

**A STUDY OF THE PROBABLE ORIGINAL LAYOUTS,
USES, AND INTERIOR APPEARANCE OF THE
OFFICERS' QUARTERS (HS-11)
AT AMERICAN CAMP**

San Juan Island National Historical Park



Prepared for
National Park Service
Department of the Interior

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FINAL REPORT: AUGUST 15 , 2005

ACKNOWLEDGEMENTS

We would like to thank the National Park Service (NPS) for funding this study. In addition, we would like to thank the following National Park Service staff for their time, thoughts, assistance, guidance and encouragement: Peter Dederich, Bill Gleason, Laurin Huffman, Jerry McElyea, and Michael Vouri along with George Bleekman, Philip Dole and Don Peting of the University of Oregon.



Fig. INTRO-1. Map of Washington State showing the locations of Fort Bellingham, Fort Steilacoom and Fort Vancouver along with American Camp.

Excerpt from sheet 1 of drawing 438/25000, drawn by Lafleur and Camarena in 1978. Edited by Aaron Lemchen 2005.

ADMINISTRATIVE DATA

A Study of the Probable Original Layouts, Uses, and Interior Appearance of the Officers' Quarters (HS-11) at American Camp was initiated by the National Park Service, through a cooperative agreement with the University of Oregon, as part of its stewardship of the historic buildings at San Juan Island National Historical Park. Accordingly, this study documents current and historical conditions of HS-11's interior configurations and finishes. Investigation for this study was conducted by Kingston Heath (principle investigator), Fred Walters (co-investigator), and Aaron Lemchen (graduate student) with Alison K. Hoagland consulting during the period of September 2004 through August 2005.

REPORT FORMAT

This study is divided into three major parts. The first part consists of the presentation of the HS-11's history and its historic context. The second part consists of gathering new physical evidence from the building itself. The third part of the study will be the evaluation, analysis and conclusions based upon data provided by the previous two parts.

SCOPE OF REPORT

The report focuses on the interior spatial arrangement, finishes and related structure of HS-11. It discusses the construction techniques as well as the probable dating of various finishes found within the building. This information will be the basis for further sets of recommendations as to the disposition of HS-11's interior, while documenting current and historical conditions.

EXECUTIVE SUMMARY

The following report is the result of a grant by the National Park Service (NPS) to the University of Oregon's Program in Historic Preservation. The authors were charged with investigating the interior spatial configurations of HS-11, the Officers' Quarters at the American Camp site on San Juan Island, Washington State. Contemporaneous data was collected concerning the historic architectural context of HS-11 including the contemporary military buildings located at Fort Vancouver, Fort Steilacoom, and Fort Bellingham. Analysis of the building's development through an examination of physical alterations allows for approximate dating of some of its features to fixed ranges in time. This information was yielded during two field investigations undertaken during October 29-31, 2004 and March 22-24, 2005; in addition to research and analysis of previous documentation of HS-11. Members of the research team were Professor Kingston Heath, Historical Architect Fred Walters, Professor Kim Hoagland and Aaron Lemchen, graduate student.

Evidence from both the documentary and physical investigations of HS-11 was analyzed to chart the evolution of the building's interior spatial configuration and finishes. The evidence was separated into six historical periods based upon the order of construction. This was done to increase our knowledge of the building's historical evolution independent of the few dated sources, most of which relate to the exterior of the building. The building itself has undergone three distinct eras of ownership and use. The first is the **military** era, when it was used to house officer(s) and perhaps family members from 1859 to 1874. The second era of this building's life was its use as a house connected with **agricultural** operations in adjacent fields from 1874 to the 1950s or 60s. The third phase of the building is its historical connection with the military era as part of state and federal **parks**. It was initially owned by Washington State Parks and is currently owned by the NPS since 1966.

TREATMENT: After consultation between the investigative team and National Park Service Administrators the preferred option for future interpretation and restoration is a hybrid treatment of both restoration and a study house approach to specific areas of the building. This treatment will involve the removal of the wall between Rooms 1 and 2 dating from the early 20th Century and the reconstruction of the wall from the military era based upon the physical evidence of the wall between rooms 3 and 4 on the west side of the structure. It will likely result as well in the restoration of the wall between Rooms 2 and 5 (E5). The entire building would be interpreted as a study house, with the west side focusing more on 20th Century developments and the east side and main passageway (Rooms 1, 2 and 5), for the most part, focusing on the military era (1859 -1874) spatial developments. It is felt that this option provides a balanced approach in terms of opening the building up to visitors and preserving the majority of the historic fabric. As in the traditional study house approach, these recommendations offer the possibility of future restoration while dramatically increasing the public's active, rather than passive, involvement in understanding the breadth of history within the building. This preservation approach also limits intrusive responses based upon conjecture, and allows for future evidence and preservation strategies to inform the building's interpretative program.

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CHAPTER 1: PURPOSE OF THE STUDY

PURPOSE

The purpose of this study is to develop for the National Park Service a probable original layout, use and appearance of the Officer's Quarters (HS-11) at American Camp between 1859 to 1874.

MECHANICS OF THE STUDY

The methodology employed in this study included the synthesis of previously documented primary and secondary sources, and contemporary physical investigations of the historic resource. Specifically, this report endeavored to correct discrepancies about the interior of the building from previously documented material by employing contemporary physical testing and research methods.

OVERVIEW OF RESEARCH CONSULTED

The research phase included primary and secondary sources from National Park Service Reports, journal articles and books. The information derived helped to further our understanding of HS-11 and the context within which this historic resource was conceived, constructed and modified.

PRIMARY SOURCES: The primary sources included written and graphic documentation about HS-11 from 1859 to 1966 (when the site was taken over by the National Park Service). They included Major Nathaniel Michler, C.E.'s *Plan of Post at Camp San Juan Island, Washington Territory* (1874), various correspondence and documentation from both the military era and farm era occupants of HS-11 uncovered by Erwin Thompson and included in his *Historic Resource Study* (see "Secondary Sources" below).

SECONDARY SOURCES: Secondary sources included the following: Erwin Thompson's *Historic Resource Study, San Juan Island National Historical Park* (1972) and the *Historic Structures Report* (HSR) by Harold A. LaFleur (1978). These two secondary sources addressed HS-11 and its history most directly. The as-built drawings (1975 – 1978) derived from LaFleur's HSR and restoration plan were also quite helpful in their documentation of the building. Alison K. Hoagland's *Army Architecture In The West: Forts Laramie, Bridger, and D.A. Russell, 1849-1912* was quite useful in documenting the architectural and societal contexts of U.S. Army posts in the west during this period. Professor Hoagland delivered a lecture at the University of Oregon, which provided important contextual data for our field investigation, and was a member of our first site investigation on October 29th and 30th of 2004. In addition, Historic American Building Survey (HABS) drawings were also useful in understanding contemporary military architecture during the period American Camp was occupied.

PHYSICAL TESTING AND RESEARCH

Physical testing and research included documentation of the building's interior finishes and structure through both destructive and non-destructive means. The recordation was primarily through written notes, photography, drawings and the sampling of materials.

NON-DESTRUCTIVE INVESTIGATION: Non-destructive investigations of the building included documentation of finishes and structure in a way that did not require any damage to the current state of the building fabric as found by the investigators. However, the current investigation took advantage of damage from previous destructive investigations in order to yield evidence whenever possible, and to limit further damage of the historic building fabric.

DESTRUCTIVE INVESTIGATION: Destructive investigation included specific areas where investigators removed interior finishes in order to undertake investigations critical for findings in this report. This consisted of the areas that were likely to assist the investigators in documenting previous locations of interior partitions as well as further evidence of interior finishes: See Appendix III-11

EVALUATION OF DATA

Evaluation of the physical data gathered for the purposes of this study were used to confirm or correct previously gathered primary and secondary source material into a historically and architecturally accurate documentation of the building's interior. This information was then used to develop a probable original layout. A primary tool for the evaluation of gathered data consisted of a matrix to conduct periodic analysis of HS-11's interior finishes.

PRESENTATION OF CONCLUSIONS

This Report's conclusions are presented in a format that includes both text and graphics. The conclusions consist of analysis matrixes along with text, drawings, diagrams and photographs documenting the building's current and historical conditions. Oversized materials are included in an appendix at the end of the report.

CHAPTER 2: HISTORIC ARCHITECTURAL CONTEXT AND PRECEDENT STUDY

MILITARY PRESENCE IN THE WEST

“In the 1850s four-fifths of the entire U.S. army of about ten thousand soldiers were stationed West of the Mississippi; in the 1890s, about two-thirds of the army of twenty-five thousand were stationed in the West.” Occupation by the regular army in the west was only interrupted by the Civil War with the shifting of the regular forces to the east; the Army in turn staffed most western posts with volunteers.

- A. K. Hoagland, from *Army Architecture in the West*¹

RATIONALE OF WESTWARD EXPANSION

The United States Army was present in the West for several reasons. A. K. Hoagland cites several reasons for this. The first one cited was to exert power, influence and cultural change upon the Native Americans and, in some cases, upon local settlers. The second reason initially behind the establishment of an Army presence in the West was to aid travelers and settlers from the East as they traveled to western destinations. Travelers used the forts for resupply, protection, and as visual landmarks on their journey. The forts, then, could be seen as the first step in establishing the governmental infrastructure necessary for western expansion.

Complementing the mission of aiding settlers and travelers was the economic subsidy Army posts brought to the local economy. Similar to the current interrelationship between military installations and the economies of the local civilian communities, early posts of the West had a major impact on the economies of the civilian population that surrounded them. This effect was, and is, due to the fact that a military installation and its residents were likely to purchase at least a portion of their basic needs in local supplies and labor. The use of local resources was more efficient than having the Army transport these necessities from distant depots as needed.

Concurrently, the Federal Government was subsidizing settlement in the West by providing free land (via the Homestead Acts). U.S. Army installations along major transportation routes, in turn, provided both protection and economic stability to these new arrivals. In the Puget Sound region this phenomenon can be seen in the early development of local communities such as Bellingham, Port Townsend and the community of Steilacoom.²

ROLES OF THE ARMY IN THE WEST

Hoagland defines two roles of western Army posts. They can be divided between those established to exert the power and influence of the Federal Government over Native Americans and non-conforming settlers, and those established to act as waypoints to protect routes of communication and transportation. While many posts were hybrid in their assumption of these roles, the post established at the present-day American Camp

site was likely rare in that its purpose was the establishment of a territorial claim to San Juan Island by the United States. The post existed to jointly administer the island in cooperation with the British Post at what is now referred to as “English Camp” on the Northwest side of the island on Garrison Bay: Figure II-1. Another reason given for the establishment of the post was the protection of local settlers by raiding Native Americans coming from what is now Canada and Alaska.³

MILITARY ARCHITECTURE IN THE PACIFIC NORTHWEST

In order to better understand the interior spatial configuration of the buildings at American Camp, it is also important to understand the spatial configuration of contemporaneous military buildings in the region. The following brief survey of U.S. Army buildings in the region is meant to give a more complete understanding of the building culture present at American Camp and the general context within which the

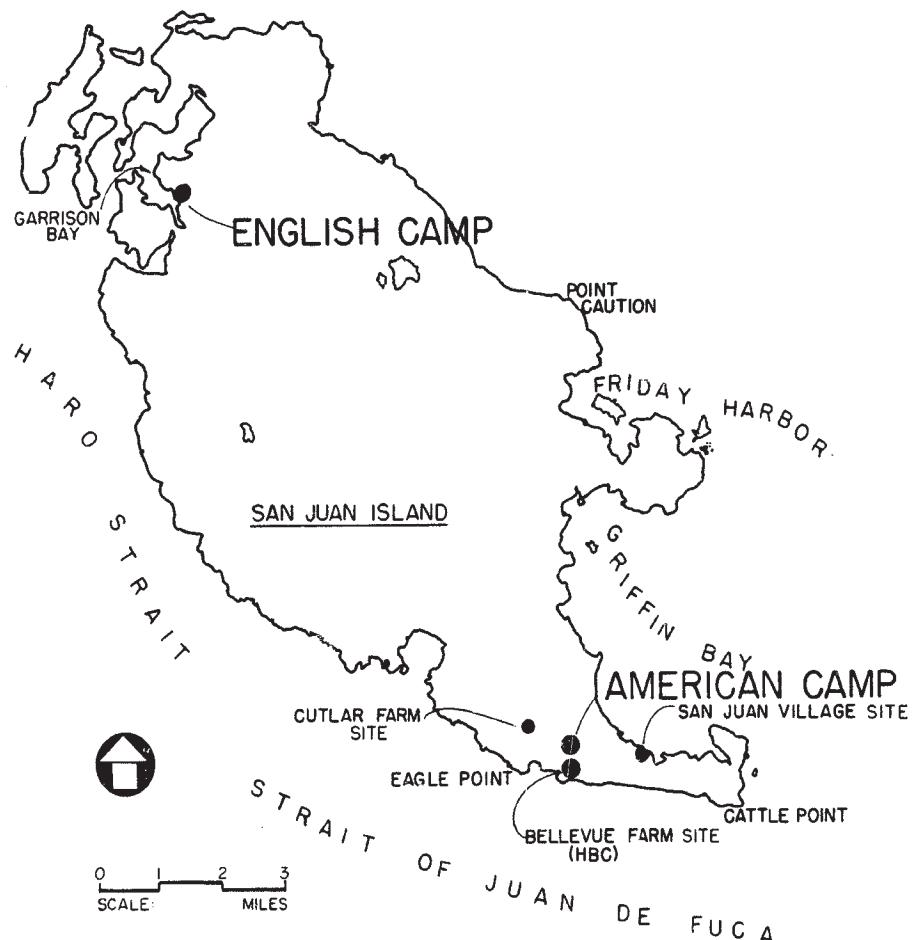


Fig. II-1. Map of San Juan Island showing American camp in context with other related historic sites on the island, including English Camp.

Excerpts from sheet 1 of drawing 438/25000, drawn by LaFleur and Camarena in 1978 as part of the restoration planning for HS-11, edited 2005 by Aaron Lemchen.

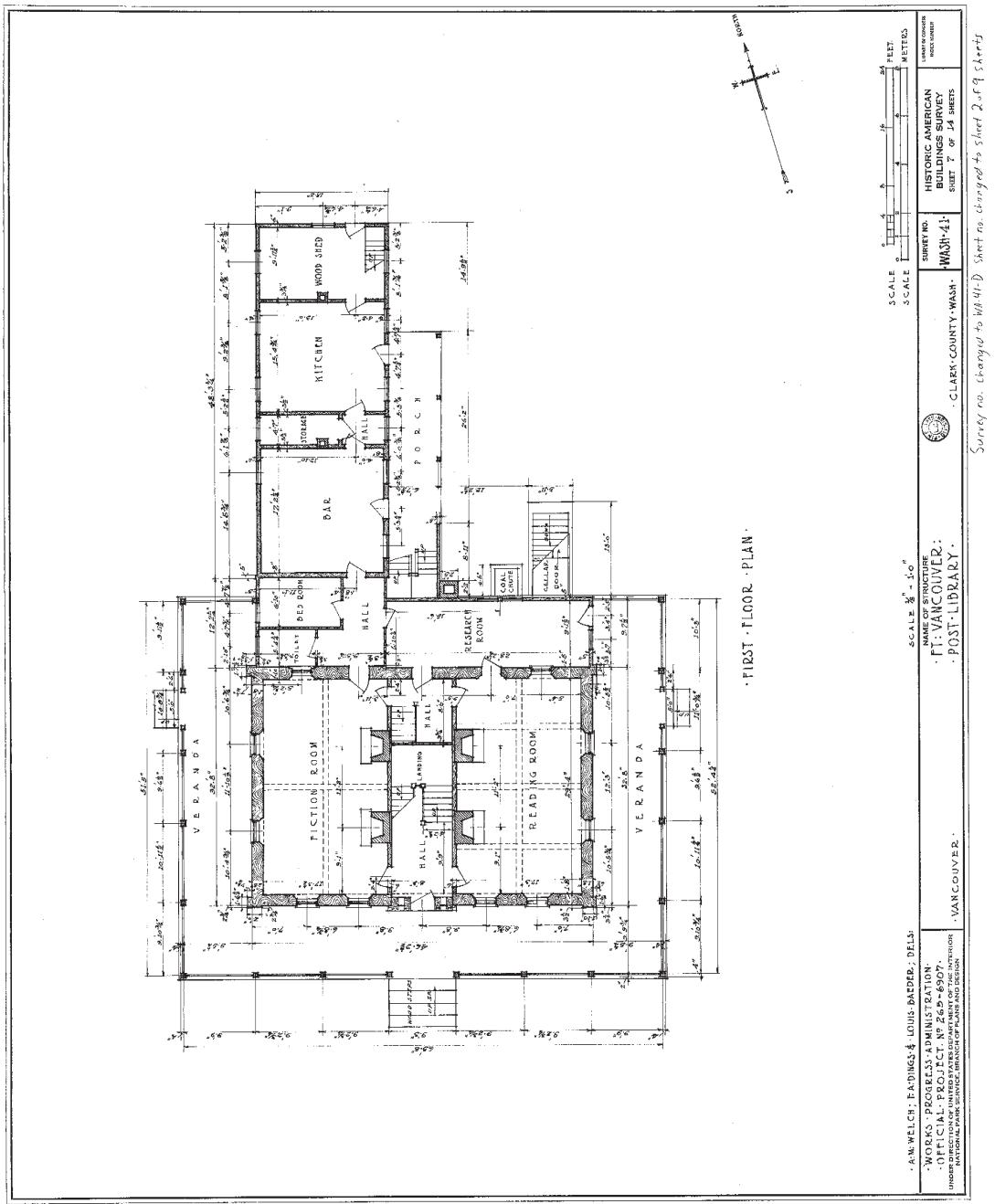


Fig. II-2. 1937 HABS plan of Ulysses S. Grant House (c. 1849, Former Post Library & Officers' Club), Fort Vancouver Barracks, Washington.

U.S. Department of the Interior, National Park Service, Historic American Building Survey, *Ft Vancouver: Post Library*, (1937) by A.M. Welch, F.A. Dings and Louis Baeder,
<http://memory.loc.gov/pnp/habshaer/wa/wa0000/wa0007/sheet/00002a.tif> accessed 3/10/2005.



Fig. II-3. 1937 HABS photograph of Ulysses S. Grant House (c. 1849, former Post Library & Officers' Club), Fort Vancouver Barracks, Washington, Front.

HABS, WASH,6-VANCO,1-D-4

<http://memory.loc.gov/pnp/habshaer/wa/wa0000/wa0007/photos/169868pv.jpg>

buildings were constructed. It also is useful to illustrate not only the types of building techniques and materials used, but the great variety used within the region and even within the various forts, camps and posts.

FORT VANCOUVER BARRACKS⁴

The early buildings at the Fort Vancouver Barracks are Neoclassical in style (owing, in part, to the peripteral colonnades) and were built c.1849.⁵ The remaining historic buildings of the Pre-Civil War era at the post that were recorded during the 1930s Historic American Building Surveys included the Ulysses S. Grant House (Post Library), Grant's Headquarters and Barracks; the last two buildings are no longer extant. These buildings exhibited great variety in their construction methodology. Some of the building technologies include log, heavy and light timber framing (including plank construction).

ULYSSES S. GRANT HOUSE: The current name of this building is honorific--given after Grant became president. This title may have come as late as the introduction of I-5 through Vancouver after World War II (see "General Grant's Headquarters"). Grant served as quartermaster at the post, with the rank of Brevet Captain from 1852 to 1853, working in the building when it was utilized as a headquarters. The building is two and a half stories with a double story wrap around veranda on three sides. The structure



Fig. II-4. 1937 HABS photograph of Ulysses S. Grant House (c. 1849, Former Post Library & Officers' Club), Fort Vancouver Barracks, Washington. Quarterview of rear.

HABS, WASH,6-VANCO,1-D-1
<http://memory.loc.gov/pnp/habshaer/wa/wa0000/wa0007/photos/169871pv.jpg>

has a hip roof with four dormers, one per elevation, and resembles a lower Mississippi Valley “raised cottage” in general massing and plan type (double pile, central hall plan surmounted by “galleries” and a high hip roof): Figures II-2 through 4.

At the time of the HABS drawings it was the Post Library, though it had previously been an Officer's Club, Post Headquarters, as well as Officer's Quarters. The construction methods used in the erection of this building varies from a 2 story log structure in the original part of the building, to plank construction in some of the rear appendages. From the HABS drawings it is not possible to determine whether the log construction is similar to the *pièce-sur-pièce* log panel construction popular with the Hudson's Bay and buildings found at Fort Bridger, but this reasoning would follow given its affinity to the raised cottage. The structure was eventually finished with wood siding and its interior plastered. At some point before being documented in 1937, rooms to the rear were added of a different construction technology than that of the original log portion of the building. In addition, the “Research Room” is flush with the rear portions of the veranda and the log structure fits concentrically within the adjacent veranda and “Research Room”. The first phase of the rear “ell” appears to be plank construction, also known as plank frame, box, or box frame construction, owing to an overall wall thickness of 3-1/2 inches. The second phase of this extension, further to the rear, appears to be constructed of framing likely 3-1/2 inches or greater in dimension with an overall thickness of 8 inches.⁶

GENERAL GRANT'S HEADQUARTERS:⁷ The construction of the

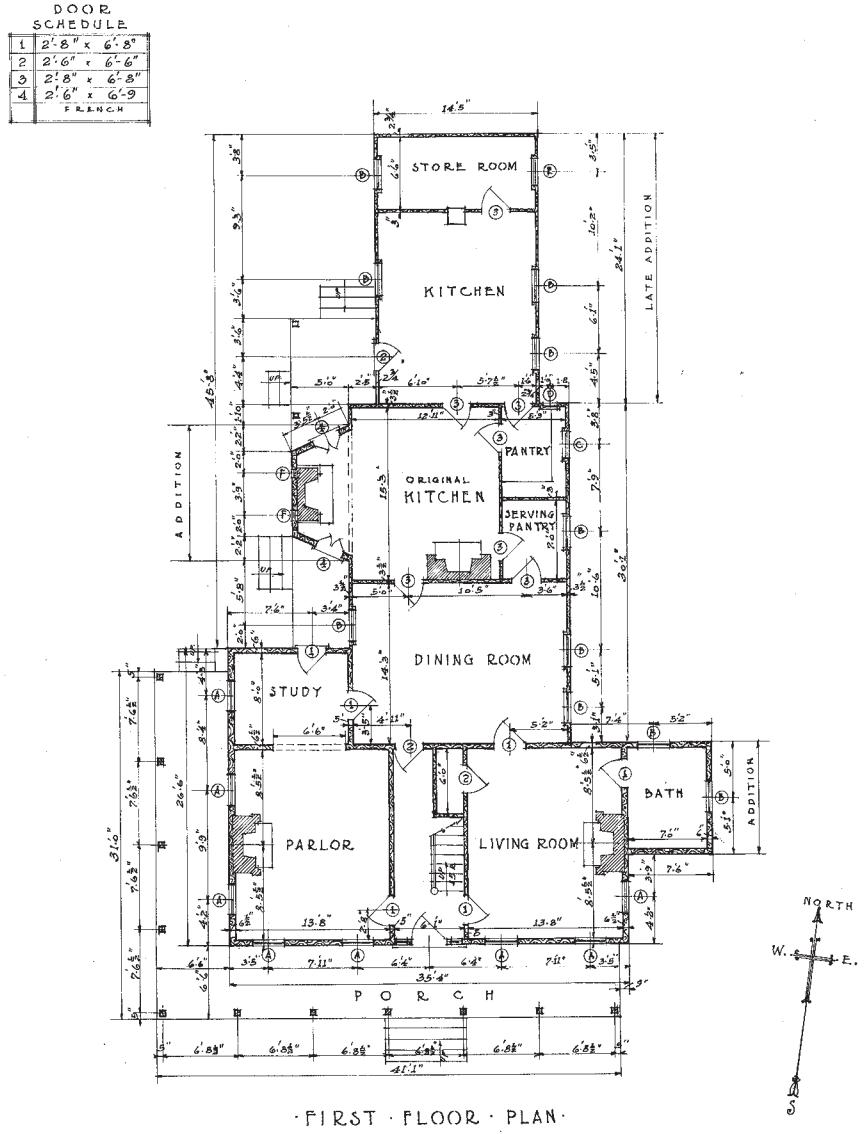


Fig. II-5. HABS Plan of "General Grant's Headquarters," Fort Vancouver Barracks, Washington.

U.S. Department of the Interior, National Park Service, Historic American Building Survey, *Ft Vancouver: Gen'l Grant's Headquarters* (1937) by F.A. Dings and Louis Baeder, <http://memory.loc.gov/pnp/habshaer/wa/wa0000/wa0005/sheet/00001a.tif> accessed 3/10/2005.

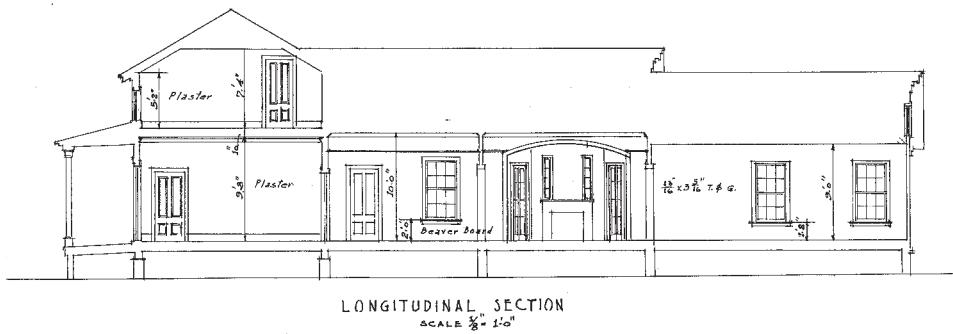


Figure II-6. Excerpt from HABS drawing showing section of “General Grant’s” Headquarters.

U.S. Department of the Interior, National Park Service, Historic American Building Survey, *Ft Vancouver: Gen'l Grant's Headquarters* (1937) by F.A. Dings and Louis Baeder,
<http://memory.loc.gov/pnp/habshaer/wa/wa0000/wa0005/sheet/00003a.tif> accessed 3/10/2005.



Fig. II-7. 1937 HABS photograph of “General Grant’s Headquarters” (c. 1849), Fort Vancouver Barracks, Washington. Quartermaster view of front including veranda.

HABS, WASH,6-VANCO,1-B-1
<http://memory.loc.gov/pnp/habshaer/wa/wa0000/wa0005/photos/169865pv.jpg>



Fig. II-8. 1937 HABS photograph of “General Grant’s Headquarters” (c.1849), Vancouver Barracks, Fort Vancouver, Vancouver, Washington. Quarter view of the rear.

HABS, WASH,6-VANCO,1-B-3
<http://memory.loc.gov/pnp/habshaer/wa/wa0000/wa0005/photos/169867pv.jpg>

building referred to as “General Grant’s Headquarters” in the HABS documents is described as a single pile frame building; in examining the drawings there are at least two types of frame construction within the building: Figures II-5 and II-6. The single pile arrangement referred to the room depth between the “front” and “rear” of the original building; a “double pile” plan would refer to a building that is two rooms deep between the front and the rear.

The part containing the single pile plan (with rooms on each side of the central hall) appears to be of nominal 4 inch stud construction. Whether this is of light or heavy frame construction cannot be discerned from the drawings except for the fact that a section through the porch and main building shows a double 2 x 4 top plate, making it likely that this building has a light or combination frame structure. The main portion of the building was finished in plaster on the interior with wood siding on the exterior. Of interest in terms of date and relation to the American camp buildings are the added rooms to the rear of this building, which are apparently of plank or box construction consisting of 1-1/2 inch by 10 inch boards forming the structure with horizontal wood siding affixed to the exterior. The interior was finished with 13/16 inch x 3 3/16 inch tongue and groove horizontal arranged boards. These boards were later covered by a Beaver Board finish⁸. A single story colonnaded veranda surrounded the building on two sides: Figure II-5 and Figure II-7.⁹



Fig. II-9. 1937 HABS photograph of Barracks Building (c. 1849), Fort Vancouver Barracks, Washington.

HABS, WASH,6-VANCO,1C-1

<http://memory.loc.gov/pnp/habshaer/wa/wa0200/wa0218/photos/169873pv.jpg>

BARRACKS: Based upon the 1937 HABS photographs available for the barracks, the building was constructed in what appears to be an I-house plan with Victorian era scrollwork on the porch. It was two stories with attic windows in the gables and interior chimneys at each end. It had a single story, full width porch on the front and a single story side wing with enclosed porch. This building is most likely of light frame construction: Figure II-9.

FORT STEILACOOM

Built in 1858, or soon thereafter, the buildings at Fort Steilacoom are also built in the Neoclassical style, similar to those at Fort Vancouver, according to the HABS drawings from 1934. The dimensions of the walls in the three buildings documented appear to be 5-1/2 inches thick. At the time of their documentation by the Historic American Building Survey the buildings, which were all built originally for the purpose of housing military officers, were used for housing doctors at the state hospital. The center building in the HABS drawing is exemplary of the double pile plan with many of the rooms all following the classic proportion of 1:1-1/3 in the proportions of their dimensions: Figure II-10 and 11. The buildings at Fort Steilacoom were surveyed by Hugh Richardson and Orr Pickering for HABS and were designed by Lieutenant A. V. Kautz.¹⁰

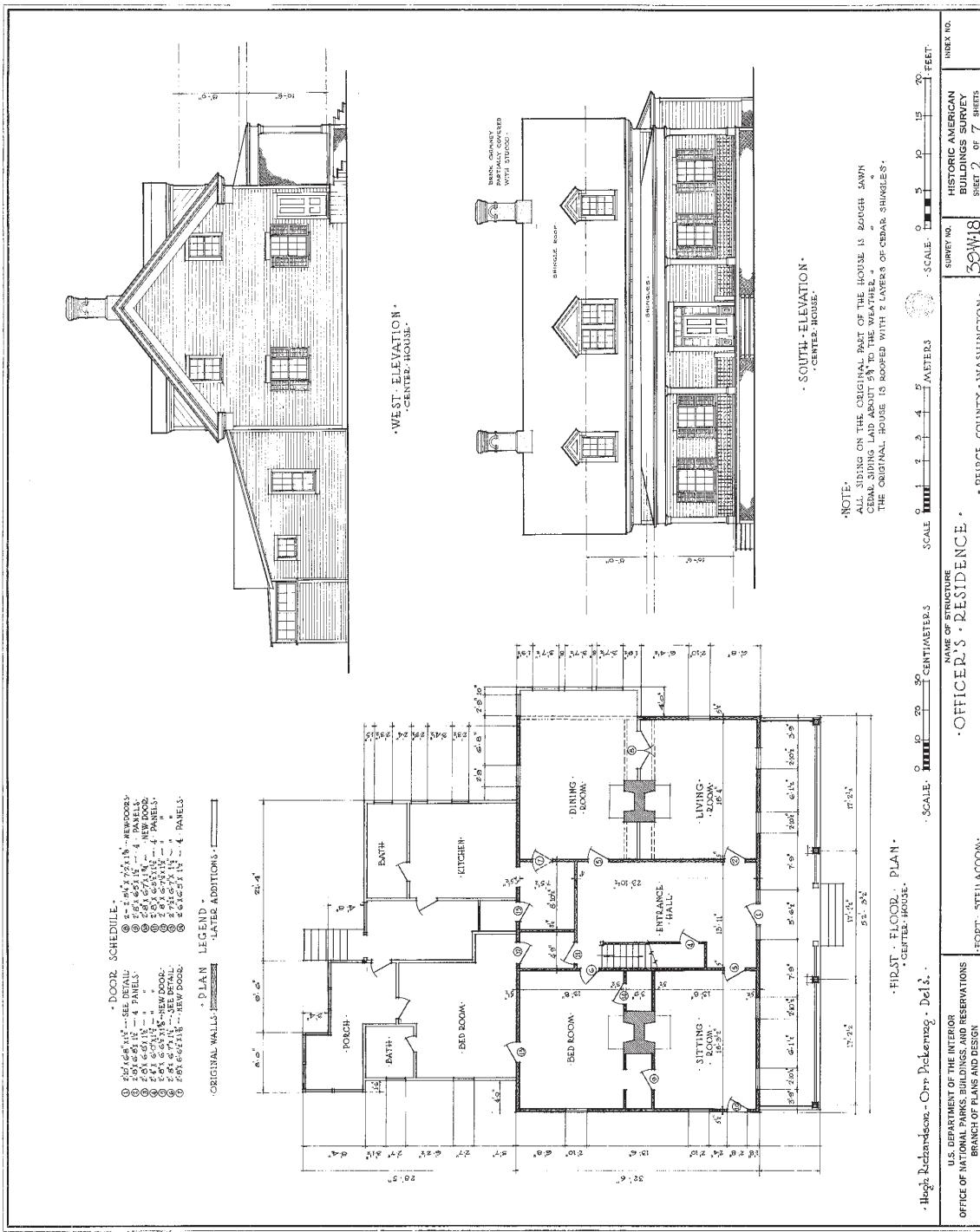


Fig. II-10. HABS Plan and elevation of "Center" officers' quarters from Fort Steilacoom, Washington.

