HFR 112

HISTORIC STRUCTURES REPORT

PART II

ADMINISTRATIVE DATA SECTION

MASTER ARMORER'S QUARTERS

BUILDING NO. 36

Harpers Ferry National Historical Park

Prepared by:

Joseph R. Prentice
Superintendent
May 17, 1965

SECTION I. ADMINISTRATIVE DATA

A. Name and Number of Building:

New Master Armorer's Quarters, Building #36.

B. Proposed Use of New Master Armorer's Quarters:

The New Master Armorer's Quarters, located on Shenandoah Street in the Lower Town, is one of the most impressive buildings in the park. Because of its connection with the Armory, its accessibility and availability, it is ideal for a small branch museum telling the story of the Armory, Arsenal and Hall Rifle Works. The production of firearms was the basic industry of Harpers Ferry and was the life blood of the town. The armory, rifle works and arsenal buildings were destroyed during the Civil War.

The museum exhibits should deal with the various types and models of firearms, production methods, and with the other products of the Armory such as Minie balls, bayonets, etc. The first floor of the building will be used as the museum and the second floor for research facilities, conference room, additional office and storage space.

The exterior of the house is to be restored to its historic period. The interior of the first floor will also be restored and the second floor interior rehabilitated.

C. Provisions for Operating the Structure:

The museum exhibits should be designed and installed to make the operation essentially self-operating. During the summer season personal interpretation will be available, however, during the rest of the year no uniformed employee will be on duty.

D. Cost Estimates:

The structure should be restored to its appearance in our period, 1859-1865. Cost of the exterior and interior restoration and the rehabilitation of the second floor interior is: $67,500.00

Architectural Investigation	1,900.00
Museum Exhibits and Furnishings, Installation and Equipment	13,000.00
PS & S	1,750.00
Contingencies	850.00
Total cost:	$85,000.00

HISTORIC STRUCTURES REPORT

PART II

HISTORICAL DATA SECTION

MASTER ARMORER'S QUARTERS

BUILDING NO. 36

Harpers Ferry National Historical Park

Prepared by:

Wescoat S. Wolfe
Supervisory Historian
May 17, 1965

SECTION II. HISTORICAL DATA SECTION

A. Name and Number of Building:

Master Armorer's Quarters, Building No.36

B. Historical Information:

There is no additional historical data. The report made by Hugh D. Gurney, Park Historian, dated February 24, 1965 for Part I, 8 pages, contains all information available at present on this structure.

It is believed that the Architectural Data Section gives a more correct definition of the actual building construction than is possible to prove by documentary research.

HFR-112

HISTORIC STRUCTURES REPORT

PART II

ARCHITECTURAL DATA SECTION

ON

MASTER ARMORER'S HOUSE

Harpers Ferry National Historical Park

Prepared by
Archie W. Franzen
Architect
April 1965

for

United States Department of the Interior, National Park Service
Eastern Office, Design and Construction
Division of Architecture

HISTORIC STRUCTURES REPORT

PART II

ARCHITECTURAL DATA SECTION

ON

MASTER ARMORER'S HOUSE

Harpers Ferry National Historical Park

A P P R O V A L S H E E T

RECOMMENDED

_____ Date _____

Superintendent

_____ Date 5-7-65

Chief, EODC

APPROVED

_____ Date _____

Regional Director, Northeast Region

FEATURES DISCLOSED IN UNCOVERING THE FABRIC

From general observations of the building it was known that the structure had suffered from the effects of numerous floods. With the recent removal of the plaster and lath, the interior door and window casings, and trim, the total effect of the damage has been exposed to view.

The first floor structural members, flooring and trim have failed or weakened from the alternate soaking and drying out resulting from flood waters. The dampness apparently attracted insect infestation and dry rot accelerated deterioration. The joists and studs, as they failed, have caused settlement that has affected the alignment and plumbness of the interior partitions of both the first and second floors. When the impaired members are replaced or strengthened with scabs it will be necessary to jack various sound members back to their true position.

The flooring throughout the structure is of single thickness laid across the joists without a sub-floor. The first floor flooring, for the most part, is damaged beyond economical salvage. However, some portions that are sound should be saved for making a few necessary minor repairs to the second floor flooring.

