Special emphasis will be placed on integration of elements on first floor. Second and third floor conduit will be surface mounted. Fixtures will be simple utilitarian design.

Coordinate with HFC/HAFE for number and location of receptacles, switches and junction boxes, etc., for electrical service; based on approved interpretive plan.

Task heating and lighting using portable fixtures. Task lighting combined with some permanent light fixtures (surface mounted track lighting).

Lightning protection not required, as per HAFE.

HVAC: limited to temperature controlled exhaust fan in the attic that vents to daylight. Temperature control as per HFC Graffiti Survey Recommendations.

Plumbing: No plumbing required.

Security: John Garner consulting, NCR-OMD.

Motion detectors will be installed in RM 101 only (Type to be specified)

Magnetic contacts will be installed at all perimeter door and window openings at Rooms 101, 102 (Type to be specified). All devices tied into park wide system via dedicated telephone line.

Fire Detection: Heat detectors (no suppression devices) will be installed in all Rooms 101, 201, 301; two devices per room (Type to be specified).

Telephone: Three jacks and lines: 1 for alarm, 1 for telephone system, 1 for extra line.

Notes on Utilities:

WPTC will install conduit, boxes, and faceplates. CONTRACTOR will install system wiring, panel boards, control boards, disconnects, other code required features, etc. and device heads at designated locations.

Second and third floor devices and conduits will be surface mounted as per approved project documents and Project Architects direction. The intention is to avoid damage to existing fabric and use existing holes through walls, floors, etc.

SITE WORK:

Site drainage as per site plan, landscape details and revised designs.

Downspouts need splash blocks or leaders to carry water away from structure.

WPTC project limit is street side of sidewalk curb. Gutter and street work not included in WPTC scope of work.

b. IMPACT OF RECOMMENDED TREATMENT ON INTEGRITY OF THE HISTORIC STRUCTURE:

Summary of Current State of Integrity of Historic Structure: Building 7, White Hall Tavern.

Portions of the historic fabric have been lost to earlier work efforts. This means the historic integrity (historic essence) of the structure has been diminished. Much still exists from the historic period and has integrity, these elements have been identified in the section, Physical Description and Exisiting Conditions of Building 7 - Character Defining Features p. 65. Areas which have been heavily impacted and/or lost include original interior and exterior finishes, original interior and exterior architectural detailing, and original doors, windows, hardware, roofing, etc. Some things which have been lost and/or added over the course of time are part of the evolution of the structure and should now be preserved. This would include the alteration of the layout of the room pattern (interior wall partitions, stair locations, etc.) and alteration of original fenestration positions (door and window locations, etc.). Previous "restoration" campaigns have included dismantling and reconstruction of exterior walls, reroofing, replacement of windows and doors and landscaping; while these efforts have maintained the visual character of the place they have also contributed to the loss of historic integrity of the structure.

The discussion of the impact of the recommended treatment on the integrity of the historic structure will focus on those elements which still maintain their integrity. Work which will have an impact on those items which are considered non-historic will not be individually discussed. The recommended treatment of the structure is preservation, that includes preservation of all existing features, even those that have been recently introduced in late twentieth century NPS restoration and/or preservation projects.

Interior

Basement, Room 001: Structural: no impact, see Foundation. Removal of existing non-historic concrete block walls will improve visual character.

First Floor, Room 101: Structural: no impact, historic framing system and floor have been previously removed, repairs to existing system will retain visual character; ceiling joists - no impact, historic fabric will remain in place with minimal intervention, bearing plate will be replaced, stone work will be repaired.

Stair 101: No impact - will retain visual character, existing historic staircase structure will be reinforced, historic framing will remain in place.

Windows: No impact - existing are non-historic, "restoration" of interior architectural casework will enhance visual character of the space.

Doors: No impact - existing are non-historic, "restoration" of interior architectural casework will enhance visual character of the space, historic doors will be repaired/ reused.

Interior Finishes: No impact - visual character of existing will be retained; existing floor and ceiling are/ will be replacements but visually preserve the character of the space based on documentary and physical evidence. Existing historic wall plaster will be conserved in place and will be repaired and/or replaced (if missing) to retain maximum fabric integrity. Color for the woodwork and the walls and ceiling are based on paint analysis of historic finishes.

Second Floor and Third Floor Rooms: Structural - no impact, minimal structural reinforcement, historic framing will remain in place. Brick walls and third floor attic brick gables will be repaired, visual character will be retained. Interior Finishes - no impact, all existing historic finishes will remain in place and efforts will be taken to protect them during other phases of the work.

Exterior

Foundation: No impact as all work is of a preservation nature, minimal fabric will be disturbed. Repointing of joints and new below grade exterior parging will be installed to protect historic masonry foundation and assist in the waterproofing of the foundation, all work is reversible.

Walls: Minimal impact, deteriorated masonry will be replaced with masonry units which will match the existing adjoining fabric, treatment indicates reuse of existing fabric if possible, repointing will be conducted only where necessary with joints and mortar specified to be compatible with surrounding extant historic fabric.

Wall Stucco: Existing stucco is considered non-historic. Recommended treatment will cause loss of deteriorated stucco and preservation of intact stucco, no additional stucco will be applied. This treatment will have no impact on the historic integrity of the structure. It will cause a minimal visual impact as stucco gradually deteriorates. Repointing of the masonry will protect the historic integrity of the historic exterior walls of the structure.

Roof System: Minimal impact, repair work to existing non-historic slate roof, flashings, gutters and downspouts will not change the visual character of the roof. Since this is a replacement roof system (based on the historic) it has no historic integrity. Visual character of the roof will be improved by the reintroduction of the long missing raking cornice boards (barge board, gable end fascia). Other work (insect screening) will have no impact on integrity or character.

Chimneys: Some impact, substantial masonry repairs are required including partially dismantling and reconstruction of the extant historic chimneys, reconstructed chimneys are designed to replicate historic chimneys based on documentary evidence. Introduction of non-historic chimney cap elements will have some minimal visual impact on the roof scape; note: most other chimneys in surrounding lower town have chimney caps. These new chimney caps are designed to replicate the pattern and scale of the historic chimney caps.

Windows: No impact, existing are non-historic, visual character will be maintained and improved.

Shutters: No impact, reintroduction of this long missing element will have no negative impact and will enhance the visual character of the structure, shutter design and placement is based on documentary evidence.

Doors: No impact, existing are non-historic, visual character will be maintained and improved.

Exterior Painting: No impact, color schedule is based on paint study and recommendations by NPS professionals, will enhance visual character.

Exterior Signage: Minimal impact, reintroduction of visually significant elements will enhance the streetscape of lower town, design based on documentary evidence.

Utilities: The introduction of required modern utilities will have a moderate visual impact on the character of the interior spaces, they will not have any significant impact on the historic integrity of the structures as the introduction of these systems (electrical, security, telephone, fire detection, ventilation) has been designed to create minimal disturbance of the remaining historic fabric and all work is easily reversible.

Site Work: The concern here is with preservation of the cultural landscape and any below grade undisturbed archeological resources which may be encountered as there will be no direct impact on the historic integrity of the fabric of the structure. Since most existing site work dates from earlier NPS interventions, there really is no impact on the integrity of the historic cultural landscape. Most of the ground disturbing activities associated with this project are in connection with previously disturbed and documented areas. Since measures are being taken in identified archaeologically sensitive areas there should be no impact on the integrity of undisturbed archeological resources.

Summary: The preservation work being carried out at this structure will have very little impact on the integrity of the historic fabric. Very little historic fabric is being removed as a result of this project. Where intervention does occur it is in the mode of preservation of extant fabric. This helps maintain the integrity of the historic fabric by increasing its life expectancy. The visual appearance of the structure will be positively impacted. The reintroduction of some long lost elements along with the general sprucing up of the interior and exterior will enhance the visitors experience in association with the story being told at this structure.

All work performed on historic fabric will be in accordance with the most current version of the Secretary of the Interior's Standards for Rehabilitation.

c. CODE COMPLIANCE ISSUES:

CODE COMPLIANCE ISSUES - CONSIDERATIONS AND RECOMMENDATIONS

INTRODUCTION: The structure known as Building 7 will undergo the proposed rehabilitation in order to make the structures partially functional for park use. Currently, the structure is not being used. As a result of the proposed rehabilitation work, the first floor area of the structure will become usable space. Visitor and NPS employee access will remain restricted. This section of the report will address the code compliance issues associated with the proposed rehabilitation.

The overall intention of the project is to preserve the integrity of the existing structures. This denotes minimal fabric intervention other than stabilization, conservation and preservation techniques, and replacement of deteriorated material only where necessary to accommodate the intended use. There will be no structural systems upgrade will be made to the building, nor will there be any plumbing or mechanical systems installed.

INTENDED USE: Both buildings will be used on their first floors; neither structure will experience any use above the first floor. The second and third floors of each structure will be preserved intact for future research and will not be used for any park function. This project does not provide for any improvements to the interior spaces above the first floor level. To emphasize the recommendation that the spaces should never be used for any park function, except research, those spaces will be posted to alert people that the areas are closed.

> Building 7, White Hall Tavern, will have the first floor area used as a representational exhibit depicting the 19th century tavern scene. There will be no visitor access to this area. The exhibits will be viewed from the sidewalk area through the two open doors and windows of the first floor level. The doors will be outfitted with an easily demountable secured viewing enclosure.

CODE COMPLIANCE ISSUES: the following items will be addressed:

A. General Code Compliance;

B. National Building Codes and Standards;

C. Disabled Access Legislation;

D. Cultural Resource & Historic Preservation.

Federal legislation and NPS policies clearly stipulate that as the building is rehabilitated, attempts shall be made to meet the applicable nationally accepted model building codes to the maximum extent feasible.

Compliance with the nationally accepted codes does not automatically trigger a complete upgrade. Alternative criteria do exist for minor alterations and for historic buildings. These criteria encourage flexibility in the literal application of the code intent.

Part II: Treatment and Use

A. CODE COMPLIANCE

The **Public Buildings Amendment Act of 1988** instructs Federal agencies to follow, "to the maximum extent feasible", as determined by the Administrator or head of the agency, the "...nationally recognized model building codes and other applicable nationally recognized codes such as electrical codes, and fire and life safety codes."

This project: The law clearly indicates it shall be the intent of the National Park Service to adhere to the pertinent national, state and local codes to the maximum extent feasible. West Virginia adopted the National Building Code (1990), now the Building Officials & Code Administrators (BOCA) National Building Code. According to the Jefferson County Planning Commission, the West Virginia State Legislature has allowed the individual counties to determine whether or not they will enforce the building code. Jefferson County (the location of Harpers Ferry) has not adopted any code, to date. Because of this the Federal government, in this case the National Park Service, would be the "authority having jurisdiction" within the park boundaries. For those project assigned by the regional office or park, the regional office assumes the role of the local jurisdictional authority and retains code review and waiver granting responsibility. (The park safety officer, with regional oversight may participate and/or act as the code reviewing authority.)

B.NATIONAL BUILDING CODES AND STANDARDS

1.Building Officials and Code Administrator's (BOCA) National Building Code/ 1993

The BOCA code is the national model building code used in West Virginia and other Mid-Atlantic states. It regulates issues such as occupancy, construction types, life safety and egress, etc. The BOCA is the base model building code from which the state and local building codes are supplemental additions, exceptions, and modifications. It is revised every three (3) years.

This Project: The BOCA is the applicable model building code for Harpers Ferry NHP, and will provide the basic code criteria and standards for all rehabilitation work, if applicable. While the BOCA refers primarily to new construction, existing and/or historic structures are given consideration in Chapter 34, Existing Structures.

Section 3406.0 Historic Structures

3406.1 Compliance The provisions of this code relating to the construction, repair, alteration, addition, restoration, and movement of structures **shall not be mandatory for existing buildings and structures identified and classified by the federal, state, or local government authority as historic buildings** (emphasis added) where such buildings are judged by the code official to be safe and in the interest of public health, safety and welfare regarding any proposed construction, alteration, repair, addition, and relocation.

Most code compliance questions are not applicable due to the historic nature of these structures, the minimal scope of the work, and the limited use and small size of these structures. Issues which have been examined include:

1. Exiting requirements (egress) for the structure:

Building 7: not applicable, no public access, controlled employee access.

2. Seismic requirements for the structures; Jefferson County, West Virginia is located in a zone where the Contour Map of Effective Peak Velocity-Related Acceleration Coefficient (BOCA 1612.1.3 (1)) indicates a rating of less than 0.05; this allows exemptions from requirements of this section of the code (1612.1, Exceptions, 1 & 4).

Building 7: exempt, see BOCA 1612.0 Earthquake Loads.

2.National Fire Protection Association 101 (NFPA-101), Life Safety Code, 1994

The nationally accepted model code for life-safety and fire protection in buildings. Sometimes referred to as the Life Safety Code, it remains the industry-accepted baseline for determining the safe occupancy of buildings.

This project: NFPA-101 is considered the minimum criteria for life-safety in Building 7 according to NPS guidelines. Provisions for the protection of visitors, employees, structures and artifacts have been made:

Building 7: Fire and smoke detection system in the form of smoke detectors being installed at appropriate locations throughout the building.

Individual structure systems are tied into park-wide alarm relay system.

3.National Fire Protection Association 70 (NFPA-70), National Electric Code, 1994

The nationally accepted model code for construction of electrical systems in buildings. It remains the industry-accepted baseline for determining the safe occupancy of buildings.

This project: NFPA-70 is considered the minimum criteria for electrical systems construction work in Building 7 according to NPS guidelines. Provisions for the protection of visitors, employees, structures and artifacts have been made:

Building 7: All electrical, security, and fire detection systems work will be in accordance with this code.

C. UNIVERSAL (DISABLED) ACCESS LEGISLATION

General: According to current laws and policies, access must be provided from the point of access, onto the site and into or through the historic building or historic landscape. Once at a program destination and depending on the public services offered, different levels of access may be required.

Part II: Treatment and Use

When a building is undergoing rehabilitation, all areas that are being altered must be made accessible to disabled people. Areas of work that do not trigger compliance are re-roofing, installation of new mechanical and electrical systems, and general maintenance.

1.Section 504 of the Rehabilitation Act of 1973 (amended 1978)

This act requires that "no otherwise qualified individual shall, solely be reason of his or her handicap, be denied the benefits or participation in any program or activity funded or conducted by a Federal agency" or a beneficiary of federal assistance.

This means that any program or service provided to the general public must be made accessible to and usable by people with disabilities to "the maximum extent possible". In addition to the public spaces, employee and administrative spaces must also be accessible to employees and the public who are disabled.

This project: NPS is required to provide universal disabled access to the programmed public and employee spaces within the buildings. Some limited flexibility in conformance exists with respect to historic structure. The applicable criteria for accessibility is the **Uniform Federal Accessibility Standards. (UFAS** - see below)

2.Uniform Federal Accessibility Standards, 1988

The minimum standards for accessibility in Federal facilities, adopted in 1988, with provisions for new construction and alterations. Historic structures are allowed certain alternative solutions to meet the intent of the standards.

This project: The NPS has adopted the UFAS as the minimum accessibility standards for all projects.

> Building 7: No public access, exhibit space viewed from accessible sidewalk viewing location through open doors (no restrictions, D101, D102). Employee access through accessible service entrance (D103) which would also be used by able bodied employees. Disabled employees would reach this door by way of a fully accessible pathway from an accessible parking space, as would an able bodied employee. All site work is designed to be fully accessible. No access is permitted above the first floor level.

3.Americans with Disabilities Act of 1990 (ADA)

Civil Rights Legislation requiring access to "public" facilities, services, transportation, programs and employment. Expanding the definition of public facilities over and above Federally funded facilities.

This Project: the guidelines for ADA compliance (ADAAG - Accessibility Guidelines for Buildings and Facilities) are closely modelled on the Uniform Federal Accessibility Standards. Again, some flexibility exists for compliance in historic buildings, and sites. The ADA does not yet apply to Federally owned or funded programs directly, but the NPS now recommends that all rehabilitation comply with ADAAG. However, since the UFAS remains the legal standard for

the government some of the less stringent areas of the ADAAG may not be used as exceptions to the UFAS.

D.CULTURAL RESOURCES & HISTORIC PRESERVATION

1.National Historic Preservation Act of 1966, as amended (NHPA)

The entire lower town of Harpers Ferry is listed on the National Register of Historic Places with numerous significant or contributing structures. This status subjects the NPS to follow the NHPA and the Secretary of the Interior's Standards for Rehabilitation (36 CFR 67), and NPS-28, Cultural Resource Management Guidelines.

The national policy of historic preservation requires Federal agencies to assess the effects of their actions on registered historic properties and sites and to minimize harm to such properties through adherence to certain preservation standards.

2.Secretary of the Interior's Standards for Rehabilitation

(36 CFR 67)

The standards and guidelines used to review work undertaken on historic buildings and sites.

This project: All work carried out on this building by the NPS will be subject to NPS policies and management guidelines (including NPS-28), which reference these standards.

Work outlined in this report as "Recommended Treatment - Architectural Program" and as indicated in the project drawings, "Rehabilitation of Buildings 5 and 7", (385/80072), will be reviewed according to the 1990 Programmatic Agreement Among the National Park Service (U.S. Department of the Interior), The Advisory Council on Historic Preservation, and The National Conference of State Historic Preservation Officers.

Under Section C.1., "Project Review-Programmatic Exclusions", certain undertakings are permitted without further review by the Council or the SHPO's provided:

-that these undertakings are based upon information adequate to identify and evaluate affected cultural resources;

-that the NPS finds that their effects on cultural resources in or eligible for the National Register will not be adverse based on criteria in 36 CFR Part 800.9; and

-that decisions regarding these undertakings are made and carried out in conformity with applicable policies, guidelines, and standards as identified in Stipulation A. and with the NPS process for the "Assessment of Actions Having an Effect on Cultural Resources" (also known as the "XXX process" or "Section 106") to be included in NPS-28.

The work tasks recommended by this report and the accompanying project drawings are of such a nature that they are within the parameters set forth in the following Programmatic Exclusions:

a. preservation maintenance (housekeeping, routine and cyclic maintenance, and stabilization) as defined in NPS-28;

f. rehabilitation and widening of existing trails, walks, paths, and sidewalks within previously disturbed areas;

h. placement, maintenance, or replacement of utility lines, transmission lines, and fences within previously disturbed areas;

i. rehabilitation work limited to actions for retaining and preserving, protectir and maintaining, and repairing and replacing in kind materials and features, consistent with the Secretary of the Interior's Standards for Rehabilitation and the accompanying guidelines;

j. health and safety activities such as radon mitigation, and removal of asbestos, lead paint, and buried oil tanks;

k. installation of fire detection and suppression systems, and security alarm systems, and upgrading of HVAC systems.

Prior to the commencement of rehabilitation work at Building 7, the Superintendent of Harpers Ferry National Historical Park is responsible for initiating the "Assessment of Effect" forms and obtaining approval from the prop authorities for the work described.

Note: This section has been based on the report, Summary of Legislation, Policies, Codes and Regulations pertaining to buildings at the Presidio of San Francisco, prepared by Robert A. Wallace, National Park Service Architect, Presidio Project Office, San Francisco, California, July, 1993.

Part III. Record of Treatment

A. Completion Report

B. Technical Data

C. As-Constructed Drawings

Part IV. Appendix

The Following is a compilation of all reports and analyses pertaining to Buildings 5 and 7. Unless otherwise noted, the reports and analyses have been included in full. To respect the integrity of the original printings of these documents their pages will not be renumbered, only the introduction page for each section will receive a number.

Appendix A:Historical Data Reports:

-Charles W. Snell, DSC, Draft Historic Structure Report, Frederick A. Roeder's Store, Bldg. No. 5,on Wager Lot No. 16, Historical Data, Harpers Ferry National Historical Park, West Virginia, April 1980.

-Charles W. Snell, DSC, Draft Historic Structure Report, White Hall Tavern, Bldg. No. 7,on Subdivisions No. 2 and No. 4 of Wager Lot No. 15, Historical Data, Harpers Ferry National Historical Park, West Virginia, April 1980.

In 1980 Charles Snell, DSC Historian, produced an updated draft of the historical data for Buildings 5 and 7 that was a revision of a draft that he produced in 1959. This information was compiled in an early effort to produce historic structure reports for Buildings 5 and 7. Snell's report contains historic data about the people, events and uses associated with Buildings 5 and 7 from 1757 to 1955. The reports have been reproduced exactly from Snell's original documents. They still retain the original scratch-out and typogrphical errors. The original photocopies of supporting photographs have been replaced by camera-ready photographs for clarity.

HISTORIC STRUCTURE REPORT

Frederick A. Roeder's Store, Bldg. No. 5, on Wager Lot No. 16.

Historical Data

Harpers Ferry National Historical Park

West Virginia

by

Charles W. Snell

Denver Service Center
National Capital Team
National Park Service
United States Department of the Interior
Denver, Colorado

April 1980

PREFACE:

The purpose of this report is to update the "Historic Building Report, Part II Historical Data Section, for Bldg. No. 5, Frederick A. Roeder's Store," Harpers Ferry National Monument, W. Va.," prepared by Historian Charles W. Snell, March 31,1959, on the basis of additional archeological, architectural, and historical evidence that has been discovered during the 20 year period since the above-listed report was prepared.

The writer wishes to thank Librarian Hilda F. Staubs of the staff of Harpers Ferry National Historical Park for her assistance in providing copies of photographs and documents from the Park collections for use in preparing this study.

Charles W. Snell
Historian

April 1980

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II. HISTORICAL DATA SECTION:

A. Significance:

Frederick A. Roeder's Store, Bldg. No. 5, located within approximately 100 feet of the original site of U.S. Armory Fire Engine House, or " John Brown Fort," is of the Second Order of Significance because it formed an immediate part of this key historic scene during the John Brown Raid in October 1859. Most of the action of that attack took place in front of Bldg. No. 5. Like Park Bldgs. No. 8, 9, and 7, Bldg. No. 5 is visible in the background of many photographs that were taken of the John Brown Fort from 1859 to 1892.

Bldg. No. 5 was constructed by Frederick A. Roeder in 1856-57 to replace the space that he lost in 1856 when he sold the front(north) half of Bldg. No. 7 to the United States and the Armory demolished that portion of Roeder's tavern in order to widen the narrow alley on which it fronted into a 40-foot wide street. Bldg. No. 5, as built by Roeder in 1856-57, was a dupicate or twin of the remaining portion of Bldg. 7 in size, floor plan , and their north or front facades were similar. Bldg. No. 5 also appears to have been utilized during most of its existance as a drinking house or tavern, as was the case with Bldg. 7.

Bldg. No. 5, in 1856-57, was a two and one half story brick and stone structure with a slate-covered gable roof, but unlike Bldg. 7, it lacked a cellar. Bldg. No. 5 fronted 24 feet 2 inches on the new street that was later known as Potomac Street and was 20 feet 2 inches deep. The first story walls were of stone and the upper story and a half of brick. There was a small end chimney centered in the north and south gable ends of the house. The north or front elevation was divided into three bays. On the first story there was a center door with a window adorned with exterior louvered shutters in each flanking bay. The center bay of the second story was occupied by a door with a small transom above and opened out on to a small wooden porch or balcony. There was a window in each flanking bay and also one in the third story level that was centered over the door below. Second and third floor windows did not have shutters and all windows had six over six lights. Prior to 1861 a two-story brick wing with a sloping slate-cover shed roof was added to the rear of the five room main house. The wing, 12 feet 7 inches wide and 13 feet deep, had one room on each floor, so that Bldg. No. 5 had a total of seven rooms by 1861. The first floor room in the wing had a fireplace.

B. Chain of Title for Bldg. No. 5 on Wager Lot No. 16, 1751 to 1953:

The lot that was to include the future site of Bldg. No. 5 was a part of the 125 acre tract that Robert Harper, a millwright from Pennsylvania, purchased from Lord Thomas Fairfax on April 25, 1751.[1] Harper died at Harpers Ferry in October 1782 and in his will he left the land that was to contain the future sites of Bldg. No. 5, the lower town of Harpers Ferry, and the U.S. Musket Factory to his niece, Sarah Harper, who was then the wife of John Wager, Sr. and residing with her husband in Philadelphia.[2] About 14 years later, on June 15,1796, John and Sarah Wager sold all of their Harper inheritance, except for six and 3/4 acres retained in what became known as the Wager Six Acre Reservation and the Ferry Lot, to the United States Government for $ 7,016.66.[3] The Federal Government was acquiring this land for the purpose of erecting an Armory and Arsenal at Harpers Ferry.

The future site of Bldg. No. 5 was located in the Wager Six Acre Reservation, which with the Ferry Lot, remained the property of the Wager family from 1796 to 1836. The only available private land on which mercantile stores and shops could be built in this sea of Federally-owned property, the Wager land increased in value as the Armory and the population of the town expanded with the passage of time. The Wager heirs refused to sell any of their land, but leased it out at high ground rents to merchants who further agreed to erect buildings as a part of securing a leasehold. These costs were passed on to the Armory

1. Fairfax deed for 125 acres to Robert Harper, April 25,1751, in Northern Neck Grant Book No. 6, p. 496, in Virginia State Library, Richmond, Va.

2. Last Will of Robert Harper of Berkeley County, Va., dated 26 September 1782, probabted in Berkeley County, Va., on October 15,1782. Copy of will in Office of the Judge Advocate General, Military Reservation Division, West Virginia Reservation File, Box 41, National Archives Record Group No. 153, Washington, D.C.

3. Copy of Warranty Deed of John Wager,et ux, Berkeley County,Va., to the United States, June 15,1796, National Archives Record Group 121, Public Buildings Service, Entry 75, Washington, D.C.

workmen in the form of very high pirces charged for goods.

One of the three Wager heirs, James B. Wager, however, overextended himself in his financial ventures and, on July 7, 1834, was thrown into prison for debt. He was forced to declare bankruptcy. On April 2,1835, the Circuit Superior Court of Law and Chancery for Jefferson County, Virginia, appointed commissioners "to lay off and divide into three equal lots and parcels, the real estate at Harper's Ferry which descended to James B. Wager, Gerard B. Wager, and Sally Ann Wager, now Sally Ann Swayne, the wife of Noah H. Swayne, from their father John Wager (Jr.), deceased."[4] The commissioners subdivided the Six Acre Reservation and the Ferry Lot, together with the buildings on this land, into 56 numbered lots. On October 10, 1835, the Circuit Court divided the lots and structures equally among the three Wager heirs. Among the lots allotted to "Sally Ann Swayne, the wife of B Noah H. Swayne," was "Lot No. 16" , which was to be the future sites of Park Bldgs. No. 5 and 16.[5] Wager Lot No. 16 fronted 32 feet on the north side of High Street,ran about 122 feet along the east propety line to a 15-foot wide alley on the north, fronted 32 feet on this alley, and then ran about 116 feet south along the west lot line to High Street. Bldg. No. 16 was to be erected on the south end of the lot, fronting on High Street, and Bldg. No. 5 was to be constructed on the north end of Lot. 16, fronting on the narrow alley which separated the Wager Six Acre Reservation lot from the U.S. Market Factory public land.

4. Gibson,etc. vs. Wager etc, Decree, in Deed Book 29, pp.140- 141, Registry of Deeds, Jefferson V County Courthouse, Charles Town, W. Va. Henceforth all deed books mentioned are located in the Jefferson County Court House unless otherwise specified.

5. Ibid. The 1835 Plat- prepared for the commissioners and entitled "The Wager Six Acre Reservation, drawn by James M. Brown, S.G.C," is located in Deed Book 29, at p. 140.

The future site of Bldg. No. 5, on the north end of Lot 16, was vacant in 1835-1838(See Map No. 1, 1835 and Map No. 2, 1837-38).

Noah Haynes Swayne (1804-1884) was the U.S. District Attorney for Ohio during the years 1831 to 1841. He had married Sarah Ann Wager of Harper's Ferry in 1832 and they were now residing in Columbus. She owned slaves, but, sharing her husband's views on the evils of slavery, she emancipated them. The Swaynes retained title to most of the lots that Mrs. Swayne received on October 10, 1835,and leased it out, operating as absentee landlords, while living in Ohio.[6]

On September 7,1837,Noah H. Swayne leased Wager Lot No. 16 and also adjacent Wager Lot No. 17, to John Wilson, a Harper's Ferry merchant, for 10 years,effective April 1,1838, at an annual rent of $ 140. Wilson further agreed to erect one or more brick or stone houses on the lot prior to April 1,1843.[7] On January 29, 1844, with the consent of John G. Wilson,who had apparently decided he did not need so much land, Noah H. Swayne leased Wager Lot No. 16 to Frederick A Roeder, a confectioner or baker, for a period of 24 years at an annual rent of $ 70.00. This lease also contained a clause calling upon Roeder to build on Lot 16.[8] Roeder

and on September 13, 1847 he was able to purchase Wager Lot No. 16

6. Dictionary of American Biography, XVIII,pp.239-240. Taking a high rank at the Ohio bar, President Abraham Lincoln appointed Noah H. Swayne an justice of the U.S. Supreme Coutt on January 21,1862, a position that Swayne held until January 25,1881, when he reired at the age of 76.

7, Lease, Swayne to Wilson, September 7,1837, in Deed Book 22, pp.340-341.

8.Swayne to Roeder, Lease, January 29,1844, Deed Book 27, pp.102-103; and Swayne and Wilson, Agreement, January 29, 1844, Deed Book 27,p.103.

from Noah and Sarah Swayne for $ 1,166.66.[9] On January 2, 1848, Roeder next purchased Wager Lot No. 17 from the Swaynes, again paying $ 1,166.66 for the land.[10] This addition increased his frontages on both High Street and the alley below to 64 feet.

In the mid 1840's, Major John Symington, Superintendent of the Harper's Ferry Armory, launched a program to acquire the Wager Six Acre Reservation Lots from No. 16 west to Lots 32, 33, and 34 (See Map 3) which fronted directly on the 15-foot wide alley that ran between the north boundary line of the Six Acre Reservation and the south property line of the U.S. Musket Factory. The Six Acre land was jammed with houses, stables, and shops, many of them built of wood and hence highly flamable. Filth and refuse from this area also poured down the hill when it rained and flowed into the U.S. Armory Canal. Symington wished to purchase some or all of the lots, demolish the buildings that fronted on the narrow alley and improve that lane into a 40 foot wide street. This would create an effective fire break, and with the demolition of the privately owned wooden structures, would greatly lessen the danger of fire to the great Musket Factory workshops. Symington submitted a detailed map showing the land with the buildings on it that was wanted, together with a detailed description of these improvements, with estimates of the prices the land and buildings could be purchased for. The Superintendent asked Congress to

9. Deed of B &. S. ,Swayne to Roeder, Sept, 13, 1847, Deed Book 29,pp. 303-304.
10. Deed of B.&.S., Swayne to Roeder, January 2,1848, Deed Book 29,pp.304-305.

appropriate $ 50,261.00 to carry out this program.[11] Congress appropriated the requested $ 50,261.00 to acquire this land with their improvements on August 8,1846.[12] Symington began implementing the land acquisition program in June 1847 and on June 6,1848, Frederick A. Roeder sold the north ends of Lots 16 and 17, two vacant pieces of ground, each fronting 32 feet on the narrow alley and 25 feet deep, to the United States Government for $ 237.00 each, making a grand total of $ 574.00 received.[13] By 1849, the 15 foot wide alley from the north end of Wager Lot No. 15, subdivision 4, west to Wager Lot 34 had been widened and improved into a 40 foot wide street, as had been proposed by Symington in 1844.

Prior to this, on November 2,1847, Frederick A. Roeder purchased Park Bldg. No. 7, then a one-story stone warehouse with cellar and slate roof, measuring 24 by 40 feet size and erected in 1838-39, from William Anderson for $ 1,000.[14] This structure, located to the east of Wager Lot 16 also fronted on the 15-foot wide alley and occupied a 24 foot wide by 45 foot deep lot that was located on portions of Subdivisions No. 2 and 4 of Wager Lot. 15. Perhaps utilizing the $ 574 received from the United States in June 1848, Roeder, probably in 1848 or 1849, added a second stone story and a half to his warehouse, which was

11. Major John Symington to Lt.Col. George Talcott,Ordnance Department, December 12,1844, with Schedules A and B, describing lots, improvements thereon, and probable prices for land and buildings, published in Serial No. 464, Document No. 43, House of Representatives Executive Documents, Vol. 2, 28th Congress, 2nd Session, 1844-45.

12. U.S. Statues at Large, Vol. IX, p. 69. This money was included in a total appropriation of $ 128,361.00 for permanent improvements at the National Armory at Harper's Ferry. Also see Map No. 3.

13. Deed of B. &. S, June 8,1848, Roeder to U.S., Deed Book 30, pp. 230-231.

14. Deed of B & S., November 2,1847, Anderson to Roeder,Deed Book 29,p.240.

utilized as a" drinking house" known as "White Hall", also as a warehouse, and living quarters were located on the upper floors.

In the 1850's Armory Superintendent Col. Benjamin Huger recommended that the U.S. Government purchase Wager Lots No. 13 and 15, Subdivisions 1, 2, and 4, with the buildings standing on this land, for the purpose of widening the 15 foot-wide alley that still ran between the north boundary lines of these Six Acre Reservation lots and the U.S. Musket Factory property line, into a 40 foot wide street, thus completing the project begun by Symington in 1848. The new street,which was to be first called North Cliff Street and later Potomac Street, would thus be 40 feet wide from its junction with Shenandoah Street/west to the all the way junction with the country road. Huger also proposed that Wager Lot 17 be purchased and turned into a cross street running from Cliff Street up to High Street.[15]

On February 13,1856, Frederick A. Roeder sold a 24 feet wide by 25 foot deep portion of his Bldg. 7 lot, including the front or north half(24 feet wide by 20 foot deep) of Bldg. 7, to the United States for $ 1,700.00.[16] The Armory demolished their portion of the structure and made the lot into a street. This left Roeder with one-half of a two and one-half story stone structure, 24 by 20 feet in size, present Bldg. No. 7, for his use as a tavern, dwelling, and warehouse.

15. Huger to Col. Henry K. Craig, Ordnance Department, July 17,1852, National Archives Record Group No. 156, Records of the Office of the Chief of Ordnance. Copies of correspondence on Harpers Ferry National Historical Park Microfilm Reel 26, Vol. 4, p. 331.
16. Deed of B. &. S.,Feb.13,1856, Deed Book 35,pp.299-300.

Roeder charged $ 700 for the land and $ 1,000 so that he could replace the demolished portion of his Bldg. 7 drinking house.

On August 26,1856, Roeder sold 28 feet six inches of the original 32 foot wide frontage on High Street and also on the new Cliff Street of Wager Lot No. 17[17] to the United States Government for $ 1,166.66. Retaining title to the remaining 3½ foot frontage of Lot 17, Roeder added this to his Lot 16, thus increasing the original frontage of Lot 16 from 32 feet to its present size of 35 feet 2½ inches. On August 26, 1856, the U.S. Government also purchased the leasehold of John G. Wilson to Wager Lot 17, including Wilson's 30 by 60foot one story frame stable which stood on this lot, for $ 300.[18] The Armory then demolished Wilson's stable and converted Lot 17 into a street as it still is today. Wager Lot 16 thus assumed its present size in August 1856.

Wager Lot 16, with Bldgs. No. 5 and 16, and also adjacent Park Bldg. No. 7, remained the property of Frederick A. Roeder and his heirs until after the Civil War.

On January 3,1881, Roeder's heirs sold Wager Lot 16, including Park Bldgs. No. 5 and 16, to Brigdet Boerley (or Burley, and later Burleigh), for $ 1,000.[19] The property remained in the hands of the Burleigh family from 1881 to 1952, passing from Brigdet to her two children: Thomas J. Burleigh and Elizabeth Burley Hagen to

17. Deed of B & S. Roeder to the U.S., August 26, 1856, Deed Book 36,pp.135-136.
18. Deed of B & S., Wilson to the U.S. August 26,1856, Deed Book 36,p. 133.
19. Deed of B & S., Roeder heirs to Brigdet Burley, January 3,1881, Deed Book I, p. 104. The Roeder Heirs sold Park Bldg. No. 5 to Charles L. Hopwood on May 12,1874 for $ 321.43, Deed of B. & S., Deed Book B, pp. 153-154.

Mary Delores Burleigh ,who acquired full titlefrom all[20]
the other Burley heirs in 1951. On December 12, 1952,
Mary D. Burleigh sold Wager Lot 16 with Park Bldgs. No. 5 and
16 to the State of West Virginia for about $ 6,000.

The deed described the bounds of Lot 16 as follows:

Located on the east side of High Street and south side of the connecting street between High and Potomac Streets:-then east 101.75 feet to a point on Potomac Street, then south 35.5 feet, then west 106 feet to a point on High Street, then north 34.26 feet with High Street to the point of beginning. [21]

On December 19,1953, the State of West Virginia donated Wager Lot No. 16, with Bldgs. No. 5 and 16, to the United States Government[22]
to be included in Harpers Ferry National Monument.

20. Deed of B. &. S., October 24,1951, Thomas J. McQuade to Mary D. Burleigh, Deed Bool 186,p.302. Thomas J. McQuade was the grandson of Elizabeth Burley Hagen.

21. Deed of B & S., December 12,1952, Mary D. Burleigh to W.Va., Deed Book 190, p. 508. The price is not given in the deed.

22. Deed of B & S., December 19,1953, W. Va. to U.S., Deed Book 199,p.41.

C. Construction of Bldg. No. 5

The Map entitled " Sketch No. 2, Shewing two practicable locations for the Balto. & Ohio R. Rd. through the Village of Harper's Ferry, Scale 100 feet = one inch," (See Map No. 2), reveals that there was no structure located on the future site of Bldg. No. 5 in 1837-38, the date when this map was drawn.[1]

As has been mentioned , Noah H. Swayne leased Wager Lots No. 16 and 17, then vacant lots, to John G. Wilson for 10 years from the first of April 1,1838.[2] On January 29, 1844, Wilson, a Harper's Ferry merchant, surrendered his leasehold to Wager Lot No. 16 and Swayne immediately leased Lot 16 to Frederick A. Roeder, a Harper's Ferry confectioner or baker, for 24 years at an annual rent of $ 70.00.[3]

Item No. IV of the Swayne-Wilson lease of 1837 contained the the following clause:

> "The said party of the second part (John G. Wilson) within five years from the said first day of April (1838) next shall erect on said Lots (16 and 17) a house or houses of brick or stone covering the entire front of said lots (except enough for one, two or three alleys which may be left or not at the option of said Wilson) at least two stories high & with the walls of sufficient thickness to sustain another story...[4]

Roeder's lease of 1844 for Wager Lot No. 16 also contained a provision that near the termination of the 24 year lease "the improvements now on said premises & those hereafter placed on the premises by the party of the second part (Roeder) ,shall be appraised..."

1. Ordnance Office Drawer No. 6. Portfolio 1, No. 5- National Archives. There is no date on the map, but the plan was one of several that were prepared and accompanied an agreement for a right of way through the U.S. Mukset Factory Yard, signed by the Secretary of War and the President of the B. &. O. R.R. on November 3,1838.
2. Lease, Swayne to Wilson, September 7,1837, Deed Book 22,pp.340-341.
3. Lease, Swayne to Roeder, Januay 29,1844, Deed Book 27,pp. 102-103. Agreement, Swayne and Wilson, Jan. 29,1844, Deed Book 27,p.103.
4. Deed Book 22, pp.340.

by disinterested parties and paid for by Noah H Swayne.[5]

Major John Symington's "Map of the Relative Position of the Reserved Land & Public Works at Harpers Ferry, Va.-1844" prepared in November 1844 to accompany his letter of December 12,1844 to Lt. Col. George Talcott (See Map No. 3) shows the exact state of the improvements on Wager Lots 16 and 17 and his Schedule A provides the following description of the structures located on the northern or lower ends of those two lots, fronting on the 15-foot wide alley.

Lot No. 16 -Owner of Ground-Mrs. Swayne. Owner of Building _____ Description of Bldg.: A large wooden stable, 60 by 30 feet and loft above. Price of ground $ 182; Price of Bldg. $ 218. Total(estimated) $ 400.[6]

Lot. No. 17: Owner of Ground; Mrs. Swayne; Owner of Bldg.-John G. Wilson. Description of Bldg.- A small wooden house 16 by 14 feet, one story. Price of Ground: $ 182; price of bldg. $ 18, Total(estimated) $ 200.[7] Also shown on the southern end of Lot 16, fronting on High Street, is Park Bldg. No. 16 in the first stages of its architectural evolution. The building, however, was not described in Schedule A because Major Symington did not plan to acquire that end of the lot.

The deeds of Roeder and Wilson, selling parts of Lots 16 and 17 to the United States Government in 1856, indicate that the large stable

5. Lease, Swayne to Roeder, Jan. 29,1844. Deed Book 27, pp. 102-103.
6. Serial No. 464. Document 43, p. 9, Scheduale A.
7. Ibid.

with loft had been erected by and belonged to John G. Wilson. He received $ 300 for the structure and his lease from the U.S. in 1856. The deeds for the sale of the north ends of Lots 16 and 17, each 32 feet wide and 25 deep, for $ 237 each to the U.S. in June 1848, indicate that these pieces of ground were vacant at that date. It thus appear probable that John G. Wilson's stable was dismantled from its position on the north end of Lot 16 and reerected on the south(High Street) end of Wager Lot 17(to which Wilson also retained a leasehold) in 1848. The small wooden house on the north end of Lot 17 also could have been easily take down or removed intact back(south) 25 feet on Lot 17, so as the clear its original site for use as the new street.

The new south end of Lot 16 from 1848 to 1856, after the new 40 foot wide street had been built, thus appears to have been vacant land, or the site only of minor outbuildings.

In 1847, Frederick A. Roeder, as has been mentioned, purchased William Anderson's one-story 24 by 40 foot stone warehouse for $ 1,000 and in 1848-49 added a stone story and a half to the original structure. This enlarged building,which fronted on the 15-foot wide alley, was used by Roeder from 1848 to 1856 as a drinking house known as White Hall, with a dwelling on the upper floors, and also as his warehouse for his bakery operations.

In 1856, again as has been note, the United States purchased the front or northern half of Roeder's tavern(Bldg. No. 7), a section 24 feet wide by 20 feet deep , from the baker for $ 1,700. The Federal Government then demolished that front half in order to widen Potomac Street to 40 feet at that point.

In the negotiations leading up to this acquisition, Col. Benjamin Huger, Superintendent of the U.S. Armory, informed the Ordnance Department that Roeder wanted $ 700 for the land to be sold and $ 1,000 to "replace" the half of his 2½ story stone structure that would be demolished.[8]

Bldg. No. 5, which is located on the north end of Lot 16, fronting on the new 40-foot wide street, thus appears to have been constructed by Frederick A. Roeder as a replacement for the space lost by the demolition of one-half of his Bldg. No. 7. This theory is strongily supported by measured drawings of the bullding , namely Drawings No NM-HF-[illegible] 3057, "The Burleigh Store, five sheets, dated August 16,1956. These plans reveal that main portion of the two and one-half story stone and brick house fronted 24 feet two inches on Potomac Street and was 20 feet two inches deep. In other words, the construction of the main portion of Bldg. No. 5, probably in the summer of 1856 or 1857, provided almost exactly the same amount of space that was lost by the demolition of one half of Bldg. 7., which also had to have a new north or front elevation construction in 1856. Furthermore, the early Historical Photographs(HF- 55, HF- 379; and HF-100, which will be discussed in some detail later) suggest the north or front elevations of Bldgs. No. 7 and 5, both probably built in 1856, were almost identical!

It thus appears most probable that Bldg. No. 5 was erected in

8. Huger to Col. Henry K. Craig, Chief of Ordnance, Jly July 17,1852, HFNHP Reel 26, V. 4, p.331.

1856 or 1857 as a twin house to remodelled Bldg. 7.

As constructed in 1856-57, Bldg. 5 was a two and one-half story house with a slate covered gable roof. Unlike Bldg. 7, however, Bldg. No. 5 never had a cellar. Bldg. No. 5 fronted 24 feet 2 inches on Potomac Street and was 20 feet 2 inches deep. The first story stone walls of Bldg. 5 were one feet seven inches thick and were possibly constructed of stone salvaged from the demolished portion of Bldg. No. 7. The walls of the two upper floors of Bldg. are constructed of brick. The east and west side walls are one foot two inches thick and the front and rear walls are 9½ inches thick.

Like Bldg. No. 7, Bldg. 5 had small chimneys centered in the front and rear gable end walls. The fenestration of of the north (front) elevations of Bldgs. No. 5 and 7 also were almost identical. Each was divided into three bays. On the first story there was a wide door located in the center bay and one window in each of the flanking bays. In the second story there was one difference, Bldg No. 7 had three windows, but Bldg. 5 had a door with a small transon above opened out on to a small wooden porch or balcony in the center bay and a flanking window to either side. Like Bldg. 7, Bldg. No. 5 had one window in the third story level, centered un the end chimney. Like Bldg. 7, the windows in Bldg. 5 has six over six lights. By 1889, the first stone story of Bldg. 5, on the north or front elevation, was painted white(See HF- 100). The second and third story brick walls of Bldg. No. 5 however were unpainted during the period 1865 to 1889. (See Photos HF-55; HF- 379, and HF- 100).

The first-story windows on the front elevation of Bldg. No. 5, like those of Bldg. 7, were adorned with exterior louvered shutters (See HF- 100). The eaves of the the east and west side elevations of Bldg. 5 were marked by corbelled brick cornices. The three openings in the second story of the facade were topped by flat brick arches.

The first floor of the main house of Bldg. 5 , like Bldg. 7, probably consisted of one large room that could be use as a tavern, a store, or a warehouse. The upper floors, intended for use as a dwelling, again like Bldg. No. 7, probably had two rooms on each level.

At some undetermined date after 1856-57, when the main portion of Bldg. 5 was erected, but prior to 1861, a two-story brick wing with a sloping shed roof was added to the rear(south) elevation, near the southeast(left) corner. The wing, 12 feet 7 inches wide and 13 feet deep, contained one room on each floor. The first floor room in the wing, which contains a fireplace, may have served as the kitchen, and the rooms above perhaps as a bedroom. Windows in the wing had six over six lights and were topped by flat brick arches. The roof of the wing, like that of the main house, was covered with slate.

In testimony given in 1902, the children of Frederick A. Roeder stated that Bldg. No. 5 contained seven rooms(in contrast to five in Bldg. 5) in 1861, thus suggesting that the brick wing had been added to Bldg. 5 prior to the beginning of the Civil War.[9]

9. National Archives Record Group 123, U.S. Court of Claims, JC Claim (Congressional Jurisdiction) No. 11803. Claims of Frederick A. Roeder Estate against the U.S., 1873-1906, Fderal Federal Record Center, Suitland Maryland. See Appendix I, for statements of Roder heirs.

The facades of Bldg. No. 5 and 7, little altered from their pre-Civil War appearance, are still to be seen in Photo HF-96, which was taken in the period 1896 to 1901. Map No.5- The Sanborn Company Insurance Map of Harpers Ferry, dated September 1907, reveals that the one-story covered porches that were to be added to the first stories of Bldgs. No. 5 and 7 had not yet been erected by that date. For these porches, which were built in the first decade of the 20th century, see Figure 34 on page of 50 of David Hardgrave Hannah"s "Archeological Excavations on Virginius Island, Harpers Ferry National Historic Park, 1966 - 1968 (Harpers Ferry Job Corps Civilian Conservation Center, Harpers Ferry, West Virginia, March 1969).[10]

Archeologist

Park Photos, NHF-196 and NHF- 843, taken 1955-56, show the 20th century one-story porch on the front of Bldg. 7; the similar porch on Bldg. 5 is missing, but structural evidence visible on the facade documents the fact that such a porch had once existed.

The Inventory of Buildings, prepared by Henry C. Edwards and John T. Willett in 1955, to accompany the Architectural Base Map of Harpers Ferry, Drawing No. NM - HF - 3055, offers the following information on the state of Bldg. No. 5: Type: Store; Date- B.1847 (actually 1856) Built by: _____. No of stories 2½, 1 story wood shed(in rear). Square feet per floor- 649 plus 200 in shed.

10. This photo, donated by the Bank of Charles Town, Charles Town, W.Va., was dated by the bank as taken in 1893, but the actual date had to be after 1901 and probably 1907, for the following reasons: 1st. The Catholic Church, on which remodelling work began in 1896 , is completely remodelled in this view. 2nd. Bldg. No. 3, which was erected after 1901 and before 1907 is visible in this picture; and 3rd. The Sanborn Company Insurance Map of September 1907 indicates that neither Bldgs. 5 or 7 had had front wooden porches added to their facades as of that date.

Cost to W. Va. $ 200 plus $ 5,800 for Bldg. No.16. Condition: September 1955: Flood damage, deterioration from neglect. Remarks (1). Belonged to Burleigh family before Civil War (Incorrect- since 1881.) Sold to Frederick Roeder, 1847. Unused since 1918.

D. The Use of Bldg. 5, Roeder's Store, 1856-1953

Confectioners, bakers, and tavern keepers did not find it necessary to advertise their business in the newspapers so that there is no documentary evidence available on just how Bldg. No. 5 was utilitized during the period 1856 to 1861. Roeder's children, in statements made in 1902, indicated that their father had rented out Bldg. 5 for $ 10. a month prior to the Civil War.[1] From the design and location of Bldg. 5 it could be used as a tavern, store, or warehouse on the first floor, and as a residence on the upper floors. From its location close to the entrance to the U.S. Musket Factory, Bldg. 5 may well have been used, as was Bldg. No. 7, as another "drinking house."

On April 18, 1861, Confederate troops seized the National Armory at Harpers Ferry and held the town until June 15, when after destroying all the Armory buildings they could and removing all of the machinery possible, the Confederate Army under the command of General Joseph E. Johnson evacuated the town. Confederate skirminishers, however, kept moving in and out of Harpers Ferry in the weeks that followed. A Union Army under command of Major General Robert Patterson invaded Virginia on July 2, 1861, crossing the Potomac at Williamsport, Maryland. A Union force comprised of the 1st New Hampshire, 1st Pennsylvania, and 9th New York regiments, under the

1. See Appendix I, Statement of James R. Roeder, September 5, 1902.

command of Col. Stone, occupied Sandy Hook, Md., opposite to Harpers Ferry about the the same time as Patterson moved into Virginia. On July 4, at about 4 p.m., the picket guard of the 9th New York, under command of Lieutenant Galbraith, Co. E., was fired upon by rebels hidding in the ruins of the Musket Factory, and posted behind the iron treatle work and bridge abutments of the B. & O. railroad on the Virginia side of the Potomac. Fearing that the rebels would attempt a crossing, Lieutenant Galbraith called for re-enforcements. Conpanies A, C, and a detail of 16 men from Company G, proceeded under the command of Major Atterbury to the ruined B. &. O. Potomac bridge. The firing lasted about half an hour when the Federals retired, as their antiquated smooth-bore muskets proved no match for the later model rifles and rifled-muskets of the Confederates. One Union soldier was mortally wounded, and four more were wounded in lesser degrees.

During this inital skirminish of the Civil War at Harper's Ferry, the first civilian casualties were experience. A shoemaker of Harpers Ferry, named Harding, who was on a spree, needlessly exposed himself, and received a dangerous wound as a consequence of his foolhardiness.

That same evening, when the fight was over, a straggler from a Pennsylvania Regiment, celebrating the Fourth of July at Sandy Hook, fired a random shot across the Potomac, intent upon killing some " damned rebel." His bullet glanced off the brick end of Isaac Fouke's Hotel, the former Wager House or U.S. Hotel, located on Wager Lots 6, 7, and 8, and struck Mr. Frederick A. Roeder, a prominent citizen of Harpers Ferry, who happened to be coming around the corner of the building, at that fateful moment. Roeder reached his home, Park Bldg. No. 16, unassisted

and shortly thereafter died from the wound which had ripped open his groin.[2] He was 51 years old. Ironically enough, Roeder was a strong supporter of the Union cause.

Roeder's wife, Anna Maria, had died in her 41st year on March 23, 1861, and with his death on July 4, they left six minor children aged two to 16. Roeder's 18 year old daughter Mary L. Roeder, who had recently married, and her 25 year old husband, John J. Kern, took charge of the six orphens and fled for safety to Maryland, living at Middletown and Frederick during the remainder of 1861. On their departure, the citizens of Harpers Ferry and the roving soldiers of both armies looted Roeder's property, furnishings and papers from Bldgs. No. 5, 7, and 16.

On Sunday, July 21, the day that the First Battle of Manasses was fought, Patterson, [illegible] retreated from Charles Town to Harpers Ferry and established his headquarters in the residence of the Armory Superintendent, Armory Dwelling No. 25, on Camp Hill.

The wholesale mustering out of Patterson's command, which was comprised chiefly of volunteers who had enlisted for three months service, had already commenced. On July 21, five regiments left, four more on the 22, and so on. His command of 14,344 men on June 28 was reduced by July 29 to about five or six thousands men. The 70-year old Patterson was discharged himself on July 25. Major General Nathaniel P. Banks

2. For detailed study of the first year of the Civil War at Harpers Ferry, Sullivan. Arthur L., "Harpers Ferry, April 18- December 31,1861, A Casualty of War,"(NPS typescript, Harpers Ferry National Monument, February 17,1960), pp.61- 65. For death of Roeder, also see Barry, Joseph, The Strange Story of Harper's Ferry(1st printing 1903, 7th Printing Shepherdstown, W.Va., 1974),pp.106-108.

took command of this reduced army on July 25. Long-term enlistees now joined Banks's force until by August 6, he had almost 12,000 men. Convinced however, that 20,000 men were necessary to defend the military position of Harpers Ferry- that is, holding fortifications on Bolivar, Loudoun, and Maryland Heights, Banks withdrew his army from Harpers Ferry to the Maryland bank of the Potomac on August 17,1861 From August 18,1861 to February 25,1862, when the Union Army reoccuppied Harpers Ferry in force, the town was virtually a no-man's land.[3]

On or about July 25, 1861 and until March 25,1862, the Roeder children and John J. Kern were to charge in 1873, the Union Army under the command of Major General Robert Patterson occupied and used the abandoned buildings of Frederick A. Roeder. John J. Kern, who was appointed administrator of the the Frederick A. Roeder Estate in 1863, stated in his claim against the United States Government for the Army use of these structure. That the Army "took possession shortly after Mr. Roeder was killed..." "They were all used by Col. Baxter's (Philadelphia Fire) Zouaves(three month volunteer troops). Bldgs No. 5 and 7 had their first floors used as stables and the upper floors were utilized to store hay and other stores. The Union Army used these two structures" off and on during the entire war." Kern further reported that the buildings were in good condition when the U.S. first took possession, and he(Frederick A. Roeder) always kept them in good repair. They were in a bad condition when the U.S. left them. The

3, Sullivan, "Harpers Ferry. April 18- December 31,1861-A Casualty of War," pp.71-79. Also Arthur L. Sullivan,"Harpers Ferry in the Civil War- 1862,"(NPS typescript, Harpers Ferry National Nonument, June 26, 1962).

"windows had been taken out and removed to Camp Hill to build quarters for the soldiers with. I guess it would have cost $ 1,000.00 at that time to restore the three bu ldings to the condition in which they were before the U.S. authorities used the same. "[4] Kern's remarks about dates in 1861 are not particularly accurate because, as has been mentioned, he fled to Maryland. Kern, like his father-in-law, was also a strong Union supporter, and he returned to Harpers Ferry with his wife and the six Roeder children in March 1862, taking up residence in Bldg. 16, while the Union Army, as Kern wrote later, continued to utilize Bldgs. No. 5 and 7 "off and on to the end of the war." The Kern-Roeder family contained to reside in Harpers Ferry until 1865, except during several brief intervals when Confederate troops again occupied Harpers Ferry and the family found it wise to retreat again into Maryland for safety. The censuses of 1870 and 1880 reveal John J. Kern, confectioner and baker, with his family of seven and James Roeder and family of four were living on Wager Lot 16. (A).

In October 1873, acting as Administrator of the Roeder Estate, John J. Kern presented a claim against the United States Government in the total amount of $ 504.00 for the rent of Bldgs. No. 5, 7 and 16, during the period July 25,1861 to March 25,1862.

For Bldg.5 he requested:

"For Rent of two-story Brick House with seven rooms on Potomac Street from July 25,1861 to March 25,1862, at $ 12.00 per month.....$ 108.00 [5]

4. See statements in Appendix I of this report.
5. Claim of J.J. Kern for Rent, 504, Power of Attorney, Dated October 8,1873, to N.M. Macrae, National Archives Record Group 123.

A. Census of 1870, Mircrolim Reel No. 1869, National Archives, Washington, D.C. Cenus of 1880 . Record Group 29, Microfilm Reel 1404. James Roeder worked on the railroad and his family perhaps resided in Bldg.5 while Kern's may have lived in Bldg. 16.

Kern was to press this claim in the Treasury Department, in Congress, and in the U.S. Court of Claims from 1873 to June 8,1906, when the U.S. Court of Claims finally awarded the Roeder heirs $ 320.00 of the total $ 504 requested. Kern was then 70 years old. The Roeder heirs, however, did not receive the $ 320 award until 10 years later, because Congress [illegible] to appropriate the money did not do so until March 4,1915. On January 1,1916 this money was finally distributed as follows: the lawyers and administrators received a total of $ 114.32 and each of the seven Roeder heirs received $ 29.38.[6]

The Boerly Family Era, 1881-1952:

On January 3,1881, as has been mentioned, Administrator John J. Kern and the Roeder children sold Wager Lot 16, with Bldgs. No. 5 and 16, to Bridget Boerly (who appears in history under the aliases of Boerly, Burley, and Burleigh)[7] for $ 1,000. Mrs. Boerly was the widow of Thomas Boerly, a Harpers Ferry tavern keeper who was killed by the John Brown raiders on October 17, 1859.

Thomas Boerly and his wife, Bridget, were both born in Ireland in the year 1818.[8] The historian Joseph Barry reported that Thomas was " a native of the County of Roscommon in Ireland."[9] They had arrived in this country by 1844, for their eldest child, Mary, was born at Harpers Ferry during that year.[10]

6. The more detailed story of this 43 year battle is narrated in Snell, Charles W., "Historic Structure Report: White Hall Tavern, Bldg. No. 7, on Subdivisions No. 2 and 4 of Wager Lot No. 15- Historical Data, Harpers Ferry National Historical Park, West Virginia,(National Captial Team, Denver Service Center, Denver Colorao, April 1980),pp.18-20.

7. Deed Book I, p.104.

8. U.S. Census of 1850, HFNHP Reel 12,p.41. They both stated that they were 32 years old and born in Ireland

9. Barry, Strange Story, p.84.

10. Census of 1850 lists Mary as six years old and born in Va.

Barry describes Boerly as "a man of great physical strength and he was noted for courage. He measured about six feet in height and weighed about two hundred pounds."[11] In 1850 Boerly listed his occupation in the census as " laborer" and he was probably employed at the U.S. Armory. He and Brigdet had two girls and a boy, ranging in age from two to six. Surviving evidence suggests that Brigdet was probably the brains of the Boerly family.

At some date between 1850 and 1853 Thomas and Bridget Boerly opened a tavern on Wager Lot 56, Section C in a three-story stone and brick house that fronted on the south side of High Street, leasing the lot and house from Gerard B. Wager, one the heirs of John Wager, Jr., They made money, for in November 1853 Thomas was able to paid a total of $ 676 to purchase Wager Lots No. 28 and No. 36 from the estate of Martin Grace, a deceased tavern owner.[12] In a deed of trust dated July 8,1854, Thomas Boerly put into trust to secure a loan "his household stuff and furniture and bar and bar fixtures" and he further noted that Bridget, his wife," had been keeping a tavern boarding house out of which from her excellent care and labor considerable money was made."[13]

11. Barry, Strange Story, 84,plus other details.
12. Deed Book 39, p.477.
13. deed of Trust,July 8,1854, Deed Book 34, pp. 134-136.

The family continued to operate their tavern at the High Street stand from 1850 to 1861. Barry narrates the death of Thomas as follows:

"A little before 7 o'clock, a.m. (on October 17, 1859-during the John Brown Raid), Mr. Alexander Kelly (a blacksmith who resided in a house on Wager Lot No. 25, High Street) approached the corner of High and Shenandoah Streets (by Bldg. No. 12), armed with a shot-gun, for the purpose of discharging it at the invaders. No sooner did he turn the corner than two shots were fired at him and a bullet was sent through his hat. Immediately afterwards, Mr. Thomas Boerly approached the same corner with the same purpose. He was a man of herculean strength and great personal courage. He discharged his gun at some of the enemy who was standing at the arsenal gate, when a shot was fired at him by one of the party who was crouching behind the arsenal fence. The bullet penetrated his groin, inflicting a ghastly wound, of which he died in a few hours."[14]

The census of 1860 reveals that Thomas left three children: Charles, 14; Elizabeth, 11; and Thomas, Jr., 8. His widow, Bridget, listed her occupation as "Merchant", The value of her real estate owned (Wager Lots 28 and 36) at $ 1,500, and the value of her personal estate at $ 600.[15]

Writing of the Boerly family in 1903, Historian Joseph Barry noted: "His (Thomas Boerly, Sr's) youngest child Thomas, Junior,

14. Barry, Strange Story, 51-52.
15. Census of 1860, Reel 12, p.195.

"still resides at Harper's Ferry and is quite a prominent citizen. (He was mayor of Harpers Ferry in 1896). He has inherited the great bodily powers and the many genial characteristics of his father. The State of Virginia granted a small pension to the widow but, the (Civil) war breaking out shortly afterwards, she received no benefit from the annuity until the restoration of peace, her claim was brought to the notice of the state authorities. From that time, until her death a few years ago, she was paid punctually. Mr. (Thomas) Boerly (in 1859) kept a grocery store and was in very comfortable circumstances."[16]

At the time of Thomas Boerly, Sr.'s death in October 1859, however, " all the household stuff and furniture and bar and bar fixtures now in the dwelling house and tavern on High Street where said Boerly resides" was in the name of his wife Bridget.[16] [17] The total value of his personal estate in 1859, which included one small carriage and one grey horse, was $ 455.00.[18]

In the great public auction of Armory lands that was held at Harpers Ferry in December 1869, when lot and buildings were sold at highly inflated prices, Bridget Boerly was the high bidder for Wager Lot No. 18, with its with three-story brick house, at $ 2,600.00 and also for vacant Wager Lot No. 29 at $ 80.00.[19] After thinking it over, she apparently decided she had bid too much for Lot 18 and, on December 6,1869, refused to sign her bond for the property. The lot thus reverted to the U.S. Government,

16. Barry, Strange Story, p.85.
17. Deed Book 34,pp.134-136.
18. Will Book No. 16, p. 162-163, Jefferson County Courthouse, Charles Town, W. Va.
19."Letter from Chief Clerk of the War Department, communicating,in compliance with a Senate Resolution of December 4,1873, information in relation to the sale of Government property at Harper's Ferry(in1869), in Senate Executive Documents, Vol. 1, 43rd Congress, Serial No. 1580, Document 6,p. 4,

and Mrs. Boerly thus escaped being burdened with a heavy debt that many citizens saddled themselves with when they bid extremely high prices on the government land on the assumption that Harpers Ferry was about to enter a boom period, when in fact the depression that began at Harpers Ferry in 1865 was to continue to 1884! Mrs. Boerly did, however, purchase Lot 29, which adjoined her Wager Lot No. 28, for the bid price of $ 80.00 and received her deed from the United States on January 13,1872.[20]

Returning to Bldg. No. 5 on Wager Lot 16, the Boerly or Burleigh family operated this structure as a tavern from 1881 well into the 20th century. Both the Sanborn-Perris map of November 1894 and the Sanborn Map dated September 1907 indicate that Bldg. No. 5 was still being utilized as a "Saloon" when these map were prepared(See Maps 4 and 5). Bldg. 5 was thus probably used chiefly as a tavern, with a residence located on the upper floors, from its construction in 1856 down to 1918.

Bldg. No. 5 was operated as a tavern by Thomas J. Burleigh, the son of Bridget Boerly, probably from 1881 to 1918. In the census of 1900, he gave his occupation as " saloon keeper " and he was then residing with his wife and seven children in Bldg. No. 16.[21]

20. Ibid., p. 4; All in National Archives Record Group 121, Public Buildings Service, Entry 76- "Deeds from United States, Harper's Ferry, Ordnance Department" (2 vols.), Vol. II, p. 5, for deed. During the December 1867 sale, Thomas J. Burley purchased Lot 1, Block A., Shenandoah Street, for $ 2,025.00. This price was later abated or reduced to $ 450.00 and Burley received his deed for Lot 1 on November 6,1879, U.S. Deeds,II, p.30; also Serial No. 1530, p. 2.

Under the terms of Bridget Boerly's will, title to Wager Lot 16, with Bldg. 5 and 16, passed in equal portions to her two surviving children, Thomas J. Burley or Burleigh and Elizabeth Burley Hagen.

21. U.S. Census of 1900, Microfilm Film Reel 1761, National Archives, Washington, D.C.

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2. Deed Books, Jefferson County Court House, Charles Town, W. Va.

3. Will Books, Jefferson County Court House, Charles Town, W. Va.

4. Vigrinia Free Press, Charles Town, Va., 1824-1861, a weekly newpaper that printed Harpers Ferry and county news. Available for use on nine reels of microfilm at Library of Harpers Ferry National Historical Park.

5. Harper's Ferry Constitutionalist, 1839-1840, a weekly newspaper that was briefly published at Harpers Ferry. Available for use on microfilm at Park Library.

6. Virginia Free Press, Charles Town, West Virginia, 1865-1896. Weekly newspaper publishing area news. Available for use(with some gaps) at Shepherd College Library, Shepherdtown, W. Va. on microlfim. Some bound volumes of originals in Jefferson County Court House, Charles Town, W. Va.

7. Spirit of Jefferson, Charles Town, West Virginia, 1865 to 1955, and to date. Weekly newspaper publishing area news. Available for use on microfilm at the University of West Virginia, at Morgantown, W. Va.

8. National Archives Record Group No. 29, Records of the Bureau of the Census, Population Schedules of the 6th, 7th, 8th, 9th, 10th, 11th, and 12th Censuses of the United States, 1840 to 1900, Washington, D.C. Censuses for the years 1840 to 1870 are available for use on microfilm at the Park Library.

9. Northern Neck Grants Books, Virginia State Library, Richmond Virginia.

10. National Archives Record Group No. 121, Public Buildings Service, Entry No. 75, Warrenty Deeds and Correspondence, 1796-1884, for Public Lands of the U.S. Armory at Harper's Ferry, Va., Washington, D.C. Has copies of all the early deeds, leases, etc.

11. National Archives Record Group 123, U.S. Court of Claims, JC (Congressional Jurisdiction)- No. 11803- Claim. Federal Record Center at Suitland, Md. This has all the of the Frederick A. Roeder Claims for Bldgs. No. 5, No. 7, and No. 16 against the United States from 1873 to 1906.

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13. National Archives Record Group No. 156. Records of the Chief of Ordnance. Correspondence of the Chief of Ordnance and the Superintendents of the U.S. Armory at Harper's Ferry regarding the purchase of land and buildings adjacent to the U.S. Musket Factory, during the years 1844 to 1857. Available on microfilm at the Park Library of Harpers Ferry National Historical Park.

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III National Park Service Reports:

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Snell, Charles W., "Historic Building Report, Part I, for Building No. 5." (NPS typescript, Harpers Ferry National Monument, W.Va., dated October 18,1957, revised January 29,1958), 14 pp., 4 maps, and 1 photo.

Snell, Charles W., "Historical Building Report, Part II, Historical Data Section for Building No. 5, Frederick A. Roeder's Store,"(NPS typescript, Harpers Ferry National Monument, March 31, 1959), 15 pp., 3 maps, and 3 photos.

Sullivan, Arthur L., "Harpers Ferry, April 18- December 31,1861,- A Casualty of War," Harpers Ferry National Monument(NPS Typescript, Harpers Ferry NM, February 17,1960), 118 pages. 14 illustrations.

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Gardner, William M. , "Excavations - Harpers Ferry,1973-74,"(Contract study for the Denver Service Center, December 6,1974). Archeologist Gardner's test trench G investigates the site of Bldg. No. 6, which was erected about 1890 and located between Bldgs. 5 and 7. Also test trench H, investingated the area north of the rear elevation of Bldg. No. 16.

Appendix No. I

Documentary eviden e on the number of rooms and Use of Bldg. No. 5, during the years 1861-62, by the Union Army.

Data extracted from:

National Archives Record Group No. 123, U.S. Circuit Court of Claims Records. Claim File No. JC 11803,Congressional Jurisdi tion, Abstract of Evidence from 1873 to 1906 of Claims of the Estate of Frederick A. Roeder to the U.S. for the U.S. Army use of Bdlgs. No. 5, 7, and 16 from 1861 to 1862. Federal Record Center, Suitland, Md.

Frederick A. Roder's Store, Building No. 5: and 5A , in 1861-62

a. John J. Kern's claim, October 4,1873, for rent on behalf of the Estate of F.A. Roeder:

For Rent for two story Brick House on Potomac Street from July July 25, 1861 to March 25,1862 at $ 12.00 per Month..... $ 108.00

rented by Col. Baxter commanding Baxter's Philadelphia Fire Zou aves.

b. John J. Kern(66 year old) statement of Sept. 5,1902: p. 4

There was one building (No.16) on Washington(or High)S treet and two (Bldgs. No. 5 and 7) on Potomac Street.

They were all used by Col. Baxter's Zouaves...The two brick buildings on Potomac Street were used for stables and other purposes.

They took possession shortly after Mr. Roeder was killed...

They(the Union Army) held it continuously until Baxter left and they used them off and on during the entire war. I think Baxter left sometime in the spring of 1862.... The other two(buildings) on Potomac Street were worth $ 10.00 each (in rent per month) and did bring $ 15.00 at one time.

The buildings were in good condition when the U.S. first took possession; and he (Roeder) always kept them in good repair. They were in a bad condition when the U.S. left them. The windows had been taken out and removed to Camp Hill to build quarters with. I guess it would have cost $ 1,000.00 at that time to restore the (3) buildings to the condition in which they were before the U.S. authorities used the same.

Cross-examination of Kern: p. 5

"...One of the buildings on Potomac Street had five rooms(Bldg. No. 5) and the other (No. 7). three.... I can't say who (what officers) used the buildings on Potomac Street. They were in and out all the time... The other two (buildings) on Potomac Street(were worth) about one thousand dollars (at the time the occupancy commenced).

c. Mary L. Kern, 59 years old, oldest child of Frederick A. Roeder, Statement of Sept. 5,1902: p. 5

" I know the U.S. authorities occupied buildings belonging to my father's estate during the war, -- our home place (Bldg. No. 16) and two (Bldg. Nos. 5 and 7) on Potomac Street... One (Bldg. No. 5) on Potomac Street (contained)seven (rooms) and the other (Bldg. No. 7 had) five (rooms).

Our father was killed July 4,1861. and the troops took possession of the house (Bldg. No. 16) that month. They gave up the home building (No. 16) and we took possession in March, 1862. The other two they used after that at different times during the war. They were brick buildings. (The Union Army used) The Potomac Street buildings for stables and warehouses for storing feed, etc.

Cross-examination of Mary L. Kern, 1902: p. 6

"The two buildings on Potomac Street were two and one-half stories high. I think it was Col. Baxter who had control of the home house (Bldg. No. 16) and it was the same troops had the other two."

d. James R. Roeder, 54 years old, second oldest son of Frederick A. Roeder, statement of Sept. 5, 1902: p. 4

The Union army used three houses (Bldg. No. 5, 7, and 16) and a bakery (Bldg. No. 16A?) belonging to my father's estate...

The other two buildings were on Potomac Street. They were built of brick. One (Bldg. No. 5) had seven rooms and the other (Bldg. No. 7) five. They used the lower part for horses and had forage in the upper part. The larger building was worth $ 10 per month (in rent) and the other $ 6.00.

They (the Union Army) took possession not quite a month after my father died, July 4, 1861. I could not say for sure but I think they (Col. Baxter of the 72d Penn. Fire Zouaves) remained there that winter."

Cross-examination of James R. Roeder: p. 5

"The same officers (Mr. Baxter and his staff) had control of the buildings on Potomac Street."

e. Thomas J. Burleigh, past 50 years of age, owner in 1902 of Bldg. No. 16, statement of Sept. 5, 1902: p. 6.

"I dont remember about them (the Union Army) occupying the two buildings (Buildings No. 5 and 7) on Potomac Street, but I remember they were very much damaged by some one."

f. Summary of the evidence by Attorney G.W. Hott, May 4, 1906:

"One (Bldg. No. 5) contained seven roons and one (Bldg. No. 5) five.

The buildings were used for....a stable, and warehouses."

Map No. 1

A Portion of the "Plat of the Wager Six Acre Reservation and the Three-fourth of an Acre Ferry Lot Reservation, showing the subdivision of this land of John Wager, Jr., among his three heirs, October 10,1835." By James M. Brown, S.J.C. Scale: One inch equals 60 feet.

Original of this plat is in Deed Book 29, at page 140, Jefferson County Court House, Charles Town, W. Va.

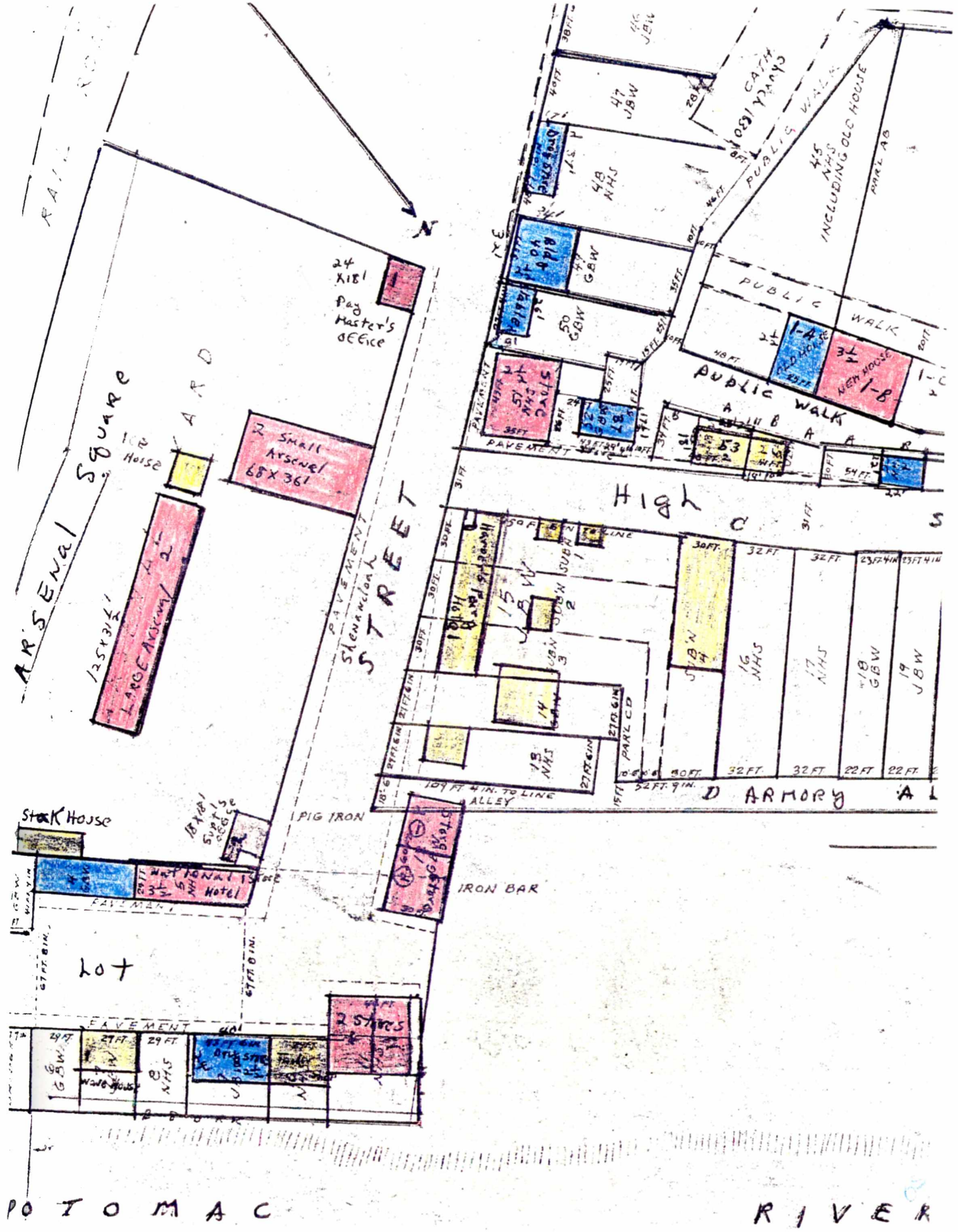
This is from a tracing of the original made by Architect Archie W. Franzen, July 11,1957, and numbered as Harpers Ferry National Monument Master Plan Drawing No. NM-HF 30706.

The buildings shown on this plat have been added by Historan Charles W. Snell on the basis of the announcement and description of the Wager lots and buildings of James B. Wager that were to be offered for sale at public auction, which was published in the Virginia Free Press, on April 7, 1836, p. 4, c. 1, supplemented by data drawn from the two following sets of railroad maps:

1."Map of Harper's Ferry Shewing the Location of the Winchester and Potomac Railroad, Drawn by Lieuts. White, Allen, and R. . Smith, U.S. Army, under the direction of James Keamney, Lt. Col. d T.E.- Map No. 2. Approved by President Andrew Jackson, 27th Jan ry 1835. Scale 100 feet to one inch. Prepared in 1834, this map is included in the Harpers Ferry National Monument Master Plan as Drawing No. NM-HF - 3002.

2."Map Shewing the routes surveyed for the Balt. & Ohio Rail Road along the public grounds on the Potomac at & above HARPER'S FERRY upon which the Company have applied to Government for permission to locate and construct their road. Scale 400 feet to one inch." Signed Benjamin H. Latrobe, Engineer of location & construction, Balt. & Ohio R. Rd. (no date, but prepared in 1837 and agreements based on this map with U.S. signed by the Secretary of War and President of the B & O, on November 3,1838), Sheet No. 3; and"No.2- Sketch Shewing two practicable locations for the Balto. & Ohio R.Rd. through the village of Harper's Ferry. Scale 100 feet to one inch."Ordnance Office,Drawer No. 69, Portfolio 1, No. 5 and 6.(National Archives Record Group No. 121, Public Buildings Service, Washington, D.C.)

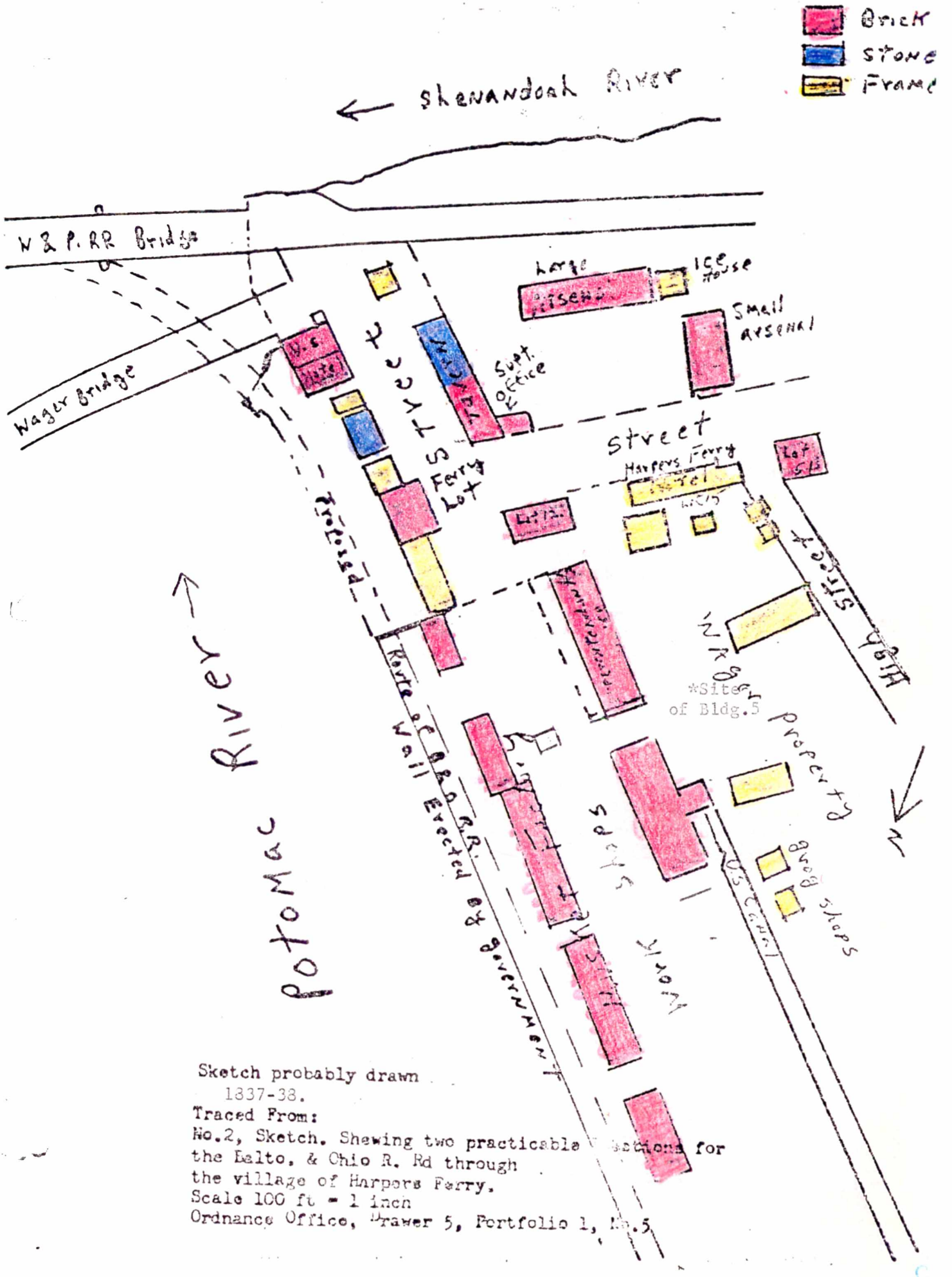
Buildings colored red are brick; Buildings colored blue are stone; and buildings colored yellow are frame. Materials of buildings have been determined by Historian Snell.


ARSENAL SQUARE
STREET
PAVEMENT
Stenandoah
N
24 X181
Pay Master's OEEice
2 Small Arsenal 68X361
Ice House
135X31½'
LARGE Arsenal
Stack House
BRICK SUTLERS OFFICE
PIG IRON
IRON BAR
Lot
67FT 6IN.
PAVEMENT
2 STORES
PUBLIC WALK
NEW HOUSE
1-A
1-B
PUBLIC
WALK
PAVEMENT
High
STREET
ARMORY
ALLEY
109 FT 4 IN. TO LINE
POTOMAC
RIVER

Map No. 2

"Sketch No. 2, Shewing two practicable locations for the Balto. & Ohio R. Rd. through the village of Harper's Ferry. Scale 100 feet to one inch." No date, but prepared in 1837 as part of a study and agreement that was signed by the Secretary of War and President of the Baltimore and Ohio Railroad for a right of way through the U.S. Musket Factory grounds on November 3,1838. (Ordnance Office, Drawer 5, Portfolio No. 5) National Archives Record Group 121, Public Buildings Service.

This map, drawn in 1837-38, shows that the the future site of Bldg. No. 7 was vacant in 1837.



Sketch probably drawn
1837-38.
Traced From:
No.2, Sketch. Shewing two practicable locations for the Balto. & Ohio R. Rd through the village of Harpers Ferry.
Scale 100 ft = 1 inch
Ordnance Office, Drawer 5, Portfolio 1, No.5

Map No. 3

"MAP of the Relative Position of the Reserved (Wager Six Acre Reservation) Land & Public Works at HARPERS FERRY, VA. 1844

(Copy- H. Ferry Armory 22 March 1847- Prepared by Major John Symington-Ordnance Department, Drawer 5, Portfolio No. 1). (National Archives Record Group No. 121- Public Buildings Service, Washington, D.C. Map has been reduced to about one-quarter of its original).

Symington prepared the original of this map in color to accompany his letter of December 12, 1844 to Lt. Col. George Talcott of the Ordnance Department, with Schedules A and B, requesting Congress to appropriate $ 50,261.00 to purchase the enclosed areas from Wager Lot No. 16 west to 32, 33, and 34, as well as Wager Lots 11 and 12 at the entrance of the Musket Factory Yard. Symington shows the locations of all buildings on the lots he wished to acquire. By purchasing this land, Symington planned to demolish all of the building fronting on the south side of the 15-foot wide alley and widen it into a 40 foot wide street, thus creating an effective firebreak or lane between the Armory workshops and the structures on Six Acre Reservation Land. Symington also hoped to demolish the large three-story brick buildings on Wager Lots 11 and 12, so that he could widen and develop a formal entrance to the U.S. Mukset Factory Yard.

Symington's Letter of December 12,1844, with Schedules A and B, describing the improvements on each lot, with the price of land and buildings, is published in Serial No. 464, Document No. 43, 28th Congress 2nd Session, 1844-45, House of Representatives Executive Documents, Vol. 2, Document No. 43.

MAP

OF THE

Relative Position

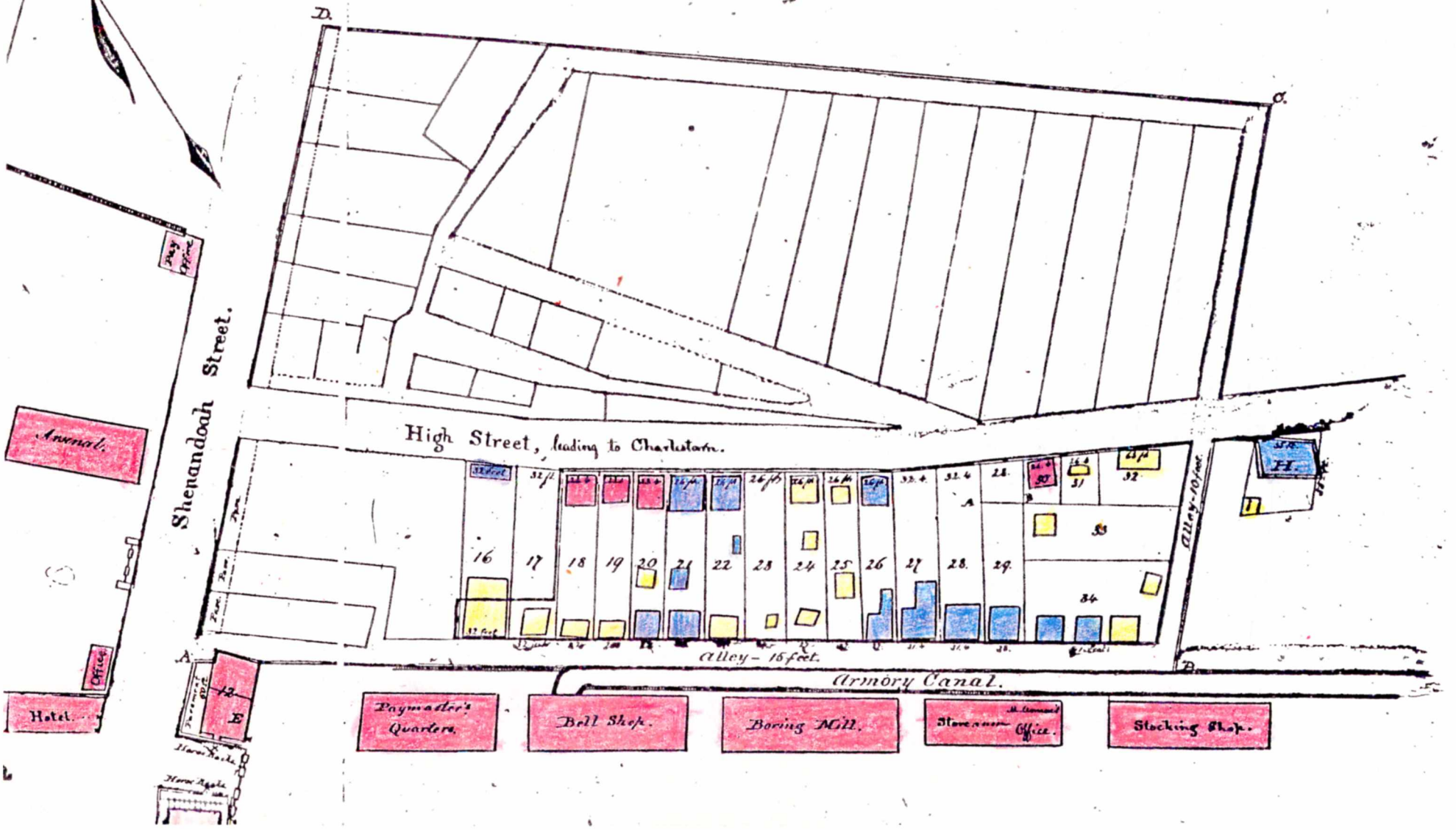
of the

Reserved Land & Public Works

at

Harpers Ferry, Va.

1844.



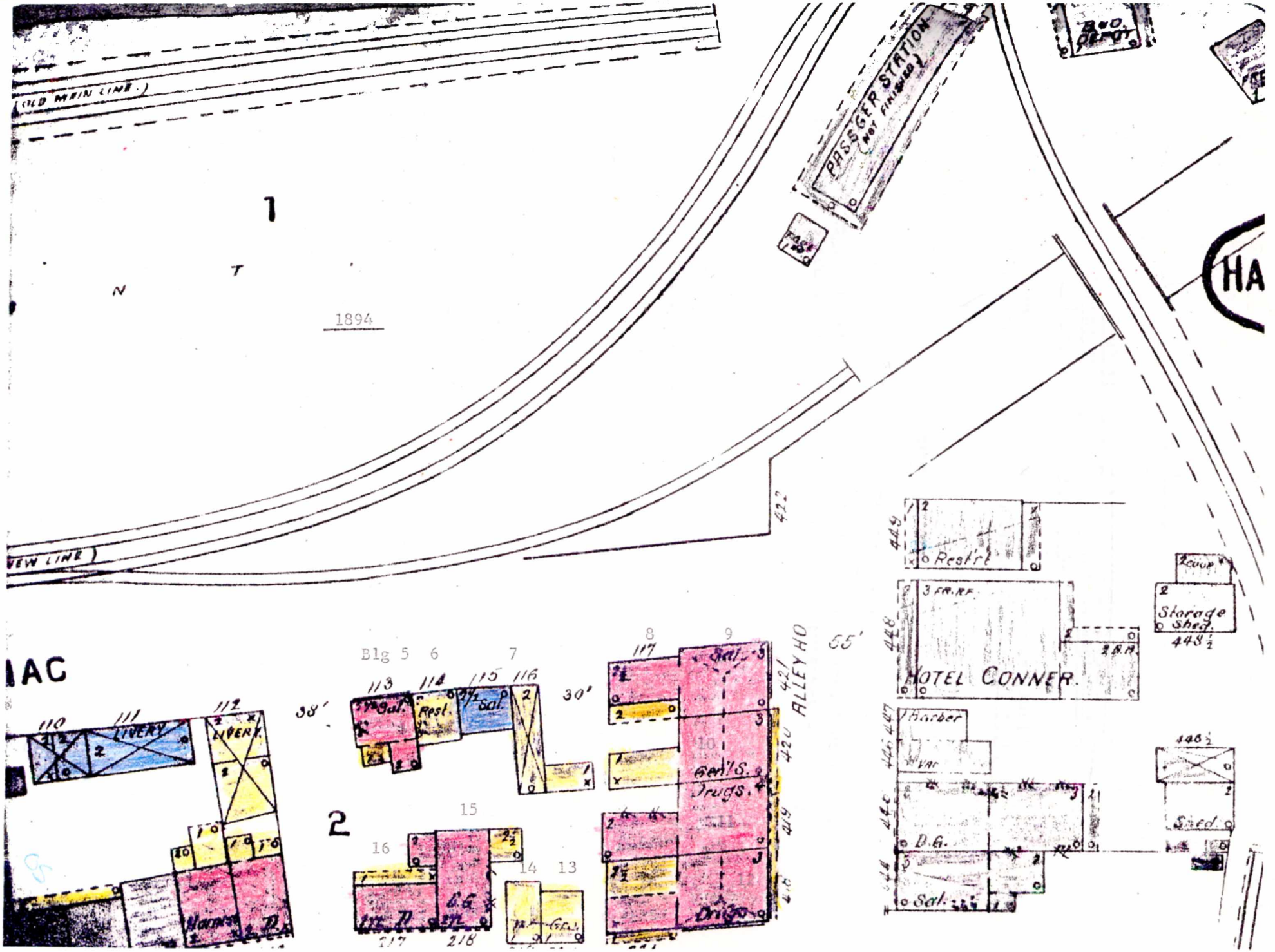
Map No. 4

Section of The Sanborn Perris Maps

of Harpers Ferry, Jefferson County, West Virginia,
November 1894. Scale 50 feet to one inch.

A set of original plates from this atlas are in the Park Library at Harpers Ferry National Historical Park.

Buildings colored red are of brick construction.
Buildings colored blue are of stone construction
Buildings colored yellow are of frame construction.
These materials as given on this copy of the map are taken from data shown on the 1894 insurance maps.


(OLD MAIN LINE)
PASSGR. STATION
(NOT FINISHED)
B. & O. DEPOT
1
N
T
1894
HA
(NEW LINE)
42.2
AC
110
111
LIVERY
112
LIVERY
Bldg 5
6
7
113
114
115
116
Sal.
Rest.
Sal.
38'
30'
2
15
16
14
13
L.G.
Groc.
217
218
8
9
117
Sal.
10
Gen'l S.
Drugs.
Drugs
ALLEY NO
42'
42.0
41.9
41.8
55'
449
Restr't
3 FR. RF.
2 BR.
HOTEL CONNER.
448
2 Story
Storage Shed.
448½
Barber
Var.
446
447
446½
D.G.
Shed
Sal.

Map No. 5

Sanborn Company Map of Harpers Ferry
Jefferson County, West Virginia, September 1907
Scale 1" = 50 feet to the inch.

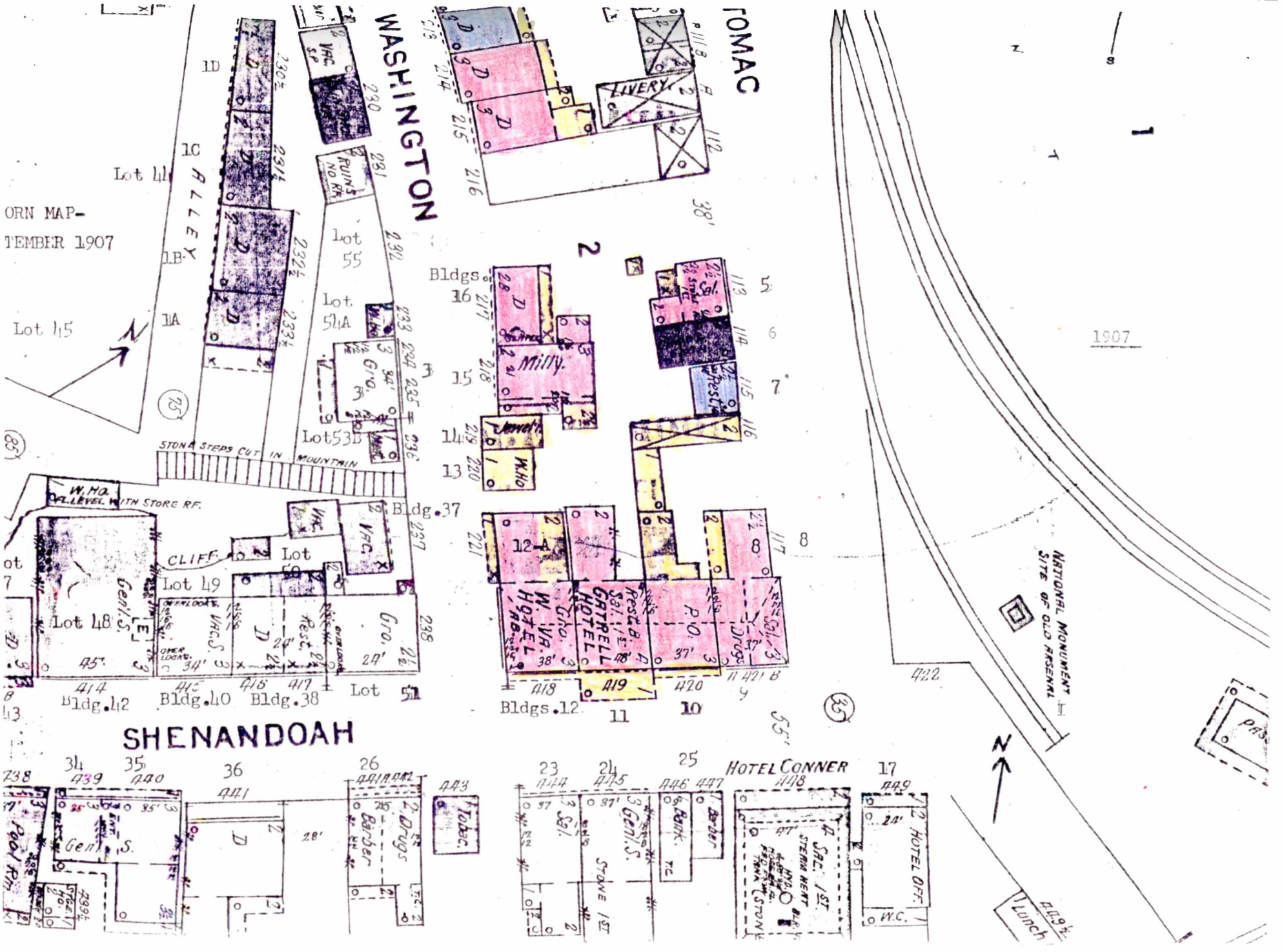
A set of plats from this atlas are available in the library of Harpers Ferry National Historical Park.

Buildings colored red are brick.

Buildings colored blue are stone.

Buildings colored yellow are frame.

Information on materials used in the construction of the buildings based on data shown on the 1907 insurance maps.


WASHINGTON
POTOMAC
ALLEY
Lot 44
Lot 45
ORN MAP-
TEMBER 1907
Lot 55
Lot 54A
Lot 53B
Bldgs. 16
Milly.
STONE STEPS CUT IN MOUNTAIN
W. HO.
LEVEL WITH STORE RF.
CLIFF
Lot 49
Lot 48
Gen'l S.
Bldg. 42
Bldg. 40
Bldg. 38
Lot 51
Bldg. 37
Bldgs. 12
W. VA. HOTEL
GATRELL HOTEL
P.O.
Drugs
LIVERY
1907
NATIONAL MONUMENT
SITE OF OLD ARSENAL
SHENANDOAH
HOTEL CONNER
Barber
Bank
Gen'l S.
STONE 1ST
STEAM HEAT
HOTEL OFF.
W.C.
Lunch
Pool Rm.

Map No 6

B & O. R.R. Main Line District
Shenandoah Division - Main Line

PLAN SHOWING RIGHT OF WAY, BUILDINGS AND TRACK
HARPERS FERRY, W. VA.

Office of Dist. Engr. M of W., Baltimore, Md.
February 19,1913, Note Books C- 31 & 35, 1-7-5.
Scale one inch equals 50 feet.

Map from part of Harpers Ferry National Monument Master Plan - Drawing No. NM- HF 9003.

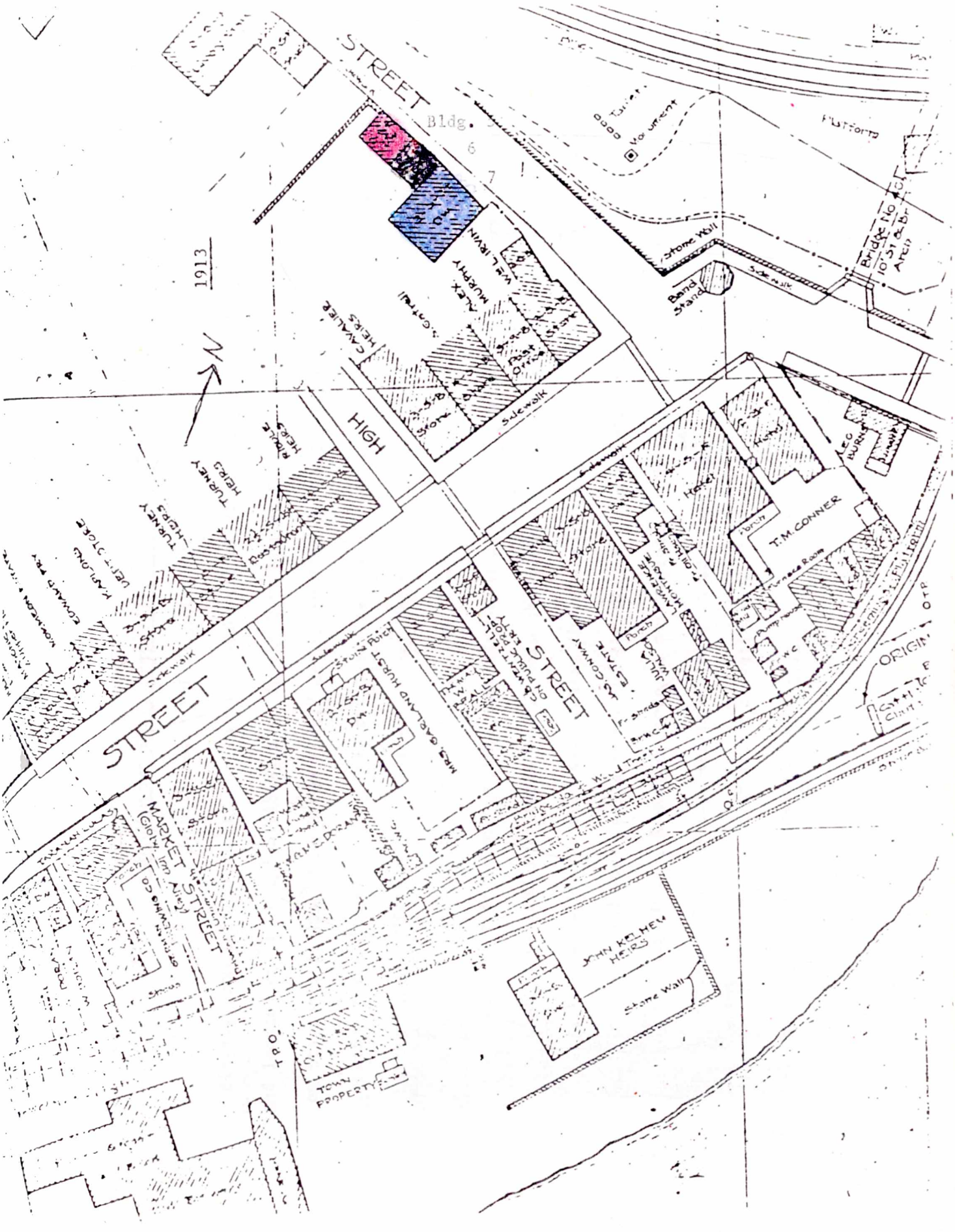

STREET
Bldg.
6
7
1913
Stone Wall
Band Stand
Bridge No
Sidewalk
HIGH
Post Office
Stone
Sidewalk
T.M. CONNER
STREET
MARKET STREET
JOHN KELHEW HEIRS
Stone Wall
TOWN PROPERTY

PHOTO NO. 1

John Brown Fort, Harper's Ferry, ca. 1873-75.

Harpers Ferry NHP Negative No. HF- 55.

Bldgs., from left to right: North gable end wall of Bldg. No. 9, then Bldg. No. 8;, next and located on its original(1848) site in the U.S. Musket Factory Yard, with the wooden cupola on its roof, is the "John Brown Fort," or Armory Fire Engine House. Moving to the right and also located in the Musket [illegible] Factory Yard, is a small portion of east gable end of the Armory Office Bldg. Visible between the Fort and the Office, is the north or front elevation of Bldg. 7. The first story, the stone portion of the facade, is painted white. The brick walls of the second and third story of this same elevation appear to be unpainted. The north or front elevation is divided into three bays. Note the center door in the center bay of the first story. Windows with six over six lights, the slate covered gable roof with small end chimneys at the north and south gable ends, and the single centered window at the third floor level.

Bldg. No. 5, Roeder's Store, is not visible in this photograph, but Bldg. No. 5, as it appears in Photo HF-100, taken in 1889, so so closely matches the appearance of Bldg. 7 in 1873 that the north or front elevations of the two structures must also have been almost identical in their fenestration in 1873.

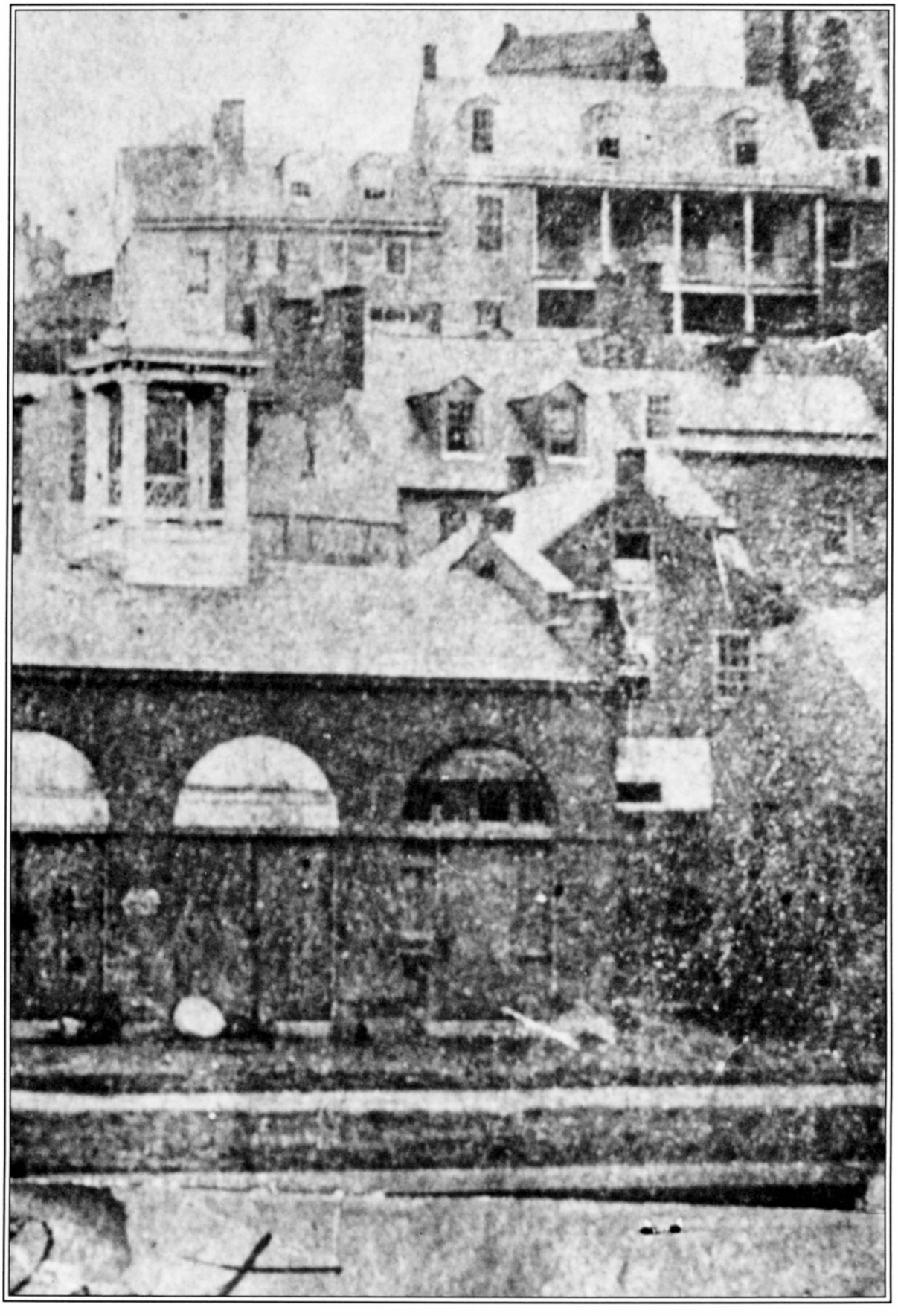


PHOTO NO. 2

JOHN BROWN's FORT, Ca. 1882-1886

Harpers Ferry NHP Negative No. HF- 379.

Bldgs., - Left to right: Portion of Bldg. 9, then Bldg. No. 8, John Brown Fort, or Armory Fire Engine House, with cupola on roof, in its original location in the U.S. Musket Factory yard; next, and also located in the Musket Factory Yard, the eastern portion of the Armory Office building,- (the one-story brick structure with the words "Iron" painted on the north walls.) Between the Fort and the Office can be seen the north or front elevation of Bldg. No. 7- White Hall, with the entire facade painted white,. To the right of Bldg. 7 and raising above the chimney of the Armory Office is visible the unpainted north or front brick facade of Bldg. No. 5 at the third story level. Bldg. 5, like Bldg. 7, has a slated covered gable roof, small end chimneys located in the north and south gable walls, and a window with six over six lights cntered in the third story level of the north gable end.