U.S. Department of the Interior, National Park Service, Historic American Building Survey, *Fort Steilacoom: Officer's Residence* (1934) by Hugh Richardson, Orr Pickering, F.C. Stanton, and W.J. Meyer <http://memory.loc.gov/pnp/habshaer/wa/wa0000/wa0083/sheet/00002a.tif> accessed 3/10/2005.



Fig. II-11. 1934 HABS photograph of "Center" officers' quarters (c. 1859) at Fort Steilacoom.

HABS, WASH,27-FOSTEI,1-1

<http://memory.loc.gov/pnp/habshaer/wa/wa0000/wa0083/photos/168650pv.jpg> and
<http://memory.loc.gov/pnp/habshaer/wa/wa0000/wa0083/supp/001.gif> accessed 3/10/2005.

FORT BELLINGHAM

Established in 1856, Fort Bellingham was built to provide settlers protection from raiding Native Americans from the north. Its location near the Fraser River gold fields in nearby British Columbia also played a prominent role in the settlement of the area surrounding Fort Bellingham by both American and some British citizens. Based upon documentary and physical evidence of buildings at American Camp and in Bellingham, the method of building at Fort Bellingham was plank construction. Many of the first buildings at American Camp were built of materials removed from Fort Bellingham. The military unit that established the American military presence on San Juan Island, Company D. of the Ninth Infantry and its commander Captain George E. Pickett, was sent from their previous station at Fort Bellingham, on July 27, 1859. Because of this strong link between Fort Bellingham and the U.S. Army Post on San Juan Island, it can be assumed that the style of furnishings, methods of construction and architectural detailing would be similar in at least some of the buildings.

When Pickett and his company left Fort Bellingham in 1859, one of the blockhouses was disassembled and transported to San Juan Island with them. The

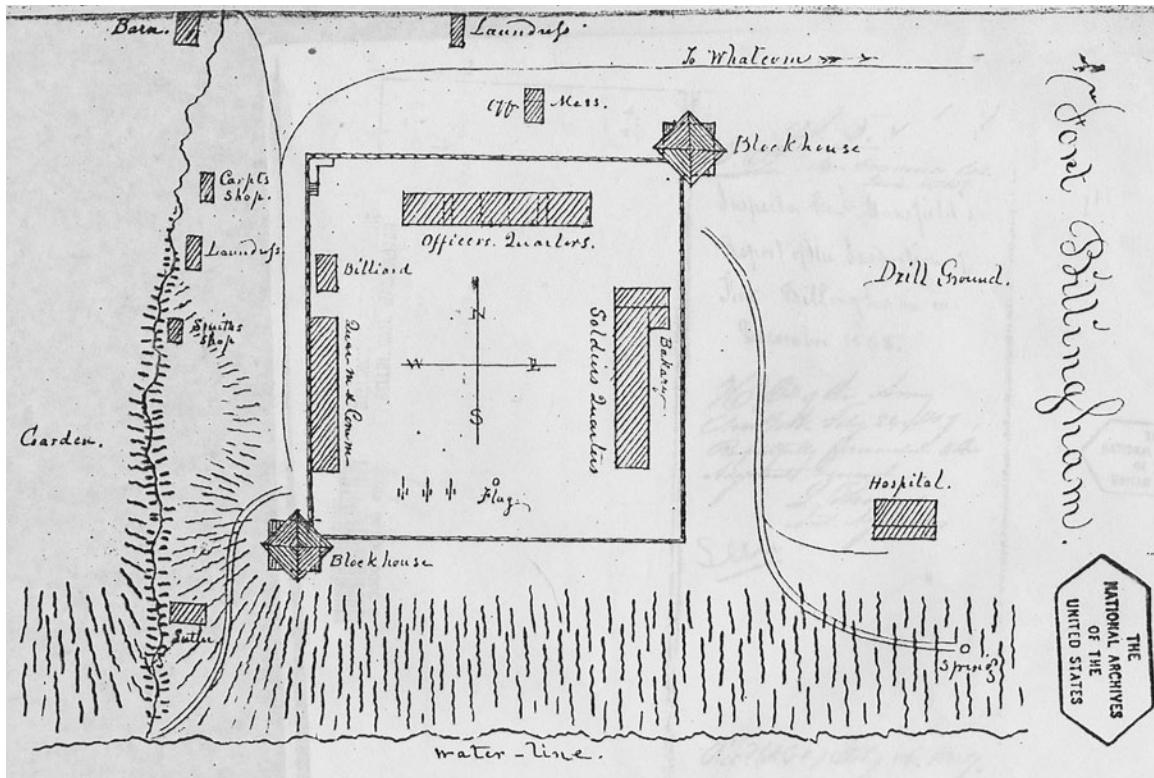


Fig. II-12. Copy of plan from "Inspector General Mansfield's Report of the Inspection of Fort Bellingham in December 1858"

Courtesy of the National Park Service, San Juan Island National Historical Park.

fort itself was surrounded by a square palisade approximately 80 yards on a side with holes cut for firearms. The blockhouses were on opposite corners of the palisade as was standard for the time and had holes in them allowing the firing of mountain howitzers. Within the perimeter of the palisade there were officers' quarters, barracks with attached kitchen, bakery and mess along with storehouses. Inspector General Joseph Mansfield visited the fort in 1858, and noted that the fort had three gates for its palisades and also sketched a plan of the fort at that time. Figure II-12, a sketch plan of the compound by Mansfield, shows three major buildings and one small building within the perimeter of the palisade, excluding the two blockhouses. To the exterior of the palisades are other buildings; they include the laundress quarters, barn, carpenter's shop, smith shop, hospital and sutler's quarters. Mansfield also noted that all of the buildings with exception of the guardhouses were single story. He further noted that the officers' quarters were "framed".¹¹

An earlier plan for the fort was enclosed in a report sent by Captain Pickett to the Department of the Pacific San Francisco headquarters in August of 1857, showing all of the buildings in more detail. This earlier set of plans clearly shows the similarity between the officers' quarters and HS-11: Figures II-13 and II-14. Mansfield's plan shows the two sets of officers' quarters as conjoined by a room, while the plan of August 1857 submitted by Pickett in his report shows open space between the two sets of officer's quarters.

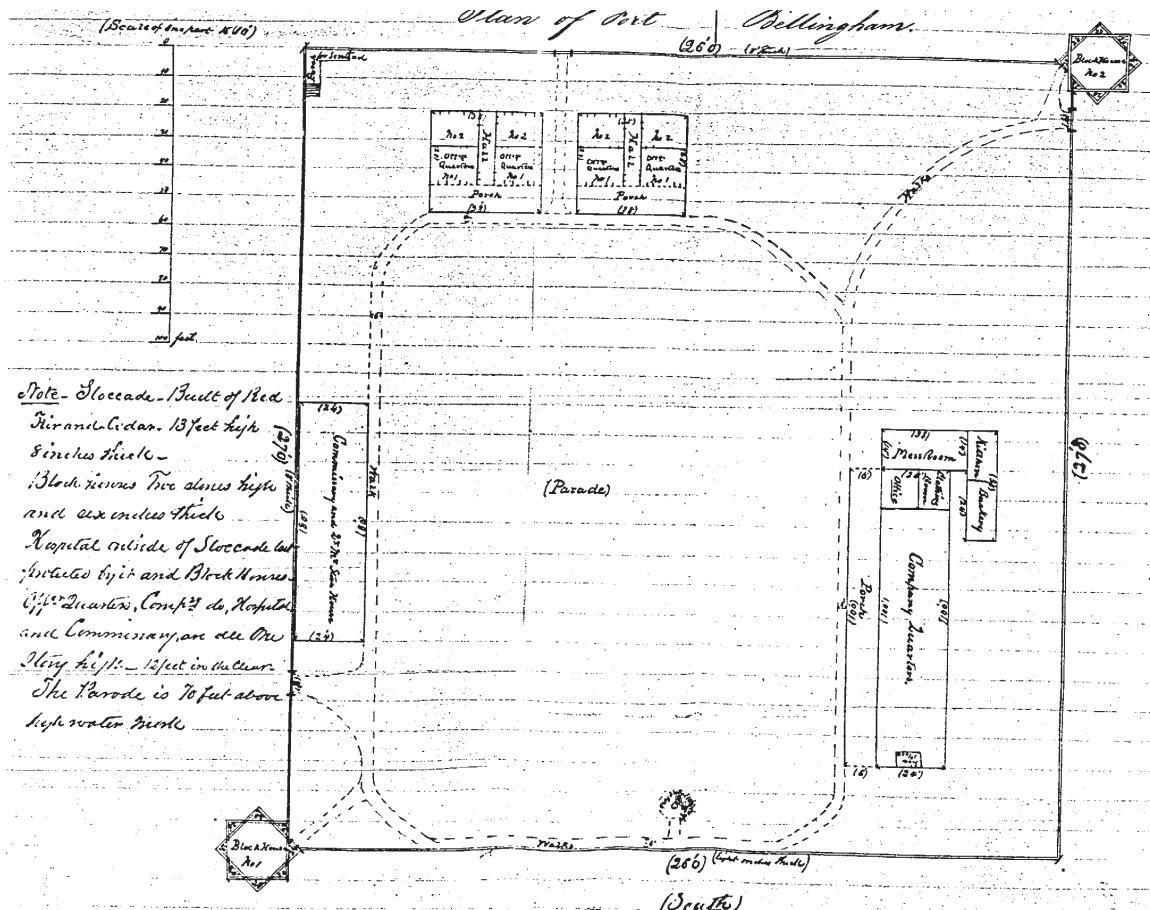


Fig. II-13. Copy of plan dated August 1, 1857 sent by Captain George E. Pickett to the Department of the Pacific.

Courtesy of the National Park Service, San Juan Island National Historical Park.

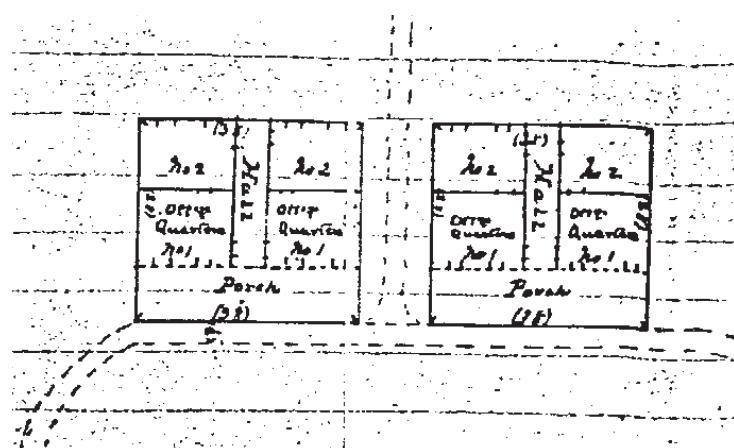


Fig. II-14. Enlargement of the officers' quarters from the above plan.

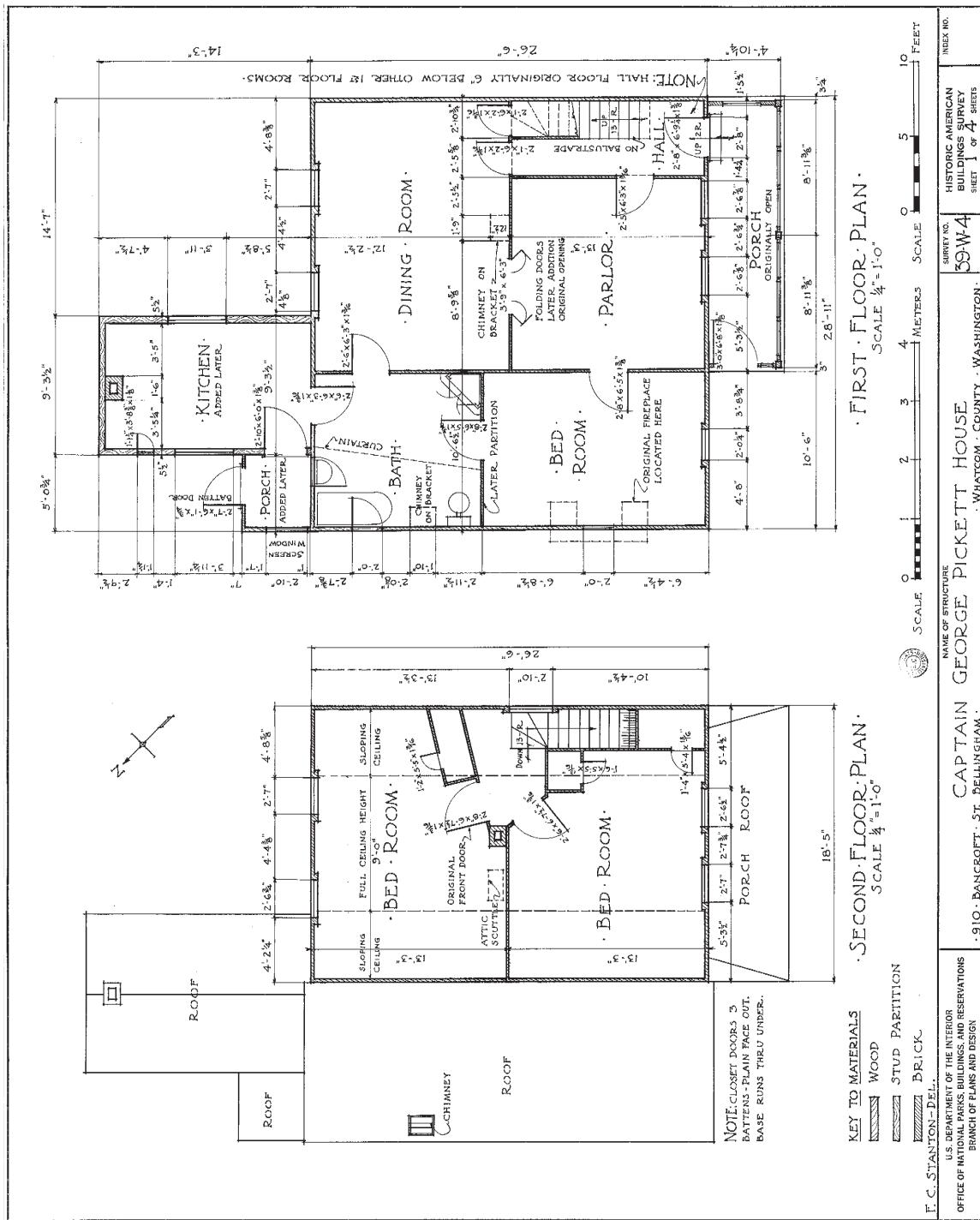


Fig. II-15. HABS Plan of Pickett residence at Fort Bellingham.

U.S. Department of the Interior, National Park Service, Historic American Building Survey, *Captain George E. Picket House* (1934) by W.J. Meyer and F.C. Stanton.
<http://memory.loc.gov/pnp/habshaer/wa/wa0100/wa0121/sheet/00001a.tif> accessed 3/10/2005.



Fig. II-16. HABS photograph of front of Pickett residence (c.1858) at Fort Bellingham dated March 1934.

HABS, WASH,37-BEL,2-1;

<http://memory.loc.gov/pnp/habshaer/wa/wa0100/wa0121/photos/169188pv.jpg>.



Fig. II-17. HABS photograph of (c.1858) Pickett residence's back at Fort Bellingham dated March 1934.

HABS, WASH,37-BEL,2-2; <http://memory.loc.gov/pnp/habshaer/wa/wa0100/wa0121/photos/169189pv.jpg>

The officers' quarters at American Camp and Fort Bellingham were similar to each other in plan. The August 1857 plan of Fort Bellingham is of more use in understanding HS-11, as rooms within the buildings are clearly delineated, though the officers' quarters are oriented towards the parade grounds on their south elevation, instead of the north as at American Camp. According to this plan, the officers' quarters had windows facing toward and away from the parade ground and had four rooms positioned around a central hall. The building itself is shown as enclosing a space of approximately 25 by 37 feet, with the long side oriented toward the parade ground. In addition, the rooms on the north side of HS-11 are marked "no. 1" and the rooms that would be roughly equivalent to the south side of HS-11 are marked "no. 2". Rooms marked "no. 1" are approximately 13' by 17', while those designated "no. 2" are approximately 11 by 17 feet: Figure II-13.¹²

The only building remaining related to Fort Bellingham is Captain Pickett's residence. This building was a private residence adjacent to the fort. Based upon HABS drawings from 1934 it was evidently of plank frame construction, though it differs in both plan and section from HS-11. It is a gable-end, side-hall passage house form common during the Greek Revival era. Note the pedimented window hood moldings. The shed roof side addition provided bedroom and bath accommodations on the first floor: Figures II-15 through 17.¹³

DIVERSITY IN MILITARY DESIGN

The previous building examples from the Fort Vancouver Barracks, Fort Steilacoom and Fort Bellingham demonstrate that military buildings of the era in which American Camp was developed were constructed without adherence to standardized plans and specifications. This resulted in a wide variation of the plans and materials employed in the construction of buildings at these posts during this era. This phenomenon is also documented by A.K. Hoagland in her book, *Army Architecture in the West*. Planning strategies, like the double pile plan, were carried out in many different construction methods and materials during this era. This was due to exigent needs and the fact that local resources were preferred to fill those needs in an era when long distance transportation of building materials was often impractical.

Though there are model plans dating from the 1860s produced by the office of Quartermaster General Montgomery C. Meigs for post commanders and quartermasters, standardized plans common to modern military architecture would not be fully adopted by the army until several decades later. These model plans were often "adapted, not adopted"¹⁴ by post and departmental quartermasters. The development of standardized military architecture was coupled with advances in transportation in the decades after the Civil War, freeing the far-flung military posts in the West from dependence upon the expediency of local materials. Other forces came into play as well: The requirement of Congress that military construction be contracted to civilians resulted in plans and specifications being issued by the Quartermaster General's office and inadequate staff at the local post often issued inadequate construction documents. New heating and plumbing technology also had an effect in this equation, requiring more expertise on

the part of the designer and builder. The standardized plans were also more likely to be built due to a major change in the institutional culture of the army. The last barrier to overcome for the implementation of standardized designs was largely that of institutional culture. Buildings that were not residential, including hospitals and guardhouses, were easily implemented with standardized designs; those that were residential, including barracks and officers' quarters, were among the last to implement standardized designs. Both officers and enlisted men resisted ceding further control of their residences to the Quartermaster General's office. The standardization of military architecture and centralization in terms of plans, materials and techniques would not be completely accomplished until the "professional" army of the 1890s.¹⁵

Interior finishes were often not only a matter of taste by the officer and quartermaster, but also were influenced by economy and availability of material and labor. U.S Army posts in the West, during the period of its occupation at American Camp, often used materials that were easily accessible for the bulk of their construction. This accessibility came in two forms: (1) Building materials could be obtained locally with a minimum effort. (2) Transportation was such that material could be transported relatively efficiently to the post. In the case of the American Camp site, its proximity to the water undoubtedly provided for relatively efficient transportation of building materials.¹⁶

Prior to the 1890s the culture of the Army allowed for department, division and post commanders and, to a lesser extent, their contemporary quartermaster personnel to have large sway in the architectural representation of the particular posts for which they were responsible. This allowed for both siting and the design at posts to be poorly considered in some examples, with various resource and tactical considerations either ignored or else considered out of proportion to other important factors in siting an Army post. Many military officers had little experience, training or skill in siting and designing permanent installations. For example, one issue especially noticeable in the siting of American Camp was the compromise in terms of the post's water supply. It was the third and final site used by the U.S. Army on the island. Here, the issue of water supply was a concern. Water had to be transported from a spring used at the second site chosen for the U.S. Army encampment on the island. This action was in contrast to placing the post more adjacent to the water supply, making this life giving resource more easily available to the occupants of the installation. However, in many cases the vast architectural discretion given to field and line officers resulted in a degree of experimentation that the Army has not seen in its architecture since the 1890s.¹⁷

OFFICERS' QUARTERS AT AMERICAN CAMP

These buildings are remnants of a joint occupation of San Juan Island by the U.S. Army and the British Royal Marines from 1859 to 1872, and singly by the U.S. Army from 1872 to 1874. The English Camp is located on the north end of the island while American camp is located on the south end of the island: see Figure II-1. This occupation was due to a dispute in the boundary between Great Britain and the United States with the island being the disputed territory. Detachments of American forces stayed on at what

is currently referred to as American Camp and occupied English Camp until 1874, two years after the British had departed. Buildings at American Camp numbered 35 buildings not including privies.¹⁸

Historically, American Camp is representative of the architectural diversity found in military architecture in the West through the late Nineteenth Century. Buildings used many different construction methods within the camp including various wood framing methods. HS-5, a laundress quarters, was built of an undefined “log” construction technique while HS-6 and HS-7, also laundress’ quarters, were of plank construction. HS-9, an officers’ quarters of closely fitted hewn logs was contemporaneous with HS-11, which was of plank frame construction. This diversity in construction had as much to do with the local supply of materials and labor. In the case of American Camp both were plentiful. But, there was always a frugality and expediency on the part of the military where “temporary” buildings were concerned. What was initially supposed to be an encampment of a couple years turned into a post that would exist for over a decade and the impermanent buildings were not designed to endure the extremely exposed conditions of the camp.

As the historical photographs depict the camp, one aspect of uniformity was the quarters along officers’ row which were similar in scale and in their architectural treatment: Figures II-18 and 19.¹⁹ HS-11 itself was of plank construction. It is reported as being battened on the interior before 1867 and may have been plastered afterwards. Evidence of battens on the interior can still be found in its central hall. They were whitewashed to aid in greater illumination with limited light sources and, no doubt, to add an element of cleanliness. The battens may have been put in place to keep out the weather as much as to improve the interior aesthetics. The weather was no trivial matter at American Camp where the buildings were in a very exposed location. The site is directly exposed to marine weather, sitting between the Strait of Juan de Fuca on south and Griffin Bay to the northeast. In general, officers’ quarter’s interiors in the U.S. Army were finished with planed boards or plaster, and then covered with whitewash or wall paper. The rudimentary handling of the initial interior finish on HS-11 speaks to the temporary nature of the quarters as conceived by the original builders.²⁰

FURNISHINGS

Furnishings of the era, like the buildings, were often of whatever materials were available. They could have been brought from the East, manufactured by civilian or military carpenters, or scavenged from materials present at the post. Officers were only allowed 1,000 pounds freight which the Army would transport from post to post as their assignments changed. This tended to limit what officers and their wives would take with them, including furniture. Furniture was often homemade or of very light construction. Folding camp chairs were often the seat of choice, due to the fact that they packed up easily. Packing crates with the addition of cloth could be transformed into furniture for holding washbasins and the like. Army blankets, sewn together in groups of four, were often used for rugs. In the quarters usually a wooden chair and table were provided along with a stove. The rest was provided by the officer and his family. Most of the furnishings

¹⁰ U.S. Department of the Interior, National Park Service, Historic American Building Survey, *Fort Steilacoom: Officer's Residence* (1934) by Hugh Richardson, Orr Pickering, F.C. Stanton, and W.J. Meyer <http://memory.loc.gov/pnp/habshaer/wa/wa0000/wa0083/sheet/00002a.tif> accessed 3/10/2005.

¹¹ "Inspector General Mansfield's Report of the Inspection of Fort Bellingham in December 1858," Bellingham Public Library, #33600001964079 and National Park Service, San Juan Island National Historical Park; Janet Oakley, "Captain George Pickett begins construction of Fort Bellingham on August 26, 1856," *HistoryLink.org: The Online Encyclopedia of Washington State History* (Seattle, 2004), http://www.historylink.org/essays/output.cfm?file_id=7098, accessed 3/10/2005

¹² "Inspector General Mansfield's Report of the Inspection of Fort Bellingham in December 1858"; "Plan of Fort Bellingham", August 1, 1857. Both this item and the Mansfield's Report are courtesy of the National Park Service, San Juan Island National Historical Park. The second items enclosure reads: "Fort Bellingham, W.T. Aug. 1st, 1857. P.16, G.E. Pickett, Capt. Of (illegible: "Fort" or "Post"?), Forwards plan of (illegible: "post") as completed (illegible), Enclosure. Received Dept of Pacific August 25, 1857".

¹³ U.S. Department of the Interior, National Park Service, Historic American Building Survey, *Captain George E. Picket House* (1934) by W.J. Meyer and F.C. Stanton, <http://memory.loc.gov/pnp/habshaer/wa/wa0100/wa0121/sheet/00001a.tif> accessed 3/10/2005.

¹⁴ Alison K. Hoagland, *Army Architecture in the West*, 10.

¹⁵ Hoagland, 10, 18, 41-44, 170-71.

¹⁶ Hoagland, 67.

¹⁷ Alison K. Hoagland, *Army Architecture in the West*, 9-10, 72-74: New materials such as adobe were experimented with in the case of Fort Laramie by the American Army to deal with the shortage of lumber and skilled labor often present in the West; Thompson, *Historic Resource Study*, 160-61.

¹⁸ Thompson, 148-65, 196; Department of the Interior, National Park Service, Denver Service Center, *Historic Structure Report: Officers' Quarters HS-11, Laundress Quarters HS-6, and English Camp Hospital HS-18*, (1977) by Harold A. LaFleur, 13; Cannon, *Administrative History*, Chapter 3.

¹⁹ Thompson, *Historic Resource Study*, 150 -152; Hoagland, *Army Architecture in the West*, 5.

²⁰ Thompson, *Historic Resource Study*, 141; Hoagland, *Army Architecture in the West*, 179.

²¹ Hoagland, *Army Architecture in the West*, 175-77.

CHAPTER 3: PREVIOUS RESTORATION OF HS-11

OVERVIEW

ESTABLISHMENT OF SAN JUAN ISLAND NATIONAL HISTORICAL PARK

WASHINGTON STATE PARKS ACQUISITION OF PROPERTY: After the military left the site of what is currently referred to as American Camp on San Juan Island in 1874, the site served agricultural purposes for a series of homesteaders in the area who divided up the land left over from the military reservation. Robert Firth was a former manager of the Hudson's Bay Company's (HBC) Bellevue Farm whose family was among the first civilian residents of the building currently referred to as the Officers' Quarters (HS-11). The property was later sold to the McRae family (c.1903) who also used the site for agricultural purposes.¹

During the early twentieth century, there was public interest in the historic value of the site. In 1904, markers were placed at both English and American Camps; this commemorative act was attended by regional and military notables and was the first public recognition of the historical importance of these sites on San Juan Island. It was not until after World War II that the governments of the State of Washington and United States showed interest and provided the means to conserve the site. In 1951, Washington State Parks acquired five acres of the McRae Family's property including the redoubt.² This core piece of property was incorporated into larger acquisitions of property with authorization for the creation of San Juan Island National Historical Park in 1966.³

LITERATURE SEARCH: MANAGEMENT PLAN AND HISTORIC RESOURCE REPORT

MANAGEMENT PLAN: Following the passage of the 1966 legislation, which enabled the creation of the park, the National Park Service developed the *Master Plan of 1967*. This was done under the auspices of the Western Office of Design and Construction, San Francisco and the Western Regional Offices. The Pacific Northwest Regional Office in Seattle was established in 1969 and assumed the regional office responsibility for San Juan Island National Historical Park (SAJH) from that time onward until replaced by the creation of the merged Pacific West Regional Office in 1995. The regional office and the Denver Service Center would continue to provide most of the guidance of the Park's initial development as defined by its master planning document.

The *Master Plan of 1967* offers basic information about the site(s) of the proposed park and the challenges of developing and managing the park. The goals this plan laid out for the National Park Service included the following:

- Develop a program of restoration and stabilization at both camps to preserve the historic settings.
- Develop necessary facilities for the interpretation of the historic story.
- Develop a program to maintain and protect the historical scene and structures.
- Utilize the recreational opportunity of the park, where consistent with the park's mission.
- Encourage the preservation of histories and artifacts of the San Juan Islands.
- In addition, the plan also provided statements concerning the scope of collections, interpretive and architectural themes.⁴

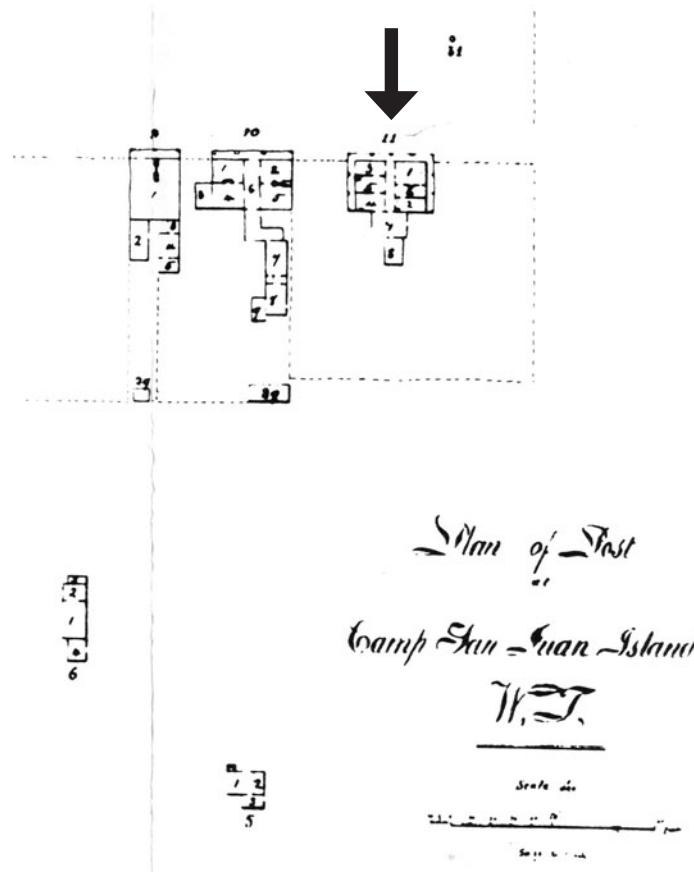


Fig. III-1. Excerpt of "Plan of Post at Camp San Juan (American Camp), W.T." by Major Nathaniel Michler, C.E., 1874.

HS-11 is the eastern-most building depicted along the row of officers' quarters roughly center to the plan excerpt (see arrow). HS-6 is the leftmost building to the south of officers' quarter. The plan correlates well with historical photographs; however, both LaFleur and this report find the accuracy of many of the details suspect. In LaFleur, *Historic Structures Report*, 11-12, 82-83.