Except for the stair halls the floor joists in the main part of the structure run from the front wall to the back wall. The first floor partitions running normal to these joists are bearing partitions

and the bearing ends of their studs are seated in a plate resting on the flooring and are locked into position by means of a mortise and tenon joint. The studs of other partitions on the first floor and those of the second floor bear directly on the flooring without a plate. The joists of the rear portion of the structure run from sidewall to sidewall. The first floor joists bear on the stone masonry foundation walls at the offset where the brick masonry of the superstructure begins. The joist ends of the second floor level are pocketed in the brick masonry.

The plaster throughout the structure has been removed except for the shaped cornices found in several of the first floor rooms and for two panels of plaster bearing the written names of several Civil War soldiers, their regiments and companies. There are five plaster ceiling roundels that were taken down when the plaster was removed and these have been saved for reinstallation when the building is restored.

After the trim was removed the extent of the damage to this material was apparent from observing the backs of the members. The lower portions of the casings suffered the most from having been submerged longer and more frequently, as floods of any proportions could reach them. Woodwork in contact with masonry was more susceptible to injury than other trim work within the building. The panels of the first floor window spandrels and doors being of thinner material, split and warped from the many cycles of being soaked and then drying out. A

good many of these will require replacement.

The carriages and landing joists of the main stairway were not nailed together, but were fastened by means of mortises and tenons. With some tightening of the newel post and ballusters, the stair as it exists should serve for some time to come. The stairs in the rear portion deteriorated to a greater extent, possibly because they were of winder construction. They will have to be reconstructed as the rotted out members are removed and replaced.

Mortise and tenon construction was also used in other parts of the structure. The structural wood lintel over the interior doors has tenons at either end fitted into mortises in the studs forming the jamb framing. The tenons extended through the studs several inches and wood pins were driven through the tenons only and not through the mortises. The pins were located tight against the sides of the studs. This same method was used in framing the header joists carrying the fireplace hearths.

The interior window and door casings and trim have been removed and the various components have been marked to key with the numbers assigned to the various openings shown on the working drawings. The various members are bundled for inspection by the contractors and kept in the immediate vicinity of the opening from which they were removed.

ILLUSTRATION NO. 1

STAIR LANDING FRAMING

Here the plaster has been removed from the soffit of the stair and the intermediate landing to the second floor. Most structural members in the building, such as the landing joists and stair carriages, were mortised and tenoned together. Lighter components were nailed where less stress was anticipated.

Where plaster surfaces were to be warped, scabs were cut to the desired profile as in the case shown here.

