

Building 36
Mammoth Hot Springs, Wyoming



Historic
Structures
Report

AUGUST 2003

Prepared by:

A&F
ARCHITECTS[®]

Prepared for:
National Park Service



HISTORIC STRUCTURES REPORT

■

ADMINISTRATION BUILDING

■

MAMMOTH HOT SPRINGS, WYOMING

■

AUGUST 2003

Prepared for:
NATIONAL PARK SERVICE
Mammoth Hot Springs, Montana

■

Historic Consultants:
HISTORICAL RESEARCH ASSOCIATES
125 Bank Street
P.O. Box 7086
Missoula, Montana 59807

■

Prepared by:
A&E ARCHITECTS, P.C.
224 North Higgins Avenue
Missoula, Montana 59807



Table of Contents



Executive Summary	i - iii
Part 1. Developmental History	1
A. Historical Background and Context	1
B. Chronology of Development and Use	2
C. Physical Description (Existing Conditions)	15
Part 2. Treatment and Use	70
A. Ultimate Treatment	70
B. Requirements for Treatment	
Secretary of Interior's Standards for Preservation Treatment	Appendix A
List of Original Drawings	Appendix B
Bibliography	Appendix C

LIST OF FIGURES

- Figure 1: First Floor Plan, Construction Chronology
- Figure 2: Second Floor Plan, Construction Chronology
- Figure 3: Third Floor Plan, Construction Chronology
- Figure 4: Attic Floor Plan, Construction Chronology
- Figure 5: The interior of one of the original latrines prior to remodeling
- Figure 6: Circa 1936 photo of the remodeling of the dormitory, north wing
- Figure 7: Circa 1935 photo of the remodeling of the north wing dormitory space
- Figure 8: Interior finishes in remodeled office areas resulting from 1938/1939 remodeling
- Figure 9: Circa 1960 photo of a meeting area in the first floor
- Figure 10: View of one of the reception areas in the Superintendent's Office circa 1975, prior to 1982 remodel
- Figure 11: First Floor Plan – Historic Fabric Documentation
- Figure 12: Second Floor Plan – Historic Fabric Documentation
- Figure 13: Third Floor Plan – Historic Fabric Documentation
- Figure 14: Attic Floor Plan – Historic Fabric Documentation
- Figure 15: Looking northeast at the main façade of the Administration Building
- Figure 16: Looking east at the entrance to the southern half of the building
- Figure 17: Looking northeast at the entrance to the northern half of the building
- Figure 18: Looking southeast at the main façade of the Administration Building
- Figure 19: Looking east at a typical single wood double-hung window
- Figure 20: Looking south at a typical set of wood double-hung windows
- Figure 21: Looking southwest at the rear of the building
- Figure 22: Looking west at the rear elevation and the connecting balconies on the building
- Figure 23: Looking northwest at the rear entrance to the north half of the building
- Figure 24: Looking southwest at the rear entrance to the south half of the building
- Figure 25: Looking northwest at the rear of the Administration Building
- Figure 26: Looking west at the entrance doors from the second floor balcony on the north half of the building
- Figure 27: Looking southwest at the second floor balcony and structure
- Figure 28: Looking southeast at the entrance doors from the second floor balcony on the front of building
- Figure 29: Looking west at the double set of wood paneled doors in Hallway 100
- Figure 30: Looking east at the original doors and transom
- Figure 31: Looking southwest at offices in the area of room 101
- Figure 32: Looking south at room 109
- Figure 33: Looking northeast at a wood paneled door and transom in room 109
- Figure 34: Looking south at the south boiler room in the original mechanical room 111
- Figure 35: Looking northwest at the boiler room
- Figure 36: Looking north at the connecting hallway between the south and north halves of the building
- Figure 37: Looking north at a typical renovated bathroom on first floor
- Figure 38: Looking south at room 118
- Figure 39: Looking east at an original door and window in room 119
- Figure 40: Looking southwest at room 122
- Figure 41: Looking east at north stairway and hall
- Figure 42: Looking southeast at the door into the central hallway from stairway
- Figure 43: Looking east at the rear doors on the north end of the building
- Figure 44: Looking northeast at the Superintendent's Office, room 127
- Figure 45: Looking northeast at the reception area, room 125
- Figure 46: Looking southeast in conference room 128