67

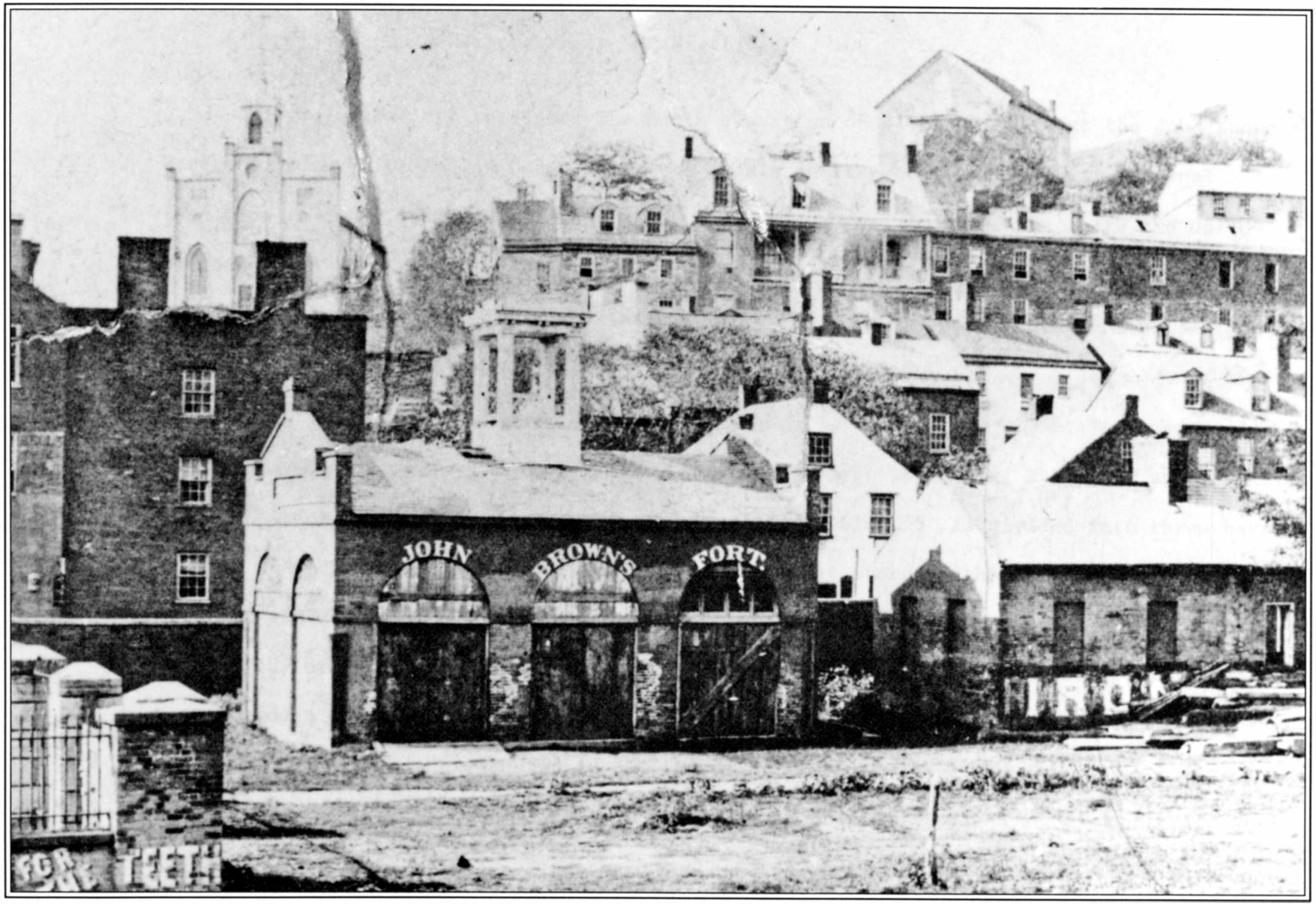

JOHN
BROWN'S
FORT
FOR TEETH

PHOTO NO. 3

THE JOHN BROWN FORT IN THE 1889 FLOOD

Harpers Ferry NHP Negative No. 100

Bldgs., from left to right: The north elevation of Bldg. No. 8, next the John Brown Fort, or Armory Fire Engine House, with the cupola on its roof, still in its original position in the U.S. Musket Factory Yard. At the right (west) end of the fort, the white-painted north third-story of Bldg. No. 7 rises above the roof of the fort. To the right of the fort, and still in the U.S. Musket Factory Yard, can be seen a few remains of the Amory Office Bldg. The demolition of the Office thus affords us an excellent view of the east side wall and north or front elevation of Bldg. 5, which rises above the Armory wall. The first stone story, on the north elevation, is painted white. The upper and half stories, built of brick, are unpainted. The north elevation of Bldg. 5 is divided into three bays. A door can be seen in the center bay of the first story, with a window located in the left or east bay. The exterior shutters, which adorn this window, are closed tight. The center bay of the second story has a door with a small transon above, that opens out on the small wooden balcony on which the woman is standing. The window in the second floor east bay and also the window located in the third story level, above the door, both have six over six lights. The slate covered gable roof has small chimneys located in the north and south gable walls. Compare this photo with Photo HF-55 of Bldg. No. 7, taken in 1865. Except for the second story balcony on Bldg.5, the two structures are otherwise identical.

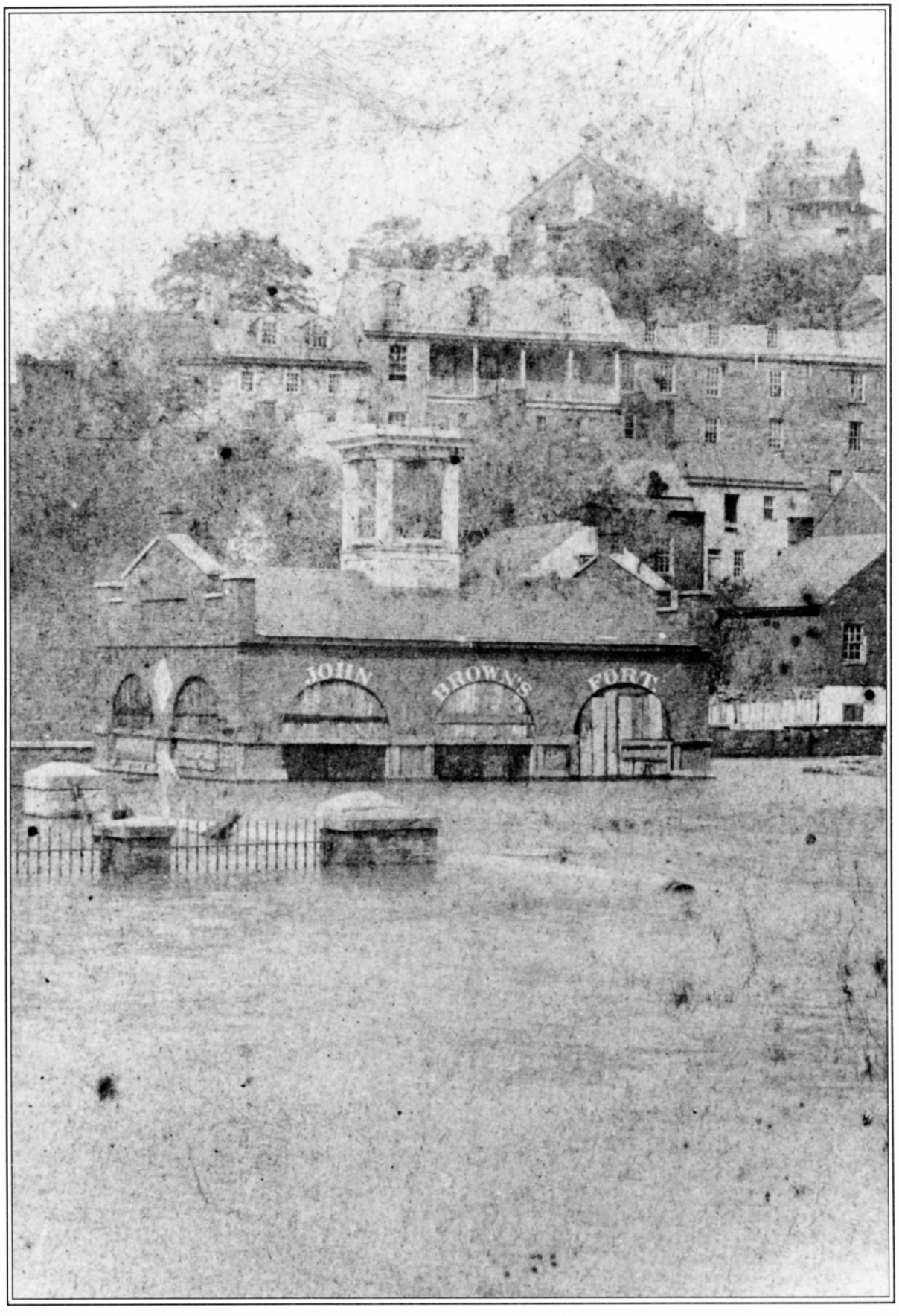

JOHN
BROWN'S
FORT

PHOTO NO.4

JOHN BROWN"S FORT, 1890-92

Harpers Ferry NHP Negative No. 190

The Armory Fire Engine House, or John Brown Fort, still stands on its original site in the U.S. Musket Factory Yard, and the Armory Office Building which once stood to the right of the Fort has been demolished, thus indicating that this photograph was taken in the period 1889-1892. Above the Armory Wall, and to the right of the Fort, rises Bldg. 5, affording an excellent view of the three bay-wide north or front elevation of the second and third stories. The stone first story, a small portion of which can be seen above the armory wall, is painted white. The brick upper stories are not painted. The second story still has its center door with a small transom above and opens out on the small wooden balcony. The flanking windows have six over six lights. The third story window, centered over the door, appears to be boarded up. This view, when compared with Photos. HF- 100, taken in 1889, HF- 55, taken of Bldg. 7 in 1865, would appear to help fill in most of the missing details for both Bldgs. No. 5 and 7, that are not always visible in any one picture.

5
P


JOHN
BROWN'S
FORT.

PHOTO NO. 5 -HARPERS FERRY FROM MARYLAND HEIGHTS, 1896-1901.

Harpers Ferry HHP Negative No. HF- 96.

This photo was taken after 1896, because the remodelling work which began on the Catholic Church in that year is well underway, and prior to 1902, because Park Bldg. No. 3 has not yet been constructed on High Street.

To the right of Park Bldgs. No. 9 and 8, and fronting on Potomac Street and the relocated B & O Railroad tracks, can be seen Bldg. No. 7, Bldg. No. 6(the two-story frame structure, erected about 1890), and to the right of Six, Bldg. No. 5.

The first story of Bldg. No. 5 is still painted white, but the color has faded badly, suggesting that it has not been repainted a for a number of years. Note that neither Bldg. No. 7 or Bldg. No. 5 yet have the one-story covered frame porches that were to be added to their north facades in the 20th century. Sanborn Company Insurance Maps for 1907 indicates that the porches were erected after the year in which that map was prepared.

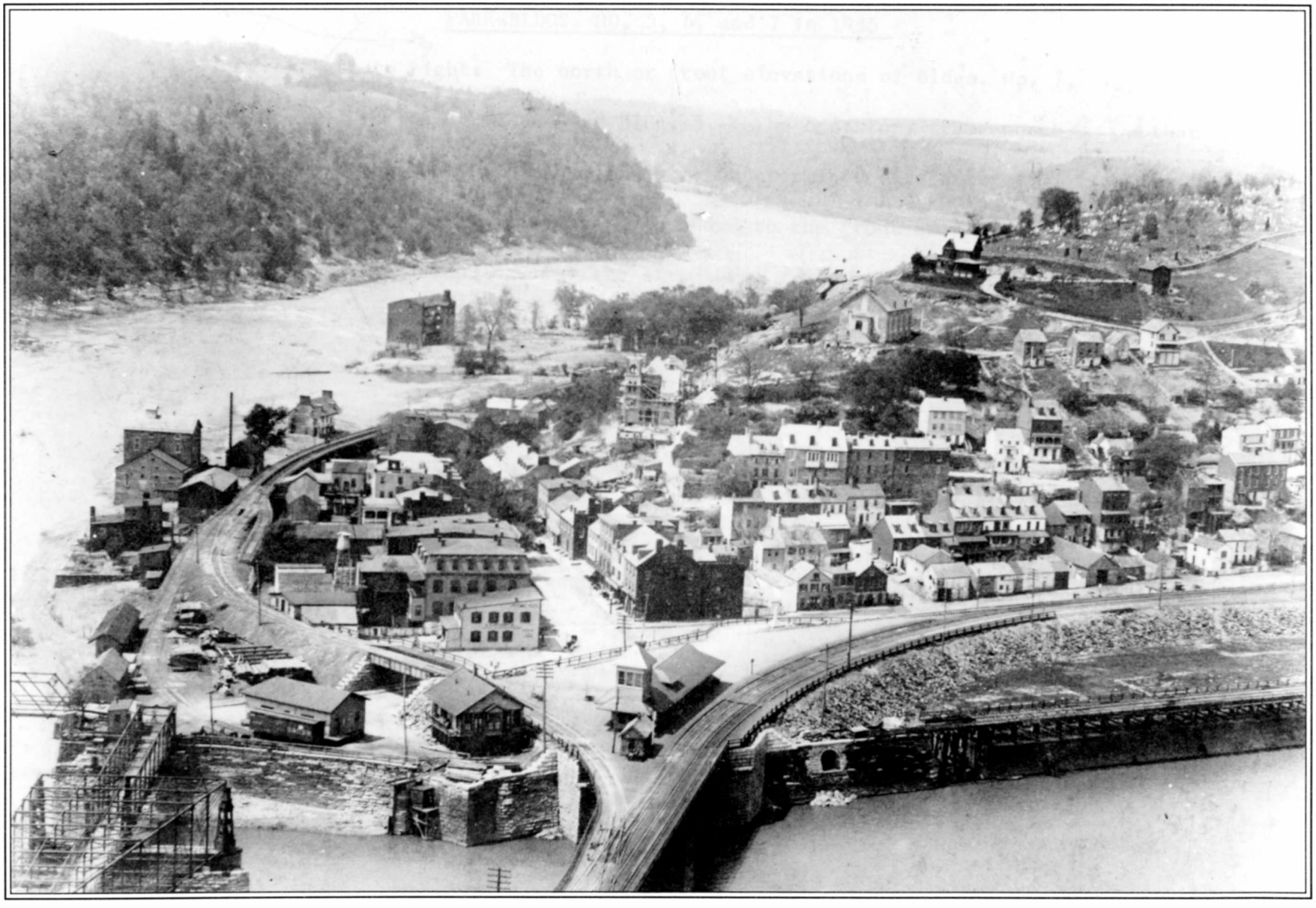


PHOTO NO. 6

PARK BLDGS. NO. 5, 6, and 7 in 1955

From left to right: The north or front elevations of Bldgs. No. 7, Bldg. No. 6, erected ca. 1890, and Bldg. 5. The one-story frame porch that was added to the front of Bldg. 7 at some undetermined date after 1907 is still standing in this view. A similar porch added to the front of Bldg. No. 5 after 1907 is no longer standing, but the structural evidence visible on the facade documents its former existance. The glass is missing from the windows of Bldg. No. 5, and the structure appears empty and in poor condition, suggesting that it had not be used for a number of years.

Harpers Ferry NHP Negative No. NHF- 843.

44

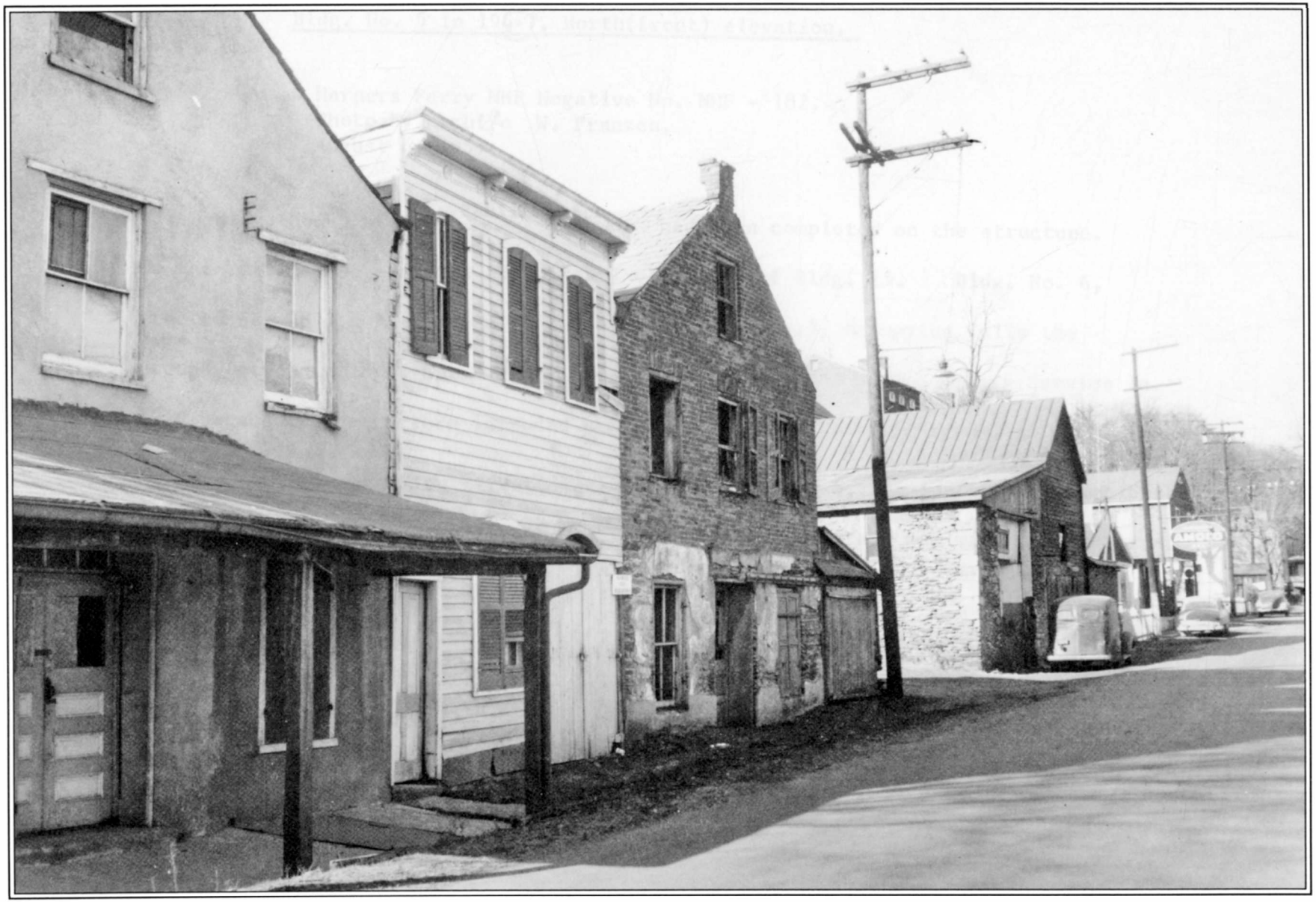


PHOTO NO. 7

Bldg. No. 5 in 1957, North(front) elevation.

Harpers Ferry NHP Negative No. NHF - 182.
Photo by Archie W. Franzen,
August 6, 1957

Bldg. No. 5 after stabilization work had been completed on the structure. To the left can be seen the north(rear) elevation of Bldg. 15. Bldg. No. 6, erected ca. 1890, which stood to the left of Bldg. No.5, occupying fully the ground between Bldgs. No. 5 and 7, was demolished by the National Park Service in 1956 because the structure intruded heavily on a major historic scene.

The connecting street, to the right of Bldg. 5, running from Potomac Street south up the hill to High Street, is former Wager Lot 17 and was made into a street by the U.S. Armory in 1856-57.

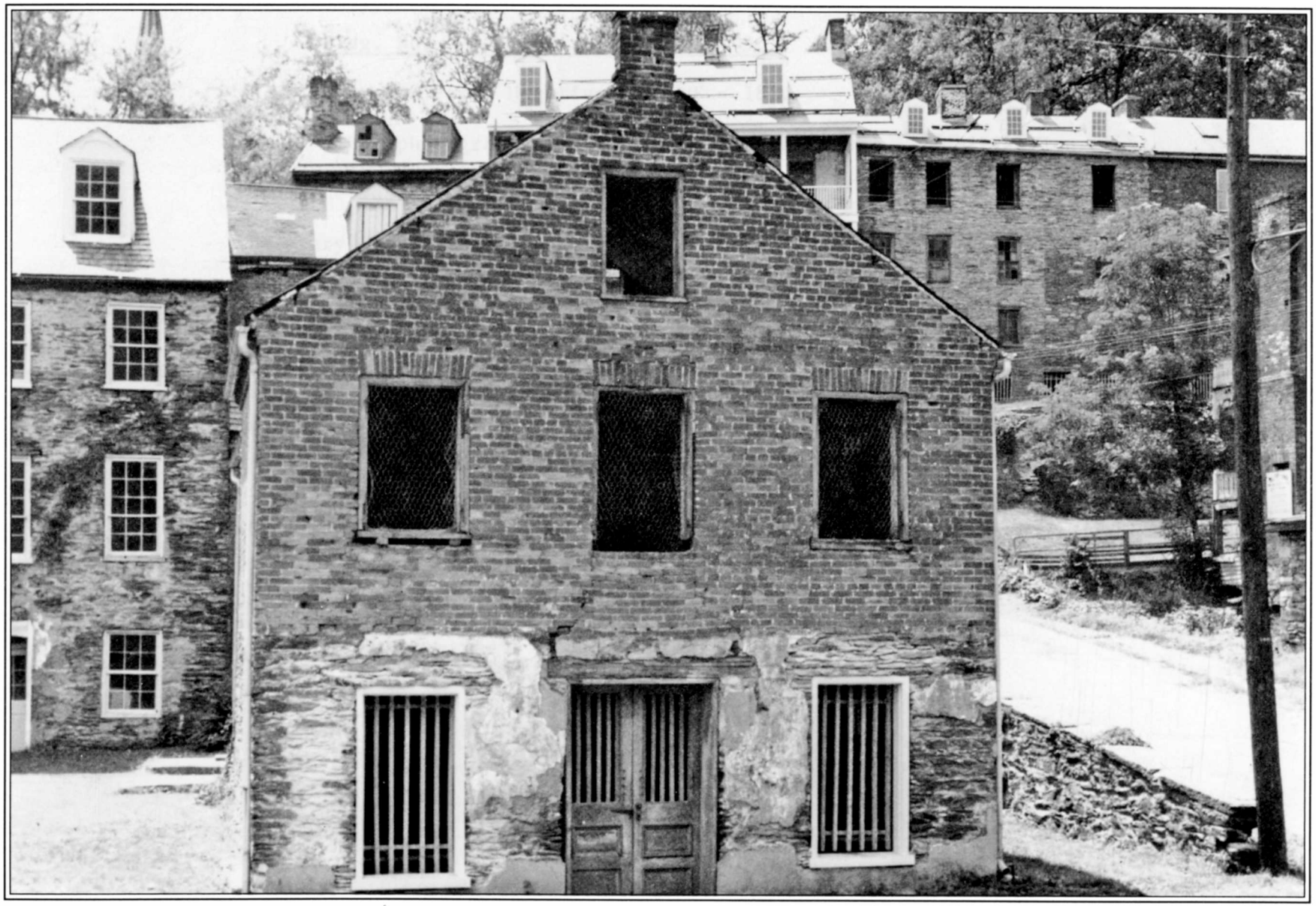


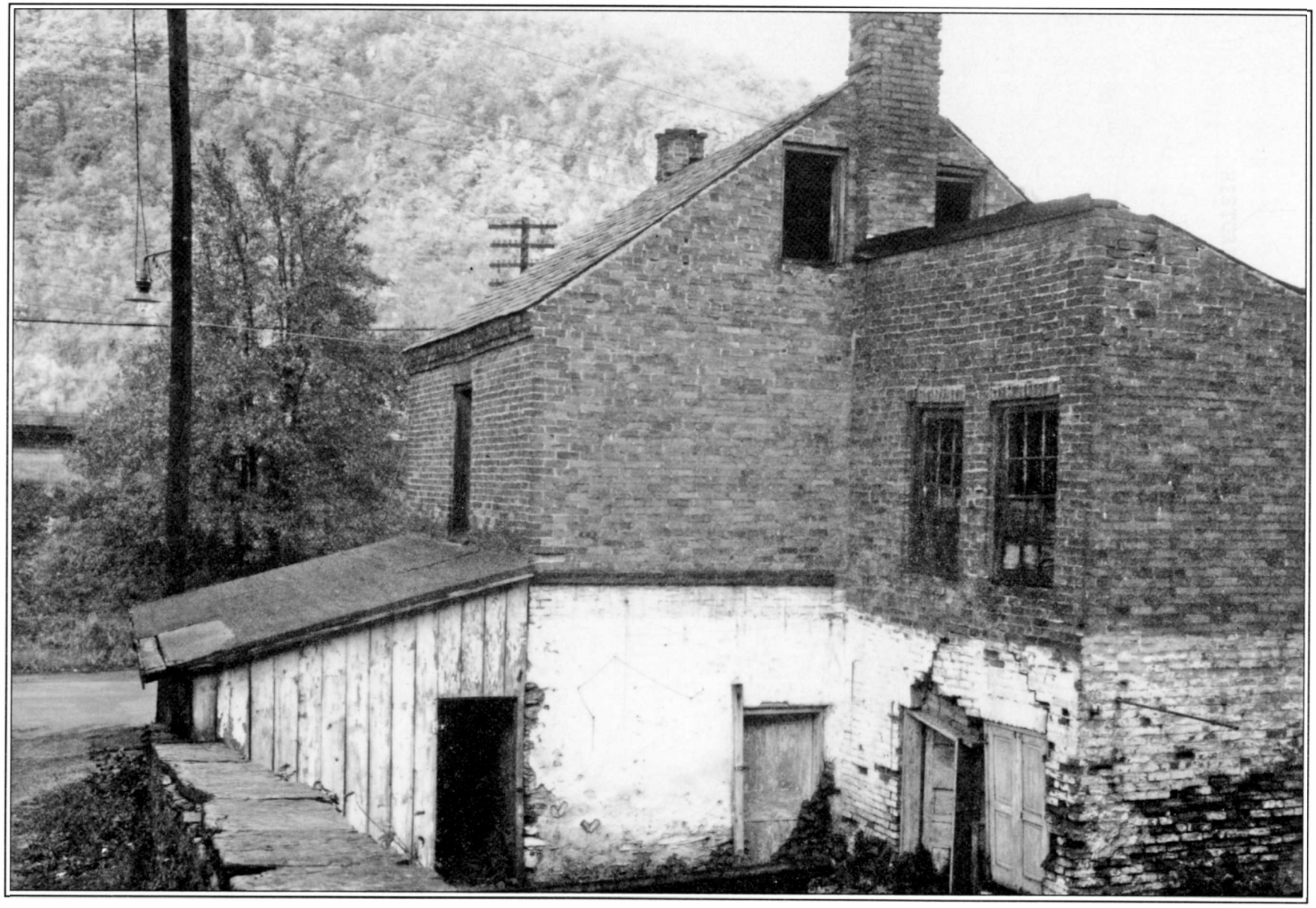
PHOTO NO. 8

Bldg. No. 5- Roeder's Store, in 1956

Harpers Ferry Negative No. NHF - 181.

This photograph, taken in 1956, prior to any stabilization work, shows the west(side) and south(rear) elevations of Bldg. No. 5 and its rear two-story brick wing. The main house, erected in 1856-57, has the stone walls of its first story painted white, as the north or front elevation was in the earliest photographs. The large chimney in the south gable wall, which served a fireplace in the first story of the rear wing, was probably added to the orginal house when the wing was erected, prior to 1861 and after 1857. The street or alley, in the left corner of the picture, running north to Potomac Street, was created in 1856 when former Wager Lot 17 was purchased by the United States Government from Roeder, and the large wooden stable on the lot demolished in order to make the land into a street.

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HISTORIC STRUCTURE REPORT

White Hall Tavern. Bldg. No. 7, on Subdivisions No. 2 and 4 of Wager Lot No. 15.

Historical Data

by

Charles W. Snell

Denver Service Center
National Capital Team
National Park Service
United States Department of the Interior
Denver, Colorado

April 1980

PREFACE:

The purpose of this report is to update the "Historic Building Report, Part II, Historical Data Section, for Bldg. No. 7, White Hall, Harpers Ferry National Monument, W. Va.," prepared by Historian Charles W. Snell, March 30, 1959, on the basis of additional archeological, architectural, and historical devidence that has been discovered during the 20 year since the above-mentioned study was completed.

The writer wishes to thank Librarian Hilda F. Staubs of the staff of Harpers Ferry National Historical Park for providing copies of documents and photographs for use in preparing this study.

Charles W. Snell,
Historian

April 1980

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II. HISTORICAL DATA SECTION:

A. Significance:

White Hall(Bldg. No.7), located within approximately 65 feet of the original site of the U.S. Armory Fire Engine House, or "John Brown Fort", is of the Second Order of Significance because it formed an immediate part of this key historic scene during the John Brown Raid at Harpers Ferry in October 1859. Most of the action of that attack took place directly in front of Bldg. 7. Like Bldgs. No. 8 and 9, Bldg. No. 7 is visible in the background of most photographs that were taken of the John Brown Fort from 1859 to 1892.

Bldg. No. 7 was constructed by William Anderson in 1838-39 as as a one-story stone warehouse, with a cellar and a slate-covered gable roof. Measuring 24 feet by 40 feet in size, Anderson used Bldg. No. 7 as a warehouse from 1839 to 1847. Frederick A. Roeder, a confectioner, purchased the structure for $ 1,000 in 1847, and probably in 1848-49, added a stone story and a half(attic) to the original building. Bldg 7 was used as "drinking house" known as "White Hall" and also as a warehouse and dwelling during the years 1848-1856.

In 1856, Roeder sold the front half of Bldg. 7 to the United States Government for $ 1,700. The Armory demolished this portion of the structure in order to widen the 15-foot wide alley in front of White Hall to its present width of 40 feet. This demolition reduced Bldg. 7 to its present size, fronting approximately 24 feet on Potomac Street and about 20 feet deep. In 1856 Roeder rebuilt the north or front elevation of Bldg. 7 using stone for the first story wall and brick for the upper story and one-half. As rebuilt in 1856, Bldg. No. 7 had a cellar, a slated covered gable roof, and a small chimney centered in each gable end. The north or front elevation was divided into three bays. On the first story there was a center door flanked on either side by a widow with exterior louvered shutters . The second story had three windows and the third or attic story had one window centered under the end chimney. Widdows had six over six lights, The structure had five rooms in 1861: probably one on the first floor and two each on the upper floors. Bldg. Seven, known throughout the years 1848-1953, as "White Hall" was also used throughout most of this period as as tavern. The front of building appaears to have been painted white during these years, hence the name " White Hall."

B Chain of Title for Bldg. No 7 on Wager Lot No. 15-Subdivision No. 2, and No. 4, 1751-1953:

The lot that was to include the future site of Bldg. No. 7 was part of a 125 acre tract that was acquired by Robert Harper, a millwright from Pennsylvania, from Lord Thomas Fairfax on April 25,1751.[1] Harper died at Harpers Ferry in October 1782 and under the terms of his will, the future sites of Bldg. 7, the lower town of Harpers Ferry, and the U.S. Musket Factory, passed to his niece, Sarah Harper, then the wife of John Wager and residing in Philadelphia.[2] On June 15,1796, John and Sarah Wager sold all of this Harper inheritance, except for 6 and 3/4 acres retained in what became known as the Wager Six Acre Reservation and the Wager Ferry Lot, to the United States Government for $ 7,016.66.[3] The Federal Government acquired the land to erect an Armory and Arsenal at Harpers Ferry.

The future site of Bldg. No. 7 was located in the Wager Six Acre Reservation, which with the Ferry Lot, remained the property of the Wager family from 1796 to 1836. The only available private land on which mercantile stores and shops could be built in this sea of Federally owned land, the Wager property increased in value as the Armory and population of the town expanded with the passage of time. The Wager heirs refused to sell any of their land, but leased it out at high ground rents to merchants who also agreed to erect buildings as a part of securing a leasehold. These costs were passed on to the Armory

1. Fairfax deed for 125 acres to Robert Harper, April 25,1751, in Northern Neck Grant Book No. 6, p. 496, in Virginia State Library, Richmond, Va.

2. Last Will of Robert Harper of Berkeley County, Va., dated 26 September 1782, probabted in Berkeley County, Va., on October 15,1782. Copy of will in Office of the Judge Advocate General, Military Reservation Division, West Virginia Reservation File, Box 41, National Archives Record Group No. 153, Washington, D.C.

3. Copy of Warranty Deed of John Wager,et ux, Berkeley County,Va., to the United States, June 15,1796, National Archives Record Group 121, Public Buildings Service, Entry 75, Washington, D.C.

workmen in the form of the very high prices charged for goods.

One of the three Wager heirs, James Bates Wager, however, overextended himself in his financial operations and, on July 7,1834, was thrown into prison for debt. He was forced to declare bankruptcy. On April 2,1835, the Circuit Superior Court of Law and Chancery for Jefferson County, Virginia, appointed commissioners " to lay off and divide into three equal lots and parcels, the real estate at Harper's Ferry which descended to James B. Wager, Gerard B. Wager, and Sally Ann Wager, now Sally Ann Swayne, the wife of Noah H. Swayne, from their father John Wager (Jr.) deceased."[4] The commissioners subdivided the Six Acre Reservation and the Ferry Lot, together with the buildings on this land, into 56 numbered lots, and on October 10, 1835, the Circuit Court divided the lots and structures equally among the three Wager heirs. Among the lots allotted to James B. Wager was Lot No."15 being a part of the old tavern lot".[5] The future site of Bldg. No. 7 was located on a portion of Wager Lot No. 15.

On January 14,1836, the Circuit Court appointed two commissioners and directed them to sell at public auction to the highest bidder the real estate of James B. Wager in Harpers Ferry for the purpose of paying off Wager's debts. The Shenandoah and High Street frontages of Lot No. 15 in 1836 were occupied by the "Harper's Ferry Hotel", a rambling frame structure that the Wagers had erected in 1803, and was then operating under a leasehold that did not expire until March 31, 1838. A newspaper advertisement fot the 1836 public auction

4. Gibson,etc. vs. Wager etc, Decree, in Deed Book 29, pp.140- 141, Registry of Deeds, Jefferson V County Courthouse, Charles Town, W. Va. Henceforth all deed books mentioned are located in the Jefferson County Court House unless otherwise specified.

5. Ibid. The 1835 Plat- prepared for the commissioners and entitled "The Wager Six Acre Reservation, drawn by James M. Brown, S.G.C," is located in Deed Book 29, at p. 140.

described Lot 15 as " A lot fronting on the U.S. Arsenal (on Shenandoah Street) 90 feet by about 150, binding on a cross street (High Street). On this lot are erected the spacious frame buildings occupied and known as a Hotel for the last 30 years...[6].

This property was offered for sale in 1836, but it was so valuable that no bidder was apparently able to offer a reasonable price for the the hotel and land, hence the commissioners refused to sell Lot 15.

On November 26, 1836, the Court next authorized the commissioners to subdivide Lot No. 15 into four smaller lots that where marked as Subidivisions No. 1, 2, 3, and 4, of Lot No. 15. About 11 months later, on October 28,1837, the four subdivisions of Lot 15 were offered and sold at public auction for a grand total of approximately $ 5,872.50 to three bidders.[7] William Anderson, a Harper Ferry merchant and builder, was one of the three successful bidders, acquiring Subdivision No.2 for $ 1,610.00 and Subdivision No. 4 for $ 1,012.50.[8] Subdivision No. 2 was an L-shapped lot fronting 30 feet on Shenandoah Street, extending back about 126 feet six inches and the short leg of the L fronted 10 feet six inches on the 15 foot wide alley that ran between th north boundary of the Wager Six Acre Reservation and the southern property line of the U.S. Musket Factory. This alley later became known as Potomac Street. Subdivision No. 4 of Lot 15 abutted on the rear or west property line of Subdivision No. 2, fronted 30 feet on High Street, extended back(north) about 125 feet on the east line to the 15-foot

8. Ibid., Deed Book No. 24, pp.457-458.

6. Virginia Free Press, April 7, 1836, p.4.
7. Deed Book 24, pp.457-458, Deed of B.& S, February 8,1841, for Subdivisions 2 and 4 to William Andewson for $ 1,610, and $ 1,012.50 respectively; Subdivision 3 to Philip Coons for $ 1,450. Deed of B. &. S., February 8,1841,Deed Book 24, 457; Lot No.1 went to Mrs. Ann C. Stephenson, Deed of B & S., April 29,1842, Deed Bok, 25,p.512- Much of the deed has been torn out of the book so that the purchase price is missing. However, as it was the choice corner lot at High and Shenendoah Streets, the price has here been estimated at $ 1,300.00.

wide alley on the north side. Subdivision No. 4 fronted 30 feet on this alley and then ran back(south) about 120 feet to High Street. (See Map No. 1- 1835 plat.)

Bldg. No. 7 was constructed so that it fronted on the alley; the structure occupied the complete 10 feet six frontage of Subdivision No. 2 and about 13 feet six inches of the 30 foot frontage of Subdivision No. 4 on the same alley, making the total frontage of Bldg. No. 7 on that narrow lane about 24 feet.

On November 2,1847, William Anderson and Sarah his wife, both of Baltimore City, sold the site of and Bldg. No. 7 itself for $ 1,000.00 to Frederick Augustus Roeder of Harpers Ferry. The deed describes the bounds as follows:

....certain warehouse property, including the ground the said warehouse stands upon, the said ground or lot being twenty-four feet wide and forty feet long, situated in village of Harper's Ferry - and standing upon the alley (now called Potomac Street) which runs parallel with the Armory buildings, and in the rear of the property recently sold and conveyed by the said William Anderson to Susan Downey (This was the balance of Subdivision No. 4, of Lot 15, including Park Bldg. No. 15, which Anderson had constructed. This sale took place on July 20,1846), including also in this conveyance any portion or strip of ground which may lie between the end of said warehouse and the alley aforesaid- but with this exception or addition, it is hereby declared to be the and intent of this deed to convey only the ground said warehouse stands on, the said warehouse being of the dimensions aforesaid... 9

Frederick A Roeder and Anna Marie, his wife, held title to this warehouse and lot until February 13,1856, when in consideration of $ 1,700, they sold the following portion of the lot and building to the United States:

9.Deed of B. &. S., November 2,1847, Deed Book 29,p.240. The lot also appears to have been about 45 feet deep and not only forty, as stated in the deed.

" Beginning at the north Eastern corner thereof (Lot 15- subdivision No. 2, abutting on Subdision No. 1 of Lot 15,) a[illegible] on the Alley, which passes along the land near the public workshops (of the U.S. Musket Factory) and thence westwardly embracing the entire front of said Lot on said Alley of Twenty four feet from said front on said Alley, together with so much of the building thereon as occupies the said area...
The meaning and inent of this conveyance being to sell and convey twenty -five feet in depth of the whole front of this lot, now owned and occupied by the said Roeder as a warehouse...: " 10

This sale reduced [illegible] Roeder's Bldg. 7 property from [illegible] lot that was 24 feet wide and 40 feet deep to one [illegible] that was 24 feet wide and 15 feet deep; that actual depth, as we shall see, however, was 20 feet. The United States Government was acquiring this piece of Roeder's land and warehouse so that they could widen the 15-foot alley to a width of 40 feet, thus creating an effective fire break between the privately owned structures situated on the Wager [illegible] Six Acre Reservation lots and the public workshops located on the U.S. Musket Factory land.

Fredick A Roeder and his heirs owned this reduced tract and building from 1856 to May 12,1874. On this latter date the Roeder heirs sold Bldg. No. 7 to Charles L. Hopwood for $ 321.43. The deed described the lot and structure as follows:

...a certain Lot & House situated on Potomac Street (the former 15-foot wide alley) in said Harper's Ferry North of and adjoining the property situated in High Street, now owned and occupied by Charlotte R. Hopwood (that is, the balance of Subdivision No. 4 of Lot 15, with Park Bldg. No. 15 located on the tract)...; the said property hereby conveyed being a part of that Known as 'White Hall' and bounded as follows; Beginning on Potomac Street at the Northeastern corner of the House hereby conveyed, running West with said street twenty-four feet three inches, thence south twenty feet, thence east twenty-four feet, three inches, and thence north (about 20 feet) to the beginning... 11

10. Deed of B. & S., [illegible] February 13,1856, Deed Book 35, pp.299-300.
11. Deed of B & S., May 12,1874. Deed Book B, pp. 153-154.

Charles L. and Charlotte R. Hopwood, and their heirs owned Bldg. No. 7 and lot and Bldg. No. 15 on Subdivision No. 4 of Lot 15 from 1874 to March 28,1923. On this latter date the Hopwood heirs sold the two structures to Harry Rockenbaugh for $ 1,500.00.[12] The property than passed under Harry Rockenbaugh's will, to Aldridge Rockenbaugh.[13] The Rockenbaugh family owned this property from 1923 to July 28,1941, when Aldridge sold Bldg. No. 7 and lot to Luke Loveless for $ 350.00.[14] The deed described this as "Being the same property which is known as White Hall on Potomac Street." Loveless enlarged the lot by purchasing a small lot that fronted 15.7 feet on Potomac Street, running back 20.6 feet on the east side, 19 feet on the west side, and was 14.2 feet wide on the rear or south side, from R. L. Stpehens on August 13,1946.[15] This added lot,which was located between Bldgs. No. 7 and No. 5, was fully occupied by Bldg. No. 6, a two-story frame structure that was probably erected about 1890 and in 1894 was being used as a restaurant.[16] Luke Loveless owned Bldgs. No. 6 and 7 until December 1,1952, when he sold these two lots and structures to the State of West Virginia, for about $ 1,900.00.[17] On December 19,1953, the State of West Virginia donated Bldgs. No. 6 and 7 and their lots to the United States Government to be included in the authorized Harpers Ferry National Monument.[18]

18. Deed of B. &. S. December 19,1953,Deed Book 199, p.41.

12. Deed Book 123, p.141. Deed describes lot as fronting "on High Street and running back to what was formerly known as Canal Street, now Potomac Street, improved by a dwelling house on High Street and one fronting on Potomac Street and other buildings."

13. Will Book F, p,202-Registery of Deeds, Jefferson County Courthouse, Charlestown, W.Va.

14. Deed Book 154, p.535. ,Bldg. No. 6,

15. Deed Book 170, p. 355. A small frame building stood on this lot in 1946.

17. Deed Book 190, p. 318.

16. Sanborn Perris Map of Harpers Ferry,Jefferson County,West Virginia, November,1894, shows Bldg. 6 and gives use.

C. Construction and Alterations to Bldg. No. 7

The Map entitled"Sketch No. 2, Shewing two practicable locations for the Balto. & Ohio R. Rd. through the Village of Harper's Ferry, Scale 100 ft = one inch"(See Map No. 2),[1] reveals that there were no structures located on the future site of Bldg. No. 7 when this map was made in 1837-38. On October 28,1837, William Anderson and his brother, Samuel B. Anderson, owners of Subdivisions No. 2 and 4 of Lot 15, and George W. Stephenson, Dr. the oldest son of Mrs. Ann C. Stephenson, the owner of Subdivision No. 1 of Lot 15, advertised for bids from carpenters and masons to erect Park Bldgs. No. 11 and 12 on Subdivisions No. 1 and 2, and and Park Bldgs. No. 7 and 15 on Subdivisions 2 and 4. The Anderson-Stephenson advertisement described the plans for the latter two structures as follows: "Also two stone houses, each 24 by 40 feet, with cellars, one of them to be one (Bldg. No. 7), and the other two stories (Bldg. No. 15) high-all to be covered with slate.....[2] Construction on these four new buildings got underway in the spring of 1838, after March 31, when the lease on the Harper's Ferry Hotel expired and this old frame building could be demolished in order to clear the sites for the construction of the large three-story brick buildings, Bldgs. No. 11 and 12, on Subdivisions No. 1 and 2 of Lot 15.

The two brick buildings were completed in the spring of 1839. Mrs. Ann C. Stephenson leased her store in Bldg. No. 12 in April 1839.[3]

1. Ordnance Office Dawer No. 5, Portfolo 1, No. 5- National Archives
2. Virginia Free Press, November 16,1837, p.3, c.4.
3. Harpers Ferry Constitutionalist, May 1,1839,p.4- the merchants' notice, of opening in Bldg. 12, however is dated April 20,1839.

William and S.B. Anderson moved into their newly completed Bldg. 11 by June 19,1839, when their leasehold on the large store building located on Wager Lot No. 51, at the corner of High and Shenandoah Street,[4] expired. Construction on the two stone Bldgs., No. 7 and 15, apparently started later in the 1838 season, or perhaps, not until early 1839. Bldg. No. 15 thus was completed and first leased for use as a tavern in September 1839.[5] Because Bldg. No. 7 was intended for use as a warehouse to service the store located in Bldg. 11, there was no notice in the newspaper when the warehouse was completed, as had been the cases with Bldgs. No. 11,12, and 15. On the basis of the evidence presented, however, Bldg. No. 7 was probably completed in 1839.

As constructed in 1839, Bldg. No. 7 was a one-story stone warehouse with a slate roof and cellar. The structure fronted 24 feet on the 15 foot wide alley that later became known as Potomac Street and was 40 feet long. The original ground plan of Bldg. No. 7 is shown on Map No. 3, a plat dated July 17,1845 and prepared by James N. Brown, Surveyor of Jefferson County, for William Anderson.[6]

As has been mentioned, Frederick A. Roeder, a confectioner, purchased " certain ware house property, including the ground the said warehouse stands upon, the said ground or lot being twent-four feet wide and forty feet long... including any portion or

4. Harpers Ferry Constitutionalist , September 11,1839, p. 1- the notice that the store on Lot 51 was rent, however, is dated June 19,1839.
5. Harpers Ferry Constitutionalist, September 11, 1839 , p.3.
6. Deed of B. &. S., dated July 20,1846, Deed Book 28,p.174-The plat shows the bounds of Subdivision 4 of Lot 15, and the ground plan of Bldg. No. 15, which William Anderson sold to Susan Downey on July 20,1846 for $ 3,000.00. Scale 1 one inch equals 30 feet.

"strip of ground which may lie between the end of said warehouse and the alley..." from William Anderson for $ 1,000 on November 2,1847.[7] Also, as has been noted, the evidence indicates that the front of the warehouse stood five feet north of the edge of the alley so that the full size of the lot was 24 by 45 feet in size. At some undetermined date after November 1847 and prior to July 1852, probably in 1848-49, Roeder added a full stone second story plus a half story or attic to his warehouse. This information is provided by a letter that Armory Superintendent Benjamin Huger wrote to Col. Henry K. Craig, Ordnance Department, on July 17,1852. Huger reported:

> Mr. A. F. Roeder (sic) who owns part of Lot No. 15 (on Map)- which extends to within 15 feet of Armory wall (along the 15-foot wide alley) offers to cut off 21 feet of the building (Bldg. No. 7) & remove it, & give the U.States a fee simple of that portion of the lot so that the road can be widened to 40 feet for $ 1,700. The size of this part of the lot (that is, the portion that was need by the United States for use as a street) is only 24 x 25 feet. - & it cuts off 21 feet of the two story stone building now on it. As this is the main part of the building he considers it worth at least $ 1,000 to replace ...8

On February 13,1856, as has been mentioned, Roeder sold to the United States " the entire front of said lot on said Alley of Twenty four feet, together with so much of the building thereon occupied the said area ... to convey twenty-five feet in depth of the whole front of this lot, now owned and occupied by the said Roeder as a warehouse...", for $ 1,700.00.[9]

Included in this sale of the 24 foot wide by 25 foot deep lot was the front (northern) portion of Roeder's two ½ story stone warehouse- a section 24 feet wide and 20 feet deep. The demolition of this front

7. Deed Book 29,p.240.
8. Huger to Craig, July 17,1852, Harpers Fery National Historical Park Microfilm Reel 26,Volume 4, p331. From National Archives Record Group No. 156, Records of the Chief of Ordnance, Washington , D.C.
9. Deed Book 35, pp. 299-300.

section by the United States in 1856 in order to widen the alley to a 40-foot wide street at this point, left Roeder with the rear section of his two -story stone warehouse still standing . A new front (north) elevation, of course had to be constructed in 1856. Bldg. No. 7, as it now stands, thus basically assumed its present form as a two-story and one-half stone structure with a slate-covered gable roof and cellar, and measuring 24 feet in width by 20 feet in depth in the 1856 remodelling.[10]

During the 1847-1855 period Bldg. No.7 had also more exciting uses than simply serving as a baker's warehouse . Armory Superintendent Henry W. Clowe in letter to Chief of Ordnance Henry K. Craig, dated July 25, 1855, requesting that the sum of $ 1,700 be included in the estimates for 1856 so that the Rodder Bldg. 7 property could be acquired, noted that this property " consists of a two-story stone house occupied now as a Dwelling and Warehouse, and formerly as a Drinking House know as the" White Hall'."[11] This information suggests that the facade of Bldg. No. 7 was painted white during this period and as the name "White Hall" was to be applied to the structure constantly in all the deeds down to 1953, it further suggests that the front elevation of Bldg. 7 was usually painted white and the structure must have been used as a tavern during most of its existance.

Testimony of the Roeder children, given in 1902, indicates that Bldg. No. 7 had five rooms in 1861-62.[12]

10. See Photograph HF- 55- taken in 1865, shown part of front elevation of Bldg. No. 7, also HF-379, taken period 1882-1886.
11. Clowe to Craig, July 24,1855; HFNHP Reel 25, Vol. 8, p. 748.
12. See data in Appendix No. I.

Architectural evolution of Bldg. 7

Based on documentary and photographic evidence and a study of measured drawings of White Hall, the probable architectural evolution of Bldg. No. 7 follows:

Stage 1: As constructed for William Anderson in 1838-39, Bldg. No. 7 was a one-story stone warehouse that fronted 24 feet on the alley that later became known as Potomac Street and was 40 feet long. The roof, probably gabled, was covered with slate and there was a cellar under the structure. The east and west side walls of both the cellar and first story were about two feet three inches thick; the front(north) and rear(south) stone walls were approximately one foot 10½ inches thick. The north facade was probably painted white, hence giving the name "White Hall" to the house.

Stage 2. 1848-49: About 1848-49, Frederick A. Roeder, the new owner, added a stone second story and a half(an attic) to the original one-story building. The new walls, on all four sides, appear to have one foot seven inches thick. The roof, probably gabled, was covered with slate and the enlarged structure was remodelled for use as a tavern or drinking house on the first story and for service as a dwelling on the upper floor and a half.

Stage 3. 1856: In 1856 the front(north) half of Bldg.7 -a portion 24 feet wide and 20 feet deep was demolished by the United States Government in order to widen the 15-foot alley in front of White Hall to a 40 foot-wide street. This alteration left Roeder with a two and one-half story stone structure, approximately 24 feet wide and 20 feet deep, the present size of Bldg. No. 7. In reconstructing the destroyed north or Potomac Street facade, Roeder rebuilt the new cellar north walls and first story of stone and both about one foot 10½ thick, probably the same thickness that they had had since 1339.[1]

1. They matched the orginal rear(or south) cellar and 1st story walls which do not appear to have been rebuilt since 1839. Perhaps the new north wall was on original cross wall with center of the structure 2.

Roeder now, however, rebuilt the second story and half story of the new north facade of brick rather than stone. The new brick walls were approximately 10 inches thick. As remodelled in 1856 Bldg. No. 7 was a two and one-half story stone and brick structure with a gabled and slate-covered roof and a cellar. The house fronted 24 feet on Potomac Street and was about 20 feet deep. The plan of the house included five rooms; probably one large room on the first floor, and two rooms each on the second floor and in the attic. The first floor was again used as a tavern room and the upper floors as a residnce. The new north elevation was again probably painted white, so that the tavern continued to be known as "White Hall" from ca. 1848 to 1873.

Photo HF- 55, taken in 1865, provides some details on the nature of the 1856-65 north facade of White Hall. This reveals that there was a small end chimney centered in the north(front) gable end of Bldg 7, which was apparently balanced by a similar small end chimney in the south gable end. The roof is covered with slate. One window is centered in the third or attic story, under the end chimney. The second story is clearly divided into three bays, each with a window containing six over six lights. The brick upper story and a half appears to be unpainted, or the paint has faded away. Only a small portion of the center of the first story can be seen in HF-55. However, it is quite clear that the one-story stone walls of the first floor are painted white and that a large door was centered in the middle bay of the north elevation.

Bldg. 7 received heavy use by the Union Armory in 1861-62. The first floor served as a stable and hay and other supplies were stored on the upper floors. Charles L. Hopwood, who purchased the house for only $ 321 43. in May 1874, reconditioned the building and put it into good condition(See Photo HF- 379-Photo No. 2? taken in the period 1882-86). During this work the north exterior, all three-stories, was painted white, but the facade was apparently not altered from its 1856-59 appearance. Photo HF- 379 also reveals that the the first story of the north or front elevation was divided into three bays, like the second story above. A doorway is visible in the center bay and a portion of a window adorned by louvered exterior shutters can be seen in part in the west or right-hand bay. The east or left-hand bay, which is not visible in any historical(pre-1900) photo, presumably contains a window with shutters to match the one in the west bay. This three-bay wide fenestration appears to date back at least to the 1856 rebuilding of the north or front elevation.

At some undetermined date after 1901 and probably after 1907, a one story covered wooden porch was added to the first story of Bldg. No. 7(See Photo No. 5-HF- 96,taken 1896-1900), but otherwise the north facade, still painted completely white, appears unaltered from the earlier view.[2]

The floor plans indicate that one earlier opening in the west (right) side wall of the cellar had been walled up with rock at some undetermined date, but probably in 1846 by William Anderson. On the first floor, a former doorway located in the west(right) wall approximately over the opening in the cellar below, has also been walled up at some undetermined date. This doorway would, of course, probably have been closed when Bldg. No. 6 was erected, which was prior to 1894. The doorway was also probably cut after 1874, when Hopwood obtained title to both Bldg. No. 7 and 15 lots.

The Inventory of Buildings prepared by Henry C. Edwards and John T. Willett in 1955 to accompany the Architectural Base Map of Harpers Ferry, Drawing No. NM-HF - 3055, offers the following information on the state of Bldg. No. 7, when the Park Service took charge of the structure: "Bldg. No. 7, Type: Dwelling or tavern. Name "White Hall". Date: B. 1859. 2½ stories. 496 square feet per floor. Cost to West Virginia, $ 1,900. Construction: Walls: stone; Roof, slate. Dormers, sash, etc. Wood. Wood porch. Remarks. Condition September 1955. Flood damage; deterioration from neglect, walls sound. Remarks, Owned by Frederick Roeder, 1859."

2. Photo HF- 1896-1901, shows the north or front elevation of Bldg. 7 without a porch. Map No. 5- the Sanborn Company insurance map of Harpers Ferry dated September 1907, indicates that the porch had not been added to Bldg. 7 as of that date. For a photo of the 20th century porch on Bldg. 7, misdated 1893 and taken after 1907, see Figure 34, page 50, in Archeologist David Hardgrave Hannah, "Archeological Excavations on Virginius Island, Harpers Ferry National Historic Park, 1966-1968:" (Harpers Ferry Job Corps Civilian Conservation Center, Harpers Ferry, West Virginia, March, 1969).

Archeological Evidence Regarding Bldg. No. 7 :

Archeologist William M. Gardner excavated the area along side the west wall(Trench G) and the south(rear) elevation of Bldg. 7(Trench FØ), in 1973-74. In regards to Trench G, Mr. Gardner found "a brick sidewalk immediately adjacent to Building No. 7. This is a very late featured and well post-Civil War but undoubtedly used by the occupants of the inner courtyards to gain access to Potomac Street."[1]

Documentary evidence provides the following information that may help date the age of this walk:

1. Map No. 3, Plat prepared in 1846 when William Anderson sold Bldg. 15 and most of Subdivision No. 4 of Lot No. 15 to Susan Downey on July 20, 1846, reserved to Anderson a right of way through Downey's backyard, via the area enclosed by figures and numbers 4, 5, 6, 7, 8, J. I, H. and G thus running adjacent to the south(rear) and west(side) walls of Bldg. 7, from the rear of his brick store, Bldgs. 11 and 11A on Subdivision 2 of Lot 15. William Anderson, in 1846, was thus have found such a brick walk useful.

2. Mrs. Susan Downey, however, apparently found the passage of Anderson and his customers through her backyard objectionable, for two years later, on August 1,1848, she paid Anderson $ 300.00 to acquire that 1846 route and in addition, gave him a new right of way leading to High Street via the area enclosed by figures and letters 1,2,3, C, B and A on Map No. 3. The deed further specified that both parties were to keep up fences.[2]

1. Gardner, William A., "Excavations - Harpers Ferry, 1973-74,"(Contract study for the Denver Service Center, December 6,1974), p. 32.

2. Deed Book 30,p.306-307.

Thus from 1848 to 1874, Bldg. 7 and Lot No. 15, subdivision 4, with Bldg. 15, were under separate ownerships and there would have been no real need for a brick walk close to Bldg. 7. Fences would also keep the occupants of Wager Lots 14, and Subdivisions 3 and 2 of Lot 15 from cutting around the rear of Bldg. 7 and across Subdvision 4 of Lot 5 to reach Potomac Street. In 1873-74, however, Charles L. and Charolette R. Hopwood purchased Bldgs. 7 and 15, thus obtaining title to all of Lot 15, Subdivision 4. The 1907 insurance map.(Map No. 5) shows the right of way granted Anderson in 1848 closed off and its space occupied by a frame addition or structure located between Bldgs. No. 14 and 15. In order to do this legally, the owners of Bldg. 15 would have had to either give the owners of Lot 15, subdivision 2 a new outlet from the back of Bldgs. No. 11 and 11A, or have purchased their right.

The brick walk along the west side of Bldg. 7 was thus probably constructed after 1874 and prior to ca. 1890, when Bldg. No. 6 was erected over the top of the sidewalk, so as to completely fill in the space between Bldgs. No. 5 and 7 (See Maps no. 4-1894 and No. 5-1907). As has been mentioned the first-story door in the west wall of Bldg. 7 was probably cut about 1874 and brickup about 1890, when Bldg. No. 6 was erected.

B. Foundation Wall

In the 1873-74 excavation Archeologist William M. Gardner reported

"Another feature of which only a part was uncovered due to the excavation difficulties (from vast quantities of rubble, consisting of very large shale fragments that could not be readily moved) was a deeply buried foundation wall which was oriented from the NE to SW, or parallel with the northwest (our "west" side) wall of Building 7. This foundation only extended for approximately six feet back (south) of the present sidewalk but ran (north) under the sidewalk and Potomac Street. It was once thought, and it is still possible that this wall was connected with some sort of basement entrance into Building 7. I am of the opinion...that this foundation represents the remains of a building shown on the 1803 map and which falls in the general vicinity... 3

3. Gardner, "Exeavations-Harpers Ferry, 1873-74," p. 32.

This writer, however, believes that thefoundation wall was probably constructed by William Anderson when he erected Bldg. No. 7 in 1838-39, to provide a basement entrance to the cellar of Bldg. 7. Floor plans of Bldg. 7 reveal that there was once a doorway located in the west cellar basement wall at a point approximately eight feet 10½ inches from the northwest(front or Potomac Street) corner of the building. The former doorway was later walled shut with rock.

In 1846, as has been mentioned, Anderson sold most of Subdivision 4, Lot 15, to [redacted] Susan Downey and reserved a right of away around the south(rear) elevation and west side of Bldg. 7. In order to walk on the ground level via his path to Potomac Street, William Anderson would have had to fill up the former basement entranceway to Bldg. 7 along the west wall. This writer thus suggests that cellar door in the west wallof Bldg. 7 was formed in 1838-39 when William Anderson erected the warehouse and closed up, together with the filling in of the sunken basement entrance way, in July 1846. when Anderson sold adjacent Subdivision 4 of Lot 15 to Susan Downey.

D. Use of Bldg. No. 7, "White Hall," 1839-1953:

Erected by William Anderson and probably completed in 1839, Bldg. No. 7 served as a one-story stone warehouse from 1839 to 1847, storing goods that were sold in Anderson's store, which was located in Bldg. No. 11. Frederick A. Roeder purchased Bldg. No. 7 in November 1847, and added a second story and a half to the warehouse, probably in 1848-49. During this period, 1848-1855, Roeder leased the structure out as a tavern, which probably because of its white painted exterior, was generally known as "White Hall." In the 1855-56, period, however, the structure was described as being used as a warehouse(on the first floor) and a dwelling on the second . Bldg. 7 then apparently reverted to service as a drinking house again during the years 1857 to 18 ., for the 1874 deed for the sale of the structure describes the property as "known as White Hall.", thus indicating that this title had been associated with Bldg. 7 for at least some 20 years.[1]

Disaster struck the Roeder family, the owners of this property in 1861. Anna Maria, the wife of Frederick A. Roeder, died on March 23,1861, in her 41st year;. The Civil War then began and on July 4, 1861, Frederick A. Roeder, a strong supporter of the Union cause, was killed by sniper's bullet that had probably been fired by a Union soldier. Mary L. Roeder, Frederick's 18 year old daughter and the recent bride of 25 year old John Kern, with her husband

1. Deed of B. &. S., May 12,1874, Deed Book B, pp. 153-154.

aid, assumed responsibility for the six minor and orphened Roeder children, whose ages ranged from two to 16.[2] As first the Confederate and then the Union Armies occupied Harper's Ferry during the summer of 1861, the Kerns took the six Roeder children and fled to Maryland for safety, residing at Middletown and Frederick during the remainder of that year. With the family gone, the remaining citizens of Harpers Ferry and the soldiers of the occupying armies stole and looted Frederick A. Roeder's personal property and furnishings in his residence and bakery, Bldgs. 16 and 16A, in Bldg. No. 5, and in Bldg. No. 7, WhiteHall. Tavern. On or about July 25,1861 the Union Army occupied Harpers Ferry generally and held the town until March 25,1862 During this eight month period, the United States Army utilized the vacant Roeder buildings. The first floors of Bldgs. No. 5 and 7 served as stables for Army horses and the upper floors were used to store hay and for other warehouse purposes.[3] The Army paid no rent. John J. Kern, like his father-in-law, was also a strong Union man and he returned to Harpers Ferry with his wife and the Roeder children in March 1862, when the Union Army occupied the town in force. He resided there during the remainder of the war, except for brief periods when the Confederate Army again invaded the town. During these short interverals Kern and family again fled into Maryland. Augustus H. Roeder, Frederick's oldest son, enlisted in the Union Army at the age of 16 in

2. U.S. Court of Claims, JC 11803-Statement of James R. Roeder, Roeder's son, Sept. 5,1902,p.4.
3. U.S. Court of Claims-11803- Claim of J. J. Kern, Administrator, F(sic) A. Roeder Estate for rent under Act July 4,1864, filed September 25,1873.

1863 and served three years in the Independent Loudoun Ranger Company. In 1863 the Circuit Court of Jefferson County appointed John J. Kern to be the administrator of the " Estate of Frederick A. Roeder." Neither Roeder nor his wife had left wills.

In October 1873, in his role as administrator, Kern presented a claim against the United States in the total amount of $ 504.00 for the rent of Roeder's buildings in Harper's Ferry that were occupied by Federal troops under the command of Colonel Baxter of the 72nd Pennsylvania Fire Zouaves, and others, for military purposes on or about July 25,1861 until on or about March 25,1862. The rent claim for Bldg. No. 7 was listed as follows:

For rent of two-story brick house (Bldg. no. 7-with five rooms) on Potomac Street from July 25,1861 to March 25,1862 at $ 6.00 per month..... $ 54.00. [12]

This claim was presented to the U.S. Quartermaster General under the terms of the Act of July 4, 1864 and was disallowed by the Third Auditor of the U.S. Treasury Department about seven years later, on June 1,1880, for want of jurdisdiction. Giving as his reason for rejection, the auditor commented: "this property was in Jefferson Co., West Va., one of the counties declared in [illegible] insurrection, and the settlement of the claim is therefore barred by Act of Feb. 21st 1867 (Section 300 "R' Appendix Rev. Stats, U.S.) which denies settlement of claims for occupation of real estate in a State or part of State declared in insurrection during the rebellion."

12. Claim of J.J. Kern for Rent, 504, Power of Attorney, dated October 8, 1873, to N.M. Mcrae, National Archives Record Group No. 123, Washington, D.C.

Twenty years later, Kern took the same claim to Congress. On March 11,1902, the U.S. House of Representatives Committee on War Claims referred the claim of the Roeder Estate to the U.S. Court of Claims to be considered under the Bowman Act of March 3, 1883. This Court dismissed the claim in January 1904 for want of jurisdiction. But Kern persisted. On March 3, 1905, a resolution of the U.S. Senate referred the claim of the Roeder Estate again to the U.S. Court of Claims,- this time to be considered under the terms of the Tucker Act of March 3,1887. The case was brought to hearing based on the loyalty of Frederick A. Roeder and merits of the claims on May 28,1906. G. W. Hott appeared as attorney for the Roeder Estate and Assistant Attorney General F. Dec. Faust represented the United States Government

The U.S. Court of Claims handed down its finding of facts on June 8, 1906, declaring:

I. It appears from the evidence that the claimants' decedent (Frederick A. Roeder) was loyal to the Government of the United States during the late war of the rebellion.

II. During the war for the suppression of the rebellion, the military forces of the United States, by proper authority, took possession of and occupied, for military purposes, certain buildings belonging to the claimants' decedent, situate at Harper's Ferry, State of West Virginia. That the reasonable rental value of said buildings during the period of said occupancy, together with the repairs incident to such occupation, was the sum of Three hundred and twenty dollars ($ 320) for which no payment appears to have been made.

The U.S. Attorney had recommended that the Roeder rent claim of $ 504.00 be reduced to $ 200.00 and the U.S. Court of Claims apparently split this difference to arrive at the figure of $ 320.00.[13]

13. All of the Frederick A. Roeder Estate Claim papers from 1873 to 1906 are now filed in National Archives Record Group No. 123 under U.S. Court of Claims JC(Congressional Jurisdiction) No. 11803, at the Federal Record Center at Suitland, Md.

Kern, in his 70th year in 1906, had finally won a battle but not the war, for there was no money to pay the claim and 10 more years were to pass before the heirs received any money. Public Law No. 289, approved March 4, 1915, finally appropriated the $ 320 necessary to pay off the Frederick A. Roeder claim of October 1873.[14]

The money was received from the Government by J. W. Gardner, acting as administrator of the Roeder Estate, in June 1915. Of the $ 320.00 received, $ 114.32 went to pay the fees of the lawyer and administrators, leaving a total of $ 205.68 to be divided among the seven Roeder children. On January 1,1916, each of the heirs received an equal share in the amount of $ 29.38. Four of the seven Roeder children were still alive in 1916 and the shares of the three deceased children were divided equally among their 11 children.[15]

To return to the Civil War era, Bldg. No. 7 was no doubt subjected to heavy use by the armies in 1861-62 and was probably in poor condition in 1865. When the Ordnance Department decided not to rebuilt the destroyed Armory at Harper's Ferry, the town was in a depressed state economically, which was to continue for nearly 20 years(1865-1885).

Beginning in the 1870's and acting as the administrator of the Frederick A. Roeder Estate, John J. Kern gradually began selling off Roeder's real estate holdings in Harpers Ferry so that the money could be divided up among the Roeder children. On May 12,1874, Kern thus sold off "White Hall" (Bldg. No. 7) for only $ 321.43.[16] The low price was probably

14. U.S. Statues at Large, Vol. 38, Part I, p. 994.
15. Account Fiduciaries Book O (1915), pp. 155-156; Jefferson County Courthouse, Charles Town, W. Va.
16. Deed Book B, p.153-154.

due to the both the poor physical state of the old structure and to lack of any real industry in the town..

The purchaser, Charles L. Hopwood, apparently rejuvenated the battered structure and gave the exterior an sparkling coat of white paint (See Photo HF-379, taken in the period 1882-1886), thus continuing the use as "White Hall" tavern.[1] The Sanborn-Perris Insurance Company Map of Harper's Ferry, W. Va., dated November 1894, indicates that Bldg. No. 7 was being used as a "saloon." The Sanborn Company Insurance Map of Harpers Ferry, W. Va., dated September 1907, shows that Bldg. No. 7 was then serving as a " restaurant".

The Inventory of buildings prepared by the National Park Service in September 1955, when the Service took charge of the National Monument, lists Bldg. No. 7 as "Dwelling or tavern", known as "White Hall".

L. Charles L. Hopwood and his wife Charolette also owned Bldhg. No. 15, in which they resided. The Census of 1880 provides the following data on the Hopwood family:

Hopwood,	Charles L.,	35,	Retail dry good merchant. Born in Md.
"	Charolette,	30,	his wife, keeping House, Born in Va,
	Harry	12,	son born in W. Va.
	Bernise	9	daughter born in W. Va.
	Charles A.,	7	son " " "
	Frank A.,	5	son " " "

A female boarder, 28 years old, and a bonnet maker by trade, was also living with the Hopwood family in 1880. Census of 1880, National Archives Record Group No. 29, Microfilm Reel 1404, Washington, D.C.

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4. Vigrinia Free Press, Charles Town, W. Va., 1824-1861, a weekly newpaper that printed Harpers Ferry and county news. Available for use on nine reels of microfilm at Library of Harpers Ferry National Historical Park.

5. Harper's Ferry Constitutionalist, 1839-1840, a weekly newspaper that was briefly published at Harpers Ferry. Available for use on microfilm at Park Library.

6. Virginia Free Press, Charles Town, West Virginia, 1865-1896. Weekly newspaper publishing area news. Available for use(with some gaps) at Shepherd College Library, Shepherdtown, W. Va. on microlfim. Some bound volumes of originals in Jefferson County Court House, Charles Town, W. Va.

7. Spirit of Jefferson, Charles Town, West Virginia ,1865 to 1955, and to date. Weekly newspaper publishing area news. Available for use on microfilm at the University of West Virginia, at Morgantown, W. Va.

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9. Northern Neck Grants Books, Virginia State Library, Richmond Virginia.

10. National Archives Record Group No. 121, Public Buildings Service, Entry No. 75, Warrenty Deeds and Correspondence, 1796-1884, for Public Lands of the U.S. Armory at Harper's Ferry, Va., Washington, D.C. Has copies of all the early deeds, leases, etc.

11. National Archives Record Group 123, U.S. Court of Claims, JC (Congressional Jurisdiction)- No. 11803- Claim. Federal Record Center at Suitland, Md. This has all the of the Frederick A. Roeder Claims for Bldgs. No. 5, No. 7, and No. 16 against the United States from 1873 to 1906.

PHOTO NO. 1

John Brown's Fort, Harper's Ferry - 1873-1875

Harpers Ferry National Historical Park Negative No. HF-55

Buildings from left to right: Bldg. No. 4 and 8. In foreground is the formal entrance to the U.S. Musket Factory Yard; the John Brown Fort, or Armory fire engine house, with cupola and roof, and the east gable end of the Armory Office Building. Visible between the Fort and Office is the upper portion of the north or front elevation of Bldg. No. 7, White Hall Tavern.

Note the small end chimneys, one each, in the north and south gable ends of Bldg. 7. Centered in the third, or attic, story of the north facade and located beneath the end chimney, is one window. The second story is divided into three bays and each bay is occupied by a window with six over six lights. The second story and a half of the north facade are constructed of brick and appear to be unpainted, or the paint has faded badly. A portion only of the 1st story of Bldg. 7 can be seen. However, it is clear that the stone walls of the 1st story are painted white and that a large door was located in the center bay at this level. There is no porch visible on the first story. Above the small end chimneys of Bldg. 7 can be seen the rear (north) elevation of Bldg. No. 15, and immediately to its right, that of Bldg. No. 16.

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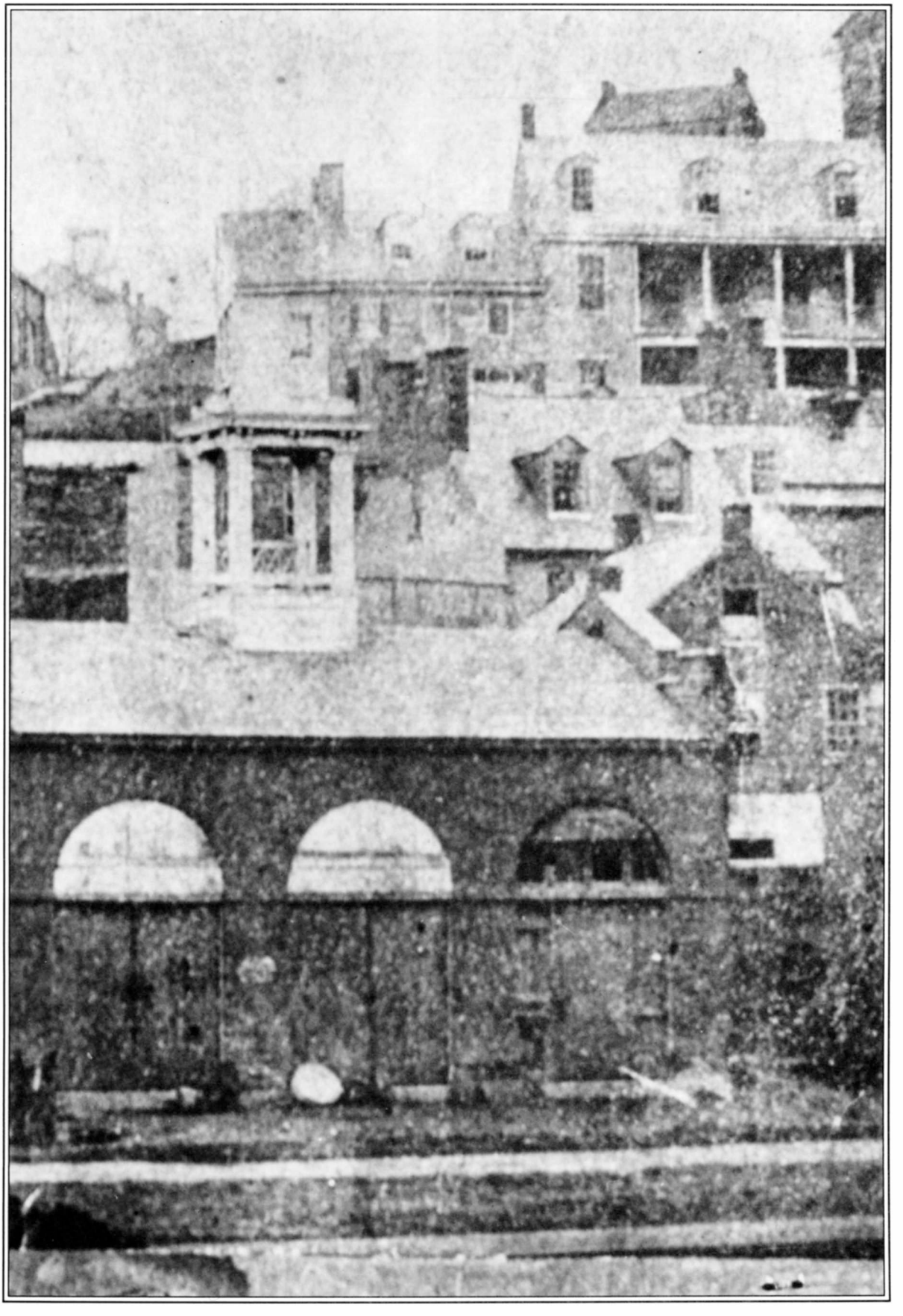


Photo No. 2

JOHN BROWN FORT, Ca. 1882-1886

Harpers Ferry NHP Negative No. HF- 379.

Bldgs. Left to right: Part of Bldg. [illegible] Bldg. No. 8, John Brown Fort, or Armory fire engine house with cupola on roof, and Armory Office building (with iron painted on facade). [illegible] Between the fort and the office can be seen the northern facade of Bldg. No.7. The photo reveals that the new owner, Charles L. Hopwood, who had purchased the old building for $ 321.43 in 1874, has put the structure in good condition. The complete north facade, 2½ stories, has been painted white since 1865(see Photo HF-55). Note the small end chimneys, slate roof, window centered in the third story level and the three windows in the second story facade. Windows have six over six lights. Except for the painting of the 2nd and third story [illegible] facade, this portion of White Hall had not been altered since the 1865 photograph was taken. In the center of the 1st story can be seen a center doorway and what [illegible] perhaps an exterior louvered shutter for a flanking window in the right hand or west bay. Note also that there is no one-story covered porch on the 1st story of Bldg. 7, as appears in NHF- 196(1956).

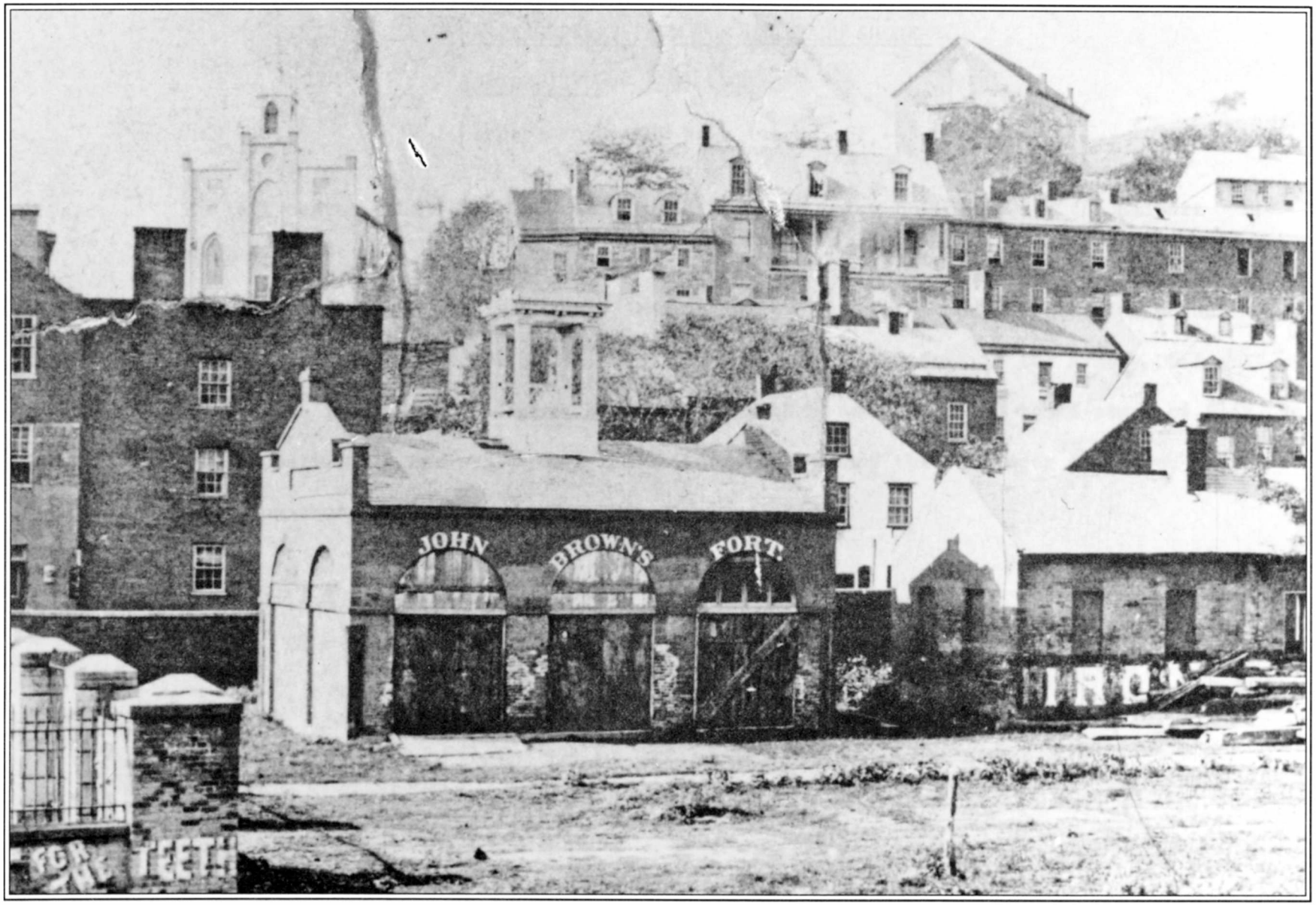

JOHN
BROWN'S
FORT
FOR TEETH

PHOTO NO. 3

HARPERSFFERRY FROM THE MARYLAND SHORE

INNTHE 1870s. [redacted]

Harpers Ferry NHP Negative No. HF -43.

In left center, the large three-and one-half story brick building with the Gilbert Brothers Druggist sign painted on its gable end wall, is Park Bldg. No. 9, moving to the right, Bldg. No. 8, and in front of 8, the John Brown Fort or Armory fire engine house, with the wooden cupola on its roof. Immediately to the right of the fort is the Armory Office building and directly above it can be seen the northern white-painted third story of Bldg. No. 7- White Hall, with one window and one chimney visible and the remainder concealed by a large pine tree.

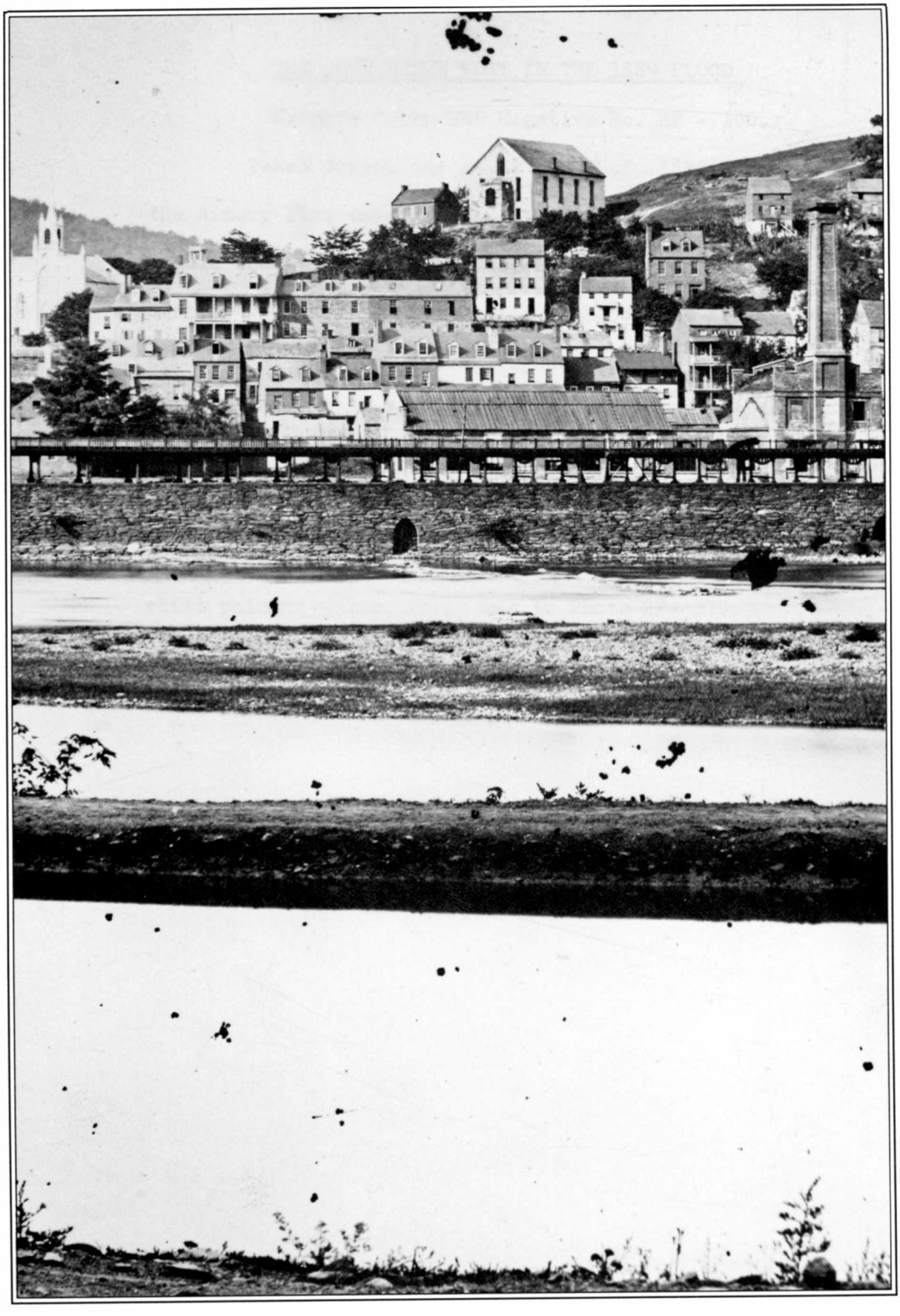


PHOTO NO. 4

THE JOHN BROWN FORT IN THE 1889 FLOOD

Harpers Ferry NHP Negative No. HF - 100.

Taken during the great flood of 1889, John Brown's Fort, the Armory fire engine house, still stands in its original position within the formal entrance to the Musket Factory yard. The Armory Office, which stood just to the right of the fort, however, has been demolished. Just above its original site is visible the north or front elevation of Bldg. No. 5, including all of its 2½ stories. Partially visible above the west(right) gable end of the John Brown Fort is the north gable end and facade of Bldg. No. 7- White Hall. Note that that the third story of the north elevation of Bldg. 7 is still painted white, as it was in Photo HF- 379.

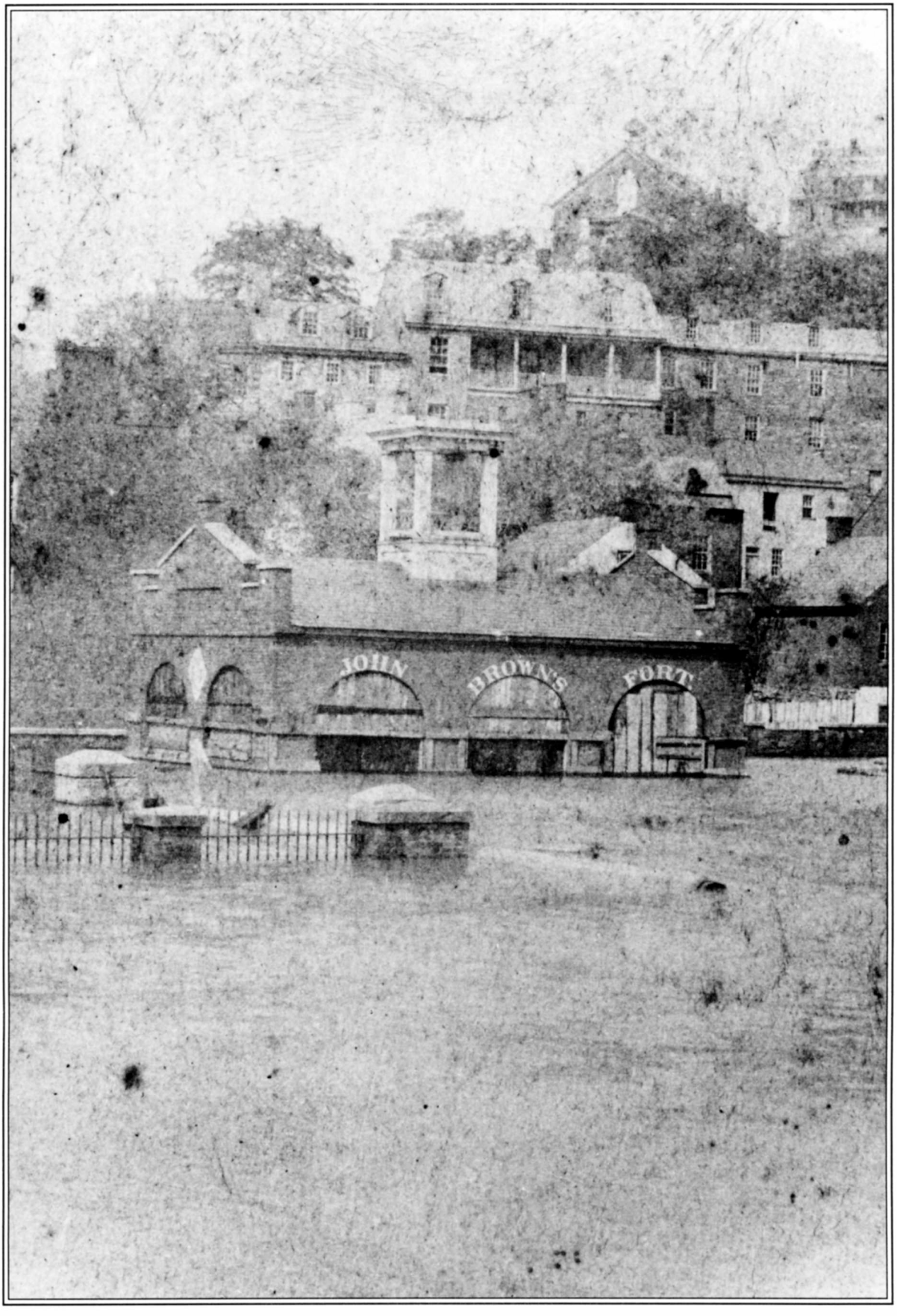

JOHN BROWN'S FORT

PHOTO NO. 5

HARPER'S FERRY FROM MARYLAND HEIGHTS, 1896-1900.

Harpers Ferry NHP Negative No. HF- 96.

This photograph was taken after 1896, because of remodelling of the Catholic Church , which started in that year, is underway in this view, and prior to 1902, when Park Bldg. No. 3 was constructed.

Compare this photograph with Map No. 4, the San Perris Map of Harper's Ferry dated November 1894. In center, at corner of Shenandoah Street and Potomac Street, stands Bldg. 9, then moving to the right, Bldg. 8, then Bldgs. 7, No. 6, and No. 5. Note that the two and one-half story north(front) elevation of Bldg. No. 7 is painted white and the first story, still not like the earlier photographs, is now sheltered by a one-story covered porch.

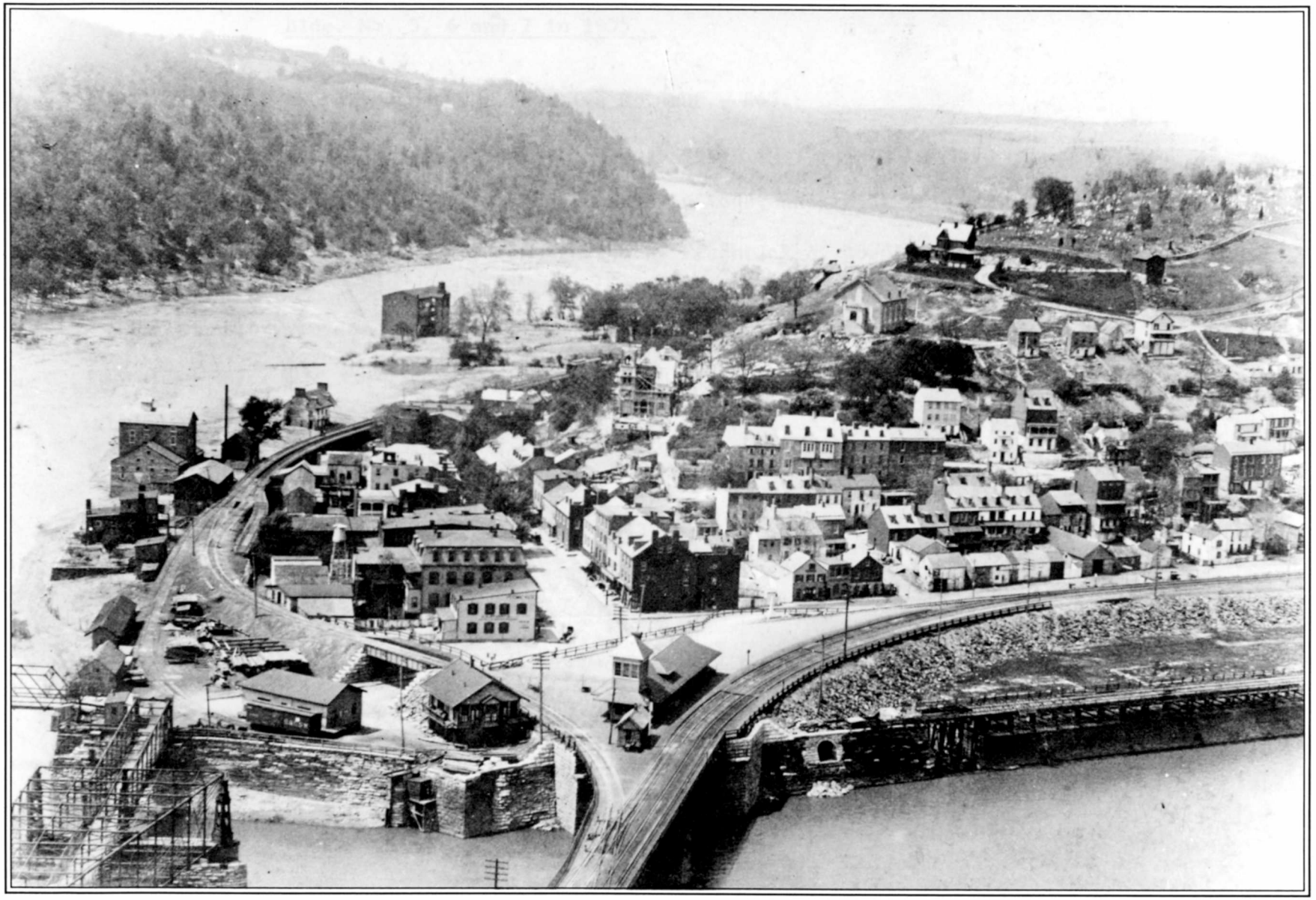


PHOTO NO: 6

Bldg. No. 5, 6 and 7 in 1955

Harpers Ferry NHP Negative No. NHF - 843.

Bldgs. From left to right, as they appeared in 1955:

Bldg. No. 7, erected in 1839, and altered in 1848, and 1856; Bldg. No. 6, erected prior to 1894, and Bldg. No. 5, constructed by Frederick A. Roeder in 1856.

The one-story covered porch on Bldg. No. 7 was added after the period 1896-1901(see Photo HF- 96). Also note that the 19th century six over six lights have been removed from all of the windows visible in this view.

W
89

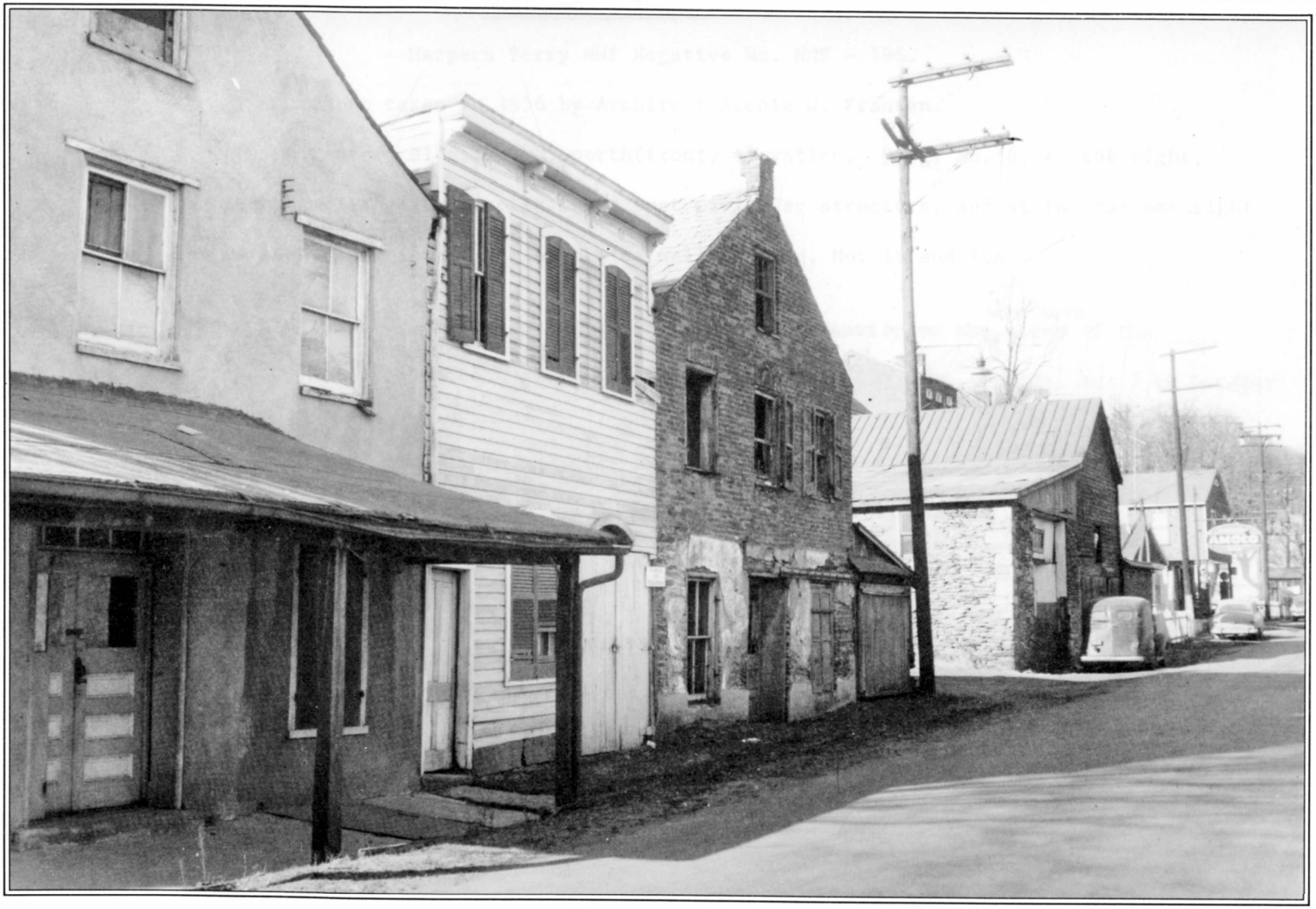


PHOTO NO. 7

Harpers Ferry NHP Negative No. NHF - 196.

Photo taken in 1956 by Architect Archie W. Franzen.

Center; Bldg. No. 5, north(front) elevation. Bldg. No. 6, to the right, has been demolished because it was a post Civil War structure, and at the extreme right can be seen a portion of the east side wall of Bldg. No. 16 and 16A

Bldg. No. 6, erected prior to 1894, intruded heavily on the historic scene of the John Brown Raid, which took place within about about 150 feet of Bldg. No. 7 in October 1859.

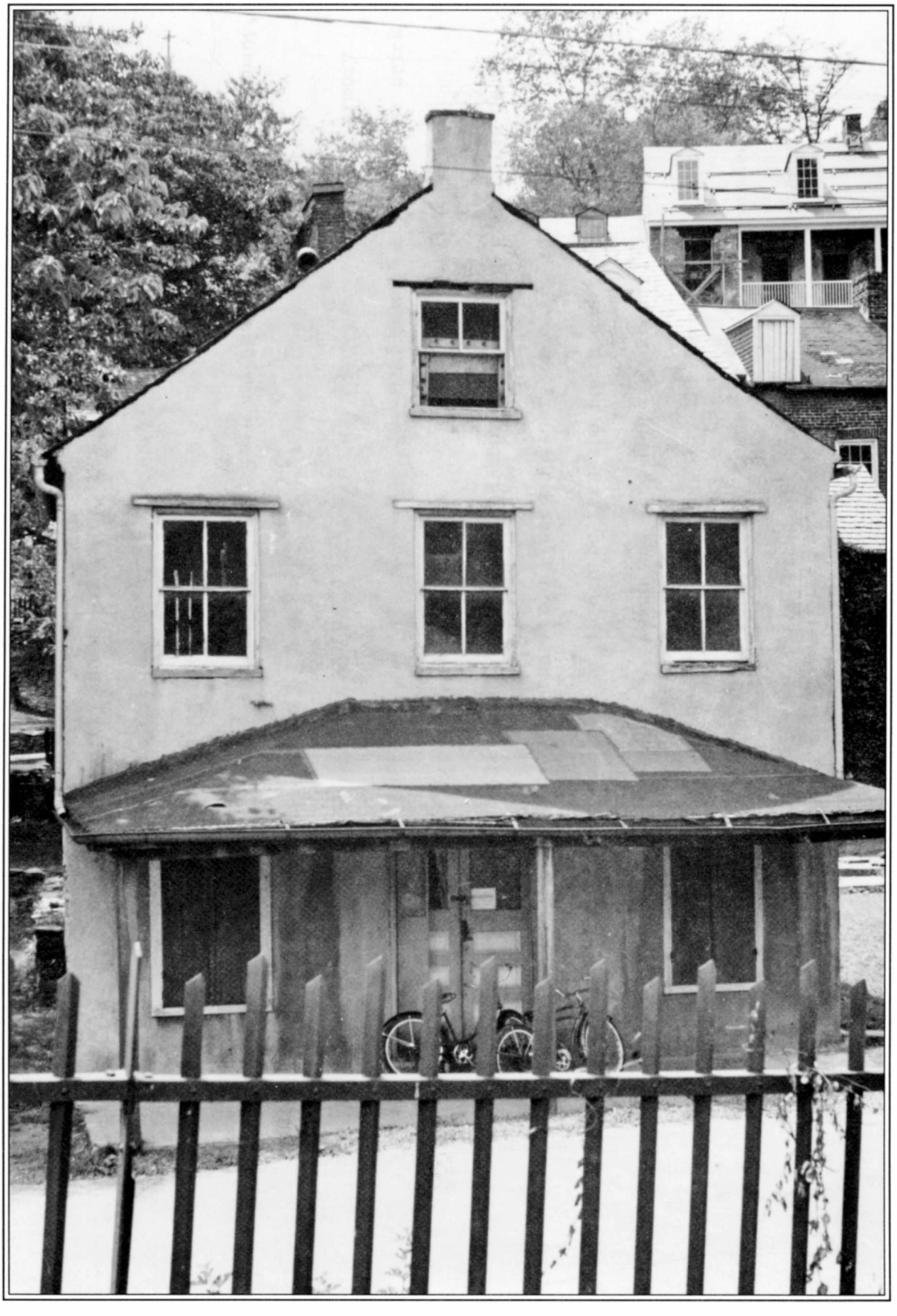
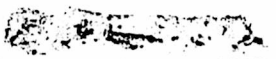


PHOTO NO. 8

HARPER'S FERRY FROM THE MARYLAND SHORE, 1859



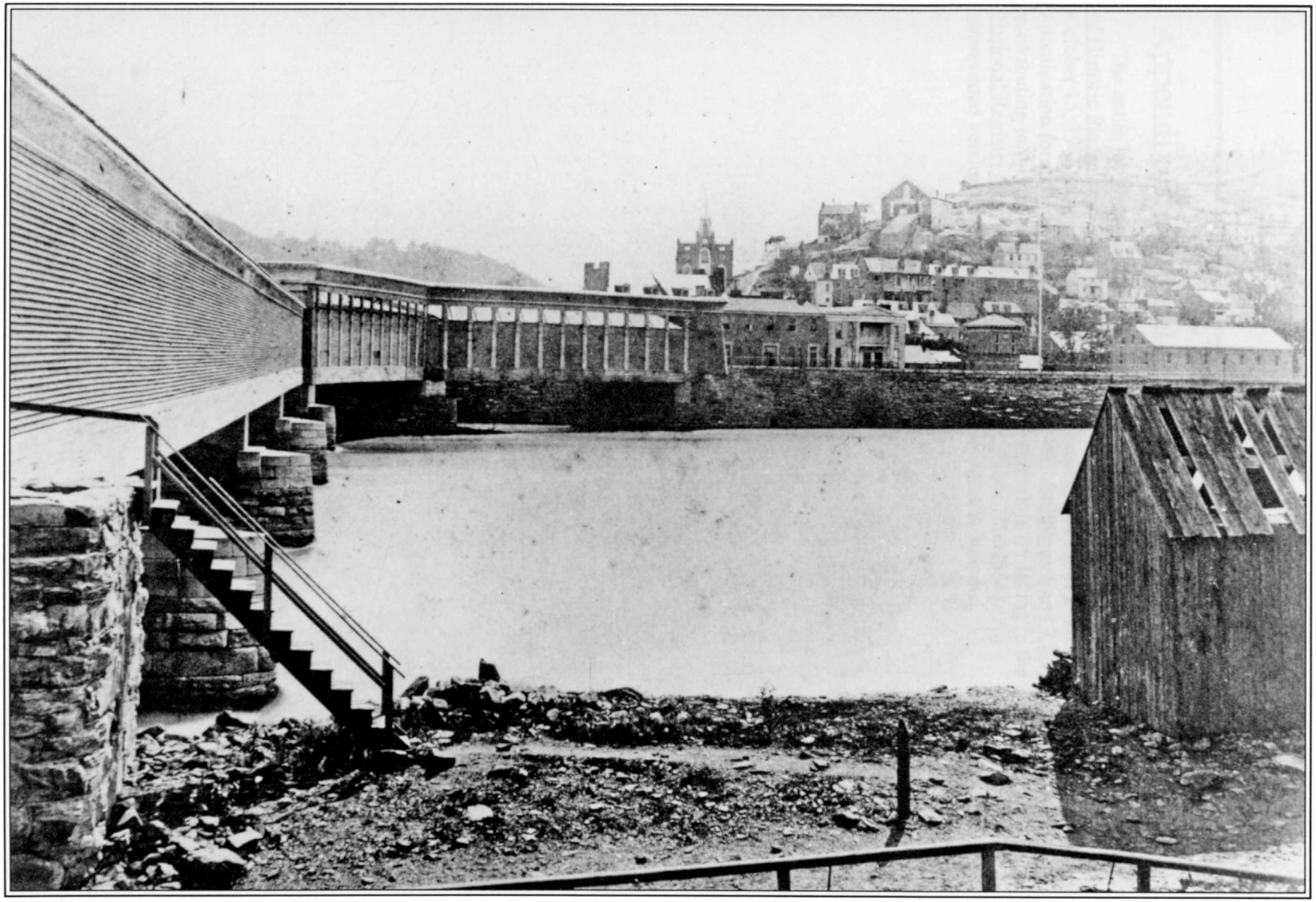
Harpers Ferry NHP Negative No. HF- 64.

This view, taken in October 1859, is the earliest photograph in which the Frederick A. Roeder House, Bldg. 16, can be seen.

Bldings: Left to right: Covered railroad and wagon toll bridge of the B.& O. RR Company, brick structure, including portion with portico, is the Wager House or U.S. Hotel, located on Wager Lots 6, 7, and 8; next roof of Armory warehouse, e next roof of Armory fire engine house with parapet wall at gable end. Next, the tall hipped roof, square brick structure is the B.&. O. Railroad water tower.

At the left of the cornice of water tower and above the Armory Fire Engine House can be seen a portion of the north(rear) roof, second floor, chimney, and dormer of Bldg. No. 16. Immediately in front of 16 aan be seen the north and south end chimneys in the gable end walls of Bldg. No. 7, which was also owned by Roeder. Above 7 can be seen the north(rear) roof and one dormer of Bldg. 15, the Susan Downey House.

On the night of July 4,1861, Frederick A. Roeder was mortally wounded by a bullet fired by a Union sniper that ricochetted off the brick end of the Wager House Hotel and struck Roeder as he rounded the corner on his way home.



Appendix B: National Register of Historic Places

The entire lower town of Harpers Ferry was entered in the National Register of Historic Places as a historic district at the inception of the National Register on October 15, 1966 (National Register reference number 66000041). The inventory / nomination form, was completed on May 7, 1981. Buildings 5 and 7 are listed as contributing to the qualities that make lower town eligible for listing in the National Register (National Register reference number 79002584). An abbreviated version of the inventory--nomination form is included.

Form No 10-306 (Rev 10-74)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

FOR FEDERAL PROPERTIES

FOR NPS USE ONLY
RECEIVED
DATE ENTERED

SEE INSTRUCTIONS IN *HOW TO COMPLETE NATIONAL REGISTER FORMS*
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC

Harpers Ferry National Historical Park

AND/OR COMMON

2 LOCATION

STREET & NUMBER

__NOT FOR PUBLICATION

CITY, TOWN

Harpers Ferry __ VICINITY OF

CONGRESSIONAL DISTRICT

2nd

STATE	CODE	COUNTY	CODE
West Virginia	54	Jefferson	037

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE	
X DISTRICT	X PUBLIC	X OCCUPIED	__AGRICULTURE	__MUSEUM
__BUILDING(S)	__PRIVATE	__UNOCCUPIED	__COMMERCIAL	X PARK
__STRUCTURE	__BOTH	__WORK IN PROGRESS	__EDUCATIONAL	__PRIVATE RESIDENCE
__SITE	PUBLIC ACQUISITION	ACCESSIBLE	__ENTERTAINMENT	__RELIGIOUS
__OBJECT	__IN PROCESS	__YES: RESTRICTED	__GOVERNMENT	__SCIENTIFIC
	__BEING CONSIDERED	X YES: UNRESTRICTED	__INDUSTRIAL	__TRANSPORTATION
		__NO	__MILITARY	__OTHER

4 AGENCY

REGIONAL HEADQUARTERS: *(If applicable)*

National Capital Region, National Park Service

STREET & NUMBER

1100 Ohio Drive, S.W.

CITY, TOWN

Washington —— VICINITY OF

STATE

D.C. 20242

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE
REGISTRY OF DEEDS, ETC Jefferson County Courthouse

STREET & NUMBER

Cor. North George and Washington Streets

CITY, TOWN

Charles Town

STATE

West Virginia

6 REPRESENTATION IN EXISTING SURVEYS

TITLE Historic American Buildings Survey: W. Va. 6, 18, 19, 23, 24, 25, 25A, 26-39, 49

DATE

1956-61 X FEDERAL __STATE __COUNTY __LOCAL

DEPOSITORY FOR
SURVEY RECORDS Library of Congress

CITY, TOWN

Washington

STATE

D.C.

contained kitchens and pantrys for the main building. A fire gutted the east half of the building in 1949, by which date the front porch had disappeared. The interior brick party wall collapsed following severe weather in 1960, which so damaged the front wall that it had to be taken down and rebuilt. In 1973 new doors, sash, and frames of antebellum design were installed, and in 1975-76 the front porch was reconstructed, largely restoring the exterior to its antebellum appearance. The interior is wholly undivided. (Park Bldg. No. 43)

Wager Lot No. 46 contains what was originally a two-story stone house fronting 38' on Shenandoah Street and measuring 32' deep (Park Bldg. No. 44), erected by Philip Coons in 1845-46. There was no cellar; the first floor was divided by a brick partition into two stores; the second floor contained five rooms and was designed for use as a dwelling. In 1845-46 a stone third floor and a slate roof were added by the Masonic Order of Harpers Ferry. A wooden exterior stair at the west end provided access to the third floor, which contained a large meeting room and a smaller room. In 1859 one of the stores (probably that on the west) and the second floor quarters were occupied by John N. Stonebraker as his bakery and residence. The other shop, vacant that October, had previously been occupied by William Newton's grocery and butcher shop. The third floor housed the Masonic Hall of Charity Lodge No. 111. William Richards, owner and resident of Wager Lot 49, then owned the property. The National Park Service has restored the exterior of the building to its 1859-65 appearance while adapting the interior to contemporary uses.

Wager Lot No. 46 occupies the southwest corner of the Wager Six Acre Reservation. Adjoining it on the west is U.S. Lot No. 1, Shenandoah Street, containing Park Bldg. No. 45 (see page 12 above).

Wager Six Acre Reservation--High and Potomac Streets

The following inventory proceeds north on the west side of Potomac Street to Swayne Street; thence south on the east side of High Street; thence north on the west side of High Street to Marmion Way. Included are those park properties on Potomac and High streets north (or northwest) of those discussed above in connection with Shenandoah Street.

Wager Lot No. 15, Subdivisions No. 2 and 4, originally contained a one-story stone building measuring 24' by 40' with cellar and slate roof, erected by William Anderson in 1838-39, Between 1847 and 1852 Frederick A. Roeder added a second stone story. In 1856 the front part of the building was removed for the widening of Potomac Street, reducing its depth to 20'. The street facade was rebuilt with brick for the second story and gable end. The first floor was a tavern called "White Hall" for most of the years from 1848 to 1953. In 1859 John Fitzpatrick,

(continued)

a stonecutter, probably occupied the residential quarters on the second floor. In 1861-62 the structure (now Park Bldg. No. 7) was used by the Union Army as a stable.