HISTORIC RESOURCE REPORT: The *Historic Resource Report* written by Erwin Thompson in 1972 was an intensive survey of both the history of the park sites and the buildings contained within it. It was among the initial steps to further the mission of the park as defined by the 1967 Master Plan. The *Historic Resource Report* developed the historical basis for preservation and interpretation of the related sites on the island. Its focus was on the incidents surrounding the historical joint occupation and administration of San Juan Island by the U.S. Army and the British Marines. Much of the primary historical evidence used in subsequent reports about features of the park comes from this report.⁵

The report is thorough in its collection of a variety of resources ranging from various archives in both the United States and Canada, including those of a local and national scale. It includes Major Nathaniel Micheler, C.E.'s plan of the camp, delineated right before the Army relinquished control of the camp in 1874, and documentation about the residents of various buildings in 1867, including construction and repairs carried out by the Army at this time.⁶

DEVELOPMENT OF THE RESTORATION PLAN

HISTORIC STRUCTURES REPORT: Harold A. LaFleur carried out investigations for the *Historic Structures Report* between 1975-1978. The report consisted of information about both the American and English Camp Sites, including the Officers' Quarters (HS-11), Laundress Quarter's (HS-6) and the English Camp Hospital (HS-18). The report used documentary and physical evidence, most of which was derived from the *Historic Resource Study*. It also included evidence in the form of photographs and measured drawings produced by Harold A. LaFleur in combination with conclusions supported by several University of Idaho Archaeological Field Schools led by Dr. Roderick Sprague.

EVIDENCE FOR EXTERIOR RESTORATION

With regard to HS-11, LaFleur documented the structure as he found it. At that point the building was more or less as the McRae's had left it from their c.1925 alterations to some time after 1951.⁷ This includes evidence of the hand-hewn sills delineating the original extent of the enclosed structure, along with plank framed walls following the sills. In some cases exterior walls, 2x4 in dimension, provided enclosed space outside these original walls as documented by LaFleur. Finally, the 3" x 6" ceiling joists and rafters placed 3' or 4' on center (as found by LaFleur in this original part of the house) all pointed to the "first build" configuration of the house.

In addition to this evidence, it appears that LaFleur relied on earlier photographs and archaeological evidence of hearth footings documented by Roderick Sprague and his University of Idaho archeological field schools. The hearths were at the time of his investigation no longer extant. Hearths were reconstructed based on the size of the footings and the chimneys were based upon photos and on the patches in the ceiling and roof sheathing. The two most important series of photographs date from the late 1860s

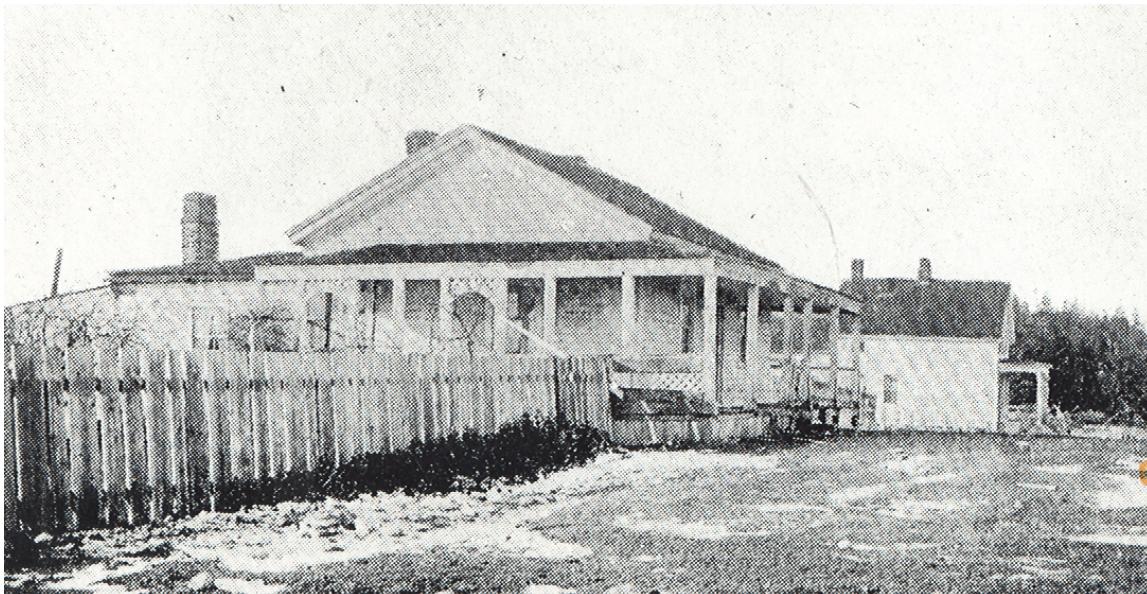


Fig. III-2. Officers' Row with HS-11 in the foreground and HS-8 in the background. Two buildings in-between had disappeared by the time of the photograph. This photograph shows the northeast corner of HS-11 some time before 1903.

Copy courtesy of National Park Service, San Juan Island National Historical Park. It may be found in Thompson's *Historic Resource Report*, Illustration & Map #7. The photograph originally appeared in an article entitled "San Juan County, Washington, San Juan, Orcas and Lopez Isles," in *Wilhelm's Magazine, The Coast*, vol. 6, (Sept. 1903) on page 92. Thompson found the photograph in the Pacific Northwest Collection at the University of Washington Library in Seattle.



Fig. III-3. Southwest corner of HS-11. The date of the photo is unknown and the westward expansion of the rear addition (flush with the main building and chimney) was not recorded in historic documents from the military period. The rear addition is likely a kitchen and/or dining space.

In Thompson's *Historic Resource Report*, Illustration & Map #8. Thompson also found this photograph in the Pacific Northwest Collection at the University of Washington Library in Seattle. Courtesy of the National Park Service, San Juan Island National Historical Park.

or early 1870s and before 1903 during the civilian period of the building. Figure II-18 is dated by Thompson at some point in the late 1860s or early 1870s. The view of the camp is from the redoubt; under close examination provides evidence of HS-11's chimney and porch configuration. Figure III-1, an excerpt from Micheler's plan of the camp, indicates that there were attached rooms to the rear. Figures III-2 and 3, photographs from the 1874 to 1903 period, offer evidence of the probable original roofing, siding, window, porch configuration and a partial east elevation of the remaining building along with the attached rooms (kitchen / dining area).⁸

In addition, there was some other less reliable documentation of the exterior including a painting made by an unnamed amateur artist during the period of occupation, using a similar vantage point on or near the redoubt as seen in Figure II-18. It can be found as "Figure 3" in the section titled "Maps and Illustrations" in Thompson's *Historic Resource Study* ("Camp San Juan Island," Provincial Archives, Victoria British Columbia, #12717). It crudely depicted the site of American Camp and the layout of the buildings contained within it. Its accuracy is suspect, other than its ability to communicate the atmosphere of the camp during occupation.

EVIDENCE FOR INTERIOR RESTORATION

Evidence for the interior restoration in LaFleur's report was derived primarily from the building itself and contemporaneous officers' quarters from throughout the country which had similar floor plans. In addition, Major Micheler's plan of the camp delineates the interior rooms of the various remaining buildings present at the camp during 1874 as shown in Figure III-1. The accuracy of the plans is suspect due to the scale at which they are drawn. Documentation uncovered by Erwin Thompson (while researching the *Historic Resource Study* for the Park) reveals requisitions for lime, white lead and brushes during the period of 1867 to 1870 in official correspondence from the fort. The correspondence also details the state of the building repair at the post and the number of residents each had at this time.

Page 3 of Appendix III depicts the plan of the building as it was found by Harold A. LaFleur, the author of the *Historic Structures Report* regarding this building. The physical evidence found at the time of his investigation included aligned butt joints in the flooring that dead ended into the historic hearth locations in the south rooms of the building. This pattern in the flooring joints was not present in the hallway. Page 1 of Appendix III depicts the current plan of the building with locations of nail tracks in the floor boards and other annotation of evidence supporting a different spatial arrangement than the current configuration. In addition, evidence of historic finishes was found in the walls including evidence of reused planks with shadows of the battens in the whitewash facing towards the interior. In Room 2, there was a paint shadow on the floor that appeared to indicate a former wall location. Room 1 had horsehair plaster on the wall possibly indicative of the military period. Requisitions for plaster were noted in the period around 1867 for the camp. Photographs of many of these features can be found in "Chapter 5: Physical Investigation".

ROOM BY ROOM DESCRIPTION: The following descriptions are of the currently remaining rooms in HS-11 as found by LaFleur in 1975. The descriptions use both systems of room designation as outlined by LaFleur in the HSR and attached drawings. The plan shown on page I of Appendix III gives an overview of the numbering system and annotates major features of its current configuration.⁹

ROOM 1 (E2): The finish flooring consists of a second layer of flooring, 1 x 6 in dimension, over a primary layer of rough lumber. The base molding was added to the walls over the lath and plaster wall finish. The exception is the south wall, common with Room 2, which is surfaced in 1 x 8 lapped boards and covered with 3/32 inch heavy paper approximately three feet wide. All of the walls were covered with wallpaper and a wallpaper border at the top. The ceiling, like the walls, consists of plaster.

ROOM 2 (E5): The flooring in this room gives some of the most tantalizing clues about the previous spatial configuration. LaFleur writes:

The most important feature of Room E5 is 52-1/4 by 50-1/2 inch patched area in the wood flooring that is directly above the Fireplace Footing No. 1 in the crawl space. The room's floorboards are one-by-six tongue and groove and extend north-south. The patched area is the same, but the boards are not in line with the original floor and are butt jointed at the ends of the area. Also there is no subfloor below the patch.

The flooring is similar to that found in Room 1 with the exception that the room had a line of aligned butt joints in the 1 x 6 flooring, extending from east to west, approximately 3 feet from the north wall. He also noted a paint shadow in the floor following the butt joint on the east side of the “patched area” that was 5 -3/4 inches wide. At a dimension of 2-1/2 to 3-1/2 inches, the paint shadow continued west over the patched area and adjoining flooring, stopping short of the west wall. LaFleur suggested that there may have been a door adjoining the two rooms where the paint shadow stopped. This “patched area” was removed and the hearth was later reconstructed by the NPS as part of their 1978 restoration. The wood floor was covered in loosely laid linoleum over newspapers that were dated 1925. The base molding is applied over the linoleum, and is 3/4 inch by 5-1/2 inches with 1/2 inch square mold on the floor whose projecting corner is eased. The walls and ceiling are finished with Beaver Board (probably from the 1920s) with wood battens placed four feet on center. The wall in common with the McRae era bathroom [Room 5 (E6)] was moved to allow for this change in spatial arrangement.¹⁰

ROOM 3 (E7): The flooring system is the same as in the previous two rooms, with a secondary layer of 1 x 6 tongue and groove boards extending north to south over a rough sawn lumber primary floor approximately 1 inch thick. This floor and the board and batten finish on the interior were likely the original finishes for the building. Similar to Room 2, there was a patch in the secondary flooring as LaFleur writes:

A patch extending into Room E8 occurs at the wood floor over Fireplace Footing No. 2. The portion in Room E7 measures 4 feet 7 inches wide and extends 1 foot

2-1/4 inches out of the south wall that crosses the patched area. The total length of this patched area in both rooms is 6 feet 4-3/4 inches north-south. The floor of Room E7 is composed of one-by-six tongue and groove extending north-south. The boards filling the patched area are a mixture of one-by-six and one-by-four tongue and groove oriented in the same direction.¹¹

LaFleur determined the patch corresponded to the foundation of a double fireplace and chimney; the fireplaces have since been reconstructed as part of the exterior restoration. The entire floor surface was covered in two layers of linoleum. The walls and the ceiling are finished with paper wallboard with wood battens over the joints similar to the finish found in Room 2 and finished in flat paint. Underneath this finish is a layer of heavy treated paper which overlays wallpaper that had been applied to the whitewashed vertical wall planks. There are vertical stripes of unfinished areas, 3 to 3-1/2 inches in width, between vertical stripes of wallpaper and whitewash finish on the vertical planks of the original build: Figure V-10. LaFleur hypothesizes that this feature indicates that there were battens applied to the joints of the planks which were later removed for the application of the wallboard. This conjecture is the most probable.¹²

ROOM 4 (E8): The flooring in this room is similar to the other rooms examined, with a second layer of 1 x 6 wood flooring placed over the primary layer. There is a continuation of the patch in the 1 x 6 flooring from Room 3 and an aligned butt joint in the flooring similar to the one in Room 2, also interrupted by the patched area. A suspended masonry chimney was hung on the wall just above the floor patch and attached to a stovepipe from a wood or coal burning stove on the floor just above the patch. The room was covered with three layers of loosely laid linoleum over a 3/16 inch heavy paperboard underlay. The walls and ceiling are finished with Beaver Board whose joints are covered by wood battens and painted. There were also wood cabinets on the east wall dated by LaFleur from the 1920s or 1930s. The original rear wall of this room was removed to extend it to the south: Appendix III-3

ROOM 5 (E4): The floor is constructed of wood similar to Room 1 with the second layer of flooring strips running north to south over a primary layer of flooring. Flooring near the north wall is made of planks 3-1/4 inches wide. The baseboard is 1-1/8 inches thick by 8-1/2 inches high with ogee molding on the top inch. At the top of the wall is ceiling molding 2-1/2 inches wide by 3-1/2 inches thick. Battens 1/2 to 5/8 inches in thickness by 3-3/4 inches cover the joints in the vertical planks that form the walls in this room. The as-built drawings completed after the restoration note a trap door near the north end of this room in the original layer of flooring.

ROOM 5 (E6): This room was once part of the greater space of Room 5 leading to a rear entry, but was converted to a bathroom. Flooring consists of 1 x 6 tongue and groove boards running north and south. The floor has nail holes and stains, which (according to LaFleur) indicated that the east wall of Room 5 (E4) once continued across this room. The floor was covered, wall to wall, with loosely laid linoleum over newspaper dating from 1925. At the same point the ceiling molding is mitered and spliced joining molding sections of slightly different profiles. Its base molding matches that of Room 1 (E2). Part of its cornice molding matches that found in Room 5 (E4).

The wall is finished with board and batten siding, much like the adjoining area of Room 5. LaFleur found the south wall with a three-light hopper window for ventilation. In the south wall, a patch was observed, the top of which was 83 inches above the floor and 3 feet wide. In addition, there was a 2-1/2 inch wide mark and stain in the paint around the top side of the patch; LaFleur attributed these markings to trim. Finally, there were bathroom fixtures including an enameled cast-iron bath tub with "chicken claw" feet. The fixtures appear to date from the 1920s or 1930s. These fixtures were removed and a door reinstalled in the location of the patch.

MAJOR RESTORATION CHANGES: Rooms E1, E3, E9 and part of E8 were additive elements to the exterior of the structure during post-military occupation of the structure after 1912 and were removed as part of the exterior restoration in c.1978; see page 3 of Appendix III. Rooms 7 and 8 were proposed as reconstructed elements of the 1978 exterior restoration, but these were never built due to the amount of conjecture necessary to reconstruct these rooms. Evidence for these two rooms exists in Micheler's plan from 1874, Figure III-1, as well as evidence provided in historic photographs, Figures III-2 and III-3 in this study. Figure III-4 shows the building as it looked from the south in 1912. At some point between 1903 and 1912, rooms 7 and 8 were removed

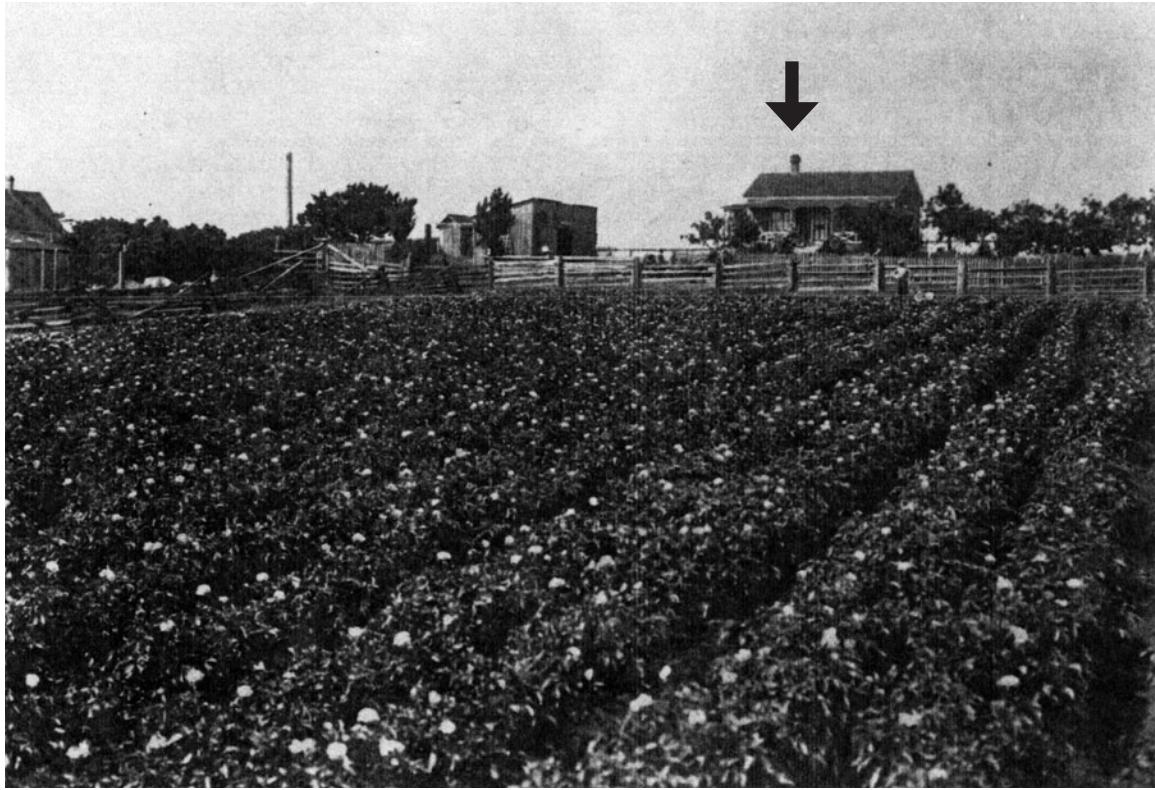


Fig. III-4, above. This photograph, dated June 16, 1912 is of the McRae House / HS-11's southern elevation. Note that Rooms 7 and 8 are missing in this photograph. They were present in the c. 1903 photograph. Here, a south facing porch has been added. Also, note the presence of a single, thinner chimney flue to the west. (see arrow). The fields in the foreground were related to the McRae House / HS-11.

from the southern elevation of the building and a porch added. This change may have been the result of the McRae's modernizing the farmhouse with cast-iron stoves in lieu of hearths.¹³

PLASTER, MORTAR AND LIME: Evidence for the plaster and mortar compositions of the interior comes from laboratory analysis of American military buildings contemporaneous with HS-11 on the island. Plaster from the Laundress' Quarters, HS-6, was included in the lime product analysis of the site by Richie, Stewart and Sprague as part of Sprague's Archaeological Field School offered at the camp during the 1970s. Richie et al are not explicit about which techniques they and the Parks Canada laboratory used for the analysis of the plaster samples. The tables of results for the mortar samples make reference to x-ray diffraction. The table relating to plasters found at the site makes reference to calcium carbonate, gypsum, magnesium and organic contents. Commonly chopped horse, or other animal hair, was used as a binder for lime plaster during the 1860s and long afterwards. Lime contained in the samples from American Camp was thought to have come from San Juan Island. No other source of lime could be found on the West Coast with the purity of the lime found in the mortar, plaster and lime samples according to Richie et al. The plaster formulation was found to include both lime and plaster of paris for smoothness. The plaster could have been added to the building during or after military occupation. We do not know about the regional availability of plaster of paris (gypsum) in the area prior to the 1869 transcontinental railroad. All evidence of plaster composition is directly related to plaster samples from the Laundress' Quarters.

The composition of mortars at the camp in the research by Richie, Stewart and Sprague is more definitive. The investigation of various existing foundations from buildings constructed during the era of military occupation shows the formula for mortar during this period was 1: 3.5 lime to sand ratio. Ideally the quicklime would have been slaked, and then sand would have been mixed into it afterwards. There was no presence of portland cement or other products that would have made the mortar hydraulic.¹⁴

INTENDED DATE OF RESTORATION: The best estimate on the intended date of restoration is based upon the two following issues: First that it was carried out for the purpose of representing HS-11 when the U.S. Army occupied the site and, second, that the restoration of the exterior could be dated based upon the photographic evidence of the building from the time of occupation and 30 years thereafter. The absence of the attached southern rooms referred to as Rooms 7 and 8 in Appendix III-13, LaFleur's restoration plans, make it difficult to consider a date after the late 1860s. However, if one considers just the basic part of the building as outlined by LaFleur, the building can be considered complete as it was initially built. The building mass most closely resembles its probable configuration in 1859- 1860 during the initial occupation. It appears odd, however, that there were no windows on the south elevation of the restoration or stairs for the door to the central hall. If any evidence existed for windows in the southern elevation, a large portion of it disappeared with the extension of Room 4 to the south as part of the

additions made between 1912 and 1925 and the insertion of more modern windows into the south wall of Room 2 during the same period. These areas were replaced with new structural planks during the restoration as evidenced by their lighter color and finer grain. No firm date exists as to when the attached rooms were added, which may have been preceded by windows in the south elevation. This could have happened as soon as 1859 and as late as 1870. It is recommended that the existence of these southern windows somehow be acknowledged both on the interior and exterior of HS-11.

RESTORATION PLAN AS EXECUTED

DESCRIPTION OF THE RESTORATION BASED UPON AS BUILTS: The McRae residence, as it was found by LaFleur in 1978, had several additions in the Bungalow style dating from the early Twentieth Century, see Appendix III-3. They include enclosed additions on the north and east. To the north, there was a bedroom addition with its own entrance to the exterior. On the south side, there was an addition and an extension of Room 4 flush with the new porch. To the west a porch with an outdoor closet extended from the building. During the restoration, these additions were removed as part of the demolition phase of the project. Major exterior restoration included the reintroduction of wall fabric on the South Elevation that was removed between 1912 and 1925. As stated in the previous paragraph, Rooms 2 and 4 were most affected by the replacement of the plank walls along their southern boundary.

CONSTRUCTION RECORDS OTHER THAN AS BUILTS: So far the only record of the restoration of HS-11 has been the amended drawings, set 25,000A, the LaFleur drawings of HS-11, revised after the restoration by Norma Camarena in 1978, based upon the drawings the contractor marked up in the field. The on site construction work was performed by an 8A (minority/small business) contractor. Robert Carper of the Denver Service Center was the architect in charge of the restoration of HS-11. The Denver Service Center had an on-site project supervisor during the time restoration work was being performed on the building.¹⁵

ENDNOTES

¹ U.S. Department of the Interior, National Park Service, Denver Service Center, *Historic Resource Study: San Juan Island National Historical Park, Washington* (1972) by Erwin N. Thompson, 163; National Park Service, Seattle Support Office, “Chapter 3: Preserving American and English Camps,” *San Juan Island: Administrative History* (1997), by Kelly June Cannon. http://www.cr.nps.gov/history/online_books/sajh/adhi3a.htm, accessed 3/10/2005.

² “Chapter 3: Preserving American and English Camps,” *San Juan Island: Administrative History* (1997), http://www.cr.nps.gov/history/online_books/sajh/adhi3.htm, accessed 3/10/2005.

It is clear that the property sold to the Washington State Parks at this time included the Redoubt, but it is unclear as to whether this also included the McRae house and the portions of Bellevue farm that had been part of the landholdings of the Firth and later McRae families. Cannon makes reference to deed research in her footnotes, but was otherwise vague as to whether part or the whole of the McRae property were sold at this time.

³ *Ibid.*

⁴ “Chapter 3: Preserving American and English Camps” and “Chapter 4: San Juan Island National Historical Park Management”, *San Juan Island: Administrative History*, http://www.cr.nps.gov/history/online_books/sajh/adhi3.htm, and http://www.cr.nps.gov/history/online_books/sajh/adhi4a.htm, accessed 3/10/2005.

⁵ Erwin T. Thompson wrote this study as an employee of the Denver Service Center, which was established in the second half of 1971.

⁶ *Thompson, Historic Resource Study* (1972).

⁷ The McRae family had occupied the site from c. 1903 to 1957, and perhaps as late as 1960.

⁸ Cannon, “Chapter 3: Preserving American and English Camps”, *San Juan Island: Administrative History*, http://www.cr.nps.gov/history/online_books/sajh/adhi3.htm, accessed 3/10/2005. The question arises of the differences in a standard for the restoration of exterior vs. interior.

⁹ *LaFleur, Historic Structures Report* (1978), 16-19, 25-29.

¹⁰ *LaFleur*, 26.

¹¹ *LaFleur*, 27-28.

¹² *LaFleur*, 27-28. The number of aligned finish layers at the edges of where the battens were placed over the planks appeared to have excluded the theory that the boards were reused with several layers of finish applied at Fort Bellingham and later reused at American Camp. All layers of the finishes appear in alignment, especially with regard to the layers of paint. One should also consider the number of paint and finish layers applied, the variability in the widths of the battens, and the relatively short period of time Fort Bellingham was occupied by the military; it is unlikely that the lumber salvaged from Fort Bellingham had more than one or two layers of paint on it, and unlikely that it had any wall-paper or other coverings over it when it was transported to American Camp. Due to the likely exposure to the elements as the lumber was being transported and stored before construction of the American Camp buildings, it is unlikely any wallpaper was applied to the planks currently part of HS-11 while they were part of the buildings at Fort Bellingham.

¹³ *Lafleur* , 13, 19-29, 90 Figure 5, Drawing 438/27000 sheet 3; Drawing 438/25000A, sheet 5.

¹⁴ C.F. Richie, John Stewart, and Roderick Sprague, “Chapter 23: Lime Product Identification At American Camp”, *San Juan Archaeology: Volume II*, Roderick Sprague, Ed. (Moscow: University of Idaho, Laboratory of Anthropology, 1983), 671-77.

¹⁵ Laurin Huffin, Historical Architect at the NPS Columbia Cascades Seattle Support Office, provided this information.

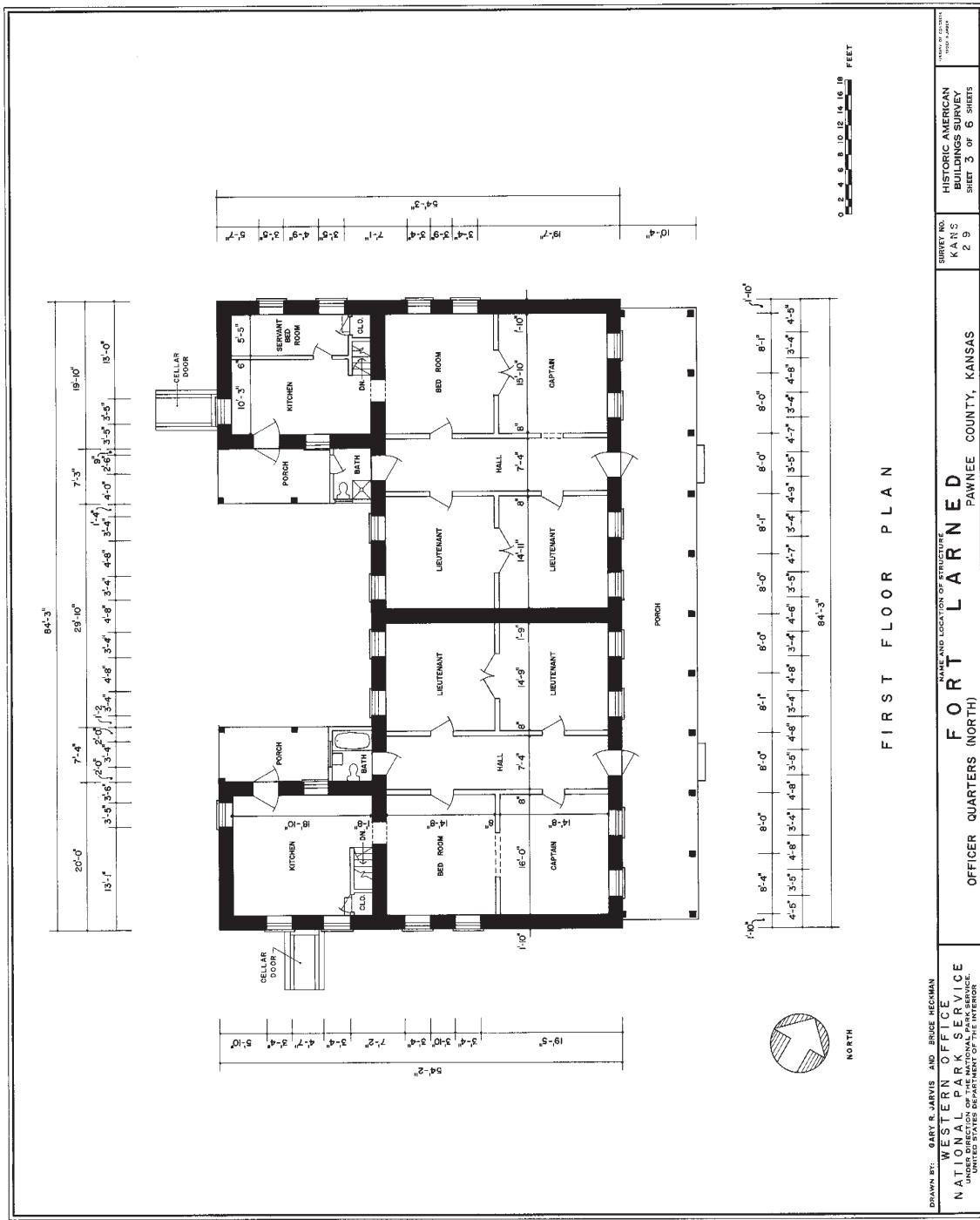


Fig. IV-1. North Officers' Quarters at Fort Larned, Kansas. Note the center hall plan module used in the building and the flexibility in housing both lieutenants and captains in the same building and module.

From U.S. Department of the Interior, National Park Service, Historic American Building Survey, *Fort Larned Officers Quarters North, Pawnee County Kansas* (1965), by Gary R. Jarvis and Bruce Heckman, <http://memory.loc.gov/php/habshaer/ks/ks0000/ks0034/sheet/00003a.tif>.

CHAPTER 4: RECENT RESEARCH AND SCHOLARSHIP¹

INTERIOR LAYOUT OF CONTEMPORARY MILITARY BUILDINGS

The interior layouts of the residences provided by the U.S. Army during the period of occupation at San Juan Island were largely dependent upon the rank of the resident. For example, lieutenants might be assigned one room, while a captain would be assigned two rooms. Exceptions appear to be made for differences in the marital status of the regular and non-commissioned officers. The central hall plan with two rooms on each side of a hallway was probably one of the most widespread planning strategies in use by the U.S. Army at this time. It was descended from the Georgian style of architecture prevalent in the United States and England before the Revolutionary War, which often had symmetrically arranged rooms on either side of a central “through passage”. Many of the officers’ quarters during this period used one variation of this concept or another. The primary reason for the popularity of this plan type (beyond tradition within the military) seems to be that of flexibility. The building type, even if single story, allowed for programmatic changes over time including housing various combinations of similarly or differentially ranked officers. Variations on this basic plan can be seen at Fort Bridger, Fort Steilacoom and Fort Vancouver among military buildings of the era.