- Figure 47: Looking southeast at room 133
- Figure 48: Looking west at the doorway from room 134
- Figure 49: Looking northwest at the boiler room 135 in the north wing of the building
- Figure 50: Looking northeast at the boiler room entrance and metal stair down to the lower area
- Figure 51: Looking northeast at the corridor wall of room 201
- Figure 52: Looking southwest at the outside walls of room 204
- Figure 53: Looking southeast at room 207
- Figure 54: Looking southwest at room 207
- Figure 55: Looking east from room 201 into room 208 and beyond
- Figure 56: Looking southeast at corridor 211
- Figure 57: Looking west from room 214 to the corridor 211 at the original wood paneled doors and transoms
- Figure 58: Looking east at room 215 where most of the room is original with the exception of the lowered ceiling
- Figure 59: Looking northeast at room 220
- Figure 60: Looking east at the north stairway and corridor 231
- Figure 61: Looking west at the north stairway and corridor 231
- Figure 62: Looking south from stairway 231 to the doorway into room 230
- Figure 63: Looking south in room 227
- Figure 64: Looking east at the bathroom 228
- Figure 65: Looking west at room 239/236
- Figure 66: Looking west at a window detail in room 233
- Figure 67: Looking south at a circa 1930's bathroom from room 233
- Figure 68: Looking south at the original wood base and casing at the door in room 232
- Figure 69: Looking south in room 232 at the transom above the ceiling in the door to the stairway
- Figure 70: Looking east from room 239 to the original NCO Quarters
- Figure 71: Looking at the original doorway and wall materials in the corridor to room 242
- Figure 72: Looking northeast at room 242
- Figure 73: Looking east from stairway 400 at the original entrance doors to the balcony at rear of building
- Figure 74: Looking west from stairway 300 at the original doors to the front balcony
- Figure 75: Looking southeast from stairway 300 at the stair to the attic
- Figure 76: Looking northeast at the stair to the attic from stairway 300
- Figure 77: Looking south at the entrance to room 301 from the stairway
- Figure 78: Looking south at room 301
- Figure 79: Looking south at room 302
- Figure 80: Looking south at room 305
- Figure 81: Looking southeast at the exterior wall of room 305
- Figure 82: Looking east at an original built-in cabinet in room 307
- Figure 83: Looking south at the exterior wall in room 307
- Figure 84: Looking north at room 310
- Figure 85: Looking southeast at room 310
- Figure 86: Looking southeast at room 312
- Figure 87: Looking east at the north stairway 324 and at the original doors to the rear balcony
- Figure 88: Looking west at the original front balcony doors from the stairway
- Figure 89: Looking northeast at the stair to the attic floor
- Figure 90: Looking southwest at a doorway in room 322
- Figure 91: Looking southwest at room 315
- Figure 92: Looking northwest at the entrance to room 325 from stairway 324
- Figure 93: Looking northwest at room 328

- Figure 94: Looking east at room 329
- Figure 95: Looking north at room 333
- Figure 96: Looking east at the original wood doorway and transom to corridor 336 and room 337 beyond
- Figure 97: Looking northeast at corridor 336 and the original plaster walls and wood trim materials
- Figure 98: Looking south at the corridor from room 338
- Figure 99: Looking northeast at room 338
- Figure 100: Looking southeast at the south stair area of room 400
- Figure 101: Looking southwest at the stone wall and roof along the stairway in room 400
- Figure 102: Looking east at room 401
- Figure 103: Looking west at room 401
- Figure 104: Looking southeast at room 402
- Figure 105: Looking north at room 403 and the passive ventilation system ductwork
- Figure 106: Looking east at the north stairway in room 405
- Figure 107: Looking south at room 404
- Figure 108: Looking north at room 406 and the passive ventilation system ductwork
- Figure 109: Looking west at the dormer windows in room 406
- Figure 110: Looking south at room 406 and evidence of the fire in 1911

Executive Summary

The double cavalry barracks, Building 36, is located within the Mammoth Hot Springs Historic District in Yellowstone National Park. Originally constructed by the U.S. Army as part of Fort Yellowstone between 1909 and 1916, non-commissioned officers and enlisted men were fed and lodged in this building. Since 1916, however, when the Army relinquished control of the building to the Department of the Interior, the building has been adapted for various other uses, principally as office space to accommodate an ever-increasing number of National Park Service employees. Prior remodeling has altered the floor plan of most of the interior spaces, and the removal of much of the historical finishing materials. In addition, previous interior modifications have occurred in a piecemeal fashion, with the result that the interior as a whole lacks a unified architectural theme in terms of finishing materials and surfaces. While the interior of the building has been substantially modified, the exterior of the building has remained virtually unchanged since its original construction.