The eastern part of Wager Lot No. 16 facing Potomac Street contains a two-story building constructed by Frederick A. Roeder in 1856-57 (Park Bldg. No. 5) to replace the space lost when his building next door (Park Bldg. No. 7) was shortened. In dimensions and materials, the structure was a near-twin of its truncated neighbor. It had no cellar, however, and by 1861 a two-story brick wing with a slate-covered shed roof, 12'7" by 13', was added to its rear. The building was variously used as a tavern, store, and warehouse, and was also occupied by the Union Army as a stable in 1861-62. Bldgs. 5 and 7 stand today in essentially their Civil War configurations.

The western part of Wager Lot No. 16 facing High Street contains what was originally a two-story stone structure, fronting 22' on High Street and measuring about 17-1/2' deep, built by Frederick A. Roeder in 1844 (Park Bldg. No. 16). Because of the sloping terrain, the first story was above ground at the rear but below grade on High Street, so that an areaway on that elevation provided direct access to the second floor. In 1848-49 Roeder extended the building with a stone addition about 13' to the north (or northwest), bringing the structure to its present plan dimensions of about 35' by 17-1/2'. The rubble stone walls were pargeted. In 1856-57 a brick story-and-a-half was built atop the existing stone walls. An ornamental cast iron balcony was installed across the High Street facade at the juncture of the stone and brick, and a covered two-story frame porch extended across the rear. Before 1859 a two-story brick structure, about 14' by 11', was erected at the outer edge of the rear porch on the south side of the lot (Park Bldg. No. 16A). The main building was the residence and probably the shop of Roeder, a confectioner, from 1845 to 1861. It housed troops during the Civil War and continued in residential use until 1953. Its exterior has been largely restored to its Civil War appearance.

The western part of Wager Lot No. 15, Subdivision 4, facing High Street contains a 2-1/2-story stone structure erected by William Anderson in 1838-39 (Park Bldg. No. 15). The building fronts 24' on High Street and measures 40'8" deep. The full basement beneath is wholly above grade at the rear. Projecting from the east end of the south elevation is a 1-1/2-story stone wing, which is the remaining two-thirds of an earlier structure on the site possibly dating from 1803. Construction of the 1838-39 building caused destruction of the western third of this structure and conversion of the remainder to a kitchen wing of the new building, measuring about 15' square. A frame second story and attic was added to the wing probably in the decade after the Civil War, Between 1894 and 1907 a two-story covered

(continued)

Appendix C: Structural Analysis Report:

Jerrold E. Johnson II, PE, DSC, Harpers Ferry National Historical Park Historic Structures Report, Buildings 5 and 7, July 1993.

For the completion of the Historic Structure Report for Buildings 5 and 7 a structural analysis was completed by the Denver Service Center Eastern Team (DSC-TEA) in June 1993 and revised in July 1993. Jerrold E. Johnson completed the structural analysis and made several recommendations as to the treatment of Buildings 5 and 7. The following is the calculations portion of the structural analysis report. The complete structural analysis narrative for each building is located in the Physical Description sub-section of Part I. Developmental History section of the HSR.

Project Memorandum

Denver Service Center ◆ Eastern Team ◆ Falls Church Branch
6245 Leesburg Pike, Suite 440 ◆ Falls Church, VA 22044-2106 ◆ 703-285-3035

Date : July 20, 1994

Park : Harpers Ferry National Historical Park

Area : Lower Town

Project : Rehabilitation and Renovation of Buildings 5 and 7

Project Number : HAFE 118-07

To : Tom Vitanza, HFC-WPTC
Telephone : 301-223-7872

From : Jay Johnson, [redacted]
Telephone : 703-285-3059
Fax ; 703-285-3056 and 703-285-3076

Subject : Structural and Plaster Notes

Enclosed is a floppy disk with all of the structural and plaster notes for project HAFE-118. Also enclosed are paper copies of all of the information.

If you have any questions, please contact me.

Jerrold E. Johnson II, PE

cc: Tony Donald, DSC-EAF, w/o attachments

JJohnson: jej: July 20, 1994: A:\VITANZA1.WPD

H3015 (DSC-EAF)
HAFE-118-35

Memorandum

To: Associate Regional Director, Professional Services, National Capital Region

From: Chief, Falls Church Branch, Eastern Team, Denver Service Center

Reference: Harpers Ferry National Historical Park, Package 118, Lower Town, Buildings 5, 7, 16, and 16A, Project Type 35

Subject: First Floor Structural Framing, Buildings 5 and 7

On Thursday, August 26, 1993, a meeting was held at the park to discuss methods of rehabilitating the first floor structural framing in buildings 5 and 7. Our understanding is that the decision was to paint the existing joists without removing the flooring and subflooring. It is our concern that this method of rehabilitation will not provide a reliable level of safety due to substandard strength and is not recommended by the Denver Service Center. Unfortunately, representatives of the Denver Service were not present when the decision was made.

The existing structural framing for the first floors in buildings 5 and 7 consists of 8-inch deep, open-web steel joists supported on concrete masonry bearing walls. The framing was installed in 1974 and 1975 and is nonhistoric. The flooring surface is $^{3}/_{4}$ inch pine flooring supported on $^{3}/_{4}$ inch plywood spanning between the steel joists. The steel joists are 8J2 joists in accordance with the requirements of the *Steel Joist Institute*. They span 15'-0" and have a safe live load capacity of 73 pounds per square foot. This is less than the live load requirement for public spaces as defined by both the BOCA Building Code and ASCE 7-88, the national standard for Minimum Design Loads for Buildings and Other Structures. The current requirement of 100 pounds per square foot has not changed since before the joists were installed.

The crawl space in building 5 and the basement in building 7 are unventilated and extremely damp. This is a major cause for the rapid corrosion of the steel. The original paint is flaking on the majority of the steel surface which will, in our estimation, result in significant loss of strength unless properly recoated. The best method for repainting of the joists is to remove all of the existing paint and rust from the surface. The construction of an open-web joist makes this difficult. Each joist is constructed of two angles along the top and two angles along the bottom. Connecting the two pairs of angles is a bent round bar that gives the joist a truss appearance. This construction results in numerous small spaces that are difficult to properly clean and paint. The difficulty of painting can be observed in buildings 34 and 35. During 1986, after flooding

in December 1985, steel joists that are similar to those in buildings 5 and 7 were wire brushed and repainted. Significant failure of the paint has occurred in less than eight years, and pitting of the steel has begun. The basement under buildings 34 and 35 is generally better ventilated and less damp than those under buildings 5 and 7, and thus is a less corrosive environment.

Our opinion is that the best method of cleaning the steel surfaces is to sandblast. Additionally, it is vital to clean all of the surfaces of the steel. In order to clean the top surface of the top angles and the connection between the bent bar and angle, the flooring and subflooring must be removed. Without the floor removal, and proper repainting, a potentially dangerous situation would exist where the top angles would rust in a location that is difficult to inspect or detect. This could easily lead to premature failure without the park being aware of the situation.

Given the existing conditions, four possible courses of action are possible. They are as follows:

1. **Do Nothing:** This option is the least expensive option. It would result in significant loss of the steel in the joists. We anticipate that 30% to 50% of the steel would be lost during the next 25 years. The resultant safe live load capacity could be as low as 32 pounds per square foot, which is unacceptable in any situation. The probability of needing to close the buildings to replace the first floor framing during the next 25 years is high.

2. **Repainting the Joists Without Removing the Flooring:** Repainting the existing steel without removing the flooring is similar to doing nothing. Additionally, a false sense of safety could exist. The result is a situation which may be more dangerous to public safety. The same loss of strength should be anticipated, and the need for premature replacement should be expected.

3. **Properly Repaint the Existing Steel Joists:** This option would allow for the continued use of the existing structural system. Unfortunately, the existing system does not meet the minimum live load requirements. Both the BOCA Building Code and ASCE 7-88 require that areas which do not meet the current requirements have the safe live loads *conspicuously* posted on each floor that is deficient. The park would be responsible for developing and implementing a plan to insure that the posted live loads are not exceeded We do not feel that this would be consistent with the historical program and interpretation of these buildings.

4. **Replace the Framing with New Steel or Timber Framing:** Replacing the existing nonhistoric framing would allow for the construction of stronger, stiffer framing. The framing would be designed to meet the building code requirements. A steel system would be constructed from I-shaped sections which would be easier to clean after flooding. A timber system would be constructed from preservatively treated timber which would require minimum cleaning. Since the flooring must be removed to properly clean the existing steel joists, the cost of replacing the framing should be similar to properly repainting the existing joists.

We strongly feel that options 1 and 2 provide inadequate long-term strength for adequate public safety, and we do not recommend either approach. We recommend option 4 for replacement of the first floor framing. This represents the best solution for both safety and maintenance of the buildings.

Billy G. Garrett

cc:
Supt., Harpers Ferry NHP

bcc:
DSC-EAF, Shufelt
DSC-EAF, Donald
DSC-EAF, Johnson

EAF: JE Johnson II: jej: September 3, 1993: 3059: harpers ferry\memos\floor.wpm

InterOffice Memorandum

National Park Service
Denver Service Center

eastern team
falls church branch
6245 Leesburg Pike Falls Church, VA 22044-2106
Telephone 703-285-3035 Fax 703-285-3076

Park	Harpers Ferry National Historical Park
Area	Lower Town
Project Name :	Package 118 Stabilization of Buildings 5 and 7
Project Number :	HAFE-118-36
Date :	Monday, July 19, 1993
To :	Susan Shufelt, Team Captain
From:	Jerrold E. Johnson II, Professional Engineer
cc :	none

On Thursday July 15, 1993 I visited Buildings 5 and 7 at Harpers Ferry with Chris Cooper. The purpose of this visit was to gather final information for the drawings for project 118. While counting the joists in the basement of building 7, we found one of the delivery tickets for the joists. The ticket was attached to the joist inside of a plastic pouch. The delivery ticket indicated that 8J2 joists were used in the construction of the non-historic first floor system. We had been able to measure the depth of the joists earlier; however, we were not able to determine the material strength and class of the joist. We had previously assumed that the joist met the requirements for a 8H3 joist.

Unfortunately the 8J2 joist is substantially weaker than a 8H3 joist. The resisting moment of a 8J2 joist is 56,000 inch-pounds (6327 N-m) while the resisting moment of a 8H3 joist is 91,000 inch-pounds (10,280 N-m). Instead of adequately carrying the building code requirement of 100 pounds per square foot (4788 Pa), the 8J2 joist has a live load capacity of 73 pounds per square foot (3495 Pa). This will require changes to the Historic Structures Report. The existing floor system will need to be replaced.

Additionally, we noted that the existing finished first floors in buildings 5 and 7 are laid on top of structural, $^{3}/_{4}$ inch (19 mm) thick plywood subflooring.

Enclosed is the revised section for the Historic Structures Report, a copy of the delivery ticket, and calculations for the first floor joists in buildings 5 and 7.

If you have any questions, please contact me.

FABRICATED STEEL
BUILDING PRODUCTS

Phone 536-8731
Area Code 814

SHIPPING NO.

OFFICE AND SHOP
49 CARDIFF STREET

SOLD TO SUCKERMAN CO.

BOX 581

WINCHESTER, W. VA.

SHIPPED TO HARPER'S FERRY JOB CO.

C.C. CENTER

Dec Colleen Hall

HARPERS FERRY, W. VA.

CUSTOMERS ORDER NO.

OUR ORDER NO. 75-116

DATE SHIPPED

VIA OUR TRUCKS

CAR NO.

FREIGHT ☑ PPD. ☐ COLLECT

Mark	Pcs. Reqd.	Material	Overall Length	Pieces Loaded	Loaded By	Actual Weight	Remarks
J1	5	8J2-13-8	15'-4"			355	
J2	6	8J2-10-2	11'-6"			330	
—	3	SW8	0'-8"			6	
BPL	12	PL 4x8 w/ Rods	0'-8"			47	
—	4	⅝"ϕ Rods x	26'-0"			52	
						790	TOTAL
Rec Circles Four Pc			Harpers Ferry	Go	To	Harpers	
Rec left at Harpers			Shop	Rec	Left	Go 24	miles

Jerrold E. Johnson II, PE
July 17,1993

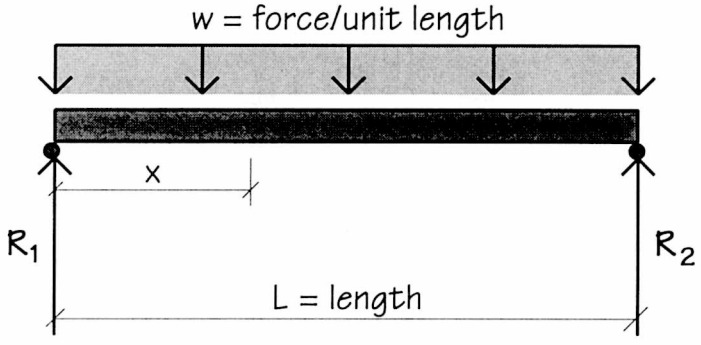
Harpers Ferry National Historic Park

Buildings #5 & #7, Existing First Floor Joists, 10 psf DL + 73 psf LL

Known to be 8J2 joists

BEAM #1 LRFD 3-130

Simple Beam with Uniform Load



DEFINE UNITS

$kip := 1000 \cdot lbf$ $ksi := \frac{kip}{in^2}$

JOIST PROPERTIES

Young's Modulus... $E := 29000 \cdot ksi$

Joist Spacing..... $spacing := 24 \cdot in$

CALCULATIONS $x := 3.0 \cdot ft$

Length....The over all length is for the 8J2 joists are known to be 15'-4" from the delivery tags. Specifications for these joists requires 4" of bearing on each end. The length will use the midpoint of the bearing.

$L := (15 \cdot ft + 4 \cdot in) - 2 \cdot (2 \cdot in)$ $L = 15 \cdot ft$

The Section and Moment of Inertia will need to be back calculated from information in the allowable load and span tables. Assume the Moment of Inertia is the same as for 8J3

Section Modulus

$ResistingMoment := 56 \cdot in \cdot kip$ $AllowableStress := 22000 \cdot \frac{lbf}{in^2}$

$S := \frac{ResistingMoment}{AllowableStress}$ $S = 2.545 \cdot in^3$

Moment of Inertia

$w_1 := 130 \cdot \frac{lbf}{ft}$ $L_1 := 15 \cdot ft$

$I := \frac{360 \cdot 5 \cdot w_1 \cdot L_1^3}{384 \cdot E}$ $I = 10.212 \cdot in^4$

Loads

Maximum allowable end reaction for 8J2 = 1900 lbf

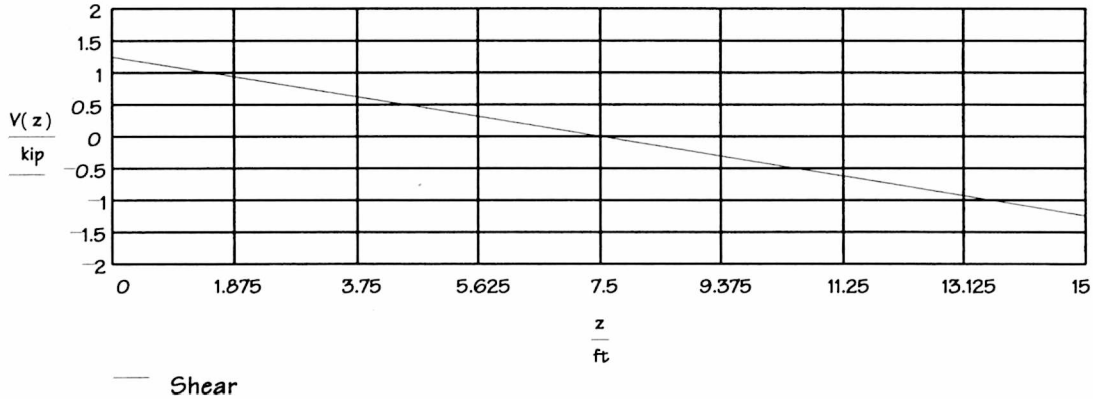
$w_{DL} := 10.00 \cdot \frac{lbf}{ft^2}$ $w_{LL} := 73.0 \cdot \frac{lbf}{ft^2}$ $w := (w_{DL} + w_{LL}) \cdot spacing$ $w = 166 \cdot \frac{lbf}{ft}$

$R_1 := w \cdot \frac{L}{2}$ $R_1 = 1245 \cdot lbf$ $R_1 = 1.245 \cdot kip$

$R_2 := w \cdot \frac{L}{2}$ $R_2 = 1245 \cdot lbf$ $R_2 = 1.245 \cdot kip$

Graph the Shear

$z := 0 \cdot ft, .05 \cdot ft .. L$ $V(z) := w \cdot \left(\frac{L}{2} - z\right)$



Moment Calculations

$M_x := \frac{(w \cdot x)}{2} \cdot (L - x)$

$M_x = 2988 \cdot ft \cdot lbf$

$M_x = 2.988 \cdot ft \cdot kip$

$M_x = 35.856 \cdot in \cdot kip$

$\sigma_x := \left| \frac{M_x}{S} \right|$ $\sigma_x = 1.409 \cdot 10^4 \cdot psi$

$\sigma_x = 14.086 \cdot ksi$

$M_{max} := \frac{\left(w \cdot L^2\right)}{8}$ At x = length/2

$M_{max} = 4668.75 \cdot ft \cdot lbf$

$M_{max} = 4.669 \cdot ft \cdot kip$

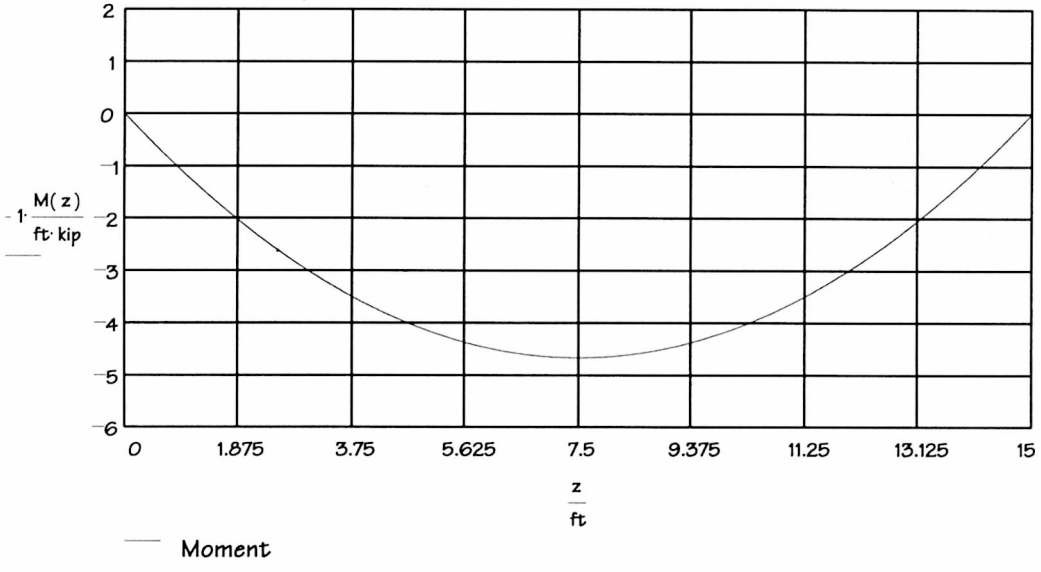
$M_{max} = 56.025 \cdot in \cdot kip$

$\sigma_{max} := \left| \frac{M_{max}}{S} \right|$ $\sigma_{max} = 2.201 \cdot 10^4 \cdot psi$

$\sigma_{max} = 22.01 \cdot ksi$

Graph the Bending Moment

$M(z) := \frac{(w \cdot z)}{2} \cdot (L - z)$



Deflection Calculations

$\Delta_x := \frac{(-w \cdot x)}{(24 \cdot E \cdot I)} \cdot \left(L^3 - 2 \cdot L \cdot x^2 + x^3\right)$ $\Delta_x = -0.3792 \cdot in$ $\left| \frac{L}{\Delta_x} \right| = 474.69$

$\Delta_{max} := \frac{\left(-5 \cdot w \cdot L^4\right)}{(384 \cdot E \cdot I)}$ $\Delta_{max} = -0.6385 \cdot in$ $\left| \frac{L}{\Delta_{max}} \right| = 281.928$

Maximum Deflection occurs at x = Length/2

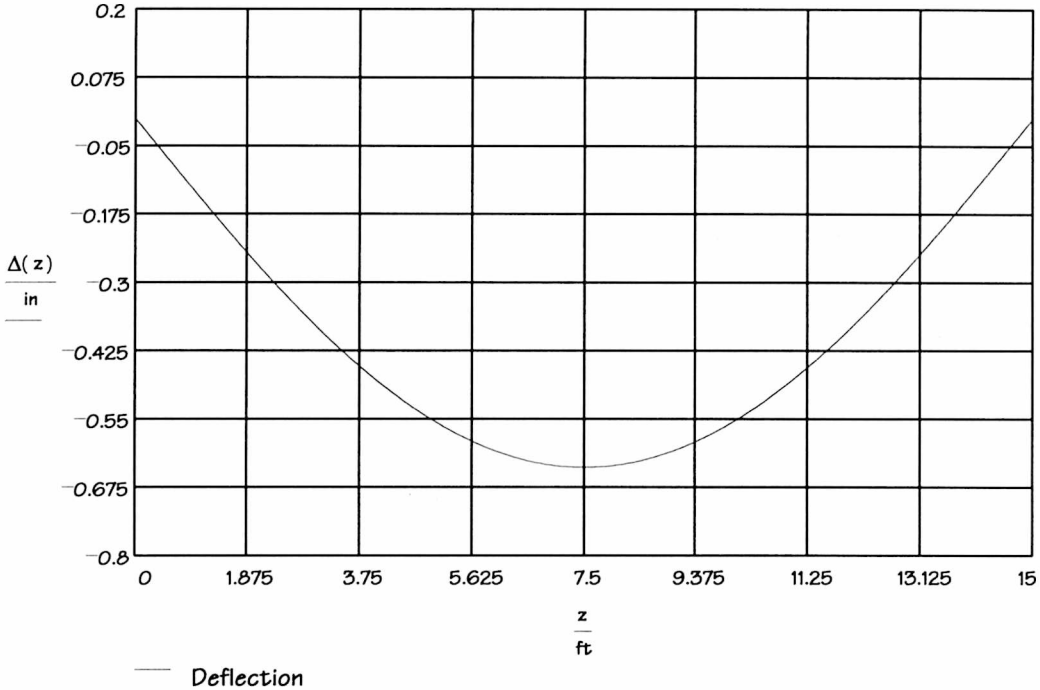
Maximum Live Load & Dead Load Deflections

$\Delta_{maxLL} := \frac{\left(-5 \cdot w_{LL} \cdot L^4 \cdot spacing\right)}{(384 \cdot E \cdot I)}$ $\Delta_{maxLL} = -0.562 \cdot in$ $\left| \frac{L}{\Delta_{maxLL}} \right| = 320.548$

$\Delta_{maxDL} := \frac{\left(-5 \cdot w_{DL} \cdot L^4 \cdot spacing\right)}{(384 \cdot E \cdot I)}$ $\Delta_{maxDL} = -0.077 \cdot in$ $\left| \frac{L}{\Delta_{maxDL}} \right| = 2340$

Graph the Beam Deflection

$$\Delta(z) := \frac{(-w \cdot z)}{(24 \cdot E \cdot I)} \cdot \left(L^3 - 2 \cdot L \cdot z^2 + z^3\right)$$

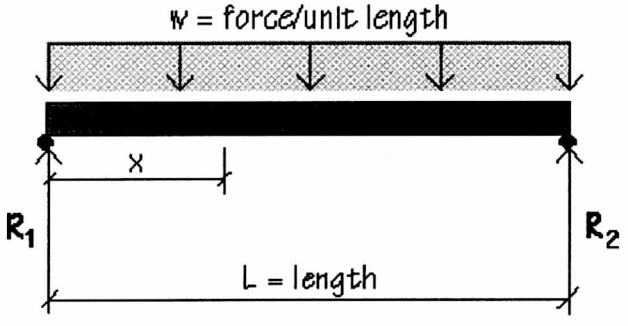


Jerrold E. Johnson II, PE
May 31, 1993

Harpers Ferry National Historic Park

Building #5 New First Floor Joist, 10 psf DL + 100 psf LL Southern Pine #1

This proposed design is to replicate the original first floor framing. We know from the 1959 HABS drawings that the first floor joists sat in pockets in the masonry. We do not know the depth, thickness, or the spacing of the joists. Based upon measurments of the second and third floor framing, we speculate the thickness was two inches. Based upon a similar floor size and shape in Building #7, we speculate that a similar 16 inch spacing was used.



BEAM #1 LRFD 3-130

Simple Beam with Uniform Load

DEFINE UNITS

$kip := 1000 \cdot lbf$ $ksi := \frac{kip}{in^2}$

BEAM PROPERTIES

Length..... $L := 10.75 \cdot ft$

Joist Width..... $b := 1.500 \cdot in$

Joist Depth..... $d := 7.25 \cdot in$

Young's Modulus..... $E := 1700 \cdot ksi$

Joist Spacing..... $spacing := 16 \cdot in$

CALCULATIONS $x := 3.0 \cdot ft$

Moment of Inertia

$I := \frac{b \cdot d^3}{12}$ $I = 47.635 \cdot in^4$

Section Modulus

$S := \frac{b \cdot d^2}{6}$ $S = 13.141 \cdot in^3$

Loads

$w_{DL} := 10.00 \cdot \frac{lbf}{ft^2}$ $w_{LL} := 100 \cdot \frac{lbf}{ft^2}$ $w := (w_{DL} + w_{LL}) \cdot spacing$ $w = 146.667 \cdot \frac{lbf}{ft}$

$R_1 := w \cdot \frac{L}{2}$ $R_1 = 788.3333 \cdot lbf$ $R_1 = 0.788 \cdot kip$

$R_2 := w \cdot \frac{L}{2}$ $R_2 = 788.333 \cdot lbf$ $R_2 = 0.788 \cdot kip$

Shear Calculations

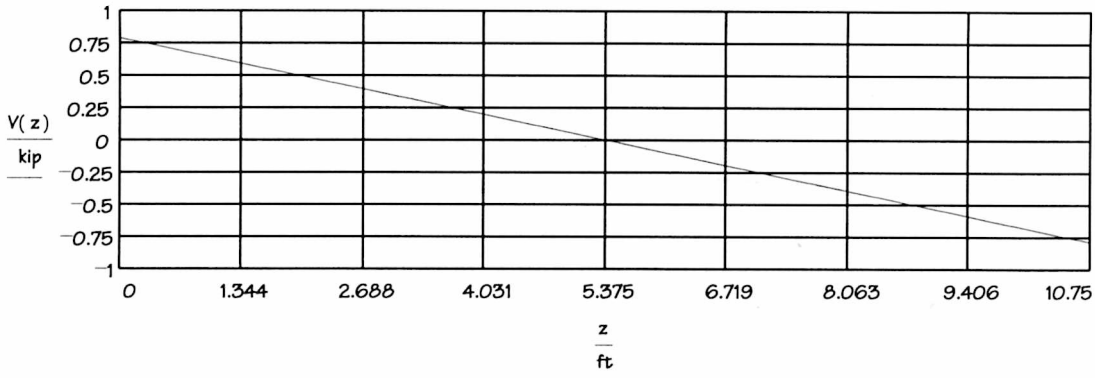
$V_x := w \cdot \left(\frac{L}{2} - x\right)$ $V_x = 348.333 \cdot lbf$ $V_x = 0.348 \cdot kip$

$\sigma_{vx} := \frac{3 \cdot V_x}{2 \cdot b \cdot d}$ $\sigma_{vx} = 48.046 \cdot psi$

$\sigma_{vmax} := \frac{3 \cdot (R_1 - w \cdot d)}{2 \cdot b \cdot d}$ $\sigma_{vmax} = 96.513 \cdot psi$

Graph the Shear

$z := 0 \cdot ft, .05 \cdot ft .. L$ $\quad V(z) := w \cdot \left(\frac{L}{2} - z\right)$



Moment Calculations

$M_x := \frac{(w \cdot x)}{2} \cdot (L - x)$ $\quad M_{max} := \frac{\left(w \cdot L^2\right)}{8}$ At x = length/2

$M_x = 1705 \cdot ft \cdot lbf$ $\quad M_{max} = 2118.646 \cdot ft \cdot lbf$

$M_x = 1.705 \cdot ft \cdot kip$ $\quad M_{max} = 2.119 \cdot ft \cdot kip$

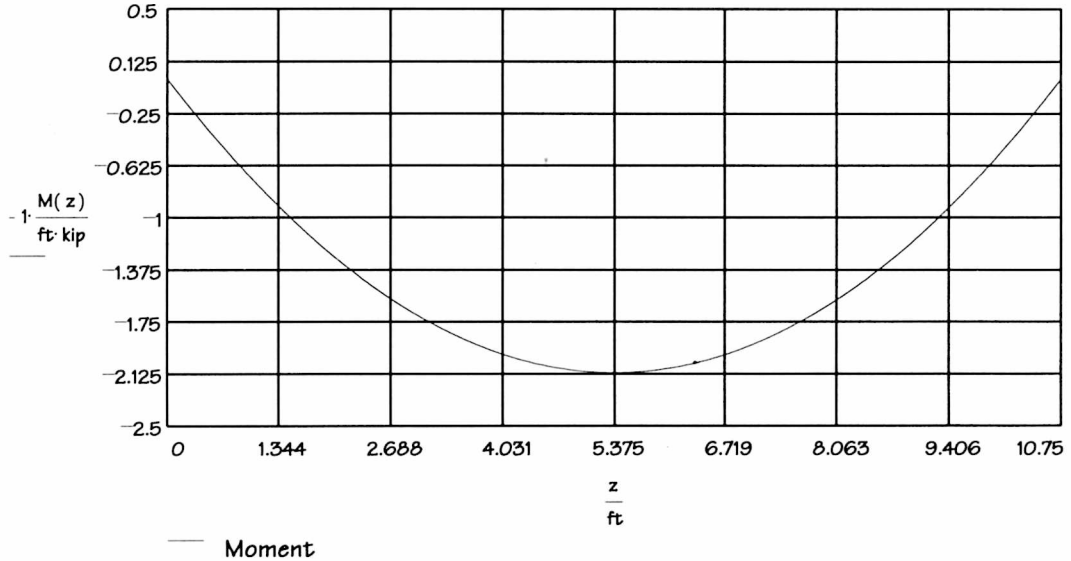
$M_x = 20.46 \cdot in \cdot kip$ $\quad M_{max} = 25.424 \cdot in \cdot kip$

$\sigma_x := \left|\frac{M_x}{S}\right|$ $\quad \sigma_x = 1557.004 \cdot psi$ $\quad \sigma_x = 1.557 \cdot ksi$

$\sigma_{max} := \left|\frac{M_{max}}{S}\right|$ $\quad \sigma_{max} = 1934.744 \cdot psi$ $\quad \sigma_{max} = 1.935 \cdot ksi$

Graph the Bending Moment

$M(z) := \frac{(w \cdot z)}{2} \cdot (L - z)$



Deflection Calculations

$\Delta_x := \frac{(-w \cdot x)}{(24 \cdot E \cdot I)} \cdot \left(L^3 - 2 \cdot L \cdot x^2 + x^3\right)$ $\quad \Delta_x = -0.4209 \cdot in$ $\quad \left|\frac{L}{\Delta_x}\right| = 306.512$

$\Delta_{max} := \frac{\left(-5 \cdot w \cdot L^4\right)}{(384 \cdot E \cdot I)}$ $\quad \Delta_{max} = -0.5442 \cdot in$ $\quad \left|\frac{L}{\Delta_{max}}\right| = 237.036$

Maximum Deflection occurs at x = Length/2

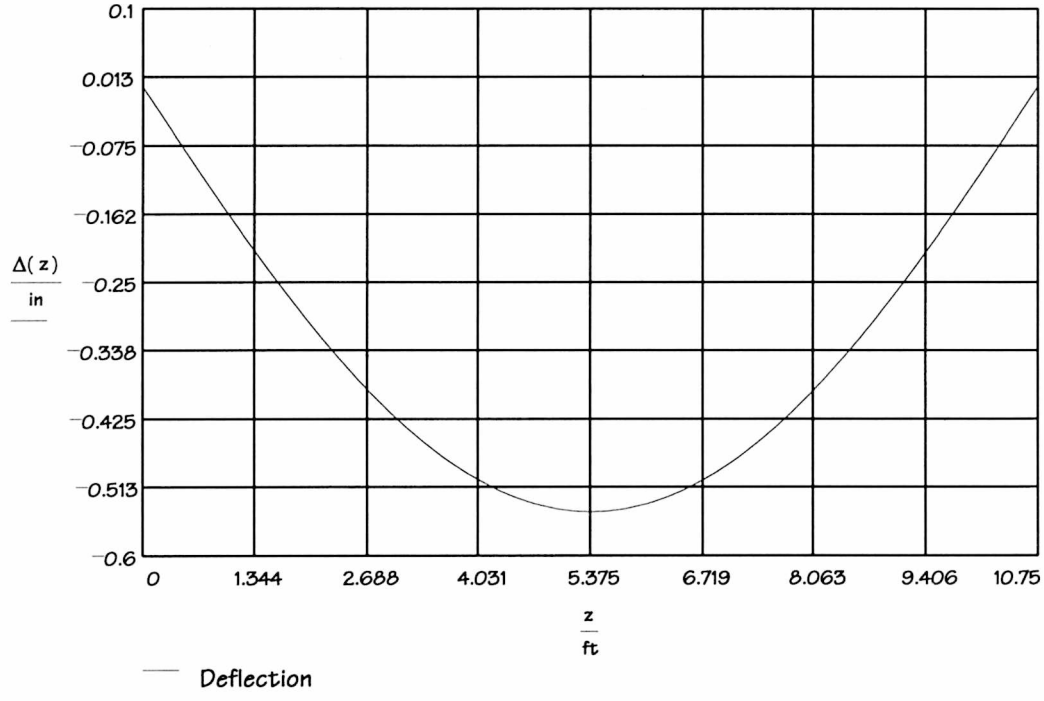
Maximum Live Load & Dead Load Deflections

$$\Delta_{maxLL} := \frac{\left(-5 \cdot w_{LL} \cdot L^4 \cdot spacing\right)}{(384 \cdot E \cdot I)} \qquad \Delta_{maxLL} = -0.495 \cdot in \qquad \left|\frac{L}{\Delta_{maxLL}}\right| = 260.74$$

$$\Delta_{maxDL} := \frac{\left(-5 \cdot w_{DL} \cdot L^4 \cdot spacing\right)}{(384 \cdot E \cdot I)} \qquad \Delta_{maxDL} = -0.049 \cdot in \qquad \left|\frac{L}{\Delta_{maxDL}}\right| = 2607.399$$

Graph the Beam Deflection

$$\Delta(z) := \frac{(-w \cdot z)}{(24 \cdot E \cdot I)} \cdot \left(L^3 - 2 \cdot L \cdot z^2 + z^3\right)$$



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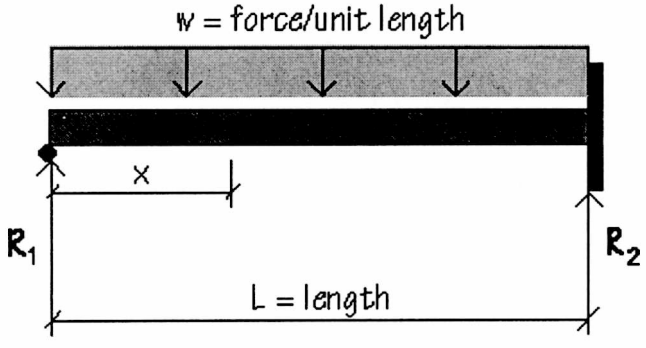
Jerrold E. Johnson II, PE
May 29, 1993

Building #5 Assumed Original First Floor Center Girder.
6"x10" Two Span Continuous. 10psf DL + 100psf LL

This calculation is based upon the 1959 HABS Drawing for Building #7, White Hall Tavern. The drawing showed a 6"x10" timber center girder supported on a center post that was sitting on a stone. This was subsequently removed and replaced by the existing steel joist floor system. The 1959 HABS drawings for Building #5 indicate that the floor was missing. Because of the similarity to Building #7, it is speculated that the framing was similar.

Beam #12 3-133

One end fixed with Uniform Load



DEFINE UNITS

$kip := 1000 \cdot lbf$ $ksi := \frac{kip}{in^2}$

BEAM PROPERTIES

Length..... $L := 9.000 \cdot ft$

Beam Width..... $b := 6.000 \cdot in$

Beam Depth..... $d := 10.000 \cdot in$

Young's Modulus..... $E := 1500 \cdot ksi$

$x := 2.0 \cdot ft$

CALCULATIONS

Moment of Inertia

$I := \frac{b \cdot d^3}{12}$ $I = 500 \cdot in^4$

Section Modulus

$S := \frac{b \cdot d^2}{6}$ $S = 100 \cdot in^3$

Loads

$w_{DL} := 105 \cdot \frac{lbf}{ft}$ $w_{LL} := 1050 \cdot \frac{lbf}{ft}$ $w := w_{DL} + w_{LL}$ $w = 1155 \cdot \frac{lbf}{ft}$

$R_1 := \frac{(3 \cdot w \cdot L)}{8}$ $R_1 = 3898.125 \cdot lbf$ $R_1 = 3.898 \cdot kip$

$R_2 := \frac{(5 \cdot w \cdot L)}{8}$ $R_2 = 6496.875 \cdot lbf$ $R_2 = 6.497 \cdot kip$

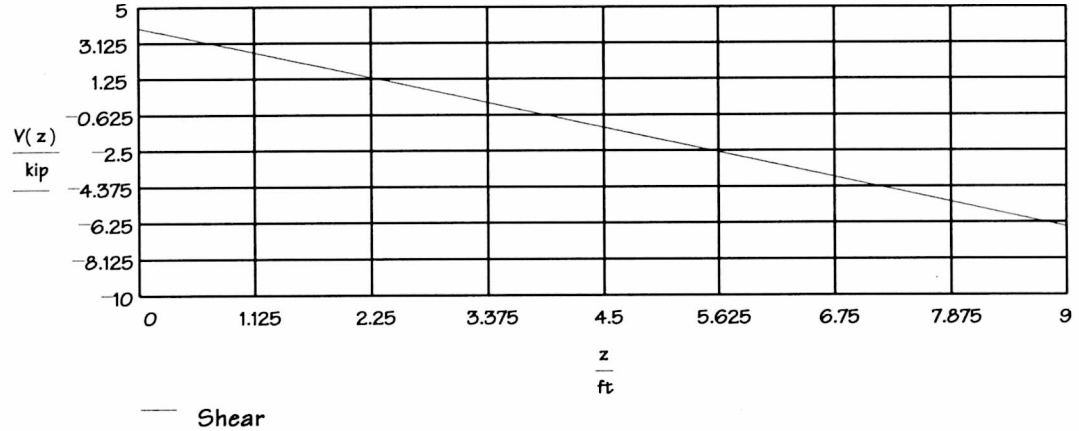
Shear Calculations

$V_x := R_1 - w \cdot x$ $V_x = 1588.125 \cdot lbf$ $V_x = 1.588 \cdot kip$

$\sigma_{vx} := \frac{3 \cdot V_x}{2 \cdot b \cdot d}$ $\sigma_{vx} = 39.703 \cdot psi$

$\sigma_{vmax} := \frac{3 \cdot (R_1 - w \cdot d)}{2 \cdot b \cdot d}$ $\sigma_{vmax} = 73.391 \cdot psi$

Graph the Shear $z := 0 \cdot ft, .05 \cdot ft .. L$ $V(z) := R_1 - w \cdot z$



Bending Moment & Stress Calculations

$M_x := R_1 \cdot x - \frac{(w \cdot x^2)}{2}$ $\quad M_1 := \frac{(9 \cdot w \cdot L^2)}{128}$ At x = 3/8 *L $\quad M_{max} := \frac{(w \cdot L^2)}{8}$ At x = L

$M_x = 5486.25 \cdot ft \cdot lbf$ $\quad M_1 = 6578.086 \cdot ft \cdot lbf$ $\quad M_{max} = 1.169 \cdot 10^4 \cdot ft \cdot lbf$

$M_x = 5.486 \cdot ft \cdot kip$ $\quad M_1 = 6.578 \cdot ft \cdot kip$ $\quad M_{max} = 11.694 \cdot ft \cdot kip$

$M_x = 65.835 \cdot in \cdot kip$ $\quad M_1 = 78.937 \cdot in \cdot kip$ $\quad M_{max} = 140.333 \cdot in \cdot kip$

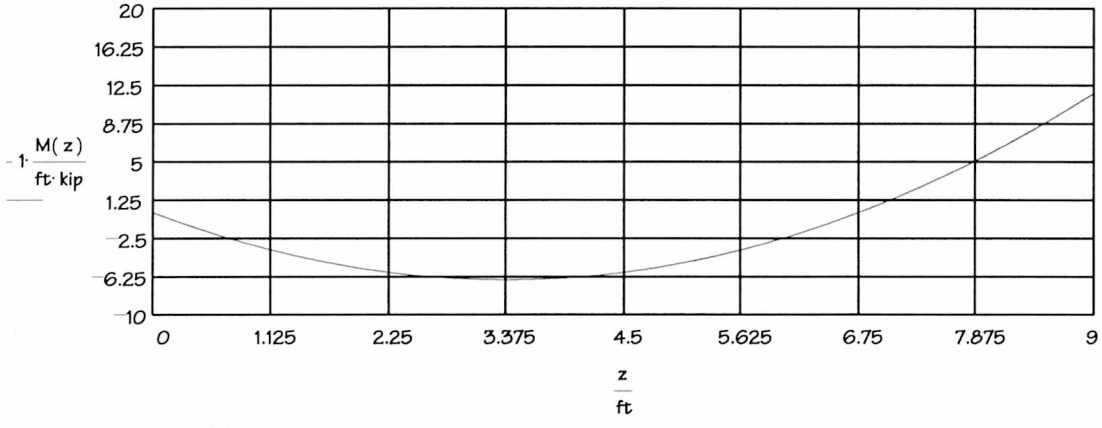
$\sigma_x := \left| \frac{M_x}{S} \right|$ $\quad \sigma_1 := \left| \frac{M_1}{S} \right|$ $\quad \sigma_{max} := \left| \frac{M_{max}}{S} \right|$

$\sigma_x = 658.35 \cdot psi$ $\quad \sigma_1 = 789.37 \cdot psi$ $\quad \sigma_{max} = 1403.325 \cdot psi$

$\sigma_x = 0.658 \cdot ksi$ $\quad \sigma_1 = 0.789 \cdot ksi$ $\quad \sigma_{max} = 1.403 \cdot ksi$

Bending Moment = 0 at $x_o := \frac{3 \cdot L}{4}$ $\quad x_o = 6.75 \cdot ft$

Graph Bending Moment $\quad M(z) := R_1 \cdot z - \frac{(w \cdot z^2)}{2}$



Deflection Calculations

$\Delta_x := \frac{(-w \cdot x)}{(48 \cdot E \cdot I)} \cdot \left(L^3 - 3 \cdot L \cdot x^2 + 2 \cdot x^3\right)$ $\quad \left| \frac{L}{\Delta_x} \right| = 1529.083$

$\Delta_x = -0.0706 \cdot in$ $\quad \Delta_x = -0.006 \cdot ft$

$\Delta_{max} := \frac{\left(-1 \cdot w \cdot L^4\right)}{(185 \cdot E \cdot I)}$ $\quad \left| \frac{L}{\Delta_{max}} \right| = 1144.356$ Max. Deflection occurs at x = 0.42 15 * Length

$\Delta_{max} = -0.0944 \cdot in$ $\quad \Delta_{max} = -0.008 \cdot ft$ $\quad 0.4125 \cdot L = 3.712 \cdot ft$

$\Delta_{xLL} := \frac{\left(-w_{LL} \cdot x\right)}{(48 \cdot E \cdot I)} \cdot \left(L^3 - 3 \cdot L \cdot x^2 + 2 \cdot x^3\right)$ $\quad \left| \frac{L}{\Delta_{xLL}} \right| = 1681.991$

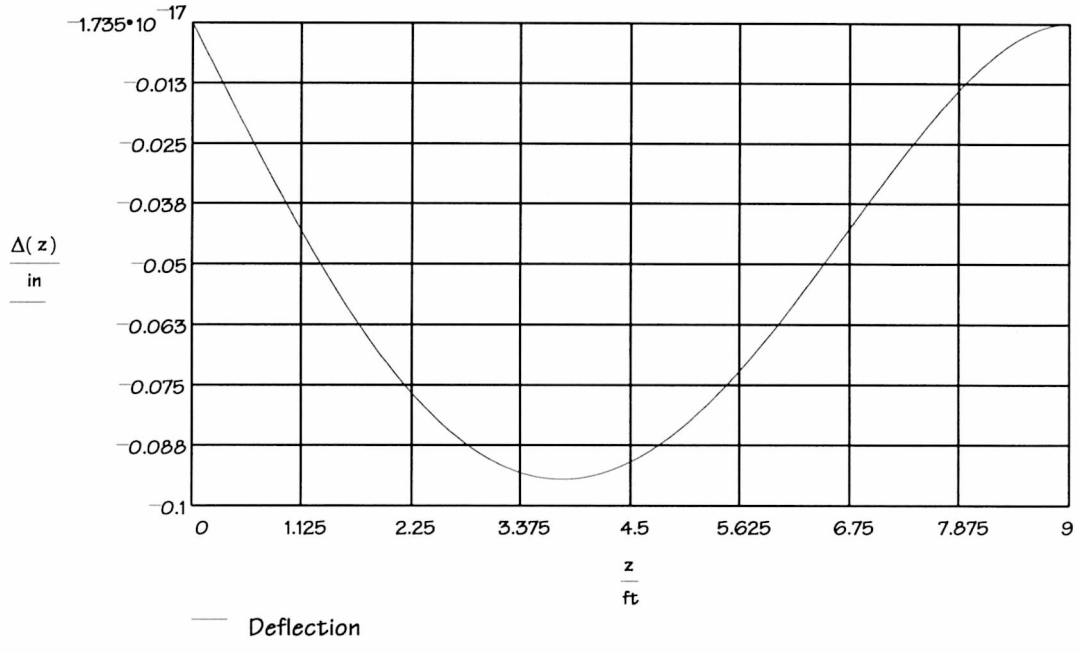
$\Delta_{xLL} = -0.0642 \cdot in$ $\quad \Delta_{xLL} = -0.005 \cdot ft$

$\Delta_{maxLL} := \frac{\left(-1 \cdot w_{LL} \cdot L^4\right)}{(185 \cdot E \cdot I)}$ $\quad \left| \frac{L}{\Delta_{maxLL}} \right| = 1258.791$ Max. Deflection occurs at x = 0.42 15 * Length

$\Delta_{maxLL} = -0.0858 \cdot in$ $\quad \Delta_{maxLL} = -0.007 \cdot ft$ $\quad 0.4125 \cdot L = 3.712 \cdot ft$

Graph the Beam Deflections

$$\Delta(z) := \frac{(-w \cdot z)}{(48 \cdot E \cdot I)} \cdot \left(L^3 - 3 \cdot L \cdot z^2 + 2 \cdot z^3\right)$$

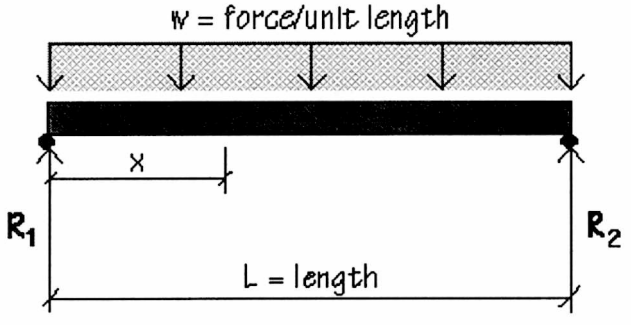


Harpers Ferry National Historic Park

May 28 1993
Jerrold E. Johnson II, PE

Building #5 Original Second Floor Joists, 8 psf DL + 20 psf LL Southern Pine

The original second floor framing appears to remain. These joists appear to have an unusual layout, since they run in the long direction of the building. $10^1/_2$ inch wide notches were noticed in some of the joists. This similar detail was noticed in one of the joists in Building #7. Unlike the similar second floor joists in Building #7, those in Building #5 appear to be single members without intermediate splices. Additionally, the spacing appears different with 24 inch spacing instead of the 16 inch spacing found in building #7.



BEAM #1 LRFD 3-130

Simple Beam with Uniform Load

DEFINE UNITS

$kip := 1000 \cdot lbf$ $ksi := \frac{kip}{in^2}$

BEAM PROPERTIES

Length..... $L := 21.33 \cdot ft$

Joist Width..... $b := 2.000 \cdot in$

Joist Depth..... $d := 9.00 \cdot in$

Young's Modulus..... $E := 1600 \cdot ksi$

Joist Spacing..... $spacing := 24 \cdot in$

CALCULATIONS $x := 3.0 \cdot ft$

Moment of Inertia

$I := \frac{b \cdot d^3}{12}$ $I = 121.5 \cdot in^4$

Section Modulus

$S := \frac{b \cdot d^2}{6}$ $S = 27 \cdot in^3$

Loads

$w_{DL} := 8.00 \cdot \frac{lbf}{ft^2}$ $w_{LL} := 20 \cdot \frac{lbf}{ft^2}$ $w := (w_{DL} + w_{LL}) \cdot spacing$ $w = 56 \cdot \frac{lbf}{ft}$

$R_1 := w \cdot \frac{L}{2}$ $R_1 = 597.24 \cdot lbf$ $R_1 = 0.597 \cdot kip$

$R_2 := w \cdot \frac{L}{2}$ $R_2 = 597.24 \cdot lbf$ $R_2 = 0.597 \cdot kip$

Shear Calculations

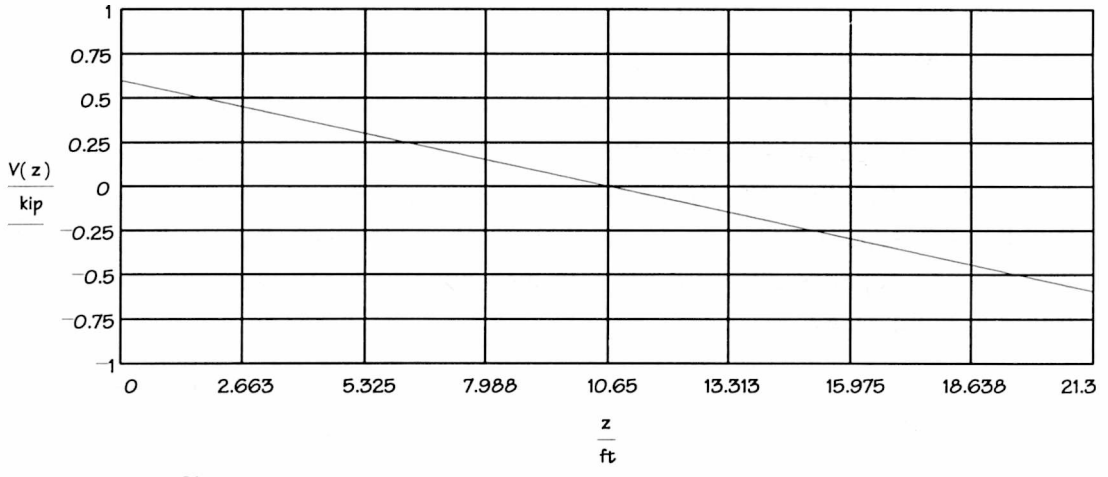
$V_x := w \cdot \left(\frac{L}{2} - x\right)$ $V_x = 429.24 \cdot lbf$ $V_x = 0.429 \cdot kip$

$\sigma_{vx} := \frac{3 \cdot V_x}{2 \cdot b \cdot d}$ $\sigma_{vx} = 35.77 \cdot psi$

$\sigma_{vmax} := \frac{3 \cdot (R_1 - w \cdot d)}{2 \cdot b \cdot d}$ $\sigma_{vmax} = 46.27 \cdot psi$

Graph the Shear

$z := 0 \cdot ft, .05 \cdot ft .. L$ $V(z) := w \cdot \left(\frac{L}{2} - z \right)$



Moment Calculations

$M_x := \frac{(w \cdot x)}{2} \cdot (L - x)$

$M_x = 1539.72 \cdot ft \cdot lbf$

$M_x = 1.54 \cdot ft \cdot kip$

$M_x = 18.477 \cdot in \cdot kip$

$\sigma_x := \left| \frac{M_x}{S} \right|$ $\sigma_x = 684.32 \cdot psi$

$\sigma_x = 0.684 \cdot ksi$

$M_{max} := \frac{(w \cdot L^2)}{8}$ At x = length/2

$M_{max} = 3184.782 \cdot ft \cdot lbf$

$M_{max} = 3.185 \cdot ft \cdot kip$

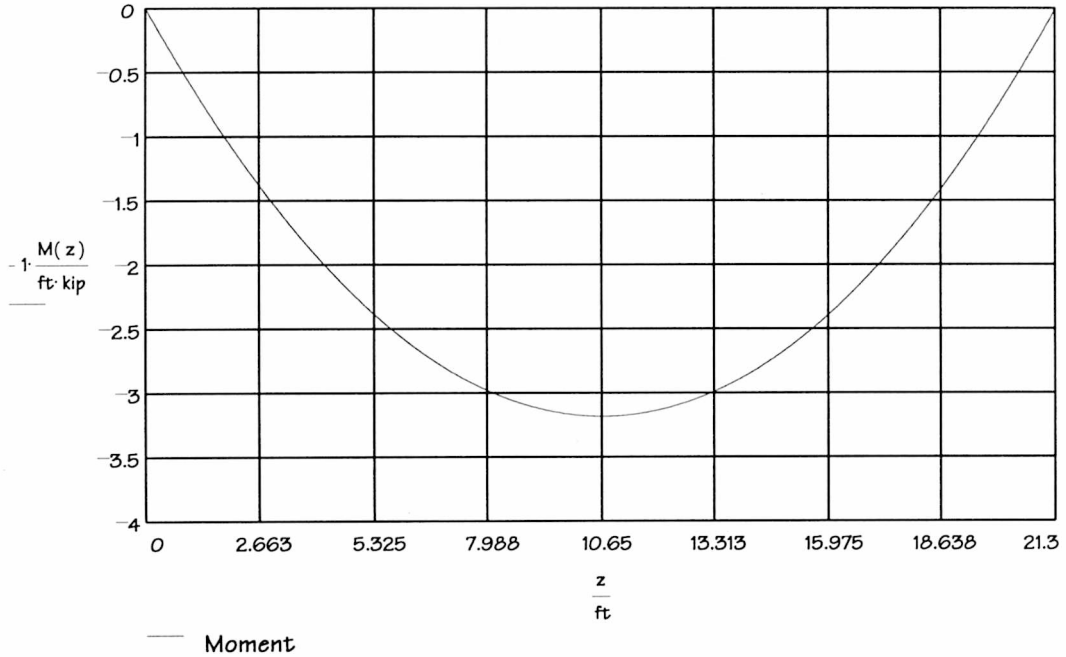
$M_{max} = 38.217 \cdot in \cdot kip$

$\sigma_{max} := \left| \frac{M_{max}}{S} \right|$ $\sigma_{max} = 1415.459 \cdot psi$

$\sigma_{max} = 1.415 \cdot ksi$

Graph the Bending Moment

$M(z) := \frac{(w \cdot z)}{2} \cdot (L - z)$



Deflection Calculations

$$\Delta_x := \frac{(-w \cdot x)}{(24 \cdot E \cdot I)} \cdot \left(L^3 - 2 \cdot L \cdot x^2 + x^3\right) \qquad \Delta_x = -0.5816 \cdot in \qquad \left|\frac{L}{\Delta_x}\right| = 440.077$$

$$\Delta_{max} := \frac{\left(-5 \cdot w \cdot L^4\right)}{(384 \cdot E \cdot I)} \qquad \Delta_{max} = -1.3416 \cdot in \qquad \left|\frac{L}{\Delta_{max}}\right| = 190.781$$

Maximum Deflection occurs at x = Length/2

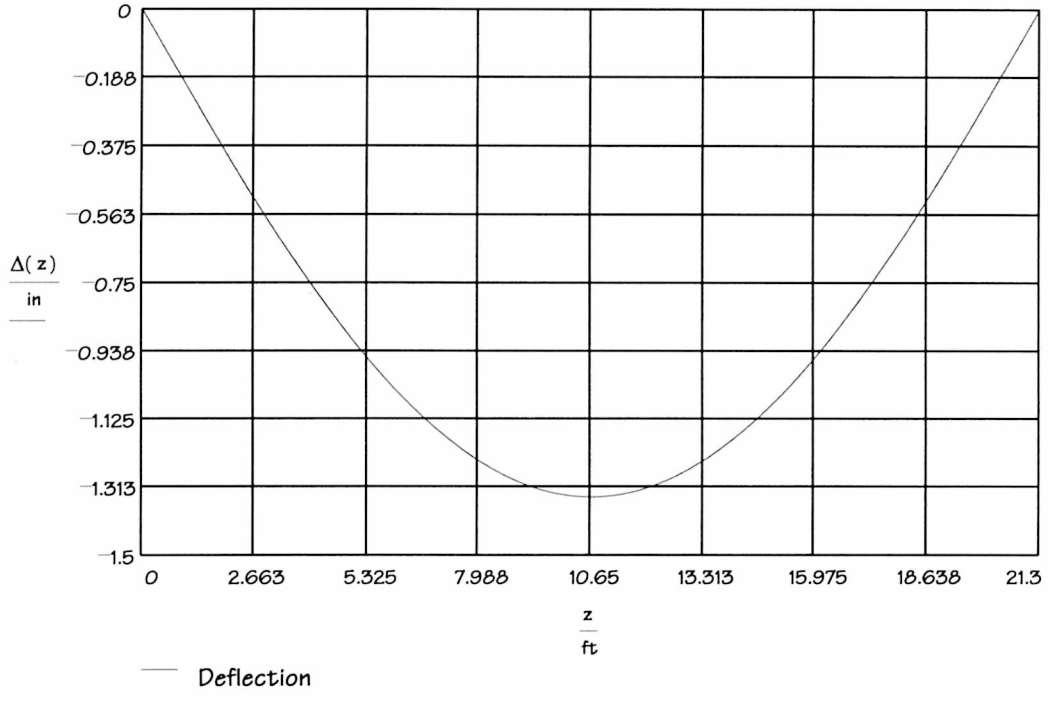
Maximum Live Load & Dead Load Deflections

$$\Delta_{maxLL} := \frac{\left(-5 \cdot w_{LL} \cdot L^4 \cdot spacing\right)}{(384 \cdot E \cdot I)} \qquad \Delta_{maxLL} = -0.958 \cdot in \qquad \left|\frac{L}{\Delta_{maxLL}}\right| = 267.093$$

$$\Delta_{maxDL} := \frac{\left(-5 \cdot w_{DL} \cdot L^4 \cdot spacing\right)}{(384 \cdot E \cdot I)} \qquad \Delta_{maxDL} = -0.383 \cdot in \qquad \left|\frac{L}{\Delta_{maxDL}}\right| = 667.732$$

Graph the Beam Deflection

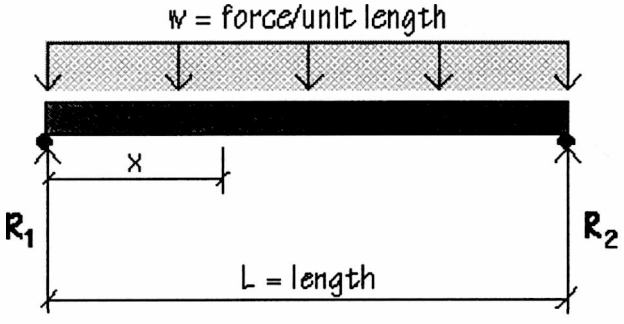
$$\Delta(z) := \frac{(-w \cdot z)}{(24 \cdot E \cdot I)} \cdot \left(L^3 - 2 \cdot L \cdot z^2 + z^3\right)$$



Jerrold E. Johnson II, PE
May 31, 1993

Harpers Ferry National Historic Park

Building #5 Original Third Floor Joists, 5 psf DL + 20 psf LL Southern Pine
2" x $8^1/_2$" at 24 inches on center.



BEAM #1 LRFD 3-130

Simple Beam with Uniform Load

DEFINE UNITS

$kip := 1000 \cdot lbf$ $ksi := \frac{kip}{in^2}$

BEAM PROPERTIES

Length..... $L := 21.33 \cdot ft$

Joist Width..... $b := 2.000 \cdot in$

Joist Depth..... $d := 8.50 \cdot in$

Young's Modulus..... $E := 1600 \cdot ksi$

Joist Spacing..... $spacing := 24 \cdot in$

CALCULATIONS $x := 5.50 \cdot ft$

Moment of Inertia

$I := \frac{b \cdot d^3}{12}$ $I = 102.354 \cdot in^4$

Section Modulus

$S := \frac{b \cdot d^2}{6}$ $S = 24.083 \cdot in^3$

Loads

$w_{DL} := 5.00 \cdot \frac{lbf}{ft^2}$ $w_{LL} := 20 \cdot \frac{lbf}{ft^2}$ $w := \left(w_{DL} + w_{LL}\right) \cdot spacing$ $w = 50 \cdot \frac{lbf}{ft}$

$R_1 := w \cdot \frac{L}{2}$ $R_1 = 533.25 \cdot lbf$ $R_1 = 0.533 \cdot kip$

$R_2 := w \cdot \frac{L}{2}$ $R_2 = 533.25 \cdot lbf$ $R_2 = 0.533 \cdot kip$

Shear Calculations

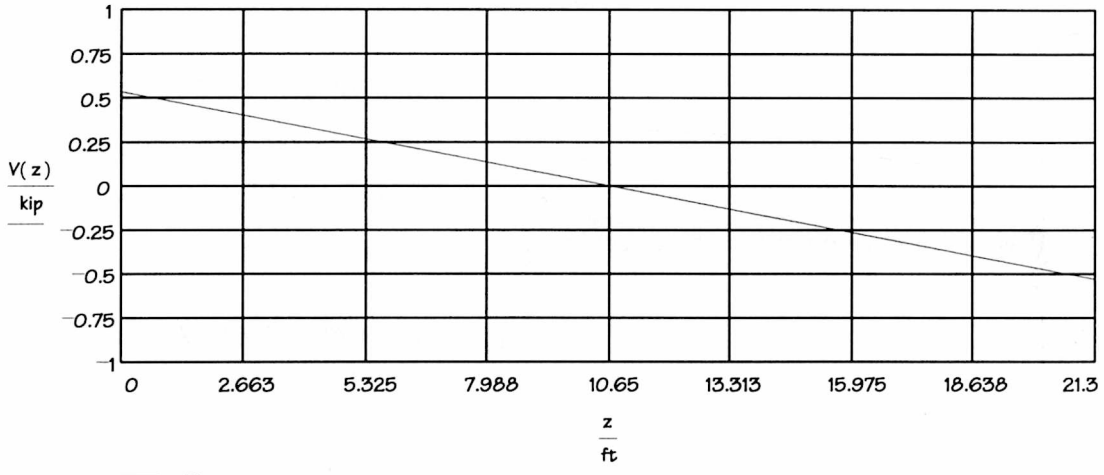
$V_x := w \cdot \left(\frac{L}{2} - x\right)$ $V_x = 258.25 \cdot lbf$ $V_x = 0.258 \cdot kip$

$\sigma_{vx} := \frac{3 \cdot V_x}{2 \cdot b \cdot d}$ $\sigma_{vx} = 22.787 \cdot psi$

$\sigma_{vmax} := \frac{3 \cdot \left(R_1 - w \cdot d\right)}{2 \cdot b \cdot d}$ $\sigma_{vmax} = 43.926 \cdot psi$

Graph the Shear

$z := 0 \cdot ft, .05 \cdot ft .. L$ $V(z) := w \cdot \left(\frac{L}{2} - z\right)$



Moment Calculations

$M_x := \frac{(w \cdot x)}{2} \cdot (L - x)$

$M_x = 2176.625 \cdot ft \cdot lbf$

$M_x = 2.177 \cdot ft \cdot kip$

$M_x = 26.119 \cdot in \cdot kip$

$\sigma_x := \left|\frac{M_x}{S}\right|$ $\sigma_x = 1084.547 \cdot psi$

$\sigma_x = 1.085 \cdot ksi$

$M_{max} := \frac{\left(w \cdot L^2\right)}{8}$ At x = length/2

$M_{max} = 2843.556 \cdot ft \cdot lbf$

$M_{max} = 2.844 \cdot ft \cdot kip$

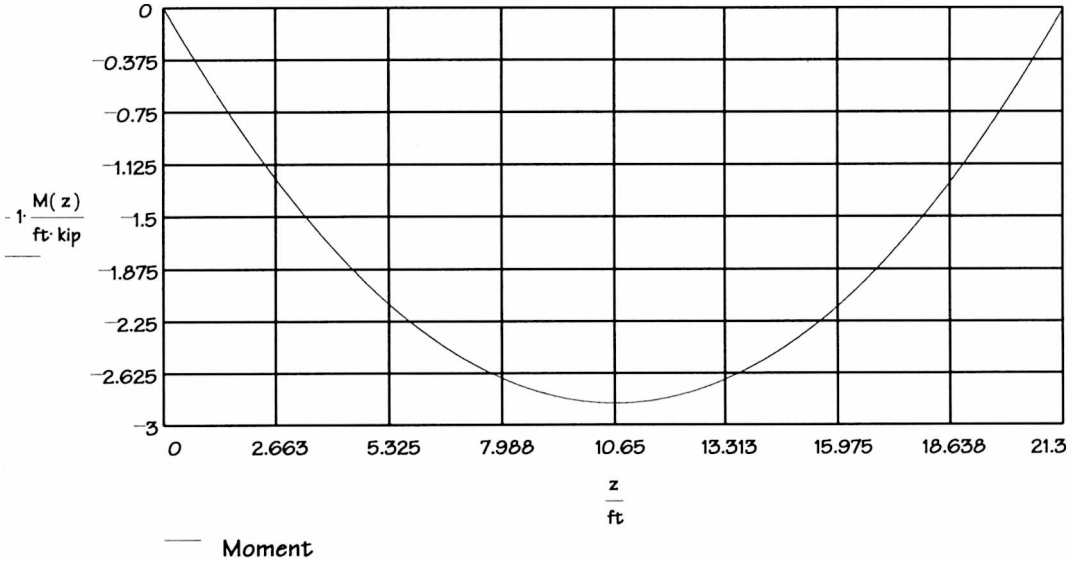
$M_{max} = 34.123 \cdot in \cdot kip$

$\sigma_{max} := \left|\frac{M_{max}}{S}\right|$ $\sigma_{max} = 1416.858 \cdot psi$

$\sigma_{max} = 1.417 \cdot ksi$

Graph the Bending Moment

$M(z) := \frac{(w \cdot z)}{2} \cdot (L - z)$



Deflection Calculations

$$\Delta_x := \frac{(-w \cdot x)}{(24 \cdot E \cdot I)} \cdot \left(L^3 - 2 \cdot L \cdot x^2 + x^3\right) \qquad \Delta_x = -1.0374 \cdot in \qquad \left|\frac{L}{\Delta_x}\right| = 246.732$$

$$\Delta_{max} := \frac{\left(-5 \cdot w \cdot L^4\right)}{(384 \cdot E \cdot I)} \qquad \Delta_{max} = -1.422 \cdot in \qquad \left|\frac{L}{\Delta_{max}}\right| = 180.004$$

Maximum Deflection occurs at x = Length/2

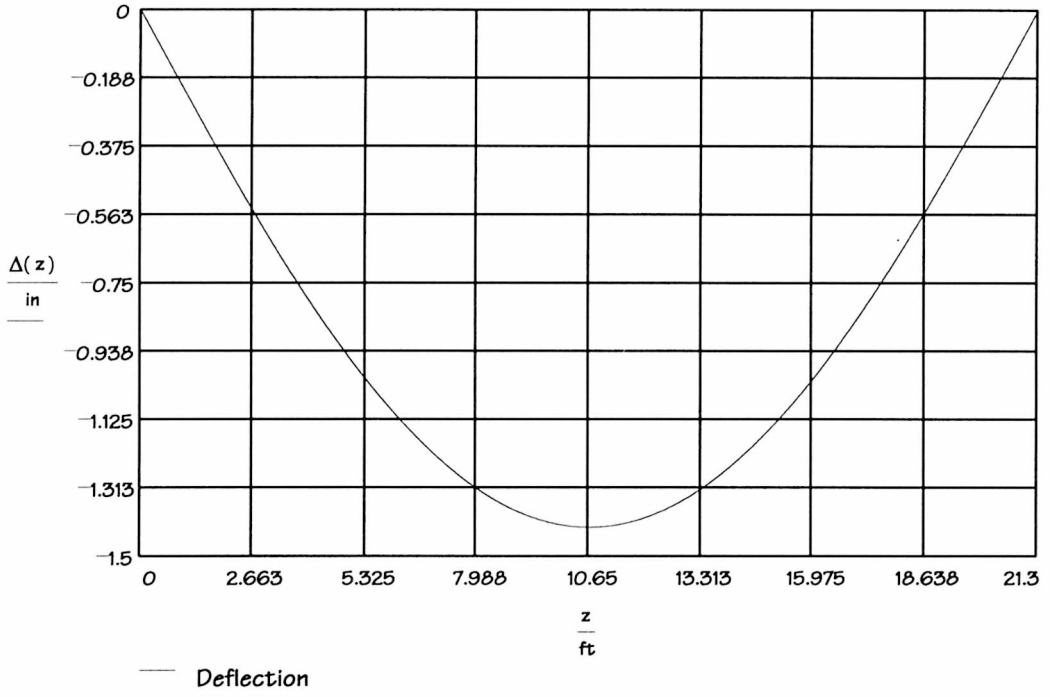
Maximum Live Load & Dead Load Deflections

$$\Delta_{maxLL} := \frac{\left(-5 \cdot w_{LL} \cdot L^4 \cdot spacing\right)}{(384 \cdot E \cdot I)} \qquad \Delta_{maxLL} = -1.138 \cdot in \qquad \left|\frac{L}{\Delta_{maxLL}}\right| = 225.005$$

$$\Delta_{maxDL} := \frac{\left(-5 \cdot w_{DL} \cdot L^4 \cdot spacing\right)}{(384 \cdot E \cdot I)} \qquad \Delta_{maxDL} = -0.284 \cdot in \qquad \left|\frac{L}{\Delta_{maxDL}}\right| = 900.019$$

Graph the Beam Deflection

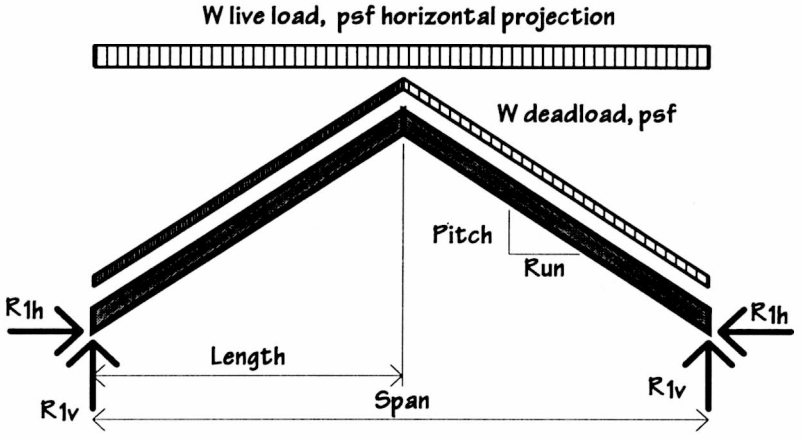
$$\Delta(z) := \frac{(-w \cdot z)}{(24 \cdot E \cdot I)} \cdot \left(L^3 - 2 \cdot L \cdot z^2 + z^3\right)$$



TIMBER ROOF RAFTER

Jerrold E. Johnson II, PE
May 31, 1993

Rectangular Member with Roof Decking, Harpers Ferry Building #5



DEFINE UNITS

$kip := 1000 \cdot lbf$

$ksi := \frac{kip}{in^2}$

FRAMING DIMENSIONS

Span..... $span := 24.00 \cdot ft$

Rafter Spacing..... $spacing := 24.00 \cdot in$

Roof Pitch..... $pitch := 8.67 \cdot in$

Roof Run..... $run := 12.00 \cdot in$

MEMBER PROPERTIES

Use Actual Member Sizes, not Nominal

Member Width..... $b := 3.000 \cdot in$

Member Depth..... $d := 5.000 \cdot in$

Young's Modulus..... $E := 1700 \cdot ksi$

CALCULATIONS

$x := 3.0 \cdot ft$

Length

$L := \frac{span}{2}$ $L = 12 \cdot ft$

Moment of Inertia

$I := \frac{b \cdot d^3}{12}$ $I = 31.25 \cdot in^4$

Section Modulus

$S := \frac{b \cdot d^2}{6}$ $S = 12.5 \cdot in^3$

Roof Slope

$rslope := atan\left(\frac{pitch}{run}\right)$ $rslope = 35.848 \cdot deg$

$w_{DL} := 15 \cdot \frac{lbf}{ft^2}$ $w_{LL} := 25 \cdot \frac{lbf}{ft^2}$ $w := \left(\frac{w_{DL}}{\cos(rslope)^2} + w_{LL}\right) \cdot spacing$ $w = 95.66 \cdot \frac{lbf}{ft}$

Reaction Calculations

$R_{1v} := w \cdot L$

$R_{1v} = 1147.922 \cdot lbf$

$R_{1v} = 1.148 \cdot kip$

$R_{1h} := \frac{R_{1v} - \frac{w \cdot L}{2}}{\tan(rslope)}$

$R_{1h} = 794.41 \cdot lbf$

$R_{1h} = 0.794 \cdot kip$

$R_{2v} := w \cdot L$

$R_{2v} = 1147.922 \cdot lbf$

$R_{2v} = 1.148 \cdot kip$

$R_{2h} := \frac{R_{2v} - \frac{w \cdot L}{2}}{\tan(rslope)}$

$R_{2h} = 794.41 \cdot lbf$

$R_{2h} = 0.794 \cdot kip$

Shear Calculations

$V_x := \left(R_{1v} - w \cdot x\right) \cdot \cos(rslope) - R_{1h} \cdot \sin(rslope)$ $V_x = 232.619 \cdot lbf$ $V_x = 0.233 \cdot kip$

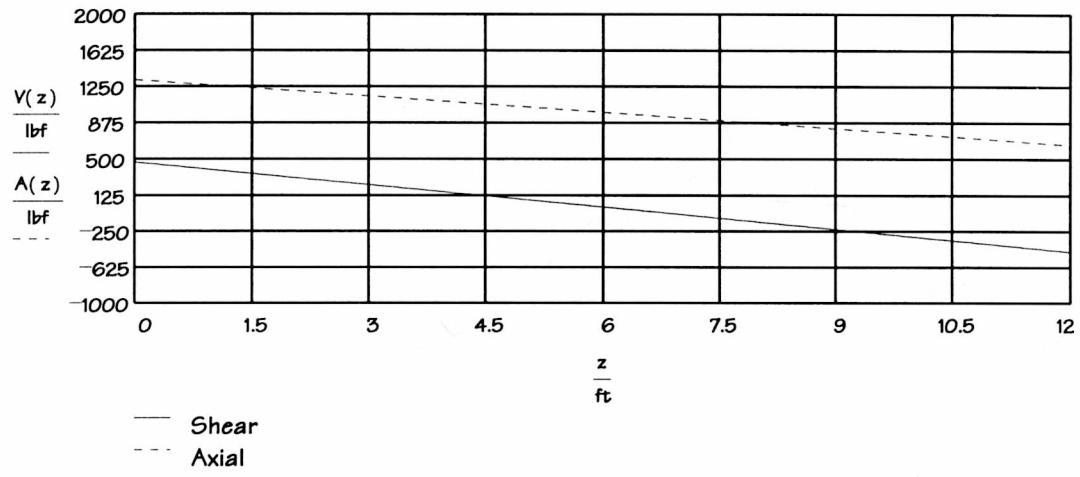
$A_x := \left(R_{1v} - w \cdot x\right) \cdot \sin(rslope) + R_{1h} \cdot \cos(rslope)$ $A_x = 1148.127 \cdot lbf$ $A_x = 1.148 \cdot kip$

Graph The Shear, and Axial Load

$z := 0 \cdot ft, .05 \cdot ft .. L$

$V(z) := \left(R_{1v} - w \cdot z\right) \cdot \cos(rslope) - R_{1h} \cdot \sin(rslope)$

$A(z) := \left(R_{1v} - w \cdot z\right) \cdot \sin(rslope) + R_{1h} \cdot \cos(rslope)$



Moment Calculations

$M_x := R_{1v} \cdot x - \frac{w \cdot x^2}{2} - R_{1h} \cdot x \cdot \tan(rslope)$

$M_x = 1291.413 \cdot ft \cdot lbf$

$M_x = 1.291 \cdot ft \cdot kip$

$M_x = 15.497 \cdot in \cdot kip$

$\sigma_x := \left| \frac{M_x}{S} \right|$ $\sigma_x = 1239.756 \cdot psi$

$\sigma_x = 1.24 \cdot ksi$

$M_{max} := \frac{1}{8} \cdot w \cdot L^2$ At x = length/2

$M_{max} = 1721.883 \cdot ft \cdot lbf$

$M_{max} = 1.722 \cdot ft \cdot kip$

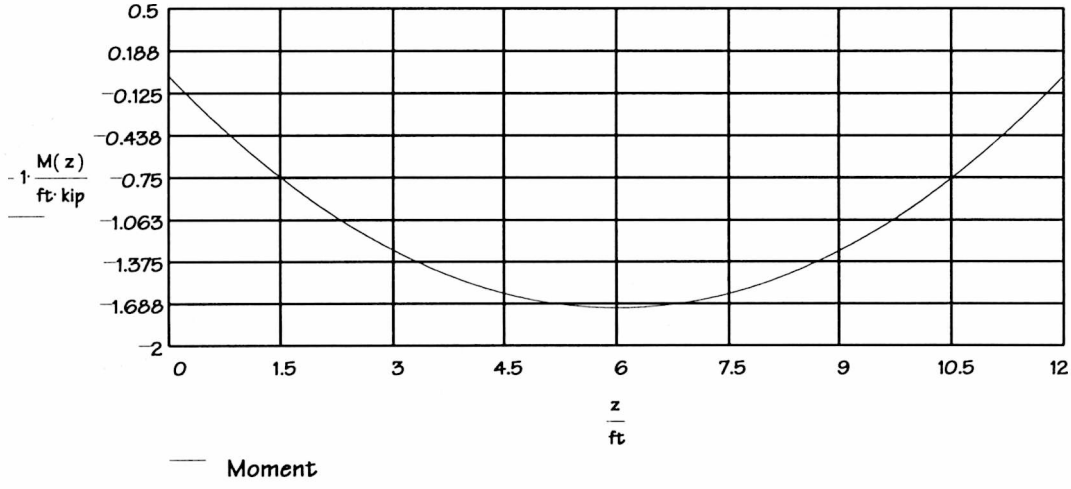
$M_{max} = 20.663 \cdot in \cdot kip$

$\sigma_{max} := \left| \frac{M_{max}}{S} \right|$ $\sigma_{max} = 1653.008 \cdot psi$

$\sigma_{max} = 1.653 \cdot ksi$

Graph the Bending Moment

$M(z) := \frac{(w \cdot z)}{2} \cdot (L - z)$



Deflection Calculations

$$\Delta_x := \frac{(-w \cdot x)}{(24 \cdot E \cdot I)} \cdot \left(L^3 - 2 \cdot L \cdot x^2 + x^3\right) \qquad \Delta_x = -0.5986 \cdot in \qquad \left|\frac{L}{\Delta_x}\right| = 240.568$$

$$\Delta_{max} := \frac{\left(-5 \cdot w \cdot L^4\right)}{(384 \cdot E \cdot I)} \qquad \Delta_{max} = -0.8401 \cdot in \qquad \left|\frac{L}{\Delta_{max}}\right| = 171.405$$

Maximum Deflection occurs at x = Length/2

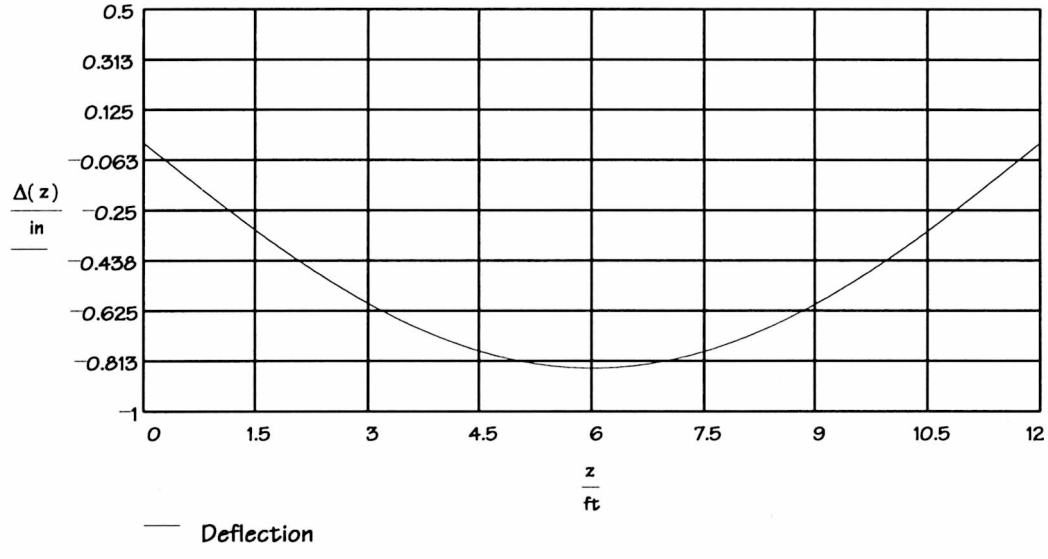
Maximum Live Load & Dead Load Deflections

$$\Delta_{maxLL} := \frac{-5 \cdot w_{LL} \cdot L^4 \cdot spacing}{384 \cdot E \cdot I} \qquad \Delta_{maxLL} = -0.439 \cdot in \qquad \left|\frac{L}{\Delta_{maxLL}}\right| = 327.932$$

$$\Delta_{maxDL} := \frac{-5 \cdot w_{DL} \cdot L^4 \cdot spacing}{384 \cdot E \cdot I} \qquad \Delta_{maxDL} = -0.263 \cdot in \qquad \left|\frac{L}{\Delta_{maxDL}}\right| = 546.553$$

Graph the Beam Deflection

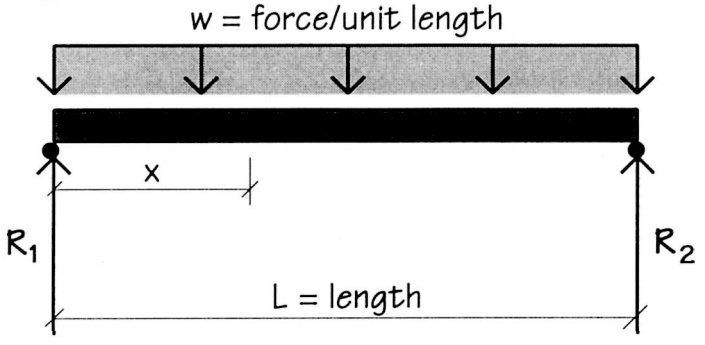
$$\Delta(z) := \frac{(-w \cdot z)}{(24 \cdot E \cdot I)} \cdot \left(L^3 - 2 \cdot L \cdot z^2 + z^3\right)$$



Jerrold E. Johnson II, PE
June 28, 1993

Harpers Ferry National Historic Park

Building 5 Annex Second Floor Joists, 10 psf DL + 60 psf LL Southern Pine #2
2" x 8" at 24 inches on center.



BEAM #1 LRFD 3-130

Simple Beam with Uniform Load

DEFINE UNITS

$kip := 1000 \cdot lbf$ $ksi := \frac{kip}{in^2}$

BEAM PROPERTIES

Length..... $L := 11.50 \cdot ft$

Joist Width..... $b := 2.000 \cdot in$

Joist Depth..... $d := 8.00 \cdot in$

Young's Modulus... $E := 1600 \cdot ksi$

Joist Spacing..spacing $:= 24.00 \cdot in$

CALCULATIONS $x := 3.0 \cdot ft$

Moment of Inertia

$I := \frac{b \cdot d^3}{12}$ $I = 85.333 \cdot in^4$

Section Modulus

$S := \frac{b \cdot d^2}{6}$ $S = 21.333 \cdot in^3$

Loads

$w_{DL} := 10.00 \cdot \frac{lbf}{ft^2}$ $w_{LL} := 60 \cdot \frac{lbf}{ft^2}$

$w := \left(w_{DL} + w_{LL}\right) \cdot spacing$ $w = 140 \cdot \frac{lbf}{ft}$

$R_1 := w \cdot \frac{L}{2}$ $R_1 = 805 \cdot lbf$ $R_1 = 0.805 \cdot kip$

$R_2 := w \cdot \frac{L}{2}$ $R_2 = 805 \cdot lbf$ $R_2 = 0.805 \cdot kip$

Shear Calculations

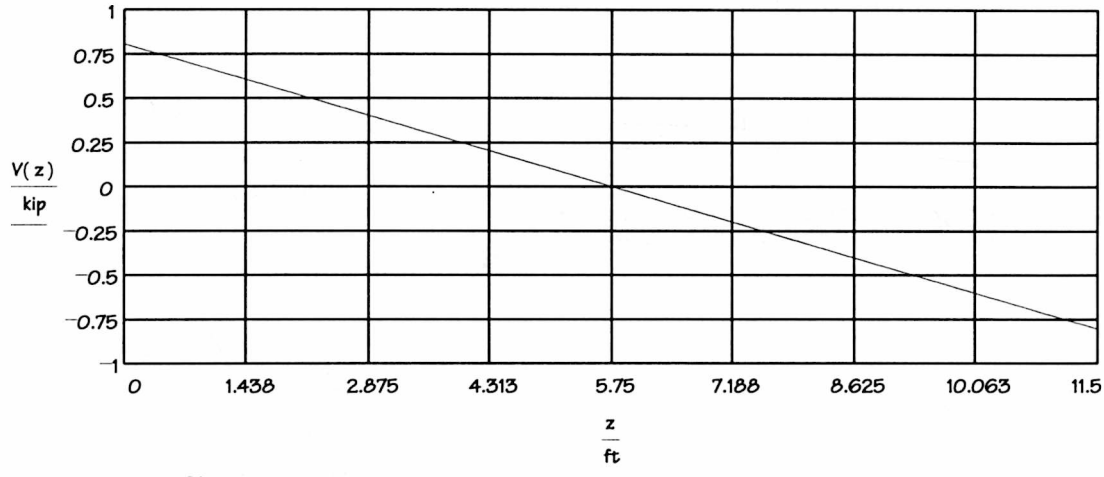
$V_x := w \cdot \left(\frac{L}{2} - x\right)$ $V_x = 385 \cdot lbf$ $V_x = 0.385 \cdot kip$

$\sigma_{vx} := \frac{3 \cdot V_x}{2 \cdot b \cdot d}$ $\sigma_{vx} = 36.094 \cdot psi$

$\sigma_{vmax} := \frac{3 \cdot \left(R_1 - w \cdot d\right)}{2 \cdot b \cdot d}$ $\sigma_{vmax} = 66.719 \cdot psi$

Graph the Shear

$z := 0 \cdot ft, .05 \cdot ft .. L$ $\quad V(z) := w \cdot \left(\frac{L}{2} - z\right)$



Moment Calculations

$M_x := \frac{(w \cdot x)}{2} \cdot (L - x)$

$M_x = 1785 \cdot ft \cdot lbf$

$M_x = 1.785 \cdot ft \cdot kip$

$M_x = 21.42 \cdot in \cdot kip$

$\sigma_x := \left|\frac{M_x}{S}\right|$ $\quad \sigma_x = 1004.063 \cdot psi$

$\sigma_x = 1.004 \cdot ksi$

$M_{max} := \frac{\left(w \cdot L^2\right)}{8}$ At x = length/2

$M_{max} = 2314.375 \cdot ft \cdot lbf$

$M_{max} = 2.314 \cdot ft \cdot kip$

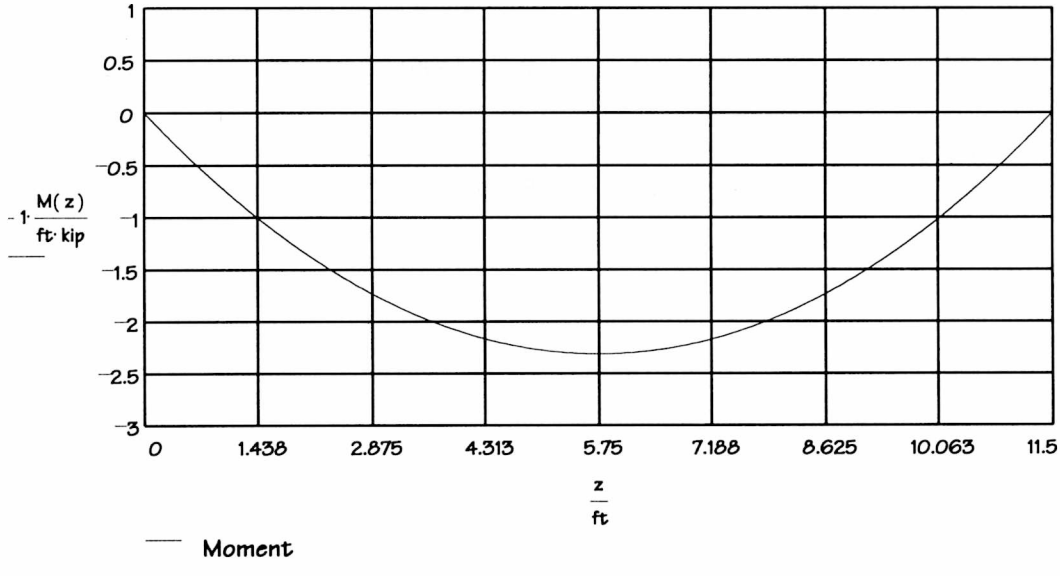
$M_{max} = 27.773 \cdot in \cdot kip$

$\sigma_{max} := \left|\frac{M_{max}}{S}\right|$ $\quad \sigma_{max} = 1301.836 \cdot psi$

$\sigma_{max} = 1.302 \cdot ksi$

Graph the Bending Moment

$M(z) := \frac{(w \cdot z)}{2} \cdot (L - z)$



Deflection Calculations

$$\Delta_x := \frac{(-w \cdot x)}{(24 \cdot E \cdot I)} \cdot \left(L^3 - 2 \cdot L \cdot x^2 + x^3\right) \qquad \Delta_x = -0.297 \cdot in \qquad \left|\frac{L}{\Delta_x}\right| = 464.673$$

$$\Delta_{max} := \frac{\left(-5 \cdot w \cdot L^4\right)}{(384 \cdot E \cdot I)} \qquad \Delta_{max} = -0.4035 \cdot in \qquad \left|\frac{L}{\Delta_{max}}\right| = 341.992$$

Maximum Deflection occurs at x = Length/2

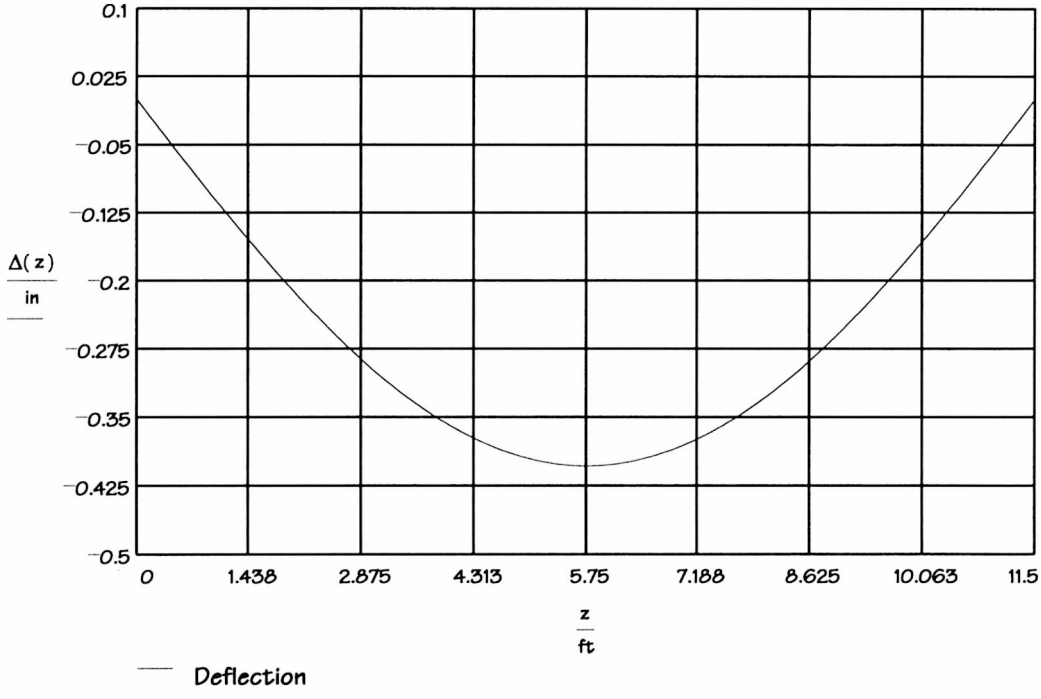
Maximum Live Load & Dead Load Deflections

$$\Delta_{maxLL} := \frac{\left(-5 \cdot w_{LL} \cdot L^4 \cdot spacing\right)}{(384 \cdot E \cdot I)} \qquad \Delta_{maxLL} = -0.346 \cdot in \qquad \left|\frac{L}{\Delta_{maxLL}}\right| = 398.991$$

$$\Delta_{maxDL} := \frac{\left(-5 \cdot w_{DL} \cdot L^4 \cdot spacing\right)}{(384 \cdot E \cdot I)} \qquad \Delta_{maxDL} = -0.058 \cdot in \qquad \left|\frac{L}{\Delta_{maxDL}}\right| = 2393.944$$

Graph the Beam Deflection

$$\Delta(z) := \frac{(-w \cdot z)}{(24 \cdot E \cdot I)} \cdot \left(L^3 - 2 \cdot L \cdot z^2 + z^3\right)$$

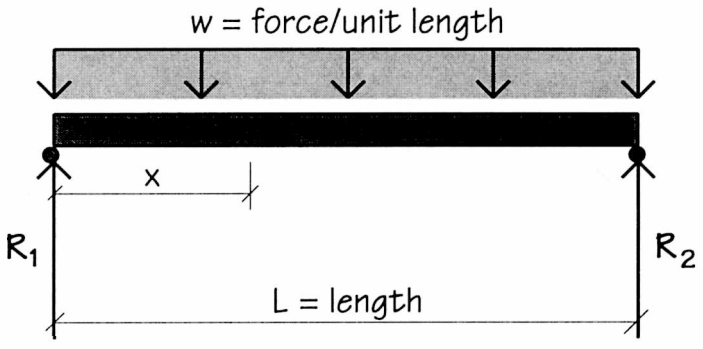


Jerrold E. Johnson II, PE
June 29, 1993

Harpers Ferry National Historic Park

Building #5 Annex Roof Joists, 15 psf DL + 25 psf LL Southern Pine

3" x 5-1/2" at 24 inches on center.



BEAM #1 LRFD 3-130

Simple Beam with Uniform Load

DEFINE UNITS

$kip := 1000 \cdot lbf$ $ksi := \frac{kip}{in^2}$

BEAM PROPERTIES

Length..... $L := 11.50 \cdot ft$

Joist Width..... $b := 3.000 \cdot in$

Joist Depth..... $d := 5.50 \cdot in$

Young's Modulus... $E := 1600 \cdot ksi$

Joist Spacing..spacing $:= 24.00 \cdot in$

CALCULATIONS $x := 3.0 \cdot ft$

Moment of Inertia

$I := \frac{b \cdot d^3}{12}$ $I = 41.594 \cdot in^4$

Section Modulus

$S := \frac{b \cdot d^2}{6}$ $S = 15.125 \cdot in^3$

Loads

$w_{DL} := 15.00 \cdot \frac{lbf}{ft^2}$ $w_{LL} := 25 \cdot \frac{lbf}{ft^2}$ $w := \left(w_{DL} + w_{LL}\right) \cdot spacing$ $w = 80 \cdot \frac{lbf}{ft}$

$R_1 := w \cdot \frac{L}{2}$ $R_1 = 460 \cdot lbf$

$R_1 = 0.46 \cdot kip$

$R_2 := w \cdot \frac{L}{2}$ $R_2 = 460 \cdot lbf$

$R_2 = 0.46 \cdot kip$

Shear Calculations

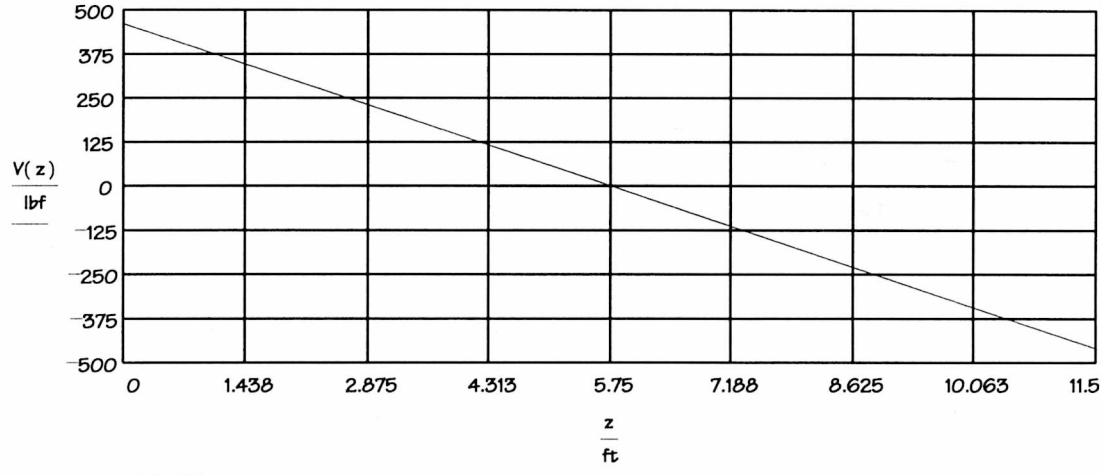
$V_x := w \cdot \left(\frac{L}{2} - x\right)$ $V_x = 220 \cdot lbf$ $V_x = 0.22 \cdot kip$

$\sigma_{vx} := \frac{3 \cdot V_x}{2 \cdot b \cdot d}$ $\sigma_{vx} = 20 \cdot psi$

$\sigma_{vmax} := \frac{3 \cdot \left(R_1 - w \cdot d\right)}{2 \cdot b \cdot d}$ $\sigma_{vmax} = 38.485 \cdot psi$

Graph the Shear

$z := 0 \cdot ft, .05 \cdot ft .. L$ $\quad V(z) := w \cdot \left(\frac{L}{2} - z \right)$



Moment Calculations

$M_x := \frac{(w \cdot x)}{2} \cdot (L - x)$

$M_x = 1020 \cdot ft \cdot lbf$

$M_x = 1.02 \cdot ft \cdot kip$

$M_x = 12.24 \cdot in \cdot kip$

$\sigma_x := \left| \frac{M_x}{S} \right|$ $\quad \sigma_x = 809.256 \cdot psi$

$\sigma_x = 0.809 \cdot ksi$

$M_{max} := \frac{\left(w \cdot L^2\right)}{8}$ At x = length/2

$M_{max} = 1322.5 \cdot ft \cdot lbf$

$M_{max} = 1.322 \cdot ft \cdot kip$

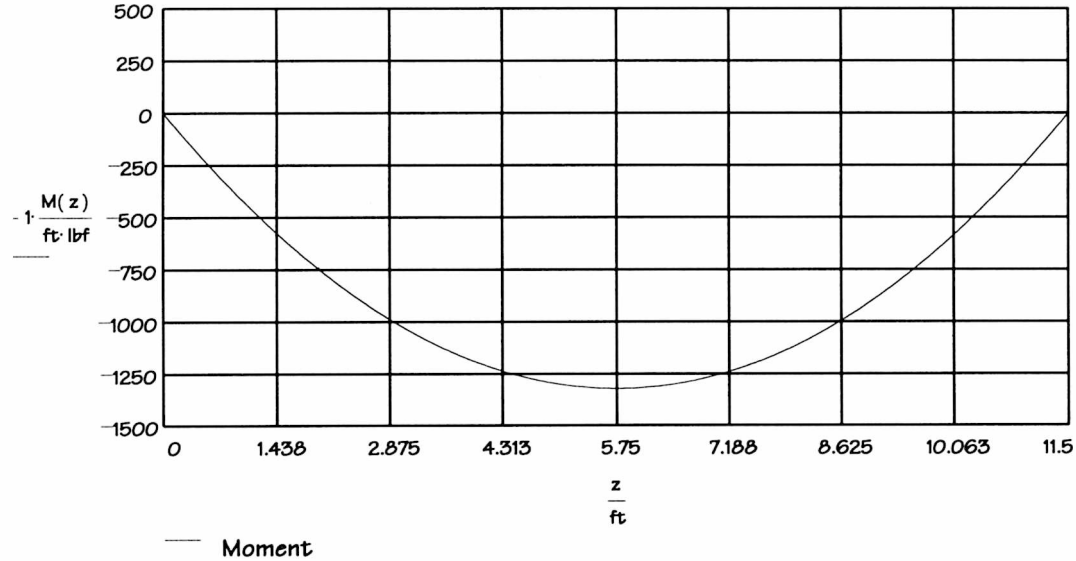
$M_{max} = 15.87 \cdot in \cdot kip$

$\sigma_{max} := \left| \frac{M_{max}}{S} \right|$ $\quad \sigma_{max} = 1049.256 \cdot psi$

$\sigma_{max} = 1.049 \cdot ksi$

Graph the Bending Moment

$M(z) := \frac{(w \cdot z)}{2} \cdot (L - z)$



Deflection Calculations

$$\Delta_x := \frac{(-w \cdot x)}{(24 \cdot E \cdot I)} \cdot \left(L^3 - 2 \cdot L \cdot x^2 + x^3\right) \qquad \Delta_x = -0.3482 \cdot in \qquad \left|\frac{L}{\Delta_x}\right| = 396.365$$

$$\Delta_{max} := \frac{\left(-5 \cdot w \cdot L^4\right)}{(384 \cdot E \cdot I)} \qquad \Delta_{max} = -0.4731 \cdot in \qquad \left|\frac{L}{\Delta_{max}}\right| = 291.718$$

Maximum Deflection occurs at x = Length/2

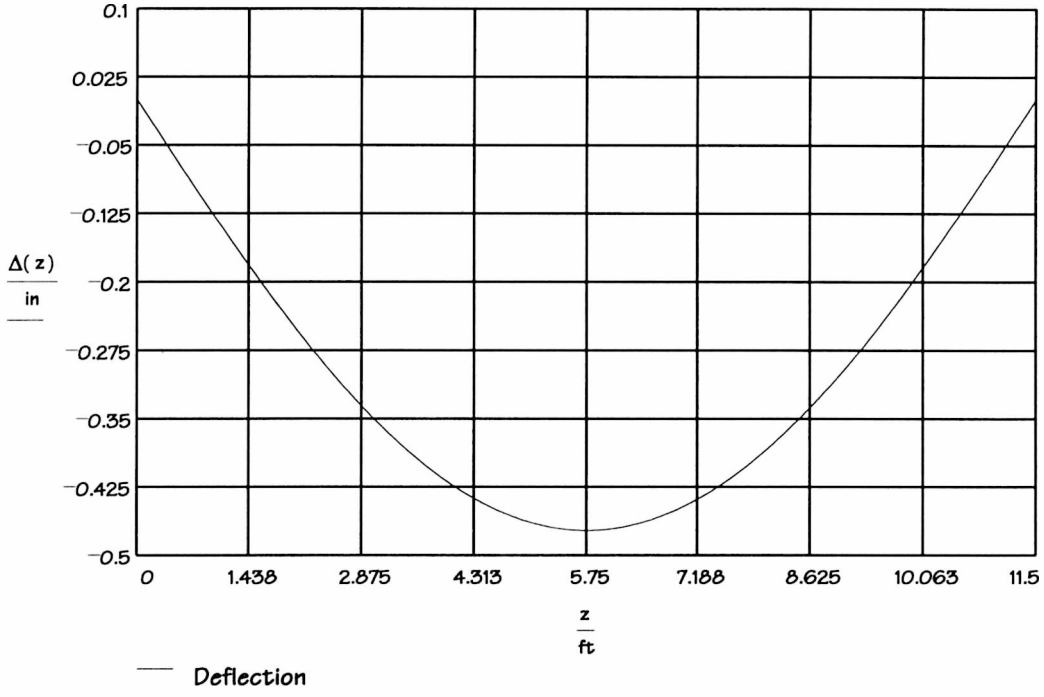
Maximum Live Load & Dead Load Deflections

$$\Delta_{maxLL} := \frac{\left(-5 \cdot w_{LL} \cdot L^4 \cdot spacing\right)}{(384 \cdot E \cdot I)} \qquad \Delta_{maxLL} = -0.296 \cdot in \qquad \left|\frac{L}{\Delta_{maxLL}}\right| = 466.749$$

$$\Delta_{maxDL} := \frac{\left(-5 \cdot w_{DL} \cdot L^4 \cdot spacing\right)}{(384 \cdot E \cdot I)} \qquad \Delta_{maxDL} = -0.177 \cdot in \qquad \left|\frac{L}{\Delta_{maxDL}}\right| = 777.915$$

Graph the Beam Deflection

$$\Delta(z) := \frac{(-w \cdot z)}{(24 \cdot E \cdot I)} \cdot \left(L^3 - 2 \cdot L \cdot z^2 + z^3\right)$$



Jerrold E. Johnson II, PE
May 29,1993

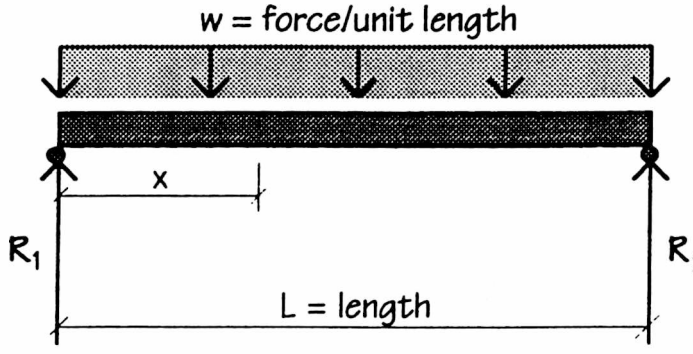
Harpers Ferry National Historic Park

Buildings #5 & #7, Existing First Floor Joists, 10 psf DL + 100 psf LL

Assumed to be 8H3 joists

BEAM #1 LRFD 3-130

Simple Beam with Uniform Load



DEFINE UNITS

$kip := 1000 \cdot lbf$ $ksi := \frac{kip}{in^2}$

JOIST PROPERTIES

Young's Modulus... $E = 29000 \cdot ksi$

Joist Spacing..... $spacing = 24 \cdot in$

CALCULATIONS $x = 3.0 \cdot ft$

Length....The length is determined by assuming a three inch bearing on the existing eight inch concrete masonry walls. The walls are assumed to have a two inch airgap between the stone foundation walls and the concrete masonry.

$L = 16 \cdot ft + 9 \cdot in - 2 \cdot (2 \cdot in) - 2 \cdot (8 \cdot in) + 2 \cdot (1.5 \cdot in)$

$L = 15.333 \cdot ft$

The Section and Moment of Inertia will need to be back calculated from information in the allowable load and span tables.