For example, a typical single story, double pile design would have at least 4 rooms. These rooms could be used either to house 4 lieutenants, 2 lieutenants and a captain, or to serve as the commanding officer’s residence. In the case of Fort Larned, Kansas, the Officers’ Quarters were actually (2) double pile quarters with a common wall forming a double house: Figure IV-1. This inherent flexibility was probably the major reason for the widespread adoption of this plan throughout the army at this time.²

PLANK CONSTRUCTION – NEW RESEARCH

CONSTRUCTION PROCESS: New research in the area of box construction has emerged since the buildings at American Camp were documented by Erwin Thompson, Roderick Sprague, and Harold LaFleur in the 1970s. The authors of this study would like to thank Shannon Bell for sharing her research on box construction.³ The two historic buildings at American Camp would be classified as being of box construction. The typical process for the construction of these buildings would be the construction of masonry, fieldstone or timber foundation piers, followed by the felling, hand-hewing, and joining of timber to construct sills. Eight mill-sawn lumber planks would then be nailed together on their long edges into four “L” sectioned corner members, in turn, nailed to the corners of the sills. The upper end of these corner boards would have the ledger boards nailed to them. Finally, the rest of the vertical planks would be nailed to the ledger board at the top and the sill at the bottom to transfer any loads. Figures IV- 2 and 3 are illustrations based upon information contained within “Board Shanty: Box Construction White County, Arkansas,” featured in volume 10 of *Pioneer America Society – Transaction s* by Steve Mitchell et al, showing typical construction techniques and details. Layout of windows and doors would be demarcated on the lumber walls of

the structure, which at this point of construction would completely enclose the building's perimeter. Holes would then be drilled at the corners of the window and door layouts and the remainder cut out with a handsaw. The installation of windows and doors would be carried out at this point. It is possible that the roof structure could be assembled before or after the insertion of the doors and windows. Construction of masonry chimneys might be among the first or last steps of the construction.⁴

INTERIOR FINISHES: Typical interior finishes for plank construction have varied widely, from white wash or tar paper to various combinations of paint, plaster, dry wall and various board facings depending upon the era of construction. Just about any wall finish that would be used in a typical wood frame structure of light or heavy construction could also be used as the interior finish on a plank frame with some modification in technique. For example, wood lath for plaster walls was placed on sleepers or interior battens, providing space and allowing plaster to key securely through the lath. If the lath was flush against the planks, the lath would have had no room for keying against the lath. Milled wood for facing the exterior or interior could be nailed directly to the plank framing itself. In some cases decorative molding and battens might be used on the inside and the outside of the building for ornamentation and weather tightness, and also for privacy, as in the case of the walls bordering the central hall in HS-11.

According to James L. Garvin, in his book *A Building History of Northern New England*, lime putty for plastering was often slaked as far in advance of its application as possible in plank lined pits. This process was called souring and was done for up to a year. The putty was then screened to break up any unslaked particles. Finally, the sand was also screened to remove large particles. All of this effort was to ensure smooth plaster with no large pieces of sand or pops caused by unslaked lime to disrupt its surface.⁵ Lime plaster could be applied in a 1, 2 or 3 coat process, all using mixtures of lime, sand and hair; in the case of the 2 and 3 coat processes, there would be no hair binder in the final coat. "Gauged stuff," a mixture of gypsum and lime based plasters, was used for ornamentation since the early nineteenth century.⁶

The wall plaster found in HS-6 and HS-11 appears to be of similar construction. They both contain chopped animal hair for binding and are placed over wood lath. The thickness of the plaster coat in HS-11 is 3/8" thick. Plaster wall samples taken from HS-6 by Roderick Sprague's Field School in the 1970s contained gypsum as well as lime. According to *Preservation Brief 21: Repairing Historic Flat Plaster Walls and Ceilings* (under the heading "Historical Background") by Mary Lee Macdonald, until the end of the 19th century plasterers used lime plaster.⁷ Lime plaster consisted of four ingredients: lime, aggregate, organic fiber and water. In the case of HS-6 and HS-11, it appears likely that the lime came from Roche Harbor or a similar source due to its purity and the lack of lime deposits on the West Coast. Production of quicklime on San Juan Island was begun in 1860 and would corroborate the 1867-68 date when a request for permission to plaster HS-11 was noted in the correspondence of the post commander. Macdonald also notes that "gauging plaster," plaster of paris, was often added to the finish plaster coats of lime plaster to accelerate the setting time. The final coat was often 35% gypsum with the

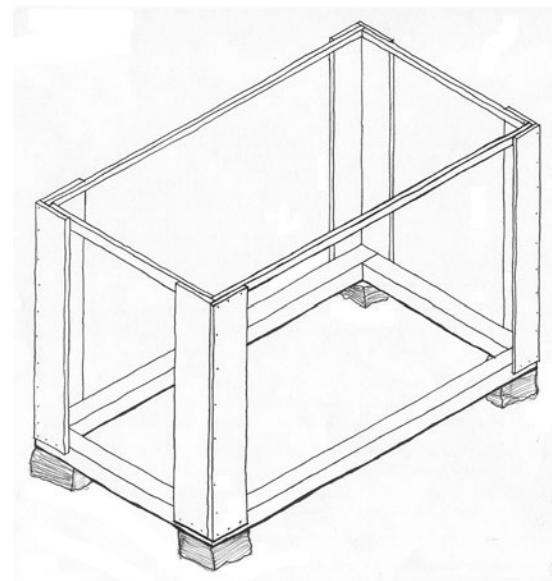


Fig. IV-2. Typical early stage of box frame construction. After the sill and floor joists are assembled, the corner boards, referred to by some Arkansas sources as "Pig Troughs", are nailed together and attached to the corners. Next, the top plates for ceiling or floor joists are attached to the corners. The remaining wall planks are then nailed to the top plates and sill. The planks are responsible for transferring loads from the roof to the foundation system.

Illustration courtesy of Shannon Bell 2005.

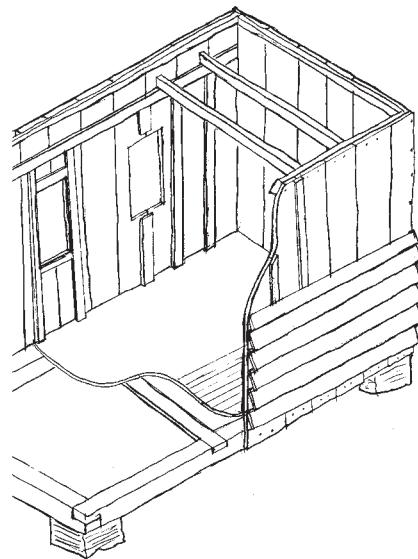


Fig. IV-3. Illustration showing some of the variety of finishes and construction techniques applied to box constructed buildings.

Illustration by Aaron Lemchen 2005.

remainder consisting of lime and sand. It was not until around 1900 that whole gypsum plaster was used for the plastering of buildings.⁸ The two samples of plaster detailed by Roderick Sprague consisted of a ratio of 1:1 lime to gypsum plaster if averaged out. This high percentage of gypsum could be attributed to later repairs with gypsum based materials. It includes approximately a half percent by weight of organic material; the assumption is that this refers to the horsehair binder. LaFleur also noted this type of binder in his investigation of HS-11. It is possible that the plaster in HS-11 is from the Military era. There is no evidence found so far, however, which precludes the plastering of these buildings from occurring in the Agricultural era during the late nineteenth or early twentieth century.⁹

BEAVER BOARD AND UPSON BOARD: In the twentieth century, “Beaver Board” also known as “Upson Board” was added to the interior of HS-11 in rooms 2 (E5), 3 (E7) and 4 (E8) as designated by LaFleur in his restoration plans. This finish was applied to the walls and in some cases to the ceilings of these rooms. Wooden battens were added to cover the joints between panels. “Beaver Board” and its contemporaries were a thick laminated paper and paper pulp product developed in 1903 and commercialized in 1906.¹⁰ It is highly vulnerable to humidity and ultraviolet light. For maximum longevity, this product should be kept at 75 degrees Fahrenheit and between 30 to 40 percent relative humidity. The product was used for the flat, paintable substrate properties it provided along with its ease of installation. This product was unique to the early through the middle of the twentieth century.¹¹ This finish undoubtedly reflects the period when the building was used as the McRae farmhouse. The 2003 *Building Condition Assessment and Evaluation* report noted that in HS-6 (Laundress’ Quarters), the interior relative humidity was found to be above 70%. The recommendation for the addition of chimney caps in both buildings underlies concerns regarding moisture penetration into the building.¹²

TENDENCY FOR BUILDINGS TO EVOLVE OVER TIME

It is common for buildings to evolve over time as additions are made and rooms are removed in an effort to adapt to current circumstances. In the case of HS-11, and many officers’ quarters of the same era, the double pile plan was advantageous for adding rooms onto the rear of the building. Most often, these rear additions shared functions related to hygiene, food preparation and dining. They would be connected to either the central-hall or flanking rooms in the center-hall plan. While one of the interior rooms may have been used originally by single officers for dining/food preparation, the demands of expanded housing needs would have soon required the addition of a separate dining, food preparation and storage area as the building filled to capacity with officers and their families.

Examples of a pattern of accretions to the rear of a building during this era included buildings at Fort Vancouver, Fort Bellingham, Fort Steilacoom, American Camp and many other period buildings. Figure III-1 shows an excerpt of the plan of American Camp, delineated by Major Nathaniel Micheler in 1874, which depicts the additions

to HS-11, HS-6 and other buildings at the camp. In the case of officers' quarters, the buildings commonly were built without food preparation and dining areas directly attached to them. It is likely there would have been a shared officers' mess or soldier's mess where the occupants of HS-11 would have taken their meals, before the addition of a kitchen.¹³

NEW KNOWLEDGE ABOUT MILITARY DESIGN OF THE ERA

As stated in Chapter II (under "Diversity in Military Design"), understanding of the larger forces shaping military architecture in the period of the 1850s through the 1870s has increased since the *Historic Resource Study* and the *Historic Structure Report* were written in the 1970s. The preference to rely upon local resources, and often designers, led to a variety of approaches in the construction of military buildings. Other influences on military architecture of the period included the professional training, leadership abilities and fiscal management policies of department, division and post commanders, and quartermasters. These factors led to a great deal of variation in the military architecture of the period in which American Camp was an active U.S. Army Post. A. K. Hoagland's Book *Army Architecture in the West*, has increased our awareness of the range and effectiveness of design in military architecture at the time that American Camp site was occupied by the U.S. Army.

CONCEPT OF ROOMS PROVIDED BY OFFICER RANK

In 1867, HS-11 was described as being occupied by Lieutenant Charles Bird. In a letter by Captain J.T. Haskell, the commander of American Camp, Captain Haskell described HS-11 as having a parlor, two bedrooms a dining room, two closets or storerooms, a passageway and kitchen.¹⁴ This is the only documentation of specific information about any of HS-11's residents. It indicates that Lieutenant Bird had more than his required allotment of rooms. Typically, a Lieutenant would have been allotted one room, and a captain would have been allotted 2 rooms and on up to five rooms for a major general. According to Hoagland, allotment of quarters was based upon rank as well as space available. She also illuminates the fact that U.S. Army regulations concerning space and room allotment were often disregarded.¹⁵

ADDITION OF REAR KITCHENS AND THE RESEARCH ON HS-11

Undoubtedly, HS-11 once had rooms attached to its southern elevation. This is based upon the photographs uncovered by Erwin Thompson as part of his *Historic Resource Study*, Major Micheler's final plan drawing of American Camp in 1874, and the evidence of paint shadows in a gable formation uncovered in the attic of the McRae house by Harold LaFleur. The existence of these additions was also confirmed by archeologists (op. cit.). In buildings contemporaneous with HS-11, it was traditional to append kitchens, along with other utilitarian rooms, to the rear of the building. The chimney pattern in LaFleur's restoration plan can be seen in photographs of the building and its appendages during, and after, military occupation of the site. Figure II-18 shows

HS-11 (including its chimneys) amid its camp context in the early 1870s. Figure IV-4, a view of the east elevation of HS-11 taken during the 1880s, clearly shows the appended rooms to the south of the building. It is quite likely that the appended areas housed rooms dedicated to food preparation and dining as this was a common pattern during the period.

ENDNOTES

¹ Non-Destructive Investigative Technology: One of the interesting advancements since the initial historic, structural and archaeological investigations conducted at American Camp has been the advancement in remote sensing technologies. This advancement assists preservationists in the identification and documentation of box constructed buildings. Structural member details (including any unseen framing members and hidden metal hardware such as nails, screws and other items) may be seen clearly without removing period finish. This information is most important for plank framed structures at American and English camps where it may be deemed inadvisable to remove the exterior and interior finishes to examine the interior structure of the wall. Mary Joan Kevlin, "Radiographic Inspection of Plank-House Construction," *Association for Preservation Technology Bulletin* 18 (1986): 3: 46.

² U.S. Department of the Interior, National Park Service, Historic American Building Survey, *Fort Larned Officers Quarters North, Pawnee County Kansas* (1965), by Gary R. Jarvis and Bruce Heckman, <http://memory.loc.gov/php/habshaer/ks/ks0000/ks0034/sheet/00003a.tif>; Alison K. Hoagland, *Army Architecture in the West: Forts Laramie, Bridger, and D.A. Russell, 1849-1912* (Norman: University of Oklahoma Press, 2004), 65-66.

³ Shannon Bell is a graduate student in the Historic Preservation Program at the University of Oregon, currently in the final stages of writing her Master's Thesis on the topic of plank and box construction.

⁴ Steve Mitchell, Donald R. Brown and Michael L. Swanda, "Board Shanty: Box Construction In White County Arkansas," *Pioneer America Society – Transactions* 10 (1987): 12-13; Greg Koos and William D. Walters, Jr., "The Eliel Barber House and American Vertical Plank Wall Construction," *Pioneer America Society – Transactions* 9 (1986): 71-72, 74.

⁵ Garvin, *A Building History of Northern New England*, (Hanover: University of New England Press, 2004), 65.

⁶ Garvin, 68-72.

⁷ U.S. Department of the Interior, National Park Service, Technical Preservation Services, *Preservation Brief 21: Repairing Historic Flat Plaster Walls and Ceilings* by Mary Lee Macdonald, under the heading "Historical Background," <http://www2.cr.nps.gov/tps/briefs/brief21.htm>, accessed 01/01/2005.

⁸ Macdonald; Garvin, 70-71.

⁹ Washington State Parks, Lime Kiln Point State Park: History <http://www.parks.wa.gov/parkpage.asp?selectedpark=Lime%20Kiln%20Point> accessed on 3/4/04; C.F. Richie, John Stewart, and Roderick Sprague, "Chapter 23: Lime Product Identification at American Camp," *San Juan Archaeology*, V. 2, Roderick Sprague Ed. (Moscow: Laboratory of Anthropology, University of Idaho, 1983), pp. 671-77; Thompson, *Historic Resources Study*, (1972) 141.

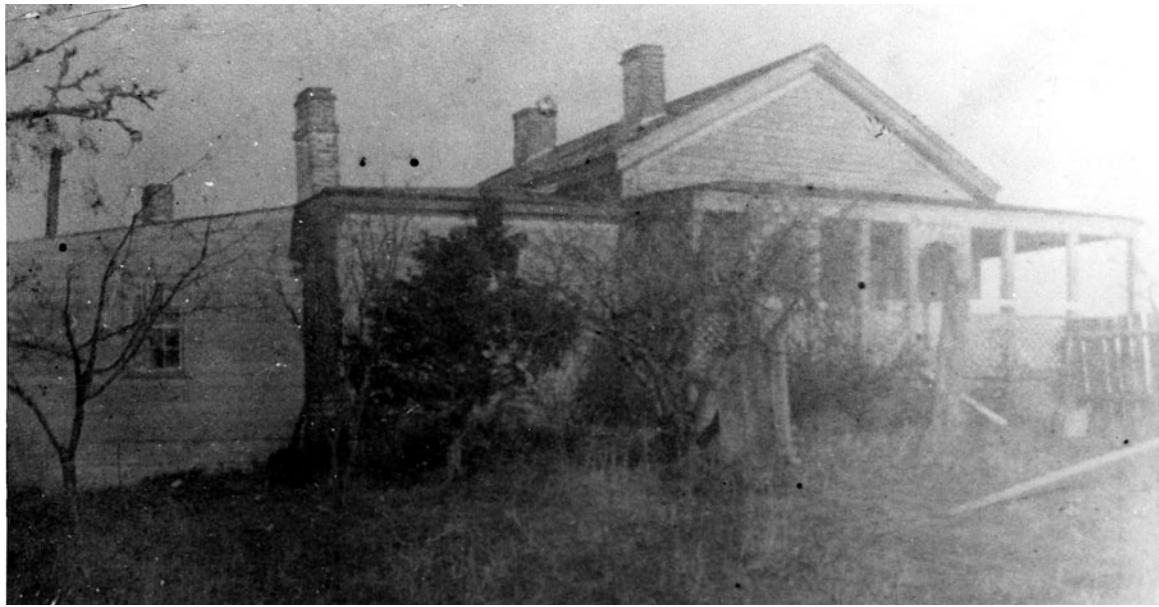


Fig. IV-4. East elevation of HS-11 during the 1880s.

Courtesy of National Park Service, San Juan Island National Historical Park. It can also be found in LaFleur, *Historic Structure Report*, 90, Figure 4.

¹⁰ Shelby Weaver, "Beaver Board and Upson Board: History and Conservation of Early Wallboard," *Association of Preservation Technology Bulletin*, (Lisle, Illinois: Association For Preservation Technology International, v.28, 1997), pp. 71.

¹¹ Weaver, 74.

¹² LaFleur, *Historic Structures Report: San Juan Island National Historical Park, Washington – Officers' Quarters HS-11, Laundress' Quarters HS-6, and English Camp Hospital HS-18*. (Denver: Denver Service Center, National Park Service, 1978) pp. 25-27; *Building Condition Assessment and Evaluation Report: Historic Structures of American Camp and English Camp, San Juan Island National Historical Park*, Zaik, Miller and Dibenedetto Architects and Planners, (Portland: National Park Service, 2003), 10, 24, 28-29.

¹³ *Historic American Building Survey*, (Fort Vancouver: General Grant's Headquarters and Post Library; Fort Steilacoom: Center Officers' Quarter; Pickett House, Bellingham, Washington), (Washington, D.C.: National Park Service and Library of Congress); Alison K. Hoagland, *Army Architecture in the West*, (2004), pp. 53.

¹⁴ Harold A. LaFleur, *Historic Structure Report*, 14-15; Thompson, *Historic Resource Study*, 152-53.

¹⁵ Alison K. Hoagland, *Army Architecture in the West*, 65-66; Thompson, *Historic Resource Study*, 92.

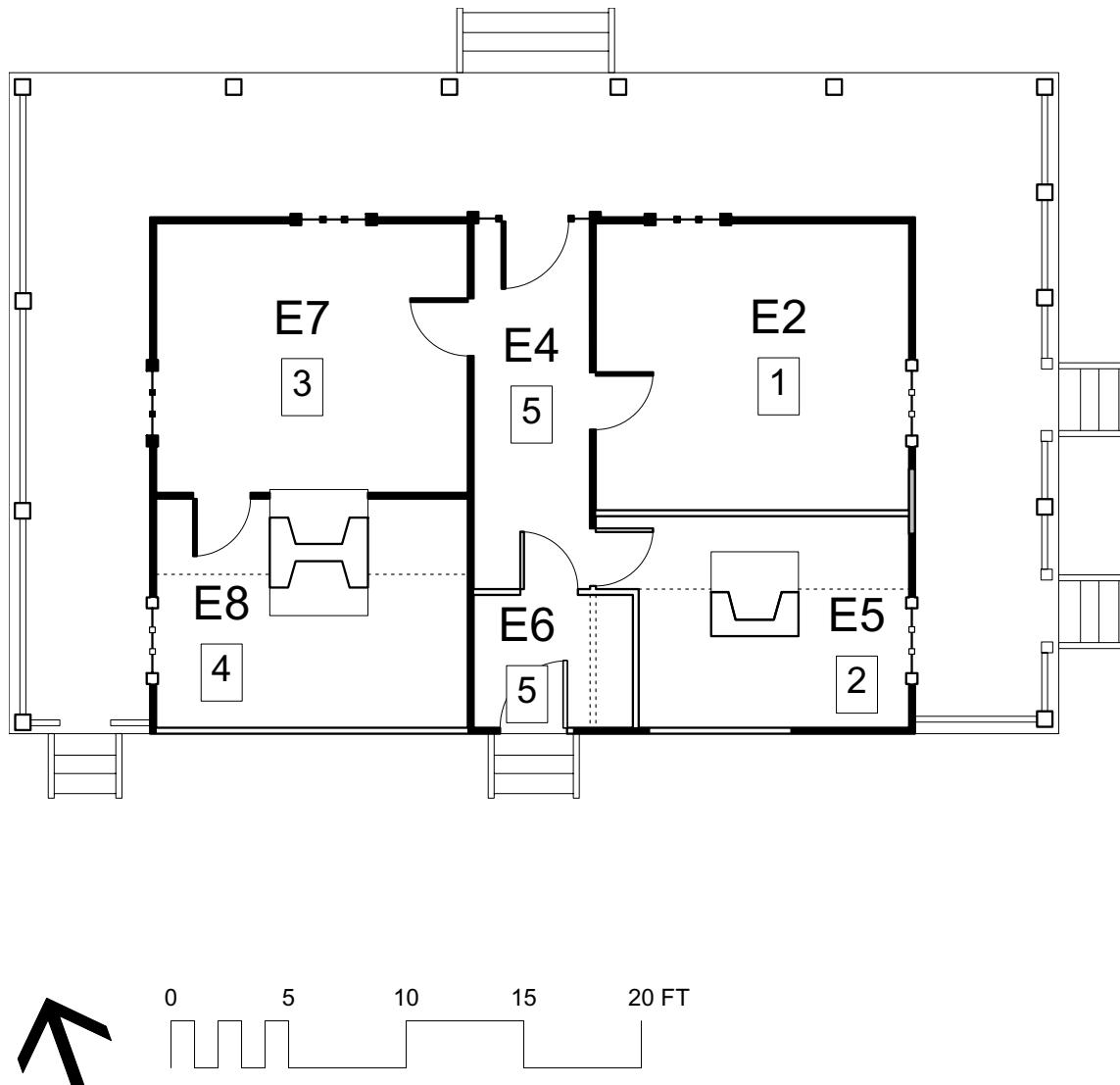


Fig. V-1. Current plan of HS-11. Fully annotated version of this plan is found on page Appendix III-1. Boxed numbers correspond to historic room numbers of the spaces while unboxed numbers (E2, etc.) correspond to numbers assigned the rooms by LaFleur in the 1978 Historic Structures Report. Solid black walls denote material likely original to the military era. The white filled walls denote walls restored by the National Park Service or likely constructed during the agricultural era of the building.

CHAPTER 5: PHYSICAL INVESTIGATION

Based upon the investigation of previous reports and historical material, it was determined that a key to understanding previous spatial configurations of HS-11, both in its military and agricultural phases, lay in understanding the current and former locations of the interior walls. This included understanding how they were attached to the building structure. To that end, portions of Beaver Board wallcovering were carefully removed in Rooms 2 and 4 to reveal former finishes and evidence of previous wall and window placement. The battens covering the Beaver Board were carefully removed and then the Beaver Board was carefully cut along the nail lines normally covered by the battens so as not to be visible when the battens and Beaver Board were reinstalled. This method of removing the Beaver Board allows for the later reapplication of the original finish with little aesthetic effect. These actions and documentation took place during a site visit by Kingston Heath, Fred Walters and Aaron Lemchen on March 22 through 24, 2005.

In addition, paint samples were taken to assist in analysis of interior finishes for the current report and future study and restoration of the building. The paint samples were individually embedded and cast in cubes of clear resin, Fig. V-2. The cubes were cut perpendicular to the layer planes of the finishes. The cut faces were then polished



Fig. V-2. Photo of paint samples from HS-11 fixed in cast resin before sawing and color analysis.

Photograph taken by Aaron Lemchen April 2005



Fig. V-3. Linoleum carpet detail in Room 1 (E2) Photograph by Aaron Lemchen March 2005.

using 600 grit sandpaper as a final treatment. Afterwards the treated samples were examined using a binocular microscope and Munsell sample chips in the University of Oregon Architecture and Allied Arts Library within 10 feet of a south facing, double story window. Due to the limited amount of magnification available from the microscope the Munsell numbers should be thought of as starting points for future color analysis. This chapter will break down findings, room by room, as identified in LaFleur's documentation from the *Historic Structures Report* and the as-built drawings amended by Norma Camarena.

ROOM 1 (E2)

FLOORING: The flooring in this room has already been well described by LaFleur in the *Historic Structures Report*. A sample of the linoleum carpet's pattern was recorded for future research, Figure V-3.

SOUTH WALL: Figure V-4 illustrates a picture of what appears to be a previous investigation of the southern wall in this room. The horizontal boards of the south wall are bare with no paint and are covered with painted paperboard and then covered with wall paper. LaFleur mentions these boards as "lapped"; a knife pushed between the joints of the horizontal wood wall board goes to a depth of 1/2 inch. This finding reinforces our earlier assessment of the these 3/4 inch board's joinery. The construction of this wall



Fig. V-4. Opening in the south wall of Room 1 (E2) showing layers of heavy paperboard and wallpaper over horizontal wood planks. Photograph by Aaron Lemchen October 2005.



Fig. V-5. Opening in the east wall of Room 1 (E2) beneath the window showing evidence of modern reuse of what appears to be Military era whitewashed planks exhibiting the ghosts of former battens and perhaps molding. This was a former (c. 1925) doorway to Room E1, before restoration by the NPS. The planks were installed during the c. 1978 restoration. Photograph by Aaron Lemchen October 2005.



Fig. V-6. Near the top of this photo is evidence of machine cut and wire nails protruding through the first layer of flooring into the crawlspace. Note that they are in line, following butt joints in the second layer of flooring above. It suggests that a wall was likely affixed to the other side of the flooring through toe nailing, and corroborates the evidence in the room above that there was a former division in this room between Rooms 1 and 2 at this location. This example is just west of the restored east hearth under Room 2 (E5). Photograph by Aaron Lemchen March 2005.

will be addressed with more specificity in the section of this chapter under the heading “ROOM 2”.¹

EAST WALL: Figure V-5 shows the exposed planks of this wall in context. They date from the exterior restoration. One of the planks that appears to be historic, due to its similarly aged/darkened appearance to the bare wood in the other planks; the other planks have the ghosts of battens in the white wash. The planks are very finely cut by a reciprocating type mill as indicated by the saw marks. The rough sawn wood is finely cut and relatively smooth compared to modern rough finish wood from the mill. These boards were reinserted in this location as part of the exterior restoration. From the 1920s to the 1970s, there had been a door at this location to the c.1925 east addition (Room E1), explaining the cut in the plaster, lath and molding: see Appendix III-3.

ROOM 2 (E5)

NORTH WALL: The north wall of Room 2 is made of 3/4 inch thick horizontal boards. The thickness of this wall between Rooms 1 and 2 was directly measured at 3-



Fig. V-7. East wall of Room 2 (E5). Note the aligned butt joint and paint shadow in the floor boards at the bottom of the picture (1). Also note its alignment with the paint shadow on the vertical structural planks, which also appear to have shadows in the paint and wallpaper from previous battens (2). This suggests the presence of an earlier wall division that ran on either side of the hearth. A patch where a window once was can be seen in the board at the leftmost section of the east wall in this picture. It was butted against by the north wall (3). This patch was likely an original window during the military or agricultural era. Photograph and image enhancement by Aaron Lemchen March and June 2005.



Fig. V-8. Room 2 (E5), Detail of block located between two planks. Photograph by Aaron Lemchen March 2005.

1/2 inches thick. Based upon a hooked metal probe introduced into drill holes in an area of the wall where a vertical batten had been temporarily removed and the Beaver Board cut away, the wall contains a 1-5/8 inches void. This is indicative of the wall studs being nominally 2x in one dimension. In summary, the wall structure is composed of at least 1/2 inch and most likely 3/4 inch thick horizontal boards on its northern face, and 3/4 inch thick boards on its south face with a 1-5/8 inch thick stud separating the two surfaces. The finish for this wall consists of vertical battens and white and off-white painted Beaver Board with a base-board covering the bare horizontal wood surface of the wall. It appears likely that this wall is from the period of 1903 to 1912. An illustration for these findings can be found on page Appendix III-7.

FLOOR / CRAWLSPACE: In order to determine whether previous walls were affixed to the floor in Room 2 (E5), investigations were undertaken in the crawlspace. The aligned butt joint in the second layer of floor boards corresponds with the line of nails projecting through the bottom of the first layer of flooring into the crawl space underneath: Figure V-6. Some of the nails appear to be machine cut (post 1790s) and others are of the wire manufacturing process (available after 1850 and used through to the present day). Identification was somewhat difficult due to the amount of corrosion both types of nails were exhibiting. All of this evidence affirms the theory that this wall was removed at some point after the installation of the second flooring layer. It should be noted that the insertion of the reconstructed hearth resulted in the removal of the “patched area” in the second layer of flooring that was noted by LaFleur in the *Historic Structures Report*.

EAST WALL: The aligned butt joints running east to west in the second layer of wooden flooring appear to match evidence of a former wall location according to evidence found in the crawlspace. This also matches the evidence found behind the east wall's Beaver Board finish layer as illustrated in Figure V-7; here, a paint shadow 2 inches wide (with its thickness to the north of the butt joint in the floor) was found. Faint stains left by former plaster keys stop at the edge of the former wall location along with the wallpaper finish. A small block of wood is located between two planks and 75-1/2 inches off the ground on center. It is located on the south side of the plank abutting the window in-fill described in the following paragraph. The face appears to have been split off it and clearly visible are two machine cut nails toe nailed into the block from the adjoining vertical planks on either side: Figure V-8. It appears this could suggest the placement of a former cabinet, closet or related feature: see entry "West Wall" under the heading "Room 4 (E8) for a similar feature.

The current north wall dead-ends into the in-filled location of what appears to be a former window with its opening extending 9 inches to the south of the north wall, 30-3/4 inches off the floor and 58 inches high. The patched opening is 22-1/2 inches from the top of the ceiling. It is listed in the demolition plans for the exterior restoration of the building as being discovered on January 5, 1979 with the full dimensions extending north into Room 1 as 38 inches wide by 38 inches tall. Paint sampled from this patch and the area immediately surrounding was examined under the microscope; from the evidence it was determined to be beige in color (Munsell 7.5Y 6/4). It is covered by a light wash of white. However, under visual observation in situ, the finish appeared to be green.

The finishes for the east wall outside of the in-filled area include a green paint, (Munsell 10GY 5/4) on top of the wood substrate, followed by an off-white (Munsell 5Y 8/2) and topped by purple on white patterned floral wallpaper. The wall paper was covered over with a plaster wall, which at one point extended up to the former location of the north wall. This portion of the plaster wall was apparently removed when the north wall was moved to its current position. The current covering of Beaver Board was installed after these actions were taken.

CEILING: A small hole was cut through the ceiling Beaver Board at the junction of where the paint shadow on the east wall from the former north wall intersects with the ceiling: Figure V-9 and Appendix III-9. Running north-south along the edge of the planks making up the east wall is a chamfered board 2 inches by 3/4 inch. At the point where the paint shadow from the former wall between Rooms 1 and 2 intersects the ceiling plane, the aforementioned chamfered board is notched. The north side of the notch is cut smoothly square; the south side of the notch is a roughly formed miter. Running into this notch is a batten 3-1/4 inches wide and varying from 3/16 to 1/2 inch in thickness extending east-west. The exposed face of the batten appears to be split. The above evidence further reinforces the likelihood that there was a wall at one point adjacent to the notch.

It should be noted that the restoration of the the hearth in this room resulted in the cutting of the Beaver Board ceiling through which the chimney was fitted.