Yellowstone National Park intends to continue using this building to house its administrative staff, and has received funding authority for rehabilitation of its interior. The purpose of this Historic Structures Report (HSR) is to identify and document remaining historic interior fabric that should be preserved and/or reconstructed during the rehabilitation, taking into consideration the need to bring the building into compliance with current health and safety codes as well as legislative requirements such as the Americans with Disabilities Act (ADA). This HSR does not include a comprehensive analysis of the exterior of the building.

This report is based upon historical research and a physical inspection of the building undertaken May 5th – 8th, 2003. A&E Historical Architect James R. McDonald completed a survey of all of the interior spaces of the building, documenting the existing conditions and the presence and location of any remaining historical fabric and floor plans. HRA Associate, Janene Caywood, reviewed data contained within the historical building files maintained by the park's Maintenance Division, and from the Yellowstone National Park Library and Archives. Copies of plans and drawings also were obtained from the National Park Service Technical Information Center in Denver, Colorado.

The recommendations contained in Part 2, Treatment and Use, reflect two goals: to stabilize the structural integrity of the building through seismic upgrades, and to complete the rehabilitation of the interior in a manner that incorporates critical architectural elements derived from the original building design. Recommendations include the protection, preservation, and re-use of extant historic fabric (e.g., the original balustrades and newel posts in the stairways, oversized doors with transoms) and use of these elements to create a unified theme for wall and ceiling finishes throughout the building. For example, restoring ceiling heights to levels above the door transoms and integrating the use of chair rails in interior wall finishes would create a unified historical theme throughout the building. It is important that the historic fabric remaining in the building be protected and reused to the maximum extent possible. In

order to achieve these goals, we also recommend that further documentation of historic fabric be undertaken as the building is cleared for interior demolition.

Administrative Data

Common Name: Administration Building

Historical Name: Two Company Barracks; Double Cavalry Barracks (US Army Building No. 36)

Smithsonian Number: 48YE486 (District number)

Historic Structure Numbers: HS-36 (LCS# 10599)

Locational Data: USGS quadrangle reference, Mammoth Quadrangle (unsurveyed)

UTM point reference, Zone 12 523783mN 4980120mE.

Proposed Treatment: Rehabilitation.

Related Studies:

1977, 1983 and 1999 LCS Surveys

National Register Nomination for Mammoth Hot Springs Historic District, 2000

David Battle and Erwin Thompson, "Fort Yellowstone Historic Structure Report" 1972

Cultural Resource Data

Date of listing in the National Register: The Mammoth Hot Springs Historic District was listed in the National Register of Historic Places on March 20, 2002. This district includes the buildings constructed by the Army for Fort Yellowstone, historic-era concessioners' buildings, and buildings constructed by the National Park Service for personnel housing and administrative purposes. Building 36, built by the Army as part of Fort Yellowstone, is counted as a contributing resource within the district. Fort Yellowstone, which represents a subset of the National Register district, is currently under consideration for National Historic Landmark status.

Period of significance: 1883 - 1949

National Register Criteria and Areas of Significance: The district is listed under National Register criteria A and C; areas of significance include "military," "architecture," "entertainment/recreation," and "conservation." The following is an excerpt from the 2000 National Register nomination:

The Mammoth Hot Springs Historic District has statewide significance as the administrative and concession headquarters of the largest national park in Wyoming. The district is significant under Criterion A for its historical association with the development of Yellowstone National Park, and more specifically, with the development of administrative and concession policies in Yellowstone and the national park system. The district's location, near one of the major natural curiosities in the park, the Mammoth Hot Springs Terraces, and at the juncture of the first entrance road to the park resulted in its selection as the site of the first administrative headquarters and the site of the first concessions in the first national park in the United States. The first hotels in Yellowstone were located at Mammoth Hot Springs, as well as the first retail store, photograph shop, and filling

station, the successors of which still operate within the district. The army era in the national parks is also associated with the district, which includes Fort Yellowstone, the best-preserved post representing the early military efforts to protect the nation's natural resources. (Fort Yellowstone has been separately nominated as a National Historic Landmark district.) The district is also important for its association with the early history of the National Park Service, reflecting the influence of that agency on park development in areas such as preserving natural features and scenic resources, responding to the popularity of the automobile, creating museums and educational programs, and incorporating master plans in park design. The district is also associated with the history of New Deal era public works programs, having benefited from several projects which provided funding and manpower for improvements and new construction.