Section Modulus

$ResistingMoment := 91 \cdot in \cdot kip$ $AllowableStress := 30000 \cdot \frac{lbf}{in^2}$

$S = \frac{ResistingMoment}{AllowableStress}$ $S = 3.033 \cdot in^3$

Moment of Inertia

$w_1 = 266 \cdot \frac{lbf}{ft}$ $L_1 = 12 \cdot ft$

$I = \frac{360 \cdot 5 \cdot w_1 \cdot L_1^3}{384 \cdot E}$ $I = 10.699 \cdot in^4$

Loads

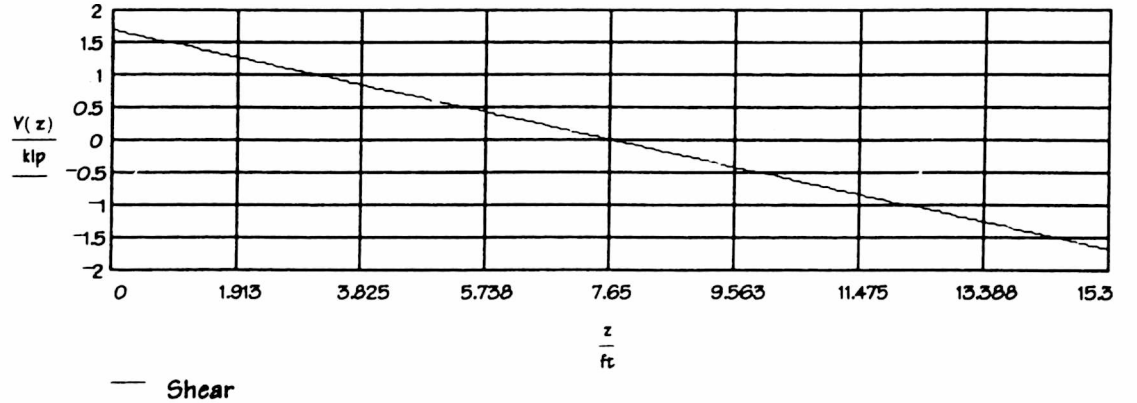
$w_{DL} = 10.00 \cdot \frac{lbf}{ft^2}$ $w_{LL} = 100 \cdot \frac{lbf}{ft^2}$ $w = (w_{DL} + w_{LL}) \cdot spacing$ $w = 220 \cdot \frac{lbf}{ft}$

$R_1 = w \cdot \frac{L}{2}$ $R_1 = 1686.6667 \cdot lbf$ $R_1 = 1.687 \cdot kip$

$R_2 = w \cdot \frac{L}{2}$ $R_2 = 1686.667 \cdot lbf$ $R_2 = 1.687 \cdot kip$

Graph the Shear

$z = 0 \cdot ft, .05 \cdot ft .. L$ $V(z) = w \cdot \left(\frac{L}{2} - z\right)$



Moment Calculations

$M_x := \frac{(w \cdot x)}{2} \cdot (L - x)$

$M_x = 4070 \cdot ft \cdot lbf$

$M_x = 4.07 \cdot ft \cdot kip$

$M_x = 48.84 \cdot in \cdot kip$

$\sigma_x := \left| \frac{M_x}{S} \right|$ $\sigma_x = 1.61 \cdot 10^4 \cdot psi$

$\sigma_x = 16.101 \cdot ksi$

$M_{max} = \frac{(w \cdot L^2)}{8}$ At x = length/2

$M_{max} = 6465.556 \cdot ft \cdot lbf$

$M_{max} = 6.466 \cdot ft \cdot kip$

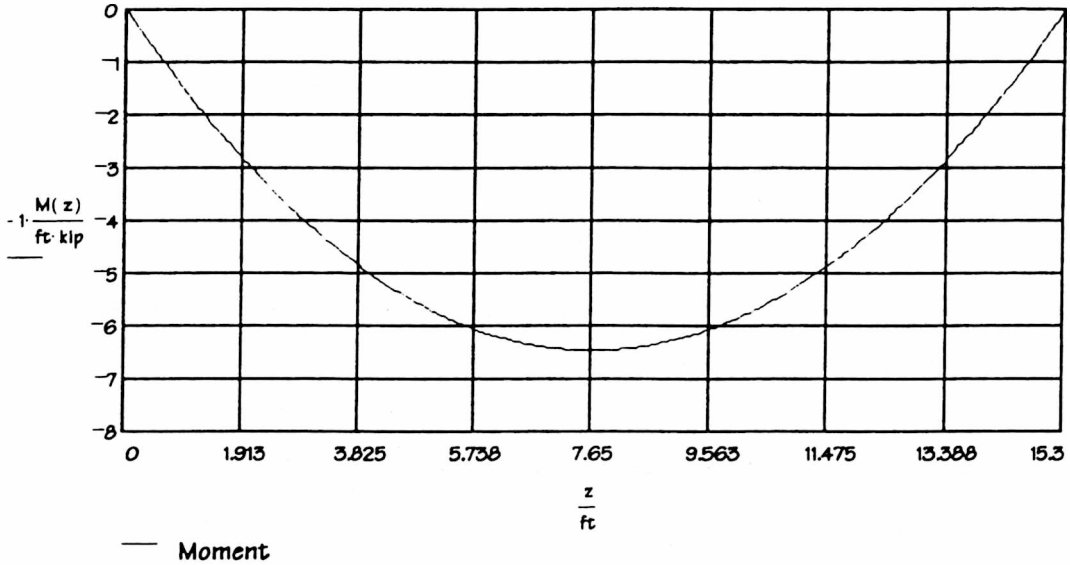
$M_{max} = 77.587 \cdot in \cdot kip$

$\sigma_{max} := \left| \frac{M_{max}}{S} \right|$ $\sigma_{max} = 2.558 \cdot 10^4 \cdot psi$

$\sigma_{max} = 25.578 \cdot ksi$

Graph the Bending Moment

$M(z) := \frac{(w \cdot z)}{2} \cdot (L - z)$



15.3

Deflection Calculations

$\Delta_x = \frac{(-w \cdot x)}{(24 \cdot E \cdot I)} \cdot (L^3 - 2 \cdot L \cdot x^2 + x^3)$ $\Delta_x = -0.514 \cdot in$ $\left| \frac{L}{\Delta_x} \right| = 357.968$

$\Delta_{max} = \frac{(-5 \cdot w \cdot L^4)}{(384 \cdot E \cdot I)}$ $\Delta_{max} = -0.8819 \cdot in$ $\left| \frac{L}{\Delta_{max}} \right| = 208.639$

Maximum Deflection occurs at x = Length/2

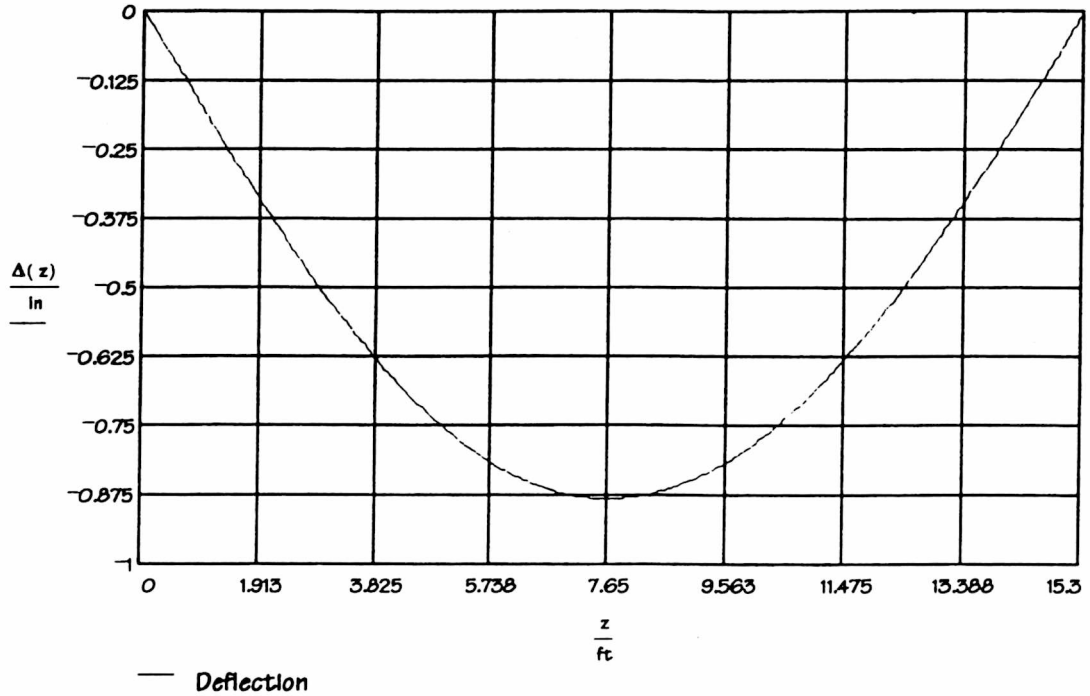
Maximum Live Load & Dead Load Deflections

$\Delta_{maxLL} = \frac{(-5 \cdot w_{LL} \cdot L^4 \cdot spacing)}{(384 \cdot E \cdot I)}$ $\Delta_{maxLL} = -0.802 \cdot in$ $\left| \frac{L}{\Delta_{maxLL}} \right| = 229.503$

$\Delta_{maxDL} = \frac{(-5 \cdot w_{DL} \cdot L^4 \cdot spacing)}{(384 \cdot E \cdot I)}$ $\Delta_{maxDL} = -0.08 \cdot in$ $\left| \frac{L}{\Delta_{maxDL}} \right| = 2295.029$

Graph the Beam Deflection

$$\Delta(z) := \frac{(-w \cdot z)}{(24 \cdot E \cdot I)} \cdot (L^3 - 2 \cdot L \cdot z^2 + z^3)$$

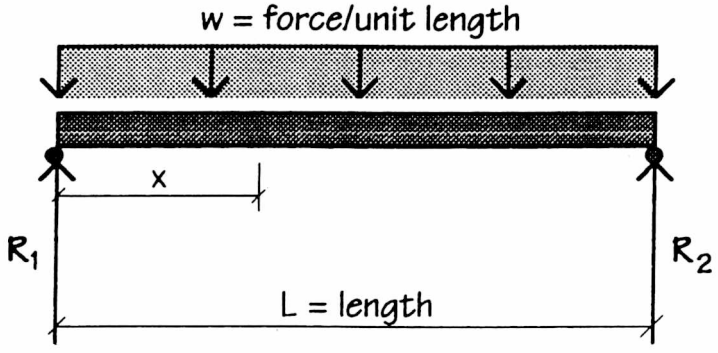


Jerrold E. Johnson II, PE
May 28, 1993

Harpers Ferry National Historic Park

Building #7 New First Floor Joist, 10 psf DL + 100 psf LL Southern Pine #1

This proposed design is to replicate the original first floor framing. We know from the 1959 HABS drawings that the first floor joists sat in pockets in the masonry, and that these pockets were located at approximately 16 inche centers. We do not know either the depth or the thickness of the girders. Based upon measurments of the second ans third floor framing, we speculate the thickness was two inches.



BEAM #1 LRFD 3-130

Simple Beam with Uniform Load

DEFINE UNITS

$kip := 1000 \cdot lbf$ $ksi := \frac{kip}{in^2}$

BEAM PROPERTIES

Length.....L := 10.00·ft

Joist Width.....b := 1.500·in

Joist Depth.....d := 9.25·in

Young's Modulus..E := 1700·ksi

Joist Spacing....spacing := 16·in

CALCULATIONS $x := 3.0 \cdot ft$

Moment of Inertia

$I := \frac{b \cdot d^3}{12}$ $I = 98.932 \cdot in^4$

Section Modulus

$S := \frac{b \cdot d^2}{6}$ $S = 21.391 \cdot in^3$

Loads

$w_{DL} = 10.00 \cdot \frac{lbf}{ft^2}$ $w_{LL} = 100 \cdot \frac{lbf}{ft^2}$ $w = (w_{DL} + w_{LL}) \cdot spacing$ $w = 146.667 \cdot \frac{lbf}{ft}$

$R_1 := w \cdot \frac{L}{2}$ $R_1 = 733.3333 \cdot lbf$ $R_1 = 0.733 \cdot kip$

$R_2 := w \cdot \frac{L}{2}$ $R_2 = 733.333 \cdot lbf$ $R_2 = 0.733 \cdot kip$

Shear Calculations

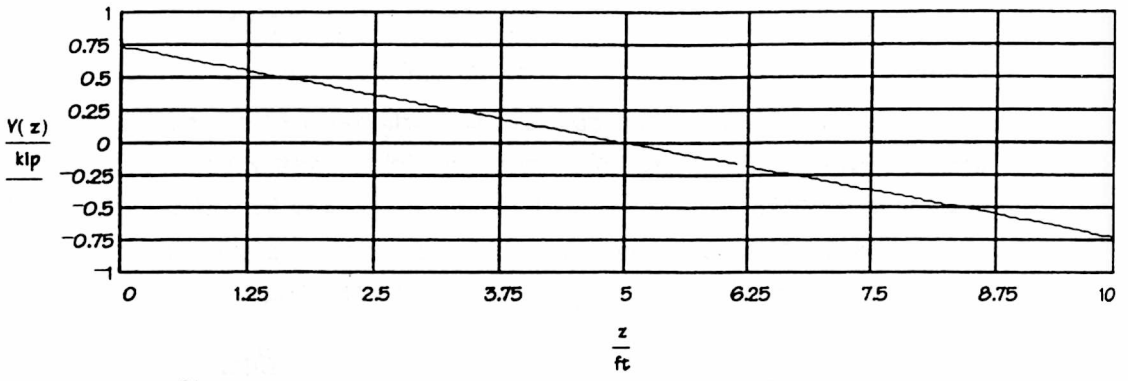
$V_x := w \cdot \left(\frac{L}{2} - x\right)$ $V_x = 293.333 \cdot lbf$ $V_x = 0.293 \cdot kip$

$\sigma_{vx} := \frac{3 \cdot V_x}{2 \cdot b \cdot d}$ $\sigma_{vx} = 31.712 \cdot psi$

$\sigma_{vmax} := \frac{3 \cdot (R_1 - w \cdot d)}{2 \cdot b \cdot d}$ $\sigma_{vmax} = 67.057 \cdot psi$

Graph the Shear

$z = 0 \cdot ft, .05 \cdot ft .. L$ $\quad V(z) = w \cdot \left(\frac{L}{2} - z\right)$



10

— Shear

Moment Calculations

$M_x = \frac{(w \cdot x)}{2} \cdot (L - x)$

$M_x = 1540 \cdot ft \cdot lbf$

$M_x = 1.54 \cdot ft \cdot kip$

$M_x = 18.48 \cdot in \cdot kip$

$\sigma_x = \left|\frac{M_x}{S}\right|$ $\quad \sigma_x = 863.93 \cdot psi$

$\sigma_x = 0.864 \cdot ksi$

$M_{max} = \frac{(w \cdot L^2)}{8}$ At x = length/2

$M_{max} = 1833.333 \cdot ft \cdot lbf$

$M_{max} = 1.833 \cdot ft \cdot kip$

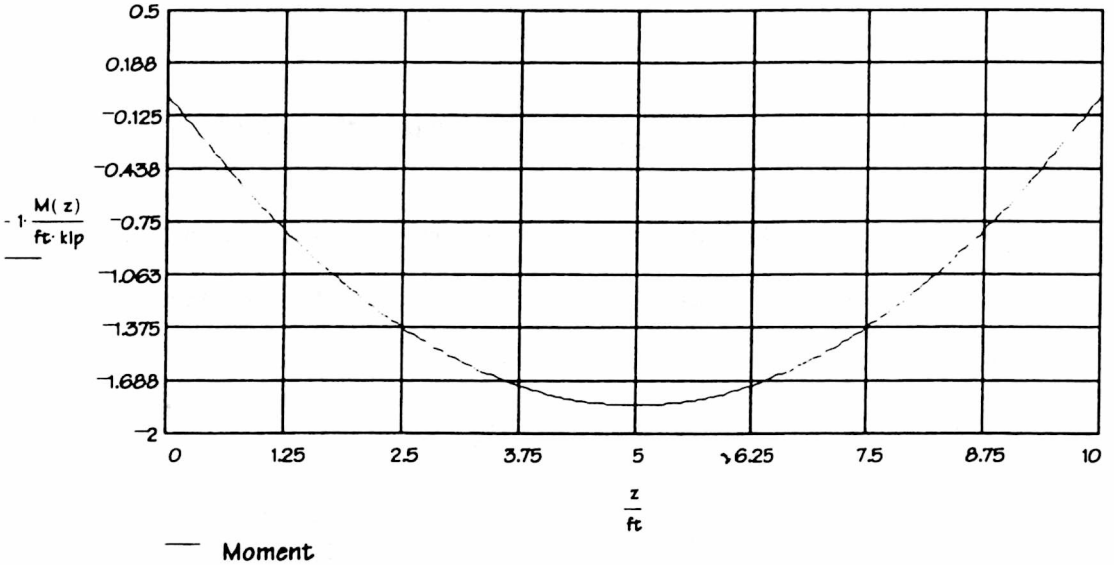
$M_{max} = 22 \cdot in \cdot kip$

$\sigma_{max} = \left|\frac{M_{max}}{S}\right|$ $\quad \sigma_{max} = 1028.488 \cdot psi$

$\sigma_{max} = 1.028 \cdot ksi$

Graph the Bending Moment

$M(z) = \frac{(w \cdot z)}{2} \cdot (L - z)$



10

— Moment

Deflection Calculations

$\Delta_x = \frac{(-w \cdot x)}{(24 \cdot E \cdot I)} \cdot (L^3 - 2 \cdot L \cdot x^2 + x^3)$ $\quad \Delta_x = -0.1595 \cdot in$ $\quad \left|\frac{L}{\Delta_x}\right| = 752.137$

$\Delta_{max} = \frac{(-5 \cdot w \cdot L^4)}{(384 \cdot E \cdot I)}$ $\quad \Delta_{max} = -0.1962 \cdot in$ $\quad \left|\frac{L}{\Delta_{max}}\right| = 611.577$

Maximum Deflection occure at x = Length/2

Maximum Live Load & Dead Load Deflections

$$\Delta_{maxLL} = \frac{\left(-5 \cdot w_{LL} \cdot L^4 \cdot spacing\right)}{(384 \cdot E \cdot I)} \qquad \Delta_{maxLL} = -0.178 \cdot in$$

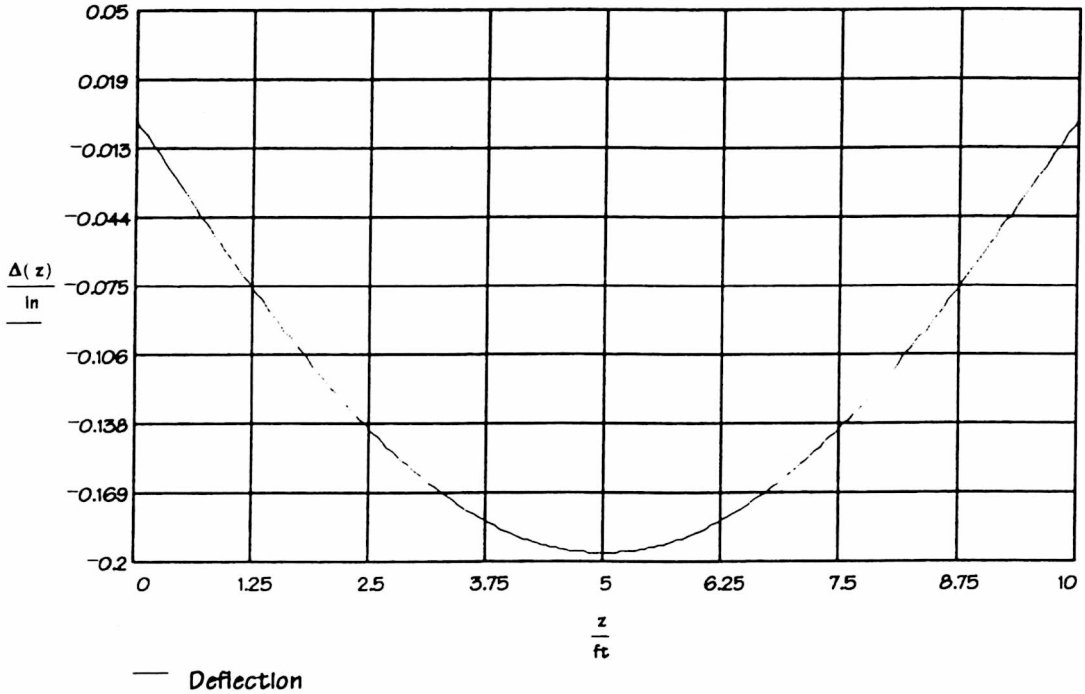
$$\left|\frac{L}{\Delta_{maxLL}}\right| = 672.735$$

$$\Delta_{maxDL} = \frac{\left(-5 \cdot w_{DL} \cdot L^4 \cdot spacing\right)}{(384 \cdot E \cdot I)} \qquad \Delta_{maxDL} = -0.018 \cdot in$$

$$\left|\frac{L}{\Delta_{maxDL}}\right| = 6727.352$$

Graph the Beam Deflection

$$\Delta(z) = \frac{(-w \cdot z)}{(24 \cdot E \cdot I)} \cdot (L^3 - 2 \cdot L \cdot z^2 + z^3)$$

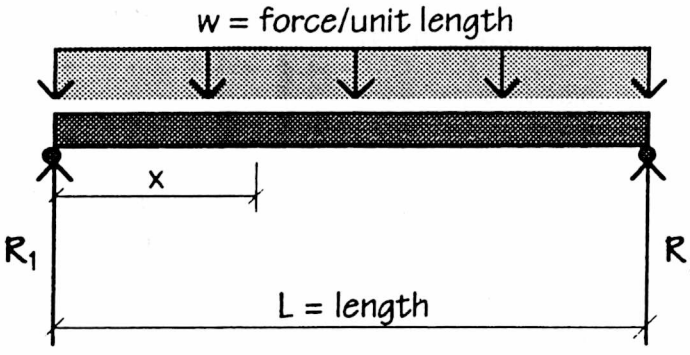


Jerrold E. Johnson II, PE
May 28, 1993

Harpers Ferry National Historic Park

Building #7 Original Second Floor Joists, 8 psf DL + 30 psf LL Southern Pine

The original second floor framing appears to remain. During the investigation, we found evidence or previous fires, and an unusual type of framing. The initial investigations noted that most of the joists appeared to have been constructed in pairs. Upon further investigation, it was reveled that the joists were constructed from two pieces of lumber. Each piece spans approximately three-quarters of the span. They are connected by a very long lap splice. The National Park Service later added joists that spanned halfway and which are supported on a four inch wide by five inch deep beam. The major prupose of these additional joists appears to be to provide a flat ceiling. The beam has a span of approximately 12 feet. This member would be inadequate to support significant, and the present sag in the beam has caused some of the additional joists to not bear against it. 1959 HABS drawings for this building do not show any cross girders in the location of the present four inch by five inch beam. Some notches suggest that such a girder may have existed. The present depth of the structure also suggests that such a girder tould have been used, since the present joists frame in the long direction of the building. The history of the building sukggests that this would have been correct for the shape of the building prior to removing the front in the 1850's. We believe that the oldest framing, unusual as it may appear, is correct. We will treat the spliced members as a single continuous member.



BEAM #1 LRFD 3-130

Simple Beam with Uniform Load

DEFINE UNITS

$kip := 1000 \cdot lbf$ $ksi := \frac{kip}{in^2}$

BEAM PROPERTIES

Length..... $L := 21.00 \cdot ft$

Joist Width..... $b := 2.000 \cdot in$

Joist Depth..... $d := 9.00 \cdot in$

Young's Modulus..... $E := 1600 \cdot ksi$

Joist Spacing.... $spacing := 16 \cdot in$

CALCULATIONS $x := 3.0 \cdot ft$

Moment of Inertia

$I = \frac{b \cdot d^3}{12}$ $I = 121.5 \cdot in^4$

Section Modulus

$S = \frac{b \cdot d^2}{6}$ $S = 27 \cdot in^3$

Loads

$w_{DL} = 8.00 \cdot \frac{lbf}{ft^2}$ $w_{LL} = 30 \cdot \frac{lbf}{ft^2}$ $w = (w_{DL} + w_{LL}) \cdot spacing$ $w = 50.667 \cdot \frac{lbf}{ft}$

$R_1 = w \cdot \frac{L}{2}$ $R_1 = 532 \cdot lbf$ $R_1 = 0.532 \cdot kip$

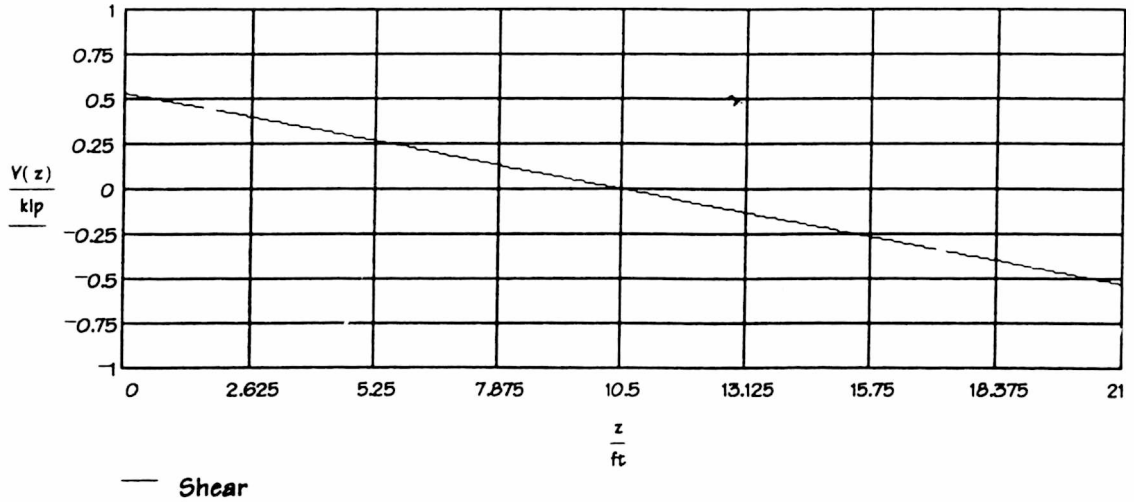
$R_2 = w \cdot \frac{L}{2}$ $R_2 = 532 \cdot lbf$ $R_2 = 0.532 \cdot kip$

Shear Calculations

$V_x = w \cdot \left(\frac{L}{2} - x\right)$ $V_x = 380 \cdot lbf$ $V_x = 0.38 \cdot kip$

$\sigma_{vx} = \frac{3 \cdot V_x}{2 \cdot b \cdot d}$ $\sigma_{vx} = 31.667 \cdot psi$ $\sigma_{vmax} = \frac{3 \cdot (R_1 - w \cdot d)}{2 \cdot b \cdot d}$ $\sigma_{vmax} = 41.167 \cdot psi$

Graph the Shear $z = 0 \cdot ft, .05 \cdot ft .. L$ $V(z) = w \cdot \left(\frac{L}{2} - z\right)$



Moment Calculations

$M_x := \frac{(w \cdot x)}{2} \cdot (L - x)$

$M_x = 1368 \cdot ft \cdot lbf$

$M_x = 1.368 \cdot ft \cdot kip$

$M_x = 16.416 \cdot in \cdot kip$

$\sigma_x := \left| \frac{M_x}{S} \right|$ $\sigma_x = 608 \cdot psi$

$\sigma_x = 0.608 \cdot ksi$

$M_{max} := \frac{(w \cdot L^2)}{8}$ At x = length/2

$M_{max} = 2793 \cdot ft \cdot lbf$

$M_{max} = 2.793 \cdot ft \cdot kip$

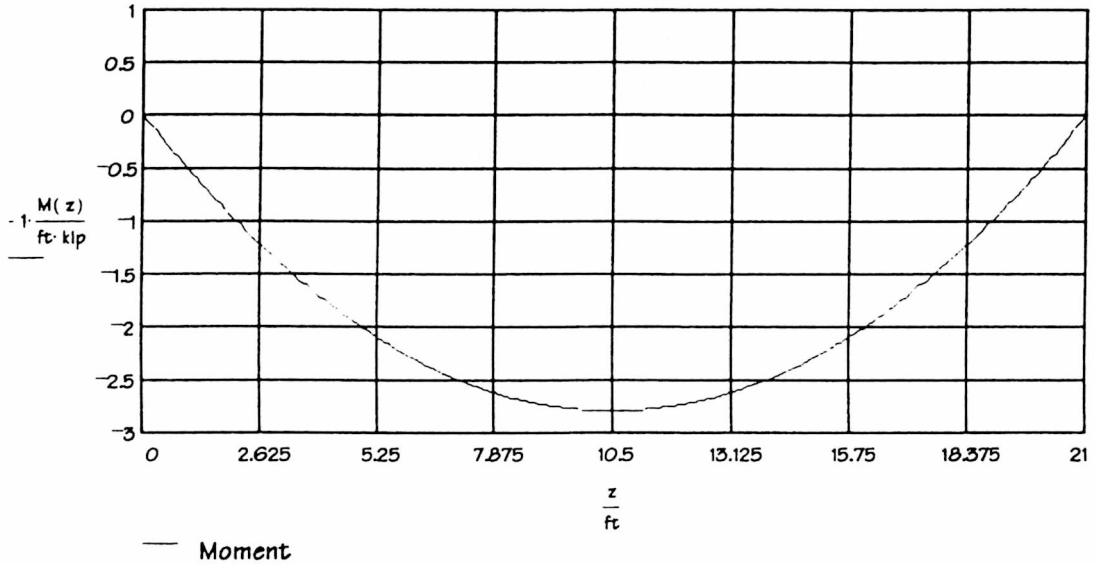
$M_{max} = 33.516 \cdot in \cdot kip$

$\sigma_{max} := \left| \frac{M_{max}}{S} \right|$ $\sigma_{max} = 1241.333 \cdot psi$

$\sigma_{max} = 1.241 \cdot ksi$

Graph the Bending Moment

$M(z) := \frac{(w \cdot z)}{2} \cdot (L - z)$



Deflection Calculations

$\Delta_x := \frac{(-w \cdot x)}{(24 \cdot E \cdot I)} \cdot (L^3 - 2 \cdot L \cdot x^2 + x^3)$ $\Delta_x = -0.5016 \cdot in$ $\left| \frac{L}{\Delta_x} \right| = 502.392$

$\Delta_{max} := \frac{(-5 \cdot w \cdot L^4)}{(384 \cdot E \cdot I)}$ $\Delta_{max} = -1.1405 \cdot in$ $\left| \frac{L}{\Delta_{max}} \right| = 220.961$

Maximum Deflection occurs at x = Length/2

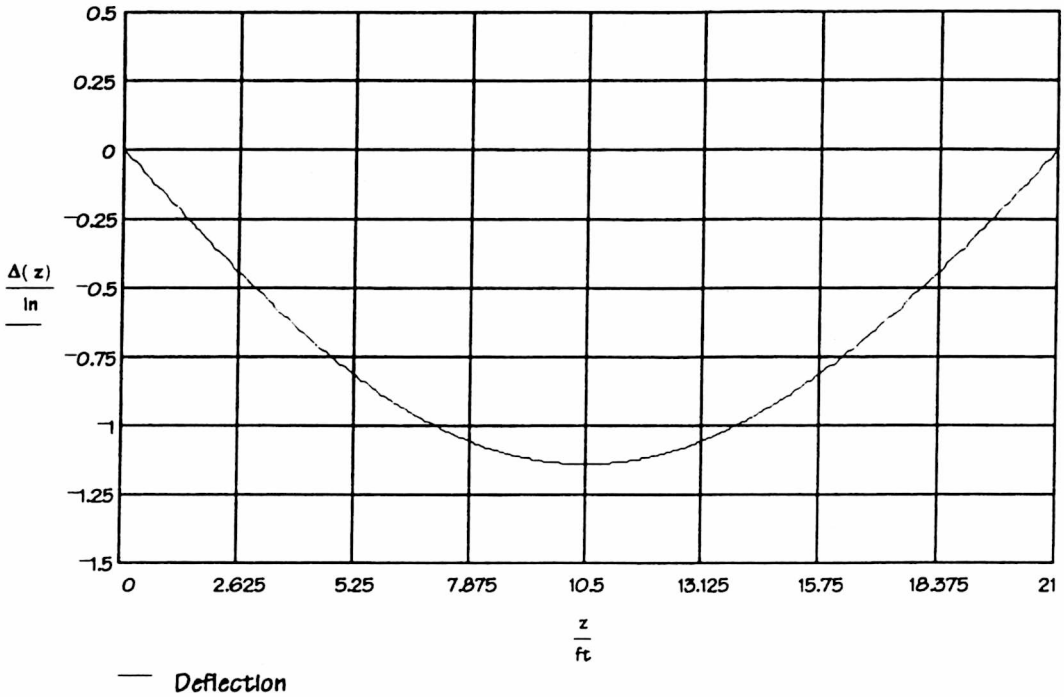
Maximum Live Load & Dead Load Deflections

$\Delta_{maxLL} := \frac{\left(-5 \cdot w_{LL} \cdot L^4 \cdot spacing\right)}{(384 \cdot E \cdot I)}$ $\Delta_{maxLL} = -0.9 \cdot in$ $\left| \frac{L}{\Delta_{maxLL}} \right| = 279.883$

$\Delta_{maxDL} := \frac{\left(-5 \cdot w_{DL} \cdot L^4 \cdot spacing\right)}{(384 \cdot E \cdot I)}$ $\Delta_{maxDL} = -0.24 \cdot in$ $\left| \frac{L}{\Delta_{maxDL}} \right| = 1049.563$

Graph the Beam Deflection

$$\Delta(z) := \frac{(-w \cdot z)}{(24 \cdot E \cdot I)} \cdot (L^3 - 2 \cdot L \cdot z^2 + z^3)$$

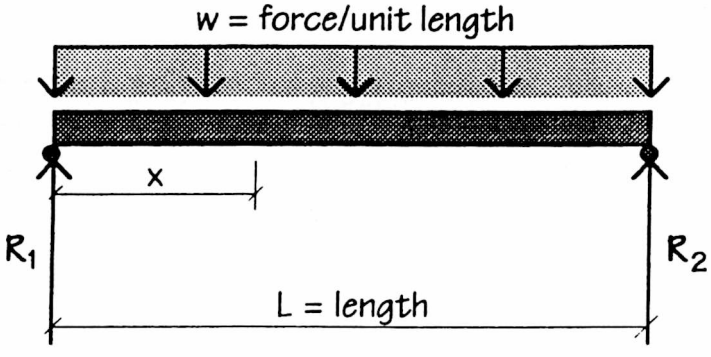


21

Jerrold E. Johnson II, PE
May 31, 1993

Harpers Ferry National Historic Park

Building #7 Original Third Floor Joists, 5 psf DL + 20 psf LL Southern Pine
2" x 8 1/2" at 22 1/2 inches on center.



BEAM #1 LRFD 3-130

Simple Beam with Uniform Load

DEFINE UNITS

$kip := 1000 \cdot lbf$ $ksi := \frac{kip}{in^2}$

BEAM PROPERTIES

Length.....L = 21.00·ft
Joist Width..... b = 2.000·in
Joist Depth.....d = 8.50·in
Young's Modulus..E = 1600·ksi
Joist Spacing.... spacing = 22.50·in

CALCULATIONS $x := 3.0 \cdot ft$

Moment of Inertia

$I = \frac{b \cdot d^3}{12}$ $I = 102.354 \cdot in^4$

Section Modulus

$S = \frac{b \cdot d^2}{6}$ $S = 24.083 \cdot in^3$

Loads

$w_{DL} = 5.00 \cdot \frac{lbf}{ft^2}$ $w_{LL} = 20 \cdot \frac{lbf}{ft^2}$ $w = (w_{DL} + w_{LL}) \cdot spacing$ $w = 46.875 \cdot \frac{lbf}{ft}$

$R_1 = w \cdot \frac{L}{2}$ $R_1 = 492.1875 \cdot lbf$ $R_1 = 0.492 \cdot kip$

$R_2 = w \cdot \frac{L}{2}$ $R_2 = 492.187 \cdot lbf$ $R_2 = 0.492 \cdot kip$

Shear Calculations

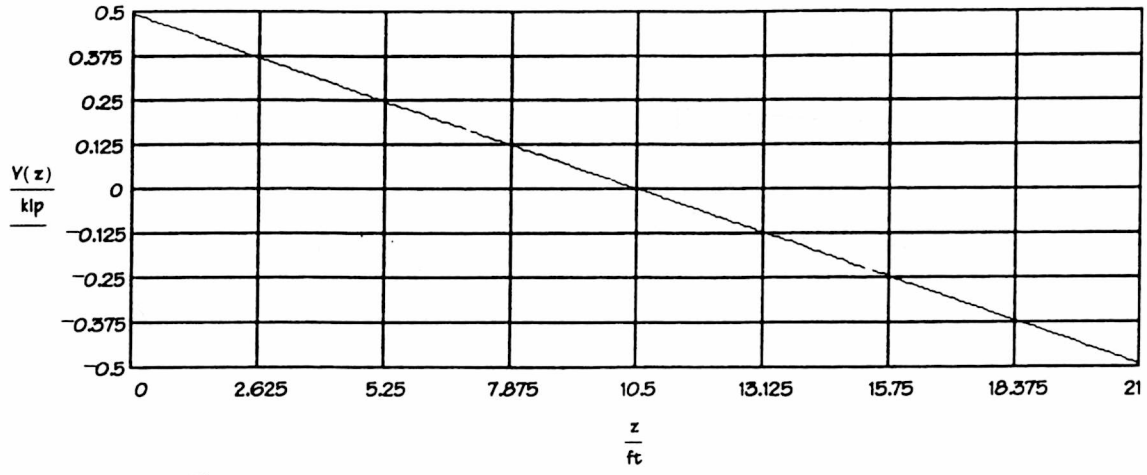
$V_x = w \cdot \left(\frac{L}{2} - x\right)$ $V_x = 351.562 \cdot lbf$ $V_x = 0.352 \cdot kip$

$\sigma_{vx} = \frac{3 \cdot V_x}{2 \cdot b \cdot d}$ $\sigma_{vx} = 31.02 \cdot psi$

$\sigma_{vmax} = \frac{3 \cdot (R_1 - w \cdot d)}{2 \cdot b \cdot d}$ $\sigma_{vmax} = 40.499 \cdot psi$

Graph the Shear

$z := 0 \cdot ft, .05 \cdot ft .. L$ $\quad V(z) := w \cdot \left(\frac{L}{2} - z \right)$



21

Moment Calculations

$M_x := \frac{(w \cdot x)}{2} \cdot (L - x)$

$M_x = 1265.625 \cdot ft \cdot lbf$

$M_x = 1.266 \cdot ft \cdot klp$

$M_x = 15.188 \cdot in \cdot klp$

$\sigma_x := \left| \frac{M_x}{S} \right|$ $\quad \sigma_x = 630.623 \cdot psi$

$\sigma_x = 0.631 \cdot ksi$

$M_{max} := \frac{(w \cdot L^2)}{8}$ At x = length/2

$M_{max} = 2583.984 \cdot ft \cdot lbf$

$M_{max} = 2.584 \cdot ft \cdot klp$

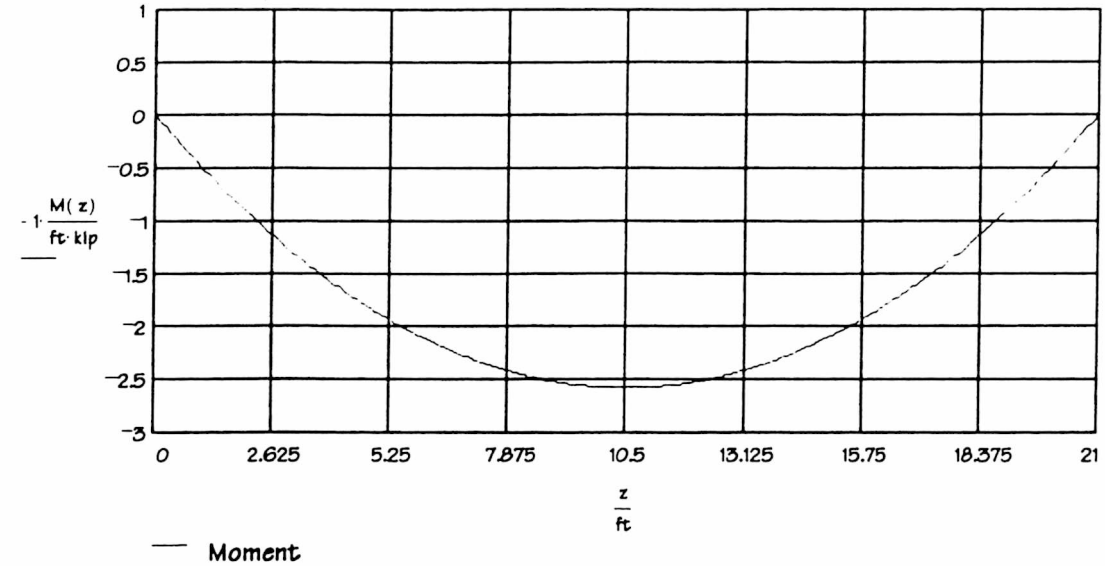
$M_{max} = 31.008 \cdot in \cdot klp$

$\sigma_{max} := \left| \frac{M_{max}}{S} \right|$ $\quad \sigma_{max} = 1287.522 \cdot psi$

$\sigma_{max} = 1.288 \cdot ksi$

Graph the Bending Moment

$M(z) := \frac{(w \cdot z)}{2} \cdot (L - z)$



21

Deflection Calculations

$$\Delta_x := \frac{(-w \cdot x)}{(24 \cdot E \cdot I)} \cdot (L^3 - 2 \cdot L \cdot x^2 + x^3) \qquad \Delta_x = -0.5509 \cdot in \qquad \left| \frac{L}{\Delta_x} \right| = 457.46$$

$$\Delta_{max} := \frac{(-5 \cdot w \cdot L^4)}{(384 \cdot E \cdot I)} \qquad \Delta_{max} = -1.2525 \cdot in \qquad \left| \frac{L}{\Delta_{max}} \right| = 201.199$$

Maximum Deflection occurs at x = Length/2

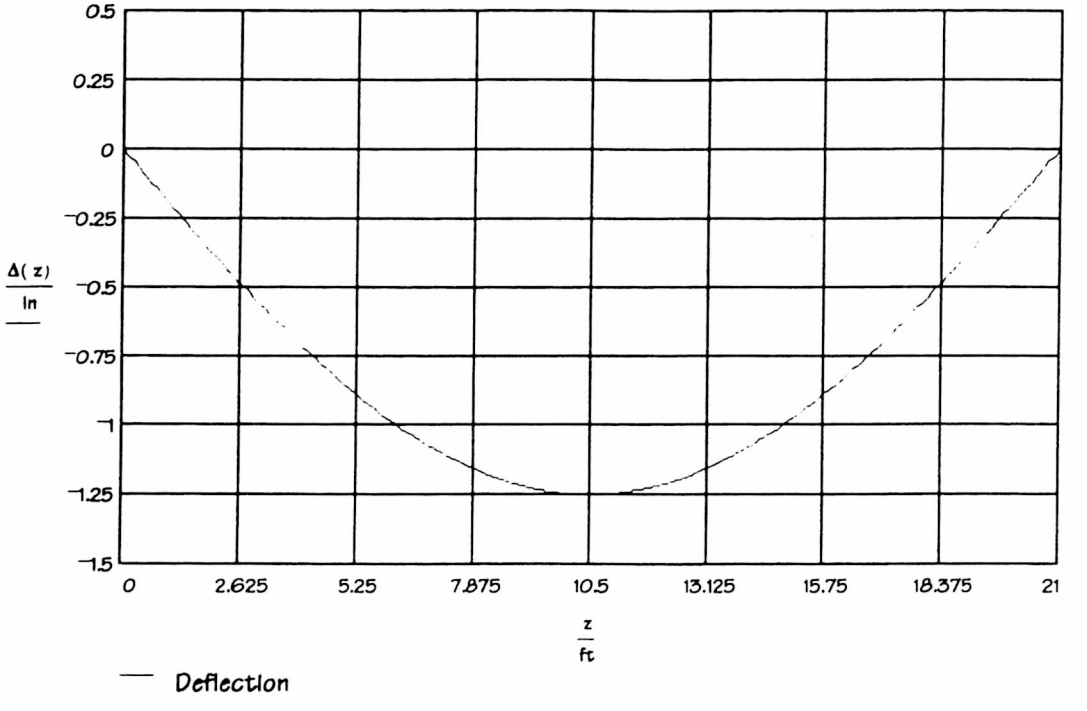
Maximum Live Load & Dead Load Deflections

$$\Delta_{maxLL} := \frac{\left(-5 \cdot w_{LL} \cdot L^4 \cdot spacing\right)}{(384 \cdot E \cdot I)} \qquad \Delta_{maxLL} = -1.002 \cdot in \qquad \left| \frac{L}{\Delta_{maxLL}} \right| = 251.498$$

$$\Delta_{maxDL} := \frac{\left(-5 \cdot w_{DL} \cdot L^4 \cdot spacing\right)}{(384 \cdot E \cdot I)} \qquad \Delta_{maxDL} = -0.25 \cdot in \qquad \left| \frac{L}{\Delta_{maxDL}} \right| = 1005.993$$

Graph the Beam Deflection

$$\Delta(z) = \frac{(-w \cdot z)}{(24 \cdot E \cdot I)} \cdot (L^3 - 2 \cdot L \cdot z^2 + z^3)$$

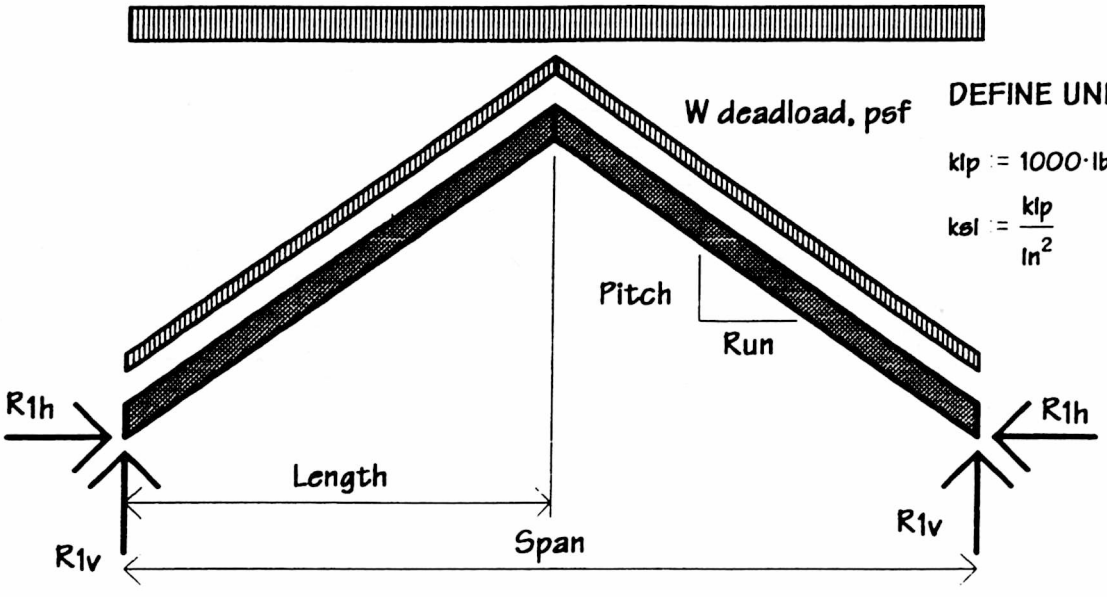


TIMBER ROOF RAFTER

Jerrold E. Johnson II, PE
May 31, 1993

Rectangular Member with Roof Decking, Harpers Ferry Building 7

W live load, psf horizontal projection



DEFINE UNITS

$klp := 1000 \cdot lbf$

$ksi := \frac{klp}{in^2}$

FRAMING DIMENSIONS

Span..... $span = 23.00 \cdot ft$

Rafter Spacing..... $spacing = 24.00 \cdot in$

Roof Pitch..... $pitch = 8.50 \cdot in$

Roof Run..... $run = 12.00 \cdot in$

MEMBER PROPERTIES

Use Actual Member Sizes, not Nominal

Member Width..... $b = 4.000 \cdot in$

Member Depth..... $d = 5.500 \cdot in$

Young's Modulus..... $E = 1700 \cdot ksi$

CALCULATIONS

$x = 3.0 \cdot ft$

Length

$L := \frac{span}{2}$ $L = 11.5 \cdot ft$

Moment of Inertia

$I := \frac{b \cdot d^3}{12}$ $I = 55.458 \cdot in^4$

Section Modulus

$S := \frac{b \cdot d^2}{6}$ $S = 20.167 \cdot in^3$

Roof Slope

$rslope := atan\left(\frac{pitch}{run}\right)$ $rslope = 35.311 \cdot deg$

$w_{DL} = 15 \cdot \frac{lbf}{ft^2}$ $w_{LL} = 25 \cdot \frac{lbf}{ft^2}$ $w = \left(\frac{w_{DL}}{\cos(rslope)^2} + w_{LL}\right) \cdot spacing$ $w = 95.052 \cdot \frac{lbf}{ft}$

Reaction Calculations

$R_{1v} = w \cdot L$

$R_{1v} = 1093.099 \cdot lbf$

$R_{1v} = 1.093 \cdot klp$

$R_{1h} = \frac{R_{1v} - \frac{w \cdot L}{2}}{\tan(rslope)}$

$R_{1h} = 771.599 \cdot lbf$

$R_{1h} = 0.772 \cdot klp$

$R_{2v} = w \cdot L$

$R_{2v} = 1093.099 \cdot lbf$

$R_{2v} = 1.093 \cdot klp$

$R_{2h} = \frac{R_{2v} - \frac{w \cdot L}{2}}{\tan(rslope)}$

$R_{2h} = 771.599 \cdot lbf$

$R_{2h} = 0.772 \cdot klp$

Shear Calculations

$V_x = (R_{1v} - w \cdot x) \cdot \cos(rslope) - R_{1h} \cdot \sin(rslope)$ $V_x = 213.303 \cdot lbf$ $V_x = 0.213 \cdot klp$

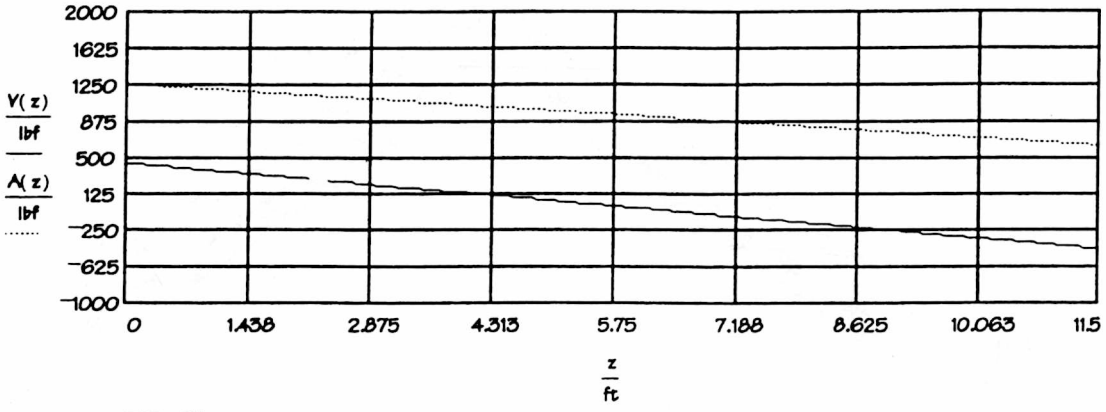
$A_x = (R_{1v} - w \cdot x) \cdot \sin(rslope) + R_{1h} \cdot \cos(rslope)$ $A_x = 1096.649 \cdot lbf$ $A_x = 1.097 \cdot klp$

Graph The Shear, and Axial Load

$z = 0 \cdot ft, .05 \cdot ft .. L$

$V(z) = (R \quad - w \cdot z) \cdot \cos(rslope) - R \quad \cdot \sin(rslope)$

$A(z) := (R_{1v} - w\,z)\,\sin(rslope) + R_{1h}\cos(rslope)$



11.5

Moment Calculations

$M_x := R_{1v}\cdot x - \frac{w\cdot x^2}{2} - R_{1h}\cdot x\cdot\tan(rslope)$

$M_x = 1211.914\cdot ft\cdot lbf$

$M_x = 1.212\cdot ft\cdot klp$

$M_x = 14.543\cdot in\cdot klp$

$\sigma_x := \left|\frac{M_x}{S}\right|$ $\sigma_x = 721.139\cdot psi$

$\sigma_x = 0.721\cdot ksi$

$M_{max} := \frac{1}{8}\cdot w\cdot L^2$ At x = length/2

$M_{max} = 1571.33\cdot ft\cdot lbf$

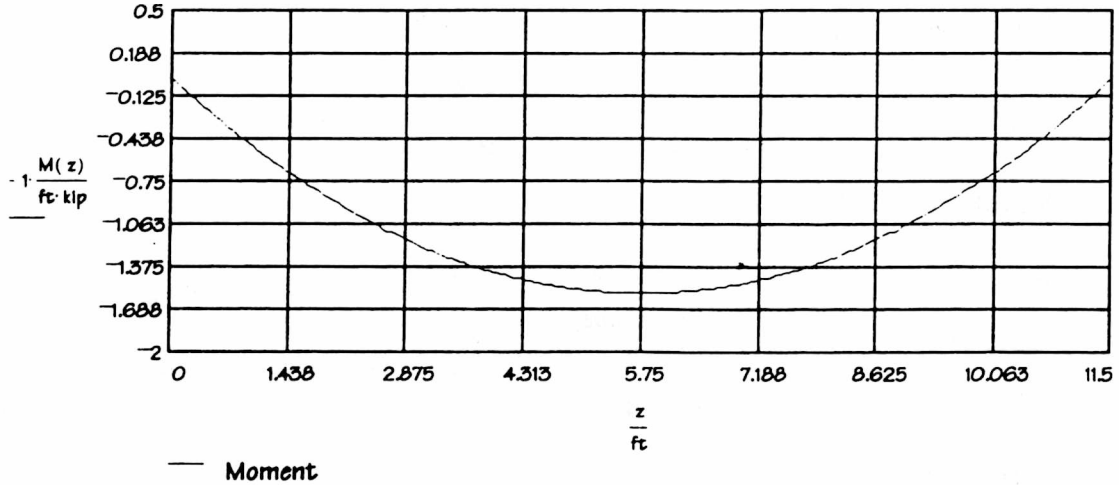
$M_{max} = 1.571\cdot ft\cdot klp$

$M_{max} = 18.856\cdot in\cdot klp$

$\sigma_{max} := \left|\frac{M_{max}}{S}\right|$ $\sigma_{max} = 935.006\cdot psi$

$\sigma_{max} = 0.935\cdot ksi$

Graph the Bending Moment $M(z) := \frac{(w\cdot z)}{2}\cdot(L - z)$



11.5

Deflection Calculations

$$\Delta_x := \frac{(-w \cdot x)}{(24 \cdot E \cdot I)} \cdot (L^3 - 2 \cdot L \cdot x^2 + x^3) \qquad \Delta_x = -0.292 \cdot in \qquad \left| \frac{L}{\Delta_x} \right| = 472.597$$

$$\Delta_{max} := \frac{(-5 \cdot w \cdot L^4)}{(384 \cdot E \cdot I)} \qquad \Delta_{max} = -0.3968 \cdot in \qquad \left| \frac{L}{\Delta_{max}} \right| = 347.824$$

Maximum Deflection occurs at x = Length/2

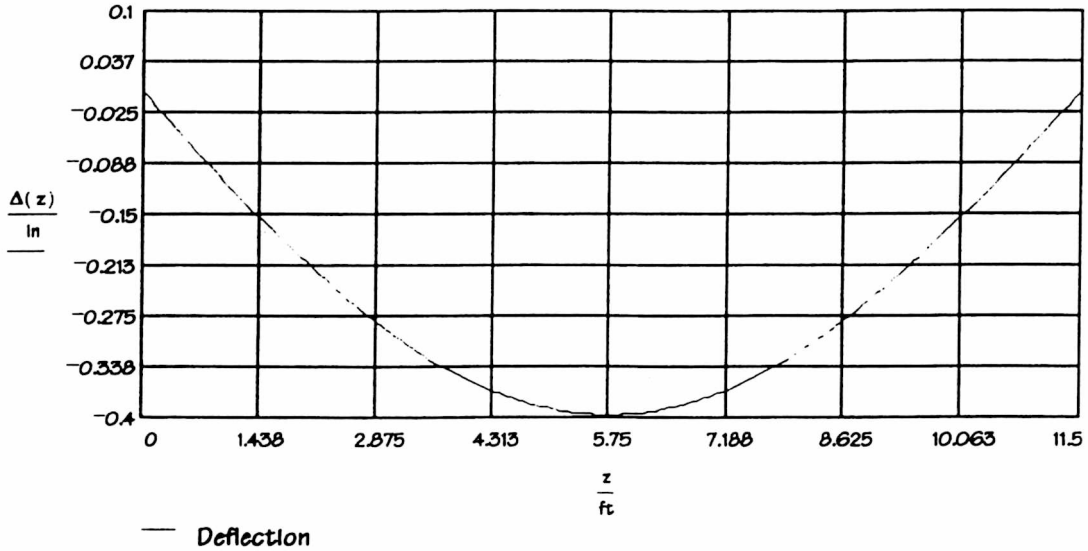
Maximum Live Load & Dead Load Deflections

$$\Delta_{maxLL} := \frac{-5 \cdot w_{LL} \cdot L^4 \cdot spacing}{384 \cdot E \cdot I} \qquad \Delta_{maxLL} = -0.209 \cdot in \qquad \left| \frac{L}{\Delta_{maxLL}} \right| = 661.228$$

$$\Delta_{maxDL} := \frac{-5 \cdot w_{DL} \cdot L^4 \cdot spacing}{384 \cdot E \cdot I} \qquad \Delta_{maxDL} = -0.125 \cdot in \qquad \left| \frac{L}{\Delta_{maxDL}} \right| = 1102.046$$

Graph the Beam Deflection

$$\Delta(z) := \frac{(-w \cdot z)}{(24 \cdot E \cdot I)} \cdot (L^3 - 2 \cdot L \cdot z^2 + z^3)$$



Appendix D: Hazardous Materials Report:

Jenkins Professionals, Inc., Asbestos and Radon Survey: Harpers Ferry National Historical Park Buildings 5,7,(16, 16A), Contract No.: CX-2000-1-0020, April, 1993.

Before any work could proceed on Buildings 5 and 7, hazardous materials testing had to be performed. Jenkins Professionals, Inc. was contracted by the architecture firm of Grieves, Worrall, Wright and O'Hatnick (the A/E firm hired by DSC-TEA-EAP) to perform radon and asbestos testing on Buildings 5, 7, (16 and 16A).

NATIONAL PARK SERVICE
INDEFINITE QUANTITIES CONTRACT No. CX-2000-1-0020
TASK ORDER No. 40, Title One Services,
Harpers Ferry National Historic Park, West Virginia
Package No. HAFE 118-35

MEMO TO: DENVER CENTER : ___E. Tafoya, D. Kalvels; DSC Coordinators
DSC-EAST: ___Tony Donald, Chief Design, DSC East.
___Laura Simpkins, DSC East, Proj. Ex.
_x_Susan Shufelt, DSC East, Review
HARPERS FERRY CTR: ___Carol Petravage, Furnishings, Co-ord.
___Don Branch, Exhibit Planning/Design
NATIONAL CAP REG.: ___Stephen Ziegenfus, Regional Coord.
PARK SITE: ___Donald Campbell, Superintendent
___Peter Dessauer, Park Architect
___Dennis Frye, Chief of Interpretation
___Paul Shackel, Park Archeologist
___Tim Fox, Chief of Maintenance
___Harvey Sorenson, Chf., Vis. Prot. Ser.
ARCHITECTS: ___Worrall, GWWO; Project Executive
___Wright, GWWO; Project Architect
STRUCT.: ___Silman, Principal Struct. Engs.
___Marie Ennis, Hist. Str. Engineer
M/E: ___Charles Henck, Princ. in Charge
SITE/CIVIL: ___William Hill, Civil Eng.
ENVIRONMENTAL: ___James Howard
LANDSCAPE: ___John Hall, Princ. in Charge; K.Bogaski
HISTORICAL: ___Trostel, FAIA
COST: ___Lambertson

Park:___ P.T.___
Pkg. #___
Area ___
Subject___

FROM : David Wright
DATE : **23 August 1993**
SUBJECT : **Asbestos Survey For Roofs**

Susan:

Jenkins Professionals returned to the site to conduct additional tests to sample the roofing materials. Their cover letter and summary are attached. There was no asbestos detected in any of the four roofs.

We trust that with this work, the task order is considered complete. If you have any questions or need any further information, please feel free to get in touch with me.

JENKINS
PROFESSIONALS, INC.

5024 Campbell Blvd., Suite D
Baltimore, Maryland 21236
Office: 410-931-7588
~~Toll Free: 800-669-7588~~
Fax: 410-931-7592
Toll Free: 800-676-7522

Park:_____
Pkg. #_____ P.T._____
Area _____
Subject _____

August 18, 1993

Mr. David Wright
Grieves, Worrall, Wright & O'Hatnick
5 East Read Street
Baltimore, MD 21202

RE: PKG. #118 - BUILDINGS 5, 7, 16, 16A
ASBESTOS ROOFING SAMPLING
JPI JOB NO.: 452-185

Dear Mr. Wright:

At your request, Jenkins Professionals, Inc. made another visit to Harpers Ferry for the purpose of sampling the roofing materials on the above referenced buildings. The Report of Analysis form is attached for your review. There was no asbestos detected at any of the four roofs.

In summary, Building 16A had part slate and part tin; Building 16 had non-asbestos paper under cedar shingles; Building 5 had non-asbestos tar paper/felt; and, Building 7 was not able to be sampled underneath the slate as there was no underlayment.

Should there be any questions regarding this matter, please feel free to contact me.

Very truly yours,

JENKINS PROFESSIONALS, INC.

Larry D. Jenkins aar

Larry D. Jenkins
President

LDJ/aar

Enc.

RECEIVED
AUG 20 1993
GRIEVES, WORRALL, WRIGHT & O'HATNICK
INCORPORATED
ARCHITECTS

JPI Jenkins Professionals, Inc. • 5024 Campbell Blvd. Suite D • Baltimore, MD 21236 • (410) 931-7588

Park:_____

Pkg. #_____ P.T._____

Area _____

Subject_____

REPORT OF ANALYSIS

Project Name: Harpers Ferry
Location: Building 5, 7, 16, and 16A
Collected by: Jenkins Professionals, Inc.
Analyte: Asbestos **Analytical Procedure:** Polarized Light Microscopy 40 CFR 763

Date: August 17, 1993
JPI Job No.: 452-185
Witnessed by: N/A

SAMPLE NO.	REMARKS/LOCATION	CONSTITUENTS	% ASBESTOS
HF-1	Building #5 Roof - Tar Paper/Felt	50% Organic Fibers 50% Non-fibrous Binders	N/O
HF-2	Building #16A Roof - Paper under Tin Roof, Note: no tar paper under slate roof	100% Cellulose Fibers	N/O
HF-3	Building 16 - Papers under Cedar Singles	50% Organic Fibers 50% Non-fibrous Binders	N/O

CH = Chrysotile AM = Amosite CR = Crocidolite N/O = None Observed

Date Received: 7/30/93

Date Reported: 8/02/93

Analyst: Michael J. Cirri

Michael J. Cirri

MAY 1 8 1993

H3015 (DSC-EAF)
HAFE-118-35

Mr. David Wright
Grieves Worrall Wright & O'Hatnick, Inc. Architects
5 East Read Street
Baltimore, Maryland 21202

Dear David:

Reference: Harpers Ferry National Historical Park, Package 118, Buildings 5, 7, 16, and 16A, Contract No. CX-2000-1-0020, Task Order No. 40, Project Type 35

Subject: Review of Asbestos and Radon Survey

The Denver Service Center (DSC) has reviewed the Asbestos and Radon Survey prepared by Jenkins Professionals, Inc. In response, DSC has the following comments:

-It appears that no samples of roofing felt were analyzed for asbestos containing material. Please provide an explanation, since the scope of services specifically states that "felt or building paper included in the roof structures shall be included in the samples taken."

-The report provides an estimate of $500 to remove the asbestos, but there is no breakdown of the estimate or discussion concerning recommendations. Please provide an explanation of what procedures must be followed to remove the asbestos and what the $500 includes.

Please call me, if you have any questions.

Sincerely,

SIGNED

Susan L. Shufelt
Contracting Officer's Representative

bcc:
DSC-TEA Snow

EAF:SShufelt:5/14/93:703-285-3067:B:\asblet.118

ASBESTOS AND RADON SURVEY
HARPERS FERRY NATIONAL HISTORICAL PARK
BUILDINGS 5, 7, 16, 16A
CONTRACT NO.: CX-2000-1-0020

PREPARED FOR:

GRIEVES, WORRALL, WRIGHT & O'HATNICK
5 EAST READ STREET
BALTIMORE, MD 21202

PREPARED BY:

JENKINS PROFESSIONALS, INC.
5024-D CAMPBELL BOULEVARD
BALTIMORE, MD 21236

JPI JOB NO.: 452-185

APRIL 22, 1993

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SECTION 1.0

EXECUTIVE SUMMARY

SECTION 1.0 EXECUTIVE SUMMARY

On Tuesday, April 13, 1993 a representative of Jenkins Professionals, Inc. (JPI) conducted an asbestos and radon survey of Buildings 5, 7, 16, and 16A located within the Harpers Ferry National Park. Mr. Peter Dessauer, Architect for the Park accompanied the JPI representative during the collection of asbestos samples and the placement of radon canisters.

Radon canisters, supplied by DMA-Radtech, were placed in the basements, crawlspaces, or lowest area of each of Buildings 5, 7, 16, and 16A. Results of analysis indicate all four (4) tests were below the 4.0 picocurries per liter (pCi/L) level at which EPA recommends additional testing and evaluation. The specific results for radon in each room are as follows:

1. Building 5 — 2.3 pCi/l
2. Building 7 — 1.7 pCi/l
3. Building 16 — <0.5 pCi/l
4. Building 16A — <0.5 pCi/l

Fourteen (14) samples of suspected asbestos-containing materials were collected and analyzed. Only one sample was identified as containing asbestos at a concentration greater than 1%. Sample number HF13-7, taken from an abandoned flue in Whitehall Tavern (Bldg. 7) on the 2nd floor showed 5-10% Chrysotile asbestos. All other samples were taken of plaster and loose insulation.

SECTION 2.0

REPORTS OF ANALYSIS - ASBESTOS

JPI Jenkins Professionals, Inc. • 5024 Campbell Blvd. Suite D • Baltimore, MD 21236

REPORT OF ANALYSIS

Project Name: Harpers Ferry
Location: West Virginia
Collected by: Larry D. Jenkins (JPI)
Analyte: Asbestos **Analytical Procedure:** Polarized Light Microscopy 40 CFR 763

Date: April 22, 1993
JPI Job No.: 452-185
Witnessed by: P. Dessauer

SAMPLE NO.	REMARKS/LOCATION	CONSTITUENTS	% ASBESTOS
HF1-5	Building 5, 2nd Floor by steps, 2' from railing in SE wall	Gypsum Quartz	N/O
HF2-5	Building 5, at base of steps, old green plaster at floor	Gypsum Quartz	N/O
HF3-5	Building 5, 1st floor, mineral wool insulation above plaster ceiling plaster	Cellulose	N/O
HF4-5	Building 5, 1st floor to left of door by North corner under window (old plaster)	Gypsum Quartz	N/O
HF5-16	Building 16, North room at existing hole in wall, 1st floor northeast corner, 6" above trim	Gypsum Quartz	N/O
HF6-16	Building 16, 2nd floor, east wall by steps, plaster	Gypsum Quartz	N/O
HF7-16	Building 16, basement, east room, plaster inside door to left	Gypsum Quartz	N/O
HF8-16	Building 16, basement, east wall by large hole in east corner	Gypsum Quartz	N/O
HF9-16A	Building 16A, ground level to right of door by HVAC unit	Gypsum Quartz Synthetic Fibers	N/O
HF10-5	Building 5, 3rd Floor, attic plaster wall on west side	Gypsum Quartz Synthetic fibers	N/O

CH = Chrysotile AM = Amosite CR = Crocidolite N/O = None Observed

Date Received: 4/13/93
Date Reported: 4/14/93

Analyst: Michael J. Cirri
Michael J. Cirri

JPI Jenkins Professionals, Inc. • 5024 Campbell Blvd. Suite D • Baltimore, MD 21236

REPORT OF ANALYSIS

Project Name: Harpers Ferry
Location: West Virginia
Collected by: Larry D. Jenkins (JPI)
Analyte: Asbestos **Analytical Procedure:** Polarized Light Microscopy 40 CFR 763

Date: April 22, 1993
JPI Job No.: 452-185
Witnessed by: P. Dessauer

SAMPLE NO.	REMARKS/LOCATION	CONSTITUENTS	% ASBESTOS
HF11-7	Building 7, Whitehall Tavern, 1st floor, north side left of window	Gypsum Quartz Cellulose Fibers	N/O
HF12-7	Building 7, 2nd floor, north side below window (old plaster)	Gypsum Quartz	N/O
HF13-7	Building 7, 2nd floor, old flue, 2' long x 8" diameter, protruding through wall	Cellulose Fibers	5-10% CH
HF14-7	Building 7, attic by steps on west wall	Gypsum Quartz	N/O

CH = Chrysotile AM = Amosite CR = Crocidolite N/O = None Observed

Date Received: 4/13/93

Date Reported: 4/14/93

Analyst: Michael J. Cirri

Michael J. Cirri

SECTION 3.0

REPORTS OF ANALYSIS - RADON

JPI Jenkins Professionals, Inc. • 5024 Campbell Blvd. Suite D • Baltimore, MD 21236

REPORT OF ANALYSIS

Project Name: Harpers Ferry
Location: West Virginia
Collected by: Larry D. Jenkins (JPI)
Analyte: Radon

Date: April 22, 1993
JPI Job No.: 452-185
Witnessed by: P. Dessauer

SAMPLE NO.	REMARKS/LOCATION	Radon Concentration pCI/L
5	Building 5	2.3
7	Building 7	1.7
16	Building 16	<0.5
16A	Building 16A	<0.5

NOTE: The U.S. Environmental Protection Agency and the Centers for Disease Control have used a Continuous Exposure level of 4 pCi/l as a guidance at which further testing and/or remedial action are indicated.

Exposure Start: 4/13/93

Exposure Stop: 4/15/93

Analyst: DMA Radtech, Inc.

SECTION 5.0

COST ESTIMATE

SECTION 5.0 COST ESTIMATE

The cost estimate for removal of asbestos from the abandoned flue in Whitehall Tavern (Bldg. 7) on the 2nd floor will be $500.00 (Five Hundred Dollars).

Appendix E: Paint and Plaster Analysis Report:

Judith Quinn, North Atlantic Region-Cultural Resource Center-Building Conservation Branch, Interior Finishes Analysis - Buildings 5 & 7 Harpers Ferry NHP, October 1993.

In order to identify the 1850 and 1856 finishes of the first story in Buildings 5 and 7, the Denver Service Center, Falls Church Branch, (who was currently in the process of completing the Historic Structures Report for Buildings 5 and 7) commissioned North Atlantic Region (NAR), Cultural Resources Center (CRC), Building Conservation Branch (BCB) to perform a complete interior analysis for both structures. This report was published in October 1993.

INTERIOR FINISHES ANALYSIS

* * *

BUILDING 5 & 7
Harper's Ferry NHP

By Judith Quinn
National Park Service, North Atlantic Region
Cultural Resources Center
Building Conservation Branch
Lowell, MA

October, 1993

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PROJECT GOALS:

The goal of this paint analysis was to identify the ca. 1850 finishes of the first story in Building 7 and the ca. 1856 finishes of the first story in Building 5. The dates correspond to the preferred restoration dates for the buildings. The identified finishes were to be color matched to the Munsell Color Notation System with color chips provided for use by the historic architect.

Ninety six paint samples were taken from the interior and exterior of Buildings 5 and 7. Of these, 43 paint samples were mounted in micro-crystalline wax and closely examined under the binocular microscope; finishes were identified, listed, and tested for lead. A comparison of the finishes of sampled features and locations in each building was made and a finish history with layer stratigraphies established. Stratigraphies are included in charts at the end of this report.

In addition, it was requested that the presence of lead in the extant finishes be determined in order to address safety concerns arising in the process of removal. Lead-based pigments and binders are noted on the stratigraphy charts in Appendix A.

The analysis will first discuss the finish history of Building 7 followed by the finish history of Building 5. Samples removed from Building 16 are listed and mapped but not analyzed.

INTRODUCTORY HISTORY:

Building 7 was constructed in 1838-39 by William Anderson; a local merchant. It is surmised that it was built as a warehouse.[1] It was referred to as the "warehouse building" in 1847 when the baker Frederick A. Roder purchased it from William Anderson.[2] Apparently, Roder rented Building 7 out as a tavern shortly after purchasing it. A letter dated July 17, 1852 identifies the building as "a drinking house known as White-Hall."[3] The current intention of Harper's Ferry NHP is to restore the first story interior of Building 7 to this period - ca. 1852 - when the building was in use as a tavern.

Subsequent uses included: billeting of Union Troops in 1861-65; restaurant - 1872; grocery - 1873; restaurant - 1890; tavern - 1904; restaurant - 1907; hay and feed store - 1912; dwelling - 1913; store - 1922; and dwelling - 1933. When the building was sold to the State of West Virginia in 1952 it had been vacant and neglected for some time. The National Park Service received the property in 1953?[4]

---

[1]Chickering, Patricia. "Historic Structures Report, History Section, Package 118, Buildings 5, 7, 16, and 16A, White Hall Tavern, The Roeder Store and the Roeder House and Annex," (Harpers Ferry National Historical Park, January 1993), p. 6.

[2]Ibid., p. 10.

[3]Ibid., p. 11.

[4]Ibid., pp. 23-25.

Building 5 was probably constructed in 1856 when alterations were made to Frederick Roder's other properties including Building 7 and Building 16. The original use of the building is unknown, although, like Building 7, it may have been rented out for commercial use.[5] It is the desire of the park to have the original, ca. 1856, finishes of the first story identified for use in the restoration.

Subsequent uses of the Building 5 were largely related to the tavern trade. Documentation from 1872, 1885, 1891, 1899, and 1910 all indicate that Building 5 was a drinking establishment. In 1912 the building was vacant. The last known use of the building was as a dwelling in 1913. When the State of West Virginia purchased the building in 1952 it had been empty for a long time as was badly deteriorated. The National Park Service acquired the property in 1953?[6]

CAUTION:

Please note that the determination of the desired finishes was problematic due to the lack of documentation detailing the architectural evolution of the buildings, and the extensive deterioration of the buildings from a long history of environmental adversity and deferred maintenance. Of particular concern is the lack of definite dated evidence on which to pin certain finishes.

---

[5]CHickering, HSR., p. 10.

[6]Ibid., HSR, pp. 20-23.

All conclusions, therefore, should be accepted with flexibility and will be prefaced with qualifying language. The final decisions concerning restoration finishes should be made by the historical architect after reviewing the findings of this analysis.

FINDINGS

BUILDING 7 - WHITE HALL TAVERN

PLASTER:

Building 7 underwent extensive alterations in ca. 1856 when the owner (Roeder) sold the front section of the building to the United States government in order to widen the road on which the building fronted. The United States demolished the front portion of the building. Roeder was compensated with $1,700.00 and a new facade (the present facade) was constructed for the building.[7]

Therefore, the front wall (northeast) and the north and east corner masonry should date to ca. 1856 while the northwest, southeast, and southwest walls should date to ca. 1838. If the plaster on these walls represents the earliest plaster applied on each wall, an examination of samples from each should provide the finishes from ca. 1838 on the northwest, southeast, and southwest walls, and from ca. 1856 on the northeast.

Theoretically, the desired ca. 1850 finishes could be identified by comparing the first finish on the northeast (front)

---

[7]Chickering, Historic Structures Report, p. 10.

wall with the northwest, southeast, and southwest wall finishes and finding a matching finish. That matching finish should date to ca. 1856 as well. Therefore, the finish that appears just before the ca. 1856 finish may represent the treatment of the wall in 1852 when the building was in use as a tavern.

Although, there have been many re-plastering and patching campaigns on all of the walls, the mortar analysis and the examination of the substrate from the paint samples, indicates that there <u>is</u> original ca. 1838 plaster extant on the northwest, southeast and southwest walls, and some ca. 1856 plaster extant on the northeast wall. The various plasters applied over the years exhibit both painted and unpainted surfaces.

Different plastering and painting campaigns are often evident in layers fracturing off from one another. Dirt, finish removal, and wallpaper are the major causes of fracturing, and each generally indicates the introduction of a new finish. Such is the case on the first story walls of Building 7.

This paint analysis suggests that the northwest and the southwest walls are original and experienced five finishes before the ca. 1856 alterations. All the finishes are cream or tan cream. They are layered on top of a single (original) white skim coat. The finishes are lime-based paints containing no lead. The

finishes are generally separated by a distinct layer of dirt suggesting exposure as a surface layer.

The northeast (front) wall of the building did not exhibit these early layers of cream paint during analysis. The finish history of the northeast wall begins with a white skim coat of plaster. One of the samples exhibits a layer of dirt on top of the skim coat indicating that the skim coat may have remained an exposed surface for a short length of time. The first painted finish on the northeast wall is a distinct light blue with visible dark blue pigments (Munsell 5PB 8/6). This light blue layer is found consistently on northwest, northeast, and southwest walls and provides a baseline for all finishes that follow. It is assumed that this light blue paint was applied either during, or shortly after, the ca. 1856 alterations. The paint is thin, brittle, and lime-based. The paint diluted in ammonium hydroxide suggesting that it is a casein paint.

The finish that appears to have been in place shortly before the ca. 1856 alterations on the northwest and southwest walls, (i.e. before the light blue casein paint), was a two-coat, cream colored, calcimine paint. The cream of P008 and P002 were matched using a blue daylight filter to the Munsell Notation System. **A cream colored, lime-based calcimine paint with a hue and value of 10YR 9/2 is the recommended color for restoring the room to its ca.**

1850 appearance. A color chip is included in Appendix B of this report.

The samples from the southeast wall indicate that this wall was replastered rather recently. It does not exhibit any finishes prior to a run of modern paints (mustard, silver, and gray white) described below. During (mortar) analysis, scratch and brown coats of the southeast wall plaster appeared to be original. Therefore, it is likely that a new surface coat was applied to original backing plaster on the southeast wall. A new white skim coat represents the initial finish on the southeast wall paint samples.

Plaster finishes post-dating ca. 1856 alterations include several distinct, all-encompassing treatments and several treatments that are apparent only in certain areas. Distinct and all-encompassing finishes on the first floor included a salmon paint, a violet paint, a yellow cream paint, a white surface coat, a tan cream paint, a thin mustard paint, silver aluminum paint, and finally a gray white latex paint. These finishes were evident in the samples from three of the walls; northwest, northeast, and southwest. These finishes generally followed one another. The dates of the finishes are unknown. It is assumed that the mustard, aluminum, and gray white paint are recent finishes applied during NPS stewardship. They are modern type paints. Therefore, the salmon, violet, yellow cream, white and tan cream paints date to ca. 1856 - 1970.

Although the above-described finishes were consistent from wall to wall, there were places that showed additional finishes. This was especially true of the northwest wall. Here, samples showed evidence of a lead-based light pink paint (with red pigments), evidence of paper, and a cream white - all following the (presumed) ca. 1856 light blue and before the all-encompassing salmon color. It is possible, but unlikely, that the layers represent a two-tone color scheme. It is probable that the northwest wall was used for public notices, signs, and other tavern/store related items. Therefore, samples taken at certain locations on the northwest wall exhibit evidence of these glued and painted notices or over-painting thereof. It is likely that the southeast wall was used in a similar manner. Unfortunately, the southeast wall has been replastered and no evidence of these layers survives.

Samples taken from the southwest wall indicate that several patching campaigns have been carried out. One sample (P008) exhibits all finishes from ca. 1838 to the present while two other samples (P006 and P007) indicate new plaster applied in ca. 1856 as well as sometime very recently.

Samples taken from the stair wall plaster indicate that this plaster wall may be original. The stair wall is currently divided into an upper and lower zone by a horizontal piece of trim. The lower, and part of the upper zone are currently concealed behind a vertical board paritition wall. The plaster is laid over a

combination of split and machine cut lath. The lower zone plaster exhibits five cream finishes over an initial white skim coat followed by a thick brick red glaze. The five cream finishes correspond to the first five cream finishes found on the original plaster of the northwest and southwest walls. The brick red glaze is the last finish applied to the plaster before it was concealed behind the lower vertical board paritition.

The original plaster of Building 7 generally exhibited 18 finishes. Dividing the number of finishes into the age of the building one finds that a new finish was applied approximately every seven years.

[See the stratigraphy charts at the back of this report for a complete chromo-chronology of samples taken from the plaster walls of Building 7.]

WOOD WORK:

The original finishes of the woodwork of the first floor of Building 7 are limited to an examination of the stair housing and to a free-floating door currently lying on the second floor. All other wood work - doors, windows, baseboards - were replaced or removed during remodeling in ca. 1980. The stair housing consists of the door frame, wooden transom, vertical board stair wall sheathing (upper and lower), treads, risers, and stringer. The detached door may belong to the door opening at the stairs.

Paint analysis provides evidence that the northwest and southeast door posts of the stair housing are the only original

pieces of woodwork on the first floor of Building 7. The original (ca. 1838) painted finish on the door posts was red brown, followed by three distinct cream layers. Each of these first four layers fracture off from one another. Between each layer is evidence of extreme surface disturbance (indicating rough paint removal).

The first four layers on the jambs correspond nicely with the first five finish layers on the original plaster; there being five cream finishes on plaster before the (presumed) ca. 1856 alterations. Therefore, the stair door frame is original.

The detached door currently located on the second floor may be original to the building but perhaps not to the first floor. The first two finishes on the door are a pink brown and a red brown glaze. These finishes do not correspond with the early paints on the door frame. The finishes on the door begin to match the paint history of the first floor wood work at the third finish. It is possible that it was moved to the first floor before the third finish was applied. It is also possible that the door <u>did</u> belong on the first floor and simply had a contrasting finish, i.e. cream frame - pink brown door.

Other wood work samples suggest that the first finish applied to the upper and lower stair wall sheathing is a two-coat, oil-based blue green paint with visible dark blue pigments (probably prussian blue). This is the first consistent finish found on all

wood work. The blue green finish is the second finish found on all trim except the stair door frame and detached door. On the door frame, the blue green paint is the fifth finish. On the door it is the third finish. Therefore, paint analysis suggests that the upper and lower vertical board sheathing was installed some four finishes after the stair door frame and two finishes after the door.

It is the opinion of this report that the blue green finish represents the ca. 1856 finish applied to compliment the ca. 1856 light blue finish of the walls. It is the first consistent color applied to wood work suggesting comprehensive treatment of the room and it lines up in the stratigraphies with the presumed ca. 1856 light blue plaster finish.

If the blue green paint represents the ca. 1856 finish, the desired ca. 1850 finish would be the finish immediately preceding it. Unfortunately, analysis suggests that much of the current stair configuration was introduced during ca. 1856 alterations. As it is probably unrealistic to dismantle the current stair housing (the original configuration being unknown at this time), it is proposed that all wood work be painted as the door frame was just before the ca. 1856 blue green finish. **Thus, the recommended ca. 1850 finish for woodwork is an oil-based cream paint matching the Munsell Notation System 10YR 9/4.** The cream trim will be paired with tan cream plaster walls as described above. A color

chip is included in Appendix B of this report. All colors were matched using a blue day-light filter.

The recommended ca. 1850 color for the door(s) is the red brown glaze found directly before the ca. 1856 blue green. The finish should be an oil-based red brown paint matching the **Munsell Notation System 10R 2/4** followed by a high gloss glaze. A color chip is included in Appendix B of this report.

The exposed underside of the stairs was not painted like the more visible trim. The treads, risers, and stringer were consistently whitewashed. Just six layers of whitewash survive on the treads and stringer, however, it is likely that many more were applied that have not survived. White wash is often a fragile finish as it is water soluble and quite powdery. It is recommended that the underside of the stairs be prepared for a new application of whitewash.

The finish history of extant wood work is generally consistent after the presumed ca. 1856 work. Following the ca. 1856 blue green finish, all wood work was grained. At least three graining campaigns are evident followed by mustard, light blue, gray blue, and two more red orange grained finishes. The finish history ends with light blue gray, silver aluminum, and light gray paints.

These last three modern paints date just prior to the ca. 1980 remodeling. This conclusion can be made in looking at the paint layering on the northwest wall window which is known to have been installed in ca. 1980. The paint on this new window consists of a white primer, a cream finish, and a dark brown finish. None of the finishes found on the older wood work are present on the new wood work.

The (original) wood work of Building 7 generally exhibited 17 finishes. Dividing the number of finishes into the age of the building one finds that a new finish was applied approximately every seven years. The number of woodwork finishes (17) corresponds almost exactly to the number of plaster finishes (18).

[See the stratigraphy charts at the back of this report for a complete chromo-chronology of samples taken from the wood work of Building 7.]

A tentative line-up of possible plaster finishes with wood work finishes is as follows. These are completely subjective and should be examined only as a very broad and speculative interpretation of the finish history of the first floor of Building 7.

	WALLS	WOOD WORK	
ca. 1838	Cream	Red Brown	
	Tan Cream	Cream	
	Tan Cream	Cream	
ca. 1850	Tan Cream	Cream	(Doors - Red Brown)
ca. 1856	Light Blue	Blue Green	

	Cream White	Red Orange/Graining
	Salmon	Red Brown Glaze/Graining
	Violet	Yellow Brown/Graining
	Yellow Cream	Mustard
	White Cream	Light Blue/Gray Blue
	Tan Cream	Burnt Orange/Graining
	Tan Cream	Red Brown Glaze
ca. 1970	Silver/Alum.	Silver/Alum.
	Light Gray	Light Gray

LEAD CONTENT:

All samples were tested with sodium sulfide to detect traces of lead. It appears however, that very little lead-based paint was used on the sampled areas of Building 7. On plaster samples, only one finish tested positive to lead; the thin light pink paint applied after the ca. 1856 light blue paint. This lead-based pink paint was evident only on samples from the northwest wall. Wood work revealed just six lead-based finishes beginning with the red brown glaze of the second graining campaign and including thereafter the light blue, gray blue, burnt orange, and the light gray blue immediately preceding the silver aluminum paint. All lead-based paints are noted with an asterik on the stratigraphy charts in Appendix A.

FINDINGS

BUILDING 5

The paint analysis of samples taken in Building 5 was much less complicated than that in Building 7 for the major reason that the desired restoration finish is the original finish. The building was built in ca. 1856 at the same time that alterations were being carried out on Building 7. Therefore, the first finish should date to ca. 1856. It was initially hoped that the first finish in Building 5 would match a finish in Building 7 thereby helping to establish a ca. 1856 baseline in Building 7. Unfortunately, the comparing the finishes in the two buildings was not enlightening.

PLASTER:

As in Building 7 there have been several re-plastering and patching campaigns on all of the walls. However, the mortar analysis and the examination of the substrate from the paint samples, indicates that there is original ca. 1856 plaster extant on the northwest and southeast walls. The various plasters applied over the years exhibit both painted and unpainted surfaces.

Different plastering and painting campaigns are often evident in layers fracturing off from one another. Dirt, finish removal, and wallpaper are the major causes of fracturing, and each generally indicates the introduction of a new finish. Such is the case on the first story walls of Building 5.

This paint analysis indicates that the walls experienced up to nine finishes depending on the area sampled. The southeast and

northwest walls exhibit the longest finish histories. The southwest and northeast walls exhibit only the last four plaster finishes of the stratigraphy. They do not show evidence of the first skim coat and early finishes. The northeast and southwest walls (or at least the areas sampled on them) were, therefore, replastered towards the middle of the history of the building.

All the finishes are variations of white and cream with the exception of a distinct violet blue that represents the finish just prior to the current white coating.

Samples exhibit a single (original) white skim coat on the plaster substrate. The finishes are all lime-based paints containing no lead. The finishes are generally separated by a distinct layer of dirt suggesting exposure as a surface layer.

The white lime-based paint applied directly to the original skim coat has been matched with a blue day light filter to Munsell Color Notation N 9.5/. **A lime-based calcimine paint with the neutral hue of Munsell N9.5/ is the recommended finish for the plaster walls of Building 5.** The paint appears thin and regular and is followed by thick layer of sandy dirt. It was apparently in place for a substantial legnth of time (because of dirt accumulation).

<u>WOODWORK:</u>

The paint analysis of samples for the woodwork on the first floor of Building 5 showed that up to eight finishes were applied over the history of the building. In dividing the number of finishes by the age of the building one can estimate that the woodwork was painted approximately every 16 years. This is a long length of time between finishes but it is likely that the building stood vacant for years at a stretch. Therefore the average is slightly skewed. However, Building 5 was repainted significantly less times than Building 7.

Elements sampled, clearly indicated that the stair housing, stair door frame, stair door, and the southeast door on the southwest wall are original. Analysis also revealed that all trim on the northeast and northwest wall (including doors and windows), and the northwest door on the southwest wall are new.

The original finish on the (original) woodwork is a blue gray oil-based paint. The blue gray paint tested positively to the presence of lead. The paint is discolored by the aging of the oils in the recipe and the color match of the visible eye is a best approximation. **The blue gray paint is matched to Munsell Color Notation 10B 6/2.** A color chip is provided in Appendix B.

The initial blue gray is followed by a pink brown, a glaze, a yellow brown, a light brown, and another glaze. It is likely that the yellow brown and light brown (combined with the glazes)

represent graining campaigns. Indeed, the attic door and architrave in the upper northwest room retain a simple graining finish that may correspond to the last grained treatments on the first floor. All of the paints of these first five finishes tested positively to the presence of lead.

Immediately following the last graining (a light brown and red brown glaze), the final two finishes are applied. These are modern latex paints and consist of a white primer and sage green finish and then simply a white finish overpainting the green.

As the treatment of the walls was almost exclusively white or cream, there is little reason to try to link plaster and woodwork finishes. All woodwork colors were paired with white, or cream walls. The single exception is the violet blue wall finish which was probably paired with the last light brown/red brown graining finish on the woodwork.

APPENDIX A.

FINISH STRATIGRAPHIES
BUILDINGS 7 AND 5

BUILDING 7 - PLASTER

	P002 (n. wall)	P003 (n. wall)	P004 (e. wall)	P005 (s. wall)	P006 (w. wall)	P007 (w. wall)	P008 (w.wall)	P009 (stair wall)
	WHT SKIM	*WHT SKIM*	-	-	-	-	*WHT SKIM*	*WHT SKIM*
ca. 1838?	TN CRM Dirt	TN CRM Dirt	-	-	-	-	CRM Dirt	CRM Dirt
	TN CRM	TN CRM	-	-	-	-	CRM WHT	CRM
	TN CRM Dirt	TN CRM Dirt	-	-	-	-	CRM Dirt	CRM
	TN CRM	CRM	-	-	-	-	CRM	WHT CRM
	TN CRM Dirt	CRM Dirt	-	-	-	-	CRM Dirt	DK RED GLAZE
ca. 1856?	-	-	WHT SKIM Dirt	-	WHT SKIM	-	-	-
	LT BLU	LT BLU	LT BLU	-	LT BLU	-	LT BLU	-
	LT PNK*	LT PNK*	-	-	-	-	-	-
	PAPER	PAPER	-	-	-	-	-	-
	-	GRA TN	GRA TN	-	-	-	-	-
	CRM WHT	CRM WHT	CRM WHT	-	-	-	-	-
	SALMON Dirt	SALMON	SALMON	-	SALMON Dirt	-	SALMON	-

VIOLET Dirt	VIOLET Dirt	VIOLET Dirt	-	VIOLET Dirt	-	VIOLET Dirt	-
-	-	YEL CRM	-	YEL CRM	-	YEL CRM	-
-	-			YEL CRM	-	YEL CRM	-
-	-	GRA WHT Dirt	-	GRA WHT Dirt	-	GRA WHT	-
-	-	CRM Dirt	*WHT SKIM* Dirt	GRA WHT Dirt	*WHT SKIM* Dirt	WHT Dirt	-
CRM	CRM	TN CRM	WHT	TN CRM	TN CRM	TN CRM	-
-	-	CRM	CRM	TN CRM	-	TN CRM	-
MUSTARD Size	MUSTARD Size	MUSTARD	-	MUSTARD	-	MUSTARD Size	-
SILVER Dirt	SILVER Dirt	SILVER Dirt	SILVER Dirt	SILVER Dirt	-	SILVER Dirt	-
GRA WHT	GRA WHT	GRA WHT	-	GRA WHT	-	GRA WHT	-

BUILDING 7 - WOODWORK

	P010 (lower parti.)	P011 (upper parti.)	P012 (n. door jamb)	P013 (s. door jamb)	P018 (lower parti.)	P019 (n. wall w. window)	P017 (under stairs)	P036 (door detached)
ca. 1838?	-	-	RED BRN Disturb.	RED BRN Disturb.	-	-	-	PNK BRN
	-	-	CRM Disturb.	CRM Disturb.	-	-	-	-
	-	-	CRM Disturb.	CRM Disturb.	-	-	-	-
	-	-	CRM Dirt	CRM Dirt	-	-	-	RED BRN
GLAZE								
ca. 1856?	BLU GRN	BLU GRN	BLU GRN	BLU GRN	BLU GRN	-	CRM WHT (whtwsh)	BLU GRN
	RED ORAN GLAZE	RED BRN GLAZE	RED BRN GLAZE	YEL ORAN GLAZE	YEL BRN GLAZE	-	CRM WHT (whtwsh)	GOLD BRN
	-	CRM	CRM	WHT	CRM	-	-	-
	-	RED BRN GLAZE*	RED BRN GLAZE*	RED BRN GLAZE*	RED BRN GLAZE*	-	WHT (whtwsh)	RED BRN GLAZE*
	YEL BRN	YEL BRN	YEL BRN	YEL BRN	YEL BRN	-	-	YEL BRN
	-	-	RED BRN	ORAN BRN	RED BRN	-	-	-

	MUSTARD	MUSTARD	MUSTARD	MUSTARD	MUSTARD	-	-	MUSTARD
	LT BLU*	LT BLU*	LT BLU*	LT BLU*	LT BLU*	-	BLU WHT (whtwsh)	-
	GRA BLU*	GRA BLU*	GRA BLU*	GRA BLU*	GRA BLU*	-	-	GRA BLU*
	MED ORAN*	BRNT ORAN*	-	-	ORAN*	-	WHT (whtwsh)	-
	LT ORAN*	-	-	-	-	-	-	-
	RED BRN GLAZE	RED BRN GLAZE	RED BRN GLAZE	RED BRN GLAZE	RED BRN GLAZE	-	-	RED BRN GLAZE
	LT GRA BLU*	LT GRA BLU*	LT GRA BLU*	LT GRA BLU*	LT GRA BLU*	-	WHT (whtwsh)	LT GRA BLU*
	SILVER	SILVER	SILVER	SILVER	SILVER	-	-	SILVER
	LT GRA	LT GRA	LT GRA	LT GRA	LT GRA	-	-	LT GRA
ca. 1980						WHT(prime)		
						CRM		
						DK BRN		

BUILDING 5 - PLASTER

	P004 (s. wall)	P005 (s. wall)	P006 (n. wall)	P007 (n. wall)	P007 (w. wall)	P009 (w. wall)	P010
ca. 1856	*WHT SKIM*	*WHT SKIM*	*WHT SKIM*	-	-	-	
	CRM WHT	WHT	WHT	-	-	-	
	xxxxxx Major Disturbance		xxxxxx				
	-	sizing?	sizing?	-	-	-	
	CRM WHT	WHT	-	-	-	-	
	CRM WHT	-	-	-	-	-	
	CRM WHT dirt	-	-	-	-	-	
	OFF WHT dirt	WHT dirt	-	*WHT SKIM*	*WHT SKIM*	*WHT SKIM*	
	WHT	WHT	-	WHT	WHT	WHT	
	WHT	WHT	-	WHT dirt	WHT dirt	WHT dirt	
	-	-	-	VIOLET BLU	VIOLET BLU	VIOLET BLU	
	-	-	-	WHT	WHT	WHT	

BUILDING 5 - WOODWORK

	P008 (e. wall n. wind.)	P013 (s. door)	P014 (n. door)	P015 (stair housng)	P016 (stair dr frm)	P017 (stair dr frm)	P019 (stair door)	P018 (stair door)
ca. 1856	-	-	-	BLU GRA*	BLU GRA*	BLU GRA*	BLU GRA*	BLU GRA*
	-	PNK BRN*	-	PNK BRN*	PNK BRN*	PNK BRN*	PNK BRN*	BRN
	-	GLAZE*	-	GLAZE*	GLAZE*	GLAZE*	GLAZE*	...too dirty to determine
	-	-	-	YEL BRN*	YEL BRN*	YEL BRN*	YEL BRN*	
	-	-	-	-	-	LT BRN*	ORAN BRN	
	-	-	-	-	-	-	TN CRM	
	-	-	-	GLAZE*	GLAZE*	GLAZE*	RED BRN GLAZE*	
	WHT (prime)	WHT (prime)	WHT (prime)	-	-	WHT (prime)	-	
	SAGE	SAGE	SAGE	SAGE	SAGE	SAGE	-	
	WHT	WHT	WHT	WHT	WHT	WHT	-	

APPENDIX B.

RECOMMENDED COLORS

INTERIOR, FIRST FLOOR
BUILDING 7 and BUILDING 5

BUILDING 7

	COLOR	MUNSELL NOTATION
ca. 1850 Plaster -	**cream**	10YR 9/2 →
ca. 1850 Woodwork -	**tan cream**	10YR 9/4 →
ca. 1850 Doors -	**red brown & high gloss glaze**	10R 2/4 →
ca. 1856 Plaster -	**light blue**	5PB 8/6 →
ca. 1856 Woodwork -	**blue green**	7.5BG 8/2 → (very faded)

BUILDING 5

	COLOR	MUNSELL NOTATION
ca. 1856 Plaster -	**White**	N 9.5/ →
ca. 1856 Woodwork -	**Blue Gray**	10B 6/2 →

Recommended Paint Types

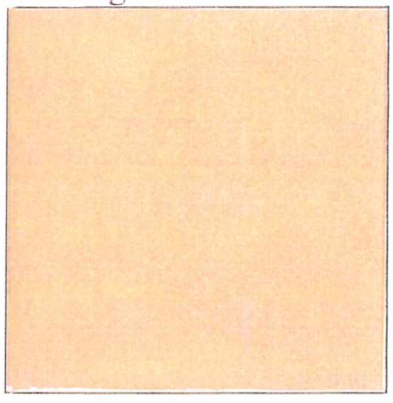
Plaster - Calcimine

Woodwork - Oil alkyd base

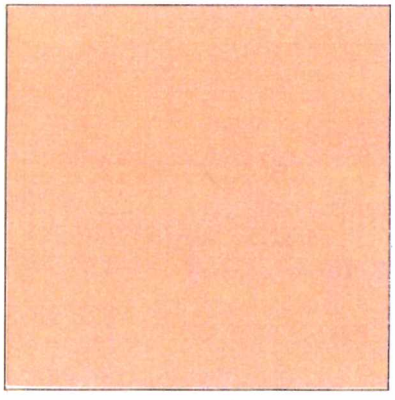
Additional (and larger) Munsell color chips may be ordered from:
MacBeth/Munsell
405 Little Britain Road
New Windsor, NY 12553
(914) 565-7660

Munsell Color Chip Samples

Building 7:



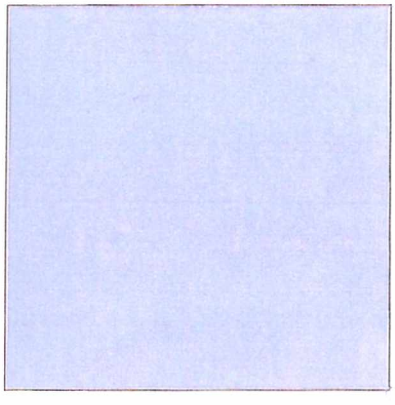
color notation:10YR 9/2
ca. 1850 plaster



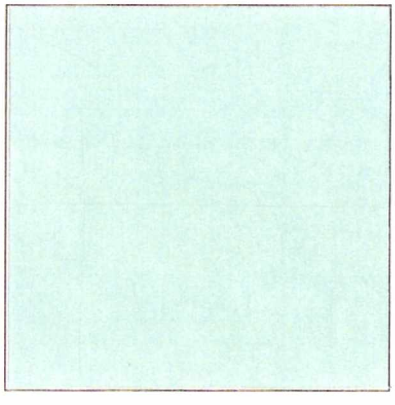
color notation: 10YR 9/4
ca. 1850 woodwork



color notation: 10R 2/4
ca. 1850 woodwork

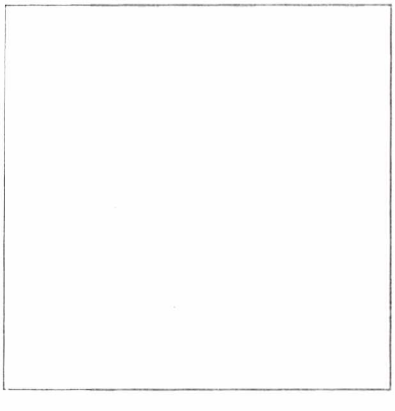


color notation: 5PB 8/6
ca. 1856 plaster

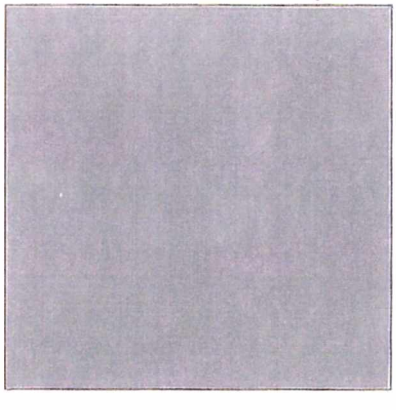


color notation: 7.5BG 8/2
ca. 1856 woodwork

Building 5:



color notation: N 9.5/
ca. 1856 plaster



color notation: 10B 6/2
ca. 1856 woodwork

APPENDIX C.

LIST OF SAMPLES REMOVED FROM BUILDINGS 5, 7, and 16

BUILDING 5, PAINT SAMPLES

Number	Location
HAFE 05 P001	Exterior, southeast elevation, approximately five feet above grade, on stucco.
HAFE 05 P002	Cellar, crawlspace, metal truss.
HAFE 05 P003	Cellar, crawlspace, metal truss, I-beam.
HAFE 05 P004	First floor, front (northeast) room, southeast wall, east corner, below first floor joist, on plaster.
HAFE 05 P005	First floor, front (northeast) room, southeast wall, on plaster.
HAFE 05 P006	First floor, front (northeast) room, northwest wall, on plaster.
HAFE 05 P007	First floor, front (northeast) room, northwest wall, top right of window, on plaster.
HAFE 05 P008	First floor, front (northeast) room, northeast wall, north window, jamb, on wood.
HAFE 05 P009	First floor, front (northeast room), center of southwest wall, on plaster.
HAFE 05 P010	First floor, front (northeast) room, southwest wall, on plaster
HAFE 05 P011	First floor, front (northeast) room, southwest wall, on plaster.
HAFE 05 P012	First floor, front (northeast) room, southwest wall, south door, modern frame, southwest jamb.
HAFE 05 P013	First floor, front (northeast) room, southwest wall, south door, panelled door, north side above door knob.
HAFE 05 P014	First floor, front (northeast) room, north door, panelled door.
HAFE 05 P015	First floor, front (northeast) room, west corner, stair housing.
HAFE 05 P016	First floor, front (northeast) room, west corner, stair housing, door frame, south face of beaded stud.

HAFE 05 P017 First floor, front (northeast) room, west corner, stair housing, south door jamb at bottom of door opening.

HAFE 05 P018 First floor, front (northeast) room, stair housing, door, flat edge, non-hinge side.

HAFE 05 P019 First floor, front (northeast) room, stair housing, door, bottom right.

HAFE 05 P020 First floor, back (southwest) room, northeast wall, above door, on plaster.

HAFE 05 P021 Second floor, east room, southwest wall, door architrave, south side.

HAFE 05 P022 Second floor, east room, southwest wall, panelled door, top rail.

HAFE 05 P023 Second floor, east room, southwest wall, panelled door, bottom right, raised panel.

HAFE 05 P024 Second floor, east room, southwest wall, door, recess in panel.

HAFE 05 P025 Second floor, east room, northwest wall, door architrave.

HAFE 05 P026 Second floor, east room, northwest wall, panelled door, raised panel, bottom right.

HAFE 05 P027 Second floor, east room, baseboard, southeast wall, southwest end.

HAFE 05 P028 Second floor, east room, baseboard, southwest wall.

HAFE 05 P029 Second floor, east room, southeast wall, under former pegboard, on plaster.

HAFE 05 P030 Second floor, east room, southeast wall, near ghost of pegboard, on plaster.

HAFE 05 P031 Second floor, north room, southeast wall, upper right of door opening, on plaster.

HAFE 05 P032 Second floor, north room, northeast wall, modern window frame.

HAFE 05 P033 Second floor, north room, southeast wall, door architrave, east side.

HAFE 05 P034 Second floor, north room, southeast wall, door.

HAFE 05 P035 Second floor, north room, northwest wall, beaded baseboard.

HAFE 05 P036 Second floor, north room, stair well, handrail of balustrade.

HAFE 05 P037 Second floor, north room, stair well, square baluster.

HAFE 05 P038 Second floor, north room, west corner, attic stair, tread.

HAFE 05 P039 Second floor, north room, west corner, attic stair, kick plate.

HAFE 05 P040 Second floor, north room, west corner, attic stair housing, door (room-side), grained.

HAFE 05 P041 Second floor, southwest room, northeast wall, on plaster.

HAFE 05 P042 Second floor, southwest room, southeast wall, on plaster.

HAFE 05 P043 Second floor, southwest room, southwest wall, stair well, square baluster.

HAFE 05 P044 Second floor, southwest room, southwest wall, stair well, newel post.

HAFE 05 P045 Second floor, southwest room, stair well, handrail of balustrade.

HAFE 05 P046 Second floor, southwest room, stair well, base of balustrade.

HAFE 05 P047 Second floor, southwest room, ends of floorboards exposed at stairwell.

HAFE 05 P048 Second floor, southwest room, southeast wall, baseboard at stairwell.

HAFE 05 P049 Second floor, southwest room, northeast wall, door threshold.

HAFE 05 P050 Second floor, southwest room, northeast wall, door architrave, north side.

HAFE 05 P051 Second floor, southwest room, northeast wall, door architrave, head.

HAFE 05 P052	Second floor, southwest room, northeast wall, door architrave, south side.
HAFE 05 P053	Second floor, southwest room, northeast wall, panelled door, middle rail.
HAFE 05 P054	Second floor, southwest room, northeast wall, panelled door, raised panel.
HAFE 05 P055	Second floor, southwest room, southeast wall, baseboard.
HAFE 05 P056	Attic, stair well, beaded end-wall partition.
HAFE 05 P057	Attic, southwest wall, baseboard.
HAFE 05 P058	Attic, northeast wall, left top of window, on plaster.

BUILDING 7, PAINT SAMPLES

Number	Location
HAFE 07 P001	Cellar, metal truss.
HAFE 07 P002	First floor, northwest wall, north corner, top of wall, east of crack, on plaster.
HAFE 07 P003	First floor, northwest wall, north corner, top of wall, west of crack.
HAFE 07 P004	First floor, northeast wall, north corner, on plaster.
HAFE 07 P005	First floor, southeast wall, east corner, east of crack, on plaster.
HAFE 07 P006	First floor, southwest wall, center, top half of wall, on plaster.
HAFE 07 P007	First floor, southwest wall, center, bottom half of wall, on plaster.
HAFE 07 P008	First floor, southwest wall, center to right of stairs, on plaster.
HAFE 07 P009	First floor, stair wall, behind vertical tongue and groove board sheathing, on plaster.
HAFE 07 P010	First floor, stair housing, bottom of vertical board sheathing, along baseboard zone.
HAFE 07 P011	First floor, stair housing, vertical board sheathing, top half.
HAFE 07 P012	First floor, stair housing, door architrave, north door post.
HAFE 07 P013	First floor, stair housing, door architrave, south door post.
HAFE 07 P014	First floor, stair housing, "transom" of beaded boards above door opening.
HAFE 07 P015	First floor, stair well, door architrave, back side of south post.
HAFE 07 P016	First floor, under stairs, stringer.
HAFE 07 P017	First floor, under stairs, treads and risers.

HAFE 07 P018	First floor, stair housing, vertical board sheathing, lower half.
HAFE 07 P019	First floor, northwest wall, west window jamb.
HAFE 07 P020	Stair well, northeast wall, base of baluster.
HAFE 07 P021	Stair well, back side of door head timber.
HAFE 07 P022	Stair well, northeast wall, board along lip of stair well.
HAFE 07 P023	Second floor, stair well, top of railing.
HAFE 07 P024	Stair well, southwest wall, on plaster.
HAFE 07 P025	Second floor, southwest wall, beaded window sill.
HAFE 07 P026	Second floor, southeast wall, baseboard, close to attic stair.
HAFE 07 P027	Second floor, northeast wall, baseboard, below middle window.
HAFE 07 P028	Second floor, northeast wall, southeast of south window, on plaster.
HAFE 07 P029	Second floor, southeast wall, east corner, east of crack, on plaster.
HAFE 07 P030	Second floor, southeast wall, west of crack, on plaster.
HAFE 07 P031	Second floor, south corner, attic stair housing, north door post.
HAFE 07 P032	Second floor, attic door, back side, center rail.
HAFE 07 P033	Second floor, front of attic door, rail.
HAFE 07 P034	Second floor, front of attic door, raised panel.
HAFE 07 P035	Second floor, attic stair, kick plate.
HAFE 07 P036	Second floor, detached door, hinge-side, rail.
HAFE 07 P037	Second floor, detached door, hinge-side, panel.

HAFE 07 P038 Second floor, detached door, hinge-side, in ghost of door knob hardware.

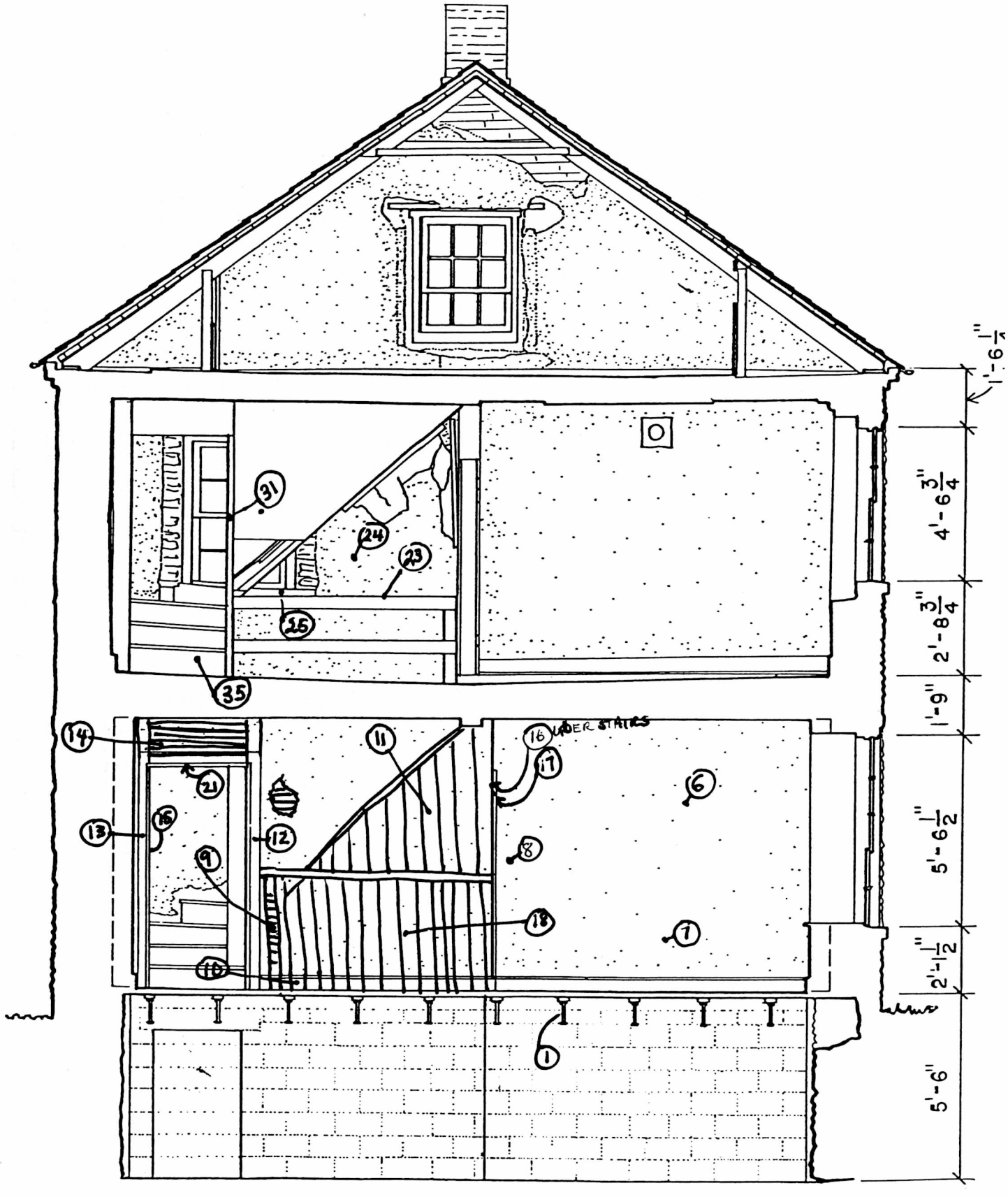
HAFE 07 P039 Attic, southeast slope of roof, horizontal plank knee-wall.