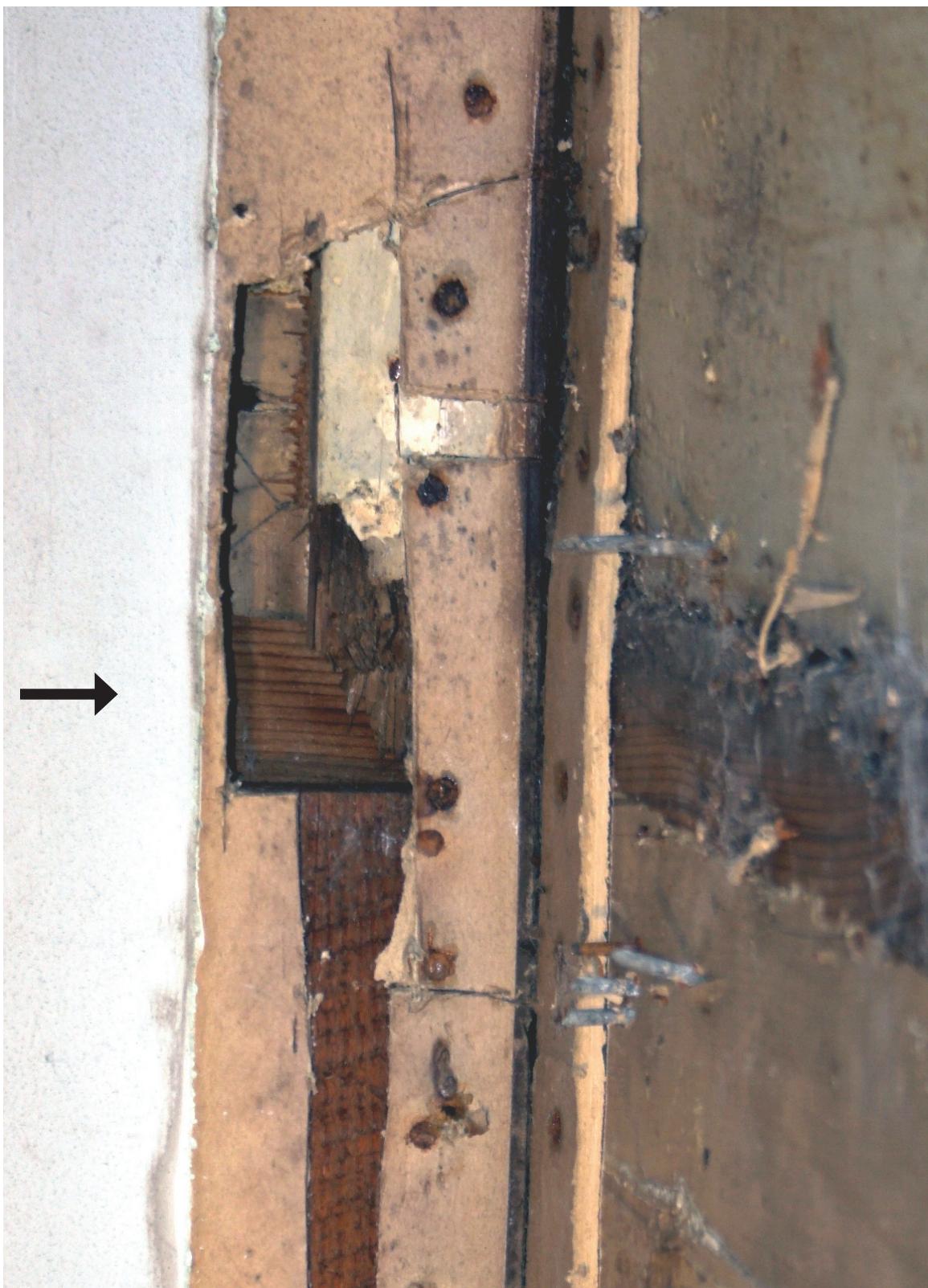


Fig. V-9. Exploratory hole cut into the ceiling's Beaver Board covering (see arrow) at the point where it is normally covered by battens. It is in alignment with a paint shadow and butt joints the floor relating to the former north wall in Room 2. Photograph by Aaron Lemchen March 2005.

ROOM 3 (E7)

FLOORING: Room 3's flooring consists of heavy paperboard over the wooden flooring under two layers of linoleum. It should be noted that the restoration of the western chimney resulted in the removal of the "patch" in the second layer of flooring recorded by LaFleur in the *Historic Structures Report* (HSR).

NORTH WALL: The finishes for the north wall in this room starting from the surface of the vertical plank substrate included green paint, cream paint, wall paper in the same pattern as that which was found on the unaltered planks of Room 2. It, in turn, is covered by a thin but coarsely woven canvas fabric. This layer of fabric was followed by floral print wallpaper consisting of a white *fleur-de-lis* pattern on a purple ground. A heavy paper board painted aqua-green covered all of these layers. The final layer on the north wall consisted of white painted beaver board: Figure V-11.

SOUTH WALL: The south wall in Room 3 was composed of 1 inch vertical planks at its heart. The middle part of the wall was removed to make way for the restored chimney and fireplace; evidence of a previous mantle can be seen in notches in the planks on either side of the fireplace: Figure V-10. It consisted of cream paint nearest the substrate, followed by paint roughly sienna in color. The first layer of wall paper was the same as found in Room 2 and on the north wall. It was the same *fleur-de-lis* patterned wallpaper, as was found on the north wall of this room. The same heavy blue painted paperboard was found with a wallpaper border: Figure V-10. The current surface finish was white painted beaver board with white battens. The east side of the door jamb in this wall is shimmed up by a piece of wood approximately 3-1/2 inches wide x 3/4 inches deep x 3/8" tall. For more information about this wall please refer to the following entry concerning the north wall in room 4.

ROOM 4 (E8)

FLOOR / CRAWL SPACE: Similar to what was found under Room 2, nails were found in a line with of the aligned butt joint in the top layer of flooring. The restored hearth resulted in the removal of the patch in the second layer of flooring that was previously noted by LaFleur in his HSR.

NORTH WALL: Samples taken from the north wall of Room 4 consisted of green paint (Munsell 10GY 5/4) over the vertical plank substrate, followed by beaver board painted off-white (Munsell 5Y8/2) and finally blue-green (10BG 4/1). .

WEST WALL: As in Room 2, a section of Beaver Board was removed to further explore the finish and construction of this wall. The paint colors found on the west wall consisted of a cream or beige paint (Munsell 5Y 8/2), followed by green (Munsell 10GY 5/4). The top of this is covered by Beaver Board painted blue. On the north side of the vertical plank adjoining the north side of the restored window, there was an area (3 by 3 inches) where green paint bridged the batten shadow. A small marking or hole in the



Fig. V-10. Room 3 (E7), south wall showing restored fireplace as well as the various layers of finishes.
Photograph by Aaron Lemchen March 2005.

middle of it is 72 inches from the current layer of flooring: Figure V-12. This plank also appeared to be a patch of some sort, as it does not extend to the full height of the wall.

CEILING: The restoration of the chimney resulted in the removal of a portion of the Beaver Board in the ceiling.

ROOM 5 (E4 & E6)

By all appearances, this room (or hallway / passage) is the most historically intact room in the building with the exception of the southern portion of the same space which was converted into a bathroom in the early twentieth century. There is a thimble for a stove pipe present along with a rectangular opening into the west wall between this room and Room 4. With the exception of the area converted to a bathroom, the room appears to have never been painted darker than an off-white or light beige based upon the analysis of paint samples.

ENDNOTES

¹ Harold A. LaFleur, *Historic Structure Report-San Juan Island National Historical Park: Officers' Quarters HS-11, Laundress Quarters HS-6, and English Camp Hospital HS-18* (1978), pp. 25.



Fig. V-11. North wall of Room 3 (E7) showing areas without paint or wallpaper. Note, evidence of interior battens on the joints of the vertical wood that have since been removed. Photograph by Aaron Lemchen March 2005.



Fig. V-12. West wall of Room 4 (E8) showing break in paint shadow at approximately the same height as the marking in Room 2's east wall seen in Figure V-7. This suggests the likelihood of a cabinet / closet affixed to this location as in the case of the block in Figure V-7. Photograph by Aaron Lemchen March 2005.

PERIODIC ANALYSIS

The following periodic analysis is based upon the evidence found in the building by LaFleur and the authors of this study and discussed in the previous chapters. It is based upon the logical layering of finishes and structure within the building. The premise of this analysis is that materials from the most recent period were placed over previous and, therefore, relatively older materials. Based upon the documented physical evidence, the three eras (Military, Agricultural and Park) were subdivided into a total of six periods. The first two periods correspond with the military era. Period III is a transitional period including the late Military and early Agricultural eras. Periods IV and V correspond with the Agricultural Era. Period VI corresponds to the Park era of the building. A short summary of each of the periods is based upon the matrix analysis found in Appendix I:

MILITARY ERA

PERIOD I: (c.1859-1860)

This period began with the construction of the building during the fall or early winter of 1859. It includes the enclosing shell of the current building and likely the first stage of construction. The impetus for officers to get out of their tents was probably strong. The first layer of flooring, the underside of which is found in the crawlspace, would most likely have been the flooring used during this period. Many of the details about the second layer of flooring show that it was added at a later time. All interior walls during this period received battens, and likely floor and ceiling molding. There are two critical pieces of evidence for this: (1) The most efficient method for assembling the internal walls would have been to use a ledger (or molding acting as a ledger) on the floor and ceiling to which the planks could bear upon or be fastened to directly; battens would have been installed afterwards. (2) The areas where no paint exists are where the former battens were placed, indicating an early installation of battens. The first several layers of paint started with a layer of white or off-white; evidence was found in Rooms 1, 4 and 5. Rooms 2 and 3 appear to be painted green in their base layer. In Rooms 2, 3, 4 and 5 this paint layer was followed by a beige or light green paint layer. The ceilings consisted of rough sawn boards 10" to 18" wide by 1" thick.

PERIOD II (c.1860-1867)

Changes during this era probably related to a desire by officers and/or their families to make the residence more homelike. This desire likely related to knowledge of the length of their assignment to the post. The first layers of wallpaper (placed over the battens) were likely added during this period: Figure V-11. Room 3 received a white *fleur de lis* pattern over a purple ground wallpaper, the same that can be seen in Room 1. Over this, a coarse muslin fabric was applied with another layer of floral print wall paper. In Room 1 -- containing parts of present day Room 1 (E2) and Room 2 (E5) and Room 3 -- the walls were covered with wallpaper that either abutted battens installed during the previous periods, or were papered over the existing battens from the first build. It was likely that during this period Rooms 7 and 8 were added.¹ The hall walls may have had a functional relationship with the internal divisions of Room 7. As stated later in this

chapter, research specific to the various wallpaper dates of manufacture could yield much evidence about the chronology of the interior development.²

TRANSITION FROM MILITARY TO AGRICULTURAL ERAS

PERIOD III (c. 1867-1903)

Most of the changes to the interior finishes of the building during this period were likely a response to issues of wear, comfort and aesthetics. Very little of its configuration was changed during the transition from the late military to early agricultural eras. This was likely due to the material and labor expense involved, and the adequacy of the building for housing a farm family. During this period, the 1 x 6 flooring was added over the first layer of flooring. Rooms 1 [E2) 3 (E7) and 5 (E4 & E6) with northern parts of Rooms 2 (E5) and 4 (E8), likely received this treatment first. This was followed by the walls between Rooms 1 and 2, and 3 and 4 being moved vertically upwards or removed, trimmed at the bottom and reinstalled to allow for the insertion of a second layer beneath the walls and in rooms 2 and 4. Evidence for this is the paint shadow along the butt joint line on the southern section of flooring in Room 2 and the former patch where the hearth was located when LaFleur found the building.

The wall between Rooms 3 and 4 on the west side does not have any indication that it was moved to the current location other than the fact that it rests upon the current layer of flooring. No paint shadow was noted on the flooring of Room 4 by either the authors of this study or LaFleur in Rooms 3 and 4. This is entirely consistent with evidence found in Room 2. It is possible that the aligned butt joint points to the fact that there may have been a double wall on either side of the western hearth as was commonly seen elsewhere in this military plan type: see Figure II-10. If the current wall between Rooms 3 and 4 is in its original position, the other wall could have been 44 inches to its south as evidenced by the aligned butt joint in the flooring. It is also likely that both hearths were not accurately reconstructed during their later restoration. According to LaFleur, they were based upon contemporary hearths, and not necessarily documentation specific to HS-11. Looking at the various HABS plans of the officers' quarters shown in Chapter II, one can see the variation of hearth shapes even at nearby Fort Vancouver Barracks and Fort Steilacoom. Military Architecture in the era in which HS-11 was built was known for its variation in design, especially at the detail level, as seen in contemporaneous buildings.

A significant change that occurred during this period was the application of plaster on lath to the walls of Room 1, currently Room 1 and the northern part of Room 2. This could have occurred as early as 1867 according to documented requisitions for lime and related supplies from the post at the time. A middle window on the east wall was removed and the opening in the plank wall patched before the plaster was applied: Figure V-7. It must be noted that this is where the evidence of the plaster wall extension and paint shadow seemingly contradicts the location of the aligned butt joint in the floor; the paint shadow extends to the north of the joint, instead of to the south as this progression would seem to require. The joint is likely the result of the last batten bordering the south

wall of Room 1. When the plaster lath was installed, the battens already on the wall were used for spacing the lath to allow the plaster to key. Whether the wall came first, or simultaneously with the battens, is still open to question.

AGRICULTURAL ERA

PERIOD IV (c.1903-1912)

Period IV saw some of the most dramatic changes to the building since its initial construction, including removal of the two hearths and Rooms 7 and 8. This was likely the initial response of the McRae family to reorienting the house to the south, with the “front” of the house facing what had become the road and the property’s attached agricultural fields on the opposite side of the road. The two hearths within the confines of the original shell of the building were removed -- likely to accommodate a more efficient metal stove. The hearths’ former locations in the floor were patched up and a hanging chimney was added to the north wall of Room 4 (E8). The wall separating Room 1 from 2 was moved northward. In the case of the wall separating Room 1 from Room 2 it was reconstructed in the new location. In the case of the wall separating Room 3 from 4, it is thought that the current wall was an original wall, due to its vertical plank construction, 4 panel door and door hardware. It was during this period that a hanging chimney was added to its south face for stoves in Rooms 4 and 5 (E4). It is likely that the southern wall of a probable double wall system between these two walls was likely removed at this time as well. Evidence of this wall still exists in the crawl space and in Room 4’s aligned butt joint in the second layer of flooring, 3 feet to the south of the current wall: Figure VI-3.

It appears unlikely that the wall between Rooms 3 and 4 was moved with the hanging chimney in place, coupled with the fact that the wall is bearing on the second layer of flooring. The movement of the interior walls was likely the result of the removal of Rooms 7 and 8, requiring a more equitable distribution of space so that Rooms 2 and 4 would be adequate for their use as a bedroom and kitchen. The east side of the door jamb in the south wall of Room 3 leading to Room 4 has patches underneath, leading to the speculation that perhaps the wall sat lower in relation to the 1 x 6 flooring, or was notched to sit flush with the outer hearth of the fireplace in its previous location. The heavy aqua painted paper board in Room 3 was put in place during this period. It should be noted that the construction of room E9, appended to the northwest corner of the building, had similar construction techniques to that found in the interior framing around the central chimney in HS-6 and likely the current wall between Rooms 1 (E2) and 2 (E5).

PERIOD V (c. 1912-1940)

This era saw the conversion of the building to the Bungalow style through several additions of rooms and design features to its exterior. This was the likely result of an increase in the number of people living in the building and/or wealth of its owners. New products such as linoleum allowed for a more decorative flooring plane that was easily

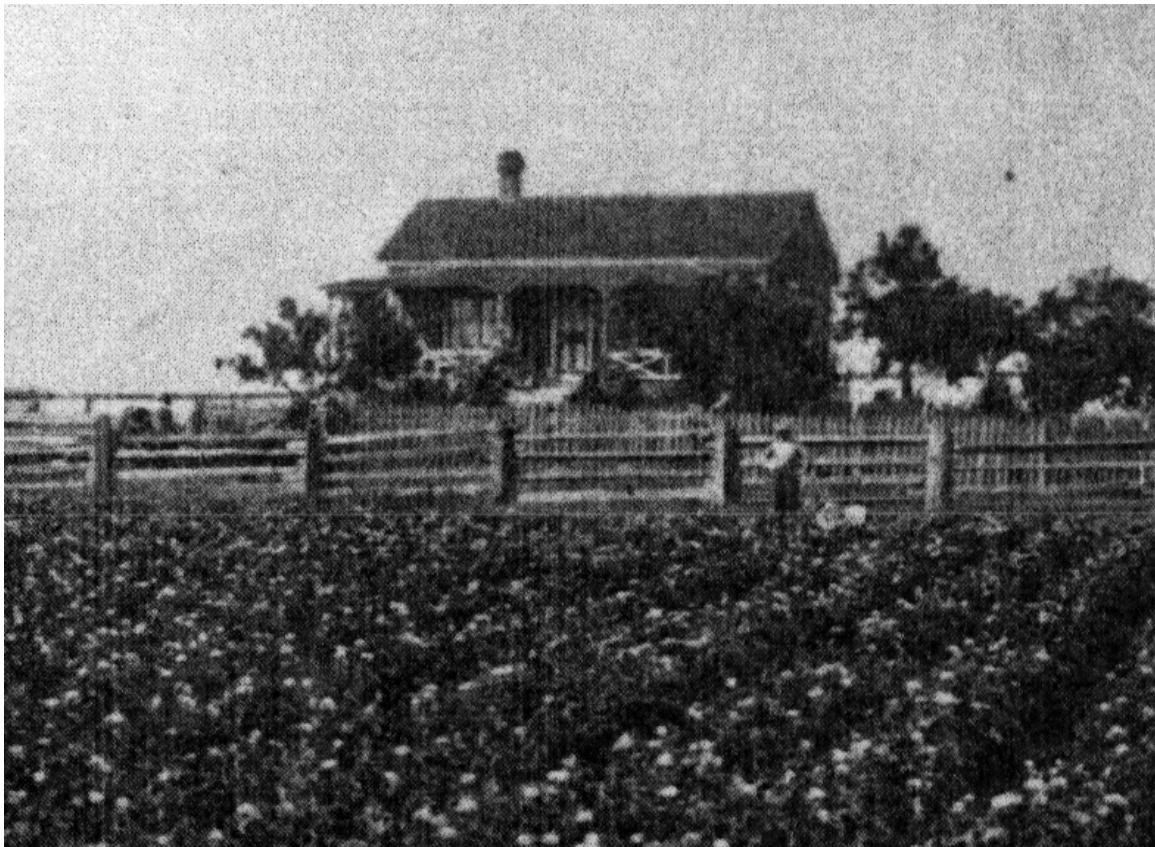


Fig. VI-3. Enlargement of Figure III-4, a photo taken of HS-11's elevation in 1912, showing its relationship to the landscape during the Agricultural era. Note, that there is only one small, corbelled chimney located on the western ridgeline, where it would serve Rooms 3 and 4 during the latter part of the Agricultural era.

kept clean.³ New additions were added to the north (E3), south (extension of Room 4 / E8) and east (E1) of the building, as well as a room in the attic (E11). A bathroom with indoor plumbing was carved out of the south end of Room 5 (E6) with additional space taken from Room 2 (E5). New ceiling molding was scarfed into the previously existing molding from the hallway. Room 2 (E5) received a new 5-panel door introduced during the bungalow period. Rooms 2 (E5), 3 (E7) and 4 (E8) received a painted Beaver Board finish, all of it white except in Room 4 (E8), where it was blue on the wall and yellow on the ceiling. Rooms 1 through 4 all had some quantity of linoleum ("carpet") which was loosely laid during this period.

HISTORICAL PARK ERA

PERIOD VI (c.1950-Present)

During this era, under ownership of NPS, the building's exterior was restored based upon the best evidence and methodology available at the time. Changes to the interior and exterior of HS-11 were part of a policy of restoring the building to its "period of primary significance". Restoration work in the interior was limited to the above

hearths found in Rooms 2 (E5) and 4 (E8), and the reintroduction of windows and doors replicating those previously existing in the exterior walls of the building. The various additions from Period IV and V were removed. No new interior finishes were added during this era.

FURTHER ANALYSIS AND DISCUSSION

EVIDENTIARY ANALYSIS OF WALLS, FLOORING AND HEARTHS

CONTENTION 1:

The wall between Rooms 3 and 4 is in its current location. If this is indeed the case, it would support the contention that there were two walls between Rooms 3 and 4.

SUPPORTING EVIDENCE:

- The corners of the mantle cut for the hearth are still visible: see Figure V-10.
- No previous paint shadow is noted on the flooring.
- Floors in Rooms 2 (E5) and 4 (E8) are installed prior to 1912, in at least two stages, prior to the hearth's removal.
- LaFleur's design for the Hearths was based upon hearths in buildings contemporaneous with HS-11.

DETRACTING EVIDENCE:

- Reconstructed Hearth is not flush with the wall.
- In order to install the flooring underneath the walls, the second layer of flooring may have been installed much earlier than previously thought, perhaps as early as the Military era of the building. The wall could have been installed later than previously thought, perhaps as late as the Agricultural era (c. 1912).
- The wall would have likely been removed and reinstalled for the wall boards to be trimmed for the new layer of flooring.
- Patched notches in the east base of the doorway trim in this wall point to it being in another location, perhaps in relationship to the hearth.
- Micheler shows the doorway in this wall on the opposite side of the hearth from where it is now located. It shows the doorway to be adjacent to the central hallway.
- Significant evidence that there was little standardization in military architecture during the period in which HS-11 was constructed.

CONCLUSION:

The evidence paints a very conflicted picture of the true status and history of this wall. It could have been the northern part of the double wall (never having been removed from its historical location), or it could have been moved, likely from the location of the aligned flooring butt joints in Room 4.

CONTENTION 2:

The hearth in Room 2 was removed after the second layer of flooring was installed and plaster was installed in the former Room 1, currently Rooms 1 (E2) and 2 (E5). The wall between rooms 1 and 2 stayed at its original location for a period of time after the hearth was removed.

SUPPORTING EVIDENCE:

- In Room 2 (E5), there were at least three separate periods of flooring installation: (1) north of the hearth, (2) south of the hearth and (3) a patch over the former hearth.
- Paint shadows in the floor over the former hearth demonstrate that the original wall was in place for some time after the hearth was removed.
- Evidence of plaster staining extends to the line of the former wall. The current wall between Rooms 1 and 2 abuts plaster that is cut flush with the wall's southern edge.

DETRACTING EVIDENCE:

- None at this time.

CONCLUSION:

The evidence appears to support this contention.

MICHELER DRAWING: FORMER ROOMS AND FORMER WALLS

“The Plan of American Camp” delineated by Major Nathaniel Micheler, C.E. in 1874 contradicts photographs from the late nineteenth and early twentieth century in that it does not fit the proportional dimensions of the current restoration or evidence recovered since then in terms of the location of former walls. The best alignment is of Rooms 1 through 6 all fitting within the current building; however, the walls do not appear to match up with the current fireplaces. This leaves in place much conjecture.

Room 7 is depicted as being narrower than the south elevation of the building, which contradicts photographs of the building from the late nineteenth or turn of the twentieth century showing the southern appendage to be flush mounted to the current rear

elevation. This could be the result of Rooms 2 and 4 being part of this southern addition. This, however, seems to be ill proportioned in comparison to the current building.

Rooms 5 and 6 may be an exaggeration, for the purposes of clarity on Micheler's part, of a double wall adjoining fireplaces with a storage space on either side of north-south passages between Rooms 1 and 2 and Rooms 3 and 4 through it. This is illustrated in the HABS drawing of officers' quarters at Fort Steilacoom: Figure II-10. This is also contradicted by Pickett's August 1857 plan of the officers' quarters at Fort Bellingham of the preceding officer's quarters that otherwise are of similar proportions: Figure II-13.

FURTHER INVESTIGATION

LOCATION OF OTHER INTERIOR WALLS: Further investigations of the crawl space and attic were undertaken to verify whether any nail evidence relating to the interior walls was to the north of where the current east-west walls are located. A brief inspection in the attic and crawl space noted no such features. The six rooms or double wall depicted in the Micheler drawing prods this type of analysis. Perhaps the most effective and least destructive way to confirm these findings would be through a detailed nail and nail-hole survey of the ceiling boards in the attic and the floorboards in the crawlspace. Protruding nails would be classified by location, type of projection (point, head or hole / breakout), type of construction (wire or cut), diameter of shank where available and perhaps length of projection from the surface. This information, classified and placed in various CAD layers could be used to analyze in more detail any possible patterns that may indicate other former walls.

WALLPAPER AND LINOLEUM: Further investigation of finishes by a conservator specializing in wallpaper and linoleum is warranted. Analysis by a conservator may result in the make and date of the various wallpapers and floor coverings found in the building and could possibly yield more precise dates relating to its application and the materials adjacent to the wallpaper layers within the interior finish of the building. However, according to wallpaper conservator Susan Filter, it is difficult to identify positively the manufacturer of a specific wallpaper from the mid- to late-nineteenth century. (See note 2 at the end of this chapter for more specific information.) An appendix assembling photographs of various segments of the wallpaper has been included in this study to aid future researchers in uncovering more information about this building. In addition, these photographs could provide evidence as to the place and manufacture of this building material and perhaps provide more detailed information about historic trading patterns and their relationship to American Camp. Further research into advertisements found in local newspapers, periodicals and city directories could yield additional information about the interior finishes available during this time period.⁴

The style of wallpaper and border found underneath the Beaver Board in Rooms 2 (E5) and 3 (E8) seems to be from the mid-nineteenth century and later according to both the periodic analysis and wallpaper specific sources. A more thorough examination of the wallpapers are necessary in order to identify positively the era and place of its manufacture. An important factor not known about the wallpaper is the type of process used to manufacture it. Was it wood block or machine printed? This level of analysis

might be of future use in helping to improve the accuracy in dating the changes in the building's various configurations over the years.⁵

ENDNOTES

¹ Please refer to the Micheler drawing present in Figure III-1 or Appendix III-2 as to the disposition of HS-11's labeling nomenclature for missing rooms 5 and 6. These numbers appear to relate to the middle rooms on either side of the hall.

² One of the investigators (Aaron Lemchen) discussed with Susan Filter, a wallpaper conservator based in Berkeley, California, the possibility of bringing in a conservator specializing in wallpaper to analyze the wallpaper at HS-11 and perhaps other buildings within the park. Specifically, he inquired as to the likelihood what kind of information could be yielded and the expected costs. At the time of this draft, the authors are still waiting for information as to the anticipated costs and production time for a report specifically addressing the wallpaper at the American Camp Officers' Quarters (HS-11). Such a study could be undertaken specifically on the American Camp resource or undertaken jointly with other buildings and archived wallpaper samples related to the park. However, Ms. Filter stated that it would be unlikely to get an exact match from wallpaper of the mid-to-late nineteenth century (as it relates to manufacturer and date of production); a consultation on conserving the remaining material likely would be fruitful.

³ See: "Chapter 4 – Fashion Floors: Linoleum, Its Predecessors and Rivals" in Pam H. Simpson's book *Cheap, Quick and Easy: Imitative Architectural Materials, 1870-1930* (Knoxville: The University of Tennessee Press, 1999) for more information about linoleum floors and historically related products such as oil cloth and felt flooring.

⁴ The American Institute for Conservation of Historic and Artistic Works maintains a database of practicing conservators, including those who specialize in wallcoverings on their website (www.aic-faic.org). As of July 19, 2005 there were 34 conservators with wallpaper experience listed on the website. The website also provides advice as it relates to selecting and working with a wallpaper conservator.

⁵ See: Department of the Interior, National Park Service Technical Preservation Services Division, *Wallpapers in Historic Preservation*, (1977) by Catherine Lynn Frangiamore, pp. 7-12, 32, Figure 26 and 34, Figure 28.

CHAPTER 7: CONCLUSIONS ABOUT HS-11

At the time of this report, evidence has been uncovered supporting the location of walls along the southern edge of the aligned butt joints in the second layer of flooring in Rooms 2 (E5) and 4 (E8). The exact dimensions or construction of the former wall in Room 2 (E5) are unknown, but they are likely similar to the current wall between Rooms 3 (E7) and 4 (E8). There is little evidence that this wall was moved. The aligned butt joint in the second layer of flooring in Room 4 may be evidence of a second wall. Furthermore, there is not enough evidence to determine conclusively whether there were additional interior walls within the current building as Micheler depicts. Two probable interior layouts are illustrated based upon the documentary and physical evidence on page 12 of Appendix III. “Probable Layout A” is based upon the physical evidence discovered so far and reflects much of LaFleur’s original restoration plan. “Probable Layout B” reflects evidence from the only known historical plan of the military era, Micheler’s plan of American Camp from 1874.

KNOWN MILITARY ERA DEVELOPMENTS

During 1859, HS-11’s structure within the perimeter of the 10 x 11 inch hewn sills was erected. Following the initial construction, southern additions were added to the building between 1859 and 1874. The orientation of the building was towards the parade ground to the north and facing the barracks. To the south were the kitchen and perhaps dining room: See Figures, III-1, III-2, III-3, VI-1 and Appendix III-2. The building reused a significant amount of lumber from buildings at Fort Bellingham in its original construction.

The reconstructed hearth locations are likely from this era, though not necessarily of the exact dimensions of the original. However, the wall between Rooms 1 (E2) and 2 (E5) was not in its current location. There were likely walls in the position indicated by the straight line butt joints in the 1 x 6 flooring in Rooms 2 (E5) and 4 (E8). There is only one officer recorded as having resided in the building in 1867, though undoubtedly other officers were assigned to the building over the years.

Battens were likely affixed to the interior walls of the building to keep out the weather as well as for privacy reasons; later on, they were used for supporting the plaster finish of Room 1.

Room 1 during this period was very likely the parlor. It was possibly plastered during this period, as the extent of the plastering corresponds to the original Room 1 (E2 and north E5). The only evidence that supported this last contention was documented requests (c. 1867) by the post commander for lime to plaster the interior of specific buildings at the fort including HS-11. The room could have as easily been plastered during the agricultural era.

KNOWN AGRICULTURAL ERA DEVELOPMENTS

Beginning in 1874, the changes brought about by civilian ownership also changed the relationship of the building to the land. The building's orientation changed 180 degrees during this period from the parade ground on its north side to fields located across the road to its south side on the site of the former Bellevue Farm. The first known owner of the building in its civilian capacity was Robert Firth, the last manager of the Bellevue Farm for the Hudson's Bay Company. Based upon photographs of the exterior, it is unlikely that much modification was carried out during the Firth family's ownership. Most of the modifications during this period could possibly include the expansion of Room 7 and the addition of newer finishes such as wall paper, paperboard, plaster in Room 1 and possibly new flooring. In the early twentieth century, the property including HS-11 was sold to the McRae family.

It was during this period that the greatest amount of modification was brought to the building, both on the interior and the exterior. Between 1903 and 1912, it appears that the southern additions were removed along with the hearths and a single hanging chimney for cast-iron stoves was installed in place of the western hearth, leaving one chimney flue. These modifications reflect its change in orientation from the parade ground to the field and road south of the building, along with upgrades in heating technology. The result of these modifications was more or less the condition in which LaFleur found the building. They include a small room to the north (E3), apparently a bedroom with closet and its own door to the exterior. The west porch, with an exterior storage space (E9), and a parlor area with fireplace were added to the east (E1). The former eastern wall of the building lost all of its windows during this period, a staircase was added adjacent to it (E10) and an upstairs room (E11): Appendix III-3.