Mammoth Hot Springs is also significant under Criterion C for its architecture. Fort Yellowstone, within the district, reflects the layout and architecture of a typical western army fort of the late nineteenth century, and is remarkable for its level of integrity, the masonry displayed in its native sandstone buildings, and the substantial quality of its construction. The buildings of the military period are representative of the work of the United States Quartermaster Corps, Hiram Chittenden, and Reed and Stem.¹

¹ R. Laurie Simmons and Thomas H. Simmons, National Register Nomination for Mammoth Hot Springs Historic District, 2000. Copy available from Wyoming State Historic Preservation Office, Cheyenne, WY.

Part 1. Developmental History

A. Historical Background and Context

In 1872, President Ulysses S. Grant signed into law the Organic Act, establishing Yellowstone National Park "for the benefit and enjoyment of the people." Located in a remote area of then Montana Territory, the park and its natural resources soon proved difficult to protect. Poachers killed wildlife and commercial development threatened fragile geothermal areas. Civilian superintendents were unequal to the task of protecting the park, and, in 1886, a detachment of Army cavalry stationed at Fort Custer, Montana Territory, moved into the park and established temporary "Camp Sheridan" near the base of the Mammoth terraces. In 1890, Congress appropriated funds for the construction of a permanent facility, to be named Fort Yellowstone, with the first buildings complete and ready to occupy by 1891. The fort housed not only regular military personnel, but also staff from the U.S. Army Corps of Engineers, who had been in the park since 1883, supervising the construction of its roads²

Over the next 30 years buildings were added to the post as needed. The double cavalry barracks (HS-36) was completed in 1909 – made with sandstone quarried from a site between the Gardner River and the Mammoth campground. At least eight major buildings were added to the fort in 1909, including several other sandstone buildings, such as the bachelor officer's quarters (HS-1), the Field Officer's quarters, and the cavalry stables (HS-34 and HS-38).

Like many frontier military posts, the buildings at Fort Yellowstone reflect contemporary national trends in popular architectural styles. Although building materials varied with geographical location, the Quartermasters department of the Army was responsible for developing standard plans, i.e., plans developed to accommodate specific military needs (barracks, stables, officer's quarters) and that could be easily adapted for use at a variety of sites. Building 36 was constructed according to the Q.M.G.O. Plan No. 227. In contrast to dwelling units, which often display "high style" architectural detailing, buildings such as barracks, stables, and warehouses most often reflect simpler forms and minimal detailing. For example, the bachelor officers' quarters (HS-1), constructed at the same time as the double cavalry barracks, contains architectural details such as a fañlight above the main entrance, multi-light windows and stone porch columns, all characteristics that are typical of the Colonial Revival style, which was popular nation-wide during the first decades of the twentieth century. Like the bachelor officers' quarters, the double cavalry barracks contains some details that may be characterized as Colonial Revival, including the low-pitched hip roof, entrances topped with transom lights, wrap porches, and the stone columns that support the front porch.

² Mary Shivers Culpin, "The History of the Construction of the Road System in Yellowstone National Park, 1872-1966: Historic Resource Study Volume I," *Selections from the Division of Cultural Resources, Rocky Mountain Region, National Park Service*, No. 5, 1994, p.25.

B. Chronology of Development and Use

The double cavalry barracks was complete and ready for occupancy in 1909. Designed to house up to 200 men, the building has a front-facing U-shaped plan, consisting of three main volumes, a central rectangular volume with the long axis oriented north-south, with an east-west oriented wing at the north and south ends. A solid, stone wall on all three floors originally divided the central volume in half, effectively dividing each floor into two mirror image parts. Hallways at the north and south ends of the central volume connected entries at the front and rear of the building, contained the staircase, and provided direct access to rooms in the central volumes and in the north and south wings. Figures 1 through 4 show the original floor plan and subsequent changes to the first, second and third floors of the building.