Photo: National Park Service
Archie W. Franzen, March 1965

Neg. on file at Park

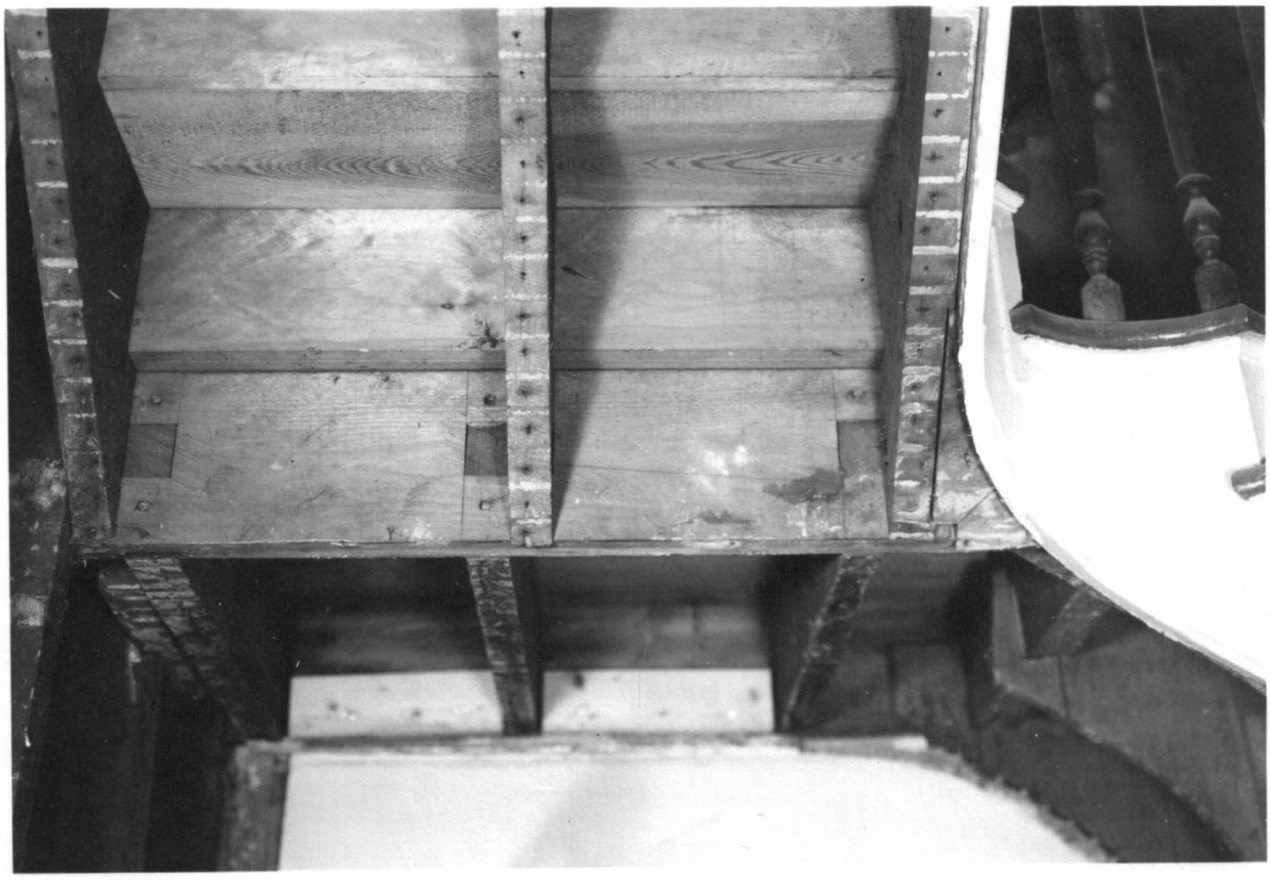

ILLUSTRATION NO. 2

FIREPLACE HEARTH FRAMING

From this angle, looking toward the underside of the second floor, can be seen the framing and boards supporting a second floor fireplace hearth. Here again a mortise and tenon was used with a wood pin through the tenon only and driven tight against the joist. This practice is better than that found in many of the other building in the Park where the pin is driven both through the joist mortise and the tenon. The latter method cuts down the capacity it would otherwise have.