HAFE 07 P040 Attic, northwest slope of roof, horizontal plank knee-wall.

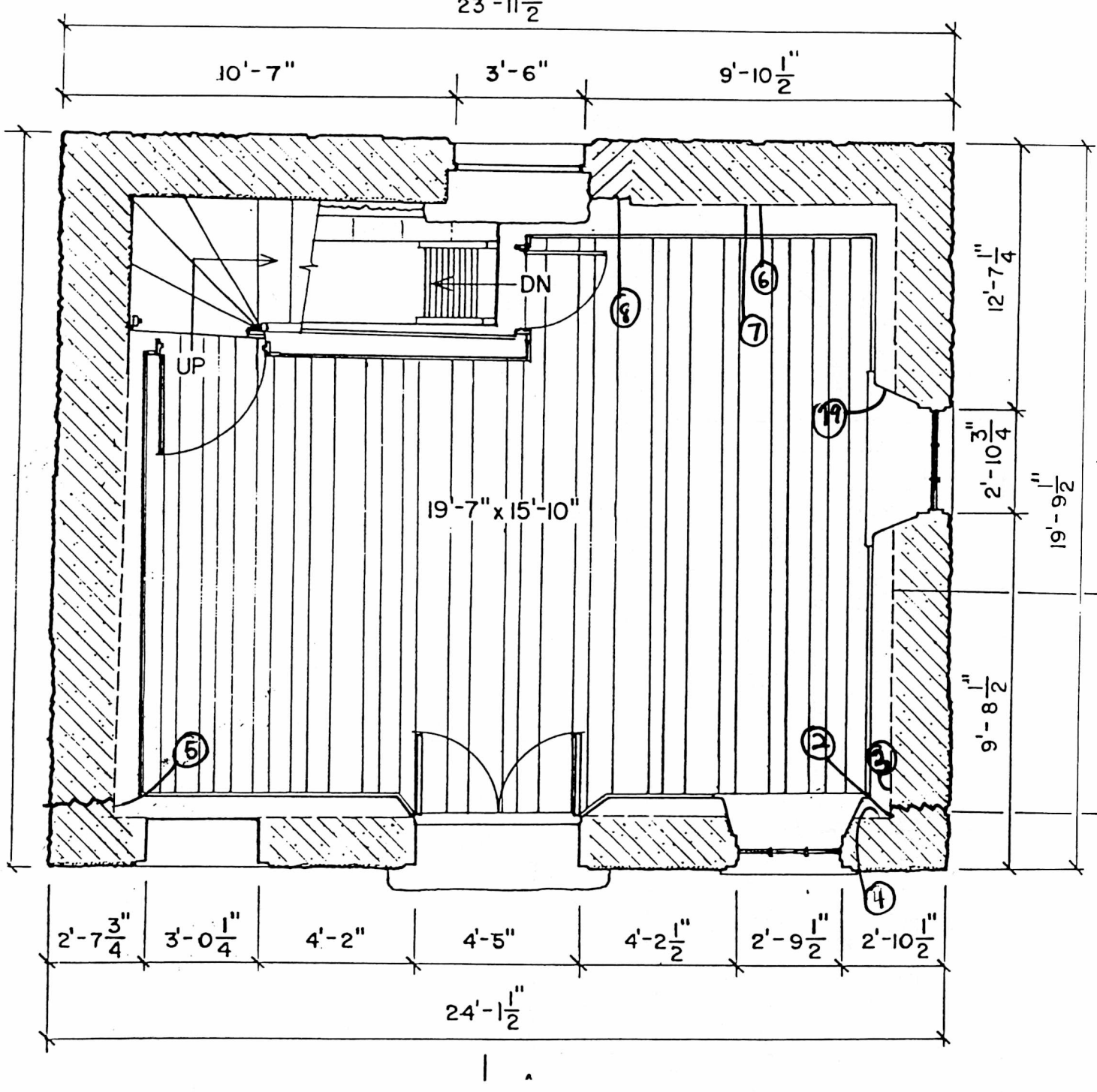
HAFE 07 P041 Attic, southeast slope, second rafter on southwest end.

APPENDIX D.

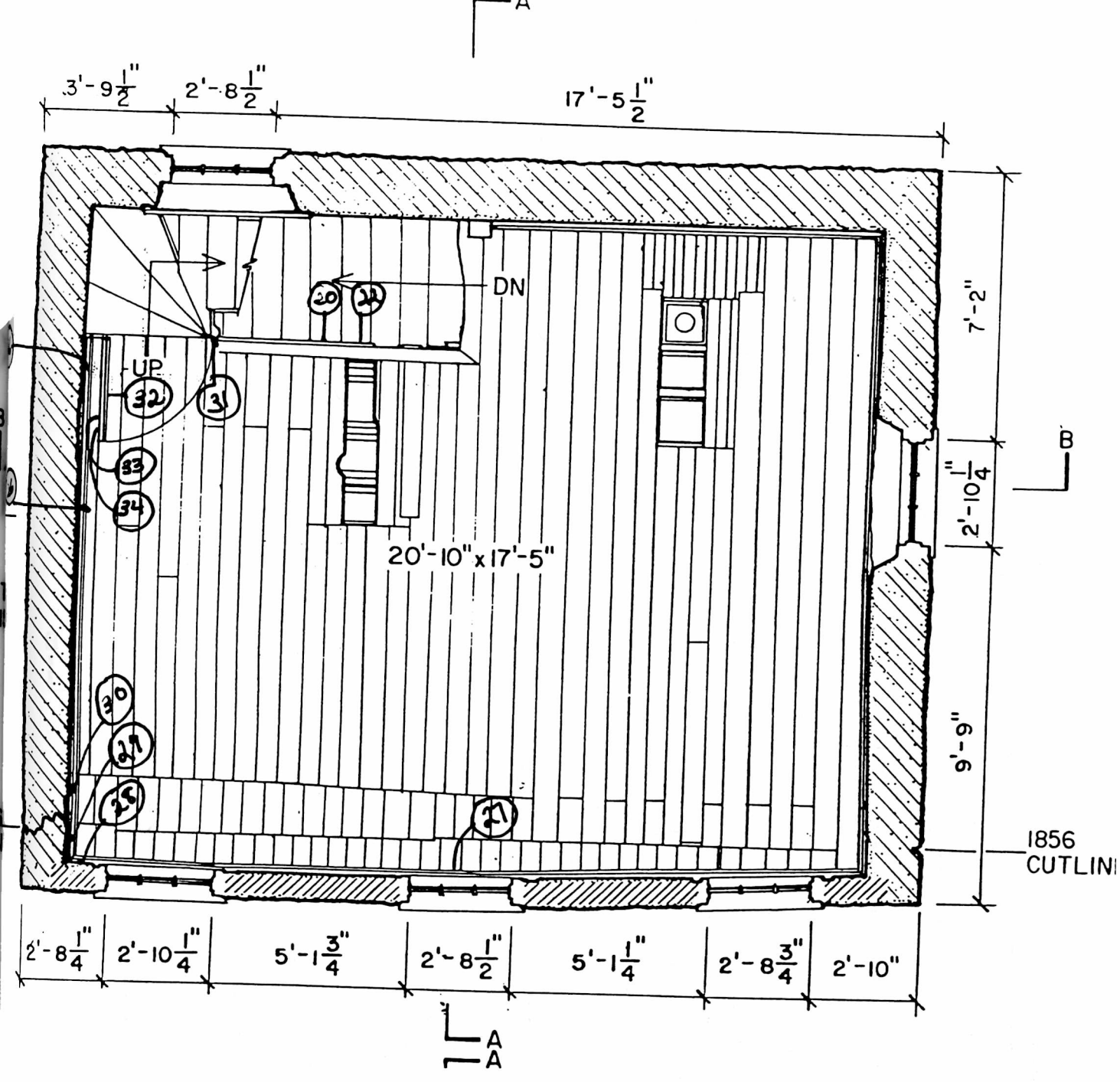
ILLUSTRATED LOCATIONS OF SAMPLES REMOVED BUILDINGS 5, 7, and 16



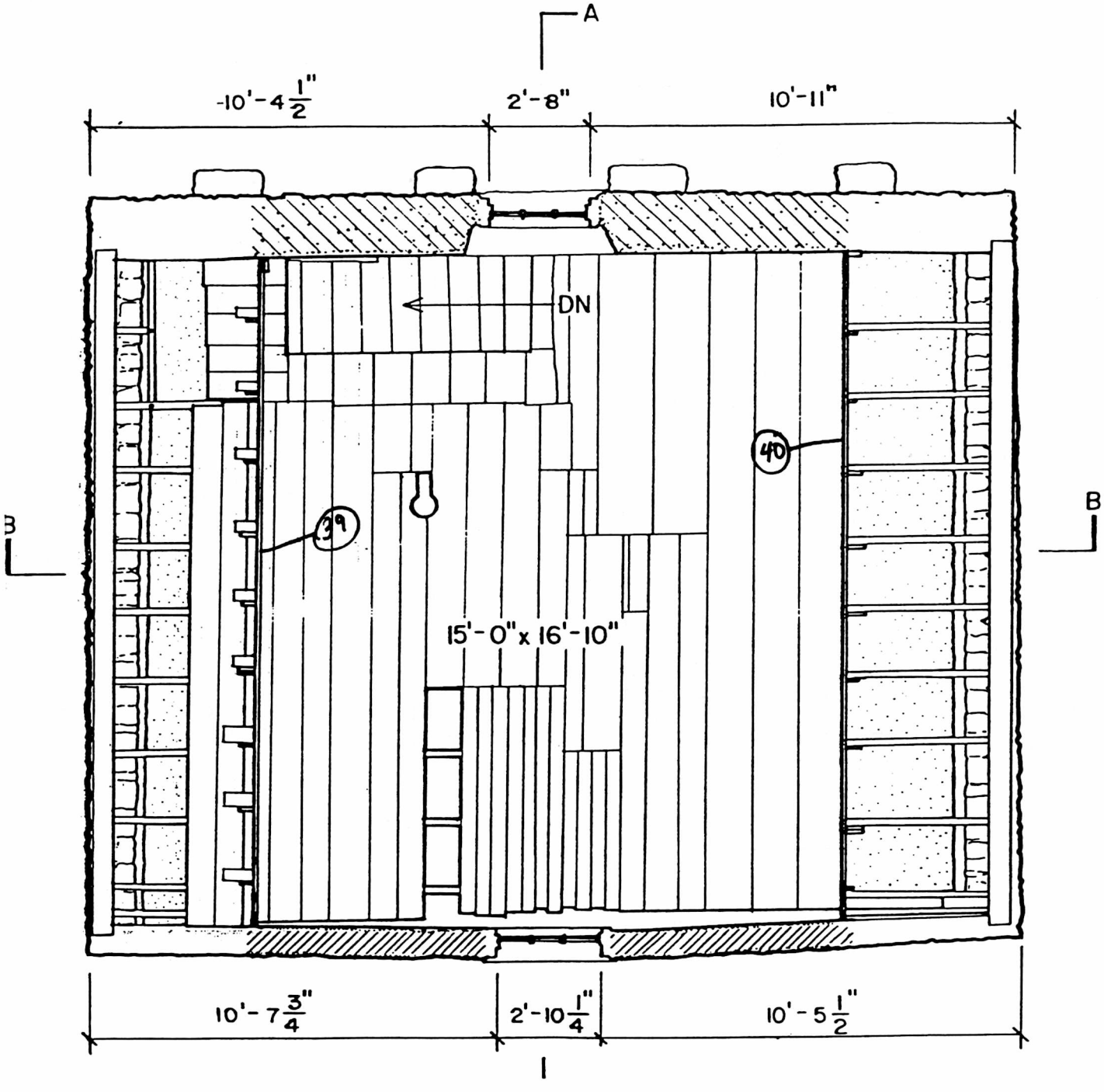
HAFE Building 7.
Looking west. Paint sample
locations noted.



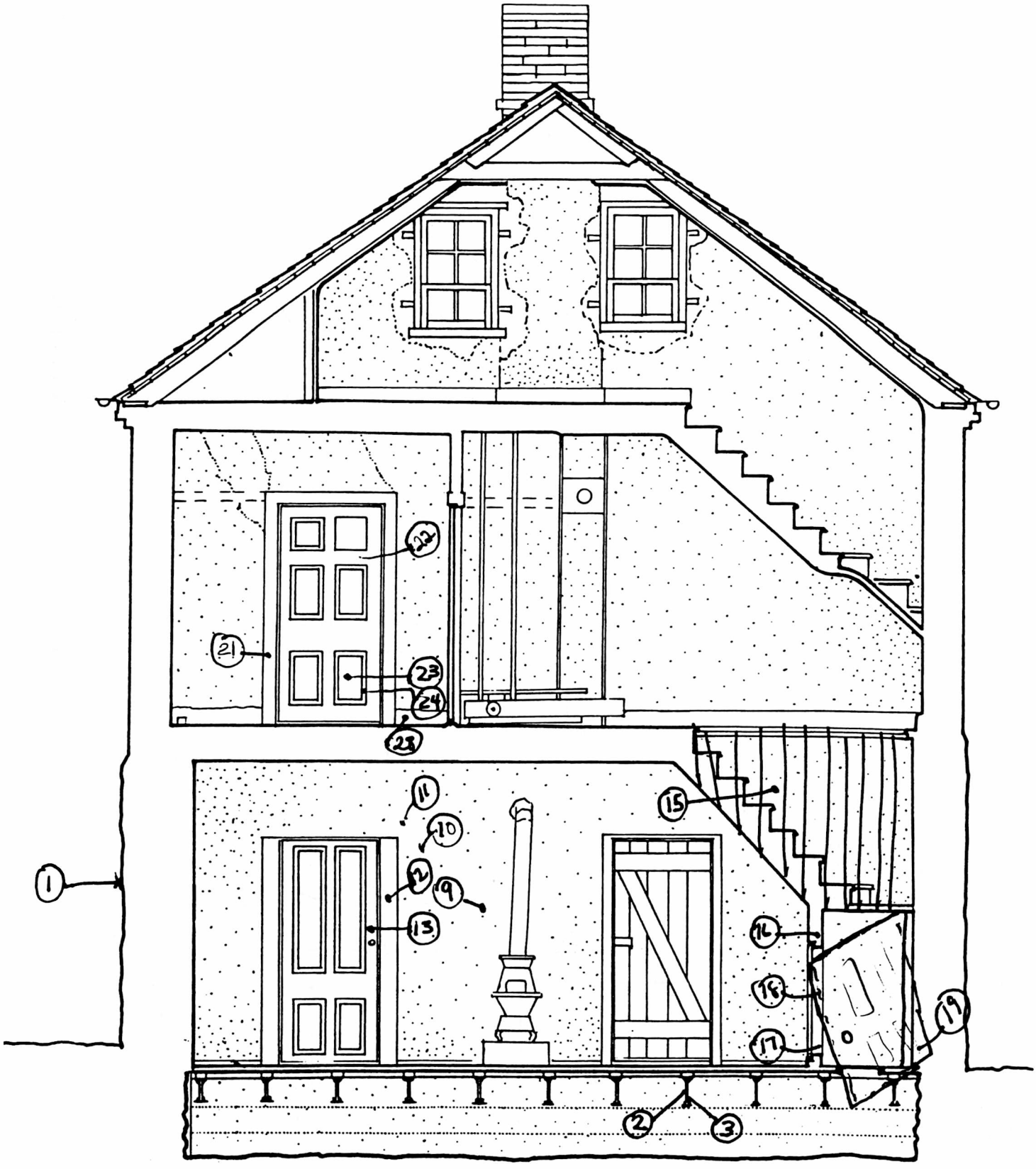
HAFE Building 7.
First floor plan. Paint sample locations noted.



HAFE Building 7.
Second floor plan. Sample locations noted.



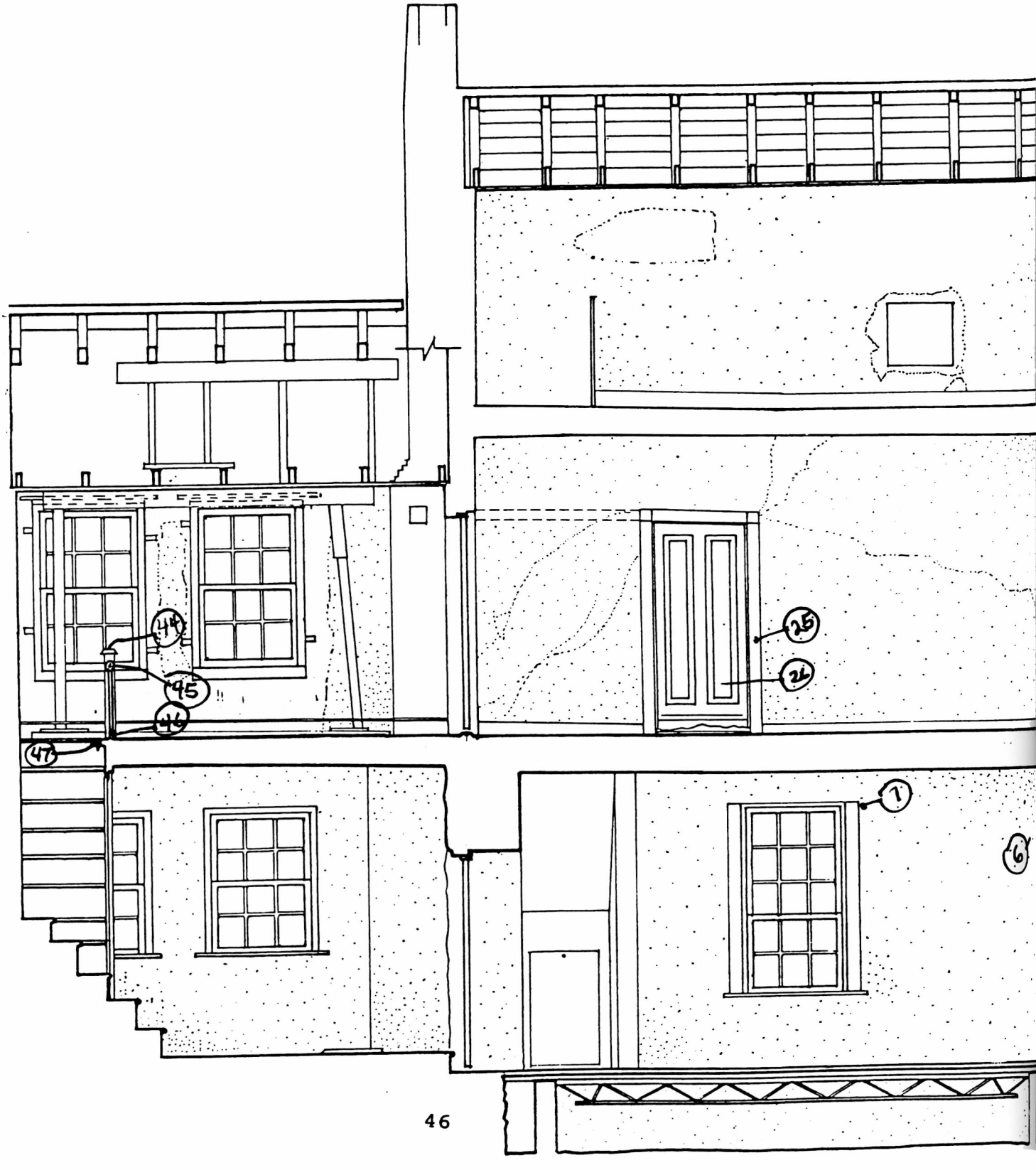
HAFE Building 7.
Attic floor plan. Sample
locations noted.

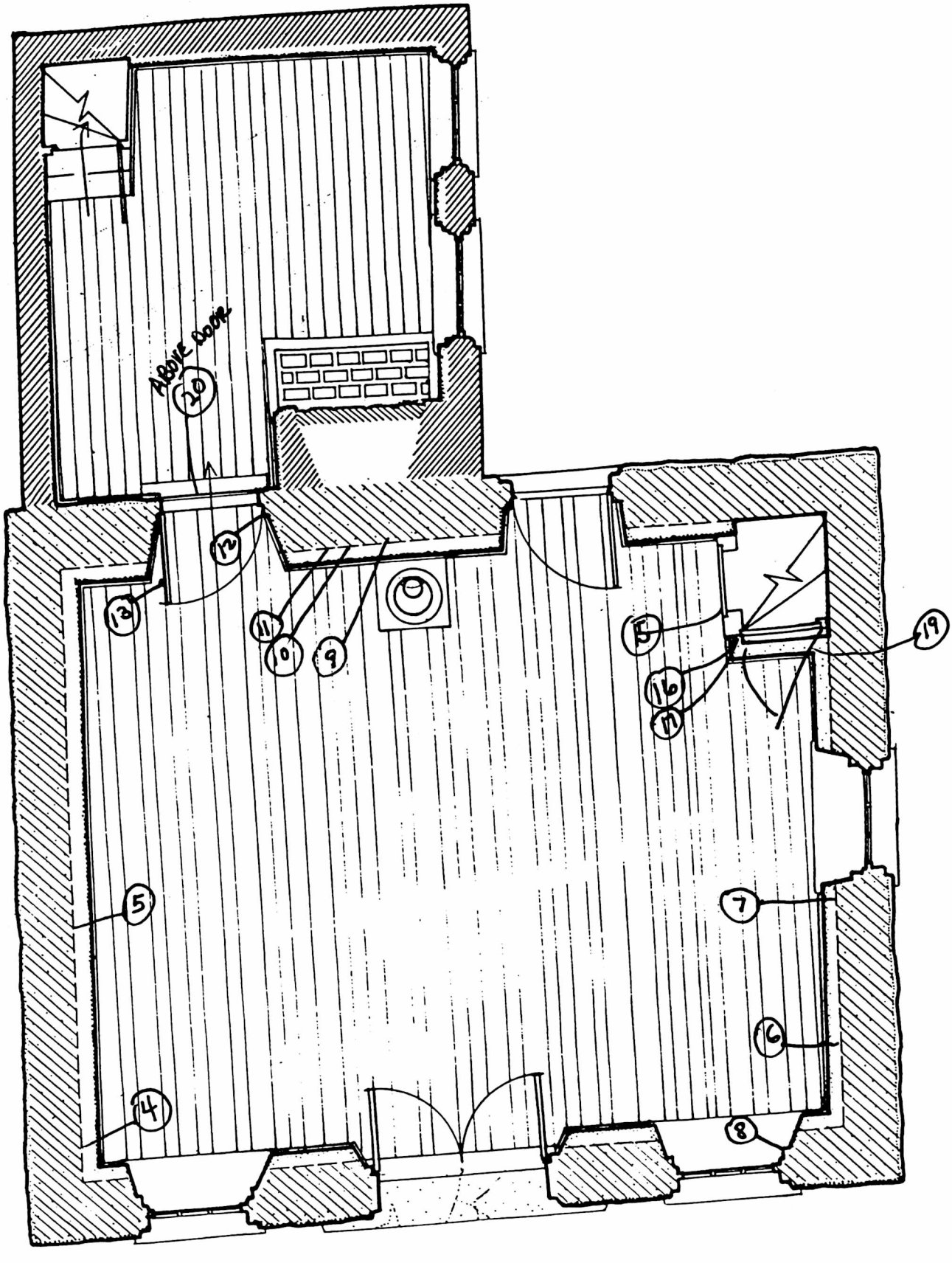


HAFE Building 5
Looking west. Paint sample
locations noted.

-LIMINA-

HAFE Building 5.
Looking north. Paint sample locations noted.

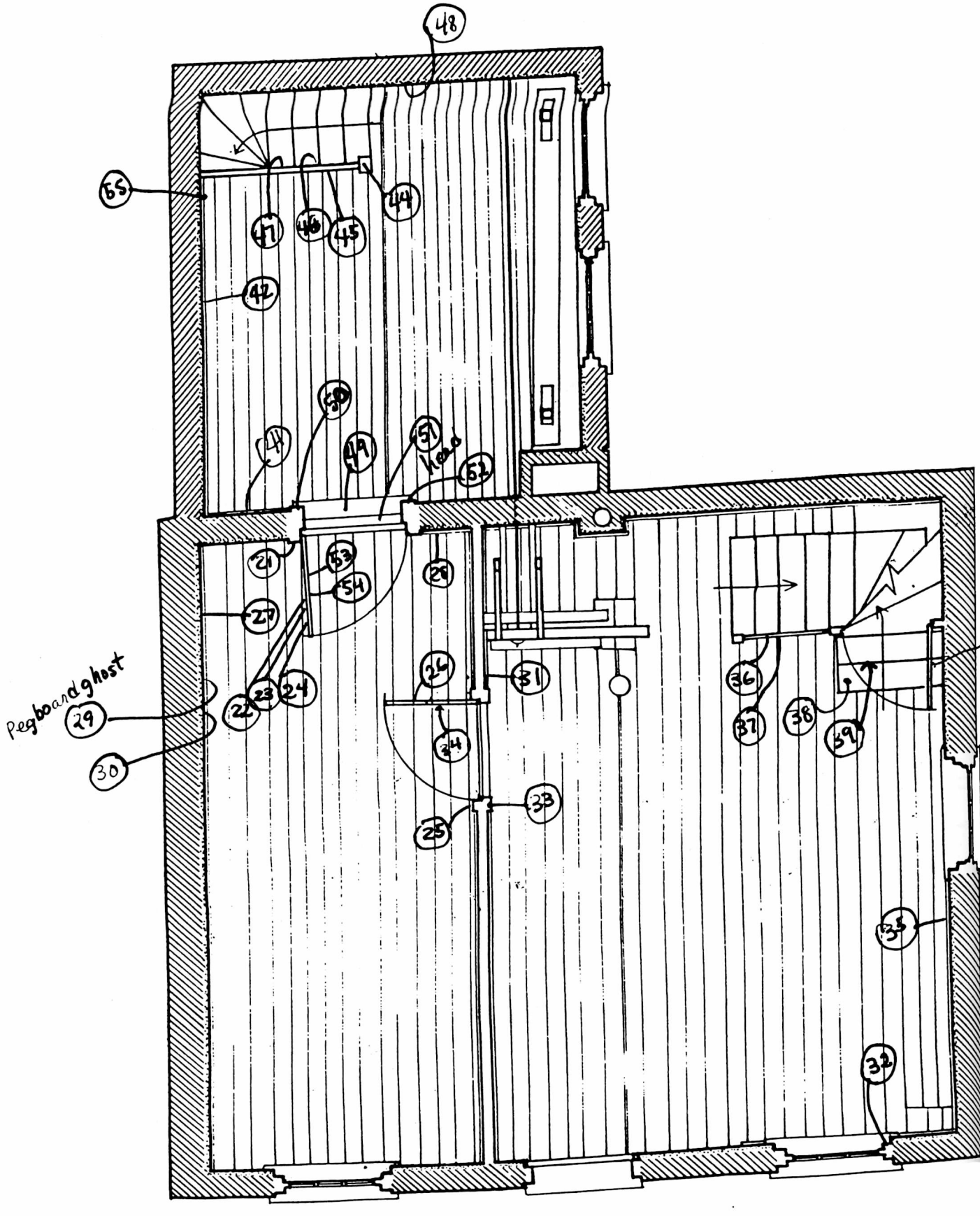




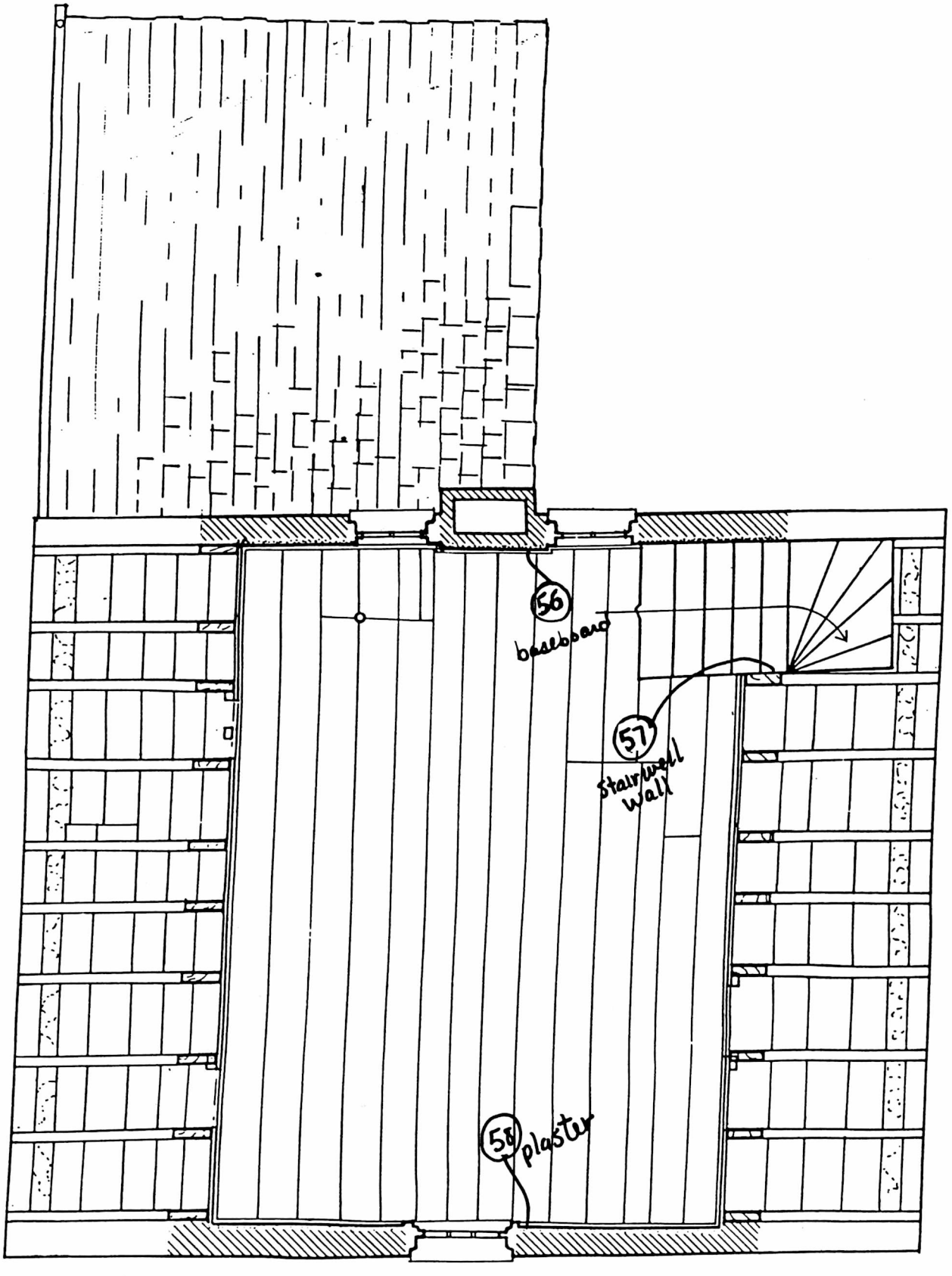
HAFE Building 5.
First floor plan. Paint sample
locations noted.

PR

HAFE Building 5.
Second floor plan. Paint sample locations noted.



HAFE Building 5.
Attic floor plan. Paint sample locations noted.



Appendix F: Condition Report for Plaster, Stucco, and Mortar:

Judith Quinn and Millan Galland, NAR-CRC-BCB, Harpers Ferry National Historical Park; Condition Report on the Plaster, Stucco and Mortar in Buildings #5,#7,(#16 and #16A), October 1993.

In order to determine the proper treatment for the deteriorating masonry and plaster in and on Buildings 5 and 7, Denver Service Center, Falls Church Branch, (who was currently in the process of completing the Historic Structures Report for Buildings 5 and 7) commissioned North Atlantic Region (NAR), Cultural Resources Center (CRC), Building Conservation Branch (BCB), to perform a complete analysis of the mortar, stucco and plaster for both structures. This report was published in October 1993.

United States Department of the Interior

NATIONAL PARK SERVICE
North Atlantic Region
Cultural Resources Center
Boott Cotton Mills Museum
400 Foot of John Street
Lowell, Massachusetts 01852-1195

IN REPLY REFER TO:

13 July 1994
H30 (NAR-CRC)

Tom Vitanza
Williamsport Preservation Training Center
205 West Potomac Street
Williamsport MD 21795

Dear Tom:

Please find enclosed the requested clean copies of the text for the Harpers Ferry Condition Report on Buildings #5, #7, #16, and #16A, as well as the original photographs.

Let me know if you require negatives or any other information.

Millan Galland
Historical Architect

HARPERS FERRY NATIONAL HISTORIC PARK
CONDITION REPORT On The PLASTER, STUCCO AND MORTAR
BUILDINGS #5, #7, #16 AND #16A

with Assessment and Recommendations
for Stabilization and Conservation

01 October 1993

United States Department of the Interior
NATIONAL PARK SERVICE
North Atlantic Region
Cultural Resources Center
Boot Cotton Mills Museum
400 Foot of John Street
Lowell, MA 01852-1195

HAFE - REPORT

01 October 1993

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INTRODUCTION

Judith Quinn, Architectural Conservator, and Millan Galland, Historical Architect, Cultural Resources Center, Building Conservation Branch, visited Harpers Ferry National Historic Park to assess the plaster, paint, stucco and mortar at Buildings #5, #7, #16, and #16A.

On 23 August, we met with Peter Dessauer, Park Architect, for a walk-through in the morning, with preliminary assessment and sampling of plaster, paint*, stucco, and mortar in the afternoon. On 24 August, Judith Quinn and Millan Galland met with Susan Shufelt, Denver Service Center Architect, Eastern Team, Fall Church Branch; Barbara Zook, Acting Coordinator at Harpers Ferry Center; Stephen Ziegenfuss, National Capitol Regional Architect; and Peter Dessauer to review the scope of work to be performed by BCB/CRC. The afternoon was again occupied by sampling, assessment, visual inspection and photographic recording. Following a review of the previous day's work, the morning of 25 August completed the sampling and assessment of the four buildings.

The purpose of the visit was to assess the deteriorated condition of the plaster in order to stabilize the Civil War era graffiti on the plaster, as well as evaluate the impact of Portland cement-rich stucco on Building #5, obtain limited stratigraphic information from the first floor paint from #5 and #7, and determine the presence of lead on the existing steel trusses of the first floors of #5 and #7. Additional assessment of the plaster and paint of #16 was to be included, with specific recommendations regarding the HVAC unit in #16A and its effect on the historic structure.

The documentation of existing conditions and recommendations for stabilization are incorporated in this report. The existing conditions include the exterior envelope as they have a direct impact on the plaster and HVAC recommendations. The report on the paint stratigraphy prepared by Judith Quinn is submitted as a separate document.

Visual observations of the existing conditions were primarily with the naked eye, using binoculars to observe the eaves, chimneys and roofs. For the interior conditions, an Olympus Boroscope was used to gain visual access in areas behind the plaster over wood lath in selected areas. Visual observation of the plaster keys was limited to inspection behind knee walls or from the back of missing sections at interior partitions.

Exterior samples were taken at ground level or through second floor and attic windows. Interior samples were taken from each first floor room at #5 and #7, with selected samples from the second floors. Samples from #16 were taken exclusively from the second floor and attic.

The format for this report lists existing conditions for the general site and exterior envelope, including flashing and moisture penetration related issues, followed by specific existing conditions for plaster, stucco, mortar, masonry and HVAC. Recommendations follow each existing conditions section, separated by a building-by-building basis where possible.

The guiding conservation approach to the stabilization of the historic plaster involves the methodical evaluation of all related issues affecting the environmental and direct physical impact on the plaster. Stabilization is the primary consideration, accomplished by solving the site, exterior envelope and building structure issues. This is followed by a more direct approach in the conservation of the plaster using a combination of repair, patching, reattachment, or consolidation.

EXISTING CONDITIONS/RECOMMENDATIONS

SITE - GENERAL CONDITIONS

The four buildings are located in Harpers Ferry Lower Town in a block bounded by High Street, Hog Alley, Potomac Street and Shenandoah Street. Buildings #5 and #7 front on Potomac Street, #5 and at the corner of Potomac Street and Hog Alley. Building #16 is located on the corner of High Street and Hog Alley. Building #16A is located at the southeast end of the northeast facade of #16, directly southwest of Building #5. Building #5 has a historic addition on the southwest elevation referred to as the annex.

High Street slopes southeastward in front of #16. Hog Alley connects High Street to Potomac Street to the northwest of #16 and #5. A stone retaining wall along the southeast side of Hog Alley allows grade access to the basement of #16 from the northeast elevation. Potomac Street has a gradual southward slope towards Shenandoah Street.

The grade slopes northeast from the basement level of #16 towards #5, with a sharp dip before leveling out towards Potomac Street.

A stone sidewalk abuts the entry facades (northeast elevations) of #5 and #7. Grass surrounds the remainder of #5. A stone drive runs adjacent to the southeast elevation of #7, with grass at the southwest. Filling in the lot between #5 and #7 is a combination of grass and stones set in grass.

SITE - EXISTING CONDITIONS

#5, #7

Basement:

The basement in #5 during the site visit had standing water (approximately one inch) from a period of rain several weeks prior. The basement in #7 revealed evidence of past water retention. In both buildings, concrete block walls on the northeast and southwest basement walls provide bearing for the contemporary first floor steel open web joists. A poured concrete floor over polyvinyl may serve to act as retention ponds during periods of flooding. Erosion of the stone joints in the foundation in #7 may also provide ingress of water, as well as through the 18" deep beam pockets (from previous 3x10 floor joists) along the southeast wall. Water may also be entering along the southwest walls from the sloping grade. The lack of ventilation in the basement of the accumulated moisture aggravates an undesirable condition.

Mud on the top surfaces of the foundation stones in the basement of #7 as well as top of joist bottom flange indicates previous flooding to a point level with the first floor.

The hard surface of the sidewalk at the northeast elevations of #5 and #7 provides the opportunity for splashback along the lower portion of the building. There is evidence of biological staining at the base of the wall on the stucco. The fine cracking between stucco surface and stone sidewalk may be allowing penetration of water through capillary action or

from seepage of standing water.

Water may be wicking up into walls by capillary action primarily from the periodically wet basement. No typical rising damp horizontal stain and efflorescence tide line on the wall was visible however. There was also no evidence of any damp-proof coursing.

The grade slopes towards the southwest elevation of #5, allowing surface water to run against the building.

The downspout from the porch of #16 empties at the grade uphill from the southwest elevation of #5. The roof addition and half of pitched roof of #16A empties directly onto the grade uphill from the southwest elevation of the #5 annex.

The grade at the southwest elevation of #5 and #7, sloping towards the building, is allowing rain runoff to soak the base of the masonry walls.

The erosion of stone joints at grade level is most severe around the perimeter of the building.

Buildings #16 and #16A do not appear to have any significant site issues that directly affect the condition of the masonry or plaster, aside from lack of ventilation and an accumulation of ground moisture.

CONCERN

The proposed change of the sidewalk on Potomac Street to provide HC access to #7 may increase the potential for water to enter the building in a more direct path.

RECOMMENDATIONS

#5, #7

Minimize hard surfaces adjacent to structure as much as possible while maintaining historical integrity.

Seal joints between stucco and sidewalk by providing a 3/8" joint during application of new stucco and fill with backer rod and sealant [See Drawing]. Maintain integrity of stucco finish at base of wall.

Provide active ventilation [the number of air changes/hour to be determined by a qualified HVAC engineer after the exterior envelope work is completed].

Install pit and sump pump with drain to an exterior drainage system. Pumping of water should immediately follow periods of heavy rain or flooding.

Periodic monitoring, or installation of an automatic sump pump or drainage system with an exit to an appropriate water disposal system away from the structure should be considered.

It is important to determine if the moisture in the walls is from condensation, lateral damp or rising-damp. If the moisture is at the exterior or interior face of foundation wall the problem may be only condensation, whereas a saturated wall would point towards a rising-damp problem if the moisture is originating from below the foundation. A lateral damp condition would result from excess water entering the foundation from the ground. The monitoring for one cycle of seasons would be considered minimum. Monitoring would involve either moisture meter probes to measure the interior and exterior surface as well as the moisture content of the core of the walls or the use of a calcium-carbide meter that records the moisture percentage from a cored sample. While the latter method is more accurate, it is also more destructive.

It would also be beneficial to measure the moisture differential between the foundation stone and the above-grade stone work. Only after reliable determination of rising-damp should the installation of a damp-proof course at base of wall be considered. Selective excavation will confirm the lack of existing damp-proof coursing.

Data loggers [such as manufactured by ACR Systems, Inc., copy of brochure included in Appendix A] are an effective means of monitoring relative humidity, temperature, dew point and interior wall temperatures in a single compact unit. The collection of information may be downloaded from the data loggers by Park staff to a computer for interpretation and assessment. Information collected by the data loggers will be essential in developing an interior environmental control system.

There should also be a determination of the location of the subterranean water table, porosity of the soil, and salt content. Salts (nitrites from ground and/or chlorides in masonry or mortar) can contaminate masonry from rising-damp.

To divert surface run-off and ground water penetration, the installation of perimeter footing drains and/or a clay-polyvinyl barrier should be considered, especially to alleviate the grading problem on the southwest elevation.

The roof run-off from #16 and #16A needs to be redirected away from the uphill side of #5.

Regrade to provide positive drainage away from the building where feasible, or provide alternative means of drainage from trench drains, or perimeter drains.

The base of the masonry walls should be repointed and the surface restuccoed. [See Outline Specifications for mortar and stucco mixes.]

The removal of salts from the interior and/or exterior may be necessary after a period of drying out of the walls if there is evidence of sub-florescence or efflorescence, and will depend on the amount of drying accomplished by the remedial work. Poultices and sacrificial plaster layers are some of the methods of removing salts.

EXTERIOR ENVELOPE - GENERAL CONDITIONS

Although not specifically investigated during the site visit as part of the scope of work -and while many of the mentioned conditions are recognized by the Park Architect- the conditions are included for their related impact to the integrity of the building envelope and the interior finishes.

EXTERIOR ENVELOPE - EXISTING CONDITIONS

#5, #7, #16

Windows:

Contemporary replacement windows in #5, #7, and #16 are shimed only. There is no backer rod, sealant or insulation to seal the open gap between unit and wall opening. Window sills do not slope consistently to the exterior, especially at #16.

Doors:

Doors at southwest elevation, second floor, of #16, also do not have backer rods and sealant. The sheet metal floor of the deck is turned up the vertical edge of the door sill, with a potential opening for water ingress. The sills are cracked and often do not have sufficient slope.

Misc.:

#16

The metal railings are anchored into the masonry without provisions for preventing water from entering the wall.

All of the sheet metal gutter braces along the southwest gutter have failed due to overloading of the gutter.

Daylight is visible between the masonry walls and the adjacent stone structure southeast of #16.

There is evidence of leaking around the chimney, with water stains at the chimney and roof sheathing as well as on the floor boards. It was not determined if the leaks are active or inactive.

There are large gaps between the northwest brick gable end and the roof sheathing. Currently, the gap between brick gable end and roof edge is an unacceptable condition. Besides direct and wind-driven rain penetration, insect, bird and rodent infestation is possible.

The exposed metal lintel angles at the 2nd floor southwest windows are beginning to corrode. There is no evidence of flashing above the lintels.

The iron straps at gutters #16 are heavily corroded, and causing large staining in some wall areas.

RECOMMENDATIONS

#5, #7, #16

Install backer rods and sealant at all window openings. Provide wood stops at the exterior to seal

stucco to window joint [See Drawing].

Provide building expansion joint between #16 and adjacent structure.

Gable end: The structural integrity of the brick gable end should be verified, replacing missing units, reattaching dislocated or loose units. If it is determined that the gap between gable end and roof edge reflects accurately the historical detailing, an alternative detail using wood blocking, backer rod and sealant should be introduced to seal the gap.

Replace existing gutter braces with more substantial and historically appropriate material, verify proper slope.

Verify flashing at window heads, caulk and paint.

Seal metal railing attachment to masonry.

Coat existing metal hardware with a protective finish, replace corroding iron hardware.

Provide backer rods, sealant, and insulation at all gaps between door and window frames and opening. Install or repair sills to slope. Detail exterior jambs to provide a weather-tight condition that is also historically appropriate for the wall finish.

FLASHING - EXISTING CONDITIONS

#5, # 7

The flashing at the false chimneys on the northeast elevations of both buildings and the southwest elevation of #7 (the base corbels out and terminates above the attic window head) of #5 and #7 is improperly installed and faulty in some areas. The flashing appears to be attached to the stucco chimney of the northeast gable of #7 with surface applied mastic. The flashing at the southwest chimney is loose, or nonexistent. Light is visible from the attic levels between the false chimney and roof. Further evidence of water penetration are spalled brick units and active efflorescence at selected interior locations. It was not determined if the false chimneys were capped or open.

The chimney at the southwest elevation of #5 was previously operable, with flue(s) to the first floor. It is not presently required to function.

The flashing between the annex and #5 appears to be galvanized and in serviceable condition.

#16

The flashing on #16 appears on the dormers, chimney, and connection to the adjacent building (on the southeast). The dormer flashing appears serviceable. The chimney flashing is in question, considering the evidence of interior leaking. The flashing between the roof of #16 and the adjacent building appears to be inadequate, with the present flashing held against the stone by

caulking, running below a non-historic saw-cut reglet parallel to the roof line of #16. There is no provision for differential building movement and the top of the flashing is not weathertight.

The original southwest slope of the roof on #16A has been covered by a wood structure, the end wall aligning with the northwest elevation of #16A. The single slope of the addition roof is a few degrees shallower than the northeast slope of #16A, continuing the plane of the higher roof of #16 to the ridge of #16A. The addition also covers the stair from the basement level to the first floor of #16. There is a continuous gap of 1" to 1-1/2" between the roof of the addition and the adjacent stone structure.

RECOMMENDATIONS

#5, #7

Replace deteriorated flashing, using appropriate methods for installation of flashing into masonry.

Cap chimney openings (unless chimney at southwest elevation in #5 is to be used for ventilation purposes).

All flashing, gutters, downspouts, brackets, and fasteners should be of compatible materials.

#16A

Flash roof addition to adjacent structure in a manner that will permit differential building movement and take into consideration the historic building materials. There should be a base flashing and counter-flashing.

The flashing at the chimney should be inspected and monitored for active leaking prior to repair/replacement. The new flashing detail at the roof should be designed to perform with the existing historic materials.

PLASTER - GENERAL CONDITIONS

The investigation of the plaster was based on: visual examination of the keys behind knee walls and through missing interior wall sections; tapping with knuckles for hollow-sounding and hand pressure on face of wall for delaminated and bulging sections; and use of an Olympus Boroscope for limited inspection of areas not visually accessible to the naked eye.

The original application of the plaster follows two general methods: plaster directly over stone or brick on first floors and perimeter walls on second floors, and gable end walls; and plaster on wood lath over wood framing at attic flat, sloping ceiling and knee walls, and interior partitions.

Dimensions:
Wood Lath: 1/4" x 1-1/2" with 1/16" - 5/8" gaps (1/2" ave.)
Plaster: $\pm$1/2" (at #5 attic)

The original workmanship of the plaster in general is not of a consistent quality. The wood lath was not spaced evenly, which led to approximately only 30% of plaster visible (behind knee wall #5 attic) with adequate keying, the remainder either lacking adequate keying from insufficient pressure applied during the application of the scratch coat, or insufficient spacing between laths.

There are several areas of plaster where the surface finish has delaminated, or areas of powdering plaster that may have been partly due to improper mix or drying originally. It is also possible that condensation is occurring within the plaster at the dew point.

The first floors are especially affected due to the direct application of plaster over stone or brick. The erosion of mortar and stone joints may be allowing water to wick into the interior of the masonry walls. Moisture may be entering by means of capillary action through fine cracks, from the interior of the wall, through penetration of eroded joints, or travel from the masonry wall above the stucco. Water from behind the stucco, unable to evaporate through the exterior, especially with Portland cement-rich stucco at #5, will tend to migrate towards the interior, with detrimental results to the attached plaster.

The porosity of the bricks may be another contributing factor to migration of moisture to the interior surface of the walls. Additionally, without a cavity between wythes, there is no ability to channel the water back to the exterior.

PLASTER - EXISTING CONDITIONS

The existing conditions of the interior plaster are varied, including deterioration, disintegration of the base, failure of the keys, water damage, cracking, delamination of finish surface, delamination of base coat, and powdering of the plaster. Moisture from the ground, through the walls, and from the roof as well as building movement, have all contributed to the deterioration of the plaster.

There is little keying of the plaster at lath gaps of less than 1/4". Lath that was available for inspection revealed inconsistent lath spacing and keying.

The correlation between the application of plaster over masonry and the interior deterioration is not self-evident, although the first floors of #5 and #7 appear to exhibit the most deterioration of powdering or detached plaster sections. The second floors of #5 and #7 retain the greater percentage of intact plaster surface finish. There is a definite relationship between the removal of baseboard and window trim to sections of missing plaster.

#16

Basement:

The plaster is applied directly over the stone. The floors are dirt, and evidently retain moisture. High levels of humidity from the atmosphere and retention by the stone and stored materials create undesirable conditions that are unrelieved by ventilation. There is also damage to the plaster from the use of the rooms as storage for lumber and other materials.

There are limited sections of plaster extant in the two basement rooms of #16; a section on southwest wall of the northwest room, delaminating 18" above the floor. There are also sections on southwest and southeast wall of southeast room, with cracks and hollow-sounding areas indicating detachment.

#5
Attic:
The plaster is attached to wood lath over wood framing on the sloping ceilings, knee walls, and flat ceiling portion [approx 1/2" thk]. Graffiti from the Civil War era is visible on the sloping ceiling surfaces, which has been documented by the NPS. Several major cracks run through the sloping sections with two holes in the knee wall. Approx 30% of the original keys are adequate, with many keys presently in place but cracked. Over 20% of the flat ceiling plaster is missing, with cracking related to the direction of the joists. The gable end walls have plaster attached directly to the brick [approx 3/4" thk]. All the plaster around the windows has been removed as a result of the installation of contemporary windows.

#5
Second floor:
The exterior walls have plaster attached directly to masonry walls.
The interior partition is plaster over wood lath. There is major structural diagonal cracking in the plaster on both sides of the door opening as a result of the second floor sagging towards the center.

The ceilings exhibit cracking in both directions. Water stains emanating from cracks indicate previous heavy water penetration.

#5
First floor:
The plaster conditions encompass deteriorated finish coat, delaminating finish coat, detached base coat, powdering plaster. There is also peeling paint, with pock-marked holes from tacked posters. The southeast and northwest walls have a zone of deterioration approx. 4 feet above the floor. The southeast wall is approximately 40% intact, with a cracking finish coat. The southwest wall has cracks and delamination. The north wall has a deteriorated finish coat and powdering base and finish coat, and is approximately 10% intact with a finish coat.

White salt crystals appear at several exposed stones, indicating the presence of moisture at the interior face.

#7
Attic:
The only extant plaster is on the gable end walls, applied directly over the stone, and is in fair condition.

#7

Second floor:
30% ceiling missing, as well as damaged/missing lath.
south wall: mostly intact, some areas missing.

#7
First floor:
Northeast wall: what little plaster there is existing between openings is solid. There is a 2 - 3 foot zone of plaster missing above the floor.

The base plaster has fallen away in a zone up to 3 - 4 foot above the floor. The plaster is hollow-sounding but no major cracks or powdering are visible.

Southeast wall: hollow-sounding but no powdering. Visible voids through stone wall at floor level at location of crack between northeast facade and structure.

Southwest wall: plaster at base 3 - 4 foot zone is largely detached, with delaminated finish coat or powdered base coat.

RECOMMENDATIONS
The method of the original construction is integral to the history of the structures and a repair inconsistent with the original method is not recommended unless there is a threat of accelerated deterioration after all other factors have been eliminated.

The elimination of interior moisture migration resulting in permanent damage and loss of historic fabric should be of primary concern with structural movement considerations thoroughly analyzed for their effect on plaster cracking. Structural movement may result from differential building settlement, soil subsidence, wind loads, and excessive live loads, among other factors.

With the elimination of interior moisture migration, the consolidation and/or reattachment of the plaster, either of the surface finish, or at the point of contact to the masonry or lath substrate, should remedy the majority of the stabilization concerns.

Prior to any consideration of interior plaster repair, patching, or consolidation, all issues dealing with the site and moisture infiltration points, structural movement, and stable interior environment (for temperature and relative humidity) must be addressed. Aside from remedial repairs and maintenance, permanent measures might include a new HVAC system. Temporary measures would include opening doors and windows for ventilation during proper drying conditions, and removing all stored material.

#5
The first floor plaster has suffered to a greater extent from moisture related deterioration than the second floor or attic. Although factors such as the Portland cement-rich stucco, splashback from the sidewalk, and lack of adequate ventilation all contribute to the deterioration, the primary cause is more likely due to the method of applying plaster directly to any masonry

surface without providing an air space. Any moisture contained in the masonry wall will be partly absorbed by the plaster. Before modifying a historic method all other mitigating factors should be thoroughly evaluated and addressed.

An evaluation of the floor load capacity should be made by a structural engineer to rectify the sagging floors and reduce the stress on the interior plaster walls.

#5, #7

On the second floor level and attic level of #5 and #7 which is not intended to be open to the public, the plaster should be stabilized. A thorough evaluation of the amount of attachment should be made, since a large portion of the keys have failed. An evaluation by a conservator regarding the quantity of plaster that may contain graffiti to be conserved may aid in the determination of priorities for the areas to be consolidated/stabilized. Large areas of detached plaster may threaten the integrity of the surrounding plaster by adding an additional load to plaster that is weak to begin with. Reattachment of the plaster may be affected by several methods of back-plastering or adhesives injections. In the attic, there is access to the back of the plaster from behind the knee walls. There is also limited access to the ceiling plaster. Although this writer is not aware of any graffiti on the ceiling, the integrity of the sloping wall plaster could be adversely effected by further detachment of the flat ceiling plaster. The flat ceiling plaster has suffered to a greater extent from deterioration, most likely due to its proximity to the roof and previous leaks.

Back-plastering involves the application of a liquid plaster mix and reinforcing mesh embedded to the establish new keys for the existing plaster over wood lath. This provides a continuous surface, the plaster spanning the lath. Some of the limitations with this method aside from the physical access required, is the additional load that is imposed on the adjacent plaster and lath. The advantage is that there is no physical damage to the surface finish. Prior to applying the back-plaster, the voids between detached plaster and lath need to be cleaned. This method should also be carried out by a conservator or plasterer with previous successful experience.

Where physical access is limited, such as areas of plaster on lath over wall framing or sloping roof framing, or where plaster is attached directly to masonry, the method of reattachment would involve an injection process using an acrylic resin-based adhesive. The outlined process was developed and refined by Morgan Phillips [See Appendix B]. For the reattachment of plaster to lath that is separated less than approx. 3 mm., an unfilled adhesive formulation is used. For larger spaces (up to 2 cm.) a formulation containing ordinary and a gas-producing filler is used. The adhesives are injected through a series of 3/16" holes. If the plaster is inherently weak, it may require consolidation prior to reinforcement of the keys. For plaster over masonry, adhesives and adhesive plaster may be injected between the detached plaster and substrate. The complete process is complex and precise, requiring the experience of a knowledgeable conservator for a successful application.

The process of back-plastering may be handled by contract whereas the more complex technique of reattachment or rekeying by injection should be by accomplished by Request for Proposals

(RFP) from qualified plaster conservators.

STUCCO - EXISTING CONDITIONS

Inspection of the stucco was limited to the naked eye and observation from the ground through binoculars. Samples were taken for laboratory analysis at the Cultural Resources Center.

#5

Presently, only the lower portion (first floor) of #5 is stucco covered. The stucco is applied directly to the masonry surface, beginning at the grade with a slight batter. The stucco is Portland cement-rich, of an uneven grayish tone, and has been crudely scored to imitate stone blocks, perhaps an attempt to duplicate the historic pattern found on #7. If impervious, the cement stucco will prevent core wall moisture from migrating to the exterior, increasing the transpiration towards the interior finish surface, and adversely affecting the interior plaster over the masonry.

An experimental area was initiated on the southeast elevation by the Park to assess the time and effort to remove the Portland cement-rich stucco.

#7

The rough quality of the stonework of #7 supports the notion that originally, the entire structure was intended to receive a stucco finish. While brick is used for the false chimneys, the gable ends of the chimneys are stuccoed. There is a three course brick cornice under the eaves similar to #5.

On the southwest elevation of #7 are four stones -projecting approx. 12 inches- that have corresponding wood members embedded in the stone wall approx. 9 inches above the stone. They may have been used for the structure of a pent roof that ran continuously from the eave line.

The northeast elevation is completely covered in stucco. There is evidence of a an attached roof/awning over the first floor door and windows. A band of yellowish-green biological staining at the base marks a band of approx. 12 inches in height. Fine cracks permeate the facade, typically originating from the corners of window or door openings. The edge of the stucco surface along the sloping gable is chipped and discontinuous.

The northwest elevation has stucco remaining from the eaves to the second floor window sill, gradually eroding until nonexistent towards the grade.

Due to the softness of the mortar and deep erosion of the mortar joints, water has undoubtedly easy access to the interior. The second floor is more protected by the eaves and therefore the stucco is less deteriorated, the first floor condition is further aggravated by having the plaster adhered directly to the stone wall at the interior.

The severe erosion of the stone joints occurs at grade level up to 18" above grade.

The southwest gable elevation is nearly completely eroded of stucco with the exception of protected areas under the projecting stones at eave level, and stucco on the first floor level that was probably covered at some point (as evidenced by vertical gaps between the panels where wood studs were probably attached). The panels are in the process of detaching from the wall as moisture enters from the top and along the sides. The paint/whitewash exterior surface slows outward migration of the moisture, allowing it to deteriorate the stucco at the point of attachment. There are various holes in the wall, several which appear to have been the result of inserted wood members. At grade level, the stucco has been completely eroded.

Where the stucco is absent, the stone work behind has been exposed to the weather, resulting in deep erosion of the setting bed, often several inches in depth.

The southeast elevation has approx. 75% of the stucco visible. The lower band of approx. 5 feet is completely free of stucco, with the stone joints deeply eroded. The southeast elevation appears to have the sole remaining section of stucco that depicts the coursing of the historic scored stone pattern. Closer inspection reveals evidence of white paint over the entire surface, with a yellow color outlining the joint itself. The scored joint has been tooled to a slight recess, the pressure slightly compressing the grains of sand [approx. 1/8" wide, coursing approx. 12", width of blocks undeterminable as no vertical joint was visible].

RECOMMENDATIONS

#7

The new stucco should be re-applied to provide a continuous water barrier as originally intended. With the exception of the extant coursing, it is not recommended to undertake an extensive conservation program to reattach the existing stucco that has delaminated. Securely attached stucco should remain, with the removal of deteriorated or delaminating stucco to allow repointing of the wall prior to the application of new stucco and patching [See Outline Specifications for stucco mixes].

The historical value of the stucco along the first floor southwest elevation has not yet been determined by the Park staff. The integrity of the plaster panels and framing pattern suggest a recent protected covering. Prior to the establishment of a stabilization/conservation program, documentation should confirm the historical significance. The beam pockets should not be filled-in until documentation and assessment are complete. If they are of historical value, a plug of treated wood section may be preferable to filling with mortar.

The stone wall should be repointed, leaving a minimum joint depth of 5/8" to allow keying of the new stucco.

The projecting stones should be documented and their purpose established prior to resurfacing with stucco.

#5

Removal of the Portland cement-rich stucco would be beneficial to the integrity of the

architecture and probably contributed to the conservation of the building. Aside from the cost factor, the potential negative impact from damage to the stonework from removal of the stucco would not be visible after the application of the replacement stucco. Architecturally, the opportunity to establish an accurate and geometrically precise representation of the scored imitation stone pattern would be desirable. In addition to aiding in the conservation of the building, a lime-rich stucco would allow moisture from within the wall to migrate to the exterior more readily. The flexibility of the lime-rich stucco also provides a greater capacity for accommodating building movement and self-sealing of hairline cracks.

BRICK MASONRY - EXISTING CONDITIONS

#5

Because there appears to be no major areas of large-scale spalling or efflorescence, the inconsistent quality of the brick (evidenced by different color and surface finish) most likely accounts for the sporadic spalling.

Northeast facade: stepped crack over north second storey window head. Minor cracking between sill and head of north windows. Contemporary extension of the central opening on the second floor for a door. Along the gable slope, there are several missing and/or dislocated brick units.

Spalling and missing brick units and eroded mortar joints at false chimney.

RECOMMENDATIONS

#5

Replace missing brick units at sloping gable ends, mortar loose units, and assure a weather-tight enclosure with the roof edge. If there is a gap between the masonry edge and roof sheathing, a backer rod and sealant should be applied deep in the recess to minimize the visual impact.

A selective repointing program of the masonry with a lime-based mortar -which is softer than the surrounding brick- should be initiated. The mix is included in this report.

The existing cracks in the brick should be monitored for future movement. An assessment by a structural engineer for the interior should include the exterior walls.

MASONRY STRUCTURAL - EXISTING CONDITIONS

#7

Constructed in c.1838, #7 was reduced in width as Potomac Street was widened in c.1856, which resulted in a new facade. The northeast elevation dates to this period, as well as #5. Presently, the c.1856 northeast elevation of #7 appears to be separating from the c.1838 main structure. The northwest elevation has a nearly continuous vertical crack from the eave to grade level, approximately 21 inches from the edge of the facade the width varying from 1/4" to over

1". The southeast elevation crack is nearly continuous from eave to base, but of a narrower dimension, varying from hairline to approx. 1/2". Several stones are sheared from the stress of the movement. At the interior, the crack is also visible approx. 8 inches from the inside corner on the first floor. The second floor crack varies from 1/8" - 3/16" at the north wall to 1/16" - 1/8" at the south wall. The facade added in c.1856 was either not tied or inadequately tied-in to the original wall.

#5
There is a crack between #5 main structure and the annex, either from a combination of differential settlement and/or lack of adequate tieing-in of the two structures.

RECOMMENDATIONS
#5
Monitor separation/movement between main structure and annex to determine if movement is active. Remedial foundation work may be required. Install backer rod and sealant at joint to provide building control joint.

#7
Monitor movement of facade in order to determine the extent of intervention required to tie facade to main structure. A temporary mortar patch will keep water from entering the wall.

STRUCTURAL FRAMING - EXISTING CONDITIONS
#5
Second floor: sagging floor is causing diagonal cracks at the interior partition running northeast-southwest.

#7
Second floor: sagging with contemporary sistering of joists.

There is an inconsistent alignment of steel angle lintels at the second floor window heads [up to 3/4" beyond face of brick wall, or 1/4" beyond face of plaster] installed during the contemporary window replacement.

RECOMMENDATIONS
#5, #7
Evaluate load capacity of existing joists and reinforce if necessary, as per structural engineer's report.

The misalignment of steel lintel angles will have an impact on any finish plaster work.

MISCELLANEOUS - EXISTING CONDITIONS
#7

There is an iron bar on the upper right hand corner of the southeast elevation, embedded in the wall and parallel to the surface, of undetermined purpose. There is also an iron bar under the second and third diagonal bricks from the southwest at the cornice level.

The end grain of the five roof rafters are visible at the brick cornice on the southeast elevation of #7.

RECOMMENDATIONS
#7
The iron bars should be documented and treated for corrosion resistance if left in place.

Treat end grain of exposed rafters to prevent dry rot, moisture penetration, or insect infestation.

HVAC - EXISTING CONDITIONS
#16A
Presently, the air-conditioning unit is draining water onto the poured concrete floor (which slopes to the northwest wall), with the water exiting through a hole formed by the removal of brick units. The constant moisture at the base of the north and partial east wall has resulted in heavy biological staining and active growth. In addition, the constant dripping from the hole has created a small pit at the grade level, with possible subsidence or undermining of the foundation. The brick wall contains a number of spalling brick units.

The air intake of the HVAC unit is located on the south end of the original slate roof of #16A. The circuitous path for fresh air to be drawn into the system involves traveling up the winding stair one flight from the covered deck. The intake screen is partially obscured by accumulated dirt and debris.

RECOMMENDATIONS
#16A
Disposal of the water in an appropriate manner is essential to the conservation of the structure. The installation of a water pan or the installation of a more efficient means of collecting dripping water from the unit. Water must be isolated from the masonry structure. Verify adequate vibration isolating supports of the HVAC unit to minimize damage to structure (natural frequency of isolator should be 1/3 - 1/5 of southwest vibration frequency of the equipment). Vibration isolators should be designed for the load of the equipment.

The HVAC unit should be evaluated for effectiveness, including but not limited to, rerouting air to the intake, cleaning the screen, and energy efficiency.

HVAC - GENERAL RECOMMENDATIONS
#5, #7
Prior to the installation of an HVAC system in #5 and #7, monitoring of a full seasonal cycle should be completed in order to accurately calculate the capabilities of a new mechanical HVAC

system.

The danger to the historic fabric from fluctuations in temperature or humidity would be primarily related to condensation on finish surfaces, condensation within the walls, and movement of the wood lath and framing which would disrupt the plaster.

Generally, the most favorable conditions for preserving building interiors occur under particular temperature and relative humidity ranges. For temperature, an ideal range is 40 to 75 degrees F, with a daily drift kept below #5 degrees. For human comfort, a range of 65 to 72 degrees F is generally accepted. If possible, the upper limit should be kept as low as comfortable. Options include dressing warmly and using space heaters. The ideal stable point for relative humidity is 40% to 65%, with fluctuations kept below 3% in one day, and a slow 10% drift from summer to winter.

During the winter, heating should be kept to a minimum, avoiding rapid heating during hours of visitation with cooling during off periods.

The use of natural ventilation is encouraged if conscientious monitoring of conditions can be assured. Warm moist air during the spring should not be introduced into the cold winter air and surfaces of the structure. Generally, windows should be opened only during periods of warm, dry air. Natural ventilation will also benefit the interior environment by reducing the humidity levels and preventing the growth of mold.

Due to the difficulty of assuring a tight building envelope, heating should be considered as the primary means of reducing the relative humidity over the use of dehumidifiers. Heat can be used for much of the year for dehumidification purposes. The heating system should be a humidistatically controlled heating system.

GENERAL CONSERVATION POLICY

Generally, as moisture is the prime cause of deterioration to historic finishes, all attempts at correcting these attendant problems should assume the highest priority in the conservation plan for the historic plaster.

Mortar:

Selective repointing only of eroded joints is recommended. Joints that are performing their duty should remain, especially considering the complexity of matching the composition of the historic mortar.

Stucco:

Complete removal only of Portland cement-rich stucco on #5 first floor.
Re-attachment of stucco on southeast wall of #7 to preserve remaining example of scored stone pattern.
Other locations: removal of large areas of detached stucco, repointing of stone below, maintaining minimum 3/8" space for keying of patch/replacement stucco, and patching/replacement to complete the surface as originally intended,

Plaster:

First floor: An overall consolidation/stabilization program may be prohibitively costly considering the advanced stage of deterioration. Considering that very little of the surface finish remains on the first floors, the value of preserving the base coats is limited. For interpretive purposes, a representative section of solid plaster may be conserved.

#5, #7

Second floor and attic: A large proportion of the plaster has been damaged from previous water leaks, installation of replacement windows, removal of baseboards and trim, and building movement. Moisture laden air, wetted exterior walls and human habitation have added to the damage. In consideration of potential paint stratigraphic information and uncovered historic graffiti, it is recommended to stabilize the existing plaster. After all building envelope and structural deficiencies have been managed, a stabilization program for the plaster would involve assessing the quantity of loose and deteriorated plaster and selective reattachment of sections that are threatening to damage adjacent sound sections.

RECOMMENDATIONS

Immediate:

-Extend and redirect downspouts away from building
-Remove water from #5 crawl space

Short-term:

-repair/replace faulty /deteriorated flashing
-apply backer rod and sealant at window openings
-open windows during dry periods for ventilation

Long-term:

-add mechanical ventilation and sump pump at #5 & #7 basement
-remove Portland cement-rich stucco at #5, replace with lime-rich stucco, scored to match #7
-regrade for positive slope away from building

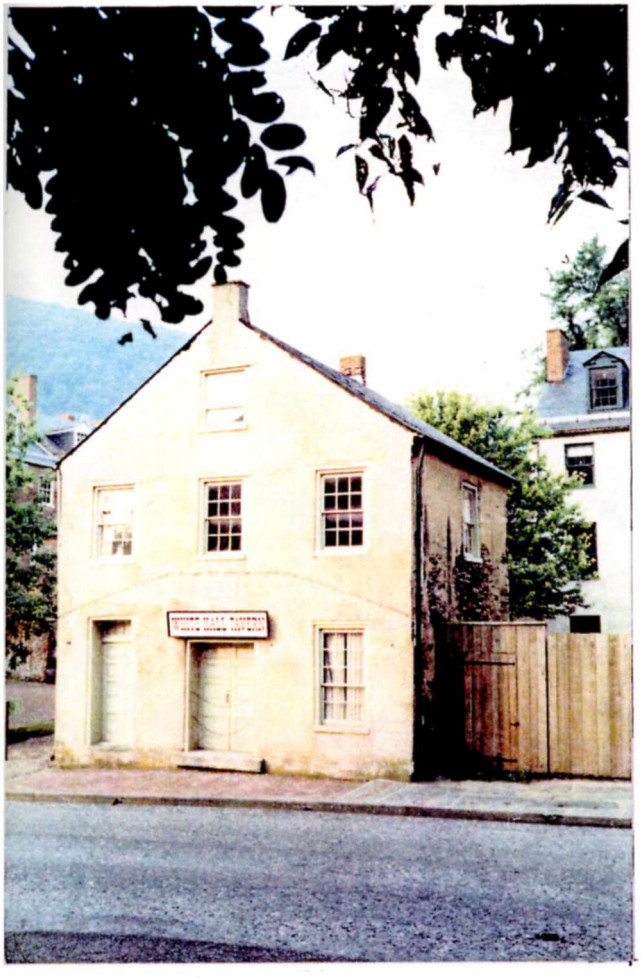
Contingent on other conditions:

-sidewalk/HC access rehab/verify slope away from buildings
-monitoring of railroad for vibration
-monitoring of water table
-moisture/temp monitoring of int/ext
-installation of exhibit space etc

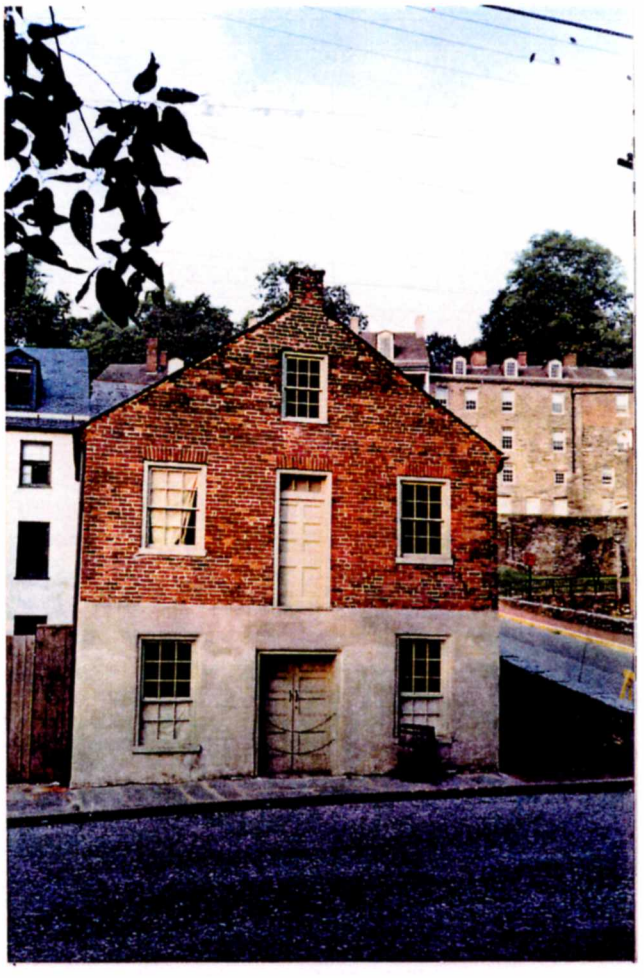
Recommendations based on further study/monitoring:

-installation of damp-proof course
-coordination of work to minimize damage to surface finishes

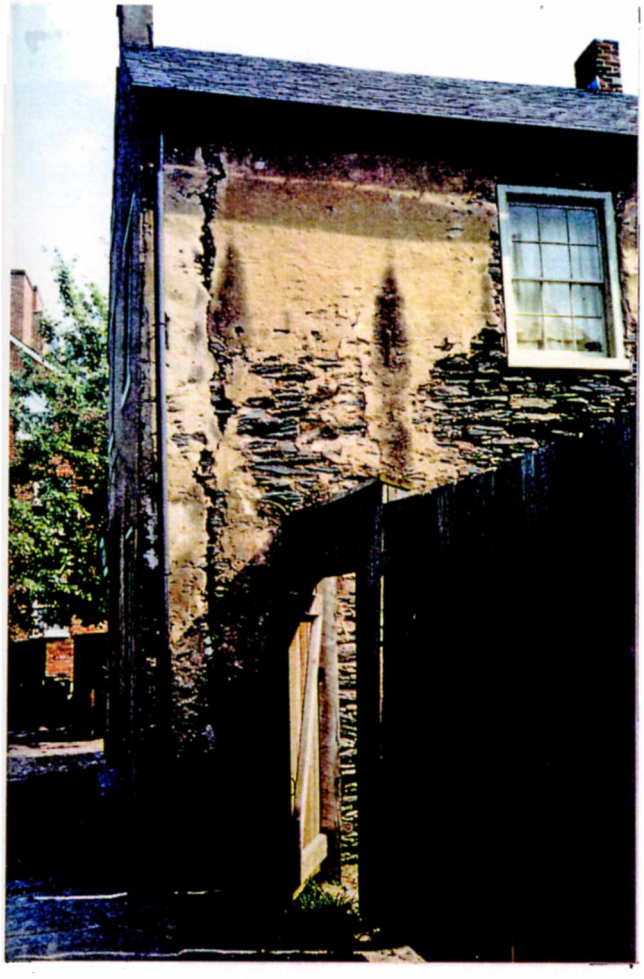
Photographs



1
NORTHEAST ELEVATION-Bldg #7
View from Potomac Street
Stucco over stone.



2
NORTHEAST ELEVATION-Bldg #5
View from Potomac Street
Stucco over stone at first
floor, exposed brick above.



3
NORTHWEST ELEVATION-Bldg #7
Vertical Crack Separating c.1850
Facade from c.1838 Structure
Crack penetrates to the
interior of the stone wall.



4
NORTHWEST ELEVATION-Bldg #7
Detail of Vertical Crack
Width of crack at exterior appears
to vary from 1" to 2".



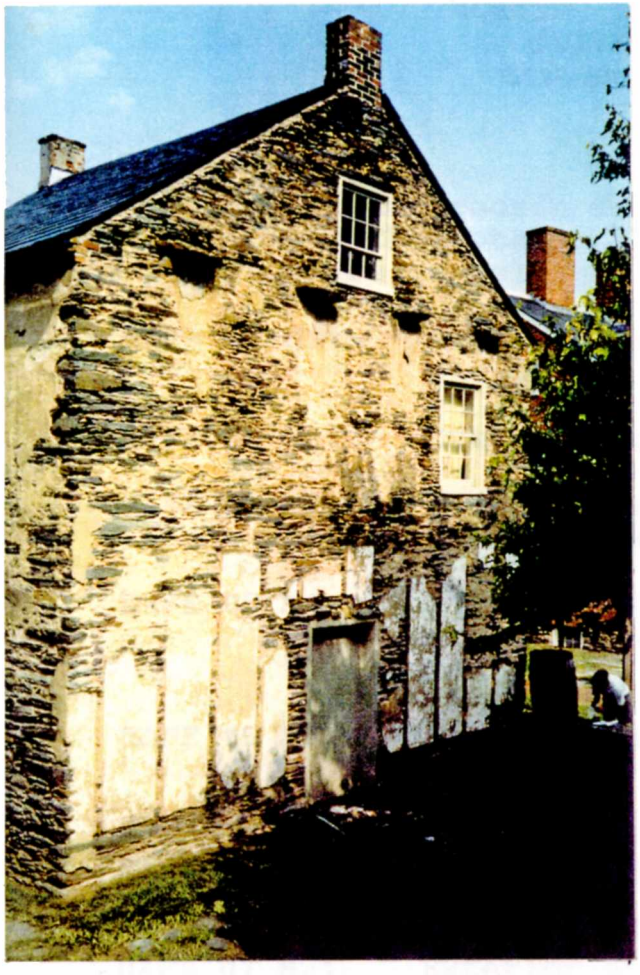
5
SOUTHEAST ELEVATION-Bldg #7
Vertical Crack Separating c.1850
Facade from c.1838 Structure
Crack does not appear continuous
as northwest elevation crack.



6
SOUTHEAST ELEVATION-Bldg #7
Detail of Vertical Crack
Crack passes through joints
and stones.



7
SECOND FLOOR-Bldg #7
Detail of Interior Vertical
Crack on Plaster over Brick
Width of crack at interior
varies from 1/16" to 3/8".



8
SOUTHWEST ELEVATION-Bldg #7
Deteriorated Stucco over Stone
Stucco panels from assumed
previous covered area.



9
SOUTHWEST ELEVATION-Bldg #7
Detail of Stucco Panels
Moisture is threatening the attachment
of the panels to the stone wall.

* * *

MORTAR, PLASTER, STUCCO
BUILDINGS 5 & 7
Harper's Ferry NHP

* * *

The ten samples chosen for analysis reflect a representative cross-section of the total number of samples taken from Buildings 5 and 7. They are as follows:

HAFE 05 M1: Exterior mortar, second floor, northeast elevation, south of window, below sill

HAFE 05 M2: Exterior mortar, adjacent to attic window

HAFE 05 M3: Interior plaster, first floor, front room, southeast wall, center bottom

HAFE 05 M4: Interior plaster, first floor, front room, northeast wall, top left (northwest) of entry door

HAFE 05 M5: Interior plaster, second floor

HAFE 07 M1: Exterior stucco, northeast elevation, south of doorway

HAFE 07 M2: Exterior stucco, southwest elevation, surface coat

HAFE 07 M3: Exterior stucco, northwest elevation, second floor, east of window

HAFE 07 M4: Interior plaster, first floor, northeast wall, lower left of door

HAFE 07 M5: Interior plaster, first floor, northeast corner, west of vertical crack (pre-1856?)

General findings of the analysis include the following:

-All samples are lime-based; lime mortar, lime stucco, and plaster. Indications of a lime (vs. cement) base include: highly visible and plentiful blaps of unmixed lime through out the mixes; vigorous, long-lasting reaction to HCL application; and the generally soft, crumbly consistency of the samples. Only the finish coat stucco on Building 7 is slightly hard, and even this could be broken by hand with some pressure.

-The samples are very similar in mix ratio, sands, and fines regardless of location and function (i.e. mortar, stucco, and plaster).

-Analysis of the samples revealed that all are quite similar to one another in ratio of components, appearance of sand, and appearance of fines. The percentage weights of sands, fines, and acid solubles display unusual consistencies from sample to sample and from Building 5 to 7. For example, samples of Building 5 consist of:

65-77% sands
5-12% fines
19-25% acid solubles.

Samples of Building 7 consist of:

62-70% sands
9-18% fines
19-23% acid solubles.

The ranges of the percentage weights between components are therefore relatively narrow, and the percentage weights between buildings are almost identical. This seems to indicate that similar mixes were used across the board for stucco, mortar, and plaster in both buildings.

-Although it is impossible to recreate the original mixes it is possible to extrapolate the mix components from analysis data. It appears that the mortar, stucco, and plaster for both buildings were comprised of approximately 10% fines, 20% acid solubles, and 70% sand.

-Considering that the fines and acid solubles together comprise the binder (10% + 20%), the mix seems to have been a ratio of 1 part binder to roughly 2 parts aggregate (30:70).

-In addition, if one interprets the fines as cement, the acid solubles as lime and the sand as aggregate (as modern mixes call for), the historic mix ratio could be broken down to 1 part cement: 2 parts lime: 7 parts sand. *[Caution: interpret loosely because all samples had a significant calcite component that was digested by HCL application. Therefore, some of the aggregate was actually calculated as acid solubles because they were dissolved.]*

-Regardless of actual recipe, the data from the analysis - showing an approximate composition of 10% fines, 20% acid solubles, and 70% sands - clearly indicates that the mortar, plaster, and stucco all were high-end sand mixes. Sand heavy mixes would be less susceptible to shrinkage and more flexible, but also harder to work and structurally weaker.

Because three functions are represented by the samples (mortar, stucco, plaster), it is likely that water was the variable in the mix. For example, stucco may have been wetter and the mortar dryer, and the plaster wettest. Or something.

-All samples shared the same sand source. The sand source is probably the bed of the Shenandoah River. Sand taken from the river during our site visit compares favorably under the microscope and in the sieving process to historic sands.

-The sand is yellow brown, medium coarse with sub-angular granules and a significant calcite (shell) component. Other components include: white, yellow, clear, and rose quartz; green serpentine stone; and a brownish-gold material that crumbled with pressure (hard-packed mud or sediment?).

-The sands of the stucco and the mortar seem to be slightly finer than those of the plaster. Evidence was borne out in grading and batching the sands with sieves. *[Finer sands may be due to excess grinding in the analysis process. However, I thought I may have been over zealous with the pestle, so I re-ran 3 stucco samples and subjected them to less grinding - and still the sands are finer.]*

-The fines of all the samples are tan brown and were matched to the Munsell Color Soil Chart. All samples are very close in Munsell value. All fines of Building 5 samples matched the 10YR 6/4 color chip. All fines of Building 7 samples matched the 10YR 7/4 color chip. The only exception was the fines of the exterior stucco of the front (HAFE 07 M1) which is slightly lighter than other fines - 10YR 7/2.

-All samples are generally well-mixed. The presence of unmixed lime is not unusual. Consultation with a fellow conservator (P. Albee), assured that the amount of pure lime chunks found in the HAFE samples is not out of the ordinary and would have had little effect on the performance of the material.

-No hair or other binding aids were found in the plaster samples with the exception of HAFE 05 M4 which contained just a few pale animal hairs.

-It is unusual to find such consistent percentage weights and visual similarities between different masonry mediums and between different buildings. The results indicate that the exterior stucco, interior plaster, and even the mortar may have been mixed and applied at the same time. Because Building 5 was constructed and Building 7 altered in 1856, it is possible that the samples here represent 1856 work. Although these assumptions are contrary to the currently

acknowledged construction dates of the buildings, the evidence is compelling.

Recommended mixes should be determined after architect's input. Not sure that the historic mixes themselves were actually that detrimental to the life of the material, although mixes with less sand should be considered.

ASTM STANDARDS

TYPE N	1:1:4 1/2 to 6	(1 + 1 x 2-1/4 to 3)
TYPE O	1:2:6 3/4 to 9	
TYPE S	2:1:6 3/4 to 9	

-May consider a Type O mortar for pointing.

-May consider a Type N mortar for stucco.

-For plaster, stucco, and mortar should recommend taking hydrated lime and soak overnight in barrel to create a lime putty to work with.

Sample: Shenandoah River sand
Weight: 32.70g

Sieve No.	Diam. (mm)	Wt. retained	% Retained	% Passing
1	1mm	3.44g	10.52%	89.48%
2	.5mm	20.32g	62.14	27.34
3	60 mesh	7.04g	21.53	5.81
4	140 mesh	1.68g	5.14	.67
5	300 mesh	.093g	.3	0
Pan	-	.004	-	-

Sample: **HAFE 07 M3** (exterior stucco, northwest wall)
Weight: 22.70g

Sieve No.	Diam. (mm)	Wt. retained	% Retained	% Passing
1	1mm	.15g	.60%	99.4%
2	.5mm	1.18g	5.2	94.2
3	60 mesh	7.39g	32.5	61.7
4	140 mesh	11.70g	51.5	10.2
5	300 mesh	2.25g	9.9	.30
Pan	-	.023	-	-

Sample: **HAFE 07 M4**, interior plaster, northeast wall
Weight: 16.32g

Sieve No.	Diam. (mm)	Wt. retained	% Retained	% Passing
1	1mm	.96g	5.8%	94.2%
2	.5mm	8.73g	53.5	40.7
3	60 mesh	4.73g	28.9	11.8
4	140 mesh	1.41g	8.6	3.2
5	300 mesh	.45g	2.76	.5
Pan	-	.025	-	-

Sample: **HAFE 05 M4**, interior plaster, northeast wall
Weight: 22.96g

Sieve No.	Diam. (mm)	Wt. retained	% Retained	% Passing
1	1mm	1.15g	5.0%	95.0%
2	.5mm	13.36g	58.1	36.9
3	60 mesh	6.53g	28.4	8.5
4	140 mesh	1.55g	6.7	1.8
5	300 mesh	.32g	1.4	.4
Pan	-	.02	-	-

70 - sand
20 - acid soluble
10 - fines

acid soluble + fines = binder

70 - aggregate
30 - binder

MIX - 1:2

fines	could be cement
acid sol.	could be lime
sand	is aggregate

1:2:7

Hydraulic lime - limestone with lots of impurities (brown color may suggest hydraulic lime). Only one place in U.S. to get - Virginia - Rosedale.

May also be natural cement or clay. May not be able to specifiy hydraulic lime but can

Appendix G: Civil War Graffiti Analysis:

Greg Byrne and Al Levitan, Harpers Ferry Center-Division of Conservation, Graffiti Survey Building #5, Harpers Ferry Historical Park. October 1993.

The second and third floors of Building 5 contain Civil War era graffiti. For the completion of the Historic Structure Report (HSR) for this structure and for Park records, Harpers Ferry Park enlisted the services of Greg Byrne and Al Levitan of Harpers Ferry Center, Division of Conservation to survey the graffiti and its plaster substrate in Building 5. The project was completed in the summer of 1993 and the findings were published in October 1993.

GRAFFITI SURVEY

BUILDING #5

HARPERS FERRY NATIONAL

HISTORICAL PARK

October 1993
Harpers Ferry Center
Division of Conservation
Greg Byrne
Alan Levitan

INTRODUCTION

The Division of Conservation was asked to assist Harpers Ferry National Historical Park in revealing and documenting graffiti in Building #5 and, as time permitted, to develop methods for stabilizing the deteriorated plaster. Civil War era graffiti is visible in a few isolated areas on the second floor where the overlying paint has flaked off and in the third floor garret where it is covered with a thin wash coat, making it, for the most part, unreadable..

As the project progressed, it became clear that the amount of graffiti on the plaster walls of building #5 was greater than anticipated, and that all aspects of the work anticipated could not be performed in the allotted 100 hours. It was agreed therefore, that DOC staff would concentrate on revealing and documenting all the graffiti on the third floor garret walls and on revealing selected areas on the second floor to assess how much graffiti exists and what would be required to preserve it. The techniques developed for documenting the graffiti in these areas can be used for further work in this building and others, should the park decide it is warranted.

SOLUBILITY TESTING

As the first step in revealing the graffiti, attempts were made to remove the overlying paint, testing a number of different solvents. A representative sample of plaster, which had become dislodged from the ceiling of the garret, was used as a test piece. The objective of the test was to remove the overlying coating without disturbing the plaster surface. The test included polar and non-polar solvents, hydrocarbons, and ketones, as well as dilute acids.

METHOD

The method used to determine solubility of the over-paint included the following steps:

- swab the selected area with solvent
- allow the solvent to remain on the surface for approximately three minutes or until it begins to evaporate
- remove the solvent and solute with a cotton tipped applicator
- evaluate solvent efficiency by examining both the swab and plaster surface under magnification

Solvents tested:

- distilled water
- distilled water with enzymes
- denatured alcohol
- acetone
- mineral spirits
- xylene
- M-pyrol
- acetic acid 5%
- acetic acid 10%

RESULTS

The tests indicated that the overlying film is an unpigmented, dilute lime wash (calcium hydroxide) that does not seem to have an organic binder. With the exception of the acids, the solvents tested removed soils on the surface to varying degrees, but did not remove the lime wash itself. The acids did disturb and could potentially remove the lime wash. Difficulty in controlling the action of the acid, and the possibility of its removing the underlying graffiti, precluded its use in this application.

The original intent of the solubility test was to develop a means to safely remove the lime wash as to reveal the graffiti bearing plaster strata. None of the solvents tested were effective in doing this; however the test did indirectly yield another method for revealing the inscriptions.

It was found that swabbing the whitewashed surface with distilled water rendered it somewhat transparent. The application of distilled water was then attempted on a larger scale in graffiti-bearing areas by coating the surface with a spray mist. This method caused the whitewash

layer to become transparent enough that the graffiti could be transcribed and, in many instances, photographed successfully.

When the distilled water evaporated the whitewash once again became translucent. This thin coat has aided in the preservation of the graffiti by protecting it from dirt, light, insect accretions, and, to an extent, moisture.

EXAMINATION AND DOCUMENTATION OF THE THIRD FLOOR GARRET

Having arrived at a technique for revealing the graffiti, albeit temporarily, by misting the lime wash with distilled water, the next step was to document the inscriptions.

The sloped ceiling of the third floor garret was divided into sections 60 cm square. This size seemed appropriate for both photographic documentation and sketching. The grid was made with 1/4" wide plastic tape. It was affixed to the plaster surface with push pins at the ends and wax at intermediate locations. Each square was given a discreet number and letter designation. The squares were numbered 1-9 on the south wall and 10-18 on the north wall. The numbering began on the east side. From the top of the sloped ceiling down to the juncture with the top of the knee wall, the squares were designated "A", "B" and "C". The "C" row was 30 cm in height. Graffiti was found in 30 of the 54 squares. Each square was given a number regardless of the presence of graffiti. Further, more intensive, investigation may reveal inscriptions in other blocks.

After the plaster surface was cleaned of superficial dirt and accretions, such as mud dauber nests, by brushing and vacuuming, the graffiti was examined under ultraviolet and high intensity incandescent light sources, as well as an infrared viewer. The ultraviolet light was successful in bringing out some of the inscriptions, however, the infrared light did not help at all in revealing the inscriptions. The most effective light source proved to be the high intensity incandescent lamp moved over the surface at various angles and distances.

PHOTOGRAPHY

Each block was photographed with a 35mm camera and ASA 400 Ektachrome slide film. The light source was a combination of ambient light from the two small garret windows and one incandescent lamp. The camera was hand held, therefore exposure time was limited. The amount and direction of light varied from one block to another depending on the amount of ambient light and the distance and angle of the single incandescent lamp. The quality of the photographs and the amount of detail each records varied considerably. Detailed photographs of some of the more intricate drawings and inscriptions were made. In general, these were more successful than the photographs of the entire 60 cm block. Test photographs of the first three blocks were taken with infrared film in the hopes that it could record additional inscriptions not visible to the unaided eye. The infrared photographs did not aid in revealing additional graffiti and the use of this film was discontinued.

Re-photographing the garret, using a tripod to enable longer exposure time, photographic lights, and a smaller grid, may be more successful in documenting the graffiti. Unfortunately time constraints precluded this being done initially. Photographing with infrared film under improved conditions may also be worthwhile since ambient and film temperature affect the image quality. High temperatures during exposure and before developing severely degrade the image. The day on which the infrared photographs were taken was extremely hot and this may have affected the resulting images.

TRANSCRIPTION

Each square was misted with distilled water and then photographed and transcribed onto graph paper 30 cm square. Considerably more detail could be gathered by visually examining the block under different light levels and angles than is evident in the photographs. Effort was made to accurately depict handwriting, drawings, relative size, and relative location within the block, however, the drawings are not made precisely to scale. The emphasis was placed on transcribing the informational content. In instances where letters or words were not decipherable, a question mark in parentheses was placed over the areas.

Sketches were made of the graffiti found on the east and west gable end walls. Much of the plaster on these walls has been disturbed or lost and only a limited amount of graffiti was revealed. These walls were not gridded into separate sections. Graffiti was found on the wood trim above the stairwell door. It could not be deciphered using the techniques and light sources we had available.

EXAMINATION AND DOCUMENTATION OF SECOND FLOOR WALLS

The second floor rooms in Building #5 showed hints of inscriptions in small areas where surface coatings had flaked off the graffiti-bearing layer of plaster. Unlike the third floor, which had received only a single coat of whitewash since the Civil War period, the more heavily used second floor had received numerous coats of whitewash and opaque paint.

The scope of work on the second floor was to develop a method for revealing the graffiti and to ascertain how much graffiti existed under the opaque layers. The technique used to survey the graffiti was to expose an area 60 cm square on selected walls of each room on the second floor. The block to be exposed was laid out with the center at approximately four feet, as this was thought to be the most likely location for graffiti.

METHOD

The technique used to reveal the graffiti on the south and west walls of the southeast room was to mechanically scrape off the overlying strata with a scalpel, using a mist of water as a lubricant and also as a means of bringing out the more faint inscriptions. There was relatively good cleavage between the graffiti-bearing strata and the overlying layers, possibly because a layer of grime had accumulated prior to the surface being painted. Approximately four hours was required to reveal each of the 60 cm square blocks.

The characteristics of the plaster and paint on the north wall of the southeast room was significantly different. The plaster was detached and spalling in some areas of the sample block, however, other areas were firmly attached. Magnification revealed what appeared to be six layers of calcimine paint or pigmented whitewash. The coating immediately over the graffiti-bearing layer was more heavily pigmented than the rest.

These layers did not cleave as easily from the graffiti-bearing surface as the previous sample blocks. More water was needed as the mechanical scraping progressed than was used on the other sample blocks. This sample block required about eight hours to reveal the graffiti.

The plaster and paint layers on the north wall of the northeast room were stable. A 3 cm square area was selected and the paint layers were individually removed until the graffiti-bearing layer was revealed. Under six layers, a blue strata was exposed which revealed a faint inscription when misted with distilled water. Beneath the blue strata was a thin whitewash coat and then a brown pigmented plaster strata upon which was found the Civil War era inscriptions. This sample block required about 14 hours to reveal.

Preceding from the outermost layer down, the layers were characterized as follows:

1. Blue-gray: thin pigmented wash, brushed on, irregular application, brittle
2. White: brushed on, cannot be separated from the third layer
3. Dark tan: extremely thin wash
4. White: brittle, crumbles and fractures easily
5. Dark blue-brown: crumbles easily
6. White: thick, not easily disturbed
7. Blue: extremely sensitive, easily disturbed with water(probably calcimine paint)
8. White: thin, cannot be separated from the blue strata
9. Brown: graffiti-bearing strata, durable, not easily disturbed, irregular burnished appearance.

The sample block in the southwest room was not made the full 60 cm square because the layers did not cleave and the graffiti-bearing strata could not be revealed by mechanical means. It was noted that graffiti from the 1920s and 1930s can be seen on the surface of the west wall. This later graffiti was on a paint layer uniform throughout the second floor. Figurative painting was visible on the plaster surface on the east wall of the north east room. This wall painting should be closely examined and dated if possible.

CONCLUSION AND RECOMMENDATIONS

This project documented the graffiti in the third floor garret and surveyed, through sample test blocks, the graffiti on the second floor of Building #5, HAFE. It was clear from the wealth of information found that the graffiti constitutes an important resource which should be preserved. The information can augment the history of the building and bring a sense of immediacy to its interpretation.

The paint and whitewash layers which covered the inscriptions have helped preserve them by protecting the surface from soiling and from exposure to light and moisture. Every test block exposed on the second floor revealed graffiti beneath. We can assume, therefore, that the graffiti was as widespread on the second floor as in the garret.

Mechanically revealing large areas will be time consuming and expensive. The characteristics and number of overlying strata vary considerably, and the time required to reveal the graffiti will vary as well. We estimate that carefully revealing one square foot will require 8-12 hours. Some strata cannot be removed mechanically and other techniques will be required in these areas. Alternatively, they can be left as an undisturbed resource for future generations. The historic plaster in Building #5 can be assumed to contain significant historic information.

RECOMMENDATIONS FOR FUTURE ACTION

Preserve the historic plaster by consolidating and re-securing it to the wood lath. Ensure that the consolidation does not prevent removing overlying paint and whitewash layers from the graffiti-bearing plaster.

Develop techniques to preserve the exposed graffiti.

Reveal the graffiti-bearing strata only if it is to be fully documented and preserved.

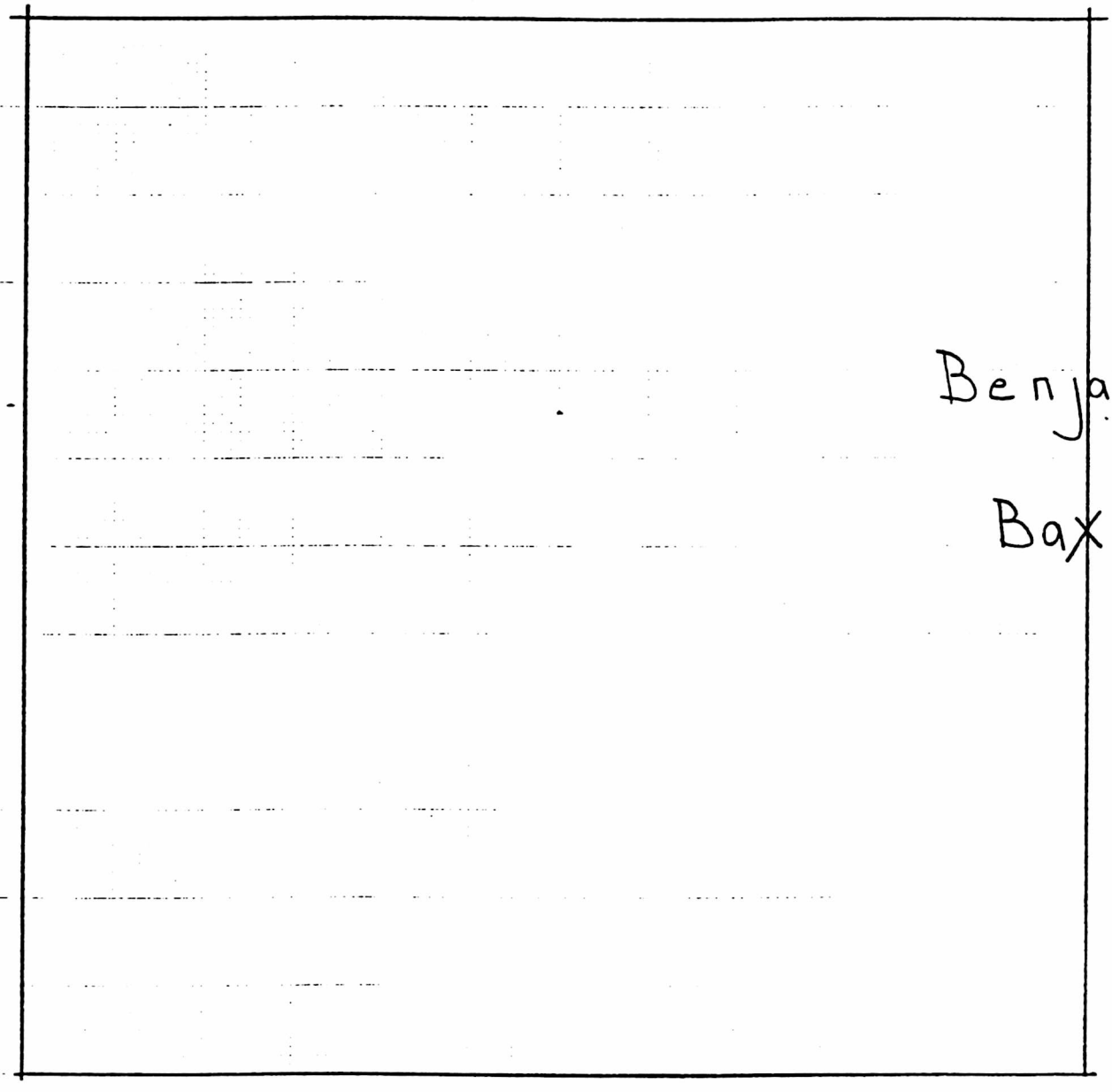
Provide the proper environmental conditions for preservation of the plaster and lath. The foremost concern is to protect against leaks and mechanical damage during construction or building restoration. Of secondary concern is to avoid over-heating the building, resulting in the desiccation of lath and plaster.