On the first floor, the east-west oriented wings contained a large "mess room" located at the front (west end), a kitchen in the middle, and a room for the cook, a boiler room and a kitchen storeroom in the rear (east end). The mess and the kitchen were both accessed from the main hallway. In addition a double door led from the mess to the kitchen. The cook's room and the kitchen storeroom were accessed via the kitchen, while the boiler room was accessed from the exterior at the rear (east elevation) of the building. The central volume contained a "company storeroom," which extended the full length of the space, with banks of three rooms on the east and west sides of the storeroom. The only access into the storerooms was from the main hallways. The three small rooms on the east side of the storerooms included a "toilet room," a barbershop and a tailor shop. The toilets were accessed from the main hallways, while the other two rooms were entered from doorways in the east exterior wall beneath the rear porch. The three rooms on the west side of the storerooms included the First Sergeant's room, a small storeroom and an office. The First Sergeant's room was accessible from the main hallway, and from a small anti-room on the west side of the building, which in turn was accessed from an exterior doorway entered via the front (west) porch. The only way into the small storeroom (which contained a gun rack) was through the First Sergeant's room. The office was accessed from the anti-room (see Figure 1).

The second and third floors were identical in terms of room configuration (see Figures 2 and 3). The east-west wings contained a large open dormitory that occupied roughly the west two-thirds of the space. Three rooms for non-commissioned officers (NCOs), a short hallway and a passageway occupied the east third of this space. Two doorways led from the interior stairwell into the dormitory, which was also accessible from the hall in the NCO quarters. The north and south halves of the center wing consisted of an open undivided space. On the second floor, this space contained a "toilet room" or lavatory (Figure 5), while the same space on the third floor contained a "day room."³

³ Bound Volume No. 167, Yellowstone National Park Museum Collection, Mammoth Hot Springs, Wyoming: Drawing No. 8120, "Two Company Barracks," 1909. Copy available from Office of the Chief of Maintenance, Yellowstone National Park Headquarters, Mammoth Hot Springs, Wyoming.


$$\underline{1/16'' = 1'-0''}$$
A&E
ARCHITECTS²

ARCHITECTURE
INTERIORS
HISTORIC

■ 608 NORTH 39TH
BILLINGS, MT 59001
PH 406 248 2833
FAX 406 248 2427

■ 228 N. HOGAN, SUITE B
MASSA, MT 59602
PH 406 721 5643
FAX 406 721 1087

www.mscbills.com

www.researchjheal.com

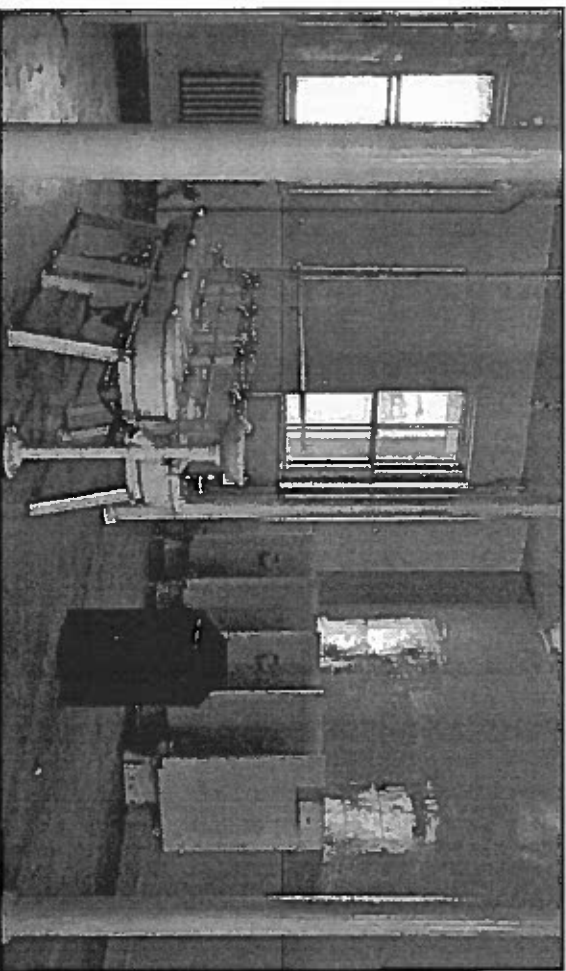


Figure 5. The interior of one of the original latrines prior to remodeling. Note the chair rail at the level of the base of the windows. (Photo No. 30598, Historic Photo Collection, RG 79, National Archives and Records Administration, Yellowstone National Park, Wyoming)