The interior wall that spanned west and east between Rooms 1 (E2) and 2 (E5), likely was moved during this period and the chimneys removed. Because of its flat stud construction, the exterior shed, E9, on the northwest corner of the building and the construction of a replacement wall between Rooms 1 (E2) and 2 (E5) were likely built during the same period. This was done at approximately the same time the fireplace was removed (c. 1903 – 1912). The room is spatially incongruous with the wall and reconstructed hearth at their current locations. As to the construction of the preceding wall between Rooms 1 and 2, there was not enough information at the current time to determine their exact design; it was likely similar to the construction of the current wall between Rooms 3 (E7) and 4 (E8). Based upon photographic evidence, the removal of the chimneys and the installation of a hanging chimney for (2) cast-iron stoves for heating and cooking occurred between 1903 and 1912. Modern plumbing also dramatically influenced the building's evolution during this period. The southern additions were removed before 1912 and a new porch was added along with the extension of Room 4 to the south, facilitating the later 1920s or 30s contemporary kitchen extension. The south end of the hallway (Room 5) along with some borrowed space from Room 2 was converted into a bathroom (E6). This decision seems to have been driven by keeping all of the plumbing in the building close together, as it is immediately adjacent to the plumbing in the kitchen.

OPTION III: “STUDY HOUSE”

If an earlier window or door which had been later covered or blocked was discovered in the investigative process, he[William Sumner Appleton] would retain it and develop a method of presenting it as an exhibit in the building. Sometimes he would glass it over, creating the effect of an exhibition case, to take maximum advantage of what the discovery could teach about the history of the building. He developed similar methods for revealing a building’s structure. New materials would be identified in some manner so that later generations of investigators would not confuse with the original fabric those which [William Sumner] Appleton could not avoid replacing. He took maximum advantage of what he found for explanatory and teaching purposes, retaining original elements and minimizing changes to the building and its fabric. He clearly identified what he was forced to add. These are all cardinal dictates of his philosophy, strongly allied as they are to those of his English predecessor, John Ruskin. And these are in the philosophical dictates which still guide the conscientious preservation professional today.

-William J. Murtagh on William Sumner Appleton and SPNEA (Society for the Preservation of New England Antiquities, founded 1910 in Boston, Massachusetts), in *Keeping Time: The History and Theory of Preservation in America* (New York: John Wiley & Sons, 1997), 81-2.

William Sumner Appleton promoted the use of the historic building as a pedagogical instrument. The original fabric had value, as did succeeding improvements in telling the story of the building. By focusing too narrowly on a period of significance, a building’s history may actually be destroyed. In the case of HS-11, the risk of restoration based upon the limited evidence in our hands at this time would not only imperil the resource’s historic fabric from the agricultural era, but from the military era as well. In addition, the current incarnation of the building, for all of its internal contradictions, provides future opportunities for the public, the National Park Service, and scholars to increase our knowledge about the history of the building, its occupants, and the site through different historical eras.

There is, understandably, great interest in restoring the interior of HS-11 to its period of military occupation, and it affects everyone from NPS staff, to the authors of this study and, of course, the general public. The service that this building could perform in illustrating how to read a building’s history from its various eras of construction and finishes is extraordinary. There are no known opportunities, of historic buildings in Western Washington that invite the public to come to an understanding of the interrelationship between their history and construction over time.²

Involvement by the public in interpreting historic resources has been taken to new levels in recent years. In the case of the Octagon’s restoration in Washington D.C., starting in 1991, the general public was allowed access to the building during the restoration as part of a “hard-hat house tours” program. This action was in contrast to the usual approach of closing a building to the public during restoration. As part of our site

investigations of HS-11 this spring, we noticed many of those visiting American Camp, young and old, wanted to peek inside of the building and were interested in discussing its present and past status. Interpretive options for a “Study House” could include staff-guided or a self-guided tours of the building.³

The hard-hat tours at the Octagon benefited the general public and the construction crews who worked on the project. The construction crews benefited from the public recognition of their work for both the effort and skill involved, while the public and scholars benefited from access to portions of the building not usually accessible to them. The NPS staff at the site would benefit from the public attention in much the same way that the construction crews did at the Octagon, receiving public recognition for the important work they do. The public would have the benefit of not only understanding the historic evolution of the interiors of the building, but how they related to the changing patterns of behavior of people who occupied the building during the military and agricultural eras, as well as the historical landscapes of American Camp and the Firth and McRae Farms. Furthermore, the use of the building as a study house would result in the preservation of *all* of the fabric that would be preserved in the “status quo” option, and allow for future technologies and preservation practices to come to bear. Reviewing original evidence, instead of restored building fabric, would be of greater value to future investigators.⁴

PRO:

- High degree of maintaining current historic fabric.
- Access to, and transparency in, interpreting the history of HS-11 and American Camp; high degree of historic fidelity.
- HS-11 as a touchstone for understanding the historical development of the American Camp site as a dynamic cultural landscape.
- Opportunity for the public to observe the restoration of select elements of the building.

CON:

- Exterior-to-interior spatial relationships would be left in their inconsistent state (though interpretive drawings on site could clarify these inconsistencies: see Thomas C. Hubka’s book, *Big House, Little House, Back House, Barn*, for examples). Current interior spatial relationships are inconsistent with the insertions of the fireplace and chimney elements as part of the exterior restoration.
- Interpretation does not confine itself to the period of significance assigned to the building: 1859 - 1874.



Fig. VII-2. Diagram of proposed hybrid interpretation plan with aspects of a study house (conservation) and the restoration of Room 1 and 2 spatially to their military era configuration. Note the restoration of the wall between Rooms 2 and 5 (E6). Interpretive scheme drawing by A. Lemchen, 2005.

OPTION IV: HYBRID RESTORATION AND STUDY HOUSE

This approach could take advantage of the inherent conceptual symmetry of the building with its central hall. The east side of the building would be carefully restored to a spatial configuration reflecting its status during the Military era and the west side rooms would be left, more or less in their current condition under a study house type of treatment. Figure VII-2 shows a conceptual diagram related to the proposed interpretation of the building. The rooms to the east of the central hall would be restored in a manner that recalls their spatial configuration to the best of our knowledge during the Military era. Any new walls would clearly be of modern construction. The current wall between Rooms 1 and 2 would be removed along with the Beaver Board and batten finish in Room 2 and replaced by a wall in alignment with the location evidence in the floor, walls and ceiling.

The reconstructed wall design would have to accomplish two major goals for this project: (1) Sensitivity to best preservation and conservation practices including standards for restoration and reversability. (2) The design would have to accomplish



Fig. VII-3. Perspective drawing showing the interior of the proposed spatially-restored Room 1 looking south. Looking through the doorway to the right of the hearth, the intrusion of the walls from the twentieth century restroom can be seen. Beaver Board is depicted as partially removed in the current Room 2 (E5).

the same structural load bearing capacity as the previous wall. (3) The construction of extant walls, the application of finishes, and their relationship with other wall, floor and ceiling surfaces should be carefully documented as it is disassembled or demolished. The proposed reconstructed wall would leave voids where there may not be enough current evidence to show the exact design of various details including molding. The wall facing would not contact any of the planar surfaces adjacent to it including the ceiling, walls or floor. Instead, the wall plane would be several inches short of contacting these planes. The wall facing would be of the same dimension lumber in a vertical orientation as those found in the wall between Rooms 3 and 4: Figure V-9. This plane of lumber would be covered by battens at the joints and be supported by a steel framework that discretely contacts the floor, ceiling and hearth on both sides to transfer both vertical and lateral loads to the foundation. The structural system would be demountable should future developments demand alterations, and it would clearly be identified as a twenty-first century intervention: Figure VII-3.

In order to effectively recreate the military era space of rooms 1 and 2, the twentieth century walls between former bathroom Room 5 (E6) and Room 2 (E5) would have to be removed in order to allow the new wall's doorway between Rooms 1 and 2 to function adequately. The original military era wall could easily be replaced based upon other sections found in Room 5 (E4 and E6). Alternatively, the replacement wall between Rooms 1 and 2 could have a non historic door in it to allow access to Room 2: see Appendix III-1, 12 and 13.

The central hall, due to its relatively pristine condition, would continue to assist in this interpretation while being the hub for the interpretation of the entire building. Rooms on the west side of the building would be used for the interpretation of McRae era, as well as the overall evolution of the building along with the former bathroom (E6). Though elements of the study house would be present in both sides of the building, the western side of HS-11's interpretation would essentially be left in its current condition and used in the more traditional sense of a study house.

The current southern elevation appears to be historically inaccurate. It is missing stairs to the southern door called for in the restoration plan, along with windows for Rooms 3 and 4. Though there is no historical information on the exact configuration of these stairs, it is recommended that, at the very least, a representational element of the southern stairs be installed. The windows may be more difficult to restore, even symbolically without conjecture. Presumably, the southern windows would have been in alignment with those on the front and of the same design as the other historic windows on the building, some of which have been reproduced. There appears to be no hard and fast rules about the placement of the rear windows, though in Figures III-4 and VI-3 the non-military era windows appear to be in line with those on the north side of the building. The quality of this photograph is such that it is hard to determine this condition with any certainty.

PRO:

- Provides an overall sense of HS-11's historic evolution.
- Allows visitors to examine the interior of the building.
- Provides space that will allow for the interpretation of the building's original design conception, construction and spatial layout during the Military era.

CON:

- Would result in the removal of historic fabric from the Agricultural Era; current walls between Rooms 1 and 2 would be removed along with walls between Room 2 and 5 that would be restored to their original configuration.
- The “reconstructed” wall between Rooms 1 and 2 could be perceived as a 21st century intrusion by visitors, instead of conforming to the expectations of what many think of as “restoration;” the purposeful difference between the reconstructed elements and the historical construction may overwhelm the interpretive message.

PREFERRED ALTERNATIVE

We believe that the “hybrid” approach would best serve the NPS and public. It leaves open opportunities for further restorative activities to the building as evidence is developed by NPS staff, research teams and even the public. It also gives the NPS the opportunity to portray the entire history of the building and its evolution through various incarnations, without privileging one epoch of history over another. The visitor has the opportunity to come to his/her own understanding and interpretation of history based upon the physical evidence before them. Offering the public an opportunity to grapple with the issues surrounding the historic interpretation of physical evidence is a far more intellectually powerful and interactive experience than many fully restored historic buildings offer. The hybrid approach effectively plays upon the physical symmetry of HS-11, to interpret the full extent of its history. It provides understanding of the spatial layout of the building’s plan during the Military era, while the west side of HS-11 provides for interpretation of the spatial evolution during the Agricultural and Historical Park eras.

ENDNOTES

¹ The “Pig War” is so named because the joint occupation of San Juan Island was precipitated by an American Settler’s (Lyman Cutlar) shooting of a Hudson Bay Company boar which he claimed had been trespassing on his potato patch in 1859. This act highlighted the fact that the definition of the international boundary (between present day Canada and the United States) near San Juan Island was in need of clarification as to which country could claim San Juan Island as its territory. For more information see Michael Vouri, *The Pig War: Standoff at Griffin Bay* (Friday Harbor, Washington: Griffin Bay Bookstore), 44 – 51.

² William J. Murtagh, Keeping Time: *The History and Theory of Preservation in America*, rev. ed., (1997), pp. 79 -82. See also the chapter “Unearthing the Mammoth” in Howard Mansfield’s *The Same Axe Twice* (Hanover [N.H.]: University Press of New England, 2000), pp. 14-18. For more on the value of acknowledging change over time, see: the chapter, “Cultural Weathering as a Vehicle for Exploring the Process of Place Making,” in Kingston Wm. Heath’s , *The Patina of Place* (Knoxville: University of Tennessee Press, 2001), 182-86.

³ Strawbery Banke museum, located in Portsmouth, New Hampshire, is an example of a study house approach with self-guided tours. For a discussion of some of the restoration and interpretation challenges facing Strawbery Banke see James L. Garvin’s , *A Building History of Northern New England* (Hanover [N.H.]: University Press of New England, 2001), vii-viii.

⁴ Lonnie J. Hovey, “Hard-Hat House Tours? Interpreting Restoration Projects,” *Association for Preservation Technology Bulletin*, (1996) 27:4, pp. 24-5.

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 - "Fort Steilacoom Officer's Quarters," Steilacoom, Washington, including the center building in the survey.
 - "Fort Vancouver," Vancouver, Washington, including post library and "General Grant's Headquarters."
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BIBLIOGRAPHY III

BIBLIOGRAPHY IV

		Room 1 [E2]	Room 2 [E5]	Room 3 [E7]	Room 4 [E8]	Room 5 [E4]	Room 5 [E6]	Additions
PERIOD I (c.1859-1860)	Floor	Current Subfloor and floor molding likely installed (parlor).	Current subfloor and floor molding likely installed (bedroom, storage).	Current subfloor and floor molding likely installed (bedroom, parlor)	Current subfloor and floor molding likely installed (bedroom, kitchen, dining).	first layer of flooring and floor molding installed (hall).	First layer of flooring, (hall). Floor molding installed.	<i>Not extant during this period.</i>
	Wall	Rough sawn structural plank with battens, <i>south wall not likely in its current location.</i>	Rough sawn structural plank with battens, <i>north wall not likely in its current location.</i>	Rough sawn structural plank with battens, <i>south wall not likely in its current location.</i>	Rough sawn structural plank with battens, <i>north wall not likely in its current location.</i>	Rough sawn structural with battens	Rough sawn structural plank with battens	
	Ceiling	Rough sawn boards 10" to 18" wide x 1" thick and ceiling molding installed.	Rough sawn boards 10" to 18" wide x 1" thick and ceiling molding installed.	Rough sawn boards 10" to 18" wide x 1" thick and ceiling molding installed.	Rough sawn boards 10" to 18" wide x 1" thick and ceiling molding installed.	Rough sawn boards 10" to 18" wide x 1" thick and ceiling molding installed.	Rough sawn boards 10" to 18" wide x 1" thick and ceiling molding installed.	
PERIOD II (c.1860 - 1867)	Floor							<i>Southern additions including Rooms 7 (Dining, Kitchen) and 8 (Kitchen) built during this period.</i>
	Wall	Wallpaper installed	Wallpaper installed in the former space of Room 1.	Wallpaper Installed				<i>One or both walls from Room 5 may have carried through the additions defining dining and kitchen spaces.</i>
	Ceiling						Ceiling molding installed.	
PERIOD III (c.1867 - 1903)	Floor	1x6 flooring added over the subfloor to the line of the former south wall.	1x6 flooring added over the first layer of flooring in the former space of Room 1. 1x6 flooring installed up to line of former north wall location at a later date but before chimney was removed.	1x6 flooring added over the first layer of flooring.	1x6 flooring added over the first layer of flooring. <i>Later 1x6 flooring installed up to line of former wall location for either the north wall or a now missing second wall.</i>	1x6 flooring added over the first layer of flooring.	1x6 flooring added over the first layer of flooring.	
	Wall	Lath and plaster extends into space E5.	Third window in East Wall patched over. Lath and plaster in the former space of Room 1, including over patched window.					
	Ceiling	Lath and plaster extends into space E5.	Lath and plaster in the former space of room 1.					
PERIOD IV (c.1903-1912)	Floor	<i>Removal of fireplace, chimney and patching of second layer of flooring between 1903 -1912</i>	<i>Removal of fireplace, chimney and patching of second layer of flooring between 1903-1912.</i>	<i>Removal of fireplace, chimney and patching of new floor between 1903-1912 followed by two layers of loosely laid linoleum. (parlor, dining)</i>	<i>Removal of fireplace, chimney and patching of new floor. Installation of hanging chimney between 1903 - 1912 and wood or coal stove.</i>	<i>Installation of wood /coal stove attached to hanging chimney in Room 4. Patching of floor at the north end of the hall.</i>		
	Wall	Former south wall removed, replacement wall moved north.	Former north wall removed and replaced north of the present site.	Former south wall moved north	North wall moved north. Void in former south wall left by fireplace patched.			
	Ceiling		Chimney removed, ceiling patched		Chimney removed, ceiling patched.			
PERIOD V (c.1912-1940)	Floor	Linoleum rug installed .(bedroom)	Later followed by loosely laid linoleum later laid down over news paper c. 1925. (bedroom)	Two layers of loosely laid linoleum. (parlor, dining)	Linoleum later laid down over paper in three layers over heavy paperboard. (kitchen)		Bathroom constructed through by borrowing space from Room 2. Restroom plumbing fixtures added.	<i>Southern additions removed between 1903 and 1912. Room E3 added between 1912 and 1930's (bedroom) along with E1(living room), E11 (upstairs bedroom) and E9 (outside storage closet).</i>
	Wall	Wallpaper added over all walls.	New door installed.wall in common with bathroom moved and space donated to E6. Beaver Board and battens applied as finish.	Blue painted paper board applied. Beaver Board and battens applied as finish.	Kitchen plumbing fixtures and cabinetry installed. Beaver Board installed with battens. South wall moved south after 1912		New ceiling molding scarfed into previously existing molding.	
	Ceiling						Ceiling scarfed into previously existing molding.	
PERIOD VI (c.1950-present)	Floor		Fireplace reconstructed, 1x6 flooring patch removed		Fireplace reconstructed, 1x6 flooring patch removed		Bathroom fixtures removed.	Period V era room additions removed.
	Wall							
	Ceiling		Chimney reconstructed		Chimney reconstructed			

Italics denote conjecture/ major variable.

	Room 1 East Wall	Room 2 East Wall	East Wall (Window Patch and under current window)	Room 3 North Wall	South Wall	Room 4 West Wall	North Wall	Room 5 Panel	Batten
Period I (c. 1859 - 1860)	White & Green boards with Batten Shadow					white / off white		White	White
		Green	Green	Green		Green	Green Paint		
		Beige		Beige	Beige		Light Green Paint ?	Beige	
					Burnt Umber Paint				
Period II (c. 1860 -1867)		Wallpaper - Floral Print: Purple on White		Wallpaper - Floral Print: Purple on White	Wallpaper - Floral Print: Purple on White				
				White Fleur De Lis on Purple Ground Wallpaper / Coarse Muslin	White Fleur De Lis on Purple Ground Wallpaper				
Period III (c. 1867 - 1903)	Plaster on wooden lath	Plaster on wood lath on wall area formerly associated with current room 1.							
Period IV (c. 1903 - 1912)				Blue Painted Heavy Paper Board	Blue Painted Heavy Paper Board				
Period V (c. 1912 - 1940)	<i>Wallpaper</i>			White painted Beaver Board	White painted Beaver Board	Blue Painted Beaver Board	Blue Painted Beaver Board		
Period VI (c. 1950 - Present)									

Paint Samples Taken 3/24/04 From Officers' Quarters American Camp, San Juan Island National Historical Park

NOTES:

Conditions: April 18, 2005, overcast rain outside, AAA Library University of Oregon, 8' from double story south facing window on main floor, with fluorescent and some incandescent. 9:45am to 2:30pm
MUNSELL COLOR: MUNSELL BOOK OF COLOR - GLOSSY FINISH COLLECTION

WHITE WITH NO NOTATION INDICATES BRIGHTER THAN MUNSELL 9/

EARTH TONE LAYER IN MANY SAMPLES BETWEEN LARGER LAYERS, THIS COULD BE A PAINT COLOR BUT SEEMS MORE LIKELY TO BE RELATED TO BLEED THROUGH OF TANNINS IN CEDAR OR ACCUMULATION OF DIRT AND DEBRIS IN THE SURFACE OF THE FINISH.

APPENDIX II: WALLPAPER AND LINOLEUM PATTERN PHOTOS



Above; Photo of remnant wallpaper on the south wall of Room 3 (E7), note the restored chimney to the left.

Right: Photograph of the remnant wallpaper on the East Wall of Room 2 (E5), showing the batten shadow that spans the joint between planks.

Photographs taken March 22, 2005 by Aaron Lemchen



APPENDIX II-3

Right. Photo of remnant wallpaper on the South Wall of Room 2 (E5).

Photograph taken March 22, 2005 by Aaron Lemchen.

Right. Sample of linoleum carpet in Room 1.

Photograph taken March 22, 2005 by Aaron Lemchen.



APPENDIX II-5

SOURCES: HAROLD A. LAFLEUR,
HISTORIC STRUCTURE
REPORT:18-19, 25 -27; DRAWING
438/27000, SHEET 3 OF 16;
438/27001, SHEET 1 OF 6.

1. BREAK OR JOINT IN FLOORING AND LOCATION OF FORMER WALL. EVIDENCE FOUND IN MARCH 2005 IN CRAWLSPACE. ROW OF NAILS ROUGHLY IN LINE WITH JOINT. CURRENT WALL LIKELY MOVED FROM THIS LOCATION TO THE PRESENT LOCATION JUST TO THE NORTH

2. WINDOW PATCH DISCOVERED DURING EXTERIOR RESTORATION AND NOTED DURING UNCOVERING OF INTERIOR'S BEAVERBOARD FINISH

3. WALL PATCHED DURING 1981 RESTORATION; FORMER KITCHEN OF MCRAE RESIDENCE EXTENDED FLUSH WITH THE FORMER SOUTH PORCH

4. DOOR IN THE APPROXIMATE LOCATION OF FORMER BATHROOM WINDOW ON THE MCRAE HOUSE.

5. NAIL HOLES IN FLOORING AND CHANGE IN MOLDING INDICATE THAT ROOM 5 EXTENDED THROUGH THE SPACE.

6. FORMER LOCATION OF WINDOW IN MCRAE HOUSE; FACING ONTO THE OPEN SOUTH PORCH NO LONGER EXTANT.

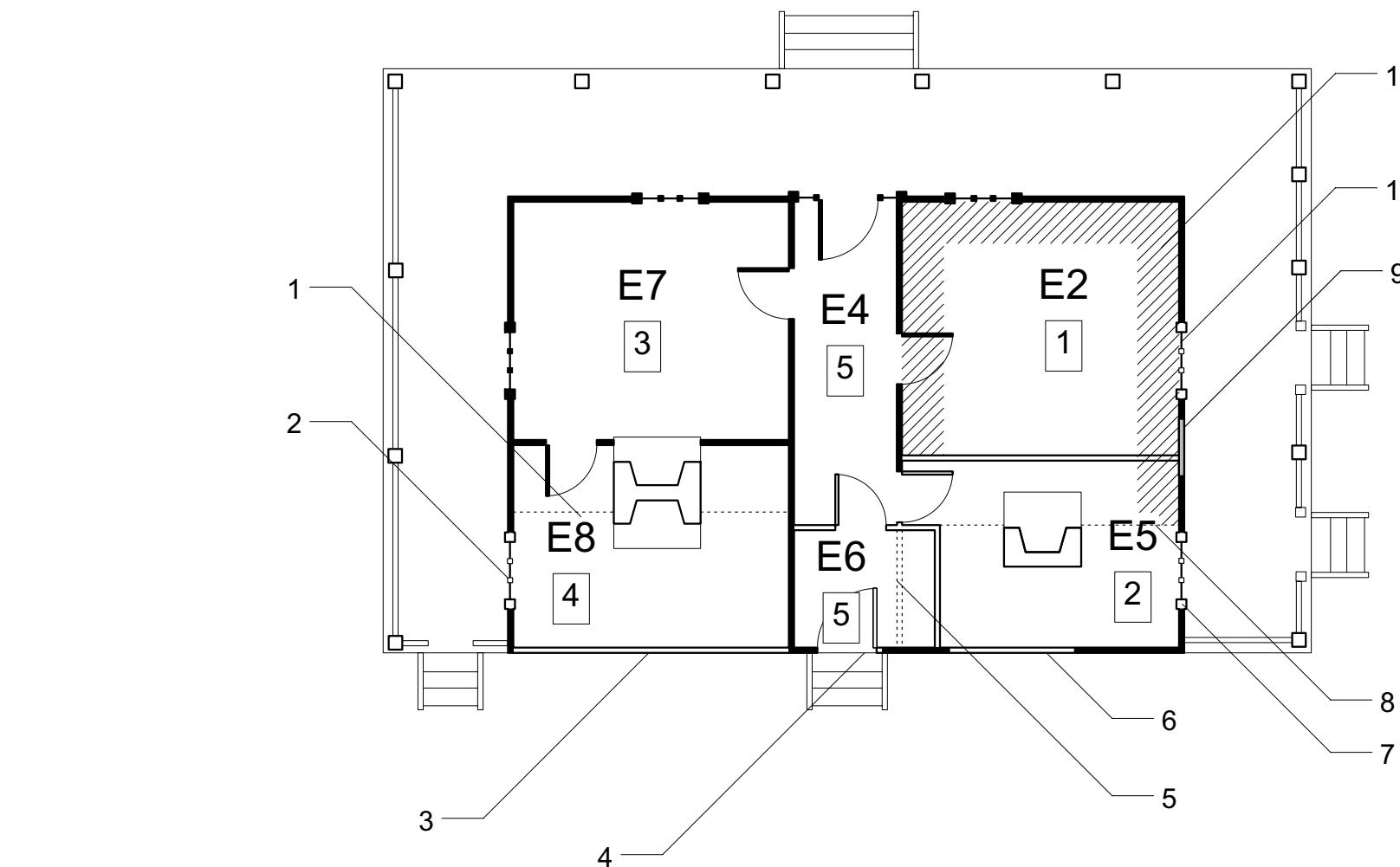
7. NEW WINDOW FROM 1981 RESTORATION; FORMERLY A PATCH IN WALL ADJOINING STAIRCASE.

8. BREAK OR JOINT IN FLOORING WITH PAINT SHADOW ALONG JOINT AND LOCATION OF FORMER WALL. EVIDENCE FOUND IN MARCH 2005 IN CRAWLSPACE OF NAILS ALONG THIS JOINT. ROW OF BATTENS IN LINE WITH JOINT ALONG WITH BATTEN PAINT SHADOW AND CEILING BATTEN BEHIND BEAVER BOARD

9. WINDOW PATCH DISCOVERED DURING EXTERIOR RESTORATION AND NOTED DURING UNCOVERING OF INTERIOR'S BEAVERBOARD FINISH

10. NEW WINDOW FROM 1981 RESTORATION; APPROXIMATE LOCATION OF FORMER DOOR IN MCRAE RESIDENCE

11. EXTENT OF EVIDENCE OF PLASTER WALL.

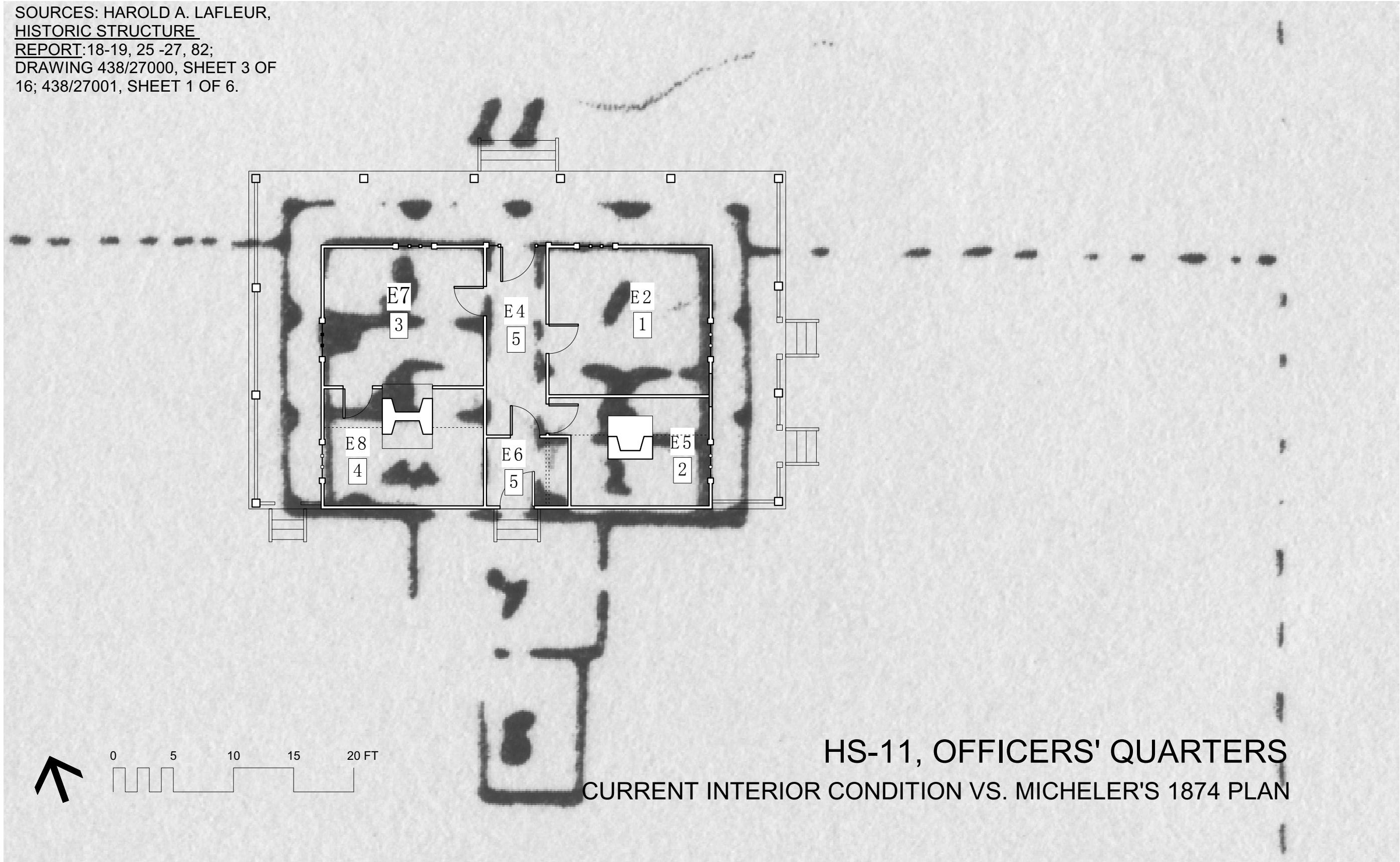


DARK LINES INDICATE PREEEXISTING WALLS BEFORE MCRAES

HS-11, OFFICERS' QUARTERS BASE PLAN CURRENT INTERIOR CONDITION

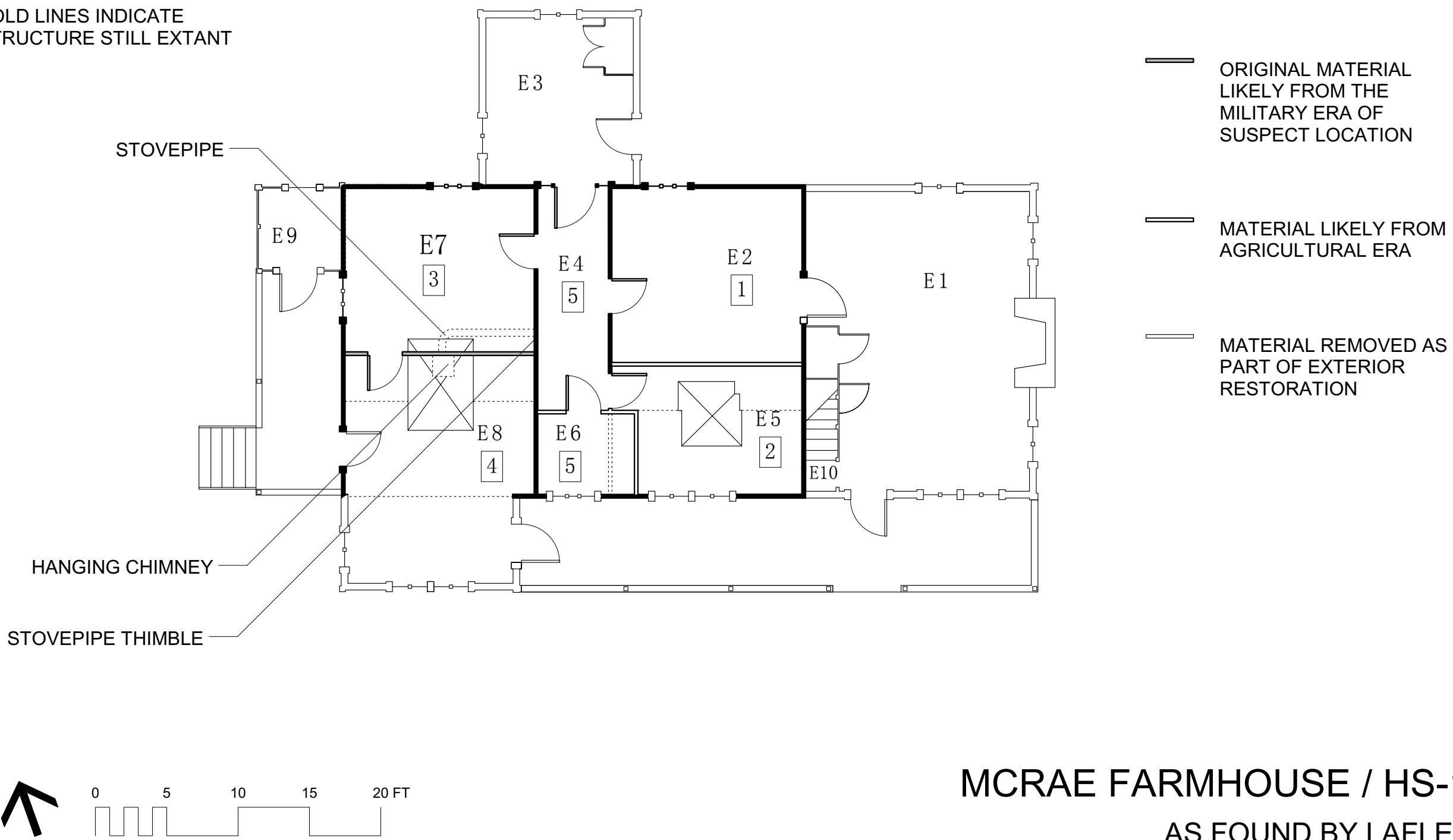


SOURCES: HAROLD A. LAFLEUR,
HISTORIC STRUCTURE
REPORT:18-19, 25 -27, 82;
DRAWING 438/27000, SHEET 3 OF
16; 438/27001, SHEET 1 OF 6.