Transcriptions from South Wall

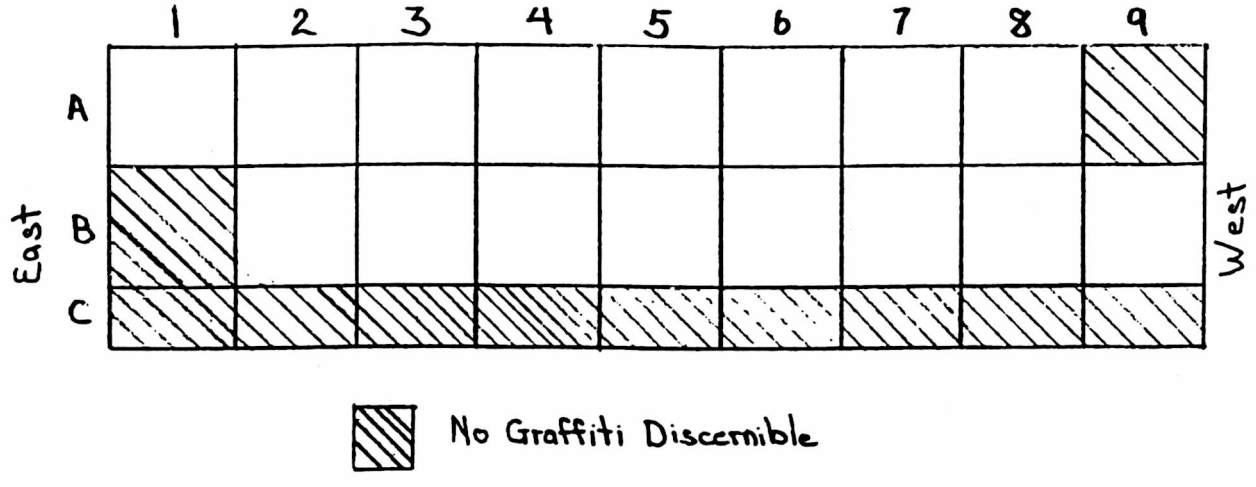
Third Floor

Building #5

1A



Bldg. 5, 3rd Floor, South Gable Wall



2A

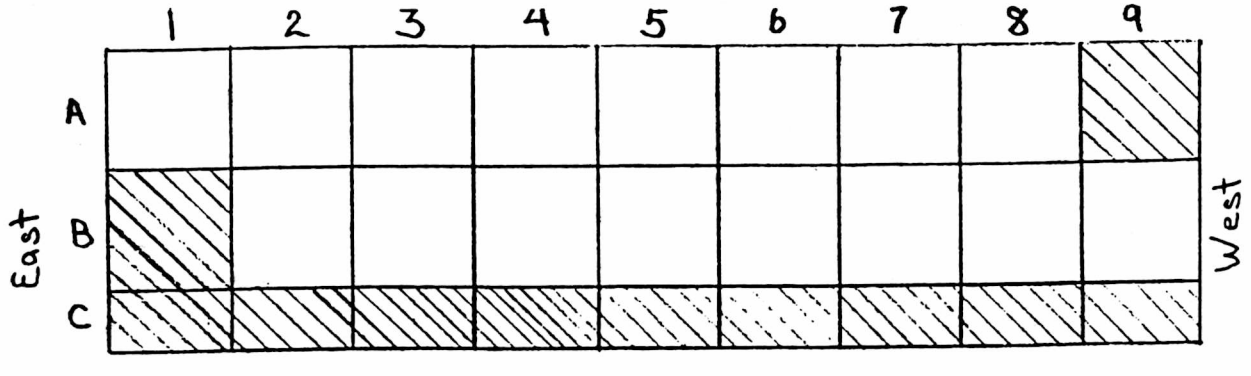
James Dougherty
Co G Baxter
(?)
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72 (?) V

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Bldg. 5, 3rd Floor, South Gable Wall

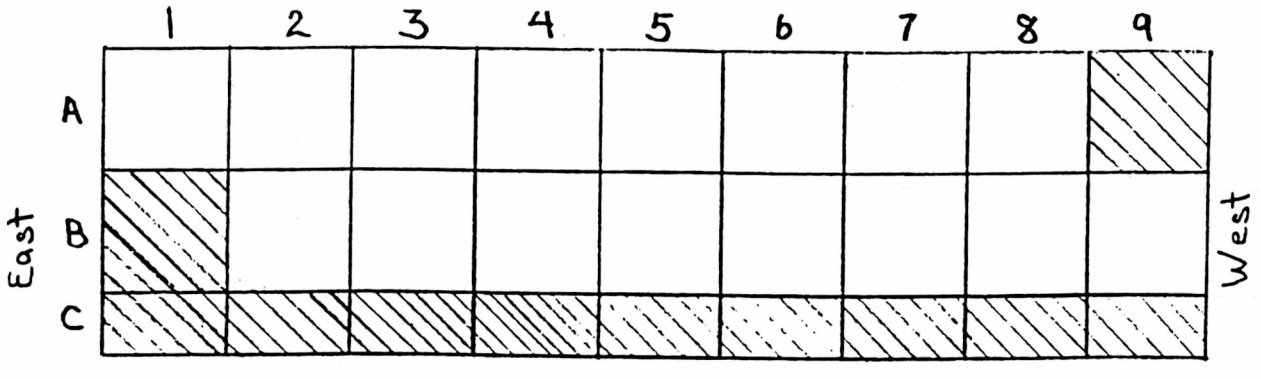


No Graffiti Discernible

2B

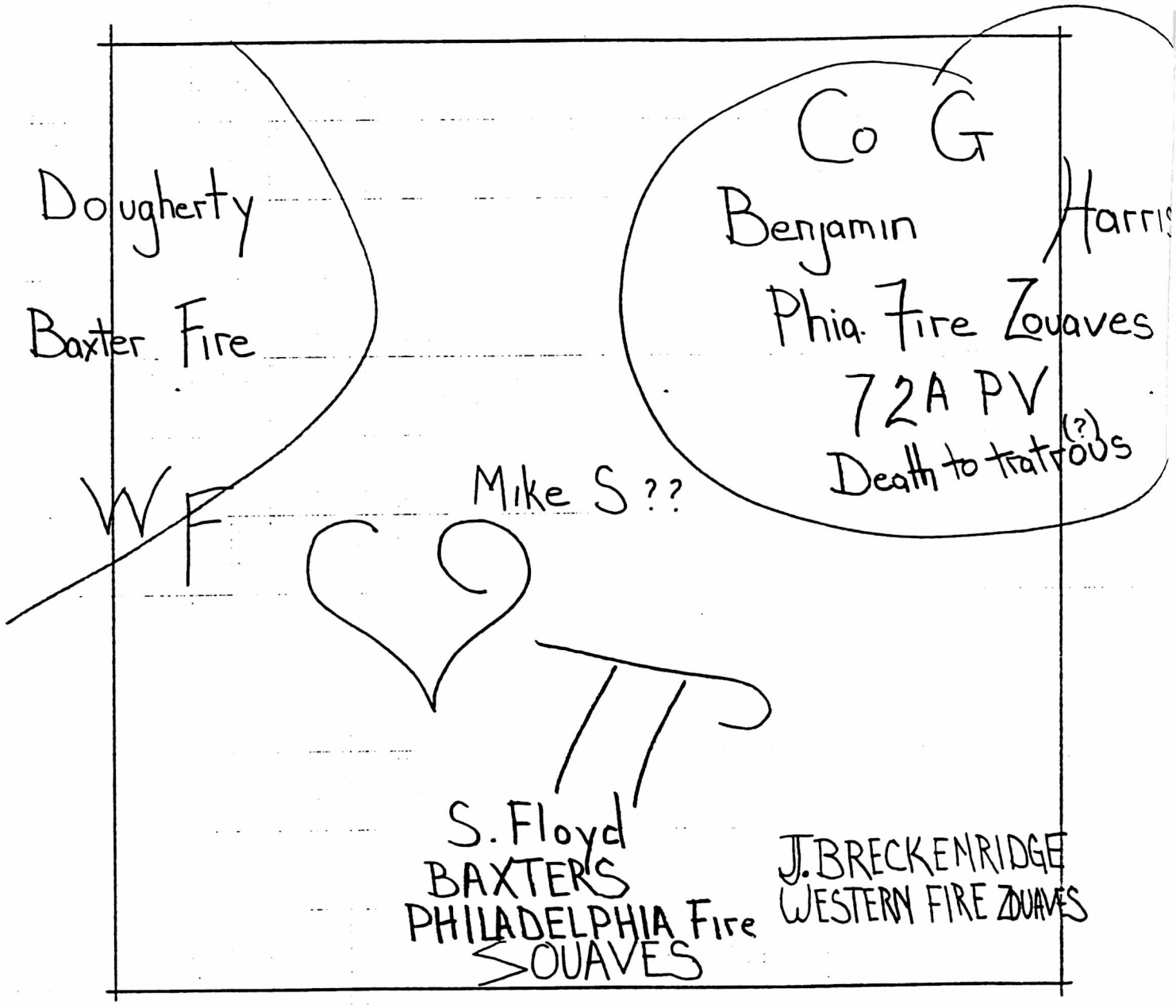
J STARR

Bldg. 5, 3rd Floor, South Gable Wall

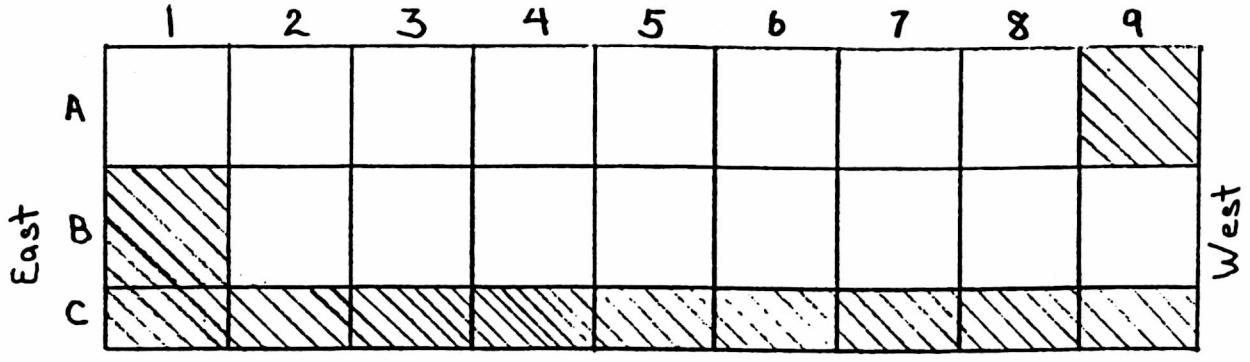


No Graffiti Discernible

3A



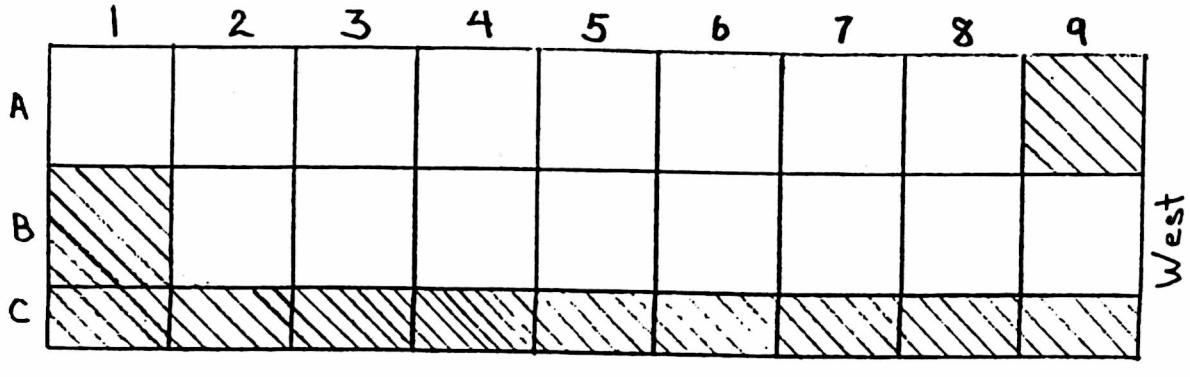
Bldg. 5, 3rd Floor, South Gable Wall



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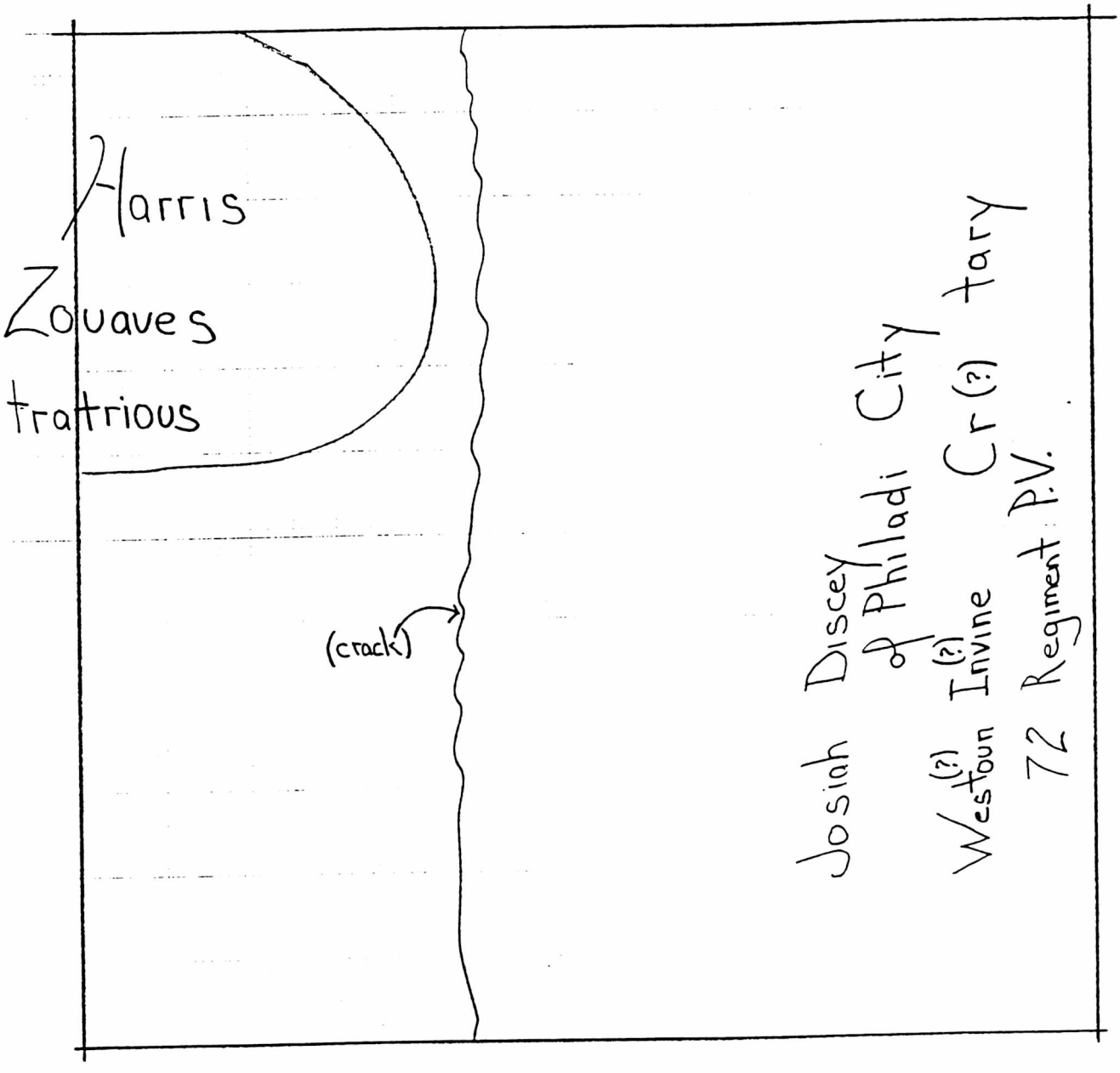
72 PV

Bldg. 5, 3rd Floor, South Gable Wall

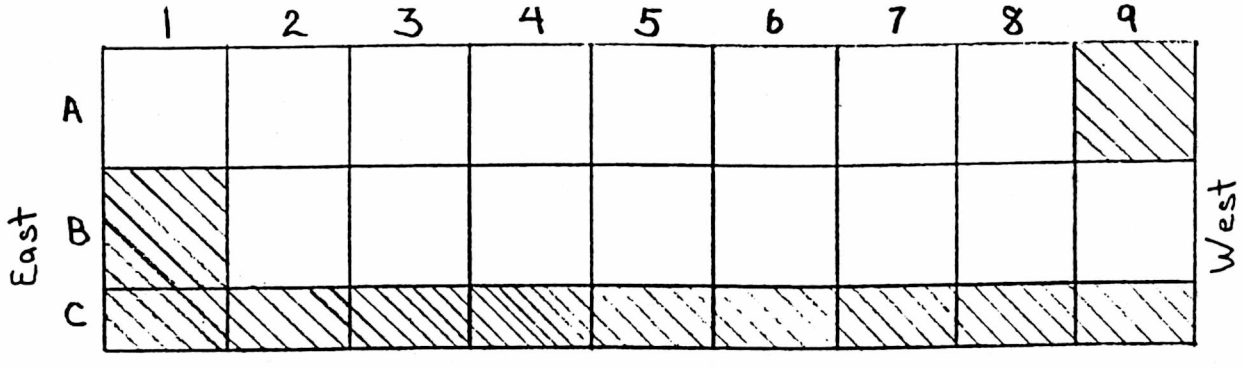


No Graffiti Discernible

4 A

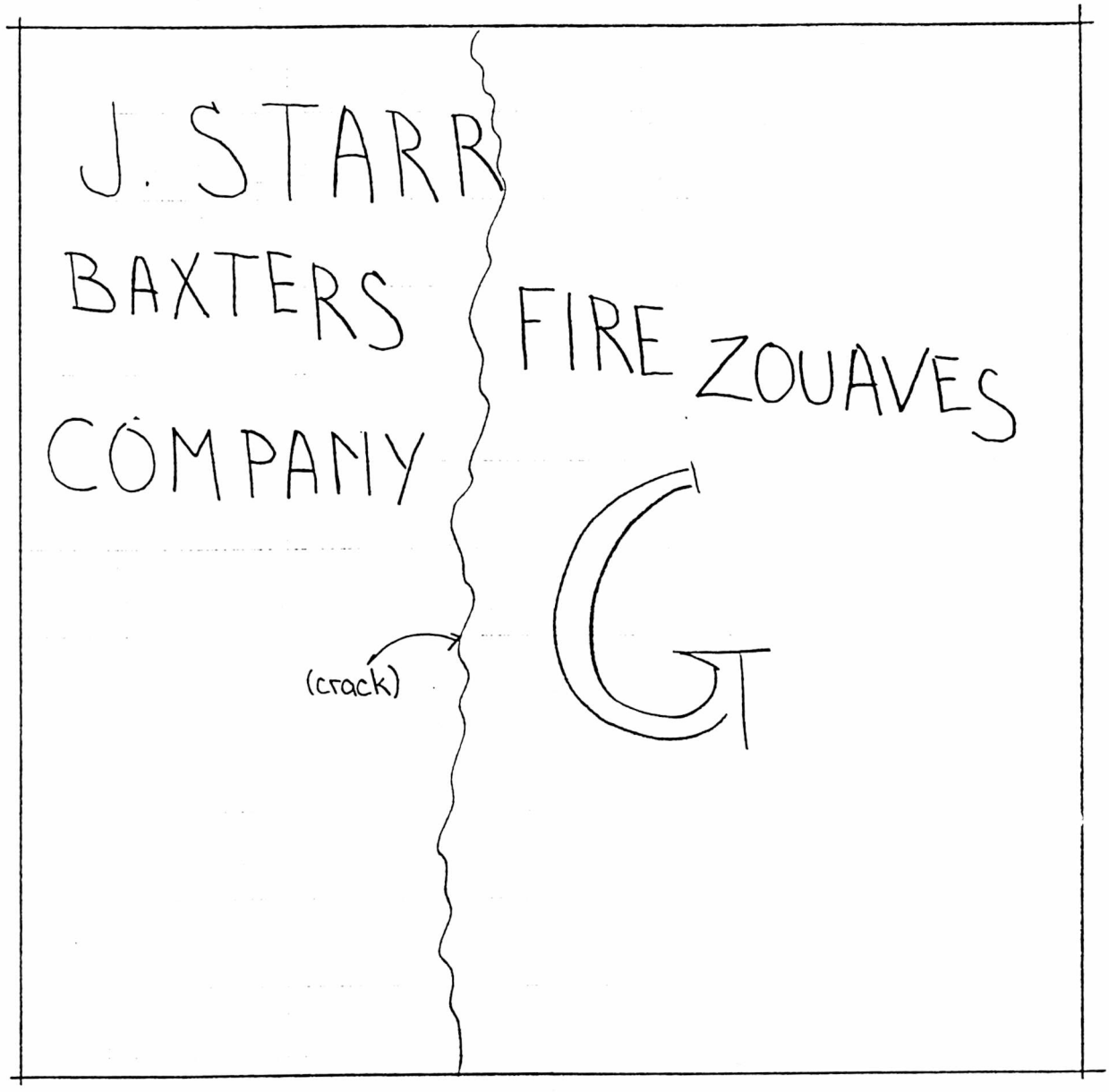


Bldg. 5, 3rd Floor, South Gable Wall

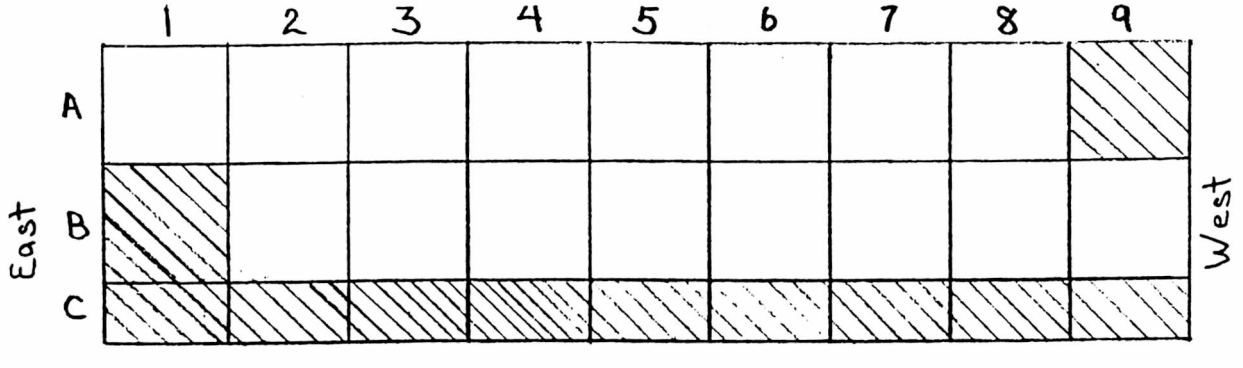


No Graffiti Discernible

4B



Bldg. 5, 3rd Floor, South Gable Wall



No Graffiti Discernible

5 A

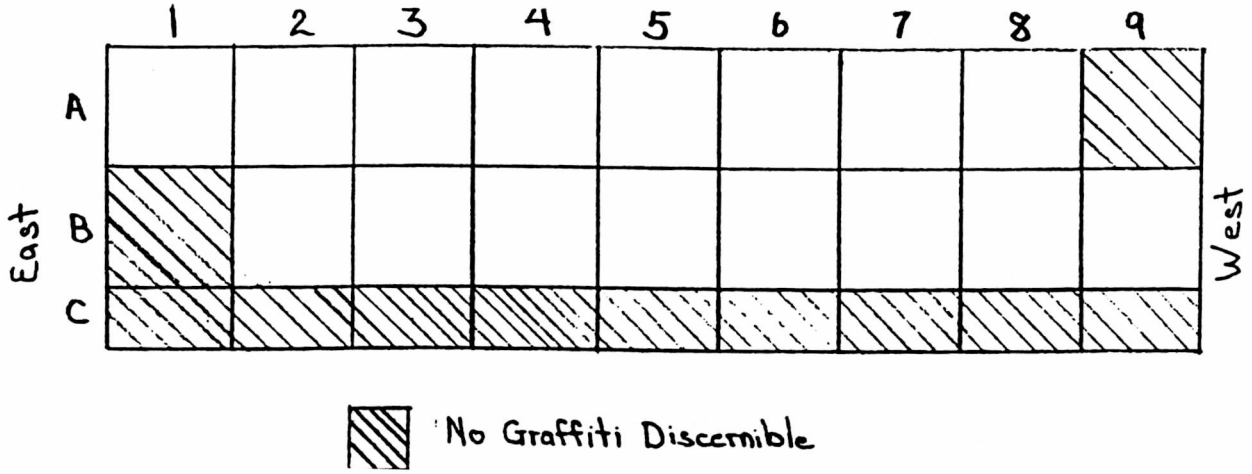
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72 rigeament
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Bldg. 5, 3rd Floor, South Gable Wall



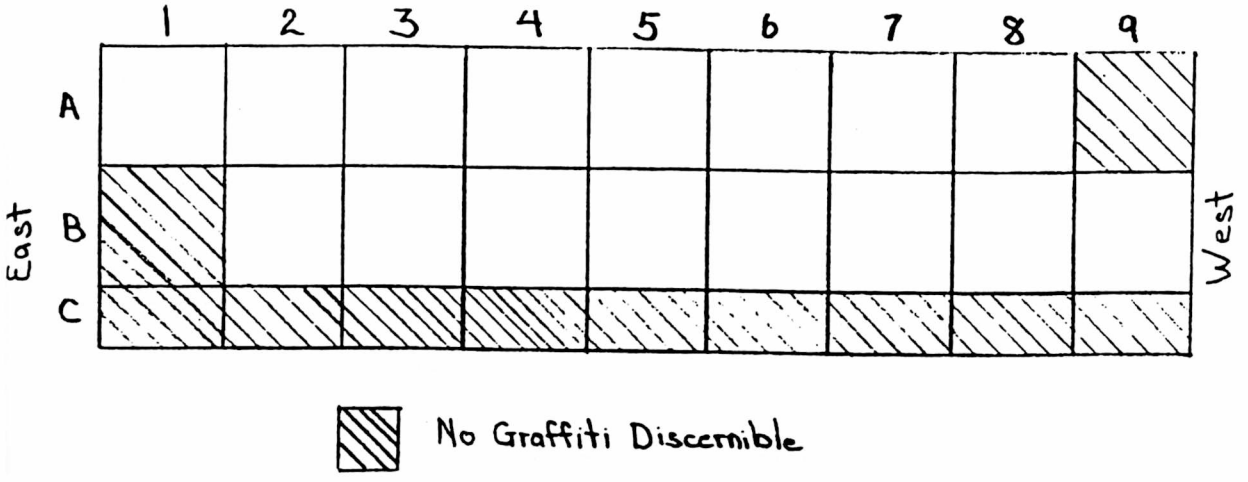
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5B

CoG

Baxters

Bldg. 5, 3rd Floor, South Gable Wall

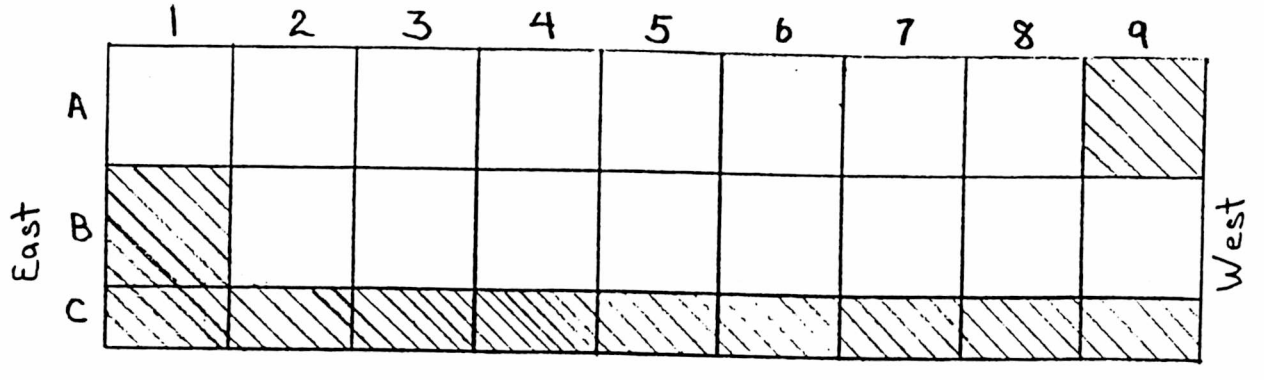


6A

Frogs Leap
Leg Leapers Froges

Leap Frog Lane

Bldg. 5, 3rd Floor, South Gable Wall

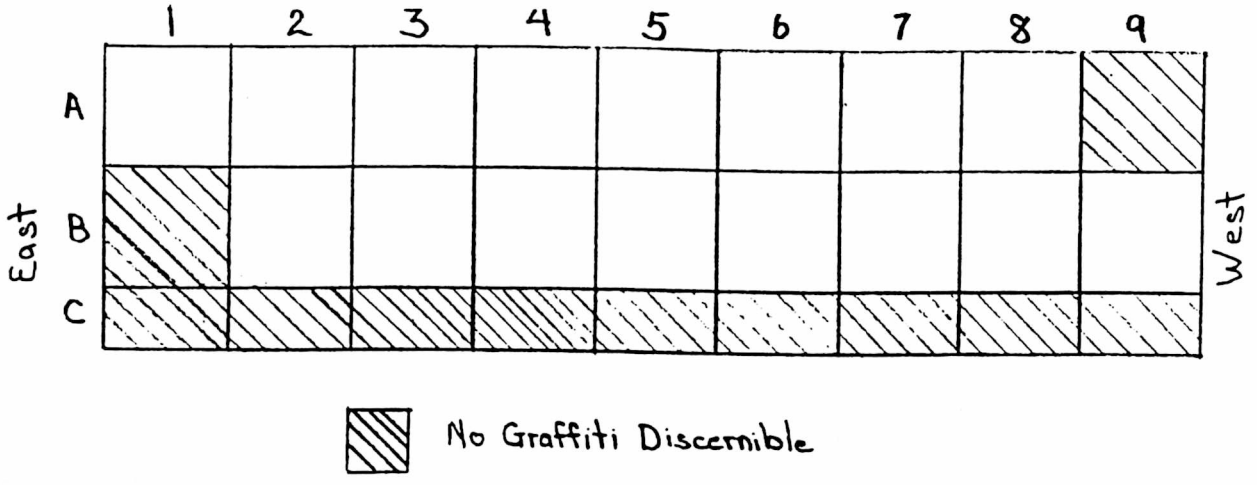


No Graffiti Discernible

6 B

Leap Frog Leap

Bldg. 5, 3rd Floor, South Gable Wall



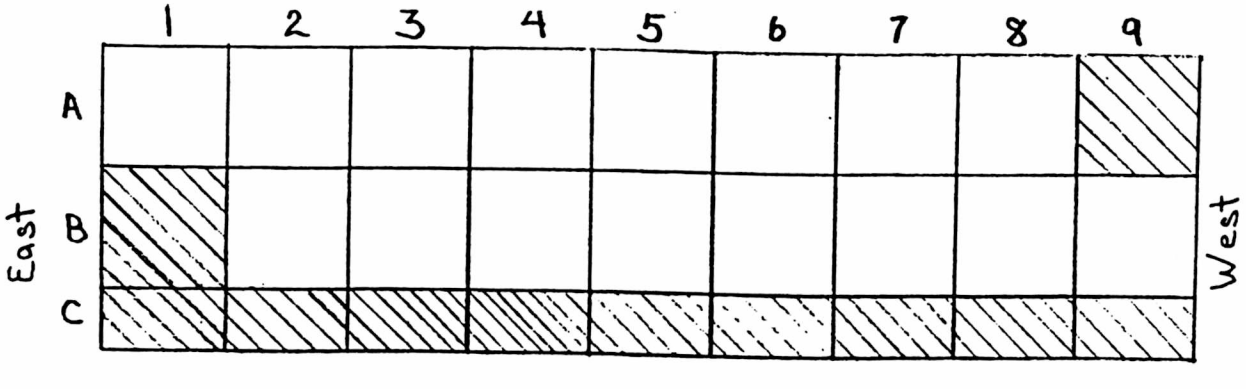
Leap to Hell

Froges Leap You Sons off

BAXTER

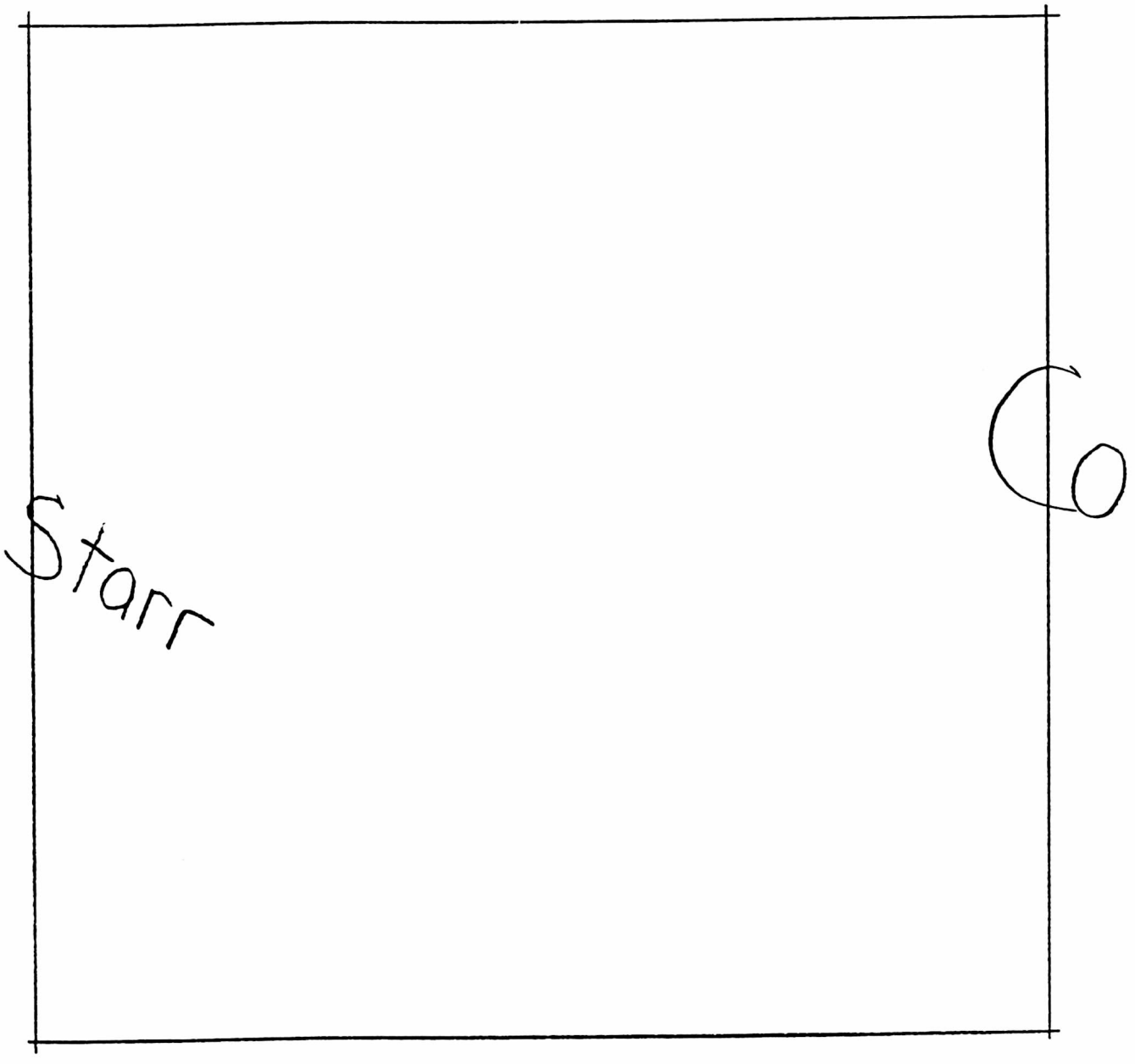
FIRE SQUAVES

Bldg. 5, 3rd Floor, South Gable Wall

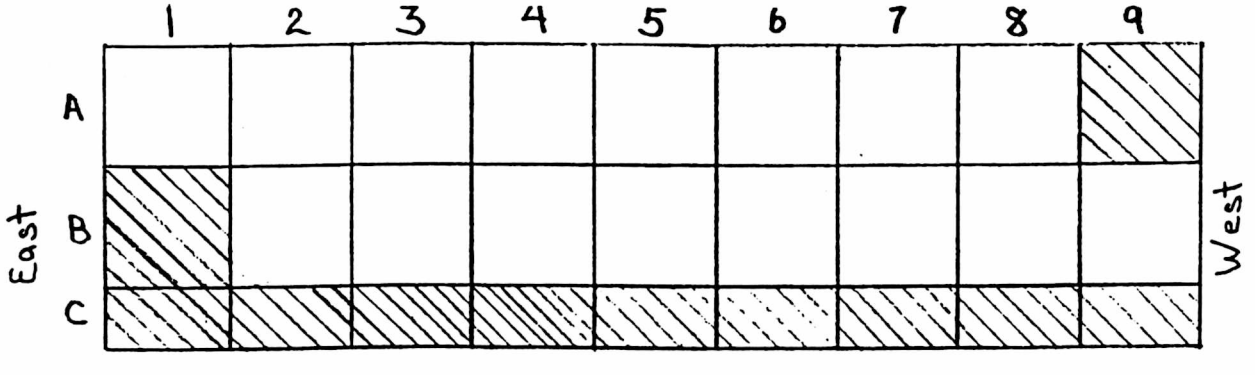


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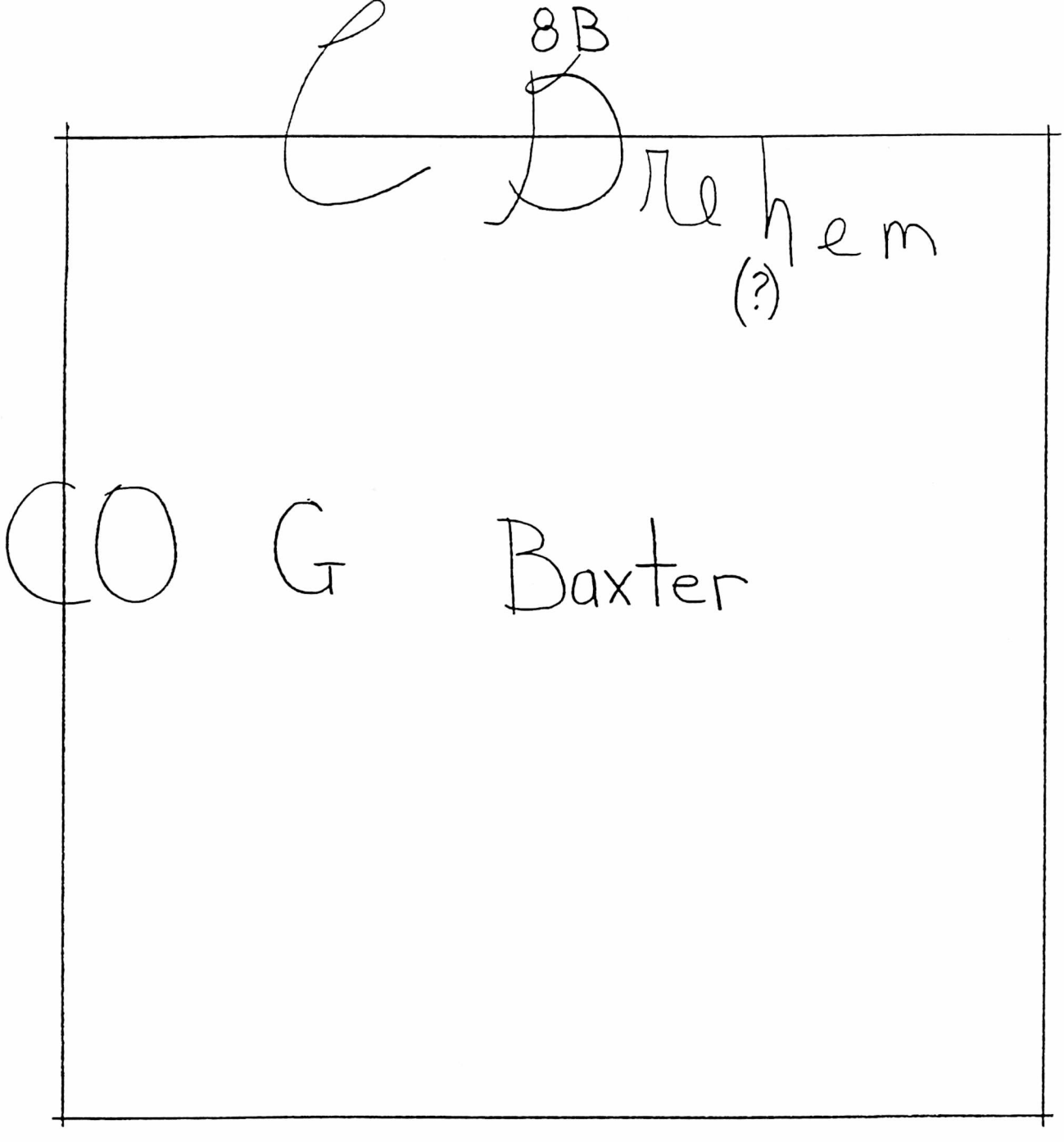
7B



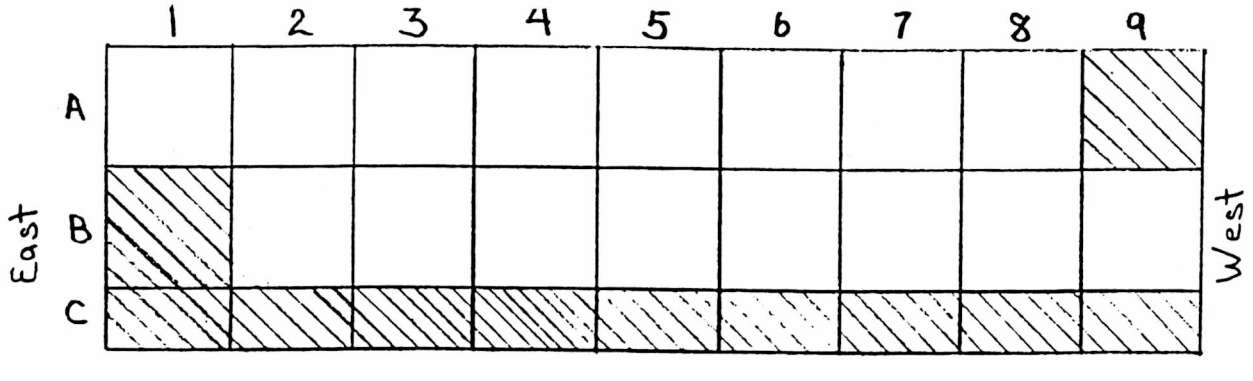
Bldg. 5, 3rd Floor, South Gable Wall



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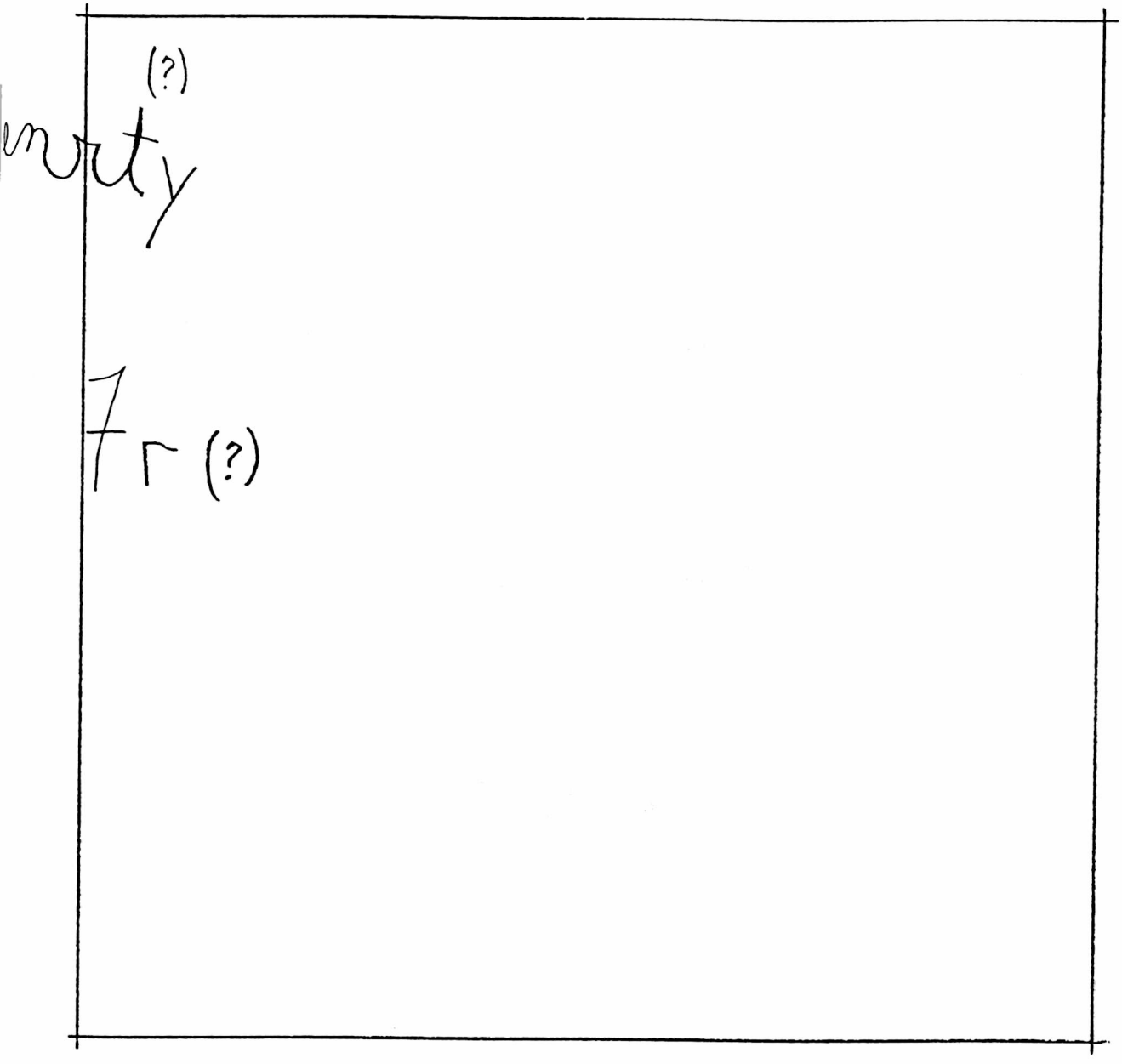


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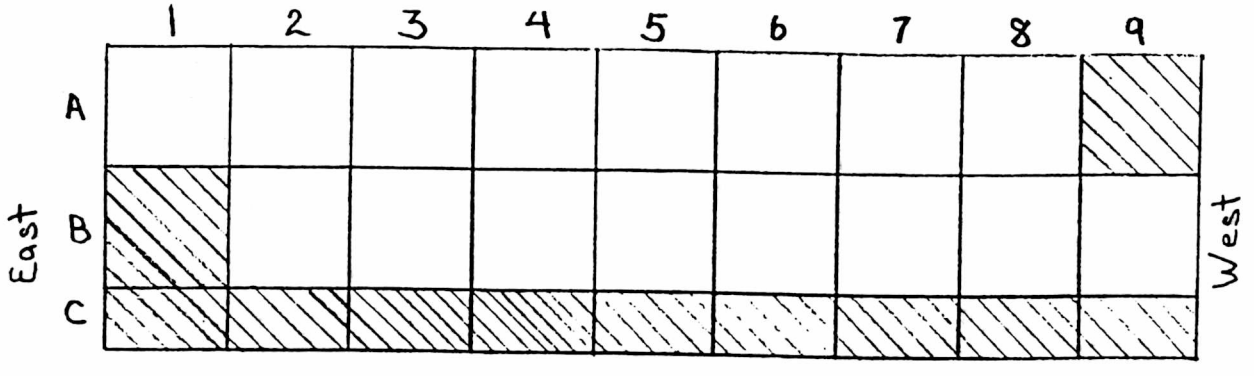


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9 B



Bldg. 5, 3rd Floor, South Gable Wall



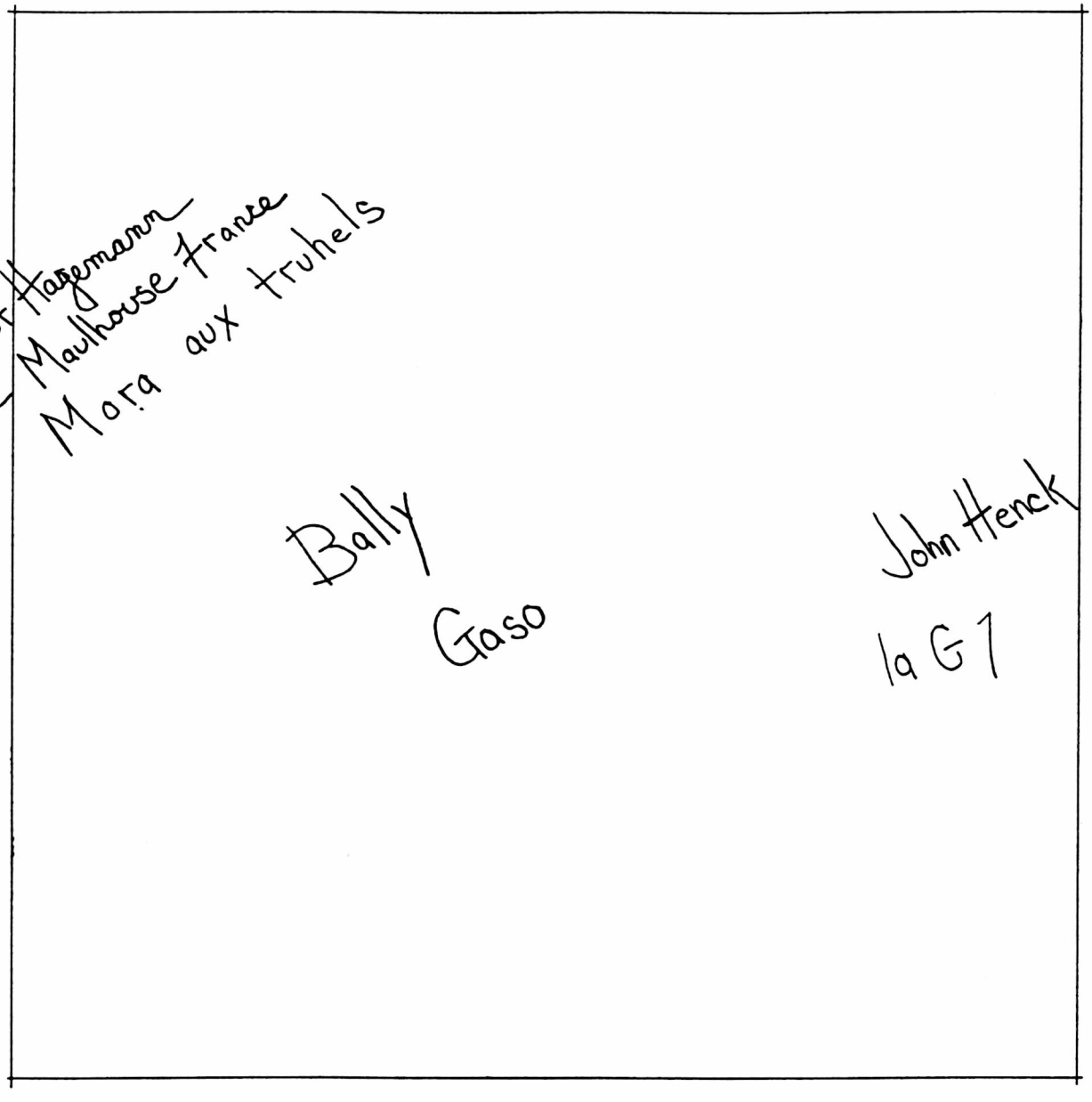
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Transcriptions from North Wall

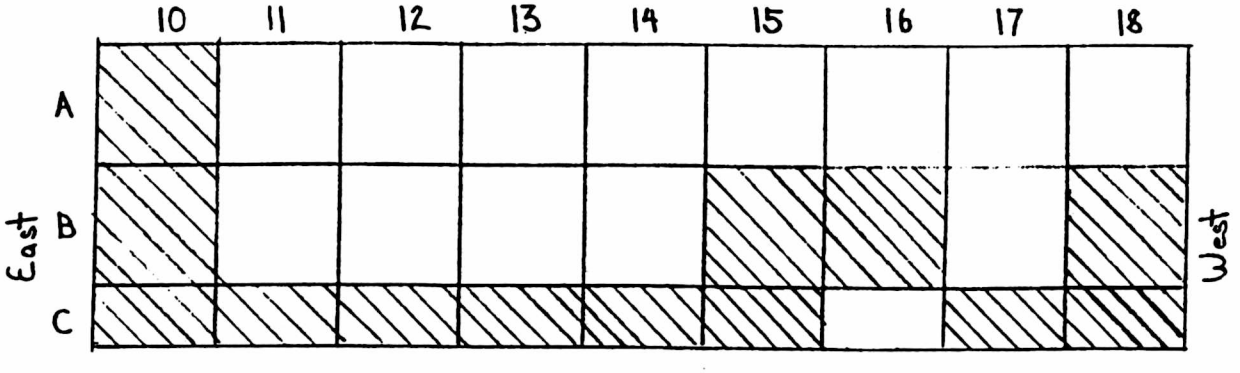
Third Floor

Building #5

11 A

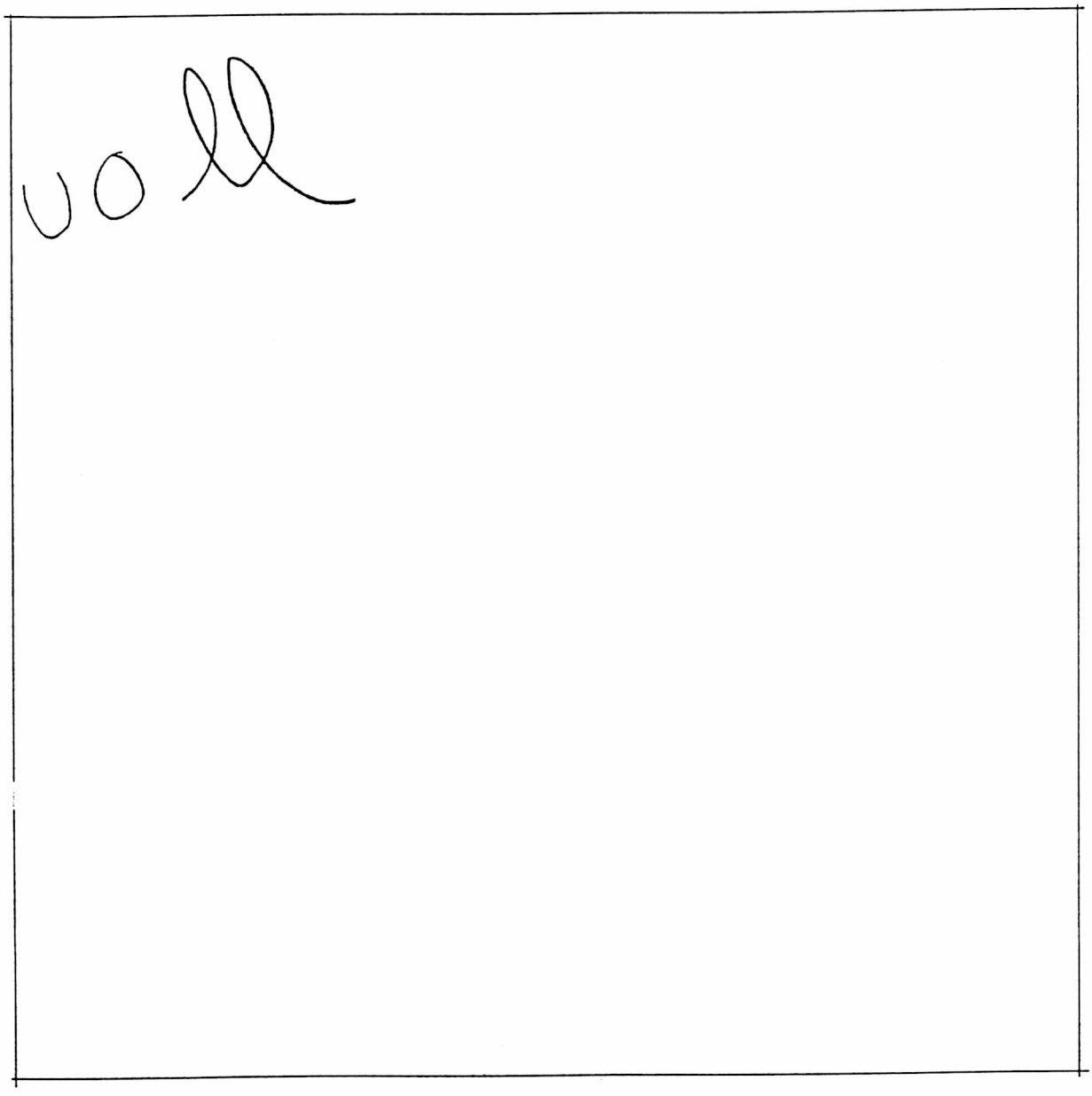


Bldg. 5, 3rd Floor, North Gable Wall

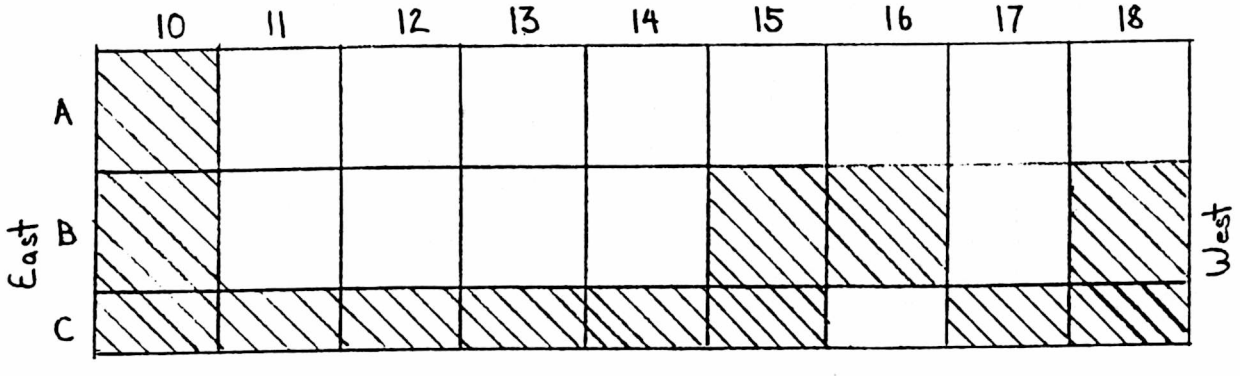


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11 B

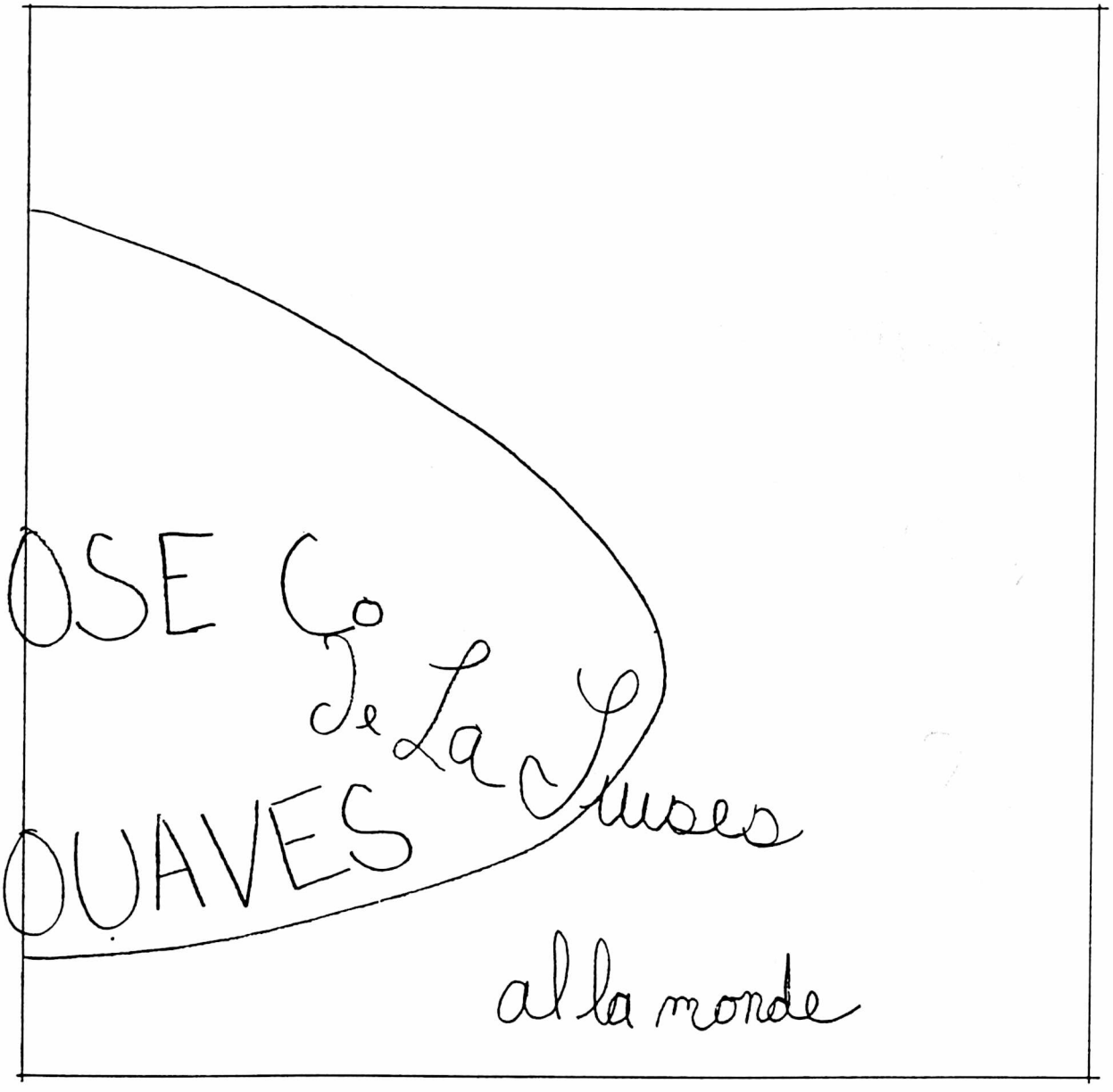


Bldg. 5, 3rd Floor, North Gable Wall

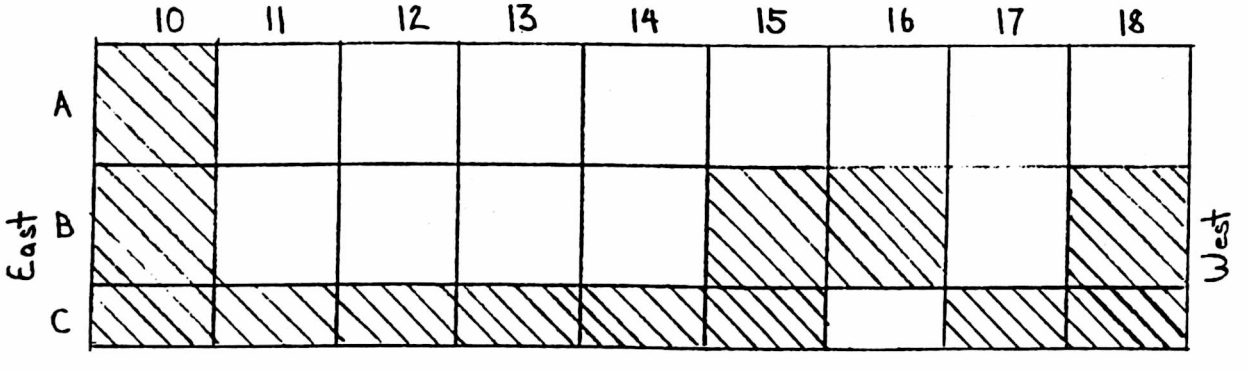


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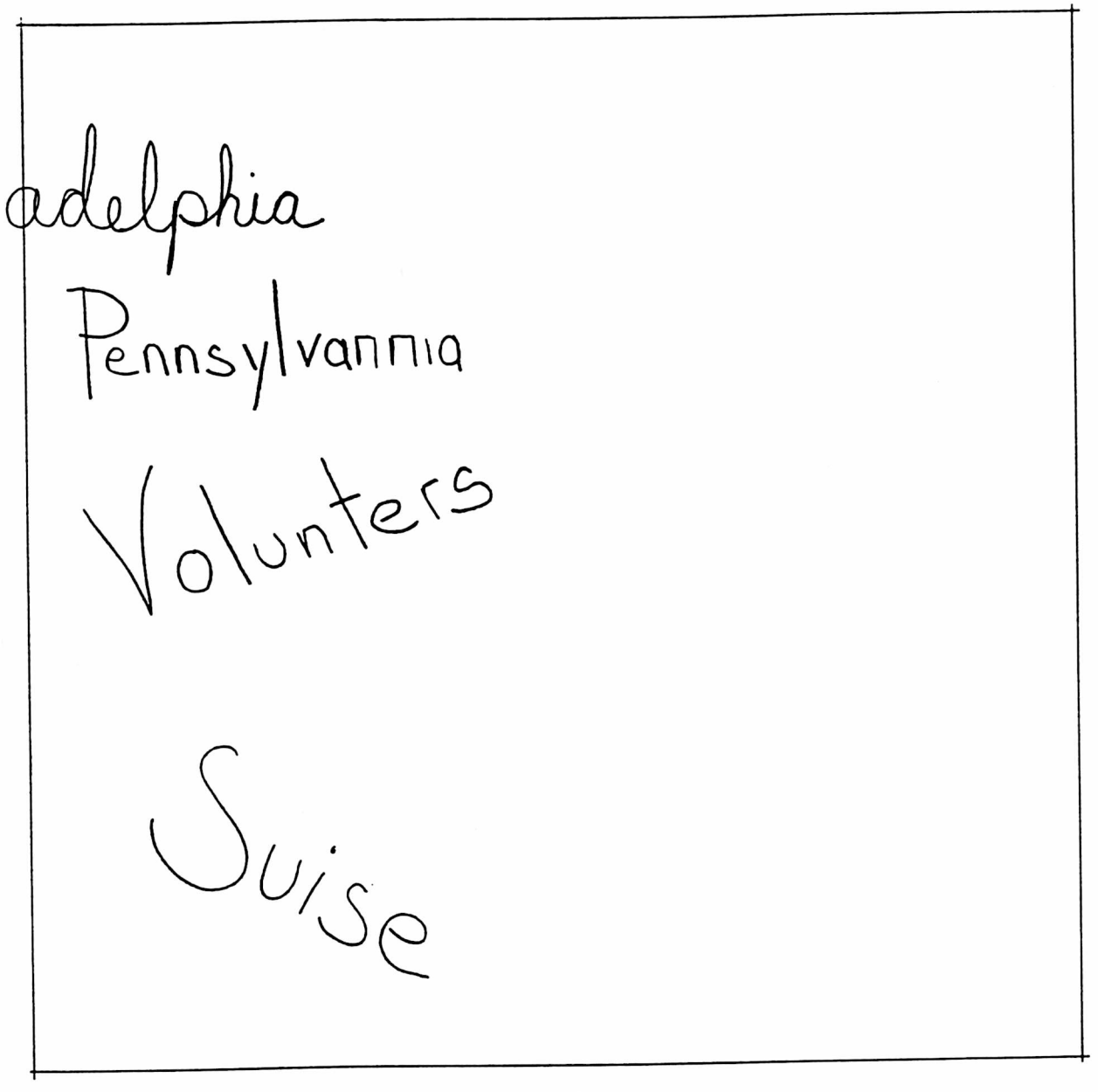
12A



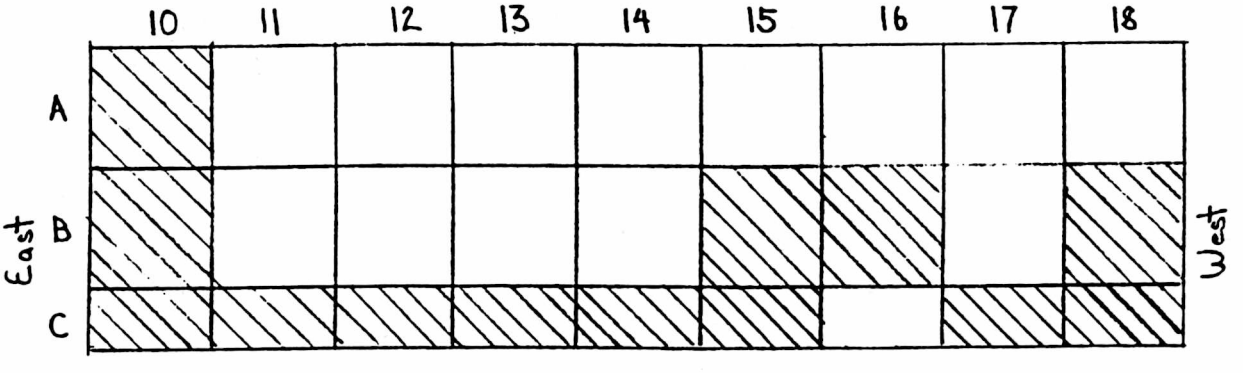
Bldg. 5, 3rd Floor, North Gable Wall



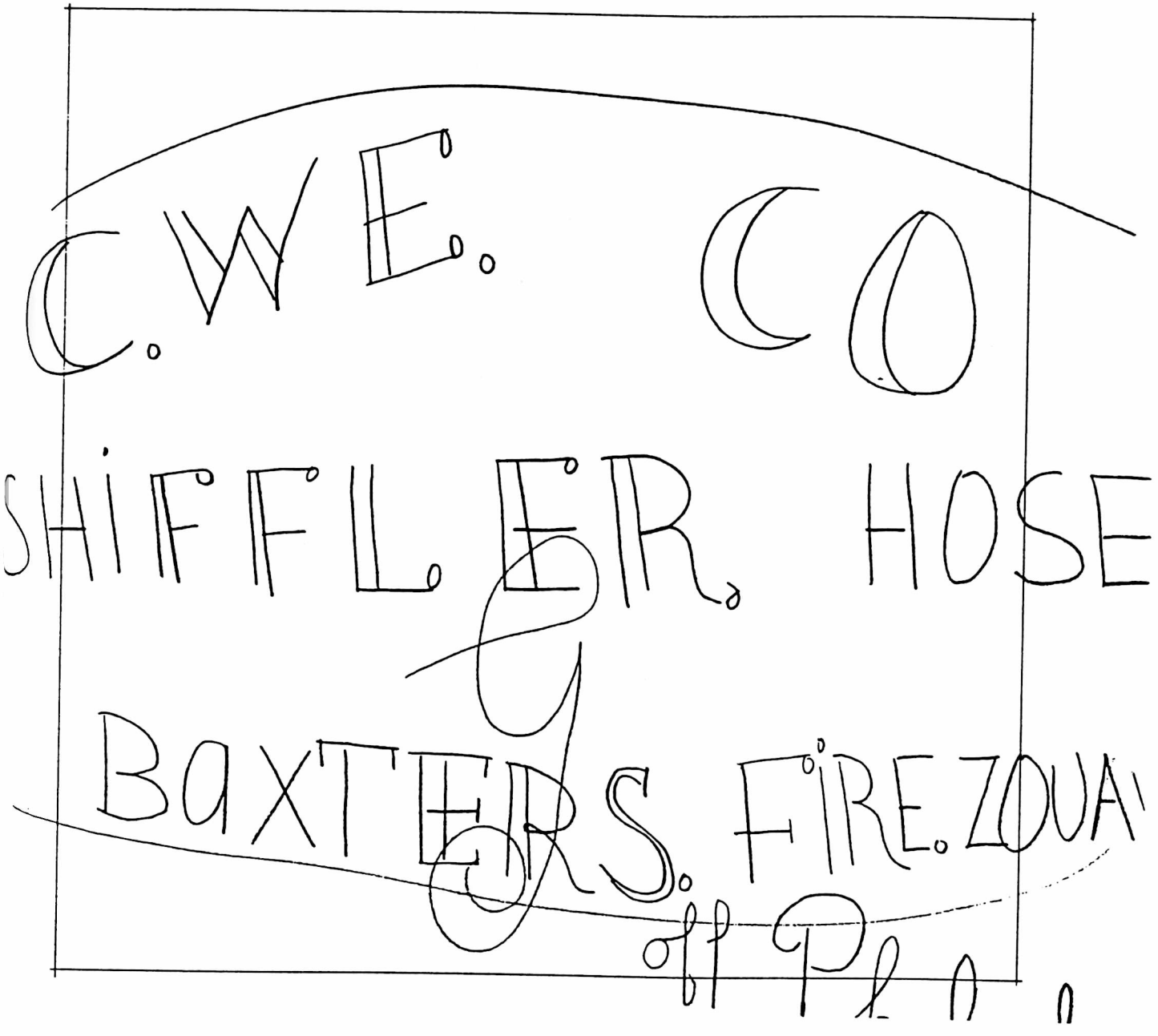
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Bldg. 5, 3rd Floor, North Gable Wall

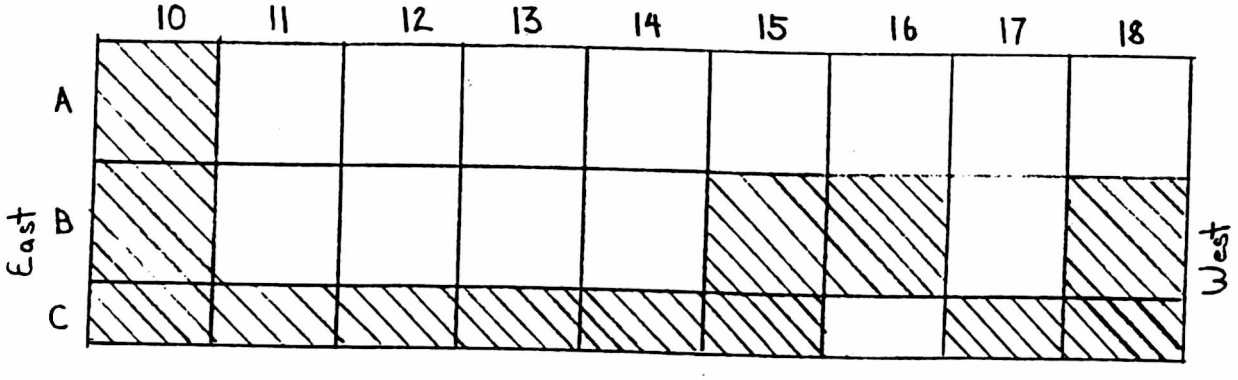


No Graffiti Discernible



Bldg. 5, 3rd Floor, North Gable Wall

2



No Graffiti Discernible

13B

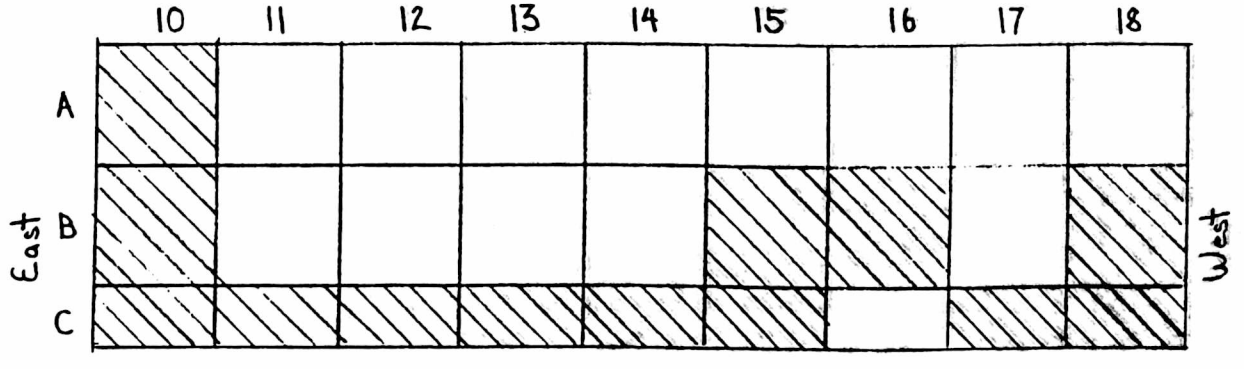
off Philade

72 Regmt

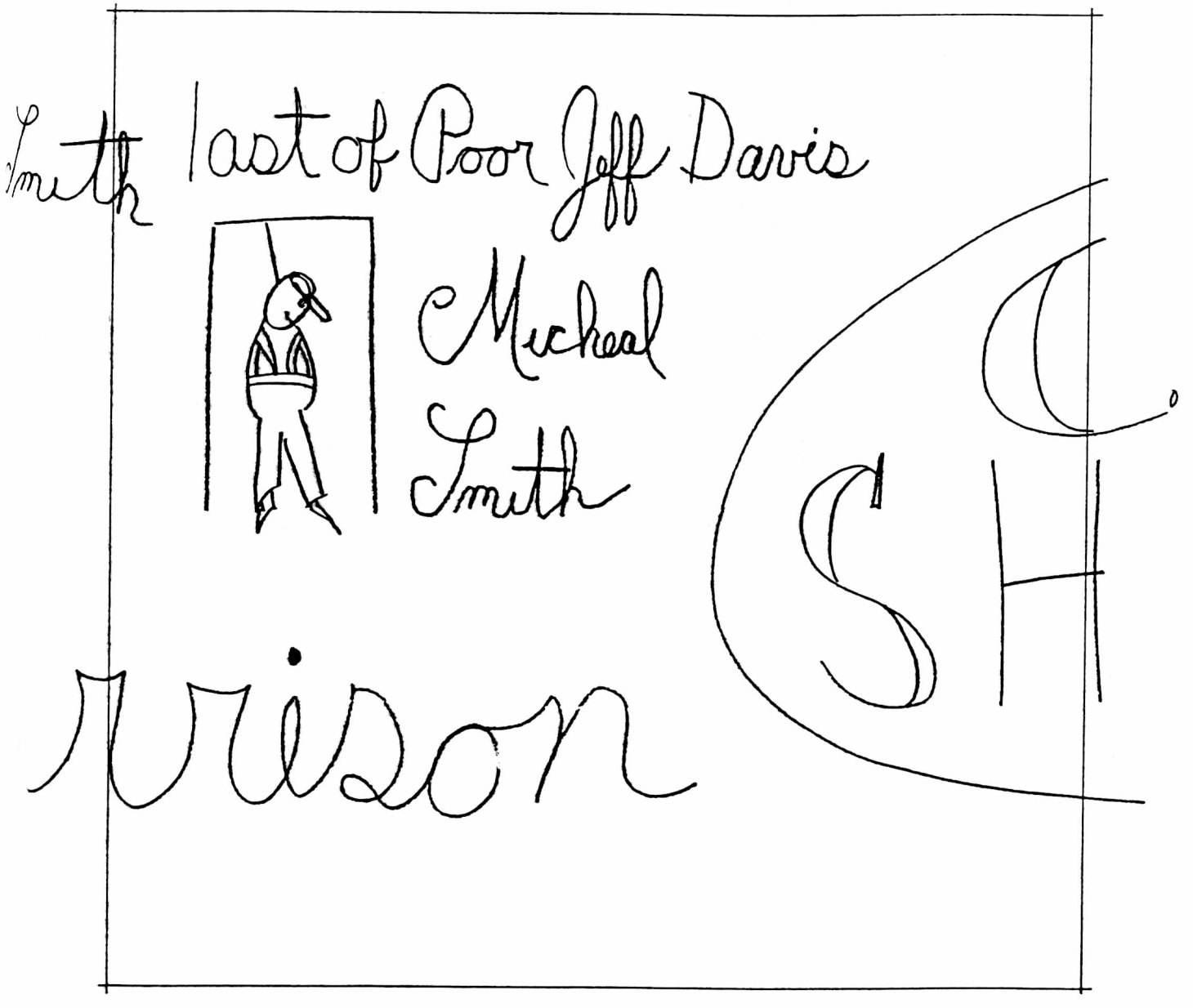
A#

d & Le

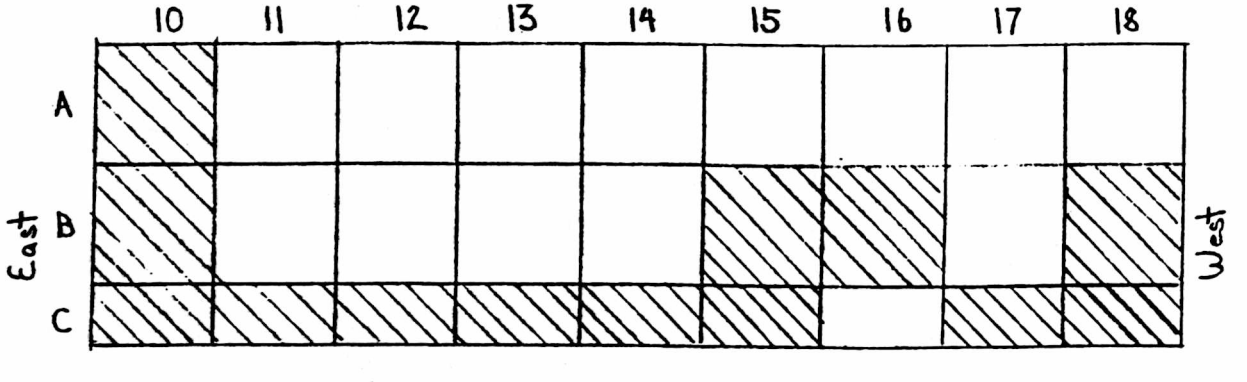
Bldg. 5, 3rd Floor, North Gable Wall



No Graffiti Discernible

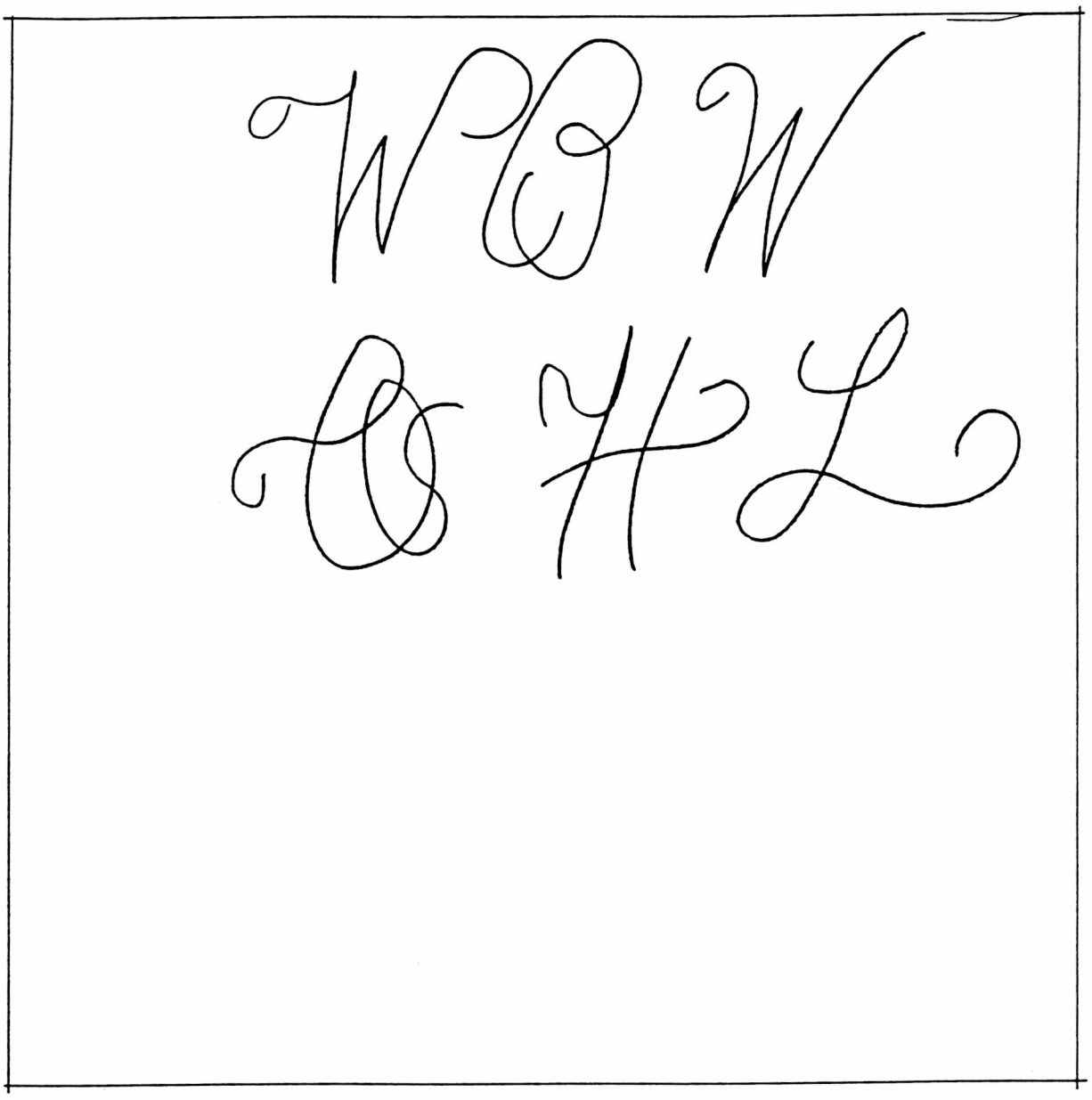


Bldg. 5, 3rd Floor, North Gable Wall



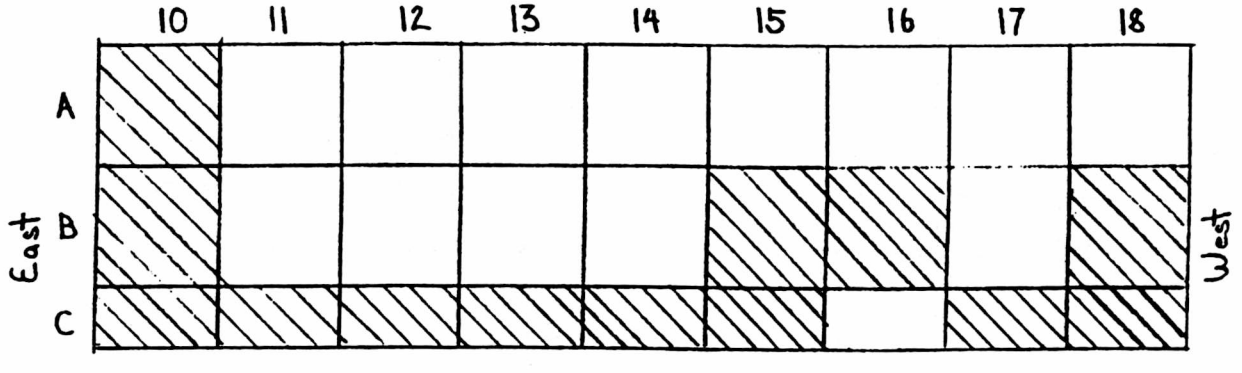
No Graffiti Discernible

14 B



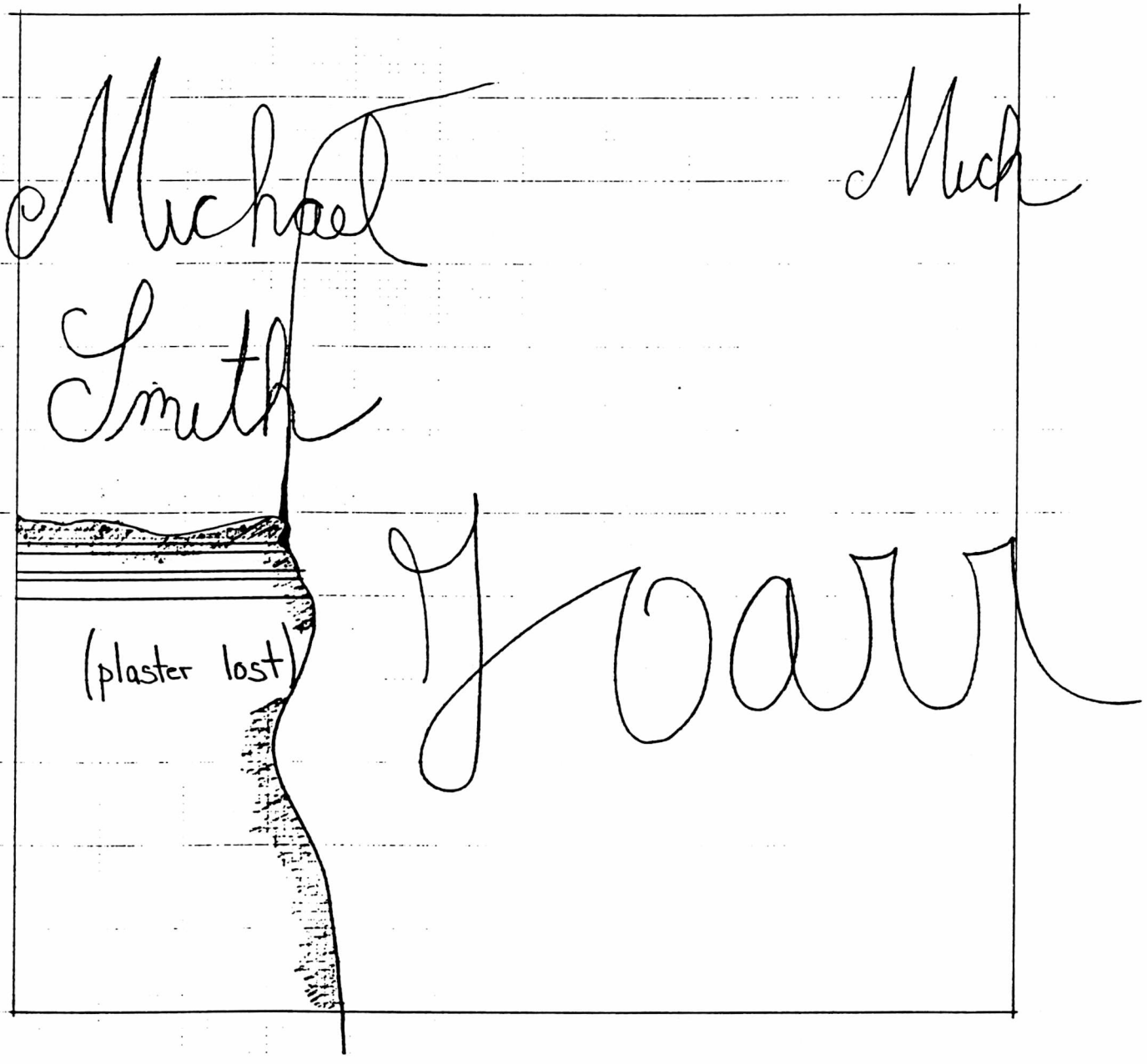
(note: inscriptions are in red)

Bldg. 5, 3rd Floor, North Gable Wall

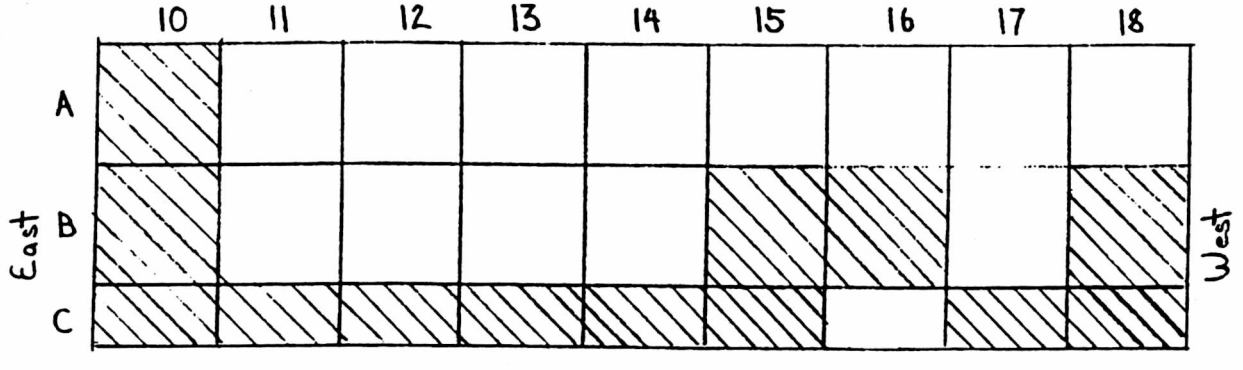


No Graffiti Discernible

15A

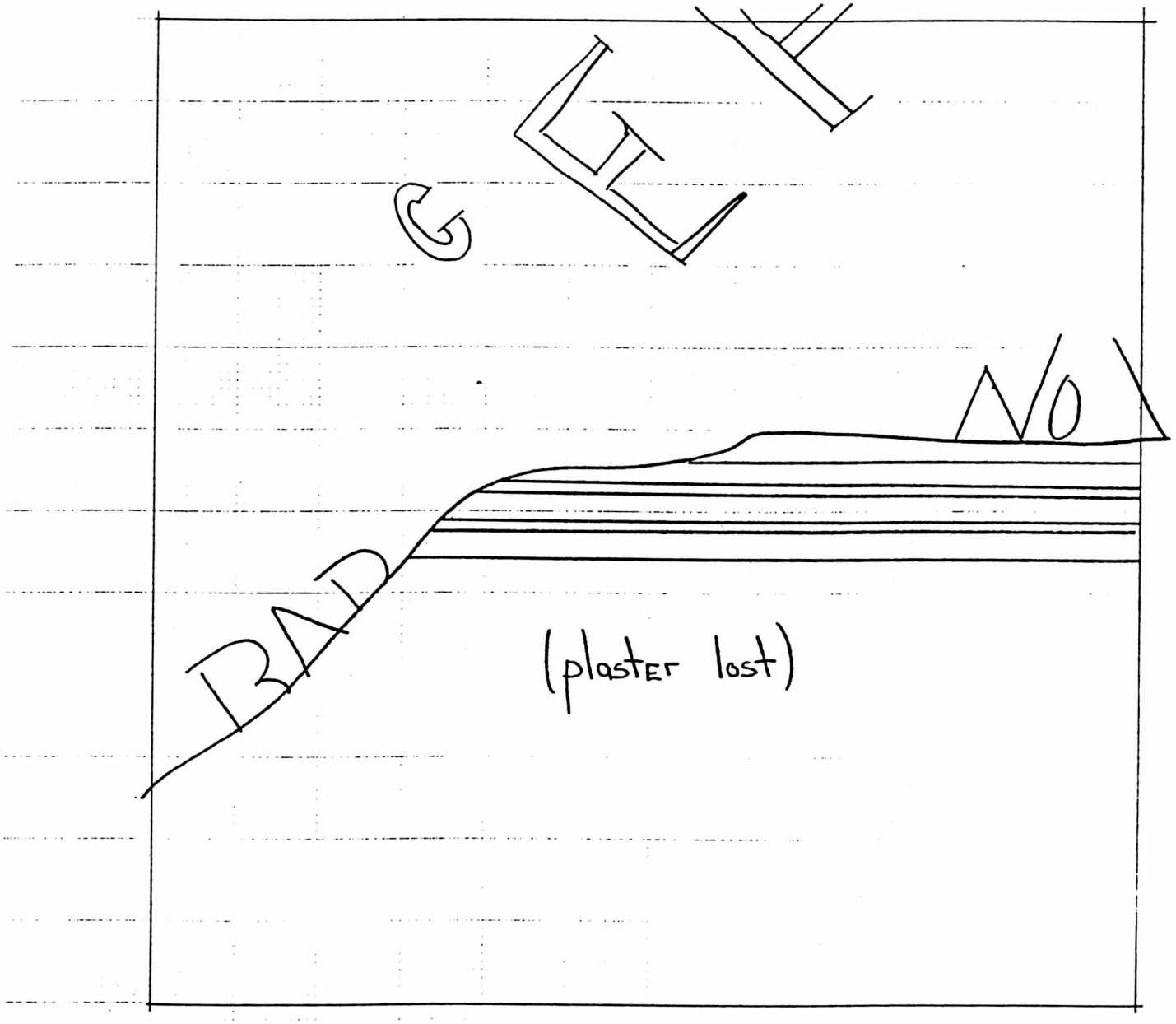


Bldg. 5, 3rd Floor, North Gable Wall

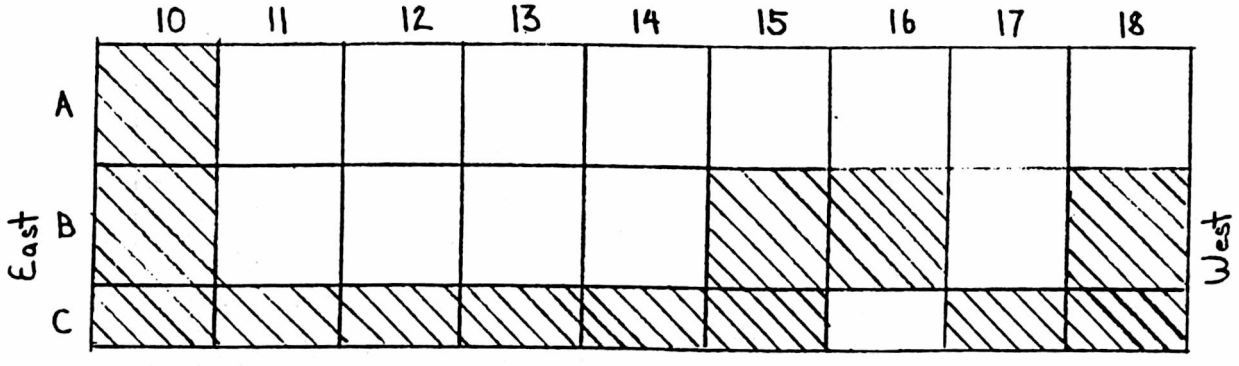


No Graffiti Discernible

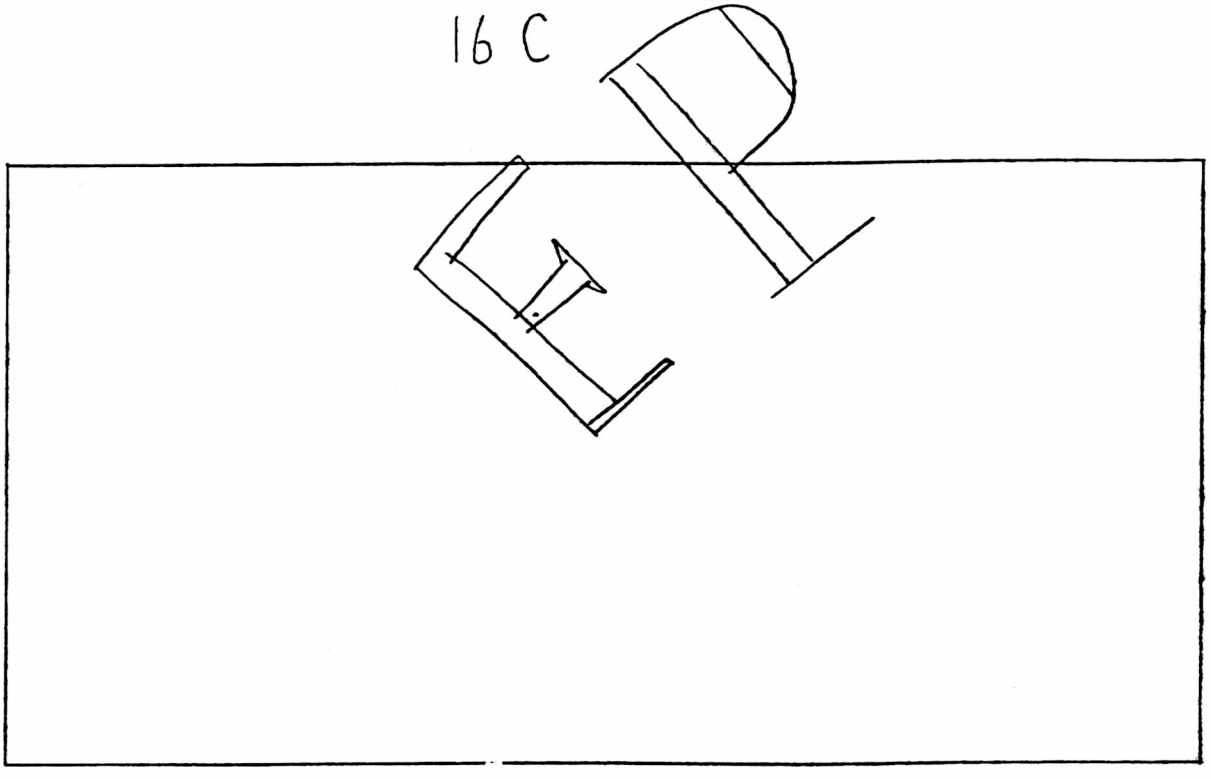
16A



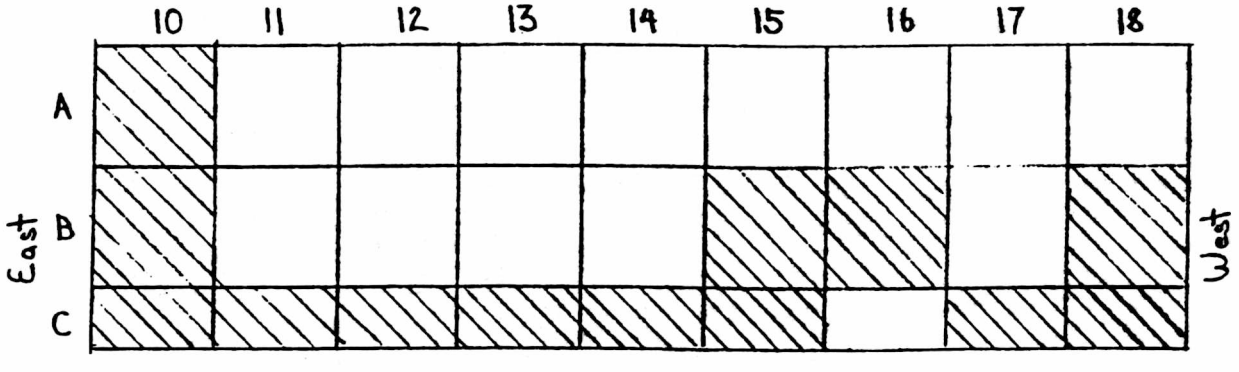
Bldg. 5, 3rd Floor, North Gable Wall



No Graffiti Discernible



Bldg. 5, 3rd Floor, North Gable Wall

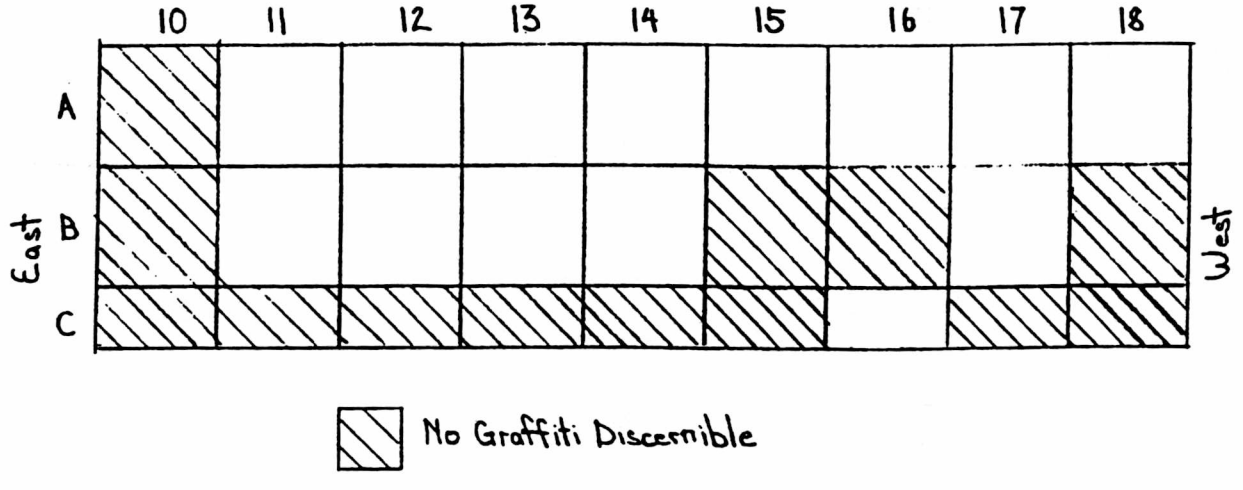


No Graffiti Discernible

John Henkle G
Baxter Fire Zouaves Company G

Stum

Bldg. 5, 3rd Floor, North Gable Wall



Appendix H: Inventory / Condition and Assessment Program - Data for Buildings 5 and 7.

Prepared by: Krista Pace Copeland, former HAFE Park Architect and Michael A. Jenkins Research Assistant, University of Maryland, Fall 1990.

****

--I N S P E C T I O N T E A M I N F O R M A T I O N----------

EVALUATION PROCEDURE

INSPECTION TEAM

DATE OF INSPECTION: 06/15/90

INSPECTION TEAM PERSONNEL:

Krista Pace Copeland
Park Architect
Harpers Ferry N.H.P.
P.O. Box 65
Harpers Ferry, WV 25425
(304) 535-6040
AREAS: EAF/IAF
TIMES:
INSPECTION: HRS.
REPORT PREPARATION: HRS.

Mike Jenkins
Reserach Historian
University of Maryland
P.O. Box 65
Harpers Ferry, WV 25425
(304) 535-6441
AREAS:
TIMES:
INSPECTION: HRS.
REPORT PREPARATION: HRS.

DATA ENTRY

DATE OF DATA ENTRY: 07/06/90

NAME: Mike Jenkins

ADDRESS: University of Maryland
P.O. Box 65
Harpers Ferry, WV 25425
(304) 535-6441

****

--MAJOR IMPROVEMENTS/MODIFICATIONS----------

CONSTRUCTION DATE: 1839	CONSTRUCTION: Built	TEXT: Date of original construction
COST: $ 0 DESIGNER: u		DESIGNER'S OCCUPATION: Unknown
CONSTRUCTION DATE: 1956	CONSTRUCTION: Altered	TEXT: removed frame front porch
COST: $ 0 DESIGNER:		DESIGNER'S OCCUPATION: Unknown
CONSTRUCTION DATE: 1956	CONSTRUCTION: Altered	TEXT: demolished bathroom addition
COST: $ 0 DESIGNER:		DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1956-1957	CONSTRUCTION: Preservation	TEXT: repaired roof and removed ground floor flooring
COST: $ 0 DESIGNER:		DESIGNER'S OCCUPATION: Unknown
CONSTRUCTION DATE: 1957-1959	CONSTRUCTION: Rehabilitation	TEXT: rehabilitated exterior; installed drainage system
COST: $ 779 DESIGNER:		DESIGNER'S OCCUPATION: Contractor
CONSTRUCTION DATE: 1963	CONSTRUCTION: Preservation	TEXT: replaced roll roofing with slate; replaced gutters
COST: $ 0 DESIGNER:		DESIGNER'S OCCUPATION: Contractor
CONSTRUCTION DATE: 1975	CONSTRUCTION: Rehabilitation	TEXT: layed floor and plastering (exhibit preparation)
COST: $ 0 DESIGNER:		DESIGNER'S OCCUPATION: Job Corps
CONSTRUCTION DATE: 1975	CONSTRUCTION: Rehabilitation	TEXT: repaired interior features; stabilized stairwell
COST: $ 0 DESIGNER:		DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1976	CONSTRUCTION: Preservation	TEXT: painted exterior
COST: $ 0 DESIGNER:		DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1977	CONSTRUCTION: Preservation	TEXT: painted interior
COST: $ 0 DESIGNER:		DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1982	CONSTRUCTION: Preservation	TEXT: repaired broken window pane
COST: $ 0 DESIGNER:		DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1989-1990	CONSTRUCTION: Preservation	TEXT: general exterior maintenance
COST: $ 345 DESIGNER:		DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1989-1990	CONSTRUCTION: Preservation	TEXT: interior maintenance
COST: $ 44 DESIGNER:		DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1989-1990	CONSTRUCTION: Preservation	TEXT: flashing/gutters
COST: $ 30 DESIGNER:		DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1989-1990	CONSTRUCTION: Preservation	TEXT: special projects
COST: $ 44 DESIGNER:		DESIGNER'S OCCUPATION: Park Staff

TOTAL IMPROVEMENT/MODIFICATION COSTS: $ 1242

AUTHOR: DATE: 03/1879 CRBIB NUMBER:
TITLE: Deed Book G, p.221, Deed of Bargain and Sale

AUTHOR: DATE: 07/1879 CRBIB NUMBER:
TITLE: Deed Book N, p.237, Deed of Bargain and Sale

AUTHOR: DATE: 10/1952 CRBIB NUMBER:
TITLE: Deed Book 190, p.242, Quit Claim

AUTHOR: DATE: 03/1928 CRBIB NUMBER:
TITLE: Deed Book 147, p.371, Deed of Bargain and Sale

AUTHOR: DATE: 07/1941 CRBIB NUMBER:
TITLE: Deed Book 154, p.535, Deed of Bargain and Sale

AUTHOR: DATE: 12/1952 CRBIB NUMBER:
TITLE: Deed Book 190, p.318, Deed of Bargain and Sale

AUTHOR: DATE: /1902 CRBIB NUMBER:
TITLE: Sanborn Perris Fire Insurance Map

AUTHOR: DATE: /1907 CRBIB NUMBER:
TITLE: Sanborn Perris Fire Insurance Map

AUTHOR: DATE: /1912 CRBIB NUMBER:
TITLE: Sanborn Perris Fire Insurance Map

AUTHOR: DATE: /1922 CRBIB NUMBER:
TITLE: Sanborn Perris Fire Insurance Map

AUTHOR: DATE: /1933 CRBIB NUMBER:
TITLE: Sanborn Perris Fire Insurance Map

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Spirit of Jefferson, May 17, 1910, p.2 c.7-8

AUTHOR: DATE: /1913 CRBIB NUMBER:
TITLE: B&O Railroad Map

AUTHOR: DATE: 09/1955 CRBIB NUMBER:
TITLE: Park Architectural Base Map

AUTHOR: Ramakrishna, Kira DATE: 08/1990 CRBIB NUMBER:
TITLE: Historic Structures Report Draft, Bldgs. 5,7,16,16A, Historical Data

AUTHOR: DATE: 02/1841 CRBIB NUMBER:
TITLE: Deed Book 24, p.457, Deed of Bargain and Sale

AUTHOR: DATE: 11/1847 CRBIB NUMBER:
TITLE: Deed Book 29, p.240, Deed of Bargain and Sale

AUTHOR: DATE: 02/1856 CRBIB NUMBER:
TITLE: Deed Book 35, p.299, Deed of Bargain and Sale

AUTHOR: DATE: 05/1874 CRBIB NUMBER:
TITLE: Deed Book B, p.153, Deed of Bargain and Sale

****

--H I S T O R I C A L D O C U M E N T A T I O N----------

HABS NUMBER: WV-156 HAER NUMBER: NATIONAL REGISTER NUMBER: 66000041

CULTURAL RESOURCES MANAGEMENT BIBLIOGRAPHY (CRBIB)

AUTHOR: Snell, Charles DATE: 04/1980 CRBIB NUMBER:
TITLE: Historic Structures Report, Bldg. No. 7, Historical Data

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Virginia Free Press, November 16, 1837, p.3 c.4

AUTHOR: DATE: 02/1856 CRBIB NUMBER:
TITLE: Deed Book 35, p.299, Deed of Bargain and Sale

AUTHOR: Franzen, A.W. DATE: 07/1959 CRBIB NUMBER:
TITLE: White Hall, HABS Survey Sheet

AUTHOR: Snell, Charles DATE: 04/1980 CRBIB NUMBER:
TITLE: Historic Structure Report, Bldgs. No. 16 and 16A, Historic Data

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Spirit of Jefferson, May 8, 1872, p.3 c.2

AUTHOR: DATE: /1870 CRBIB NUMBER:
TITLE: Ninth Census of the United States for Town of Harpers Ferry

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Spirit of Jefferson, May 9, 1882, p.3 c.1

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Virginia Free Press, May 13, 1882, p.3 c.3

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Photograph, HF-57

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Spirit of Jefferson, February 17, 1880, p.3 c.1

AUTHOR: DATE: /1894 CRBIB NUMBER:
TITLE: Sanborn Perris Fire Insurance Map

****

--I D E N T I F I C A T I O N / M A N A G E M E N T I N F O R M A T I O N (cont)----------

BUILDING CODE INFORMATION
APPLICABLE CODES:
BOCA
UFAS

OCCUPANCY CLASSIFICATION: Exhibit
OCCUPANCY LOAD:
HAZARD OF CONTENTS: Ordinary
SEISMIC ZONE:
CONSTRUCTION TYPE: III

OPERATIONS INFORMATION
Open to the public
SEASON: summer
HOURS: 7:30a.m.- 6:00p.m.
TREATMENT RESPONSIBILITY
INTERIM TREATMENT: NPS
APPROVED ULTIMATE TREATMENT: NPS
ROUTINE MAINTENANCE: NPS
CYCLIC MAINTENANCE: NPS
ULTIMATE TREATMENT: APPROVED DATE: 03/ /80
DOCUMENT: C - DCP
TREATMENT TYPE: RESTORATION

--S I G N I F I C A N C E----------

SIGNIFICANCE: State & Regional
NATIONAL REGISTER STATUS: 1 - Entered - Documented DATE: 05/07/81
NHL STATUS: No

--H I S T O R I C A L I N F O R M A T I O N----------

PERIOD OF CONSTRUCTION: Historic
HISTORIC FUNCTION:
SINGLE DWELLING(INCL ROWHOUSE)
BUSINESS

CURRENT FUNCTION:
NPS EXHIBIT

--D O C U M E N T A T I O N----------

DSC PARKCODE:
DRAWINGS:

TITLE	DOC ID #	DATE	LOCATION
Whitehall Tavern Building #7	N/A	10/16/70	HAFE
White Hall HABS Drawing	N/A	N/A	HAFE

REPORTS:

TITLE	DOC ID #	DATE	LOCATION
Historic Structures Report	N/A	3/30/59	HAFE
Historic Structures Report	N/A	4/1980	HAFE
Historic Structures Report Draft	N/A	8/28/90	HAFE

--EXECUTIVE SUMMARY

SIGNIFICANCE: Building 7 was erected by William Anderson and altered by Frederick A. Roeder. It served first as a warehouse, then White Hall" tavern, next as a stable for the Union Army during 1861-1862.

ARCHITECTURAL DESCRIPTION: Building 7 ia a two story stone building with a slate roof.

--IDENTIFICATION/MANAGEMENT INFORMATION

OTHER NAMES:

BUILDING ADDRESS
- PARK ORGCODE: 3850
- Park General
- DISTRICT ORGCODE: 3850
- Potomac Street
- Harpers Ferry, WV 25425
- LOCATION: Lower Town
- COUNTY: Jefferson

BUILDING INFORMATION
- BUILDING ORGCODE: 0007
- MANAGEMENT UNIT: HAFE
- BUILDING CONDITION: Poor
- MAINTENANCE PRIORITY: 1 - High
- MANAGEMENT CATEGORY: A DATE: 01/03/81
- ELEVATION: FT
- UTM COORDINATES: / /

REAL PROPERTY INFORMATION
- ACQUISITION DOCUMENT: - - -
- ACQUISITION COST: $ 1900
- ACQUISITION DATE: 1953
- GENERAL LEDGER ACCT NO: 215
- SF 1166 NUMBER: 6070
- SF 1166 DESIGNATION: VISITOR CONTACT
- TOTAL IMPROVEMENT/MODIFICATION COSTS: $ 1242

OTHER PROPERTY INFORMATION
- NPS LEGAL INTEREST:
  FEE - FEE SIMPLE
- MANAGEMENT AGREEMENT: NONE

NUMBERING INFORMATION
- NUMBER ON BUILDING: 07
- LCS ID NUMBER: 00621
- HOUSING NUMBER: N/A
- ENERGY NUMBER: N/A
- CONCESSIONER NUMBER: N/A

APPRAISAL INFORMATION
- REPLACEMENT COST:
- APPRAISAL YEAR:
- APPRAISAL SOURCE:
- PERCENT OCCUPIED: 0%
- DATE OF CONSTRUCTION: 1838-1839

SIZE INFORMATION
- TOTAL FLOOR AREA: 933 SF
- FIRST FLOOR AREA: 300 SF
- ADDITIONAL FLOOR AREA: 633 SF
- TOTAL BASEMENT AREA: 279 SF
- FINISHED BASEMENT AREA: 0 SF
- UNFINISHED BASEMENT AREA: 279 SF
- ROOF AREA: 620 SF
- PERIMETER LENGTH: 88 LF
- NUMBER OF STORIES: 2.5
- NUMBER OF ROOMS: 4
- NUMBER OF BATHROOMS: 0

SUMMARY COST INFORMATION
- TOTAL: $ 0
- CRITICAL: $ 0
- SERIOUS: $ 0
- MINOR: $ 0

--I N S P E C T I O N T E A M I N F O R M A T I O N----------

EVALUATION PROCEDURE

INSPECTION TEAM

DATE OF INSPECTION: 06/15/90

INSPECTION TEAM PERSONNEL:

Krista Pace Copeland
Park Architect
Harpers Ferry N.H.P.
P.O. Box 65
Harpers Ferry, WV 25425
(304) 535-6040
AREAS: EAF/IAF
TIMES:
INSPECTION: HRS.
REPORT PREPARATION: HRS.

Mike Jenkins
Research Historian
University of Maryland
P.O. Box 65
Harpers Ferry, WV 25425
(304) 535-6441
AREAS:
TIMES:
INSPECTION: HRS.
REPORT PREPARATION: HRS.