Photo: National Park Service
Archie W. Franzen, March 1965

Neg. on file at Park

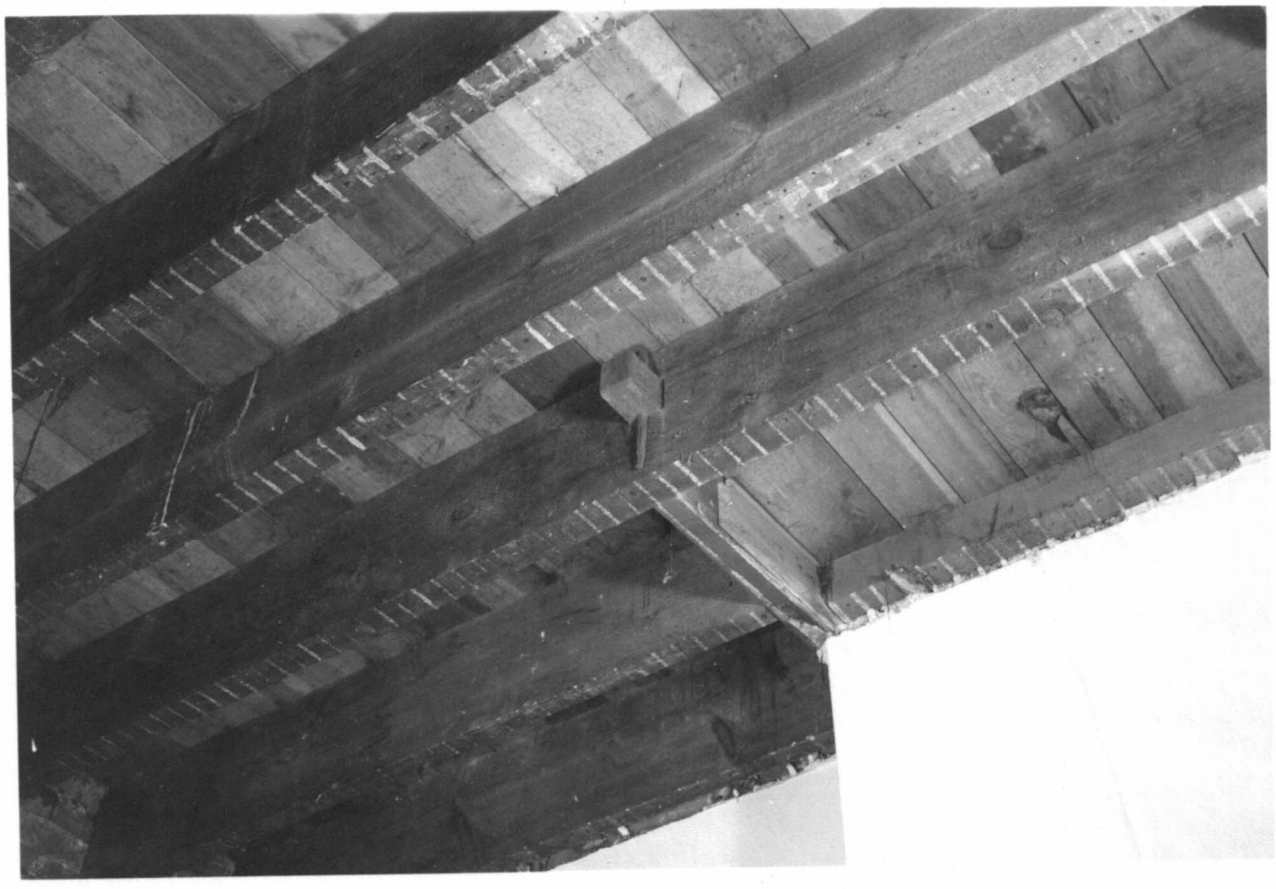

ILLUSTRATION NO. 3

CIVIL WAR PERIOD WRITING ON PLASTER

On the walls of the second floor rear hall can be found penciled writings by soldiers occupying the structure during the Civil War. In this instance drugs are listed indicating that a medical unit may have spent some time in the building.

While no vestige of wallpaper has been discovered, it is possible that the rooms were papered. During the war years the buildings were very likely quite damp for lack of heat, and as a result wallpaper would have loosened and the soldiers may have then removed it. At the second floor level and particularly in the back rooms the walls may have only been whitewashed.