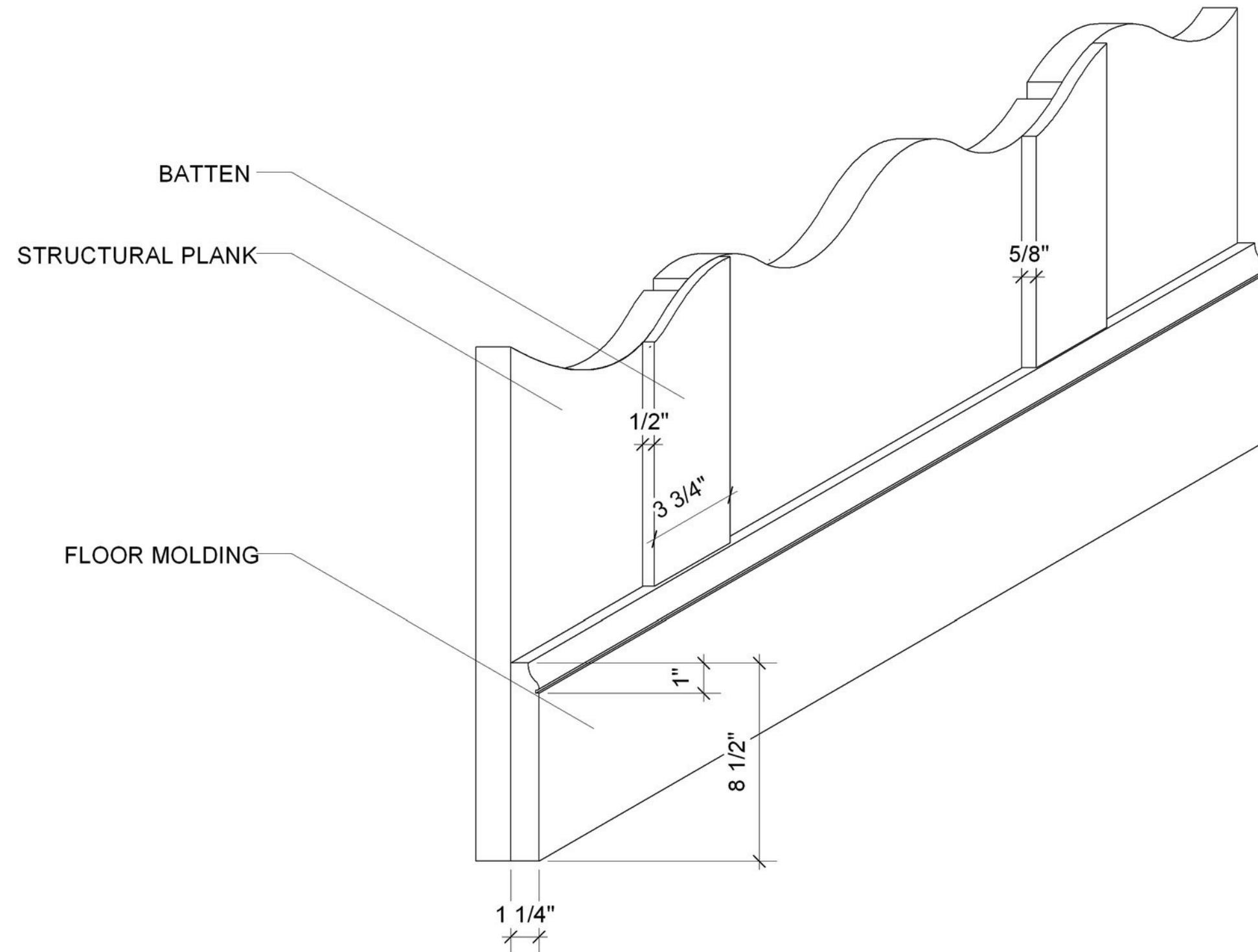
SOURCES: HAROLD A. LAFLEUR,
HISTORIC STRUCTURE
REPORT:18-19, 25 -27; DRAWING
438/27000, SHEET 3 OF 16

BOLD LINES INDICATE
STRUCTURE STILL EXTANT



MCRAE FARMHOUSE / HS-11
AS FOUND BY LAFLEUR

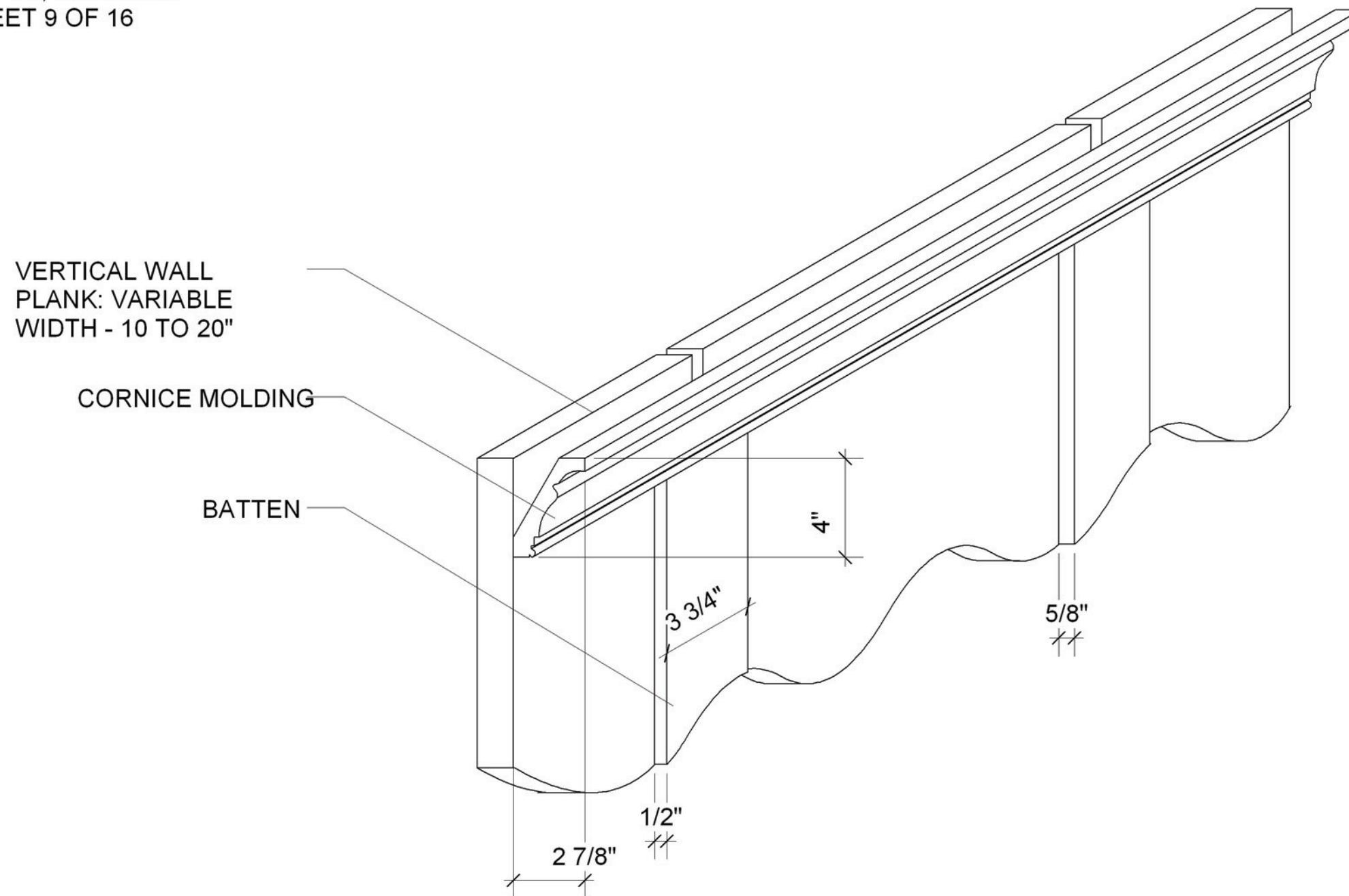
SOURCES: HAROLD A. LAFLEUR,
HISTORIC STRUCTURE
REPORT:19, 26 -27; DRAWING
438/27000, SHEET 9 OF 16



0 1 2 FT

HS-11, OFFICERS' QUARTERS
DETAIL 1: WALL BOTTOM, ROOM 5 (E4 & E6)

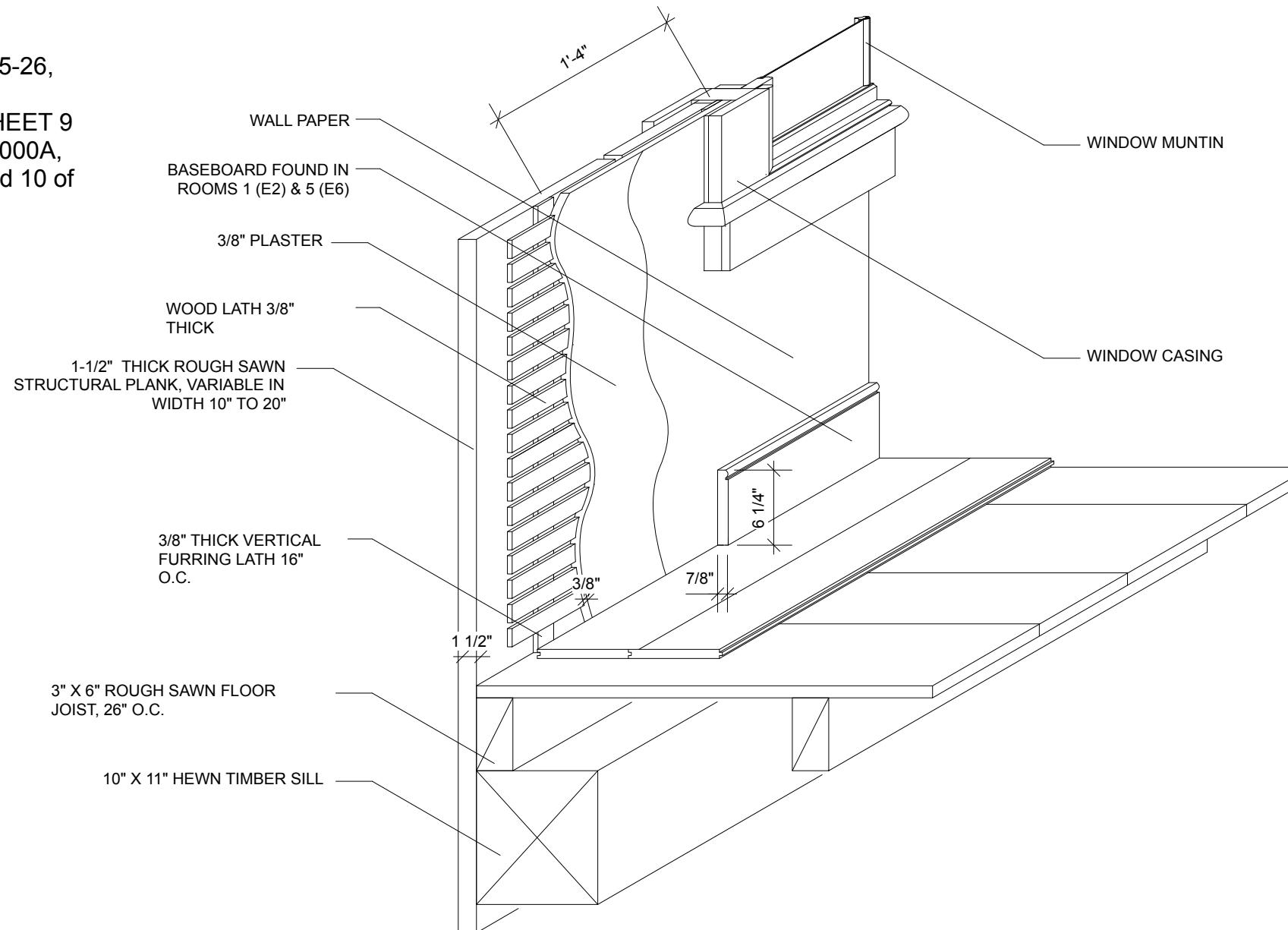
SOURCES: HAROLD A. LAFLEUR,
HISTORIC STRUCTURE
REPORT:19, 26 -27; DRAWING
438/27000, SHEET 9 OF 16



0 1 2 FT

HS-11, OFFICERS' QUARTERS
DETAIL 2: WALL TOP, ROOM 5 (E4 & E6)

SOURCES: HAROLD
A. LAFLEUR,
HISTORIC
STRUCTURE
REPORT:18,25-26,
DRAWING
438/27000, SHEET 9
OF 16, 438/25000A,
Sheets 5, 6 and 10 of
14.

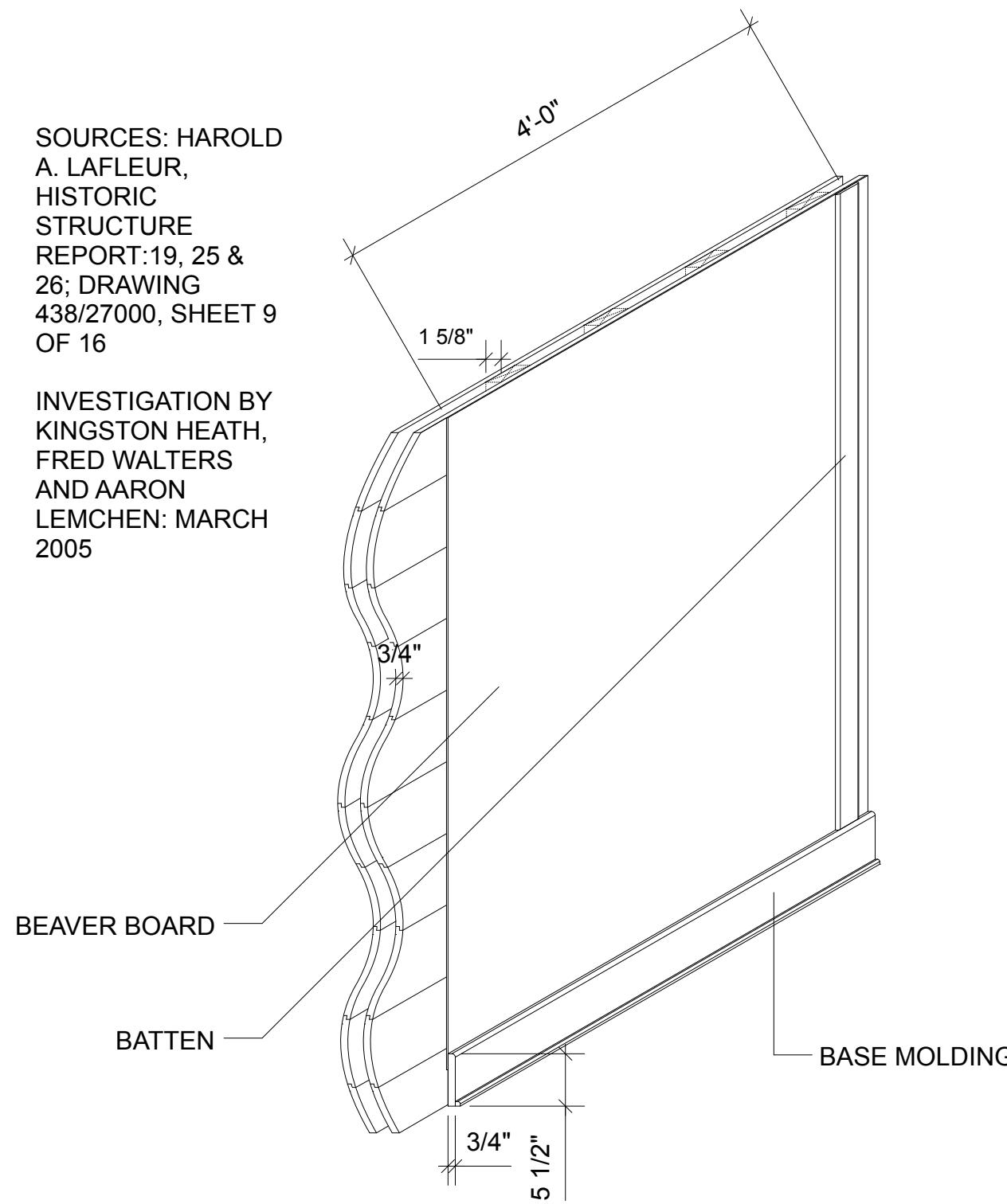


0 1 2 FT

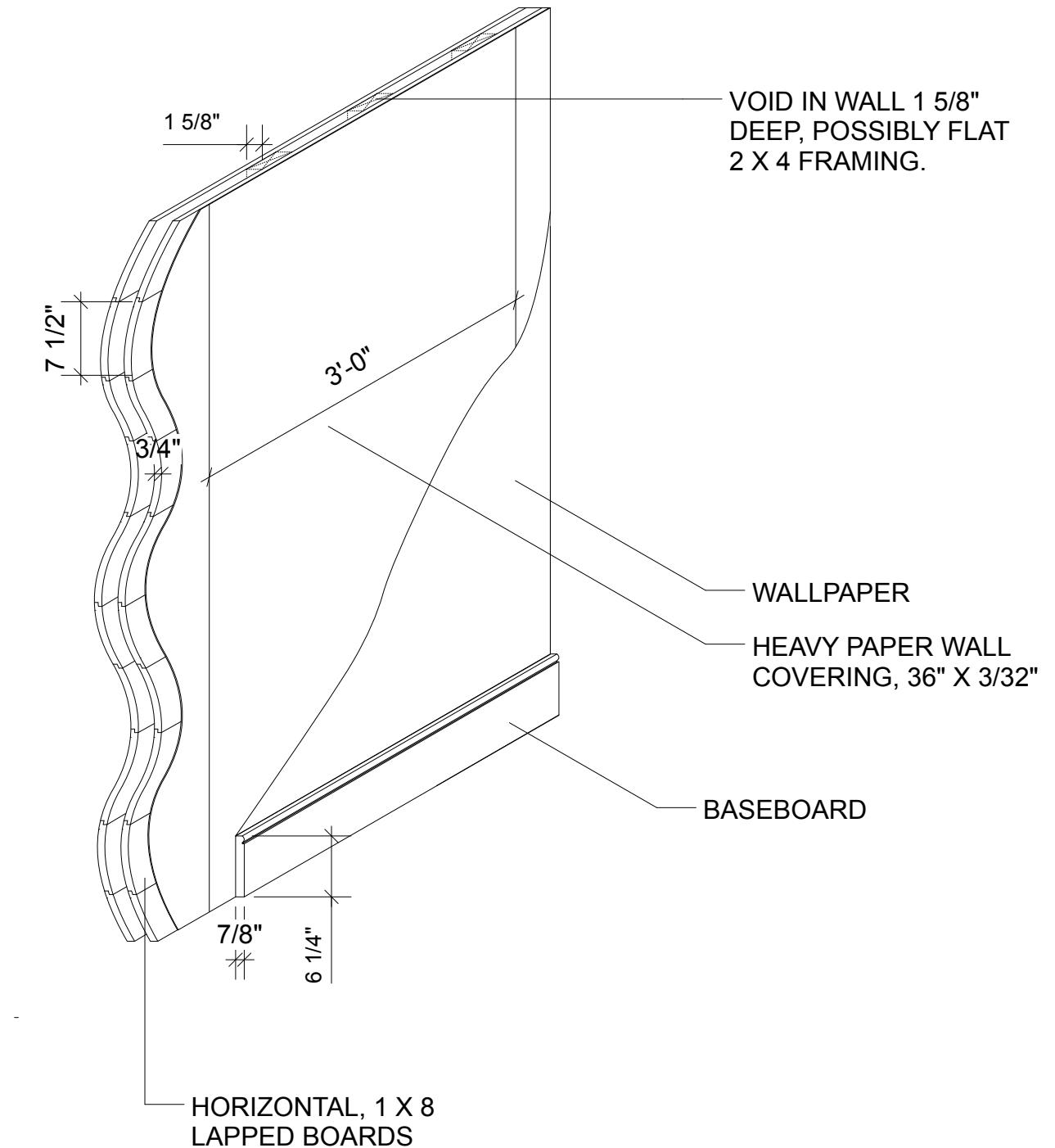
HS-11, OFFICERS' QUARTERS
DETAIL 3: EAST WALL, ROOM 1 (E2)

SOURCES: HAROLD
A. LAFLEUR,
HISTORIC
STRUCTURE
REPORT: 19, 25 &
26; DRAWING
438/27000, SHEET 9
OF 16

INVESTIGATION BY
KINGSTON HEATH,
FRED WALTERS
AND AARON
LEMCHEN: MARCH
2005



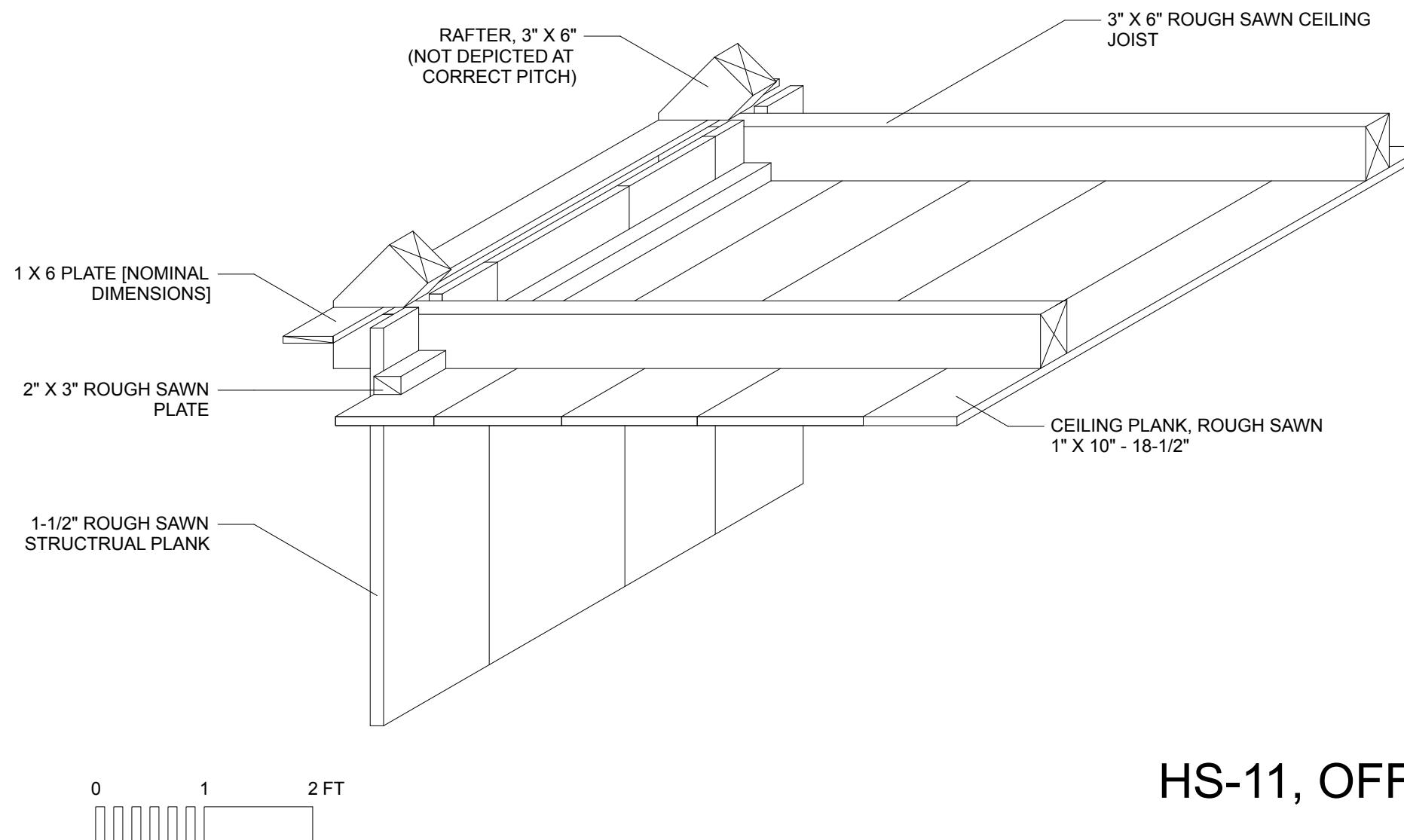
A: SOUTH SIDE OF THE WALL



B: NORTH SIDE OF THE WALL

HS-11, OFFICERS' QUARTERS
DETAIL 4: WALL BETWEEN ROOM 1 (E2) AND ROOM 2 (E5)

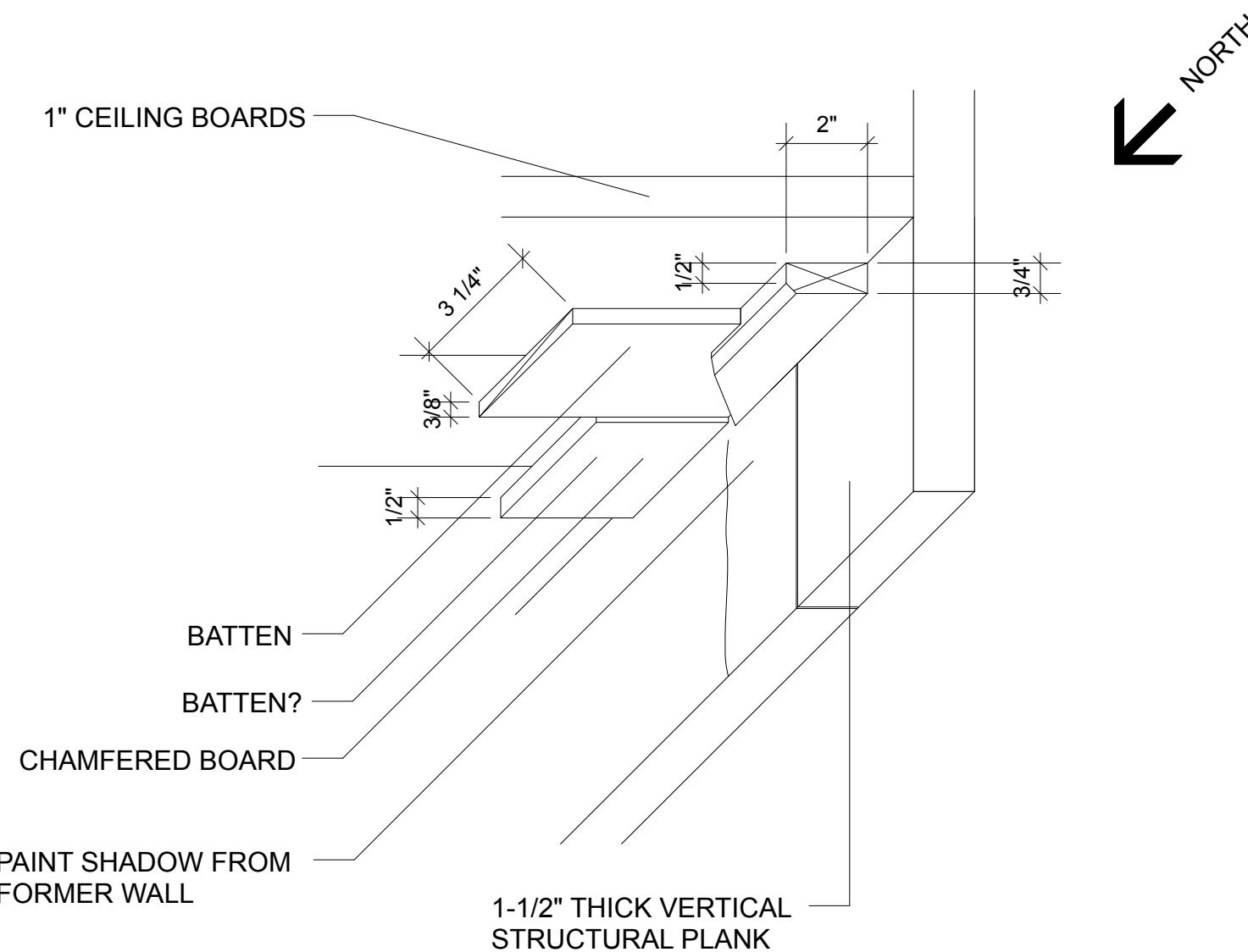
SOURCES: HAROLD A.
LAFLEUR, HISTORIC
STRUCTURE
REPORT:18,25-26,
DRAWING 438/27000,
SHEET 9 OF 16, 438/25000A,
SHEETS 5, 6 AND 10