DATA ENTRY

DATE OF DATA ENTRY: 07/06/90
NAME: Mike Jenkins
ADDRESS: University of Maryland
P.O. Box 65
Harpers Ferry, WV 25425
(304) 535-6441

CONSTRUCTION DATE: 1989-1990 CONSTRUCTION: Preservation TEXT: interior maintenance
COST: $ 147 DESIGNER: DESIGNER'S OCCUPATION: Park Staff

CONSTRUCTION DATE: 1989-1990 CONSTRUCTION: Preservation TEXT: flashing/gutters
COST: $ 30 DESIGNER: DESIGNER'S OCCUPATION: Park Staff

CONSTRUCTION DATE: 1989-1990 CONSTRUCTION: Preservation TEXT: masonry repairs
COST: $ 110 DESIGNER: DESIGNER'S OCCUPATION: Park Staff

CONSTRUCTION DATE: 1989-1990 CONSTRUCTION: Preservation TEXT: special projects
COST: $ 33 DESIGNER: DESIGNER'S OCCUPATION: Park Staff

TOTAL IMPROVEMENT/MODIFICATION COSTS: $ 2462

--MAJOR IMPROVEMENTS/MODIFICATIONS----------

CONSTRUCTION DATE: 1856-1857 COST: $ 0 DESIGNER:	CONSTRUCTION: Built	TEXT: Date of original construction DESIGNER'S OCCUPATION: Unknown
CONSTRUCTION DATE: 1956-1957 COST: $ 350 DESIGNER:	CONSTRUCTION: Preservation	TEXT: repaired roof (laid roll roofing on lean-to) DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1956-1957 COST: $ 0 DESIGNER:	CONSTRUCTION: Preservation	TEXT: replaced rear addition rafters DESIGNER'S OCCUPATION: Unknown
CONSTRUCTION DATE: 1956-1957 COST: $ 0 DESIGNER:	CONSTRUCTION: Stabilization	TEXT: stabilized building DESIGNER'S OCCUPATION: Unknown
CONSTRUCTION DATE: 1957 COST: $ 0 DESIGNER:	CONSTRUCTION: Preservation	TEXT: replaced rotted window frames DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1957-1959 COST: $ 813 DESIGNER:	CONSTRUCTION: Rehabilitation	TEXT: rehabilitated exterior DESIGNER'S OCCUPATION: Contractor
CONSTRUCTION DATE: 1957 COST: $ 0 DESIGNER:	CONSTRUCTION: Altered	TEXT: removed front porch DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1961 COST: $ 890 DESIGNER:	CONSTRUCTION: Preservation	TEXT: repaired masonry DESIGNER'S OCCUPATION: Contractor
CONSTRUCTION DATE: 1963 COST: $ 0 DESIGNER:	CONSTRUCTION: Preservation	TEXT: replaced roll roofing with slate roof DESIGNER'S OCCUPATION: Contractor
CONSTRUCTION DATE: 1976 COST: $ 0 DESIGNER:	CONSTRUCTION: Preservation	TEXT: painted exterior DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1978 COST: $ 0 DESIGNER:	CONSTRUCTION: Preservation	TEXT: painted interior DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1980-1981 COST: $ 0 DESIGNER:	CONSTRUCTION: Preservation	TEXT: removed electrical wiring from front room DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1981 COST: $ 0 DESIGNER:	CONSTRUCTION: Altered	TEXT: moved furnace to install exhibit DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1981 COST: $ 0 DESIGNER:	CONSTRUCTION: Preservation	TEXT: replastered and repainted both rooms DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1981 COST: $ 0 DESIGNER:	CONSTRUCTION: Preservation	TEXT: replaced and repaired rotted window sills DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1989-1990 COST: $ 89 DESIGNER:	CONSTRUCTION: Preservation	TEXT: general exterior maintenance DESIGNER'S OCCUPATION: Park Staff

AUTHOR: DATE: 01/1844 CRBIB NUMBER:
TITLE: Deed Book 27, p.102, Lease

AUTHOR: DATE: 09/1847 CRBIB NUMBER:
TITLE: Deed Book 29, p.303, Deed of Bargain and Sale

AUTHOR: DATE: 12/1880 CRBIB NUMBER:
TITLE: Deed Book I, p.74, Deed of Bargain and Sale

AUTHOR: DATE: 01/1881 CRBIB NUMBER:
TITLE: Deed Book I, p.104, Deed of Bargain and Sale

AUTHOR: DATE: 12/1952 CRBIB NUMBER:
TITLE: Deed Book 190, p.508, Deed of Bargain and Sale

AUTHOR: DATE: /1902 CRBIB NUMBER:
TITLE: Sanborn Perris Fire Insurance Map

AUTHOR: DATE: /1907 CRBIB NUMBER:
TITLE: Sanborn Perris Fire Insurance Map

AUTHOR: DATE: /1912 CRBIB NUMBER:
TITLE: Sanborn Perris Fire Insurance Map

AUTHOR: DATE: /1922 CRBIB NUMBER:
TITLE: Sanborn Perris Fire Insurance Map

AUTHOR: DATE: /1933 CRBIB NUMBER:
TITLE: Sanborn Perris Fire Insurance Map

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Spirit of Jefferson, May 17, 1910, p. 2 c.7-8

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Spirit of Jefferson, May 2, 1911, p.2 c.1

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Virginia Free Press, June 8, 1911, p.4 c.2

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Spirit of Jefferson, June 25, 1912, p.2 c.4

AUTHOR: DATE: 09/1955 CRBIB NUMBER:
TITLE: Park Architectural Base Map

AUTHOR: Ramakrishna, Kira DATE: 08/1990 CRBIB NUMBER:
TITLE: Historic Structures Report, Draft, Bldgs. 5,7,16,16A, Historic Data

AUTHOR: DATE: 09/1837 CRBIB NUMBER:
TITLE: Deed Book 22, p.340, Lease

AUTHOR: DATE: 01/1844 CRBIB NUMBER:
TITLE: Deed Book 27, p.103, Agreement

--H I S T O R I C A L D O C U M E N T A T I O N----------

HABS NUMBER: WV-223 HAER NUMBER: NATIONAL REGISTER NUMBER: 66000041
CULTURAL RESOURCES MANAGEMENT BIBLIOGRAPHY (CRBIB)

AUTHOR: Snell, Charles DATE: 04/1980 CRBIB NUMBER:
TITLE: Historic Structure Report, Bldg. No. 5, Historic Data

AUTHOR: Snell, Charles DATE: 04/1980 CRBIB NUMBER:
TITLE: Historic Structure Report, Bldgs. No. 16 and 16A, Historical Da
ta

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Spirit of Jefferson, May 8, 1872, p.3 c.2

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Spirit of Jefferson, May 12, 1885, p. 3 c.3

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Virginia Free Press, May 16, 1887, p.2 c.4

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Virginia Free Press, May 17, 1888, p.3 c.2

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Spirit of Jefferson, June 4, 1889, p.2 c.2

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Spirit of Jefferson, May 14, 1890, p.3 c.2

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Spirit of Jefferson, May 12, 1891, p.3 c.2

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Spirit of Jefferson, November 11, 1891, p.3 c.3

AUTHOR: Randall, John C. DATE: /1892 CRBIB NUMBER:
TITLE: Randall's Business Directory

AUTHOR: DATE: /1894 CRBIB NUMBER:
TITLE: Sanborn Perris Fire Insurance Map

****

--I D E N T I F I C A T I O N / M A N A G E M E N T I N F O R M A T I O N (cont)----------

BUILDING CODE INFORMATION

APPLICABLE CODES:
BOCA
Unif. Federal Access Standards

OCCUPANCY CLASSIFICATION: Exhibit
OCCUPANCY LOAD:
HAZARD OF CONTENTS: Ordinary
SEISMIC ZONE: 0
CONSTRUCTION TYPE: Type III

OPERATIONS INFORMATION

Open to the public
SEASON: summer
HOURS: 7:30-6:00
TREATMENT RESPONSIBILITY
INTERIM TREATMENT: NPS
APPROVED ULTIMATE TREATMENT: NPS
ROUTINE MAINTENANCE: NPS
CYCLIC MAINTENANCE: NPS
ULTIMATE TREATMENT: PROPOSED DATE: 3 / /80
DOCUMENT: C - DCP
TREATMENT TYPE: RESTORATION

--S I G N I F I C A N C E----------

SIGNIFICANCE: State & Regional
NATIONAL REGISTER STATUS: 1 - Entered - Documented DATE: 05/07/81
NHL STATUS: No

--H I S T O R I C A L I N F O R M A T I O N----------

PERIOD OF CONSTRUCTION: Historic
HISTORIC FUNCTION:
SINGLE DWELLING(INCL ROWHOUSE)

CURRENT FUNCTION:
NPS EXHIBIT

--D O C U M E N T A T I O N----------

DSC PARKCODE:
DRAWINGS:

TITLE	DOC ID #	DATE	LOCATION
Building 5, The Burleigh Store	3057	8/10/56	HAFE
Masonry Stabilization, Bldg.5	3156	3/7/61	HAFE

REPORTS:

TITLE	DOC ID #	DATE	LOCATION
Historic Structure Report	N/A	3/31/59	HAFE
Historic Structures Report	N/A	4/1980	HAFE
Historic Building Report Draft	N/A	8/28/90	HAFE

****

--E X E C U T I V E S U M M A R Y----------

SIGNIFICANCE: Building 5 was constructed by Frederick A. Roeder to replace the space lost when his building next door was shortened. It was used as a tavern, a store, and a warehouse, and was also occupied by the Union army as a stable in 1861-1862.
ARCHITECTURAL DESCRIPTION: Building 5 is a two story structure with a slate roof. The first story is stone, the second is brick. A two story brick annex exists at the rear.

--I D E N T I F I C A T I O N / M A N A G E M E N T I N F O R M A T I O N----------

OTHER NAMES:

BUILDING ADDRESS
PARK ORGCODE: 3850
Park General
DISTRICT ORGCODE: 3850
Potomac Street
Harpers Ferry, WV 25425
LOCATION: Lower Town
COUNTY: Jefferson

BUILDING INFORMATION
BUILDING ORGCODE: 0005
MANAGEMENT UNIT: HAFE
BUILDING CONDITION: Poor
MAINTENANCE PRIORITY: 1 - High
MANAGEMENT CATEGORY: A DATE: 03/01/81
ELEVATION: FT
UTM COORDINATES: / /

REAL PROPERTY INFORMATION
ACQUISITION DOCUMENT: - - -
ACQUISITION COST: $ 0
ACQUISITION DATE:
GENERAL LEDGER ACCT NO: 215
SF 1166 NUMBER: 6070
SF 1166 DESIGNATION: VISITOR CONTACT
TOTAL IMPROVEMENT/MODIFICATION COSTS: $ 2462

OTHER PROPERTY INFORMATION
NPS LEGAL INTEREST:
FEE - FEE SIMPLE
MANAGEMENT AGREEMENT: NONE

NUMBERING INFORMATION
NUMBER ON BUILDING: 05
LCS ID NUMBER: 00546
HOUSING NUMBER: N/A
ENERGY NUMBER: N/A
CONCESSIONER NUMBER: N/A

APPRAISAL INFORMATION
REPLACEMENT COST:
APPRAISAL YEAR:
APPRAISAL SOURCE:
PERCENT OCCUPIED: 0%
DATE OF CONSTRUCTION: 1856-1857

SIZE INFORMATION
TOTAL FLOOR AREA: 1237 SF
FIRST FLOOR AREA: 487 SF
ADDITIONAL FLOOR AREA: 750 SF
TOTAL BASEMENT AREA: 0 SF
FINISHED BASEMENT AREA: 0 SF
UNFINISHED BASEMENT AREA: 0 SF
ROOF AREA: 568 SF
PERIMETER LENGTH: 112 LF
NUMBER OF STORIES: 2.5
NUMBER OF ROOMS: 6
NUMBER OF BATHROOMS: 0

SUMMARY COST INFORMATION
TOTAL: $ 0
CRITICAL: $ 0
SERIOUS: $ 0
MINOR: $ 0

****

--E X E C U T I V E S U M M A R Y----------

SIGNIFICANCE: Building 5 was constructed by Frederick A. Roeder to replace the space lost when his building next door was shortened. It was used as a tavern, a store, and a warehouse, and was also occupied by the Union army as a stable in 1861-1862.
ARCHITECTURAL DESCRIPTION: Building 5 is a two story structure with a slate roof. The first story is stone, the second is brick. A two story brick annex exists at the rear.

--I D E N T I F I C A T I O N / M A N A G E M E N T I N F O R M A T I O N----------

OTHER NAMES:

BUILDING ADDRESS
PARK ORGCODE: 3850
Park General
DISTRICT ORGCODE: 3850
Potomac Street
Harpers Ferry, WV 25425
LOCATION: Lower Town
COUNTY: Jefferson

BUILDING INFORMATION
BUILDING ORGCODE: 0005
MANAGEMENT UNIT: HAFE
BUILDING CONDITION: Poor
MAINTENANCE PRIORITY: 1 - High
MANAGEMENT CATEGORY: A DATE: 03/01/81
ELEVATION: FT
UTM COORDINATES: / /

REAL PROPERTY INFORMATION
ACQUISITION DOCUMENT: - - -
ACQUISITION COST: $ 0
ACQUISITION DATE:
GENERAL LEDGER ACCT NO: 215
SF 1166 NUMBER: 6070
SF 1166 DESIGNATION: VISITOR CONTACT
TOTAL IMPROVEMENT/MODIFICATION COSTS: $ 2462

OTHER PROPERTY INFORMATION
NPS LEGAL INTEREST:
FEE - FEE SIMPLE
MANAGEMENT AGREEMENT: NONE

NUMBERING INFORMATION
NUMBER ON BUILDING: 05
LCS ID NUMBER: 00546
HOUSING NUMBER: N/A
ENERGY NUMBER: N/A
CONCESSIONER NUMBER: N/A

APPRAISAL INFORMATION
REPLACEMENT COST:
APPRAISAL YEAR:
APPRAISAL SOURCE:
PERCENT OCCUPIED: 0%
DATE OF CONSTRUCTION: 1856-1857

SIZE INFORMATION
TOTAL FLOOR AREA: 1237 SF
FIRST FLOOR AREA: 487 SF
ADDITIONAL FLOOR AREA: 750 SF
TOTAL BASEMENT AREA: 0 SF
FINISHED BASEMENT AREA: 0 SF
UNFINISHED BASEMENT AREA: 0 SF
ROOF AREA: 568 SF
PERIMETER LENGTH: 112 LF
NUMBER OF STORIES: 2.5
NUMBER OF ROOMS: 6
NUMBER OF BATHROOMS: 0

SUMMARY COST INFORMATION
TOTAL: $ 0
CRITICAL: $ 0
SERIOUS: $ 0
MINOR: $ 0

****

--I D E N T I F I C A T I O N / M A N A G E M E N T I N F O R M A T I O N (cont)----------

BUILDING CODE INFORMATION
APPLICABLE CODES:
BOCA
Unif. Federal Access Standards

OCCUPANCY CLASSIFICATION: Exhibit
OCCUPANCY LOAD:
HAZARD OF CONTENTS: Ordinary
SEISMIC ZONE: 0
CONSTRUCTION TYPE: Type III

OPERATIONS INFORMATION
Open to the public
SEASON: summer
HOURS: 7:30-6:00
TREATMENT RESPONSIBILITY
INTERIM TREATMENT: NPS
APPROVED ULTIMATE TREATMENT: NPS
ROUTINE MAINTENANCE: NPS
CYCLIC MAINTENANCE: NPS
ULTIMATE TREATMENT: PROPOSED DATE: 3 / /80
DOCUMENT: C - DCP
TREATMENT TYPE: RESTORATION

--S I G N I F I C A N C E----------

SIGNIFICANCE: State & Regional
NATIONAL REGISTER STATUS: 1 - Entered - Documented DATE: 05/07/81
NHL STATUS: No

--H I S T O R I C A L I N F O R M A T I O N----------

PERIOD OF CONSTRUCTION: Historic
HISTORIC FUNCTION:
SINGLE DWELLING(INCL ROWHOUSE)

CURRENT FUNCTION:
NPS EXHIBIT

--D O C U M E N T A T I O N----------

DSC PARKCODE:
DRAWINGS:

TITLE	DOC ID #	DATE	LOCATION
Building 5, The Burleigh Store	3057	8/10/56	HAFE
Masonry Stabilization, Bldg.5	3156	3/7/61	HAFE

REPORTS:

TITLE	DOC ID #	DATE	LOCATION
Historic Structure Report	N/A	3/31/59	HAFE
Historic Structures Report	N/A	4/1980	HAFE
Historic Building Report Draft	N/A	8/28/90	HAFE

****

--H I S T O R I C A L D O C U M E N T A T I O N----------

HABS NUMBER: WV-223 HAER NUMBER: NATIONAL REGISTER NUMBER: 66000041

CULTURAL RESOURCES MANAGEMENT BIBLIOGRAPHY (CRBIB)

AUTHOR: Snell, Charles DATE: 04/1980 CRBIB NUMBER:
TITLE: Historic Structure Report, Bldg. No. 5, Historic Data

AUTHOR: Snell, Charles DATE: 04/1980 CRBIB NUMBER:
TITLE: Historic Structure Report, Bldgs. No. 16 and 16A, Historical Da
ta

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Spirit of Jefferson, May 8, 1872, p.3 c.2

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Spirit of Jefferson, May 12, 1885, p. 3 c.3

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Virginia Free Press, May 16, 1887, p.2 c.4

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Virginia Free Press, May 17, 1888, p.3 c.2

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Spirit of Jefferson, June 4, 1889, p.2 c.2

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Spirit of Jefferson, May 14, 1890, p.3 c.2

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Spirit of Jefferson, May 12, 1891, p.3 c.2

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Spirit of Jefferson, November 11, 1891, p.3 c.3

AUTHOR: Randall, John C. DATE: /1892 CRBIB NUMBER:
TITLE: Randall's Business Directory

AUTHOR: DATE: /1894 CRBIB NUMBER:
TITLE: Sanborn Perris Fire Insurance Map

AUTHOR: DATE: /1902 CRBIB NUMBER:
TITLE: Sanborn Perris Fire Insurance Map

AUTHOR: DATE: /1907 CRBIB NUMBER:
TITLE: Sanborn Perris Fire Insurance Map

AUTHOR: DATE: /1912 CRBIB NUMBER:
TITLE: Sanborn Perris Fire Insurance Map

AUTHOR: DATE: /1922 CRBIB NUMBER:
TITLE: Sanborn Perris Fire Insurance Map

AUTHOR: DATE: /1933 CRBIB NUMBER:
TITLE: Sanborn Perris Fire Insurance Map

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Spirit of Jefferson, May 17, 1910, p. 2 c.7-8

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Spirit of Jefferson, May 2, 1911, p.2 c.1

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Virginia Free Press, June 8, 1911, p.4 c.2

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Spirit of Jefferson, June 25, 1912, p.2 c.4

AUTHOR: DATE: 09/1955 CRBIB NUMBER:
TITLE: Park Architectural Base Map

AUTHOR: Ramakrishna, Kira DATE: 08/1990 CRBIB NUMBER:
TITLE: Historic Structures Report, Draft, Bldgs. 5,7,16,16A, Historic Data

AUTHOR: DATE: 09/1837 CRBIB NUMBER:
TITLE: Deed Book 22, p.340, Lease

AUTHOR: DATE: 01/1844 CRBIB NUMBER:
TITLE: Deed Book 27, p.103, Agreement

AUTHOR: DATE: 01/1844 CRBIB NUMBER:
TITLE: Deed Book 27, p.102, Lease

AUTHOR: DATE: 09/1847 CRBIB NUMBER:
TITLE: Deed Book 29, p.303, Deed of Bargain and Sale

AUTHOR: DATE: 12/1880 CRBIB NUMBER:
TITLE: Deed Book I, p.74, Deed of Bargain and Sale

AUTHOR: DATE: 01/1881 CRBIB NUMBER:
TITLE: Deed Book I, p.104, Deed of Bargain and Sale

AUTHOR: DATE: 12/1952 CRBIB NUMBER:
TITLE: Deed Book 190, p.508, Deed of Bargain and Sale

****

--MAJOR IMPROVEMENTS/MODIFICATIONS----------

CONSTRUCTION DATE: 1856-1857	CONSTRUCTION: Built	TEXT: Date of original construction
COST: $ 0 DESIGNER:		DESIGNER'S OCCUPATION: Unknown
CONSTRUCTION DATE: 1956-1957	CONSTRUCTION: Preservation	TEXT: repaired roof (laid roll roofing on lean-to)
COST: $ 350 DESIGNER:		DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1956-1957	CONSTRUCTION: Preservation	TEXT: replaced rear addition rafters
COST: $ 0 DESIGNER:		DESIGNER'S OCCUPATION: Unknown
CONSTRUCTION DATE: 1956-1957	CONSTRUCTION: Stabilization	TEXT: stabilized building
COST: $ 0 DESIGNER:		DESIGNER'S OCCUPATION: Unknown
CONSTRUCTION DATE: 1957	CONSTRUCTION: Preservation	TEXT: replaced rotted window frames
COST: $ 0 DESIGNER:		DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1957-1959	CONSTRUCTION: Rehabilitation	TEXT: rehabilitated exterior
COST: $ 813 DESIGNER:		DESIGNER'S OCCUPATION: Contractor
CONSTRUCTION DATE: 1957	CONSTRUCTION: Altered	TEXT: removed front porch
COST: $ 0 DESIGNER:		DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1961	CONSTRUCTION: Preservation	TEXT: repaired masonry
COST: $ 890 DESIGNER:		DESIGNER'S OCCUPATION: Contractor
CONSTRUCTION DATE: 1963	CONSTRUCTION: Preservation	TEXT: replaced roll roofing with slate roof
COST: $ 0 DESIGNER:		DESIGNER'S OCCUPATION: Contractor
CONSTRUCTION DATE: 1976	CONSTRUCTION: Preservation	TEXT: painted exterior
COST: $ 0 DESIGNER:		DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1978	CONSTRUCTION: Preservation	TEXT: painted interior
COST: $ 0 DESIGNER:		DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1980-1981	CONSTRUCTION: Preservation	TEXT: removed electrical wiring from front room
COST: $ 0 DESIGNER:		DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1981	CONSTRUCTION: Altered	TEXT: moved furnace to install exhibit
COST: $ 0 DESIGNER:		DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1981	CONSTRUCTION: Preservation	TEXT: replastered and repainted both rooms
COST: $ 0 DESIGNER:		DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1981	CONSTRUCTION: Preservation	TEXT: replaced and repaired rotted window sills
COST: $ 0 DESIGNER:		DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1989-1990	CONSTRUCTION: Preservation	TEXT: general exterior maintenance
COST: $ 89 DESIGNER:		DESIGNER'S OCCUPATION: Park Staff

CONSTRUCTION DATE: 1989-1990 CONSTRUCTION: Preservation TEXT: interior maintenance
COST: $ 147 DESIGNER: DESIGNER'S OCCUPATION: Park Staff

CONSTRUCTION DATE: 1989-1990 CONSTRUCTION: Preservation TEXT: flashing/gutters
COST: $ 30 DESIGNER: DESIGNER'S OCCUPATION: Park Staff

CONSTRUCTION DATE: 1989-1990 CONSTRUCTION: Preservation TEXT: masonry repairs
COST: $ 110 DESIGNER: DESIGNER'S OCCUPATION: Park Staff

CONSTRUCTION DATE: 1989-1990 CONSTRUCTION: Preservation TEXT: special projects
COST: $ 33 DESIGNER: DESIGNER'S OCCUPATION: Park Staff

TOTAL IMPROVEMENT/MODIFICATION COSTS: $ 2462

-I N S P E C T I O N T E A M I N F O R M A T I O N-

EVALUATION PROCEDURE

INSPECTION TEAM
DATE OF INSPECTION: 06/15/90
INSPECTION TEAM PERSONNEL:

Krista Pace Copeland
Park Architect
Harpers Ferry N.H.P.
P.O. Box 65
Harpers Ferry, WV 25425
(304) 535-6040
AREAS: EAF/IAF
TIMES:
INSPECTION: HRS.
REPORT PREPARATION: HRS.

Mike Jenkins
Research Historian
University of Maryland
P.O. Box 65
Harpers Ferry, WV 25425
(304) 535-6441
AREAS:
TIMES:
INSPECTION: HRS.
REPORT PREPARATION: HRS.

DATA ENTRY
DATE OF DATA ENTRY: 07/06/90
NAME: Mike Jenkins
ADDRESS: University of Maryland
P.O. Box 65
Harpers Ferry, WV 25425
(304) 535-6441

****

--E X E C U T I V E S U M M A R Y----------

SIGNIFICANCE: Building 7 was erected by William Anderson and altered by Frederick A. Roeder. It served first as a warehouse, then White Hall" tavern, next as a stable for the Union Army during 1861-1862.

ARCHITECTURAL DESCRIPTION: Building 7 ia a two story stone building with a slate roof.

--I D E N T I F I C A T I O N / M A N A G E M E N T I N F O R M A T I O N----------

OTHER NAMES:

BUILDING ADDRESS
PARK ORGCODE: 3850
Park General
DISTRICT ORGCODE: 3850
Potomac Street
Harpers Ferry, WV 25425
LOCATION: Lower Town
COUNTY: Jefferson

BUILDING INFORMATION
BUILDING ORGCODE: 0007
MANAGEMENT UNIT: HAFE
BUILDING CONDITION: Poor
MAINTENANCE PRIORITY: 1 - High
MANAGEMENT CATEGORY: A DATE: 01/03/81
ELEVATION: FT
UTM COORDINATES: / /

REAL PROPERTY INFORMATION
ACQUISITION DOCUMENT: - - -
ACQUISITION COST: $ 1900
ACQUISITION DATE: 1953
GENERAL LEDGER ACCT NO: 215
SF 1166 NUMBER: 6070
SF 1166 DESIGNATION: VISITOR CONTACT
TOTAL IMPROVEMENT/MODIFICATION COSTS: $ 1242

OTHER PROPERTY INFORMATION
NPS LEGAL INTEREST:
FEE - FEE SIMPLE
MANAGEMENT AGREEMENT: NONE

NUMBERING INFORMATION
NUMBER ON BUILDING: 07
LCS ID NUMBER: 00621
HOUSING NUMBER: N/A
ENERGY NUMBER: N/A
CONCESSIONER NUMBER: N/A

APPRAISAL INFORMATION
REPLACEMENT COST:
APPRAISAL YEAR:
APPRAISAL SOURCE:
PERCENT OCCUPIED: 0%
DATE OF CONSTRUCTION: 1838-1839

SIZE INFORMATION
TOTAL FLOOR AREA: 933 SF
FIRST FLOOR AREA: 300 SF
ADDITIONAL FLOOR AREA: 633 SF
TOTAL BASEMENT AREA: 279 SF
FINISHED BASEMENT AREA: 0 SF
UNFINISHED BASEMENT AREA: 279 SF
ROOF AREA: 620 SF
PERIMETER LENGTH: 88 LF
NUMBER OF STORIES: 2.5
NUMBER OF ROOMS: 4
NUMBER OF BATHROOMS: 0

SUMMARY COST INFORMATION
TOTAL: $ 0
CRITICAL: $ 0
SERIOUS: $ 0
MINOR: $ 0

****

--I D E N T I F I C A T I O N / M A N A G E M E N T I N F O R M A T I O N (cont)----------

BUILDING CODE INFORMATION
APPLICABLE CODES:
BOCA
UFAS

OCCUPANCY CLASSIFICATION: Exhibit
OCCUPANCY LOAD:
HAZARD OF CONTENTS: Ordinary
SEISMIC ZONE:
CONSTRUCTION TYPE: III

OPERATIONS INFORMATION
Open to the public
SEASON: summer
HOURS: 7:30a.m.- 6:00p.m.
TREATMENT RESPONSIBILITY
INTERIM TREATMENT: NPS
APPROVED ULTIMATE TREATMENT: NPS
ROUTINE MAINTENANCE: NPS
CYCLIC MAINTENANCE: NPS
ULTIMATE TREATMENT: APPROVED DATE: 03/ /80
DOCUMENT: C - DCP
TREATMENT TYPE: RESTORATION

--S I G N I F I C A N C E----------

SIGNIFICANCE: State & Regional
NATIONAL REGISTER STATUS: 1 - Entered - Documented DATE: 05/07/81
NHL STATUS: No

--H I S T O R I C A L I N F O R M A T I O N----------

PERIOD OF CONSTRUCTION: Historic
HISTORIC FUNCTION:
SINGLE DWELLING(INCL ROWHOUSE)
BUSINESS

CURRENT FUNCTION:
NPS EXHIBIT

--D O C U M E N T A T I O N----------

DSC PARKCODE:
DRAWINGS:

TITLE	DOC ID #	DATE	LOCATION
Whitehall Tavern Building #7	N/A	10/16/70	HAFE
White Hall HABS Drawing	N/A	N/A	HAFE

REPORTS:

TITLE	DOC ID #	DATE	LOCATION
Historic Structures Report	N/A	3/30/59	HAFE
Historic Structures Report	N/A	4/1980	HAFE
Historic Structures Report Draft	N/A	8/28/90	HAFE

****

--H I S T O R I C A L D O C U M E N T A T I O N----------

HABS NUMBER: WV-156 HAER NUMBER: NATIONAL REGISTER NUMBER: 66000041

CULTURAL RESOURCES MANAGEMENT BIBLIOGRAPHY (CRBIB)

AUTHOR: Snell, Charles DATE: 04/1980 CRBIB NUMBER:
TITLE: Historic Structures Report, Bldg. No. 7, Historical Data

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Virginia Free Press, November 16, 1837, p.3 c.4

AUTHOR: DATE: 02/1856 CRBIB NUMBER:
TITLE: Deed Book 35, p.299, Deed of Bargain and Sale

AUTHOR: Franzen, A.W. DATE: 07/1959 CRBIB NUMBER:
TITLE: White Hall, HABS Survey Sheet

AUTHOR: Snell, Charles DATE: 04/1980 CRBIB NUMBER:
TITLE: Historic Structure Report, Bldgs. No. 16 and 16A, Historic Data

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Spirit of Jefferson, May 8, 1872, p.3 c.2

AUTHOR: DATE: /1870 CRBIB NUMBER:
TITLE: Ninth Census of the United States for Town of Harpers Ferry

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Spirit of Jefferson, May 9, 1882, p.3 c.1

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Virginia Free Press, May 13, 1882, p.3 c.3

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Photograph, HF-57

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Spirit of Jefferson, February 17, 1880, p.3 c.1

AUTHOR: DATE: /1894 CRBIB NUMBER:
TITLE: Sanborn Perris Fire Insurance Map

AUTHOR: DATE: /1902 CRBIB NUMBER:
TITLE: Sanborn Perris Fire Insurance Map

AUTHOR: DATE: /1907 CRBIB NUMBER:
TITLE: Sanborn Perris Fire Insurance Map

AUTHOR: DATE: /1912 CRBIB NUMBER:
TITLE: Sanborn Perris Fire Insurance Map

AUTHOR: DATE: /1922 CRBIB NUMBER:
TITLE: Sanborn Perris Fire Insurance Map

AUTHOR: DATE: /1933 CRBIB NUMBER:
TITLE: Sanborn Perris Fire Insurance Map

AUTHOR: DATE: / CRBIB NUMBER:
TITLE: Spirit of Jefferson, May 17, 1910, p.2 c.7-8

AUTHOR: DATE: /1913 CRBIB NUMBER:
TITLE: B&O Railroad Map

AUTHOR: DATE: 09/1955 CRBIB NUMBER:
TITLE: Park Architectural Base Map

AUTHOR: Ramakrishna, Kira DATE: 08/1990 CRBIB NUMBER:
TITLE: Historic Structures Report Draft, Bldgs. 5,7,16,16A, Historical Data

AUTHOR: DATE: 02/1841 CRBIB NUMBER:
TITLE: Deed Book 24, p.457, Deed of Bargain and Sale

AUTHOR: DATE: 11/1847 CRBIB NUMBER:
TITLE: Deed Book 29, p.240, Deed of Bargain and Sale

AUTHOR: DATE: 02/1856 CRBIB NUMBER:
TITLE: Deed Book 35, p.299, Deed of Bargain and Sale

AUTHOR: DATE: 05/1874 CRBIB NUMBER:
TITLE: Deed Book B, p.153, Deed of Bargain and Sale

AUTHOR: DATE: 03/1879 CRBIB NUMBER:
TITLE: Deed Book G, p.221, Deed of Bargain and Sale

AUTHOR: DATE: 07/1879 CRBIB NUMBER:
TITLE: Deed Book N, p.237, Deed of Bargain and Sale

AUTHOR: DATE: 10/1952 CRBIB NUMBER:
TITLE: Deed Book 190, p.242, Quit Claim

AUTHOR: DATE: 03/1928 CRBIB NUMBER:
TITLE: Deed Book 147, p.371, Deed of Bargain and Sale

AUTHOR: DATE: 07/1941 CRBIB NUMBER:
TITLE: Deed Book 154, p.535, Deed of Bargain and Sale

AUTHOR: DATE: 12/1952 CRBIB NUMBER:
TITLE: Deed Book 190, p.318, Deed of Bargain and Sale

****

--MAJOR IMPROVEMENTS/MODIFICATIONS----------

CONSTRUCTION DATE: 1839 COST: $ 0 DESIGNER: u	CONSTRUCTION: Built	TEXT: Date of original construction DESIGNER'S OCCUPATION: Unknown
CONSTRUCTION DATE: 1956 COST: $ 0 DESIGNER:	CONSTRUCTION: Altered	TEXT: removed frame front porch DESIGNER'S OCCUPATION: Unknown
CONSTRUCTION DATE: 1956 COST: $ 0 DESIGNER:	CONSTRUCTION: Altered	TEXT: demolished bathroom addition DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1956-1957 COST: $ 0 DESIGNER:	CONSTRUCTION: Preservation	TEXT: repaired roof and removed ground floor flooring DESIGNER'S OCCUPATION: Unknown
CONSTRUCTION DATE: 1957-1959 COST: $ 779 DESIGNER:	CONSTRUCTION: Rehabilitation	TEXT: rehabilitated exterior; installed drainage system DESIGNER'S OCCUPATION: Contractor
CONSTRUCTION DATE: 1963 COST: $ 0 DESIGNER:	CONSTRUCTION: Preservation	TEXT: replaced roll roofing with slate; replaced gutters DESIGNER'S OCCUPATION: Contractor
CONSTRUCTION DATE: 1975 COST: $ 0 DESIGNER:	CONSTRUCTION: Rehabilitation	TEXT: layed floor and plastering (exhibit preparation) DESIGNER'S OCCUPATION: Job Corps
CONSTRUCTION DATE: 1975 COST: $ 0 DESIGNER:	CONSTRUCTION: Rehabilitation	TEXT: repaired interior features; stabilized stairwell DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1976 COST: $ 0 DESIGNER:	CONSTRUCTION: Preservation	TEXT: painted exterior DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1977 COST: $ 0 DESIGNER:	CONSTRUCTION: Preservation	TEXT: painted interior DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1982 COST: $ 0 DESIGNER:	CONSTRUCTION: Preservation	TEXT: repaired broken window pane DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1989-1990 COST: $ 345 DESIGNER:	CONSTRUCTION: Preservation	TEXT: general exterior maintenance DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1989-1990 COST: $ 44 DESIGNER:	CONSTRUCTION: Preservation	TEXT: interior maintenance DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1989-1990 COST: $ 30 DESIGNER:	CONSTRUCTION: Preservation	TEXT: flashing/gutters DESIGNER'S OCCUPATION: Park Staff
CONSTRUCTION DATE: 1989-1990 COST: $ 44 DESIGNER:	CONSTRUCTION: Preservation	TEXT: special projects DESIGNER'S OCCUPATION: Park Staff

TOTAL IMPROVEMENT/MODIFICATION COSTS: $ 1242

****

--I N S P E C T I O N T E A M I N F O R M A T I O N----------

EVALUATION PROCEDURE

INSPECTION TEAM

DATE OF INSPECTION: 06/15/90

INSPECTION TEAM PERSONNEL:

Krista Pace Copeland
Park Architect
Harpers Ferry N.H.P.
P.O. Box 65
Harpers Ferry, WV 25425
(304) 535-6040
AREAS: EAF/IAF
TIMES:
INSPECTION: HRS.
REPORT PREPARATION: HRS.

Mike Jenkins
Reserach Historian
University of Maryland
P.O. Box 65
Harpers Ferry, WV 25425
(304) 535-6441
AREAS:
TIMES:
INSPECTION: HRS.
REPORT PREPARATION: HRS.

DATA ENTRY

DATE OF DATA ENTRY: 07/06/90

NAME: Mike Jenkins

ADDRESS: University of Maryland
P.O. Box 65
Harpers Ferry, WV 25425
(304) 535-6441

Appendix I: List of Classified Structures

Buildings 5 and 7 have both been entered into the List of Classified Structures (LCS). The full listing for both strucures has been included and is current through June 14, 1994.

LIST OF CLASSIFIED STRUCTURES (LCS)
SINGLE ENTRY REPORT

Identification

IDLCS: 00546 Structure Number: B05

Structure Name 1: BLDG. #5, FREDERICK A ROEDER'S STORE--LOWER TOWN
Structure Name 2: BURLEIGH STORE
Structure Name 3:

Park Alpha Code: HAFE Name: HARPERS FERRY NATIONAL HISTORICAL PARK
ORGCODE: 3850 County: JEFFERSON State: WV
Regional Office: NATIONAL CAPITAL
Subunit ORGCODE: Name:
Alpha Code: County: State:

Number of UTM's: 1 Zone/Easting/Northing
18 264600 4356020

Significance

NR Status: ENTERED - DOCUMENTED Date: 10/15/66
Significance: CONTRIBUTING
NHL: NO Date: / /

Significance

1 OF 3 STRUCTURES APPEARING IN HIST. PHOTO OF ENGINEHOUSE; 2.5-S GABLED SLATE ROOF W/ CHIMNEY ON EACH END; 1ST-S PARGETTED FIELD STONE, DOUBLE DOOR ENTRY; 2ND-S & GABLE ENDS IN BRICK; 2- BRICK SHED ROOF ADDITION "L", 20'X24"; EXTERIOR STAIR TO 2ND-S

Historical Information

Period of Construction: HISTORIC

Date: 1838-	(BU)	Designer:UNKNOWN	(O)
Date: 1856-	(AL)	Designer:BRICK SHED-ROOF ADDITION	(O)
Date: 1956-1963	(RR)	Designer:SERIES OF SMALL CONTRACTS	(O)
Date: -	( )	Designer:	( )

Functions, Uses, Materials, Impacts, and Condition

Historic Functions	Current Uses
WAREHOUSE (GEN SUPPLY STOR)	EXHIBIT
SINGLE FAMILY DWELLING	

Buildings—Materials—Structures

Foundation: STONE Sub-structure:
Framing: BRICK
Walls: STONE
Roof: SLATE Super-structure:
Other: WOOD
Volume: 1 - 2,000 CUBIC FT

Description

DETAILED DOCUMENTATION AVAILABLE; HISTORY DRAFT, 1990

Impact Level: MODERATE Impact Types: INAPPROPRIATE PRES./REST.
NEGLECT
Condition: FAIR INAPPROPRIATE ENVIRONMENT

LIST OF CLASSIFIED STRUCTURES (LCS)
SINGLE ENTRY REPORT
Continued

IDLCS	Park	Structure Name	Number
00546	HAFE	BLDG. #5, FREDERICK A ROEDER'S STORE--LOWER TOWN	B05

Management Information

NPS Legal Interest: FEE
Life: Exp. Date: / /
Federal Owner:
Local Owner:

Management Category: MUST BE PRES. & MAINT Management Date: 10/15/66
Management Agreement: NONE Agrmt. Exp. Date: / /

Proposed Ultimate Treat: Doc: Date: / /
Approved Ultimate Treat: RESTORATION Doc: HSR Date: 09/19/64

Treatment Responsibilities		Treatment Costs		
Interim Treatment:	NPS	Interim:	$10,000	Date: 06/91
Ultimate Treatment:	NPS	Ultimate:	$400,000	Date: 06/91
Routine Maintenance:	NPS	Level of Estimate:	SIMILAR FACILITIES	
Cyclic Maintenance:	NPS	Estimator:	REGION	

Approved Ultimate Treatment Completed: NO

Management Text

DSC & A/E CURRENTLY PREPARING PLANS FOR PP & RR; PARGETTING CHIPPING NEAR GROUND; ORIGINALLY CONSTRUCTED AS 1 ROOM STONE WAREHOUSE; PERIOD BALCONY REMOVED

Major Bibliographical References

Nat. Reg.: 66000041 CSI: Nat. Cat: YES

HABS: WV-223
HAER:

BRIDGES:
DAMS:
QTRS:

CLI		CRBIB		Other
1.	HRS	1.		1. DCP 3/31/80
2.	HS ASSESS	2.		2. HIST. PHOTO, NPS
3.	HSR	3.		3. HIST. BLDG. REP. BIB#001225
4.	CLR	4.		4. & #001219, 012207, 001218
5.		5.		

Documentation Level: GOOD

Date Entered/Updated: 06/13/91 Logger:

Date of Report: 06/14/94

LIST OF CLASSIFIED STRUCTURES (LCS)
SINGLE ENTRY REPORT

Identification

IDLCS: 00621 Structure Number: B07

Structure Name 1: BLDG. #7, WHITE HALL TAVERN--LOWER TOWN
Structure Name 2: WHITE HALL
Structure Name 3:

Park Alpha Code: HAFE Name: HARPERS FERRY NATIONAL HISTORICAL PARK
ORGCODE: 3850 County: JEFFERSON State: WV
Regional Office: NATIONAL CAPITAL
Subunit ORGCODE: Name:
Alpha Code: County: State:

Number of UTM's: 1 Zone/Easting/Northing
18 264610 4356010

Significance

NR Status: ENTERED - DOCUMENTED Date: 10/15/66
Significance: CONTRIBUTING
NHL: NO Date: / /

Significance

1 OF 3 STRUCTURES IN HIST. PHOTO OF ENGINEHOUSE; 1-S TAVERN 1848-1953 SERVED AS TAVERN; UNION ARMY STABLE IN CIVIL WAR; 2.5-S RANDOM FIELDSTONE COVERED W/ STUCCO, 20'X24'; BOTH 1ST & 2ND-S DOOR FLANKED W/ 6/6SASHES; BRICK SAWTOOTH CORNICE; GABLE ROOF

Historical Information

Period of Construction: HISTORIC

Date: 1839-	(BU)	Designer: WILLIAM ANDERSON	(O)
Date: 1840-1850	(AL)	Designer: 2ND-S ADDED, FREDERICK ROEDER	(O)
Date: 1856-	(AL)	Designer: FRONT REMOVED TO WIDEN ALLEY	(O)
Date: 1894-	(AL)	Designer: ADD'N. OF FRAME FRONT PORCH	(O)

Functions, Uses, Materials, Impacts, and Condition

Historic Functions
SINGLE FAMILY DWELLING
RESTAURANT (BAR, LOUNGE)

Current Uses
HISTORIC FURNISHED INTERIOR

Buildings — Materials — Structures

Foundation: STONE Sub-structure:
Framing: STONE
Walls: STONE
Roof: SHINGLE Super-structure:
Other: EARTH
Volume: 1 - 2,000 CUBIC FT

Description

DETAILED DOCUMENTATION AVAILABLE; NO RECENT HSR, BUT SCHEDULE FOR NEAR FUTURE; HISTORY DRAFT, 1990

Impact Level: MODERATE Impact Types: INAPPROPRIATE PRES./REST.
STRUCTURAL DETERIORATION
Condition: FAIR INAPPROPRIATE ENVIRONMENT

LIST OF CLASSIFIED STRUCTURES (LCS)
SINGLE ENTRY REPORT
Continued

IDLCS	Park	Structure Name	Number
00621	HAFE	BLDG. #7, WHITE HALL TAVERN--LOWER TOWN	B07

Management Information

NPS Legal Interest: FEE
Life: Exp. Date: / /
Federal Owner:
Local Owner:

Management Category: MUST BE PRES. & MAINT Management Date: 02/20/91
Management Agreement: NONE Agrmt. Exp. Date: / /

Proposed Ultimate Treat: Doc: Date: / /
Approved Ultimate Treat: RESTORATION Doc: DCP Date: 03/31/80

Treatment Responsibilities		Treatment Costs		
Interim Treatment:	NPS	Interim:	$10,000	Date: 06/91
Ultimate Treatment:	NPS	Ultimate:	$300,000	Date: 06/91
Routine Maintenance:	NPS	Level of Estimate:	SIMILAR FACILITIES	
Cyclic Maintenance:	NPS	Estimator:	REGION	

Approved Ultimate Treatment Completed: NO

Management Text

DSC & A/E CURRENTLY PLANNING FOR RR & PP; ORIGINALLY 24'X40' 1-S WAREHOUSE; FRONT REMOVED TO WIDEN ALLEY; 1894 PORCH SINCE REMOVED; SOME CHIPPING OF STUCCO; PAINT IN GOOD CONDITION

Major Bibliographical References

Nat. Reg.: 66000014 CSI: Nat. Cat: YES

HABS: WV-156
HAER:

BRIDGES:
DAMS:
QTRS:

	CLI	CRBIB	Other
1.	HRS	1.	1. DCP 3/31/80
2.	HS ASSESS	2.	2. HIST. PHOTO, NPS
3.	HSR	3.	3. HIST BLDG. REP. BIB#001345
4.	CLR	4.	4. ADMIN DATA BIB#001344
5.		5.	

Documentation Level: GOOD

Date Entered/Updated: 06/13/91 Logger:

Date of Report: 06/14/94

Appendix J: Photographs:

Copies of historic photographs were obtained from the Harpers Ferry Park Library with the assistance of Frank Schultz DePalo and Peg Bethany. Other copies were obtained from the National Park Service Historic Photograph Collection at Harpers Ferry Center with the assistance of Tom DuRant, Curator Historic Photograph Collections. The photographs contained in this report cover the time period from 1859 to 1994. The 1990 existing conditions photographs by former Park Architect Krista Copeland, 1993 existing condition photographs (DSC) and 1994 existing condition photographs (WPTC) are also included in the report to document the structures prior to construction.

Photograph List:

Harpers Ferry Library Collection:

HF-43 - c. 1871, View of Lower Town, upper portion of Bldg. 7.

HF-55 - c. 1865, View of upper portion of Bldg 7 NE elevation.

HF-57 - c. 1890-91, Building 7, NE elevation.

HF-64 - October 1859, View of Lower Town, only see chimneys of Bldg. 7.

HF-96 - c. 1896, View of Lower Town, shows NE elevations of Bldgs. 5 and 7.

HF-100 - c. 1889, View of upper portions of Buildings 5 and 7.

HF-190 - c. 1889-92, Bldg. 5 NE elevation.

HF-329 - c. 1904, Bldg. 7, NE elevation.

HF-379 - c. 1882-86, View of upper portions of Buildings 5 and 7.

HF-569 - c. 1890, View of upper portions of Buildings 5 and 7.

HF-571 - c. 1890, View of upper portions of Buildings 5 and 7.

HF-655 - c. 1880-1890, View of upper portions of Buildings 5 and 7.

HF-875 - no date, (New number HF-8620) View of Bldgs. 5 and 7 NE elevation.

HF-1200 - 1862, View of upper portions of Buildings 5 and 7.

HF-1211 - c. 1890-1910, Building 5 NE elevation.

HF-1220 - c. 1939, View of upper portions of Buildings 5 and 7.

NHF-181 - c. 1956, Building 5 NW and SW elevations.

NHF-182 - August 6, 1957, Building 5 NE elevation.

NHF-183 - July 18, 1957, Building 5 rear corner.

NHF-184 - July 18, 1957, NW elevation of Bldg. 5 during stabilization work.

NHF-185 - August 6, 1957, Building 5 NW and SW elevations.

NHF-186 - July 18, 1957, NW and SW elevation of Bldg. 5 during stabilization work.

NHF-187 - November 7, 1956, Building 5, rafters on rear addition before replacement.

NHF-188 - November 7, 1956, Building 5, rafters on rear addition before replacement.

NHF-189 - November 7, 1956, Building 5, rafters on rear addition before replacement.

NHF-190 - November 7, 1956, Building 5, rafters on rear addition before replacement.

NHF-191 - November 7, 1956, Building 5 SW chimney.

NHF-192 - November 7, 1956, Building 5 SW chimney.

NHF-193 - No Date, Building 5, SE and SW elevations.

NHF-194 - September 1957, Building 7, porch ceiling and posts.

NHF-195 - No Date, Building 7, NW elevation.

NHF-196 - August 6, 1957, Building 7, NE elevation.

NHF-197 - No Date, Buildings 5 and 7, NE and much of SE elevations

NHF-198 - No Date, Buildings 5 and 7, NE and most of NW elevations

NHF-199 - November 14, 1956, Building 5 replacement roof sheathing.

NHF-200 - No Date, Building 7, SW and NW elevations.

NHF-201 - c. 1954, Building 7, NE elevation.

NHF-843 - c. 1956, Buildings 5 and 7, NE elevations.

NHF-1708 - c. No Date, Building 5, NE elevation.

NHF-1863 - October 1961, Building 5, SE and SW elevations after stabilization work.

NHF-1865 - October 1961, Building 5, upper portions of NW and SW elevations.

Photograph List

NHF-1867 - October 1961, Building 5, SW and NW elevations.

NHF-1868 - October 1961, Building 5, SW and NW elevations during stabilization.

NHF-1870 - October 1861, Building 5, NE elevation.

NHF-3317 - March 1971, Buildings 5 and 7, SW and NW elevations.

NHF-3449 - June 1974, Building 5, NE and SE elevations.

NHF-3515 - January 1975, Building 5, NE elevation.

NHF-3516 - July 1976, Building 7 as a law office, NE elevation.

NHF-3558 - Fall 1974, Building 7, SW elevation.

NHF-3559 - Fall 1974, Building 7, SW elevation.

NHF-3656 - January 1975, Building 7 NE elevation.

NHF-3657 - July 1976, Building 7 interior as a law office.

NHF-3704 - March or April 1978, Building 7, SW and some of NW elevation.

Other Photographic resources:

-Krista Copeland (Former Park Architect), 1990 existing condition photographs, black and white prints, on file with HSR materials.

-Denver Service Center, Falls Church, VA., 1993 existing condition photographs, color prints, on file with HSR materials.

-Williamsport Preservation Training Center, 1994 existing condition photographs, black and white prints, on file with HSR materials.

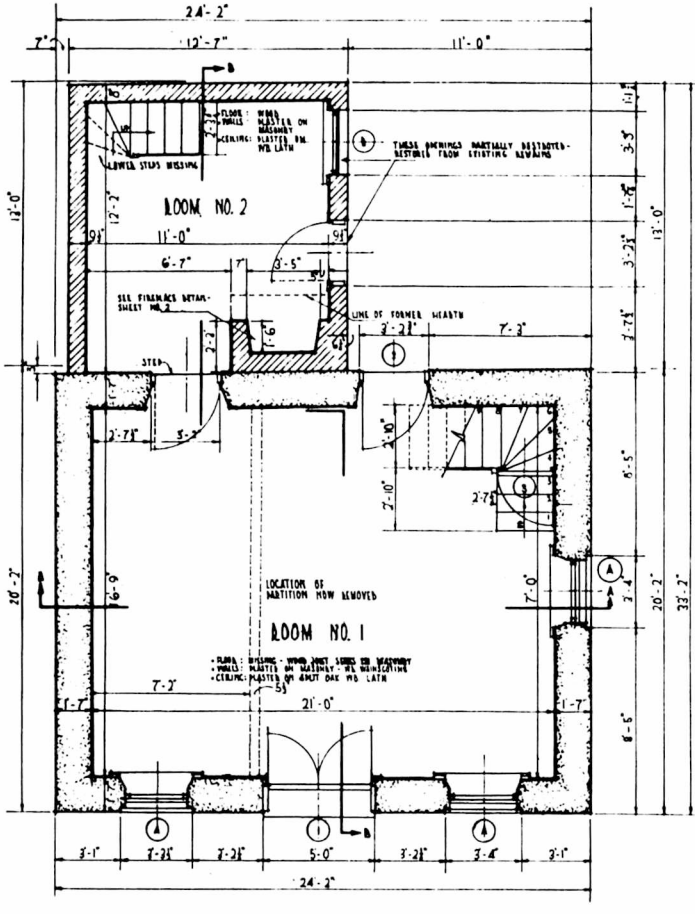
-Library of Congress, Prints and Photographs Division, James Madison Building , Washington, D.C. 20540

Appendix K: Drawings

In 1956, Building 5 was documented by the Historic American Building Survey (HABS). During this documentation the structure was assigned the number WV-223. In 1959, Building 7 was documented by the Historic American Buildings Survey. During this documentation the structure was assigned the number WV-156. These drawings were updated and redrawn in 1992. The 1992 versions are referred to as the addendum to WV-223 and addendum to WV-156.

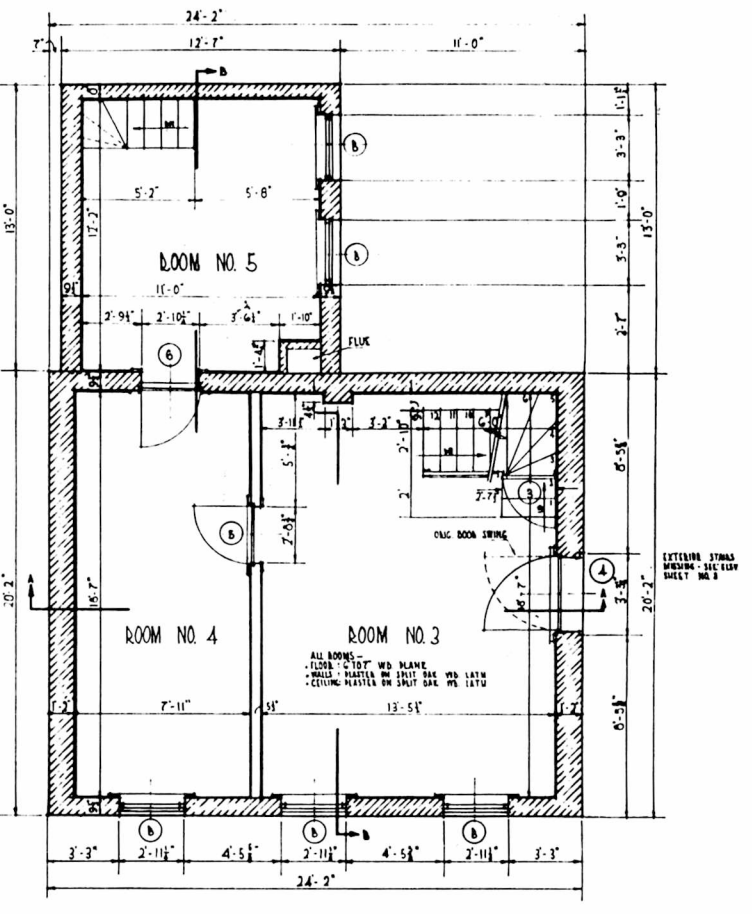
In 1970, Harpers Ferry Park Architect, Archie Franzen, prepared measured drawings of existing conditions of the windows and doors in both buildings. These drawings are on file in the Park collection.

As part of the Williamsport Preservation Training Center project day-labor construction documents were prepared (drawing set number 385/25032, "Preservation of Buildings 5 and 7"). The final approved drawings with "as-built" notations will be included in the "Record of Treatment" report, the follow up report to the HSR.



FIRST FLOOR PLAN.

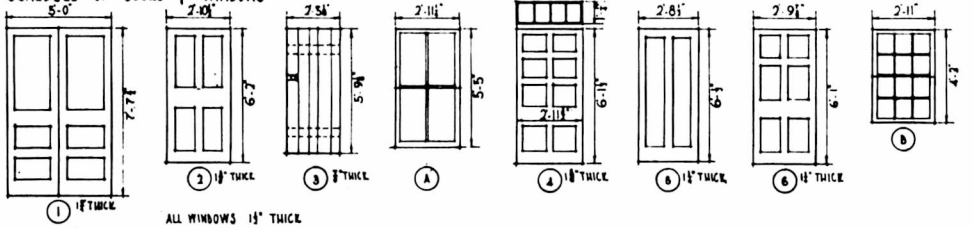
SCALE 1/4" = 1'-0"



SECOND FLOOR PLAN.

SCALE 1/4" = 1'-0"

SCHEDULE OF DOORS & WINDOWS

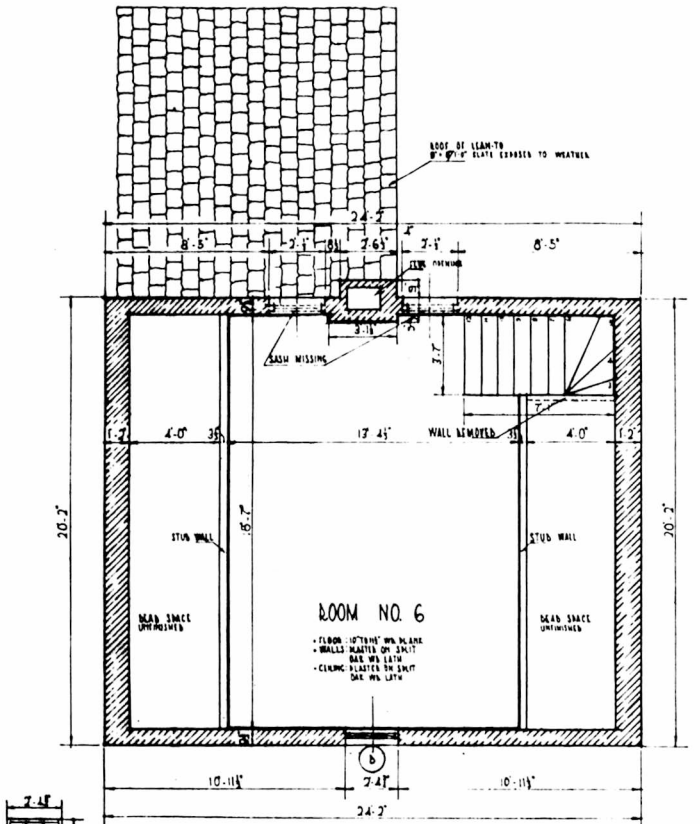


ALL WINDOWS 1¾" THICK



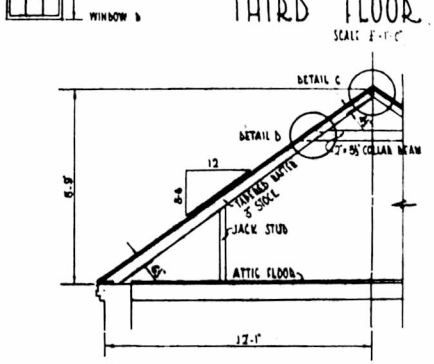
JAS. N. WISE - DEL.

"Mission 66" Harpers Ferry National Historical Park Project UNDER DIRECTION OF UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE, BRANCH OF PLANS AND DESIGN	NAME OF STRUCTURE: ROEDER STORE — POTOMAC STREET — HARPERS FERRY — JEFFERSON COUNTY — WEST VIRGINIA	SURVEY NO. WV 223	HISTORIC AMERICAN BUILDINGS SURVEY SHEET 1 OF 4 SHEETS	LIBRARY OF CONGRESS PRINTS DIVISION



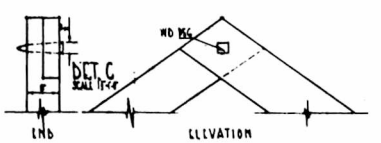
THIRD FLOOR PLAN

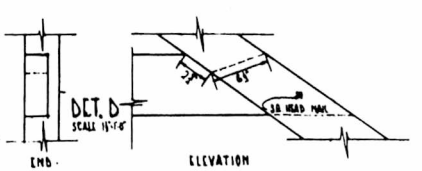
SCALE 1/4"-1'-0"

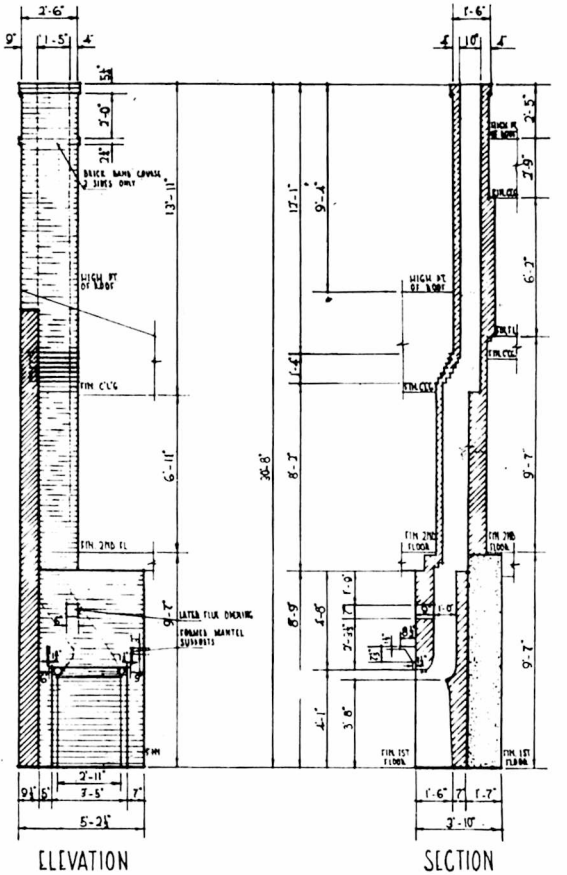


HALF SECTION ROOF FRAMING

SCALE 1/4"-1'-0"







FIREPLACE DETAIL

SCALE 1/4"-1'-0"



JAS M. KISE - DEL

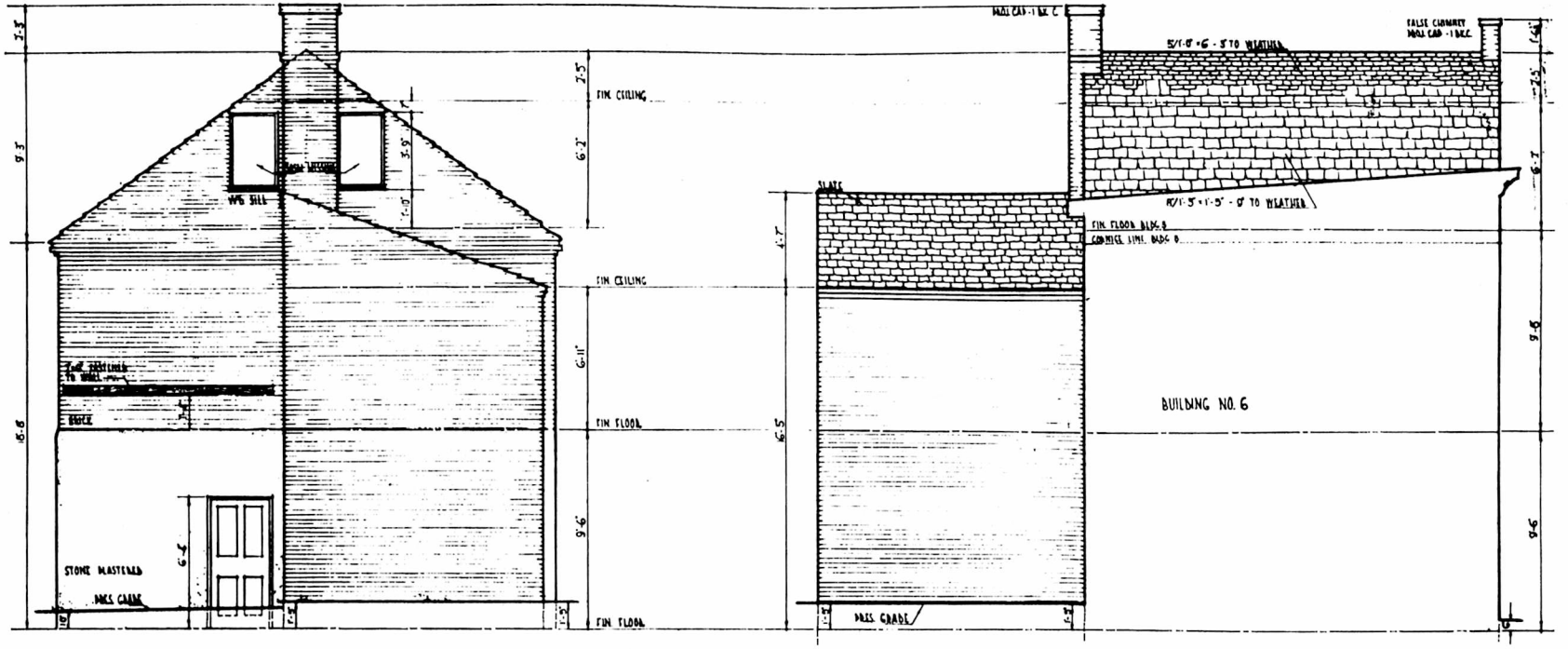
"Mission'66"
Harpers Ferry National Historical Park Project
UNDER DIRECTION OF UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE, BRANCH OF PLANS AND DESIGN

POTOMAC STREET

NAME OF STRUCTURE
ROEDER STORE
HARPERS FERRY JEFFERSON COUNTY WEST VIRGINIA

SURVEY NO.
WV
223

HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 2 OF 4 SHEETS

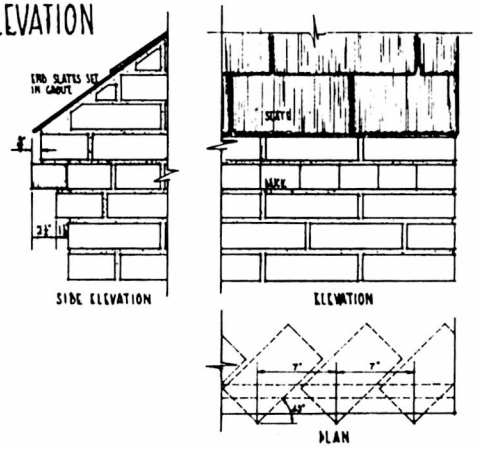


SOUTHWEST ELEVATION

SCALE 1/4"-1'-0"

SOUTHEAST ELEVATION

SCALE 1/4"-1'-0"



CORNICE DETAIL

SCALE 1½"-1'-0"



NOTE: REVISED AUG. 28, '56 - BUILDING NO. 6 SHOWN ABOVE REMOVED AUG. '56

JAS. N. DIXE - DEL.

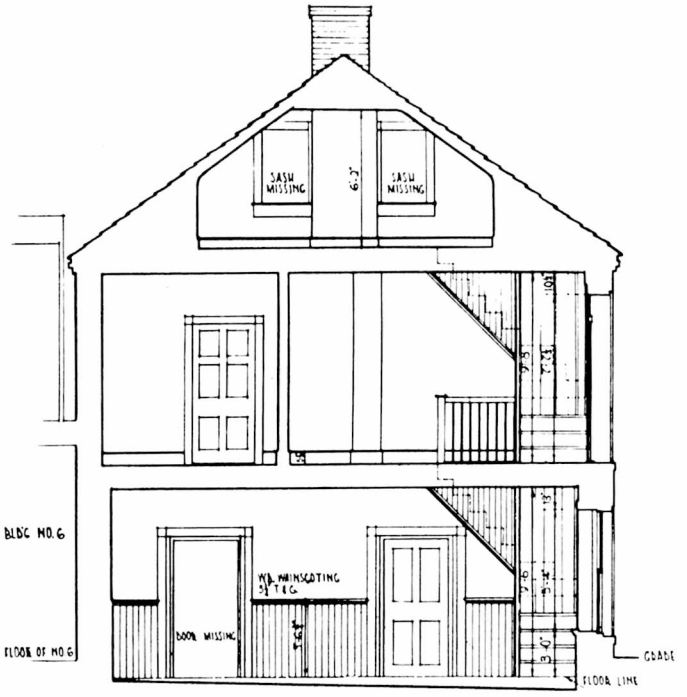
"Mission 66"
Harpers Ferry National Historical Park Project
UNDER DIRECTION OF UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE, BRANCH OF PLANS AND DESIGN

NAME OF STRUCTURE
ROEDER STORE

POTOMAC STREET — HARPERS FERRY — JEFFERSON COUNTY — WEST VIRGINIA

SURVEY NO. WV 223

HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 3 OF 4 SHEETS



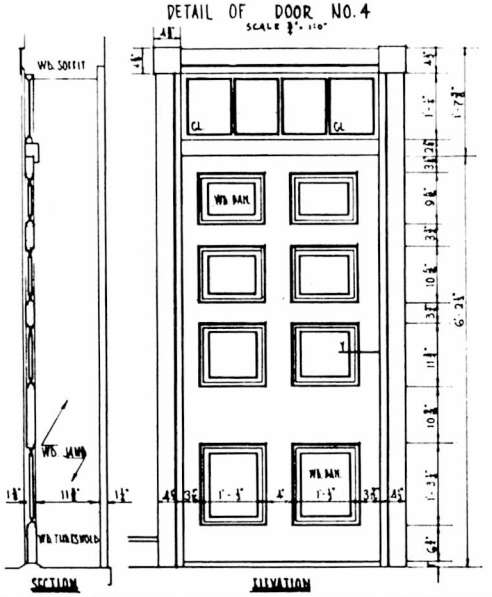
SECTION A-A
SCALE 1/4" = 1'-0"

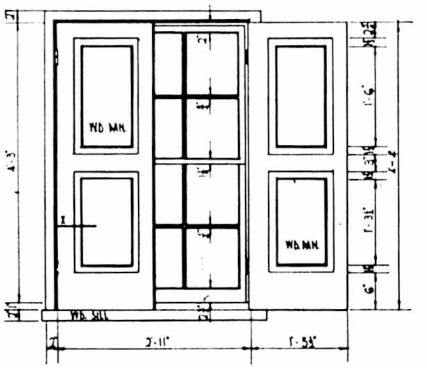


SECTION B-B
SCALE 1/4" = 1'-0"

NOTE: CUTTING PLANE SHIFTED ALONG LINE X-X TO CLARIFY RELATION OF MAJOR PARTS OF BUILDING

DETAIL OF DOOR NO. 4
SCALE 1/2" = 1'-0"



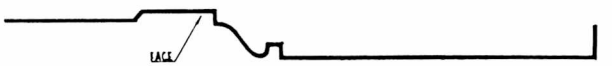


DETAIL OF WINDOW NO. B
SCALE 1/2" = 1'-0"

NOTE:
THIS DETAIL WAS BEEN PARTIALLY RESTORED FROM EXISTING FRAGMENTS. IT APPEARS TO BE TYPICAL FOR THE EARLIER PHASE OF THE BUILDING. IT IS THE ONLY 6 WINDOW WITH ITS ORIGINAL SHUTTERS AND ITS ORIGINAL SHUTTER HARDWARE.



FULL SIZE PROFILE AT X



FULL SIZE PROFILE AT Y

"Mission 66"
Harpers Ferry National Historical Park Project
UNDER DIRECTION OF UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE, BRANCH OF PLANS AND DESIGN

NAME OF STRUCTURE
ROEDER STORE

POTOMAC STREET — HARPERS FERRY — JEFFERSON COUNTY — WEST VIRGINIA

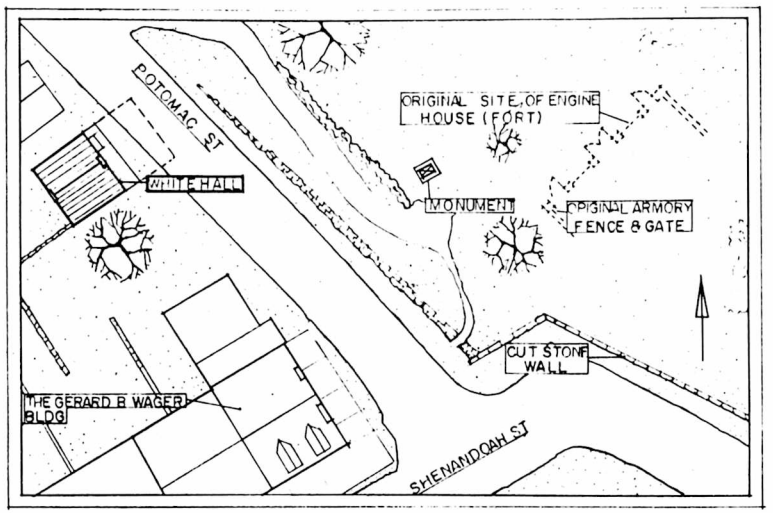
SURVEY NO.
WV
223

HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 4 OF 4 SHEETS

LIBRARY OF CONGRESS

WHITE HALL

POTOMAC STREET HARPERS FERRY JEFFERSON COUNTY WEST VIRGINIA

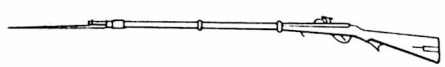


MAP OF THE VICINITY OF POTOMAC AND SHENANDOAH STREETS IN HARPERS FERRY, WEST VIRGINIA, SHOWING WHITE HALL IN RELATION TO JOHN BROWN'S FORT. THIS IS TAKEN FROM DRAWING NO. NM-HF 3086 BY A.W. FRANZEN DATED MAY 20, 1956.

WHITE HALL WAS BUILT IN 1839 AS A ONE STORY STONE WAREHOUSE 24 x 40 FEET. THE ORIGINAL OWNERS WERE WILLIAM AND SAMUEL B. ANDERSON AND DR. GEORGE B. STEPHENSON. THE NEXT OWNER, FREDERICK B. ROETER ADDED A SECOND STORY TO THE BUILDING BETWEEN 1847 AND 1852. IN 1956 THE FRONT PART OF THE BUILDING WAS REMOVED TO FACILITATE THE WIDENING OF POTOMAC STREET, AND A NEW FRONT WAS BUILT. A FRAME PORCH WAS ADDED IN 1894 AND THIS HAS BEEN REMOVED. THE BUILDING HAS BEEN USED AS A WAREHOUSE, A TAVERN, AND A RESIDENCE AND IS NOT OCCUPIED AT THIS TIME. WHITE HALL AND THE GERARD B. WAGER BUILDING SERVED AS A BACKDROP FOR THE ARMORY ENGINE HOUSE WHICH JOHN BROWN USED AS A REFUGE DURING HIS RAID IN 1859.



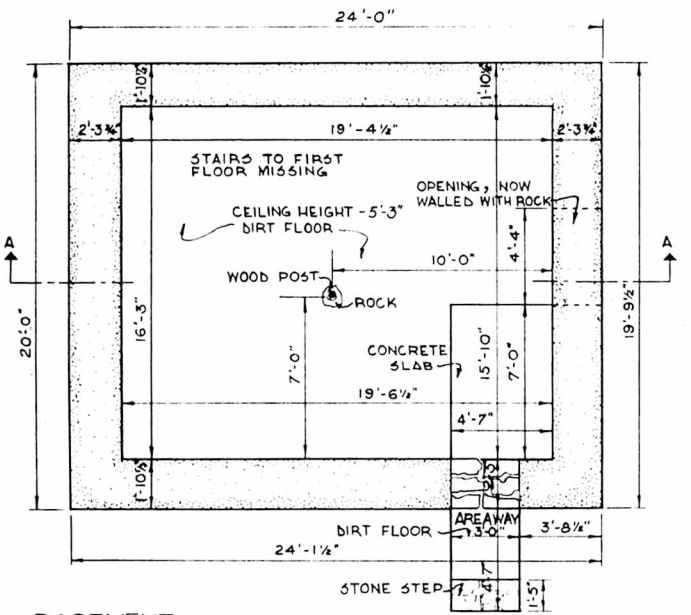
THIS PROJECT WAS FINANCED FROM FUNDS OF THE "MISSION 66" PROGRAM OF THE NATIONAL PARK SERVICE. IT WAS MEASURED AND DRAWN JULY, 1959 UNDER THE DIRECTION OF CHARLES E. PETERSON, SUPERVISING ARCHITECT, HISTORIC STRUCTURES, AND A.W. FRANZEN, RESIDENT ARCHITECT.



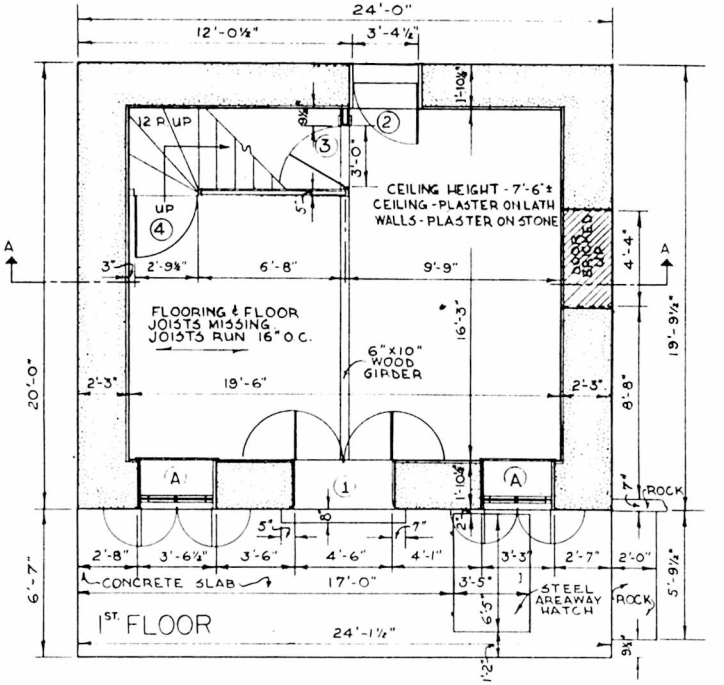
PROJECT SUPERVISOR: ARCHITECT, CHARLES S. DOTTS (UNIVERSITY OF ILLINOIS)
STUDENT ASSISTANT ARCHITECTS: RICHARD G. COLVILLE (UNIVERSITY OF PENNSYLVANIA)
CHARLES H. LAVERS JR. (UNIVERSITY OF FLORIDA)
JAMES M. REPLOGLE (OHIO STATE UNIVERSITY)

RECORDED BY THE NATIONAL PARK SERVICE

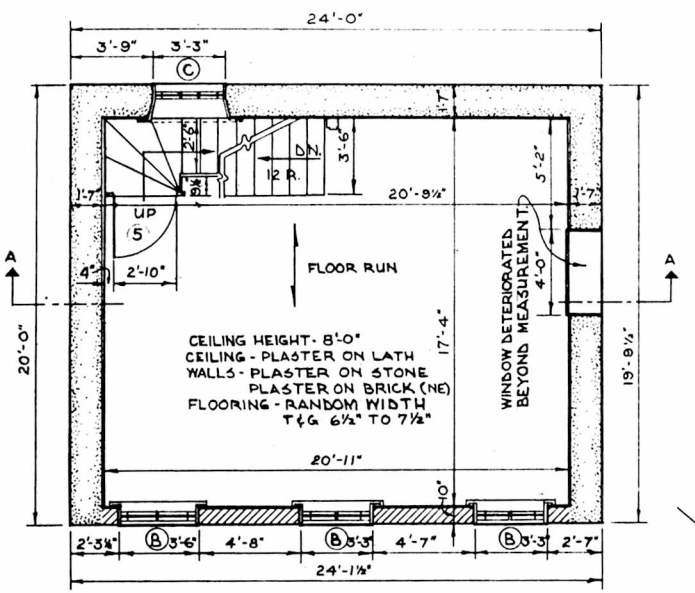
UNDER DIRECTION OF UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE, BRANCH OF PLANS AND DESIGN	NAME OF STRUCTURE: WHITE HALL — POTOMAC STREET HARPERS FERRY JEFFERSON COUNTY WEST VIRGINIA	SURVEY NO. WV-156	HISTORIC AMERICAN BUILDINGS SURVEY SHEET 1 OF 8 SHEETS	LIBRARY OF CONGRESS PRINTS DIVISION



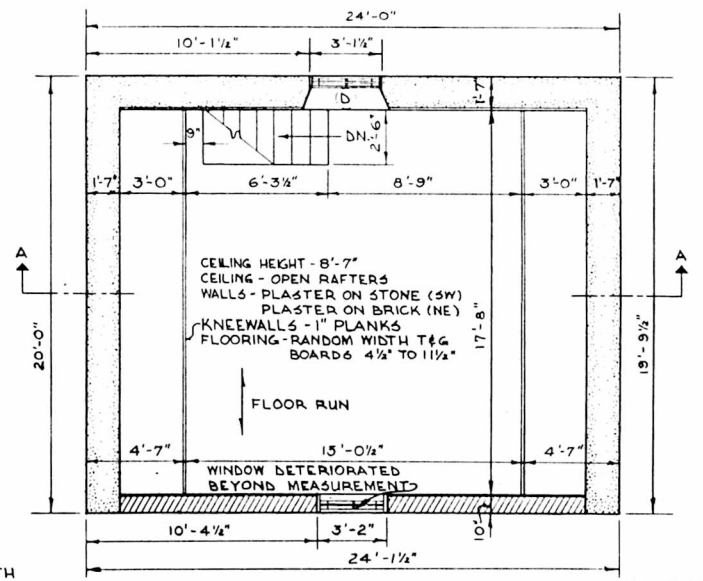
BASEMENT



1ST. FLOOR



2ND. FLOOR



ATTIC

NORTH

FEET 1/4"= 1'-0"

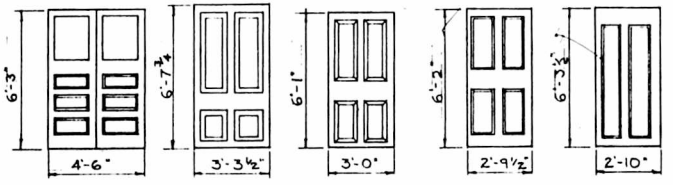
CENTIMETERS 1 48

C.S. DOTTS
C.H. LAVERS JR. 1959

FLOOR PLANS

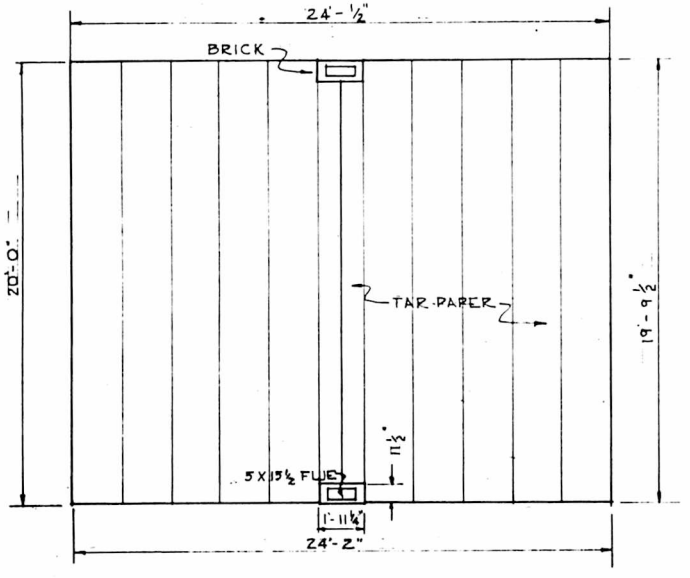
SCALE - ¼"=1'-0"

U.S. DEPARTMENT OF THE INTERIOR OFFICE OF NATIONAL PARKS, BUILDINGS, AND RESERVATIONS BRANCH OF PLANS AND DESIGN	NAME OF STRUCTURE WHITE HALL POTOMAC STREET HARPERS FERRY JEFFERSON COUNTY WEST VIRGINIA	SURVEY NO. WV-156	HISTORIC AMERICAN BUILDINGS SURVEY SHEET 2 OF 8 SHEETS	INDEX NO.



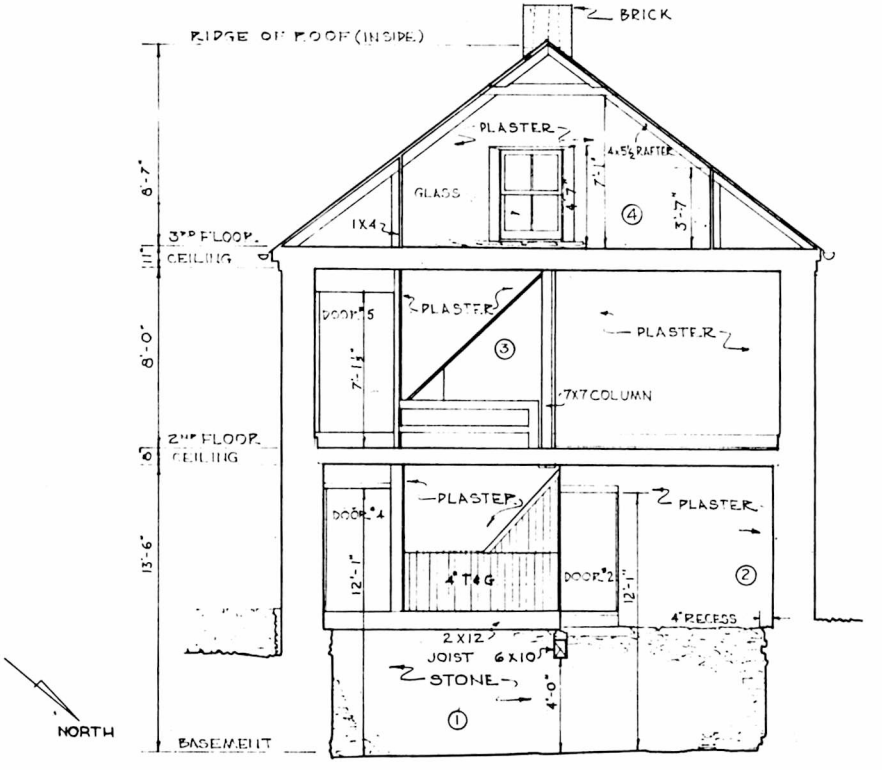
DOOR SCHEDULE

SCALE $\frac{1}{4}$" = 1'-0"



ROOF PLAN

SCALE $\frac{1}{4}$" = 1'-0"



LONGITUDINAL SECTION

SCALE $\frac{1}{4}$" = 1'-0"

FEET 1/4"=1'-0"

CENTIMETERS 1:48

C. O. DOTTS
J. M. REPLOGLE 1959

UNDER DIRECTION OF UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE, BRANCH OF PLANS AND DESIGN

NAME OF STRUCTURE
WHITE HALL
POTOMAC STREET HARPERS FERRY JEFFERSON COUNTY WEST VIRGINIA

SURVEY NO. WV-156

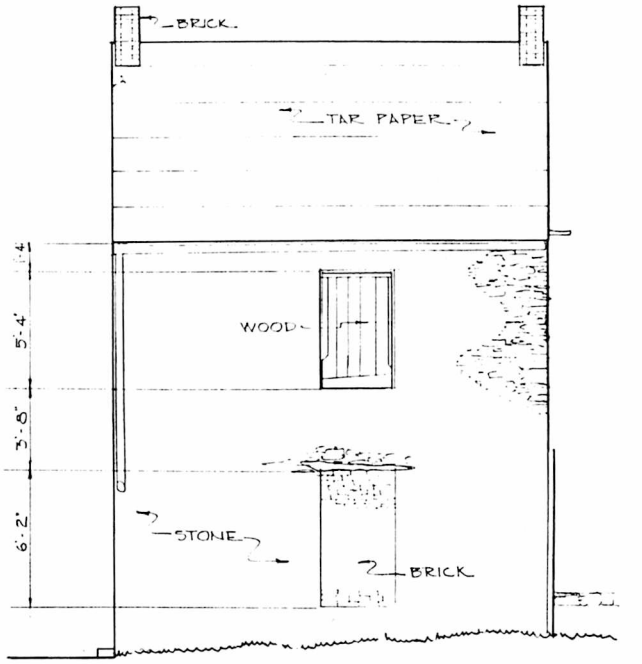
HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 3 OF 8 SHEETS

LIBRARY OF CONGRESS BRICK BUILDING



NORTHEAST ELEVATION

SCALE 1/4" = 1'-0"



NORTHWEST ELEVATION

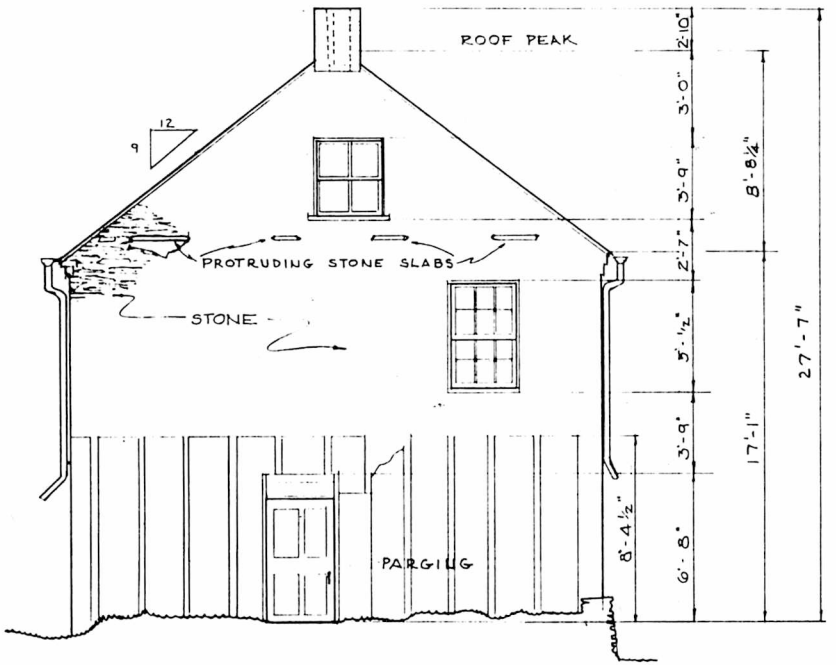
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FEET 1/4" = 1'-0"

CENTIMETERS 1:48

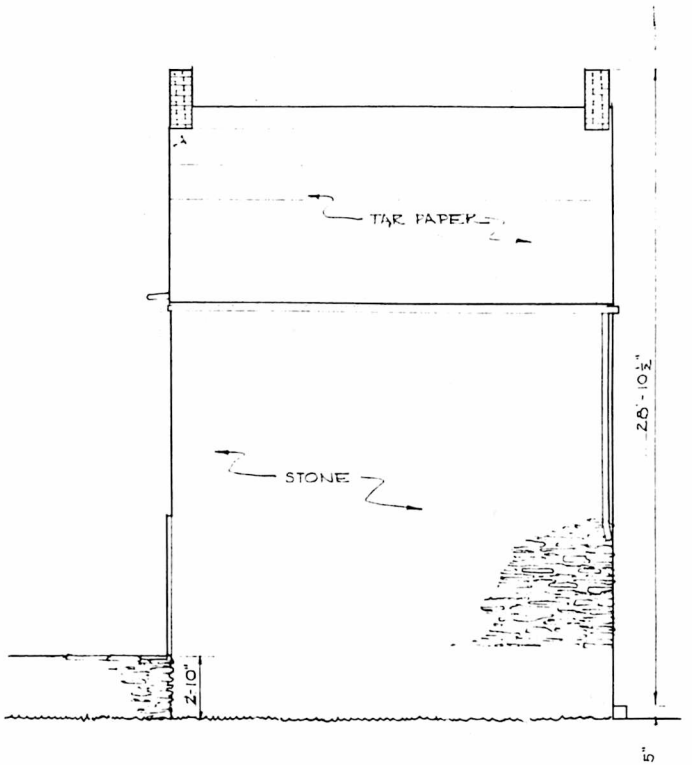
C. H. LAVERS JR.
J. M. REPLOGLE 1959

U.S. DEPARTMENT OF THE INTERIOR OFFICE OF NATIONAL PARKS, BUILDINGS, AND RESERVATIONS BRANCH OF PLANS AND DESIGN	NAME OF STRUCTURE WHITE HALL. POTOMAC STREET .. HARPERS FERRY JEFFERSON COUNTY WEST VIRGINIA	SURVEY NO. WV-156	HISTORIC AMERICAN BUILDINGS SURVEY SHEET 4 OF 8 SHEETS	INDEX NO.



SOUTHWEST ELEVATION

SCALE $\frac{1}{4}$" = 1'-0"



SOUTHEAST ELEVATION

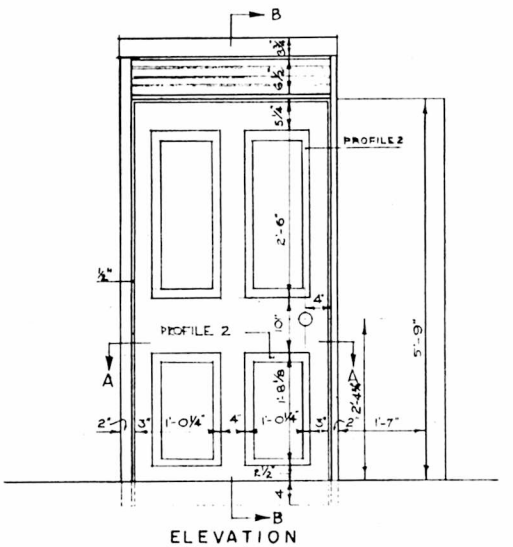
SCALE $\frac{1}{4}$" = 1'-0"

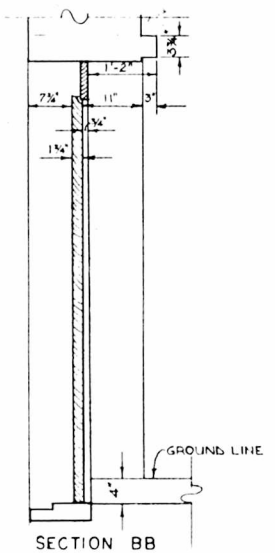
FEET 1/4" = 1'-0"

CENTIMETERS 1:48

C. H. LAVERS JR.
J. M. REPLOGLE 1959

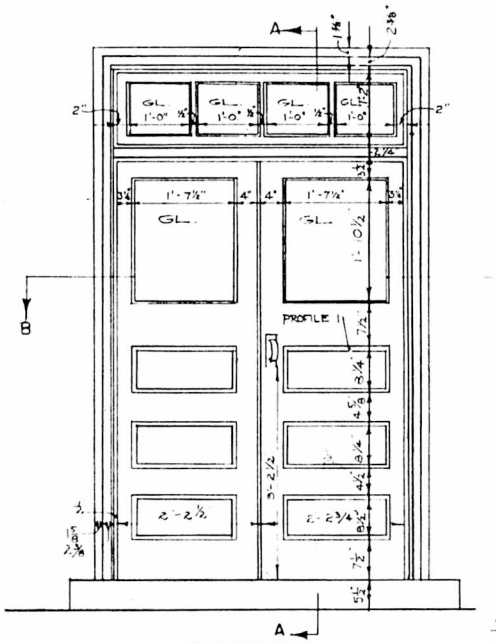
U.S. DEPARTMENT OF THE INTERIOR OFFICE OF NATIONAL PARKS, BUILDINGS, AND RESERVATIONS BRANCH OF PLANS AND DESIGN	NAME OF STRUCTURE WHITE HALL POTOMAC STREET HARPERS FERRY JEFFERSON COUNTY WEST VIRGINIA	SURVEY NO. WV-156	HISTORIC AMERICAN BUILDINGS SURVEY SHEET 5 OF 8 SHEETS	INDEX NO.

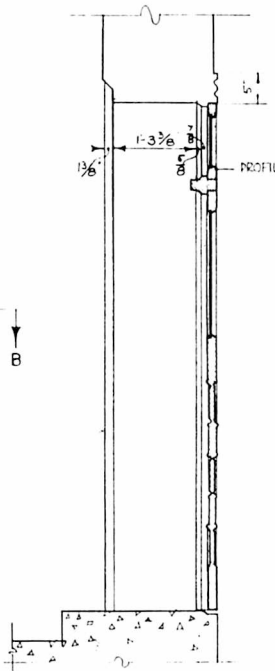


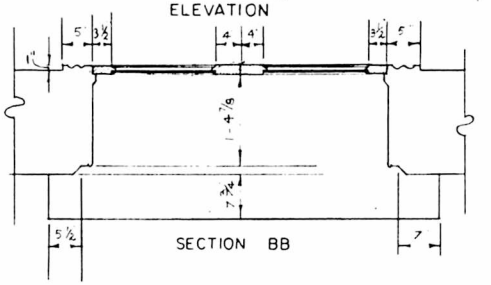


DOOR NO 2

SCALE $\frac{3}{4}$" = 1'-0"

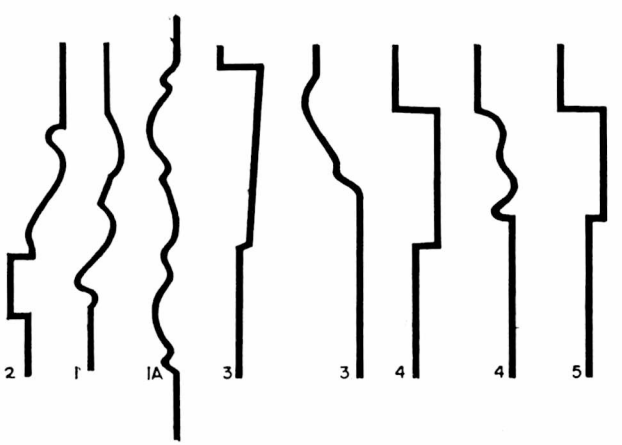






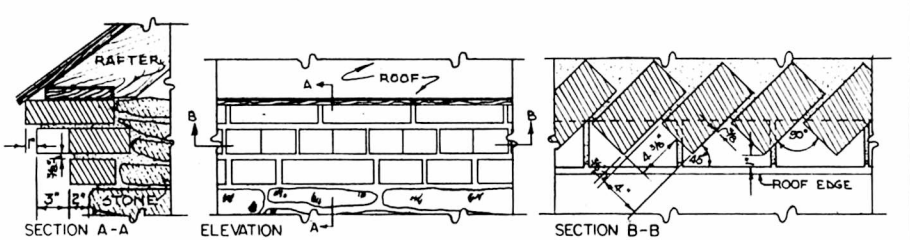
DOOR NO 1

SCALE $\frac{3}{4}$" = 1'-0"



DOOR PANEL PROFILES

SCALE - FULL SIZE

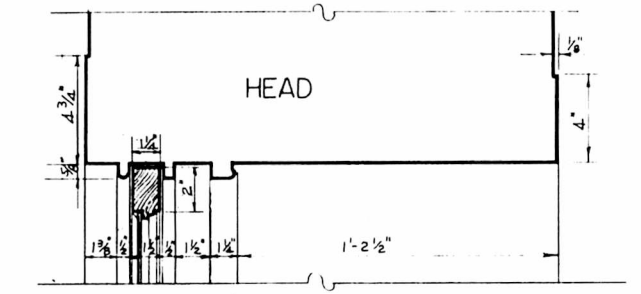


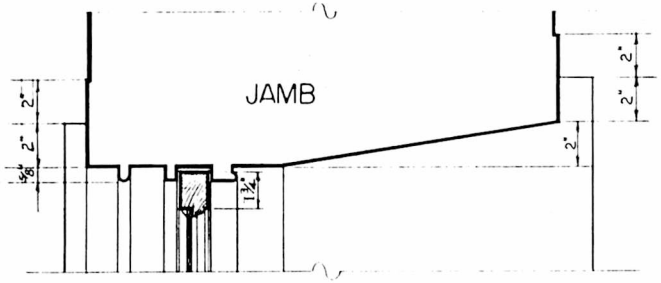
CORNICE DETAILS

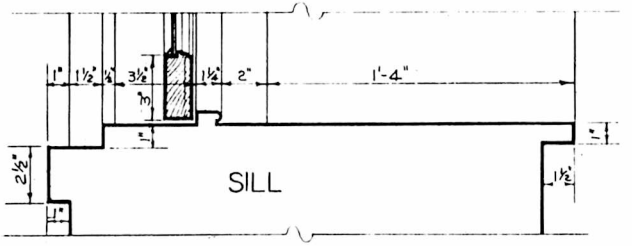
SCALE - 1½" = 1'-0"

C. S. DOTTS
R.G. COLVILLE 1959

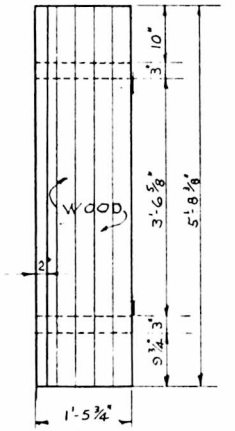
U.S. DEPARTMENT OF THE INTERIOR OFFICE OF NATIONAL PARKS, BUILDINGS, AND RESERVATIONS BRANCH OF PLANS AND DESIGN	NAME OF STRUCTURE WHITE HALL POTOMAC STREET HARPERS FERRY JEFFERSON COUNTY WEST VIRGINIA	SURVEY NO. WV-156	HISTORIC AMERICAN BUILDINGS SURVEY SHEET 6 OF 8 SHEETS	INDEX NO.



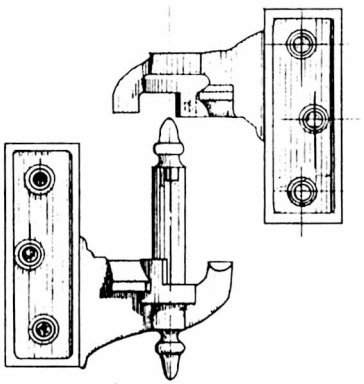




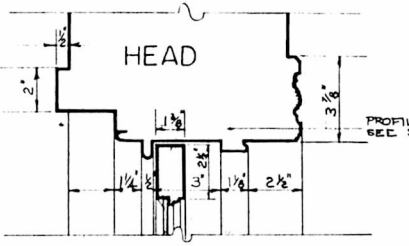
WINDOW DETAILS TYPE A SCALE 3"=1'-0"

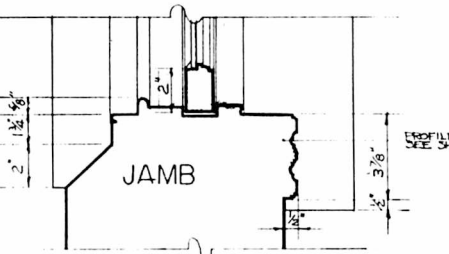


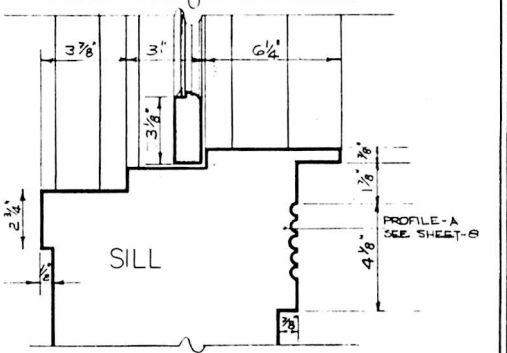
SHUTTER DETAILS WINDOW A
SCALE 3/4"=1'-0"



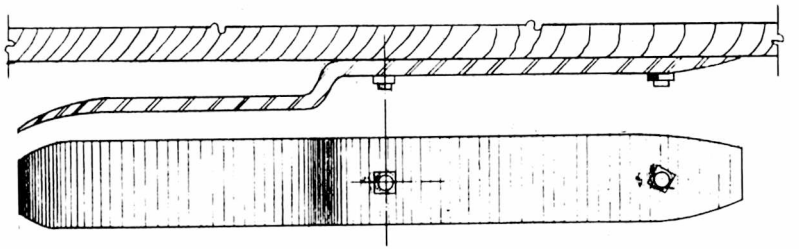
SHUTTER HINGE FULL SIZE

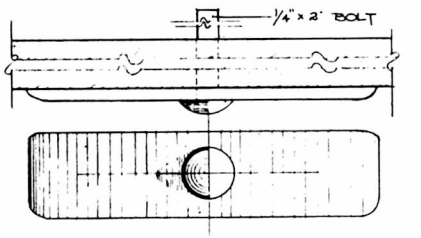






WINDOW DETAILS TYPE B SCALE 3"=1'-0"



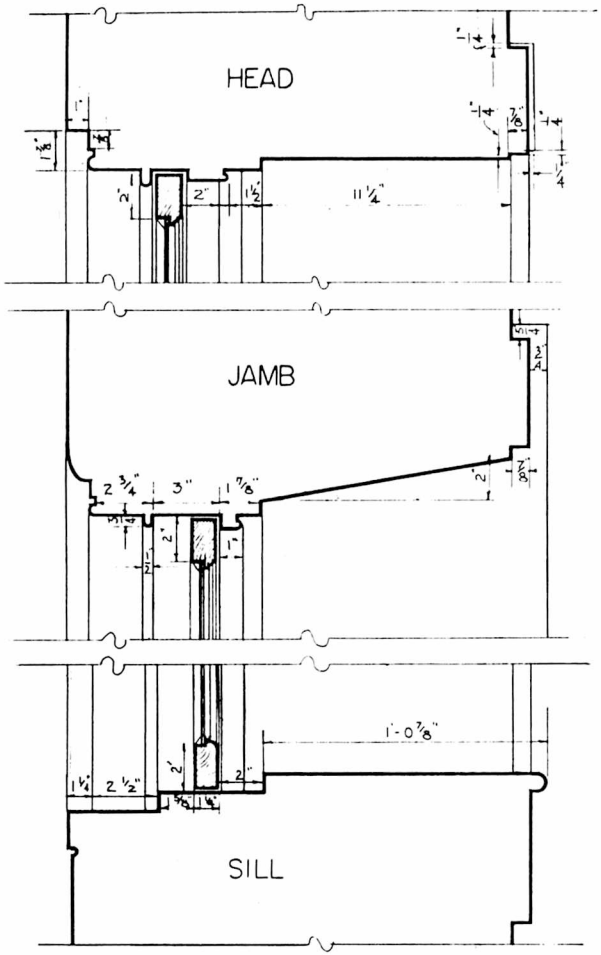


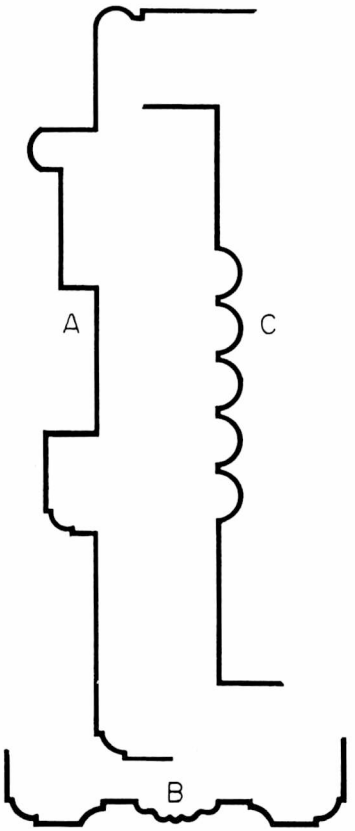
SHUTTER LATCH DETAILS

FULL SIZE

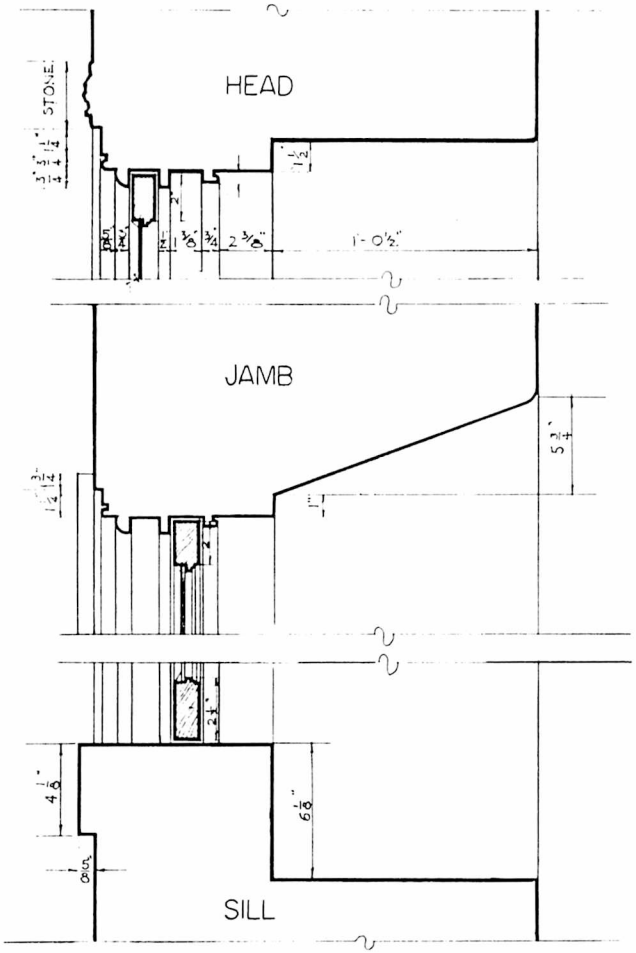
R.G. COLVILLE
C.H. LAVERS JR. 1959

U.S. DEPARTMENT OF THE INTERIOR OFFICE OF NATIONAL PARKS, BUILDINGS, AND RESERVATIONS BRANCH OF PLANS AND DESIGN	NAME OF STRUCTURE WHITE HALL POTOMAC STREET HARPERS FERRY JEFFERSON COUNTY WEST VIRGINIA	SURVEY NO. WV-156	HISTORIC AMERICAN BUILDINGS SURVEY SHEET 7 OF 8 SHEETS	INDEX NO.

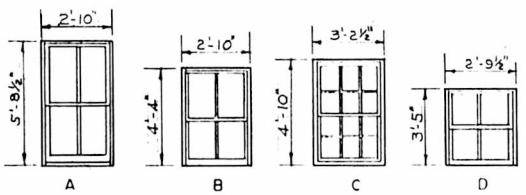




PROFILES of WINDOW A
FULL SIZE



WINDOW DETAILS TYPE C SCALE 3"=1'-0"



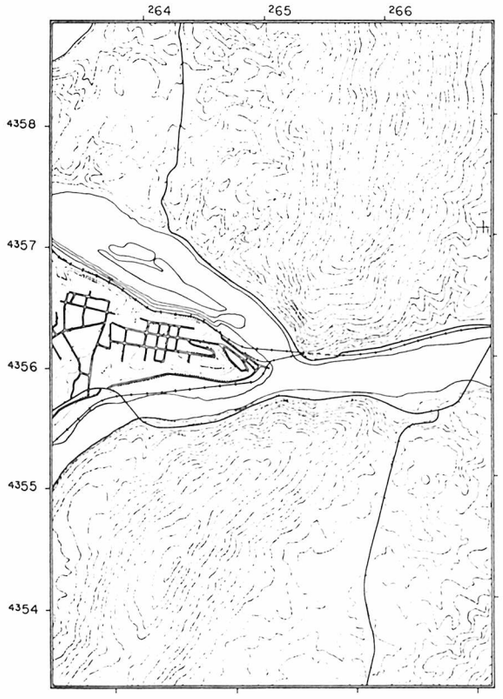
WINDOW SCHEDULE SCALE 1/4"=1'-0"

WINDOW DETAILS TYPE D SCALE 3"=1'-0"

C.S. DOTTS
C.H. LAVERS JR. 1959

U.S. DEPARTMENT OF THE INTERIOR OFFICE OF NATIONAL PARKS, BUILDINGS, AND RESERVATIONS BRANCH OF PLANS AND DESIGN	NAME OF STRUCTURE WHITE HALL POTOMAC STREET HARPERS FERRY JEFFERSON COUNTY WEST VIRGINIA	SURVEY NO. WV-156	HISTORIC AMERICAN BUILDINGS SURVEY SHEET 8 OF 8 SHEETS	INDEX NO.

ROEDER STORE



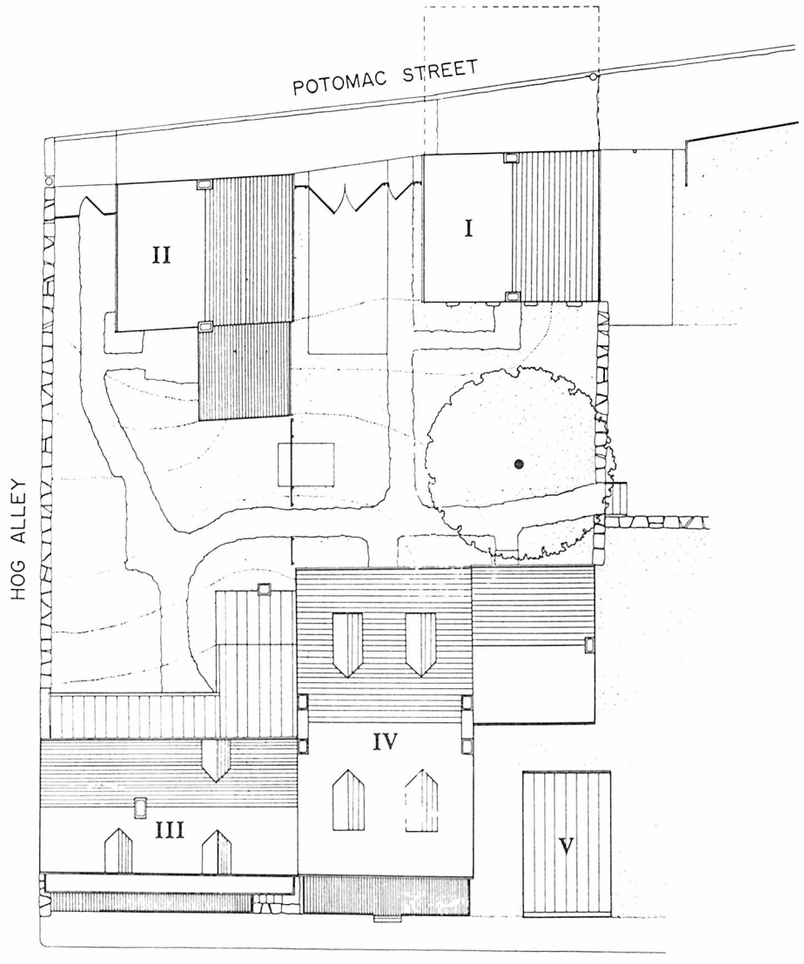
TAKEN FROM USGS HARPERS FERRY QUADRANGLE (1955)
UTM 15. 264780. 4356060

LOCATION MAP

FEET 1"= 2000'
0 1000 2000 4000 6000

METERS 1:24,000
0 500 1000 2000

N



I. WHITE HALL II. ROEDER STORE III. ROEDER HOUSE
IV. SUSAN DOWNEY HOUSE V. ALFRED BURTON JEWELRY SHOP

N

SCALE
0 5 10 20 30
FEET 1"= 10'-0"

THE ROEDER STORE WAS PROBABLY BUILT IN 1856, FOR FREDERICK ROEDER, A HARPERS FERRY CONFECTIONER. ROEDER ALSO OWNED THE ADJOINING WHITE HALL TAVERN AND WAS FORCED TO SELL THE NORTHEAST HALF OF THE WHITE HALL TAVERN TO THE UNITED STATES GOVERNMENT IN 1856 FOR THE WIDENING OF AN ALLEY INTO POTOMAC STREET. COMPENSATION FOR THIS LOSS PRESUMABLY PAID FOR CONSTRUCTION OF THE ROEDER STORE FRONTING ON THE NEW POTOMAC STREET. THE NEW ROEDER STORE WAS APPROXIMATELY THE SAME SIZE AS THE DEMOLISHED HALF OF THE WHITEHALL TAVERN, AND THE NEW POTOMAC STREET FACADES FOR WHITEHALL TAVERN AND ROEDER STORE ARE NEARLY IDENTICAL, INCLUDING STONE RUBBLE FIRST FLOOR WALLS AND BRICK MASONRY SECOND FLOOR WALLS AND ATTIC GABLES. A TWO STORY BRICK SHED-ROOFED "FLOUNDER" WAS SUBSEQUENTLY ADDED BY ROEDER TO THE BACK (SOUTHWEST) OF THE ROEDER STORE AT SOME TIME PRIOR TO THE CIVIL WAR. THE WALLS OF THE "FLOUNDER" ARE NOT KEYED INTO THE WALLS OF THE ORIGINAL ROEDER STORE, BUT ONLY ATTACHED BY MORTAR JOINTS. THE STORE SERVED AS QUARTERS FOR UNION TROOPS DURING THE CIVIL WAR, WITH GRAFFITI EXTANT ON THE SECOND FLOOR AND IN THE ATTIC. IT WAS OPERATED AS A SALOON AFTER THE WAR UNTIL 1914 WHEN WEST VIRGINIA WENT DRY.