Photo: National Park Service
Archie W. Franzen, March 1965

Neg. on file at Park

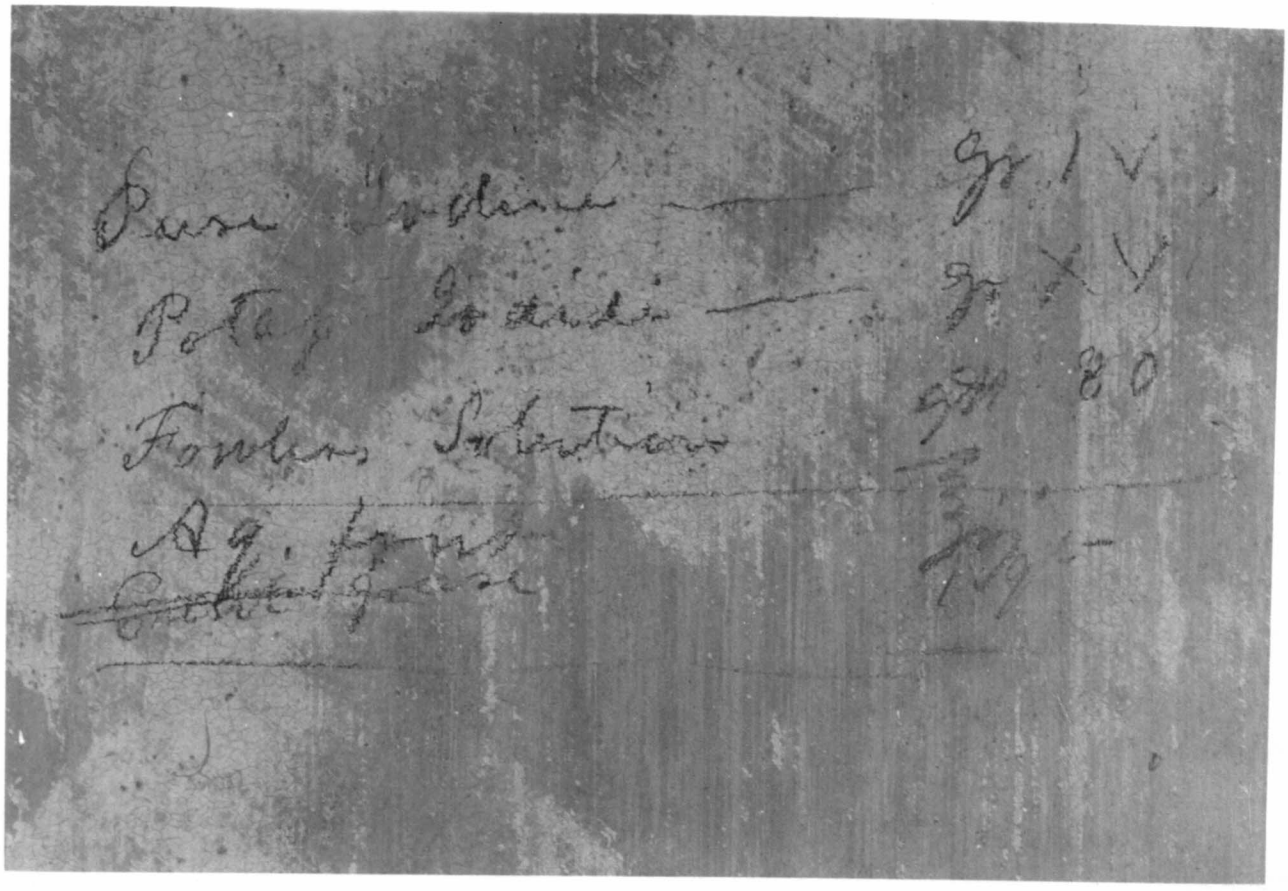

ILLUSTRATION NO. 4

FIRST FLOOR BEARING PARTITION STUDS

Shown in this photograph is damage resulting from floods. This partition separates Rooms # 4 and # 5. It is a bearing partition and supports the floor joists of the floor above. The lower ends of the studs were tenoned and fir into corresponding mortises in a continuous plate. The plate is nailed to the single thickness flooring of the first floor, and was used only under bearing partitions and not under dividing partitions. The upper ends of the studs were cut to form a half-lap at the bottom of the joist above and were nailed to the side of the joist.

Plaster droppings between studs absorbed and retained moisture from flood waters, causing the stud ends to rot. Sawn lath were used and nailed to the studs with cut nails.

Photo: National Park Service
Archie W. Franzen, March 1965

Neg. on file at Park

ILLUSTRATION NO. 5

FIRST FLOOR DIVIDING PARTITION STUDS

In the case of a non-bearing partition the bottom ends of the studs rest directly on the single thickness flooring of the first floor. This partition separates the central hallway from Room # 6. A beam runs under the flooring directly under the partition line. The upper ends of the studs are half-lapped on to the second floor joists. A corner of the main entrance door can be seen and the flooring inside the door has been renewed with modern flooring. The trim portion of the window and door casings have been removed.

Photo: National Park Service
Archie W. Franzen, March 1965

Neg. on file at Park

ILLUSTRATION NO. 6

SIDEWALL STUDS OF MAIN STAIRWELL

The first and second floor studs overlap the second floor joists at the stairwell employing dutchmen to give continuity to the plaster wall surface.

A portion of the plaster cornice of the first floor main hall can be seen terminating below the skirt of the stairwell.