Between 1909 and 1916 there is no record of substantial modifications to the building. Soon after its completion, however, window and door screens and window and storm doors were manufactured for the building, and vestibules were added to cover the rear basement doors. Between 1911 and 1916, expenditures on the building range between \$43.00 in 1913 and \$472.00 in 1916. A fire in 1911 (the effects of which remain visible in the attic at the northeast corner of the building) required repairs in the amount of \$2,950.00, which were performed by Gagnon & Company of Billings, Montana.⁴

In 1916 the Department of the Interior assumed administrative control of the park, and the Army officially abandoned the post. As the Army prepared to transfer the post buildings to the Department of the Interior, the U.S. Engineer requested that he be allowed to retain the use of several Army buildings, including the south half of Building 36. His request was granted, and the new civilian National Park Service administration was left with the north half of the building.⁵

Although no documentary records from the period between 1916 and 1934 have been located, we know that by 1935 alterations had already been made to the interior of the building. Drawing No. NP-YEL 8120C, dated 1935, and containing the notation "prepared for study of office arrangement for

⁴ Historic Structure Survey Form for Building HS-36, 1999 "Historic Resources Notebooks," copy available in Cultural Resource Division, Yellowstone National Park Headquarters, Mammoth Hot Springs, Wyoming.

⁵ David G. Battle and Erwin N. Thompson "Fort Yellowstone Historic Structure Report," National Park Service, Denver Service Center, 1972 p.31.

administrative use," shows the results of several remodeling projects – mostly in the north half of the building (i.e., that part controlled by the National Park Service).⁶

On the first floor, the former kitchen and mess in the north half had been converted into a saddle room (in the former kitchen area) and a post office (in the former mess hall). The door connecting the kitchen and the mess hall was filled, so that the saddle room and post office were accessible only from the hall containing the stairwell. The configuration of the six small rooms in each half of the central wing remained substantially unchanged, with the exception that in the north half the First Sergeant's room and adjacent storeroom had been converted to rest rooms; in the south half on the west side, one of the rooms and a former rest room had been combined to form a space for the "telephone office." There was still no interior connection between the north and south halves of the first floor; rather, the space between the two banks of rooms continued to be used for storage – for the post office in the north half and for the mess in the south half. In the south wing, the former mess room had been divided into a large and small dining room, connected by a door in the new partition wall. A new doorway connected the smaller dining room directly with the kitchen (see Figure 1).

Fewer changes had been made to the second floor. The lavatory in the north half of the building remained intact, but new partitions in the old dormitory divided the space into four rooms, including a large open area for drafting, an office for the E.C.W. Clerk, a file room, and a landscape office. The original NCO rooms at the east end of the wing were unchanged, but used for offices (G. W. Miller's office, E.C.W. Clerks, and E. E. Matleson office). The south half of the building was unchanged but did accommodate new occupants. The dormitory served as ranger's quarters (see Figure 2).

On the third floor, the north half of the building had been substantially modified, mainly by erecting partitions in the old day room and dormitory. In the day room five rooms were arranged adjacent to a central hallway, three on the east side and two on the west side. The larger of the two rooms on the west side was in use as a "re-employ office." Similarly, the formerly open dormitory space had been divided into seven small rooms arranged along the perimeter walls, all of which opened onto a "bull room." The south half of the building apparently had not been structurally modified but, like the second floor, did accommodate new uses. The 1935 plan indicates that the dormitory was used for P.W.A. Quarters, and the former day room was also being used as quarters. Like the second floor, the NCO quarters in the rear of the north and south wings had not been modified (see Figure 3).

A 1936 plan of the building⁷ shows a few refinements from the 1935 room configuration. On the first floor, the kitchen-turned-saddle room in the north half of the building housed the purchasing office. On the third floor, in the north half of the building, the re-employment office in the west half of the old day room had been expanded by removal of the west wall of the hallway and the room partition.

⁶ Drawing No. NP-YEL 8120C, 1935, Drawing of file at the National Park Service, Denver Service Center Technical Information Center, Denver Colorado (hereafter DSC TIC).

⁷ Drawing No. NP-YEL 8461, 1936, Drawing on file at DSC TIC.

The next major alteration to the interior of Building 36 occurred between 1938 and 1939. This project, which was limited to the north wing of the building, was likely the result of the space study begun in 1935. The park's carpentry shop began work in March of 1938: "Work was started on the barracks building in making over the first and second floors of the north wing to be used as offices for the accounting, engineering and architectural departments." ⁸ The first floor was completed and ready for occupancy by the accounting office on May 6th, 1938.