DOCUMENTATION WAS UNDERTAKEN IN THE SUMMER OF 1992 BY THE WASHINGTON, D. C. OFFICE OF THE HISTORIC AMERICAN BUILDINGS SURVEY (HABS). THE PRINCIPALS INVOLVED WERE ROBERT J. KAPSCH, DIVISION CHIEF, HABS/HAER AND PAUL D. DOLINSKY, CHIEF, HABS. THE PROJECT WAS SPONSORED BY THE HARPERS FERRY NATIONAL HISTORIC PARK, DONALD W. CAMPBELL, SUPERINTENDENT, AND BY THE EASTERN TEAM, DENVER SERVICE CENTER OF THE NATIONAL PARK SERVICE, BILLY G. GARRETT, BRANCH CHIEF. DOCUMENTATION WAS INITIATED BY PROJECT LEADER FREDERICK J. LINDSTROM, HABS STAFF ARCHITECT. THE FIELD RECORDING WAS CONDUCTED BY PROJECT SUPERVISOR ANDREW WENCHEL (ARLINGTON, VA.), AND ARCHITECTURE TECHNICIANS HEATHER BRUNKEN (KANSAS STATE UNIVERSITY), LEE ERIC HUGHART (BALTIMORE, MD.), ROBERT P. NEELY (UNIVERSITY OF KANSAS), AND VITA RUSKYTE (US-ICOMOS, LITHUANIA).

LARGE FORMAT PHOTOGRAPH

HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 1 OF 8 SHEETS

SURVEY NO.
WV - 223

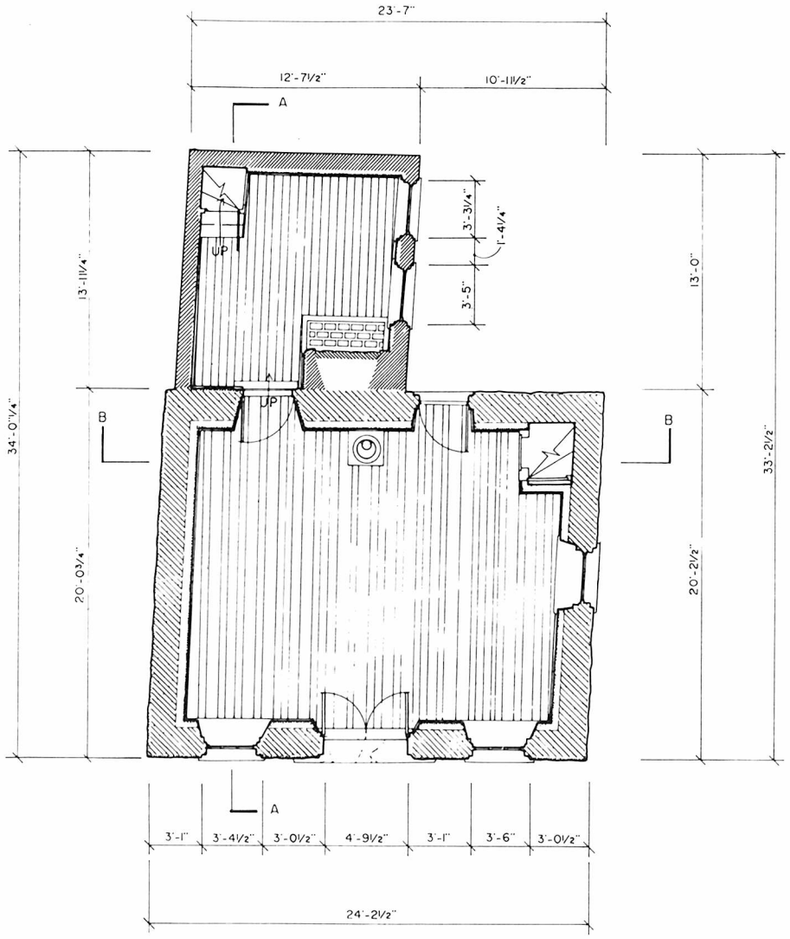
NAME AND LOCATION OF STRUCTURE
FREDERICK A. ROEDER'S STORE
POTOMAC STREET, HARPERS FERRY, JEFFERSON COUNTY, WEST VIRGINIA

ADDENDUM TO:

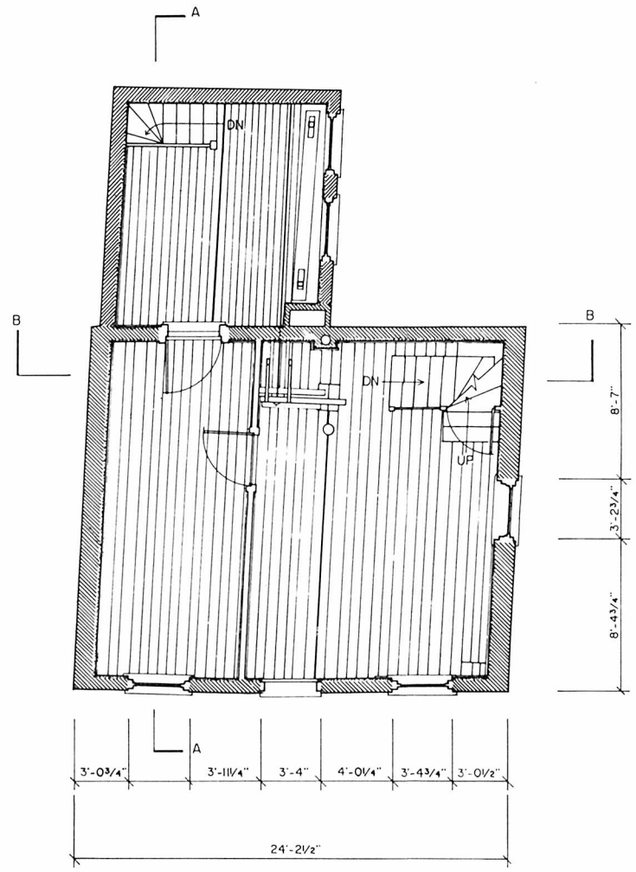
DRAWN BY RICHARD A. VENTRONE, JNR., ANDREW WENCHEL
HARPERS FERRY NATIONAL HISTORIC PARK
PROJECT, SUMMER 1992
NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR

NAME AND LOCATION OF STRUCTURE AND DESCRIPTION OF SUBJECT
HABS SURVEY NATIONAL PARK SERVICE NAME OF DELINEATOR DATE OF THE DRAWING

IF REPRODUCED PLEASE CREDIT HISTORIC AMERICAN BUILDINGS SURVEY



FIRST FLOOR PLAN



SECOND FLOOR PLAN

SCALE:

0 1 2 3 4 6 8 10
FEET 1/4"=1'0"

0 1 2 3
METERS 1:48

DRAWN BY VITA RUSKYTE
HARPERS FERRY NATIONAL HISTORIC PARK
PROJECT: SUMMER 1992
NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR

ADDENDUM TO:

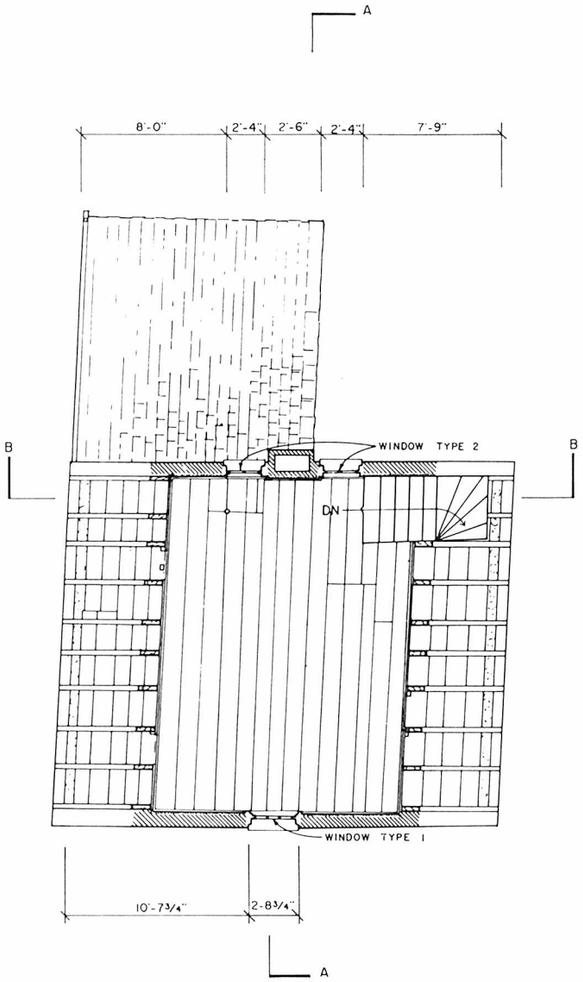
NAME AND LOCATION OF STRUCTURE
FREDERICK A. ROEDER'S STORE
POTOMAC STREET, HARPERS FERRY, JEFFERSON COUNTY, WEST VIRGINIA

SURVEY NO.
WV - 223

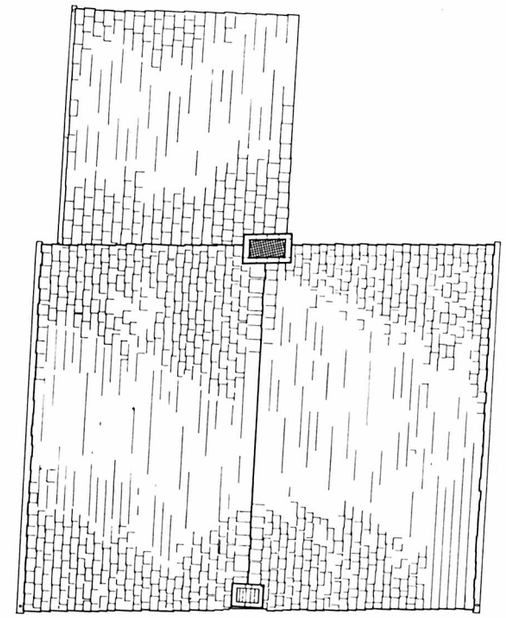
HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 2 OF 8 SHEETS

MEASURED DRAWINGS

IF REPRODUCED PLEASE CREDIT HISTORIC AMERICAN BUILDINGS SURVEY, NATIONAL PARK SERVICE. NAME OF DELINEATOR, DATE OF THE DRAWING



ATTIC PLAN



ROOF PLAN

SCALE:

0 1 2 3 4 6 8 10
FEET 1/4"=1'0"
0 1 2 3
METERS 1:48

DRAWN BY VITA RUSKYTE

HARPERS FERRY NATIONAL HISTORIC PARK
PROJECT, SUMMER 1992
HISTORIC AMERICAN BUILDINGS SURVEY
UNITED STATES DEPARTMENT OF THE INTERIOR

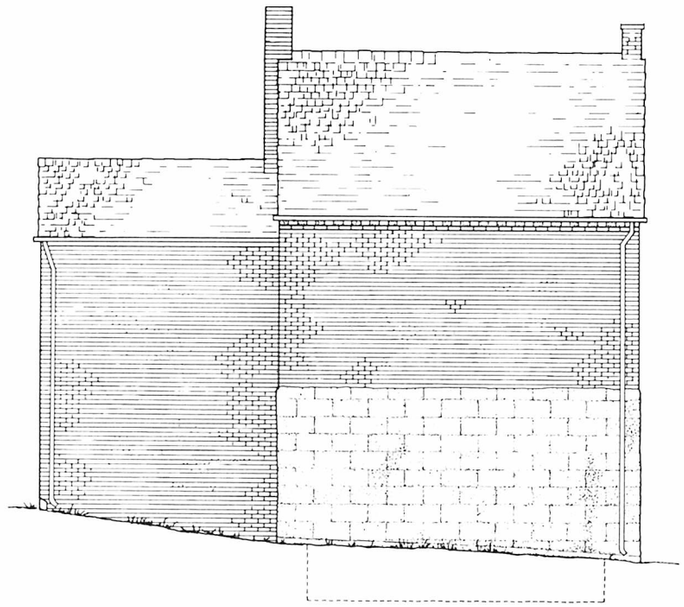
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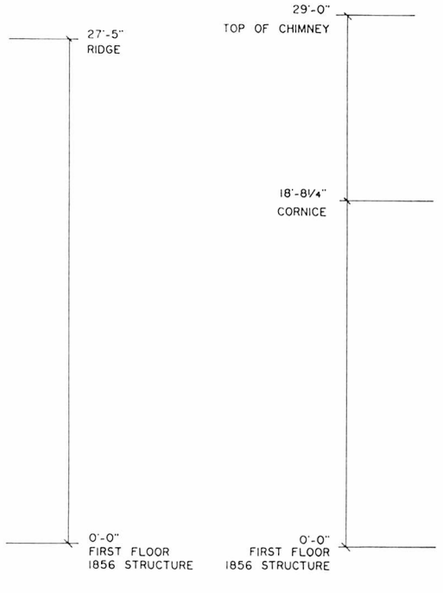
NAME AND LOCATION OF STRUCTURE
FREDERICK A. ROEDER'S STORE
POTOMAC STREET, HARPERS FERRY, JEFFERSON COUNTY, WEST VIRGINIA

SURVEY NO.
WV - 223

HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 3 OF 8 SHEETS

IF REPRODUCED, PLEASE CREDIT HISTORIC AMERICAN BUILDINGS SURVEY, NATIONAL PARK SERVICE, NAME OF DELINEATOR, DATE OF THE DRAWING







SOUTHEAST ELEVATION

SCALE:

0 1 2 3 4 6 8 10
FEET 1/4"=1'-0"

0 1 2 3
METERS 1:48

NORTHEAST ELEVATION

NAME AND LOCATION OF STRUCTURE
FREDERICK A. ROEDER'S STORE
POTOMAC STREET, HARPERS FERRY, JEFFERSON COUNTY, WEST VIRGINIA

SURVEY NO. WV-223

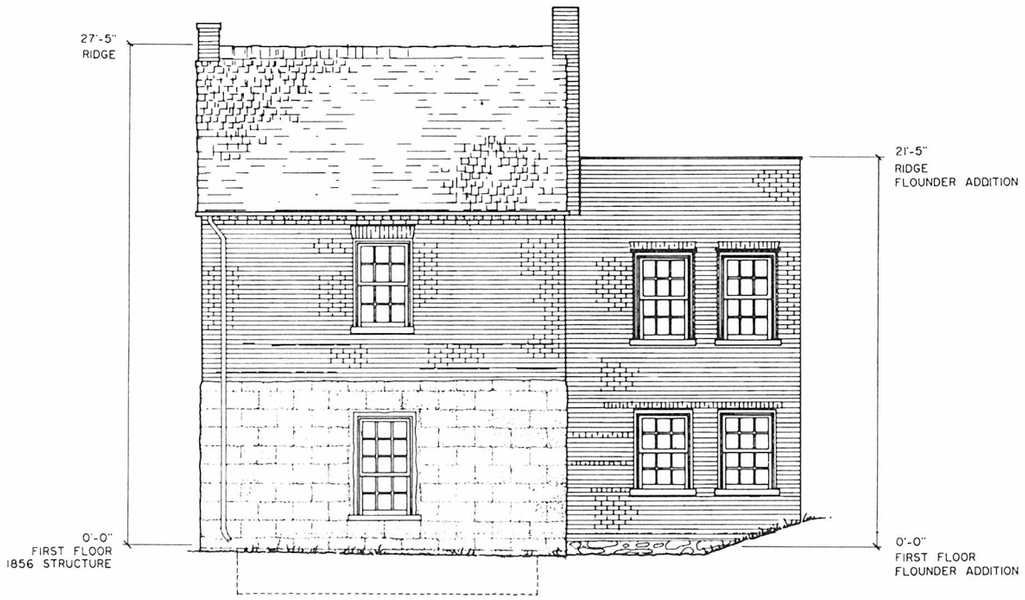
HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 4 OF 8 SHEETS

ADDENDUM TO

HARPERS FERRY NATIONAL HISTORIC PARK
PROJECT, SUMMER 1992
NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR

DRAWN BY VITA RUSKYTE

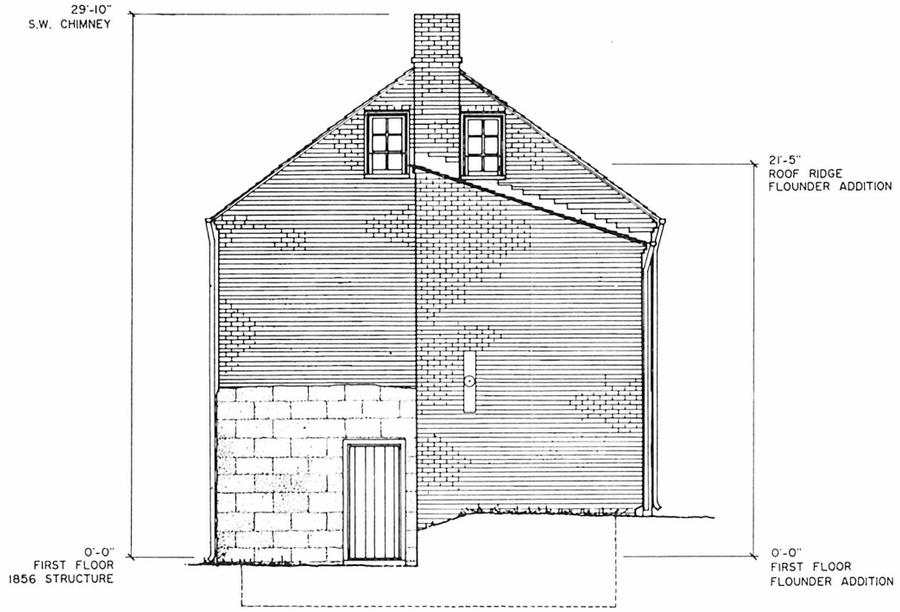
IF REPRODUCED PLEASE CREDIT HISTORIC AMERICAN BUILDINGS SURVEY: NATIONAL PARK SERVICE NAME OF DELINEATOR DATE OF THE DRAWING



NORTHWEST ELEVATION

SCALE

0 1 2 3 4 5 10
FEET 1/4"=1'-0"
0 1 2 3
METERS 1:48



SOUTHWEST ELEVATION

DRAWN BY VITA RUSKYTE
HARPERS FERRY NATIONAL HISTORIC PARK
PROJECT, SUMMER 1992
NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR

ADDENDUM TO

NAME AND LOCATION OF STRUCTURE
FREDERICK A. ROEDER'S STORE
POTOMAC STREET, HARPERS FERRY, JEFFERSON COUNTY, WEST VIRGINIA

SURVEY NO.
WV-223

HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 5 OF 8 SHEETS

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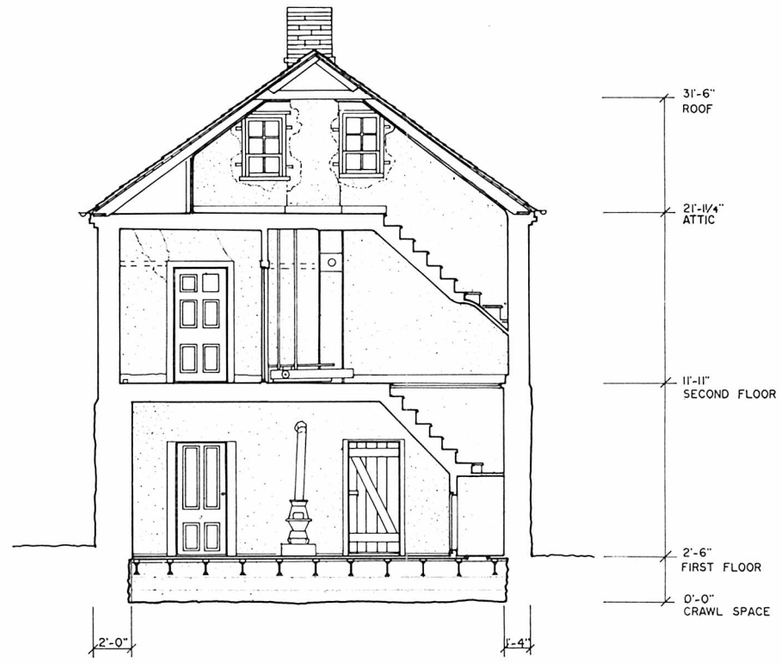


SECTION A-A

SCALE:

0 1 2 3 4 6 8 10
FEET 1/4"=1'-0"

0 1 2 3
METERS 1:48



SECTION B-B

DRAWN BY VITA RUSKYTE
HARPERS FERRY NATIONAL HISTORIC PARK
PROJECT, SUMMER, 1992
NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR

ADDENDUM TO:

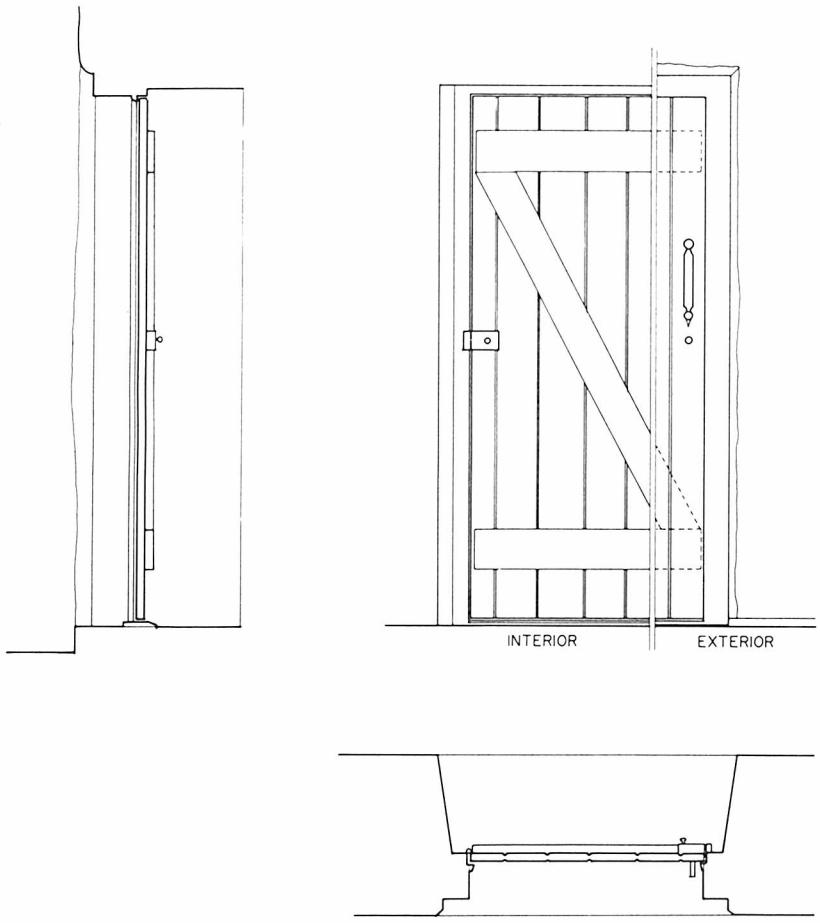
NAME AND LOCATION OF STRUCTURE
FREDERICK A. ROEDER'S STORE
POTOMAC STREET, HARPERS FERRY, JEFFERSON COUNTY, WEST VIRGINIA

SURVEY NO.
WV - 223

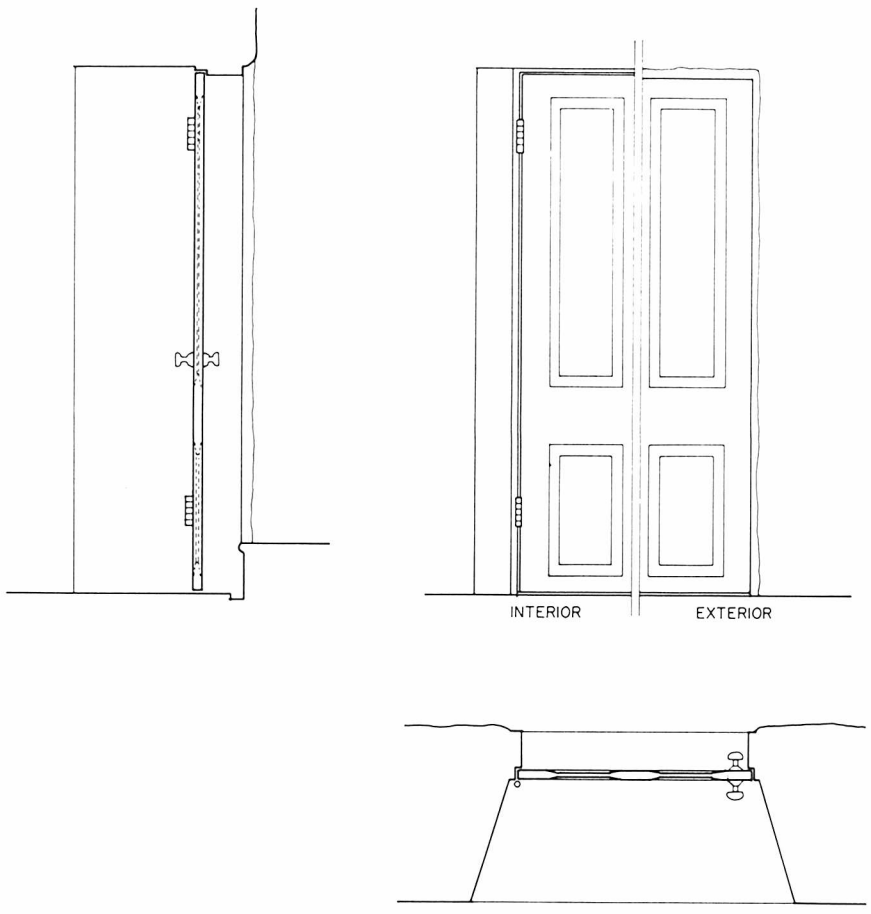
HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 6 OF 8 SHEETS

GRAPHIC DESIGNER
INDEX NUMBER

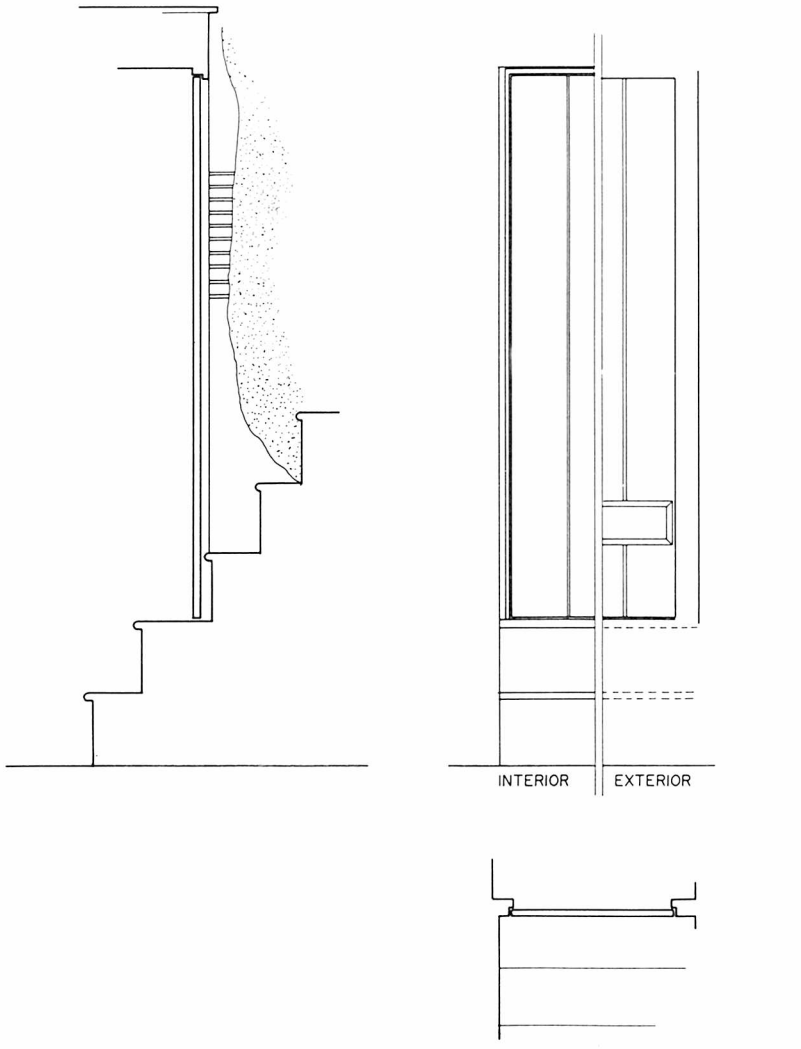
IF REPRODUCED PLEASE CREDIT HISTORIC AMERICAN BUILDINGS SURVEY, NATIONAL PARK SERVICE, NAME OF DELINEATOR, DATE OF THE DRAWING



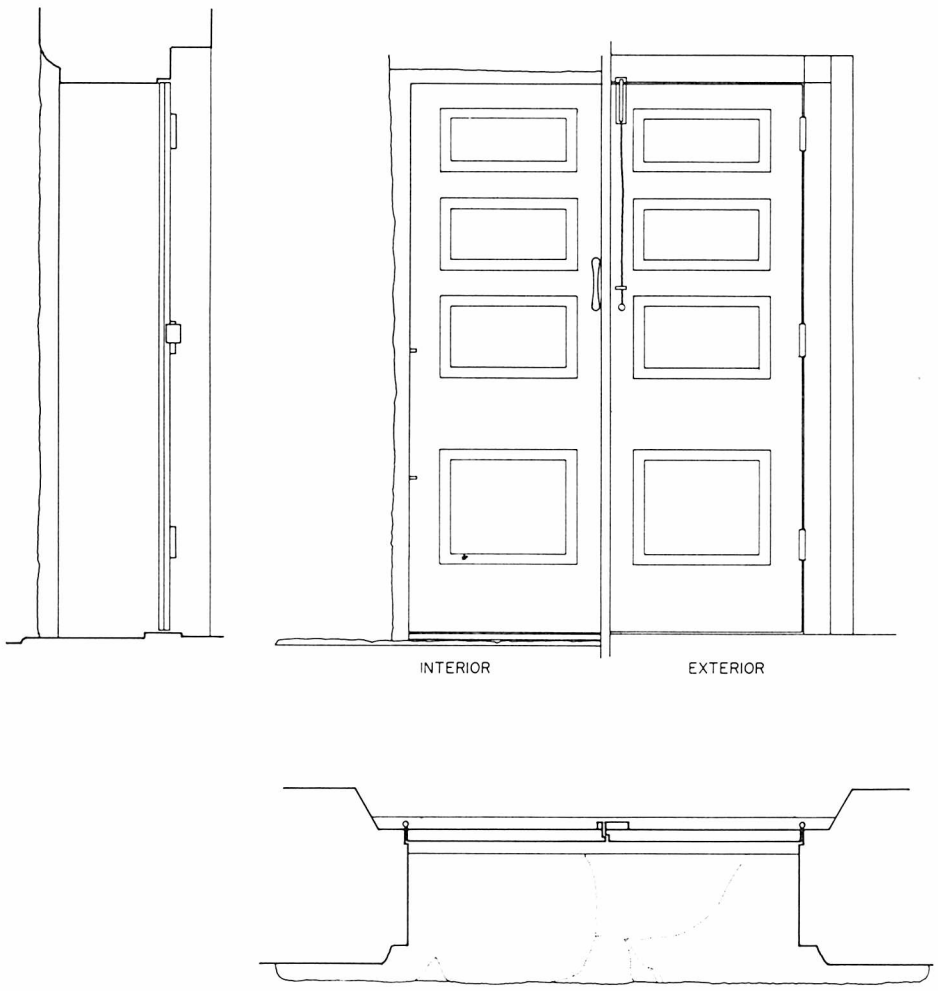
REAR DOOR - FIRST FLOOR



INTERIOR DOOR - FIRST FLOOR



DOOR TO STAIRWAY (FIRST FLOOR)



MAIN ENTRY DOOR

SCALE

0 1 2 3 4 5

FEET 3/4" = 1'-0"

0 50 100 150

CENTIMETERS 1:16

DRAWN BY PRELIMINARY: VITA RUSKYTE INKING: GARY T. McLEOD THOMAS M. BEHRENS

HARPERS FERRY NATIONAL HISTORIC PARK
PROJECT, SUMMER 1992
NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR

ADDENDUM TO:

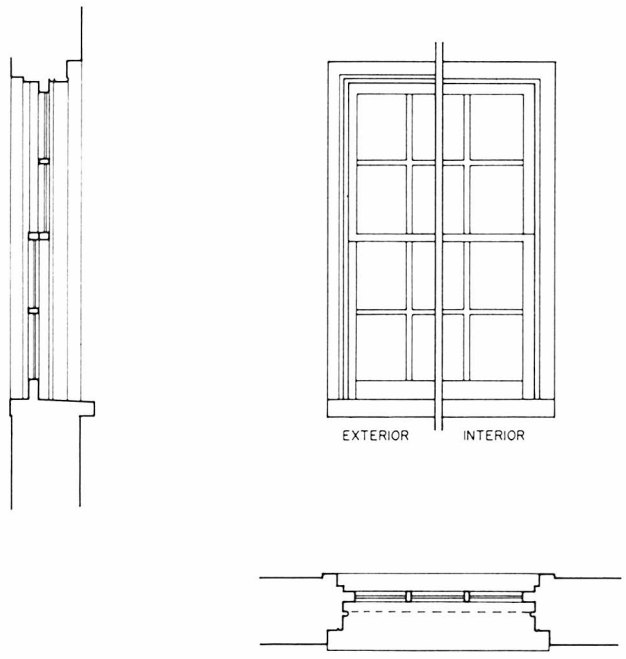
NAME AND LOCATION OF STRUCTURE
FREDERICK A. ROEDER'S STORE
POTOMAC STREET, HARPERS FERRY, JEFFERSON COUNTY, WEST VIRGINIA

SURVEY NO.
WV - 223

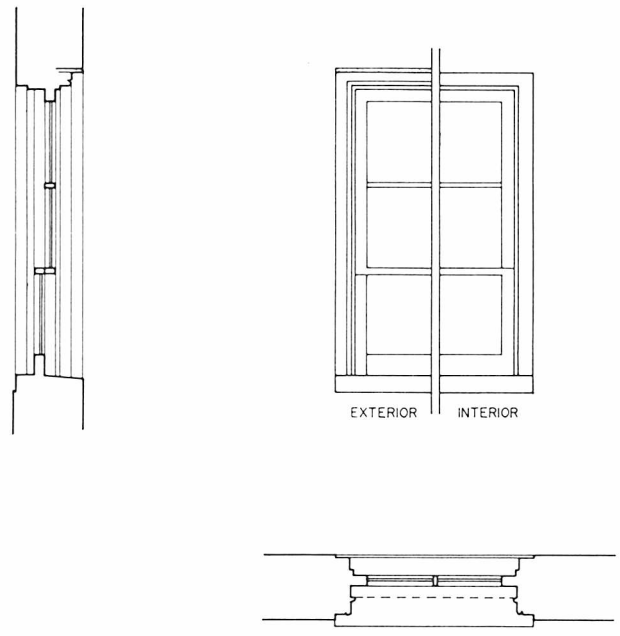
HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 7 OF 8 SHEETS

LIBRARY OF CONGRESS INDEX NUMBER

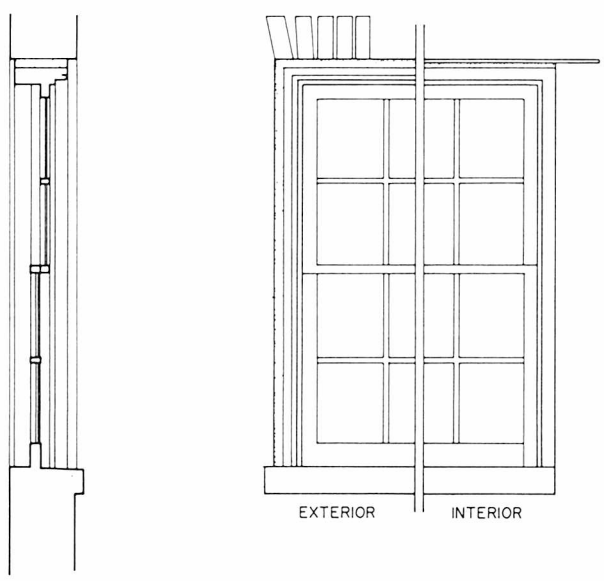
IF REPRODUCED, PLEASE CREDIT HISTORIC AMERICAN BUILDINGS SURVEY, NATIONAL PARK SERVICE, NAME OF DELINEATOR, DATE OF THE DRAWING



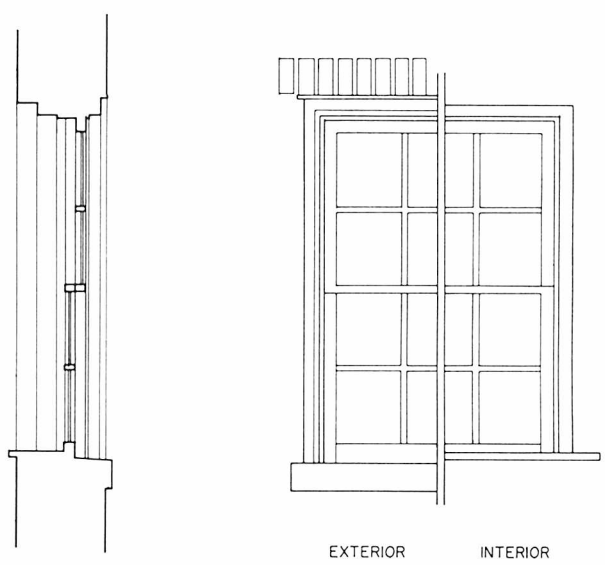
THIRD FLOOR WINDOW DETAIL (TYPE 1)



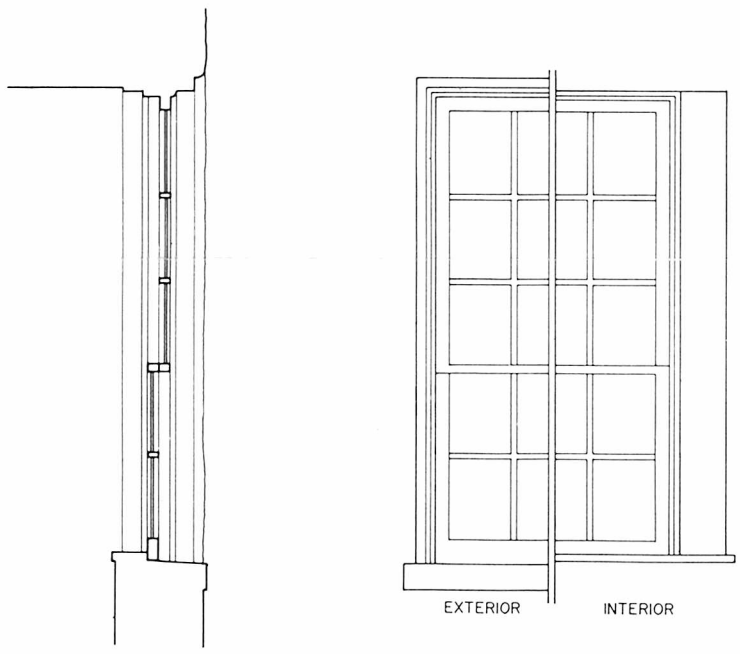
THIRD FLOOR WINDOW DETAIL (TYPE 2)



TYPICAL WINDOW DETAIL



SECOND FLOOR WINDOW DETAIL



FIRST FLOOR WINDOW DETAIL

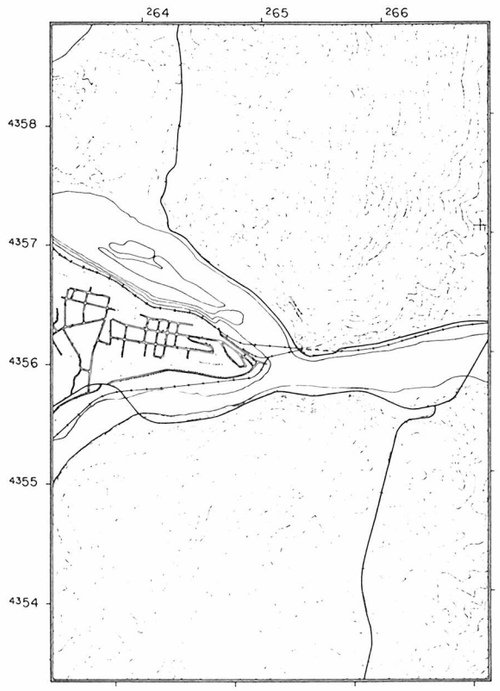
SCALE:
0 1 2 3 4 5
FEET 3/4" = 1'-0"
0 50 100 150
CENTIMETERS 1:16

DRAWN BY PRELIMINARY: VITA RUSKYTE INKING: THOMAS M. BEHRENS

HARPERS FERRY NATIONAL HISTORC PARK PROJECT SUMMER 1992 NATIONAL PARK SERVICE UNITED STATES DEPARTMENT OF THE INTERIOR	ADDENDUM TO:	NAME AND LOCATION OF STRUCTURE FREDERICK A. ROEDER STORE POTOMAC STREET, HARPERS FERRY, JEFFERSON COUNTY, WEST VIRGINIA	SURVEY NO. WV-223	HISTORIC AMERICAN BUILDINGS SURVEY SHEET 8 OF 8 SHEETS

IF REPRODUCED, PLEASE CREDIT HISTORIC AMERICAN BUILDINGS SURVEY, NATIONAL PARK SERVICE, NAME OF DELINEATOR, DATE OF THE DRAWING

WHITE HALL TAVERN

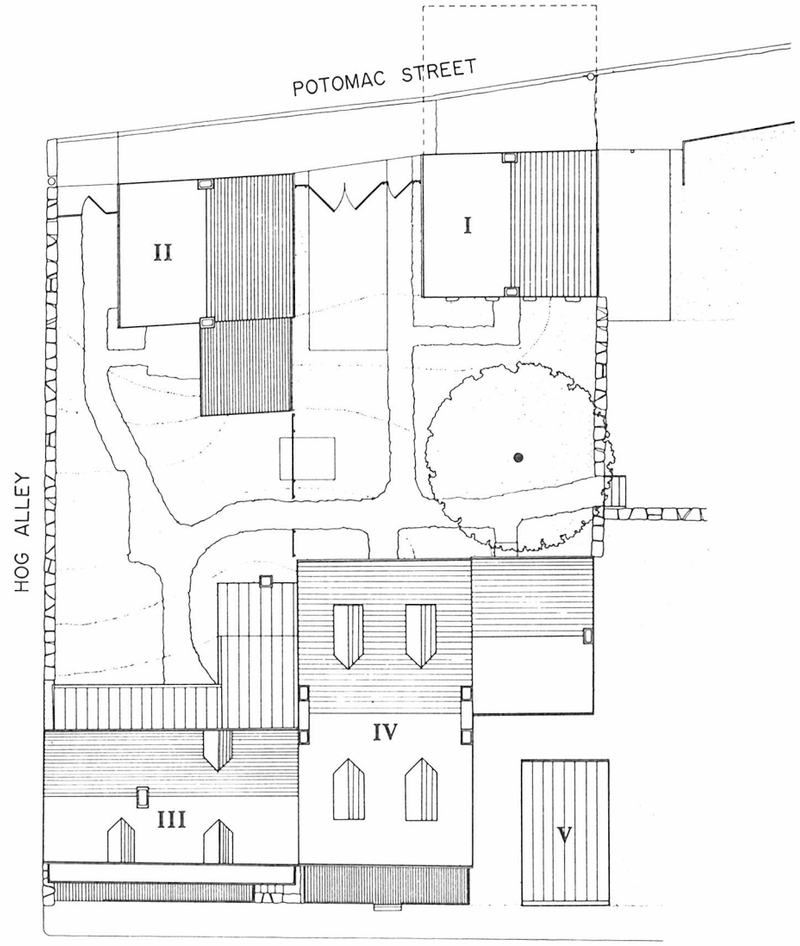


TAKEN FROM USGS HARPERS FERRY QUADRANGLE (1955)
UTM 15. 264780. 4356060

LOCATION MAP

FEET 1"= 2000'
0 1000 2000 4000 6000
METERS 1:24,000
0 500 1000 2000

N



HIGH STREET

I. WHITE HALL II. ROEDER STORE III. ROEDER HOUSE
IV. SUSAN DOWNEY HOUSE V. ALFRED BURTON JEWELRY SHOP

N

SCALE
0 5 10 20 30
FEET 1"= 10'-0"

WHITE HALL TAVERN WAS BUILT IN 1837-38 AS A WAREHOUSE FOR WILLIAM ANDERSON, A HARPERS FERRY MERCHANT. AS ORIGINALLY CONSTRUCTED THE WAREHOUSE WAS A TWO-STORY STRUCTURE 24' X 40', WITH STONE WALLS, A SLATE ROOF, AND A CELLAR. IN 1847, ANDERSON SOLD THE PROPERTY TO FREDERICK ROEDER. AN 1852 LETTER FROM ARMORY SUPERINTENDENT BENJAMIN HUGER TO THE ORDNANCE DEPARTMENT REFERS TO THE PROPERTY AS "A DRINKING HOUSE KNOWN AS WHITE-HALL." DIRECTLY ACROSS AN ALLEY FROM THE ARMORY YARD, THE TAVERN WAS CONVENIENT TO ARMORY WORKERS.

IN 1856 THE GOVERNMENT ACQUIRED THE NORTHEAST 20' OF THE STRUCTURE, FRONTING ON THE ALLEY, AND DEMOLISHED IT TO WIDEN THE ORIGINAL ALLEY INTO POTOMAC STREET. THIS LEFT THE PRESENT 24' X 20' STRUCTURE WITH A NEW FACADE CONSTRUCTED IN 1856 OF STONE RUBBLE (CELLAR AND FIRST FLOOR) AND BRICK (SECOND FLOOR AND ATTIC GABLE). THE JOINTS BETWEEN THE ORIGINAL STRUCTURE AND THE NEW 1856 FACADE AND WHERE THE SECOND AND ATTIC FLOORS WERE CUT ARE STILL EVIDENT IN THE BUILDING FABRIC. PATCHES OF HISTORIC PARGING WITH PAINTED STONE JOINTS SURVIVE ON THE BUILDING. WHITE HALL WAS A TAVERN IN CLOSE PROXIMITY TO JOHN BROWN'S "FORT" IN 1859, SERVED AS QUARTERS FOR UNION TROOPS DURING THE CIVIL WAR, AND WAS OPERATED AS A SALOON AFTER THE WAR UNTIL 1914 WHEN WEST VIRGINIA WENT DRY.

DOCUMENTATION WAS UNDERTAKEN IN THE SUMMER OF 1992 BY THE WASHINGTON, D. C., OFFICE OF THE HISTORIC AMERICAN BUILDINGS SURVEY (HABS). THE PRINCIPALS INVOLVED WERE ROBERT J. KAPSCH, DIVISION CHIEF, HABS/HAER, AND PAUL D. DOLINSKY, CHIEF, HABS. THE PROJECT WAS SPONSORED BY THE HARPERS FERRY NATIONAL HISTORIC PARK, DONALD W. CAMPBELL, SUPERINTENDENT, AND BY THE EASTERN TEAM, DENVER SERVICE CENTER OF THE NATIONAL PARK SERVICE, BILLY G. GARRETT, BRANCH CHIEF. DOCUMENTATION WAS INITIATED BY PROJECT LEADER FREDERICK J. LINDSTROM, HABS SUPERVISORY ARCHITECT. THE FIELD RECORDING WAS CONDUCTED BY PROJECT SUPERVISOR ANDREW WENCHEL (ARLINGTON, VA.) AND ARCHITECTURE TECHNICIANS HEATHER BRUNKEN (KANSAS STATE UNIVERSITY), LEE ERIC HUGHART (BALTIMORE, MD.), ROBERT P. NEELY (UNIVERSITY OF KANSAS), AND VITA RUSKYTE (US-ICOMOS, LITHUANIA). FINAL EDITING WAS COMPLETED BY EVAN E. MILLER IN THE HABS WASHINGTON OFFICE.

GRAPHIC SCALE IN INCHES
HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 1 OF 5 SHEETS
SURVEY NO.
ADDENDUM
WV-156

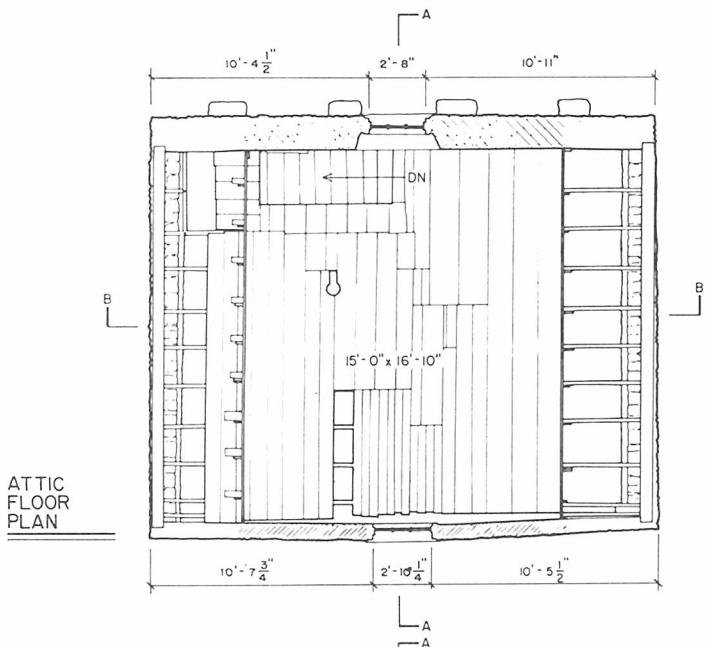
NAME AND LOCATION OF STRUCTURE
WHITE HALL TAVERN
HARPERS FERRY, JEFFERSON COUNTY, WEST VIRGINIA
POTOMAC STREET, HARPERS FERRY

HISTORIC AMERICAN BUILDINGS SURVEY NATIONAL PARK SERVICE NAME OF DELINEATOR DATE OF THE DRAWING

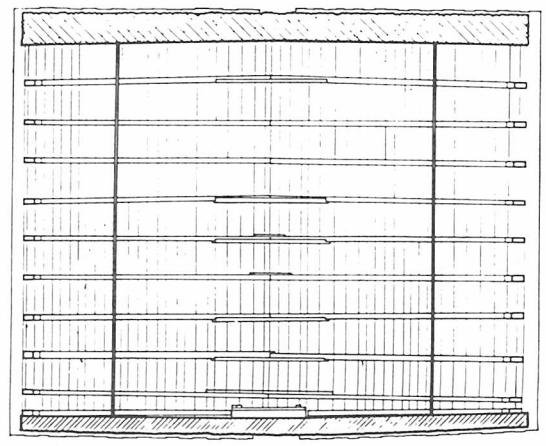
DRAWN BY RICHARD A. VENTRONE, JNR., ANDREW WENCHEL
HARPERS FERRY NATIONAL HISTORIC PARK
PROJECT, SUMMER 1992
NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR

ADDENDUM

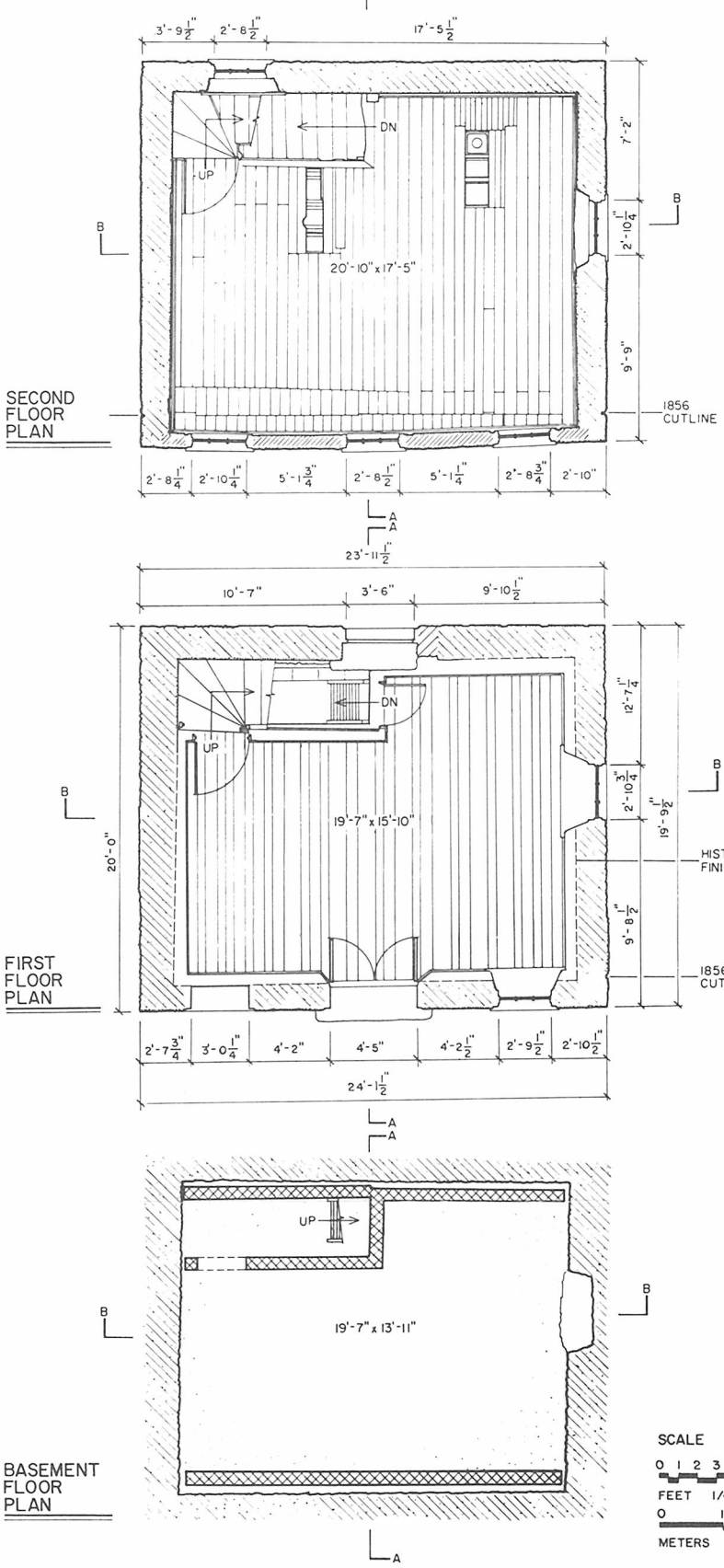
IF REPRODUCED PLEASE CREDIT HISTORIC AMERICAN BUILDINGS SURVEY



ATTIC FLOOR PLAN



ATTIC REFLECTED CEILING PLAN



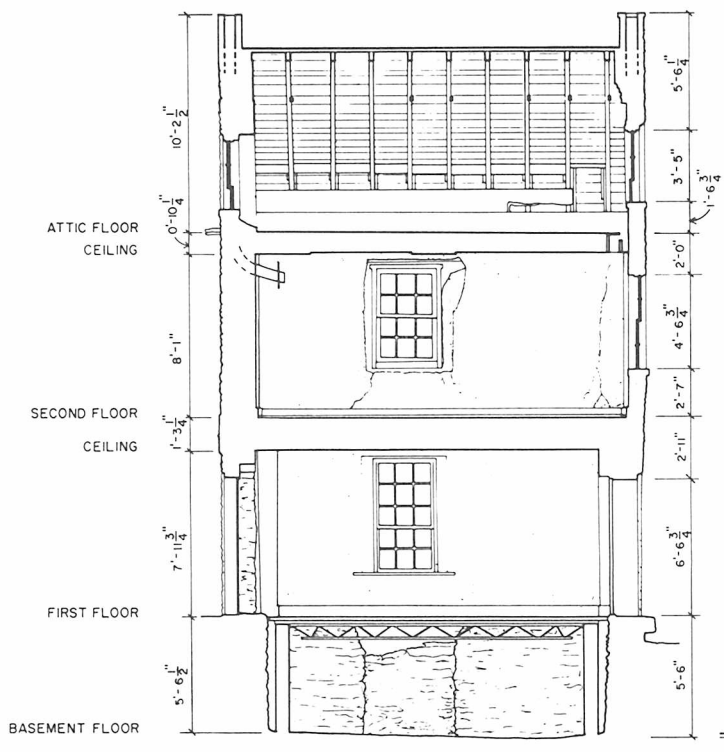
SECOND FLOOR PLAN

FIRST FLOOR PLAN

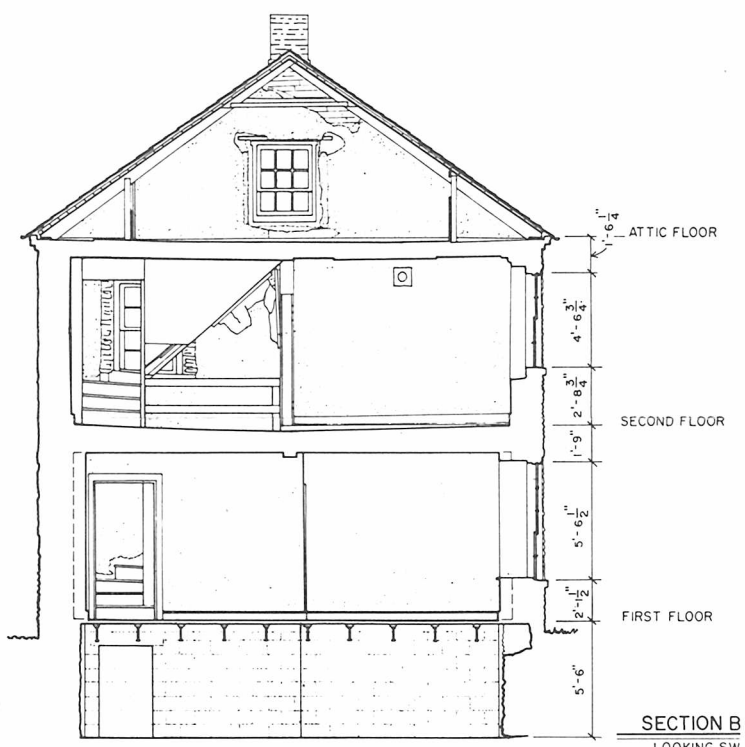
BASEMENT FLOOR PLAN

SCALE

0 1 2 3 4 5 10
FEET 1/4"=1'
0 1 2 3
METERS 1:48



SECTION A
LOOKING NW



SECTION B
LOOKING SW

MATERIALS

- ALL WALLS ARE STONE RUBBLE EXCEPT NORTHEAST WALL FROM THE SECOND FLOOR UP IS OF BRICK.
- ALL DOORS AND WINDOWS ARE WOOD.

INTERIOR FINISHES:

- BASEMENT: STONE RUBBLE AND CONCRETE MASONRY UNIT WALLS.
- FIRST FLOOR: GYPSUM BOARD ON WOOD STUD WALLS, RANDOM WIDTH PINE FLOOR BOARDS, TEXTURED PLASTER ON LATH CEILING.
- SECOND FLOOR: PLASTER ON STONE AND BRICK WALLS, PINE FLOOR BOARDS, PLASTER ON LATH CEILING.
- ATTIC: PLASTER ON STONE/BRICK GABLE WALLS, PINE BOARD KNEE WALLS, PINE FLOOR BOARDS, PINE RAFTERS AND ROOF BOARDS.

DRAWN BY HEATHER BRUNKEN

HARPERS FERRY NATIONAL HISTORIC PARK
PROJECT, SUMMER 1992
NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR

ADDENDUM TO:

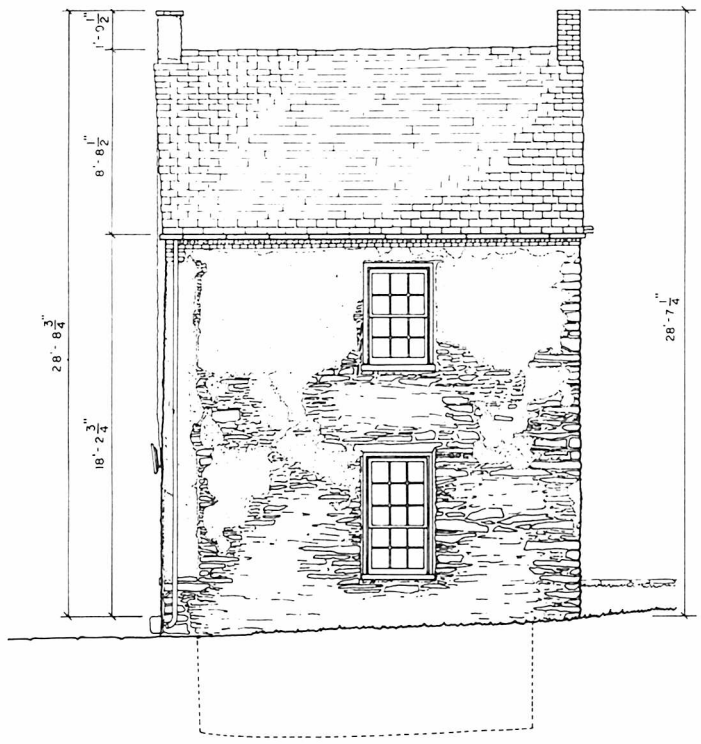
NAME AND LOCATION OF STRUCTURE
WHITE HALL TAVERN
POTOMAC STREET, HARPERS FERRY, JEFFERSON COUNTY, WEST VIRGINIA

SURVEY NO.
ADDENDUM
WV-156

HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 2 OF 5 SHEETS

LIBRARY OF CONGRESS INDEX NUMBER

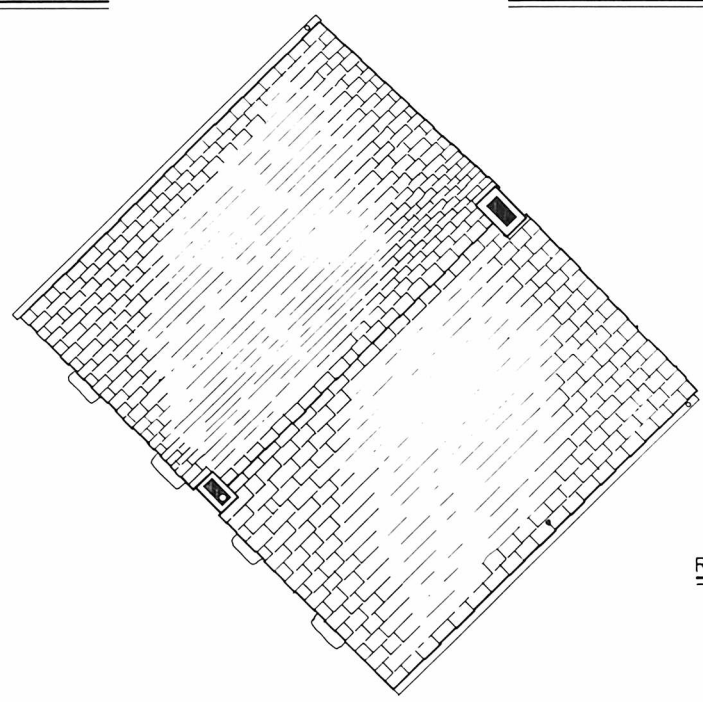
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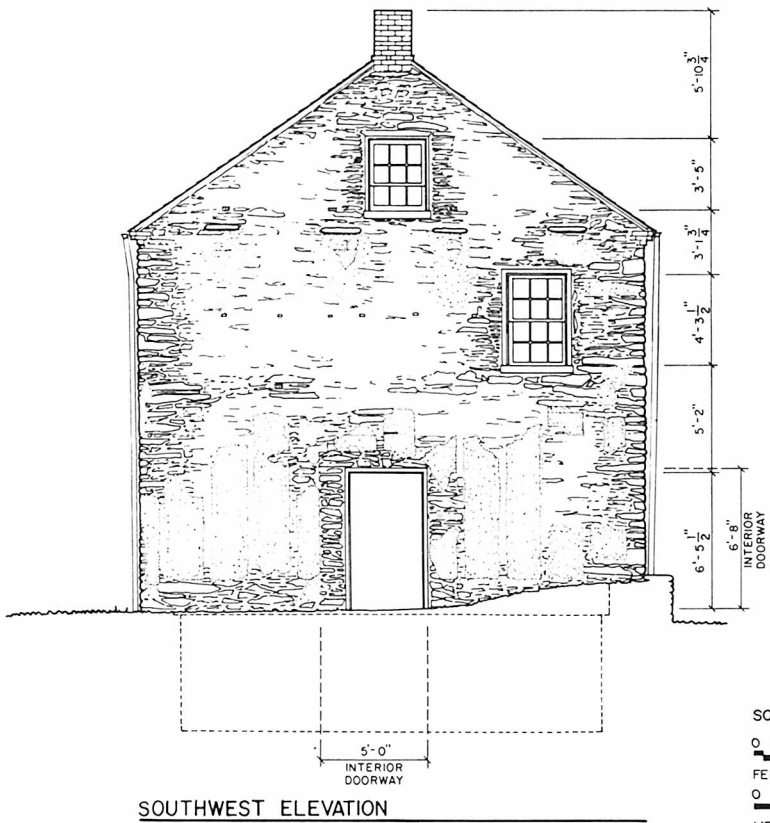
NORTHWEST ELEVATION



NORTHEAST ELEVATION



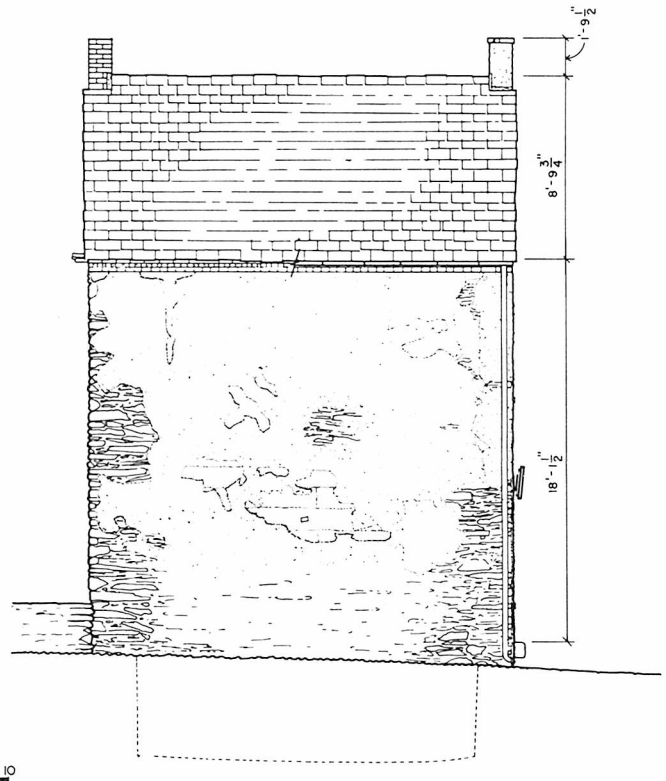
ROOF PLAN



SOUTHWEST ELEVATION

SCALE

0 1 2 3 4 5 10
FEET 1/4"=1'
0 1 2 3
METERS 1:48



SOUTHEAST ELEVATION

MATERIALS:

ALL WALLS ARE STONE RUBBLE, EXCEPT NORTHEAST WALL FROM THE SECOND FLOOR UP IS OF BRICK WITH THE SAME FOR CHIMNEYS AND CORBELLED EAVES.

NOTES:

- MODERN PARGING ON NORTHEAST WALL LACKS PAINTED LINE JOINTS FOUND ON TRACES OF HISTORIC PARGING ON OTHER WALLS.
- PORTION OF ROOF GUTTER OMITTED FROM SOUTHEAST ELEVATION TO REVEAL BRICK EAVE CORNICE.

DRAWN BY HEATHER BRUNKEN

HARPERS FERRY NATIONAL HISTORIC PARK
PROJECT, SUMMER 1992
NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR

ADDENDUM TO:

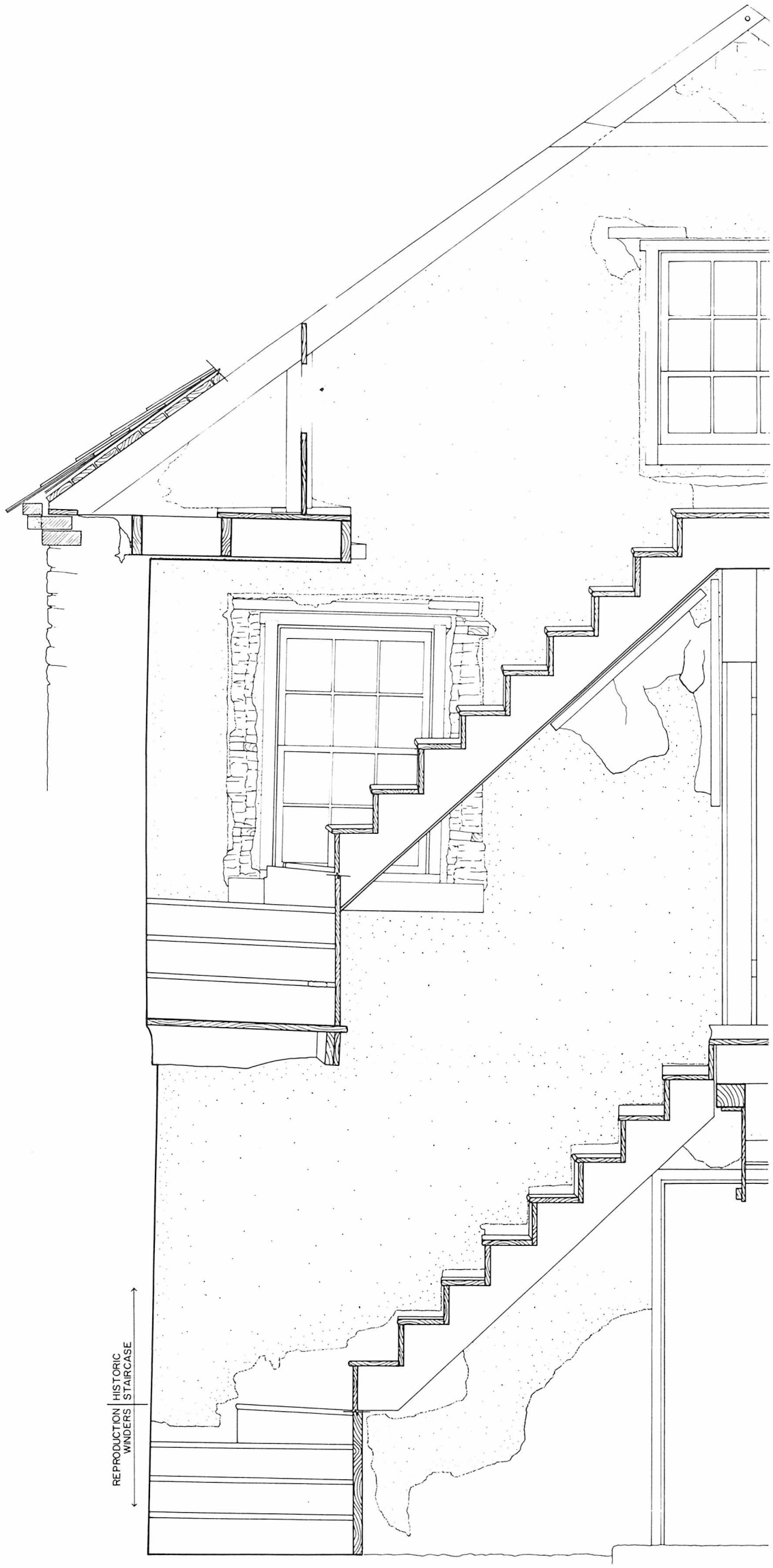
NAME AND LOCATION OF STRUCTURE
WHITE HALL TAVERN
POTOMAC STREET, HARPERS FERRY, JEFFERSON COUNTY, WEST VIRGINIA

SURVEY NO.
ADDENDUM
WV-156

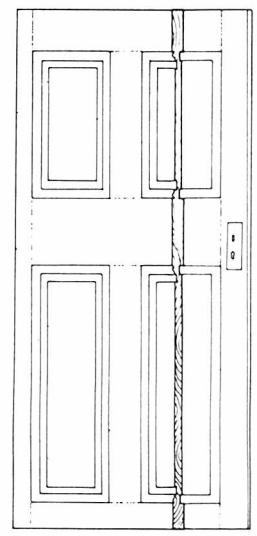
HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 3 OF 5 SHEETS

LIBRARY OF CONGRESS INDEX NUMBER

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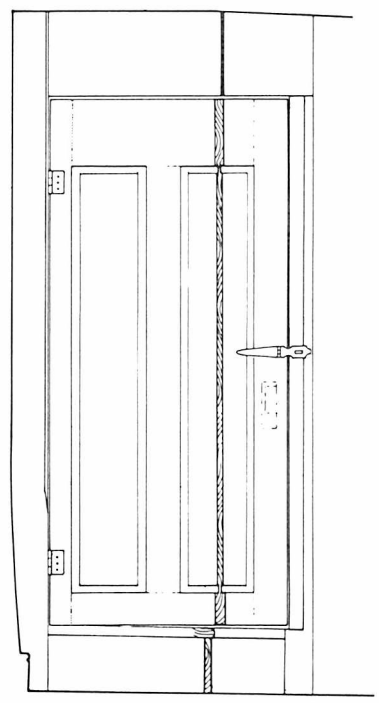


STAIRCASE DETAIL



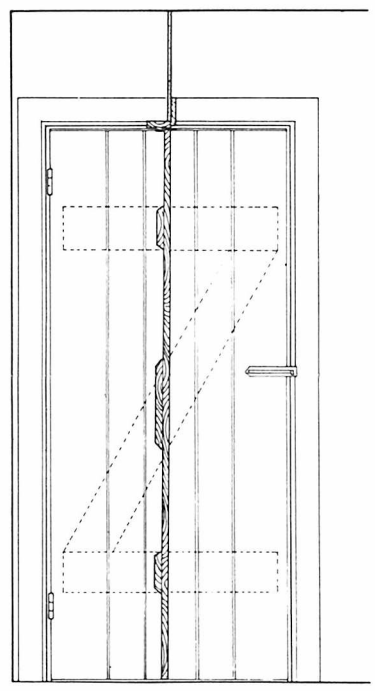
ORIGINAL FIRST FLOOR STAIR DOOR

2'-9 7/8" x 6'-2"



SECOND FLOOR STAIR DOOR

2'-9 15/16" x 6'-3 5/16"



FIRST FLOOR STAIR DOOR

2'-9 3/4" x 6'-6 11/16"

SCALE

0 1 2
FEET 1"=1'
0 50
CENTIMETERS 1:12

DRAWN BY: HEATHER BRUNKEN

HARPERS FERRY NATIONAL HISTORIC PARK
PROJECT, SUMMER 1992
NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR

ADDENDUM TO:

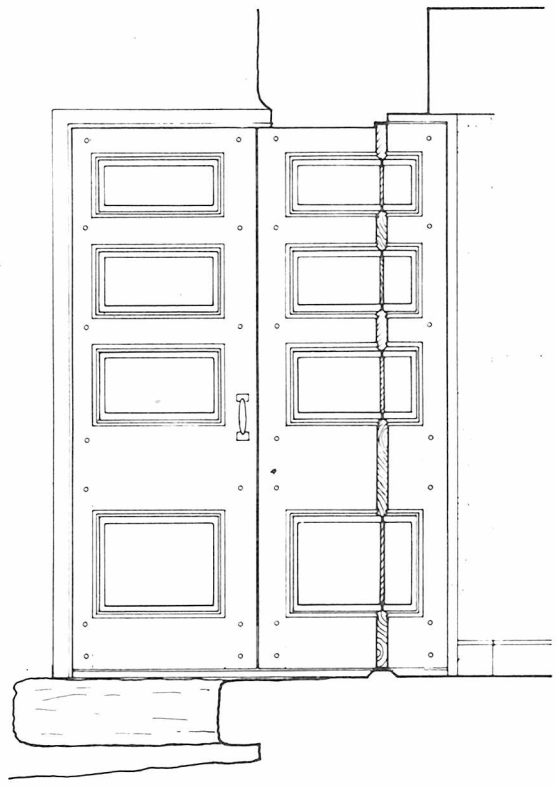
NAME AND LOCATION OF STRUCTURE
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POTOMAC STREET, HARPERS FERRY, JEFFERSON COUNTY, WEST VIRGINIA

SURVEY NO.
ADDENDUM
WV-156

HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 4 OF 5 SHEETS

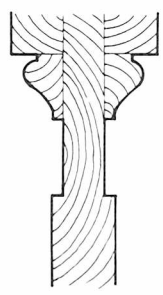
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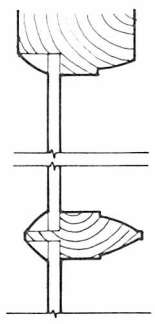
NORTHEAST CENTER DOOR

DOORS: 4'-5 3/8" x 6'-6"



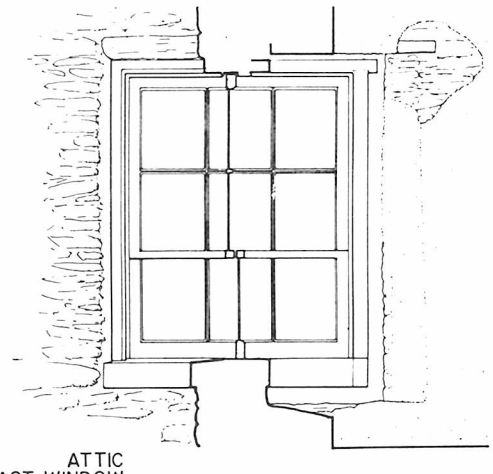
DOOR DETAIL

FULL SCALE



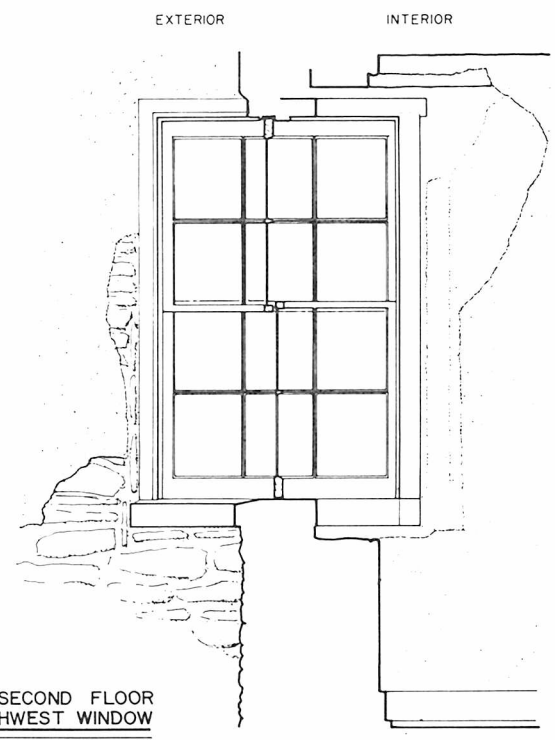
MULLION DETAIL

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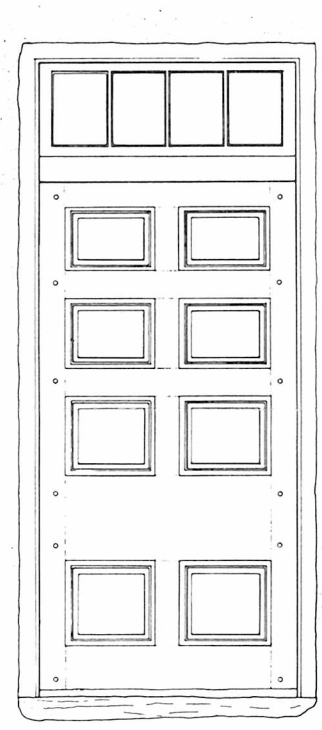
ATTIC
NORTHEAST WINDOW

SASH: 2'-8 5/16" x 3'-4 5/8"



SECOND FLOOR
NORTHWEST WINDOW

SASH: 2'-10 3/4" x 5'-5 1/2"



NORTHEAST SIDE DOOR

DOOR: 3'-0 3/8" x 6'-2"

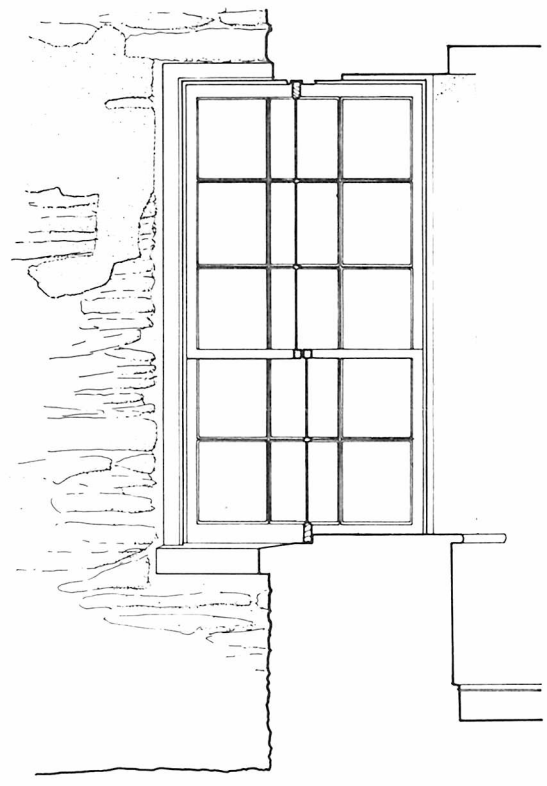
SCALE

0 1 2

FEET 1"=1'

0 50

CENTIMETERS 1:12



FIRST FLOOR
NORTHWEST WINDOW

SASH: 2'-10 3/4" x 5'-5 1/2"

DRAWN BY HEATHER BRUNKEN

HARPERS FERRY NATIONAL HISTORIC PARK PROJECT, SUMMER 1992 NATIONAL PARK SERVICE UNITED STATES DEPARTMENT OF THE INTERIOR	ADDENDUM TO:	NAME AND LOCATION OF STRUCTURE WHITE HALL TAVERN POTOMAC STREET, HARPERS FERRY, JEFFERSON COUNTY, WEST VIRGINIA	SURVEY NO. ADDENDUM WV-156	HISTORIC AMERICAN BUILDINGS SURVEY SHEET 5 OF 5 SHEETS	LIBRARY OF CONGRESS INDEX NUMBER

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Appendix L: Selected Bibliography

The following is the complete Cultural Resource Bibliography (CRBIB) listing for all reference materials pertaining to Buildings 5 and 7. All included reports contain their respective bibliographies. These bibliographies are not reprinted in the appendix.

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Appendix M: Structural Analysis Report

The following reports were produced by Jerrold Johnson, II, PE, DSC-TEA. The reports address the structural concerns present in Buildings 5 and 7.

Harpers Ferry National Historical Park

Historic Structures Report

Building 5

The Frederick A. Roeder Store, building 5, is a small, three story building constructed with stone and brick walls, a wood roof, and wood floor framing. The original building was constructed around 1856, and it appears as if some of the materials from the front of the original building 7 were used in the construction. In 1853, Potomac street was widened by the federal government. This required that the front portion of building 7 be removed. The similar size and construction materials suggests that the materials were reused to construct building 5. At a later time, a small, two story brick annex was added to the rear of the original construction giving us the present configuration.

Main Building Foundation System

The foundations for this building appear to consist of simple footings for the stone walls. The north and south walls are the bearing walls for the floor and roof systems. They are approximately one foot-seven inches (463 mm) thick. The east and west walls are also one foot-seven inches (463 mm) thick, and they support their own weight. In the present structure, concrete masonry walls exist inside of the east and west walls. These were installed by the National Park Service during the 1960s to support the first floor loads from a steel joist system. At the same time that the concrete masonry walls were installed, a concrete floor was installed in the crawl space. Drawings prepared by the Historic American Building Survey (HABS) for building 7 in 1959 indicate that the basement had a earthen floor. Near the center of the floor was a large stone that supported a wood post. It is speculated that the original crawl space had an earthen floor.

The condition of the concrete masonry walls is excellent. The condition of the north and south stone masonry walls is poor. The original mortar is extremely soft. It appears to contain a minimum of lime and no other cementitious materials. As a result, many of the stones are loose. The east and west foundation walls cannot be evaluated, since the concrete masonry walls are constructed in front of them.

Main Building First Floor Framing

The present first floor framing consists of a series of open web steel joists that span east to west. The joists bear on concrete masonry walls that are parallel to the east and west walls of the building. A delivery ticket was found in the basement of building 7 attached to one of the joists. The ticket indicates that 8J2 joist were used in building 7. It is assumed that the same size and type of joist was used in building 5. Analysis indicates that the joists have a

live load capacity of 73 pounds per square foot (3495 Pa). This is less than the required museum loading of 100 pounds per square foot (4788 Pa). Additionally, the eight inch deep joists are extremely flexible for the span distance and do not meet the Steel Joist Institute specifications which limit the live load deflections to $^{1}/_{360}$th of the span distance.

Visual observation of the joists indicated that the joists had a thin shop coating of paint applied prior to installation. In the moist, poorly ventilated basement, the coating has deteriorated, and corrosion has begun. Up to this point in time, the corrosion has been primarily surface corrosion, and thus no reduction in strength is currently justified. Unless new coatings are applied, strength loss can be expected to occur rapidly.

On top of the joists are nailers and cross pieces. 3/4 inch (19 mm) plywood is attached to the nailers with the strong direction perpendicular to the joists. The flooring is nailed to the plywood and is laid in the same direction as the historical flooring.

The 1959 HABS drawings indicate a different framing system for the first floor. Timber joists were located in pockets in the masonry walls. No other information is given on the drawings for building 5; however, more information is provided for building 7. Near the center of building 7, running east and west, was a six inch (152 mm) by ten inch (254 mm) girder. The girder was supported near the center of the span by a wood post. Pockets in the north and south walls indicate that the joists framed in at 16 inches (406 mm) on center. Analysis of the six inch (152 mm) by ten inch (254 mm), two span, continuous girder indicates that size would be adequate for 100 pounds per square foot (4788 Pa) building live loads. Analysis also show that nominal 2 x 10 (38 mm x 235 mm) joists at 16 inches (406 mm) on center would be required for use as a museum or public meeting area.

Main Building Second Floor Framing

Second floor framing is provided by two inch (51 mm) wide by nine inch (229 mm) deep joists spanning in the north-south direction. These joists are installed at approximately 24 inches (610 mm) on center. Observations show that large vertical deflections have occurred.

Visual observation indicates that all of the joists are of either number one or number two grade. Structural analysis assumes a number two grade. The floor has a safe live load capacity of 20 pounds per square foot (958 Pa). This live load capacity is only half of that permitted by building codes for residential construction. The deflection calculation results do not account for the large observed deformations based upon the dead load alone. By accounting for long-term, inelastic deflections, creep, the calculations indicate that the second floor has most likely been used as a storage area with continuous applied loads for significant amounts of time. This is consistent with the historical accounts for the previous use of the building. The space is safe, without modification, for a limited number of people; however, it must not be used for the storage of materials or on a continuous basis such as for offices.

Main Building Third Floor Framing

The third floor framing appears to be the original framing. The joists span the entire width of the building in the north-south direction and are spaced at 24 inches (610 mm) on center.

The size of the members is two inches (51 mm) wide by eight and one half inches (216 mm) deep. The condition of the members appears to be good. Signs of water leakage are small, and no significant decay was noticed.

Structural calculations indicate that the floor has a safe live load capacity of 20 pounds per square foot (958 Pa). This live load capacity is only half of that permitted by building codes for residential construction. The space is safe, without modification, for a limited number of people; however, it must not be used for the storage of materials or on a continuous basis such as for offices.

Main Building Roof Framing

The majority of the roof framing appears to be original. Some work has been done on the framing system during the 1960s when the slates were replaced. The framing members are rafters that are four inches (102 mm) wide by five inches (127 mm) deep and spaced at 24 inches (610 mm) on center. The total span of the roof is approximately 24 feet (7.32 m). Tie members connect each pair of rafters. All of the materials appear to be in good condition, even though some of the tie members are missing.

A structural analysis was performed that considered pairs to rafters acting as simple three hinge arches. The tie members were not considered to contribute to the structural capacity of the members, and were not considered in the analysis. The dead load was assumed to be 15 pounds per square foot (718 Pa) along the length of the member, and the live load was assumed to be 25 pounds per square foot (1197 Pa) based upon the horizontal projection of the roof. The results indicate that the existing structure is adequate for snow loads. Due to the heavy dead load of the roof and the long history of the building, wind uplift loads were not considered.

Main Building Exterior Walls

The first floor exterior walls are constructed out of random stone with a very soft mortar. This is the same construction as was used in the building foundations. The condition of the individual stones is good; however, the condition of the existing mortar is extremely poor. In many locations, mortar does not exist between the stones. The soft mortar has shown that it is adequate to support the building loads; however, it does not have a high degree of weathering resistance.

Above the first floor, the walls are constructed of brick. In many locations the brick is in very poor condition due to weathering. As brick ages, it expands due to water bonding to the clay particles that constitute the brick. The longer and hotter the original firing, the more resistant the brick are to this bonding of water, and thus more durable the brick. Much of the brick used in these walls appears to be a softer brick with reduced firing compared to many of the other bricks. This has resulted in conditions where some of the original bricks are beginning to crumble. This condition is easily seen in the 1956 and 1957 photographs. Bricks that have crumbled need to be replaced with new bricks that have been properly fired for exterior applications.

A photograph from 1956 shows the beginning of a structural collapse in the area above the first floor door on the east side of the building. It is believed that the cause of this failure was due to a rotted lintel above the door. Repairs have since occurred, and no additional problems with the lintel are visible.

Annex Foundations

The foundations for the annex are constructed out of both stone and brick. Archeological excavations indicate that the original depth of the foundations was between 30 inches (0.76 m) and 36 inches (0.91 m). The current condition appears to be good.

Repairs to the southwest corner occurred during 1957 to replace the section of the missing wall and foundation. The apparent cause of the failure was inadequate drainage of ground water away from the building. We speculate that erosion of water under the foundations caused them to collapse into a crawl space under the first floor.

Annex First Floor Framing

The present first floor is a concrete slab on-grade. Wood nail strips are installed over the concrete to permit nailing of the wood finish surface. 1956 HABS drawings indicate that the first floor was wood. This would imply that a crawl space was originally constructed under this room which would be consistent with a small ventilation opening that possibly existed on the south foundation wall

Annex Second Floor Framing

The second floor framing is constructed from 2 inch (51 mm) wide by 8 inch (203 mm) deep joists spaced approximately at 24 inches (0.61 m). The framing bears on the north and south walls. Analysis indicates that the live load capacity of these members exceeds 50 pounds per square foot (2394 Pa).

It is not known if the present floor framing is original to the building. Historical photographs show that many structural problems have occurred with the north wall. Currently the wall has four windows. Two of these are below the bearing for the second floor framing. Previous to this arrangement, the 1959 HABS drawings indicate that the wall had one door and one window below the second floor framing. One note for these openings says, "These openings partially destroyed - Restored from existing remains". 1956 photographs from prior to the stabilization show a window and door arrangement with no brick column between the door and window.

We speculate that the second floor framing has had very few modifications, and that during the 1957 stabilization, temporary supports were provided while the north wall was partially reconstructed.

Annex Roof Framing

The existing framing for the annex roof has a simple one way pitch. Simply supported roof joists were placed upon the north and south walls. A ceiling was needed, and thus ceiling joists spanned in the same direction. The roof joists are tapered with the smaller end at the peak. They measure 3 inches (76 mm) wide and $4^1/_2$ inches (114 mm) deep at the peak and 7 inches deep (178 mm) at the lower bearing. The spacing is nearly uniform at 24 inches (0.61 m). Not all of the joists are original. 1956 or 1957 photographs show that some of the rafters had been significantly rotted. These joists have been replaced with members of the same size and shape. The ceiling joists are 2 inches (51 mm) wide and 4 inches (102 mm) deep.

Analysis indicates that the roof joists are adequate for the weight of the slate roof plus the required snow load, and that the ceiling joists are adequate for the dead load of the ceiling

Both the roof joists and ceiling joists rest in pockets in the north and south walls. This is adequate as long as proper roofing and flashing are maintained. If the roofing system is not maintained, then water can easily enter at the walls at the bearing locations. This will rapidly lead to rotting of the wood. At the north wall, a combination of timber beams and columns partially support the roof and ceiling joists on the second floor. We feel that these remain from the 1957 period when the north wall was partially collapsed, and that they are not currently needed to support the roof system. It is possible that these items could be regarded as part of the building's history that dealt with the poor condition of the structure prior to the 1957 stabilization and renovation in the 1960s.

Annex Walls

Walls in the annex have been a source of significant problems in the past. Photographs from 1956 show that the north wall was ready to collapse, the west wall was badly deteriorated, and the lower southwest corner was missing. A small crack is visible between the north wall and the chimney in the original building.

The walls are constructed out of two wythes of brick. In many locations the brick is in very poor condition due to weathering. Much of the brick used in these walls appears to be a softer brick with reduced firing when compared to other bricks. This has resulted in conditions where some of the original bricks are beginning to crumble. Bricks that have crumbled need to be replaced with new bricks that have been properly fired for exterior applications.

Signs of work done to stabilize the structure in 1957 include new bricks, different types of mortar, and steel lintels over the windows on the north wall. 1956 photographs suggest that the missing part of the lower southwest corner was likely caused by erosion of the foundation. Site grading at this location appears to indicate that this erosion may still be a problem. With the installation of a concrete slab to replace the speculated wood, first floor framing, the chance of erosion is significantly diminished.

The repair work on the west wall appears to be in relative good condition. Either during the 1957 stabilization, or before, a steel rod was installed above the second floor to tie the west wall to the east wall of the main building. With the stabilization and later renovations, it is

not felt that the rod is currently needed; however, it may be considered as part of the building's history that dealt with the conditions of the buildings prior to work by the National Park Service.

Work performed on the north wall raised many questions about the original construction. The 1956 photograph taken prior to stabilization work and photographs taken during the stabilization work indicate that instead of two windows on the lower level, one window and one door existed. The lintel was west of the door and was formed using bricks set on an angle forming a flat arch condition. The outer wythe of the lintel above the door was constructed in a similar manner, but not the inner wythe. The inner wythe appears to be set on the door frame. Some form of column is expected between the door and the window; however, none exists. This lack of a column is what appears to have caused the collapse of the bricks above the door and window. It also appears to be the cause of distress in the vicinity of the second floor windows. It would seem logical to assume that a brick column was originally provided, but no evidence of brick rubble can be found in the photographs. What is seen is the unusual detail of the door frame. If the column had been brick, then we would expect for the top of the door frame to end at the column. In the photograph we see that the top of the door frame extended beyond the west side. This is not seen for the east side of the frame. We speculate that a timber column was used instead of a brick column. Rotting at the base of the column would lead to collapse of the structure, and rot would have been common at this location. This additionally would account for a lack of brick debris. We also speculate that the small, visible crack between the chimney and north wall is a result of the collapse between the doors and window.

A substantial amount of fill has been placed against the exterior walls. This is particularly significant near the southwest corner of the building in the area of a brick cistern. Water leakage through the walls, as a result of the fill, has damage plaster surfaces in the building interior.

Recommendations

In general, this building is in good condition. No serious problems exist that prevent the use of the first floor by the park. In order to use the first floor as a museum or for exhibitions, the first floor must be strengthened to meet the building code requirements. The following are specific recommendations for each of the areas.

The original stone foundations walls and exterior stone walls must be rehabilitated to replace lost stones and mortar between the stones. Mortar similar to the original is acceptable form a structural standpoint. The use of a soft mortar may give better service, since it is softer than the masonry; however, with soft mortars, a method of protecting them from the weather is need or regular repointing should be performed.

The steel joists that support the first floor must be strengthened or replaced to meet building code requirements. We recommend replacing the joists with a new structural system framed in preservatively treated timber. Other possible systems include replacing the existing joists with new joists and framing with steel wide flange sections. We recommend the preservatively treated timber because the system should remain maintenance free for at least

50 years except for cleaning after floods. The rectangular shapes of the members will be easier to clean after a flood. Steel framing constructed out of wide flange sections can be painted to resist the corrosion. Repainting of the steel should be expected every 25 years. The wide flange shape will be more difficult to clean than a timber system, but it should not be excessively difficult. We do not recommend replacing the steel joist with new steel joists. No 8 inch (203 mm) joist can meet the deflection requirements of the Structural Joist Institute specifications. Additionally, open web joists are extremely difficult to paint properly and to clean after a flood.

The second and third floors are adequate for a limited number of people. They are not adequate for use as museum exhibition, for any storage, or for office space. We recommend the posting of structural load restrictions for the floors that limit the number of people above the first floor to no more than six people at one time. Even though the conditions of these floors are good, they will not remain in this condition unless they are properly maintained. The temperature and humidity need to be controlled. This will require and adequate method of ventilation to be provided. Additionally, the areas will need to be cleaned on a regular basis to remove dust and debris, and to inspect for any signs of roof leakage.

The roof is in good condition, and no work is needed from a structural standpoint.

The steel rod and temporary support structure that exist in the second floor space of the annex and in the second floor of the main building are not now needed from a structural standpoint. They do not do any damage by remaining in place. We recommend leaving them in-place.

Harpers Ferry National Historical Park

Historic Structures Report

Building 7

Building 7 is a small, three story stone building constructed with stone walls, a wood roof, and wood floor framing. The original building was larger than the present structure; however, in 1853, the size was reduced to permit widening of Potomac Street. This is visible at the northeast corner of the building where the east wall, along Potomac Street, meets the north wall. The joint between the two walls was not constructed by overlapping stones, but rather it consists of a open joint where the walls abut each other. This change in the size of the building is important in determining the most probable framing used originally in the building.

Foundation System

The foundations for this building appear to consist of simple footings for the stone walls. The north and south walls are the bearing walls for the second floor, third floor, and roof framing systems. They also supported part of the original first floor loads. They are approximately 2 feet 3 inches (686 mm) thick.

The east and west stone walls are approximately 1 foot 10 inches (559 mm) thick, and they support their own weight. In the present structure, 8 inch thick, concrete masonry walls exist inside of the east and west walls. These were installed by the National Park Service during the 1960s to support the first floor loads from a steel joist system.

At the same time that the concrete masonry walls were installed, a concrete floor was installed in the basement. Drawings prepared by the Historic American Building Survey (HABS) in 1959 indicate that the basement had a earthen floor. Near the center of the floor was a large stone that supported a wood post. The stone and post were removed during the 1960s renovation.

The condition of the concrete masonry walls is excellent. The condition of the north and south stone masonry walls is poor. The original mortar is extremely soft. It appears to contain a minimum of lime and no other cementitious materials. As a result, many of the stones are loose. The condition of the east and west foundation walls cannot be evaluated, since the concrete masonry walls are constructed in front of them.

First Floor Framing

The present first floor framing consists of a series of open web steel joists that span east to

west. The joists bear on concrete masonry walls that are parallel to the east and west walls of the building. A delivery ticket was found in the basement attached to one of the joists. The ticket indicates that 8J2 joist were used in building 7. It is assumed that the same size and type of joist was used in building 5. Analysis indicates that the joists have a live load capacity of 73 pounds per square foot (3495 Pa). This is less than the required museum loading of 100 pounds per square foot (4788 Pa). Additionally, the eight inch deep joists are extremely flexible for the span distance and do not meet the Steel Joist Institute specifications which limit the live load deflections to $^{1}/_{360}$th of the span distance.

Visual observation of the joists indicates that the steel joists had a thin shop coating of paint applied prior to installation. In the moist, poorly ventilated basement, the coating has worn off, and corrosion has begun. Up to this point in time, the corrosion has been primarily surface corrosion, and thus no reduction in strength is justified. Unless new coatings are applied, strength loss is expected to occur rapidly.

On top of the joists are nailers and cross pieces. 3/4 inch (19 mm) plywood is attached to the nailers with the strong direction perpendicular to the joists. The flooring is nailed to the plywood and the same direction as the historical flooring.

The 1959 HABS drawings indicate a completely different framing system for the first floor. Near the center of the building, running east and west, was a 6 inch (152 mm) by 10 inch (254 mm) girder. The girder was supported near the center of the span by a wood post. Even though the joists did not remain at the time of the survey, pockets in the north and south walls indicate that the framing was at 16 inches (406 mm) on center. Since the second and third floor joists are 2 inches (51 mm) wide, it is speculated that the first floor joists would also be 2 inches (51 mm) wide. Analysis of the 6 inch (152 mm) by 10 inch (254 mm), two span continuous girder indicates that the size would be adequate for 100 pounds per square foot (4788 Pa) building live loads. Analysis also shows that new 2 x 10 (38 mm x 235 mm) nominally sized joists at 16 inches (406 mm) on center would be required to the 100 pounds per square foot (4788 Pa) live load required in museum exhibition or public meeting areas.

Second Floor Framing

The most unusual framing in building 7 is the second floor framing. Observations indicate that all but one of the oldest joists were constructed in pairs. In these paired joists, the individual joists did not span the full distance, but were constructed with a very long lap splice. Each member of the pair had a length that was approximately three-quarters of the span. The long splice length permits the members to act as one single member; however, the nails joining the two members are not holding the splices tight. This has resulted in a scissors like appearance across the splice length. Another observation is that in most cases, the member sizes for the paired joists are not the same with the depth or width being significantly different. The joists rest on a wood bearing plate at the outside walls. Surrounding the joists are stone that give the appearance of joist pockets in the wall. The bearing plate is rotted.

As was indicated, one joist is not constructed in this manner. It is a single member that spans

the entire distance. This joist is deeper than the other joists except at a $10^1/_2$ inch (267 mm) wide notch near the center. At the notch, the joist depth is 9 inches (229 mm). This joist is similar to joists that frame the second floor in building 5, Roeders Store.

Additional joists were installed by the National Park Service during the 1960s. The joists appear to have been installed for the purpose of providing a level ceiling for the first floor room. Unlike the older construction, the new joists span half of the north-south distance. The joist rest on the wood stud wall at the exterior and on a $5^1/_2$ inch (140 mm) wide by $4^3/_4$ inch (121 mm) deep beam perpendicular to the joists and near the centerline of the building. Additionally, the new joists were nailed to the older joists.

The shallow beam appears to be one of the older members in the building; however, it does not appear to have any structural purpose. The span is approximately 12 feet (3.66 m), but the shallow depth makes it ineffective in supporting the joists. Even though the new joists were installed to bear on the beam, not all of them do now. None of the older joists bear on the beam. This is due to the large, inelastic, vertical deflections, creep, that have occurred in the beam.

A three dimensional structural analysis was performed to determine the effectiveness of the existing $5^1/_2$ inch (140 mm) by $4^3/_4$ (121 mm) inch beam to support the floor joists at mid span. The analysis is based upon a elastic model with two span joists. The joists were assumed to be 2 inches (51 mm) wide and 9 inches (229 mm) deep. The layout of the model is shown in Figure 1. Figure 2 shows the calculated deflections in three dimensions, while Figure 3 shows the bending moment, shear, and deflections for the center beam. Figures 4, 5, and 6 show the bending moment, shear, and deflections for different floor joists. The analysis indicates that the depth of the present beam is too shallow to provide significant support to the joists.

In two locations evidence of previous fire damage exists. The first location is in the vicinity of a hole for an apparent, small round, chimney. Here the damage was significant in that both members of a paired joist have been significantly damaged. The second location is on the north side of the structure, where damage is limited to surface damage only.

Structural calculations indicate that the existing floor framing has a safe live load capacity of 30 pounds per square foot (1436 Pa). This live load capacity is less than that permitted by building codes for residential construction. The space is safe without modification for a limited number of people; however, it must not be used for any continuous use such as for offices, or the storage of materials.

Unusual framing is not uncommon in older buildings; however, given the more simple framing of the third floor, and similar features in building 5, we do not feel that the older framing is original to this building. The one joist that spans the width of the building probably would not have been installed differently than the other joists during original construction. Additionally, if the spliced joists were the original construction, then both members would be expected to be the same width. We speculate that a problem with the original members caused them to be replaced at some point in time. The most probable cause

of this would have been decay near the ends. If this was the case, then the idea that the ends were cut off of the members and the remaining lumber reused makes sense. Additional members would have been brought in to form the joist splices. This major work would have also required for the stairs to the second floor to have been disassembled from framing similar to that found in building 5. The presence of the center beam could have been used to reconstruct the stairs and to provide temporary support to the pairs during reconstruction of the floor. At this stage, a center post may have been utilized as a temporary support. Upon completion of the splices, the post could be removed and the center beam left in place. The presence of one long joist may be due to a lack of deterioration of the member. This possible scenario would explain the conditions that now exist.

Third Floor Framing

The third floor framing appears to be the original framing. The joists span the entire width of the building in the north-south direction, and are spaced at $22^1/_2$ inches (571 mm) on center. The size of the members is 2 inches (51 mm) wide by $8^1/_2$ inches (216 mm) deep. The condition of the members appears to be good. Signs of water leakage are small, and no significant decay was noticed.

Structural calculations indicate that the floor has a safe live load capacity of 20 pounds per square foot (958 Pa). This live load capacity is only half of that permitted by building codes for residential construction. The space is safe without modification for a limited number of people; however, it must not be used for any continuous use such as for offices, or the storage of materials.

Roof Framing

The majority of the roof framing appears to be original. Some work was done on the framing system during the 1960s when the slates were replaced. The framing members are rafters that are four inches (102 mm) wide by five inches (127 mm) deep and spaced at 24 inches (610 mm) on center. The total span of the roof is approximately 24 feet (7.32 m). Collar tie members connect each pair of rafters. All of the materials appear to be in good condition, even though some of the collar tie members are missing.

The structural analysis considers each pair to rafters to act as simple three hinge arches. The collar tie members was not considered to as contributing to the structural capacity of the members, and, thus, was not considered in the analysis. The dead load is assumed to be 15 pounds per square foot (718 Pa) along the length of the member, and the live load is assumed to be a snow load of 25 pounds per square foot (1197 Pa) based upon the horizontal projection of the roof. The results indicate that the existing structure is adequate for snow loads. Due to the heavy dead load of the roof and the long history of the building, wind uplift loads were not considered.

Exterior Walls

The exterior walls are constructed out of random stone with a very soft mortar. This is the

same construction as was used in the building foundations. The condition of the individual stones is good; however, the condition of the existing mortar is extremely poor. In many locations, mortar does not exist between the stones. The soft mortar has shown that it is adequate to support the building loads; however, it does not have a high degree of weathering resistance.

Full height vertical joints are evident between the east wall, along Potomac Street, and the north and south walls. These joints are the result of the reconstruction that was required when the federal government widened Potomac Street in 1853. They are not the result of structural problems.

Recommendations

In general, this building is in good condition. No serious problems exist that prevent it's use by the park. Use as a museum for exhibitions must be restricted to the first floor. The following are specific recommendations for each of the areas.

The original stone foundations walls and exterior walls must be rehabilitated to replace lost and deteriorated mortar between the stones. This will require the removal of the existing concrete masonry walls to work on the east and west walls. Mortar similar to the original is acceptable form a structural standpoint. The use of a soft mortar may give better service than the use of harder mortars with higher portland cement contents. This is because the mortar is usually softer than the stone; however, soft mortars do not typically have as good of weathering resistance as do harder mortars. With soft mortars, a method of protecting them from the weather is needed or regular repointing should be performed.

The steel joists that support the first floor must be strengthened or replaced to meet building code requirements. We recommend replacing the joists with a new structural system framed in preservatively treated timber. Other possible systems include replacing the existing joists with new joists and framing with steel wide flange sections. We recommend the preservatively treated timber because the system should remain maintenance free for at least 50 years except for cleaning after floods. The rectangular shapes of the members will be easier to clean after a flood. Steel framing constructed out of wide flange sections can be painted to resist the corrosion. Repainting of the steel should be expected every 25 years. The wide flange shape will be more difficult to clean than a timber system, but it should not be excessively difficult. We do not recommend replacing the steel joist with new steel joists. No 8 inch (203 mm) joist can meet the deflection requirements of the Structural Joist Institute specifications. Additionally, open web joists are extremely difficult to paint properly and to clean after a flood.

The second and third floors are adequate for a limited number of people, but not for continual use such as for museum exhibitions,offices, or storage. We recommend the posting of structural load restrictions for the floors that limit the number of people above the first floor to no more than six people at one time. Even though the conditions of these floors are good, they will not remain in this condition unless they are properly maintained. The temperature and humidity need to be controlled. As part of this control, adequate ventilation must be

provided. Additionally, the areas will need to be cleaned on a regular basis to remove dust and debris, and to inspect for any signs of roof leakage.

The roof is in good condition, and no work is needed from a structural standpoint.