HS-11, OFFICERS' QUARTERS
DETAIL 5: NORTH WALL

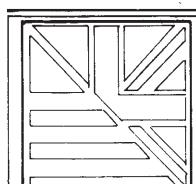
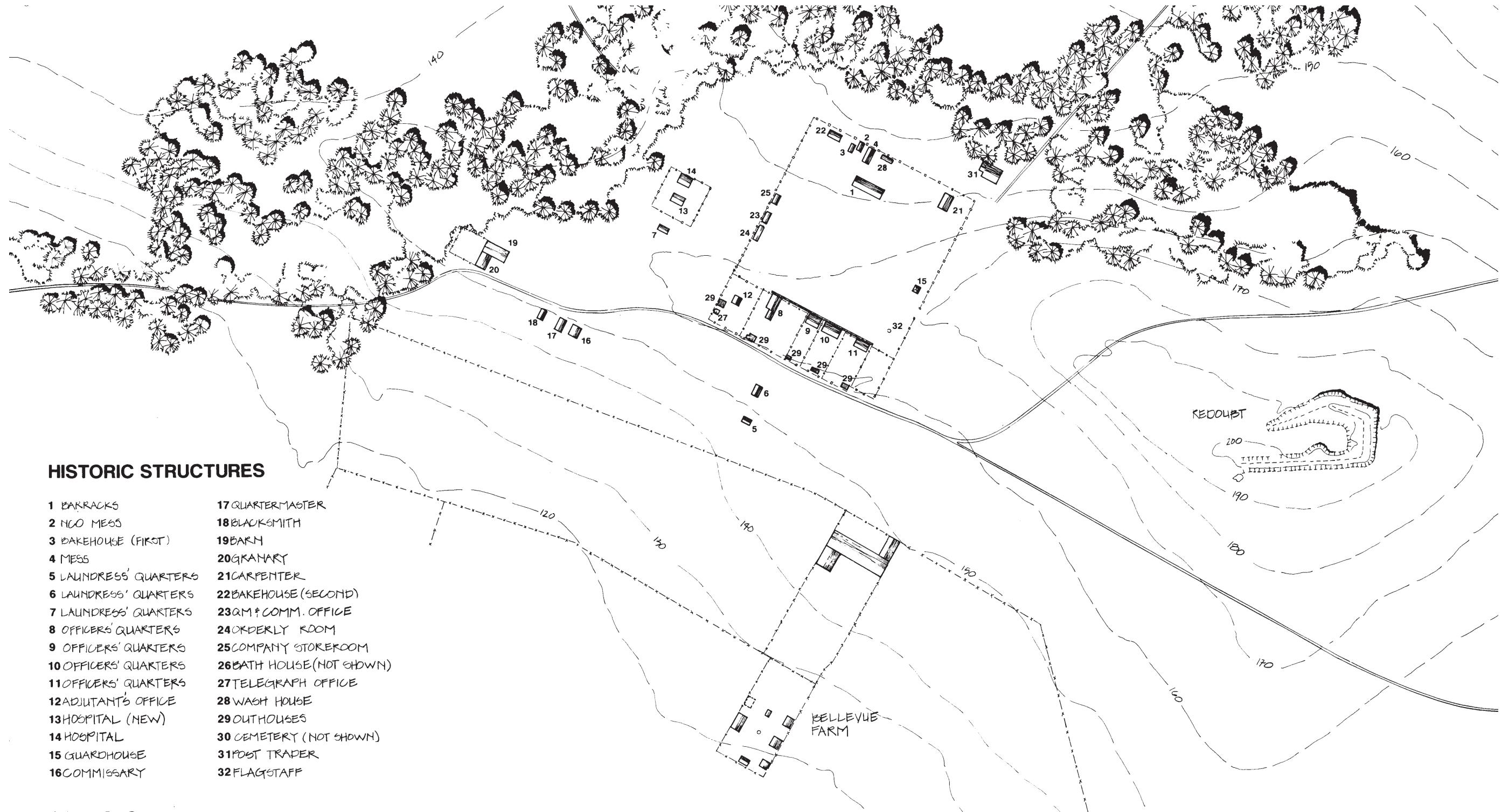
SOURCES: HAROLD A.
LAFLEUR, HISTORIC
STRUCTURE
REPORT:18-19, 25 & 26;
DRAWING 438/27000,
SHEET 4 OF 16

INVESTIGATION BY
KINGSTON HEATH, FRED
WALTERS AND AARON
LEMCHEN: MARCH 2005



0 6 IN
□ □ □

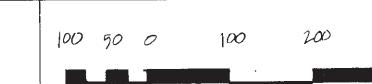
HS-11, OFFICERS' QUARTERS
DETAIL 6: ROOM 2 (E5) EAST WALL



**SAN JUAN ISLAND
NATIONAL HISTORICAL PARK
HISTORIC LANDSCAPE STUDY**

NATIONAL PARK SERVICE
PACIFIC NORTHWEST REGION
CULTURAL RESOURCE DIVISION

DRAWN BY: GILBERT DATE: 6/86



SCALE 1"-100'

NORTH

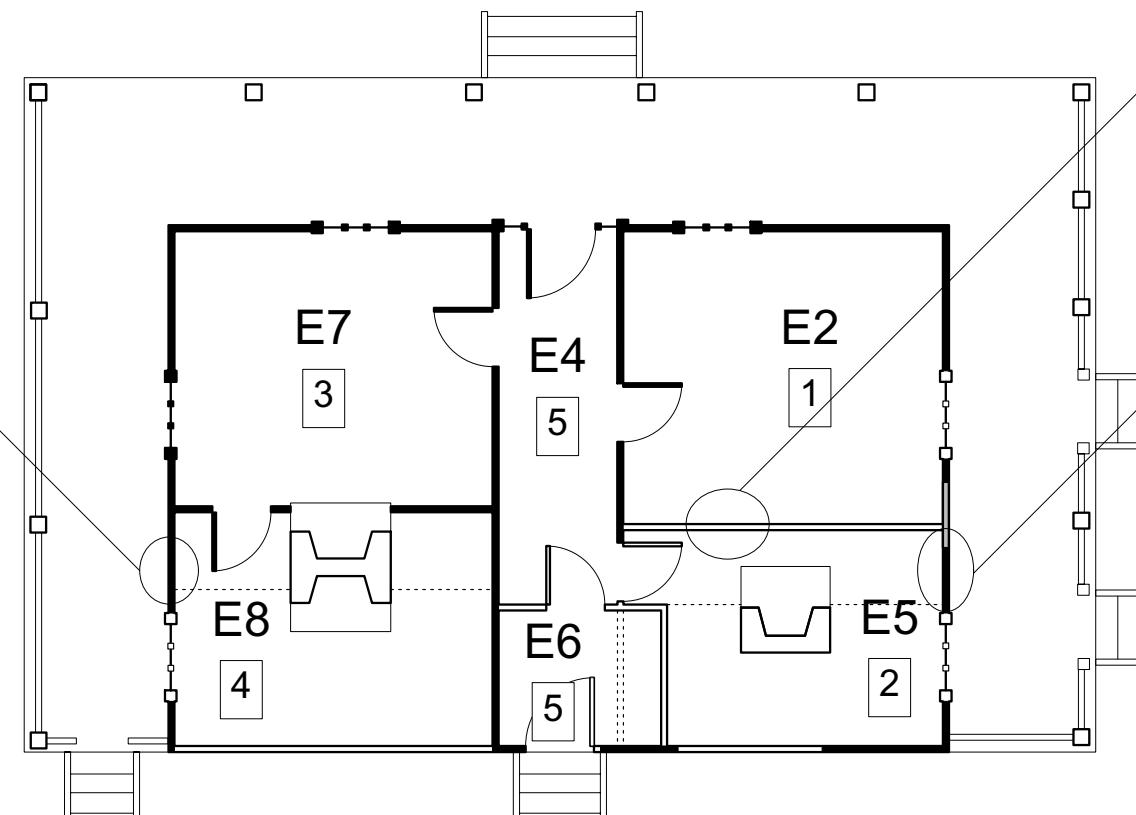


**HISTORIC BASE MAP
AMERICAN CAMP
(CIRCA 1867)**

DRAWING NO.
438 - 80018
SHEET 5
OF 13

SOURCES: HAROLD A. LAFLEUR,
HISTORIC STRUCTURE
REPORT: 18-19, 25 -27; DRAWING
438/27000, SHEET 3 OF 16;
438/27001, SHEET 1 OF 6.

REMOVAL OF
BEAVERBOARD IN
THIS AREA TO BETTER
EXAMINE HISTORIC
WALL.



REMOVAL OF A
VERTICAL BATTEN IN
ROOM 2 (E5),
ALLOWING A HOLE TO
BE DRILLED
UNDERNEATH TO
FURTHER GAUGE THE
CONSTRUCTION OF
THE CURRENT WALL
BETWEEN ROOMS 1
(E2) AND 2 (E5).

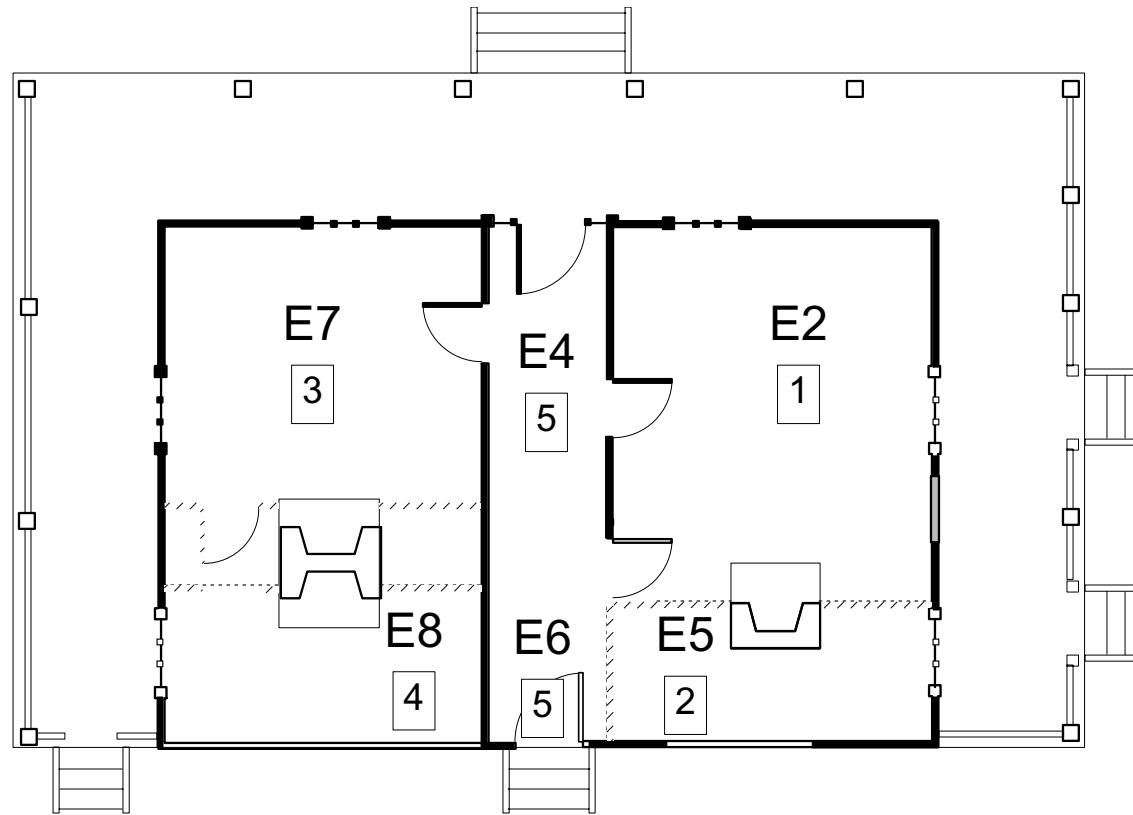
REMOVAL OF
BEAVERBOARD FROM
NORTHERN PORTION
OF THE EAST WALL IN
ROOM 2 (E5) ALONG
WITH THE
EXAMINATION OF THE
MATERIAL BEHIND
CEILING / WALL
BATTEN.

*SAMPLES FOR PAINT ANALYSIS WERE TAKEN FROM ALL ROOMS

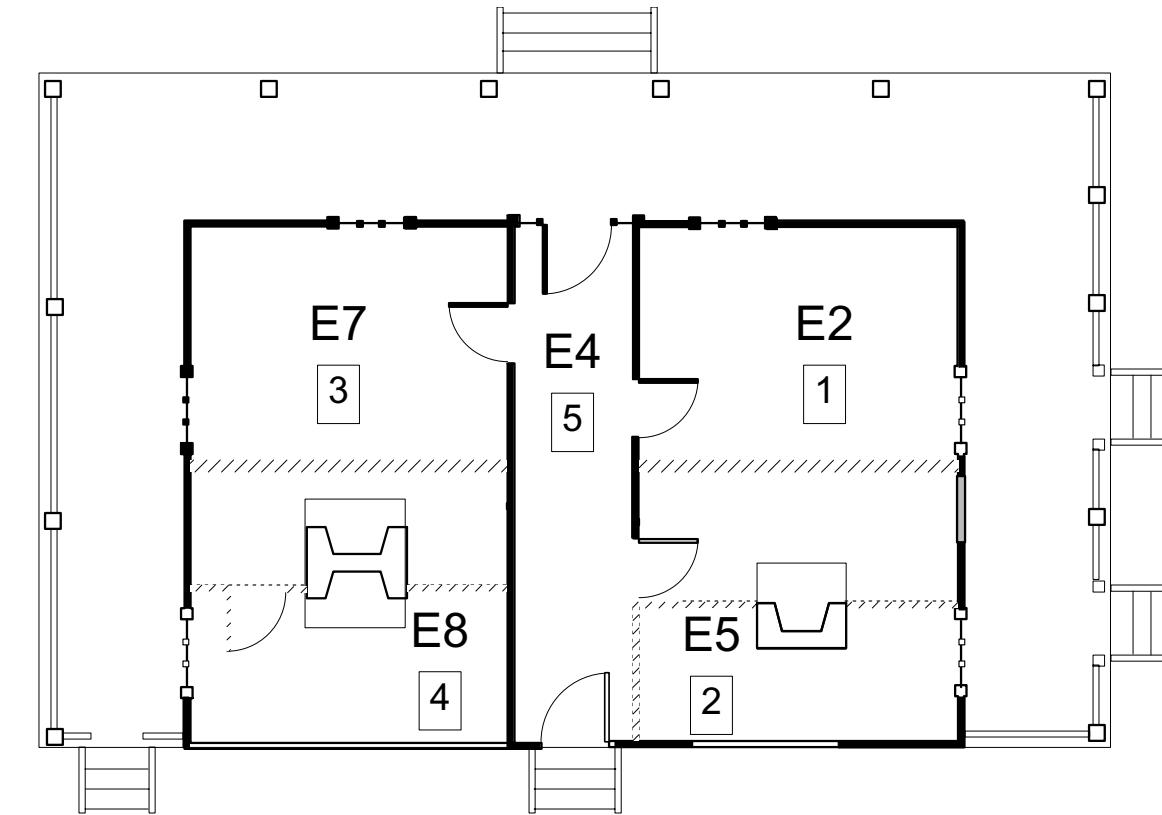


0 5 10 15 20 FT

HS-11, OFFICERS' QUARTERS SITES OF DESTRUCTIVE INVESTIGATION

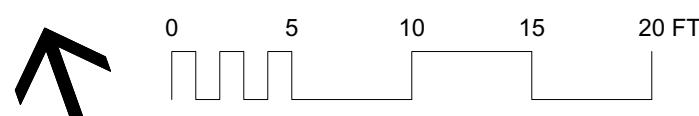


PROBABLE LAYOUT "A" - BASED ON LAFLEUR DRAWING AND PHYSICAL EVIDENCE

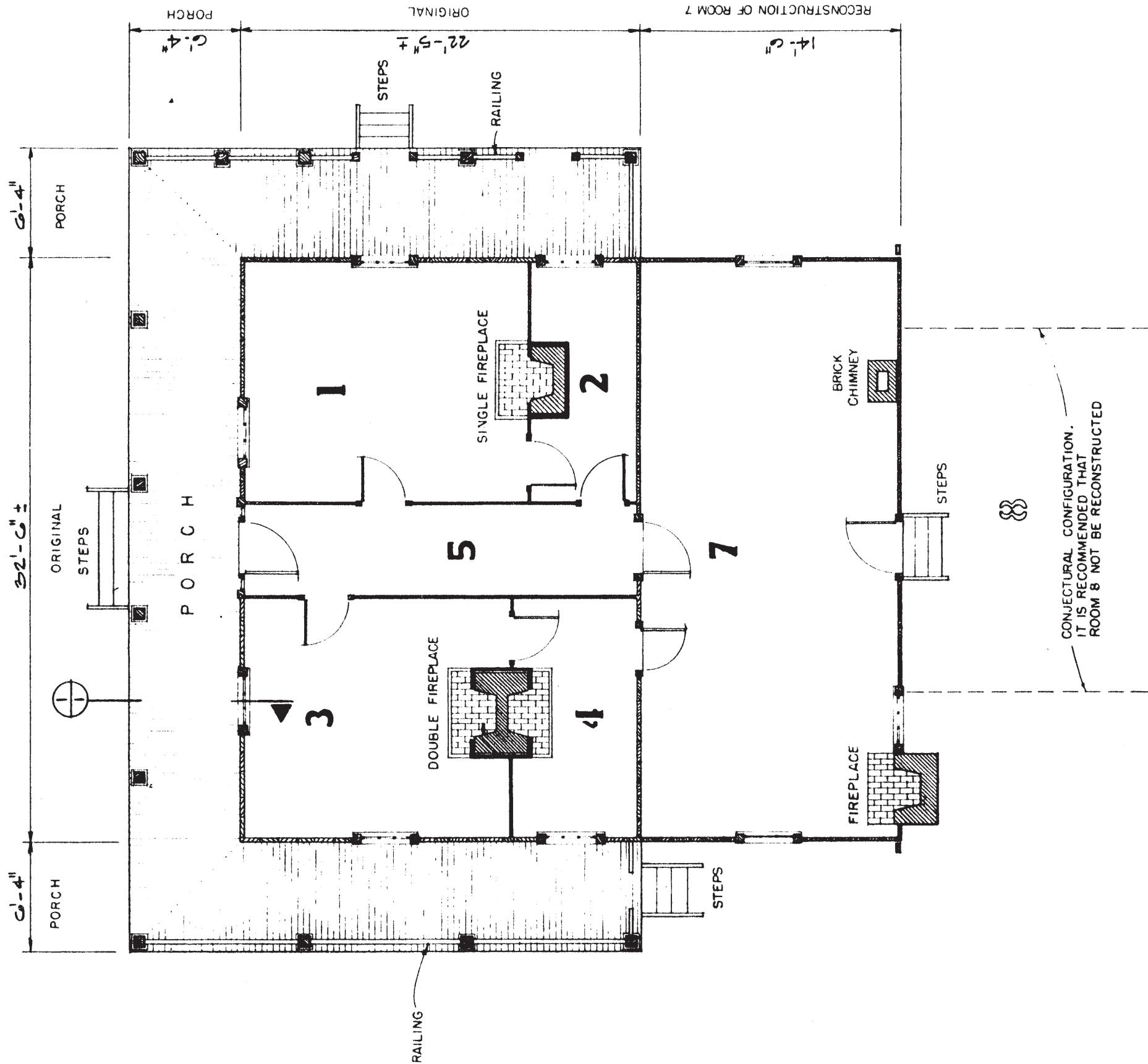


PROBABLE LAYOUT "B" - BASED ON MICHELMER DRAWING AND PHYSICAL EVIDENCE

*HATCHED AREA INDICATES PROBABLE WALL



HS-11, OFFICERS' QUARTERS PROBABLE INTERIOR LAYOUTS



The original plan of the interior restoration from the *Historic Structures Report* by Harold A. Lafleur. It shows the proposed Room 7, and Room 8; it was felt subsequently that there was too much conjecture to reconstruct. Note that Room 7 does not have any internal divisions for such a large space.

Both figures from U.S. Department of the Interior, National Park Service, Denver Service Office, *Historic Structure Report, San Juan Island National Historical Park, Officers' Quarters HS-11, Laundress' Quarters HS-6 and English Camp Hospital HS-18, Architectural Data* (January 1978), by Harold A. Lafleur, above page 90 Figure 5; right Drawing 438/27001, sheet 1/6.



Fig. II-18 *upper right*: Photograph of American Camp in the late 1860s or early 1870s from the northeast side of the redoubt. The officers' quarters can be seen at the extreme left (see arrow).

Courtesy of National Park Service, San Juan Island National Historical Park.



Fig. II-19 *lower right*: Photograph by Aaron Lemchen of American Camp from the redoubt in October 2004, showing the officers' quarters (HS-11) just right of center and the laundress' quarters (HS-6) leftmost.

found in an officer's quarters would have been personal property, and therefore would not have been identical from family to family.²¹

ENDNOTES

¹ Alison K. Hoagland, *Army Architecture in the West: Forts Laramie, Bridger, and D.A. Russell, 1849-1912* (Norman: University of Oklahoma Press, 2004), 6, 18.

² It should be noted that while military installations have a definite effect on the local community in the case of Bellingham, Port Townsend, Steilacoom and San Juan Town, these effects may not always be the singular driving force in creating the town, nor are they permanent. Bellingham also had a sawmill and other industry related to the Fraser Gold Rush; the series of San Francisco Fires also brought about the economic and political conditions that led to the establishment of the fort. Steilacoom has remained a relatively small town not too far from the sprawl adjoining nearby Fort Lewis and Tacoma. San Juan Village's population declined after the army abandoned the post.

Department of the Interior, National Park Service, Denver Service Center, *Historic Resources Study: San Juan Island National Historical Park, Washington* (1972) by Erwin Thompson, 188.

³ Robert W. Frazer, *Forts of the West: Military Forts and Presidios and Posts Commonly Called Forts West Of The Mississippi River To 1898* (Norman: University of Oklahoma Press, 1965), xiv. "From 1846 until the 1880's, the military policy of the United States in the West was devoted to the control of the Indian."

⁴ The Fort Vancouver Barracks is the name currently used in various National Register Nominations for buildings and districts within the area. The U.S. Army post was initially assigned the name of the Columbia Barracks to distinguish it from the Hudson Bay Company's Fort Vancouver, which it was initially collocated with. The name was later changed to the Vancouver Barracks.

⁵ U.S. Department of the Interior, National Park Service, Historic American Building Survey, *Fort Vancouver: Vancouver, Clark County, Washington*, (June 1937) by Louis Baeder, HABS WASH 6-Vanco-1, <http://memory.loc.gov/pnp/habshaer/wa/wa0200/wa0232/data/002.tif> accessed 3/10/2005.

⁶ U.S. Department of the Interior, National Park Service, Historic American Building Survey, *Ft Vancouver: Post Library*, (1937) by A.M. Welch, F.A. Dings and Louis Baeder, <http://memory.loc.gov/pnp/habshaer/wa/wa0000/wa0007/sheet/00002a.tif> accessed 3/10/2005; U.S. Department of the Interior, National Park Service, National Register Of Historic Places Inventory – Nomination Form, *Officer's Row, Fort Vancouver Barracks*, (1974) by Veteran's Administration 7.1-2, 7.4, 8.1-8.2, <http://www.oahp.wa.gov/gis/pdfs/586.pdf>, accessed June 13, 2005.

⁷ Ulysses S. Grant held the rank of Captain while he was stationed at the Fort Vancouver (Columbia) Barracks. The naming for this building, like Grant's House, was likely honorific. This building and the barracks are, to the best of our knowledge, no longer extant either due to the expansion of Pearson Field or to the construction of the interchange between I-5 and Washington State Route 14.

⁸ Beaver Board and Upson Board were trade names for this product. In fact, the delineators of the HABS recordation of General Grant's Quarters referred to the wallcovering in parts of the building as "Beaver Board". Beaver Board was first introduced in 1906, see the entry for "Beaver Board and Upson Board" under the heading "Plank Construction – New Research" in Chapter 4 and note 10 for the same chapter.

⁹ U.S. Department of the Interior, National Park Service, Historic American Building Survey, *Ft Vancouver: Gen'l Grant's Headquarters* (1937) by F.A. Dings and Louis Baeder, <http://memory.loc.gov/pnp/habshaer/wa/wa0000/wa0005/sheet/00001a.tif> and <http://memory.loc.gov/pnp/habshaer/wa/wa0000/wa0005/sheet/00003a.tif> accessed 3/10/2005.

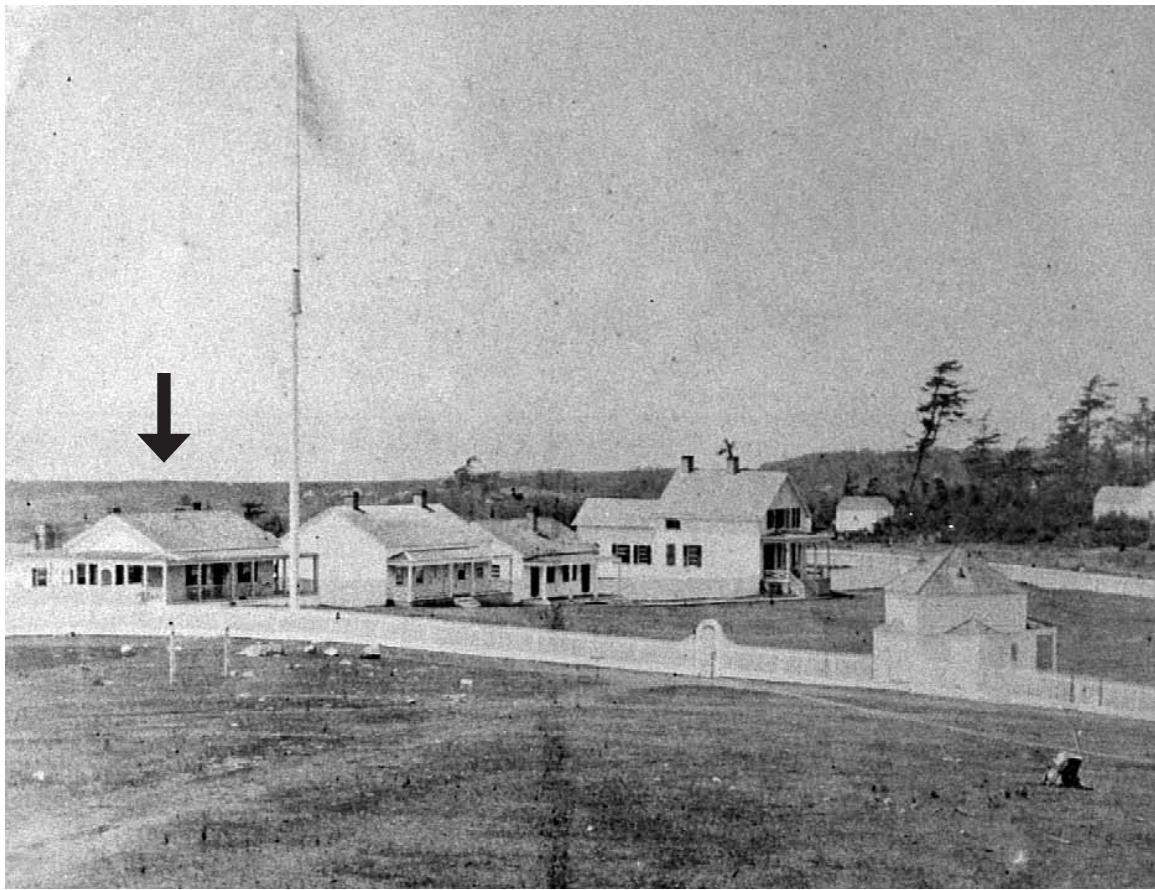


Fig. VI-1: magnification of Fig. II-18. Photograph from 1863 showing HS-11 during the military era. It is the leftmost building in this photograph (see arrow). Also note the presence of the rear (kitchen) addition by the late 1860s.

CHAPTER 6: ANALYSIS

MAJOR ERAS IN THE HISTORY OF HS-11

The linked use of HS-11 and its adjacencies can be divided into three major eras: (1) Military, (2) Agricultural and (3) Historical Park. The initial use of the building was as quarters for U.S. Army officers during 1859 to 1874. In that capacity, the post established its claim to the island on behalf of the United States. During this era, the major physical orientation of the building was facing north toward the parade ground. Immediately south of the military post was the Hudson's Bay Company's Bellevue Farm. After the boundary dispute was settled and the military abandoned the post (1874), the building's site reference changed from facing the parade grounds (to the north), to the agricultural fields (to the south): on the site of the former Bellevue Farm.

The first known civilian owner of the building was Robert Firth, the former manager of Bellevue Farm. In the early twentieth century, the building was sold to the McRae Family. In the period after 1903, the building underwent significant remodeling.



Fig. VI-2. View of HS-11 after its exterior restoration. Photo by Aaron Lemchen, October, 2005.

It physically reflected the changes in societal values and national popular taste from the mid nineteenth to the early twentieth century; the change of the building's orientation from the parade ground to the agricultural fields located on the site of the former Bellevue Farm and the shift in function from officers' quarters to a private residence resulted in the redefinition of the building's stylistic expression from the Greek Revival to the Bungalow style. During this period, additions and alterations to all elevations of the building's exterior were made. There was evidence that many interior alterations were made between 1903 and 1925, including the addition of linoleum flooring, the modernization of the kitchen and the installation of a bathroom: Appendix III page 3.

During the late 1950s or early 1960s, the McRae family sold their property to Washington State Parks as part of an effort by the organization to gather property on the island related to the historical border dispute. In 1966, the property was acquired from Washington State Parks as part of the creation of San Juan Island National Historical Park to be administered by the National Park Service as part of an Act of Congress signed by the President. In 1978, a *Historic Structures Report* (HSR) was completed for this building by Harold A. LaFleur. During the late 1970s the exterior of HS-11 was restored to a condition approximating its appearance during the early military period with exterior additions removed and windows and other features restored based upon photographs and physical evidence from the military and early agricultural eras. The interior spaces of the building were essentially left as they had been by the McRaes, Figure VI-2.

KNOWN HISTORICAL PARK ERA DEVELOPMENTS

Though the exact date that the property was acquired from the McRaes has not been ascertained, it appears that the building was acquired in the late 1950s or early 1960s as part of a drive by Washington State Parks to preserve buildings and sites related to the “Pig War”¹ and other local history after World War II. The property was transferred to the National Park Service when San Juan Island National Historical Park was created in 1966. In the late 1970s or early 1980s, the building’s exterior was restored to its former condition during the military era. This restoration made use of the best available information at the time developed by Thompson and LaFleur. At present, the interior has never been restored (outside of the reinsertion of the hearth and related elements, removal of the west hanging chimney and removal of the plumbing fixtures from the bathroom). The southern walls of Rooms 2 and 4 (minus there window openings) were restored to their original position as part of the exterior restoration along with the removal of the southern porch. The roof massing was restored and the veranda was reconstructed to the north and east sides of the building. With exception of the fenestration on the south facade, missing windows and doors were reintroduced to all sides of the building.

OPTIONS FOR THE DISPOSITION OF HS-11’S INTERIORS

OPTION I: STATUS QUO

This option recommends the management of HS-11 in a similar manner as the NPS has been doing since the exterior restoration was completed. It would remain a stabilized exhibit site. There would be no public access to the interior.

PRO:

- High degree of maintaining remaining historic fabric.
- Little wear from use by visitors and staff.
- Further expenditures of resources limited in comparison to other options, including maintenance and interpretive work.
- Little cost for improving or maintaining accessibility to the building.

CON:

- Lack of public access to the building leads to diminished understanding of history as it relates to the site and the building. In addition, the appreciation of the building by the public may diminish because of this relationship.
- The interior spaces and finishes do not reflect the period of significance; at present, there is an inconsistent relationship between interior and exterior features.

OPTION II: CONTINUED RESTORATION TO MILITARY ERA

The restoration of HS-11 to its military era configuration is fraught with preservation issues, not the least of which is the conservation of historic fabric, even that fabric that relates to the military era. The ideal restoration would give the public an insight into home life for an officer and his family during this period at American Camp. Yet, there is, at present, limited evidence for a certified restoration of this building.

PRO:

- Aesthetic and historical consistency between exterior and interior treatments.
- Building interpretation would focus on the Military era (1859-1874) as the primary period of significance in accordance with the NPS's charge.

CON:

- Requires large amounts of conjecture as to the configuration of the structure during the Military era. Likely would result in the destruction of relevant historic fabric.



Fig. VII-1. Left: The late eighteenth century raised paneling is mounted on piano hinges and operated here by Professor Patrick Malone of Brown University, revealing the early eighteenth century historic hearth in the Parson Barnard House, North Andover, Massachusetts (c.1715). Abbott Lowell Cummings of Yale University is to his right interpreting the site's preservation approach to members of the Vernacular Architectural Forum. Right: another door in the same room is opened by an unnamed person in the "study house" and reveals a chronology of the wallpaper patterns within the house. Photographs courtesy of Dr. Kingston W. Heath, 1981.