Photo: National Park Service
Archie W. Franzen, March 1965

Neg. on file at Park

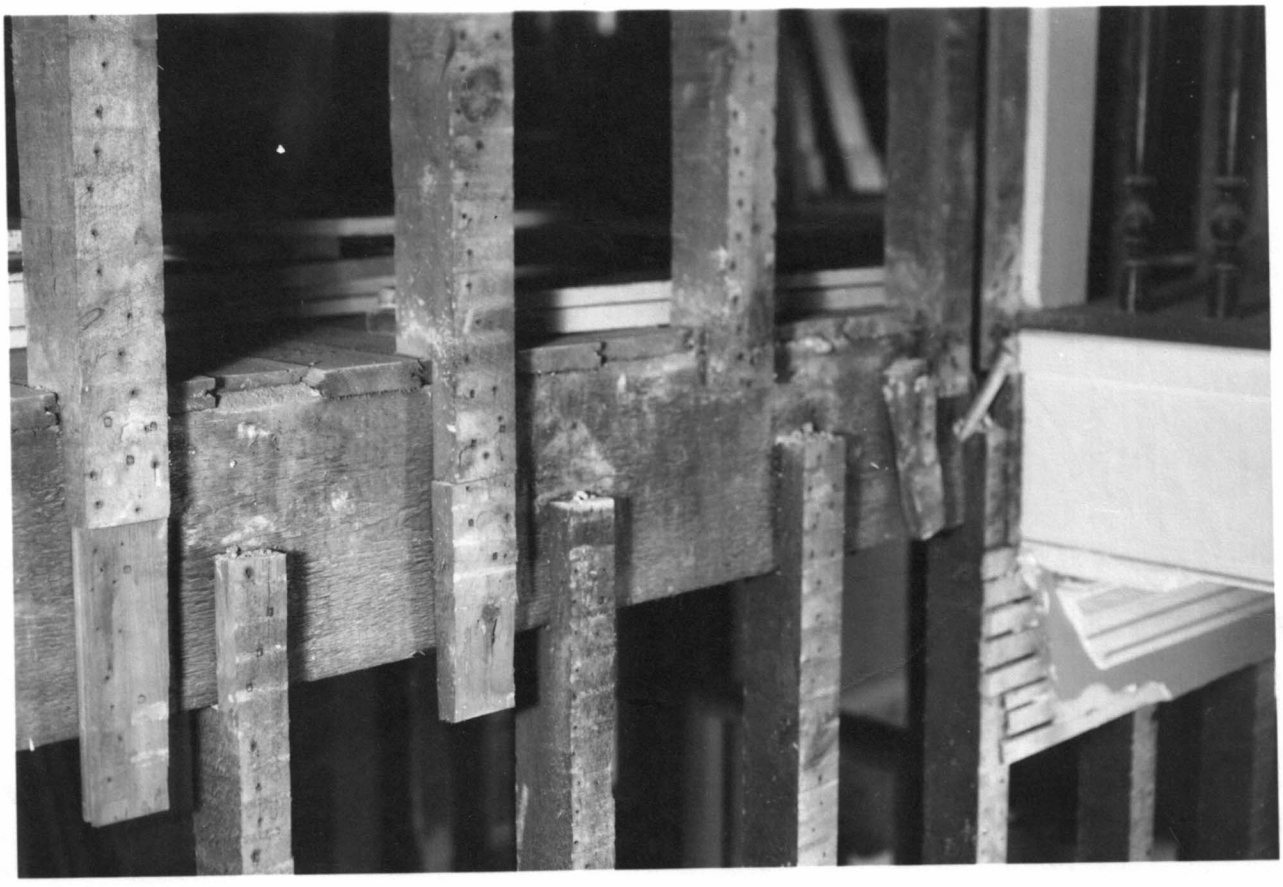

ILLUSTRATION NO. 7

INTERIOR DOOR FRAMING DETAIL

The rough framing of a typical interior door opening is shown here where it can be seen that the lintel was fastened by a mortise and tenon joint to the studs and further secured with a wood pin. The pin was driven through the tenon only and hard against the side of the stud to lock it in place. Using a drifted hole, this method made it possible to make the connection very tight.

The cover trim board of the casing has been removed leaving only the jamb lining. The plasterer depended on these boards for his ground.

Photo: National Park Service
Archie W. Franzen, March 1965

Neg. on file at Park

ILLUSTRATION NO. 8

DETAIL OF STAIR CARRIAGE

The treads and risers appear here in end view showing how they fit together. The plaster ground of the rake shows just above the nosings serving also as a nailing strip for the stringer trim. The stud next to the wall is considerably rotted out as several similarly placed studs are at other locations. They apparently gathered moisture from the masonry walls following floods.

Photo: National Park Service
Archie W. Franzen, March 1965

Neg. on file at Park