In June of 1938, the remodeling of the second floor continued under the auspices of the Emergency Recovery Act (E.R.A.) program. The second floor was completed in July, and the E.R.A. crew began work on the third floor. ⁹ The Superintendent's Monthly Report for August of 1938 indicates that the third floor remodeling was completed and that "floor space large enough to accommodate the blue print machine was partitioned off in the wash room of the second floor of the barracks building." In December the E.R.A. program neared completion of reconstructing the basement in the north half of the barracks readying it for installation of a new heating plant. ¹⁰ The job was complete by February of 1939.

The results of the 1938 – 1939 remodel continued the trend towards subdividing the large open spaces that typified the original barracks into smaller offices. On the first floor, the original double door that connected the mess room and the kitchen was reestablished. In the kitchen/saddle room/ purchasing office a small room was enclosed in the southwest corner of the original space. In the former mess room/post office, additional partitions were erected to enclose space in the center of the south wall and in the northeast corner. The new room in the northeast corner contained a half-wall and counter, which opened into the remainder of the area. A new ceiling of 12" x 24" acousti-celotex tiles was laid over the original ceiling in the newly configured office space. The three rooms at the east end of the wing (including the boiler room accessed from the exterior of the building) remained unchanged. In the center wing, the space for the telephone company was expanded by cutting an opening in the original stone wall that separated the two halves of the building (see Figure 1).

On the second floor, the three offices that had been partitioned from the original dormitory space prior to 1935 were removed. New partitions created a large "drafting room" in the north part of the original dormitory space, accessed from a new hall in its southeast corner. A new "storage room" was enclosed adjacent to and accessed through this new hall. A series of three small offices (one a "telephone office") were created along the east edge of the old dormitory space. These rooms were all accessed via a second hall, which, like the hall leading to the drafting room, opened onto the main hall containing the stairway. There was no direct connection between the bank of rooms along the west edge of the former dormitory and the large drafting room (see Figure 2). [Note: A door now connects the drafting room and the northern-most of the three rooms added at the north end of the room. This doorway may have been

⁸ Superintendent's Monthly Report for March, 1938, p.8, Yellowstone National Park Library, Mammoth Hot Springs, Wyoming (hereafter YNP Library).

⁹ Superintendent's Monthly Report for July, 1938, p.10, YNP Library.

¹⁰ Superintendent's Monthly Report for December, 1938, p. 9, YNP Library.

added in 1958.¹¹ Figures 6 through 8 show the interior of the building during and after the 1938/1939 remodeling project.

Between 1939 and 1957 few changes were made to the interior of the building. Park maintenance personnel worked on numerous small projects (mostly painting and patching plaster) and other repairs and/or replacement of worn materials, such as laying linoleum in parts of the building.¹² A 1947 floor plan shows few modifications since completion of the 1938/1939 remodeling project. The exception is the first floor of the north wing, where the original wall separating the kitchen from the mess, as well as the partitions added in 1938/39, had been removed entirely. Two new rooms had been enclosed along the south wall of the combined space, one accessed from the stairway hall and one from the interior (Figure 9).

In 1951 the park conducted a study to turn the third floor of the north wing and the second and third floors of the south wing into bachelor apartments. Notes on the plan¹³ state that the 3rd floor north wing was partitioned into 7 rooms and the 2nd and 3rd floors south wings were open, an indication that the configuration of rooms in these spaces had not been altered since completion of the 1938/1939 remodel. This plan was never implemented, nor was a 1955 plan to modernize the remaining kitchen and mess halls in the south half of the building.¹⁴



Figure 6. Circa 1935 photo of the remodeling of the dormitory, north wing.
(Photo No. 20699, Historic Photo Collection, RG 79, YNP Archives.)

¹¹ List of improvements, Building 36 File, Office of the Chief of Maintenance, Yellowstone National Park Headquarters, Mammoth Hot Springs, Wyoming (hereafter, Park Maintenance Files).

¹² List of improvements, Building 36 File, Park Maintenance Files.

¹³ Drawing NP-YEL 8120-E "Preliminary plan remodeling barracks bldg for apartment," 1951, Drawing on file at DSC TIC.

¹⁴ Drawing NP-YEL 8120-H "Kitchen Modernization – Mess Hall," 1955, Drawing on file at DSC TIC.

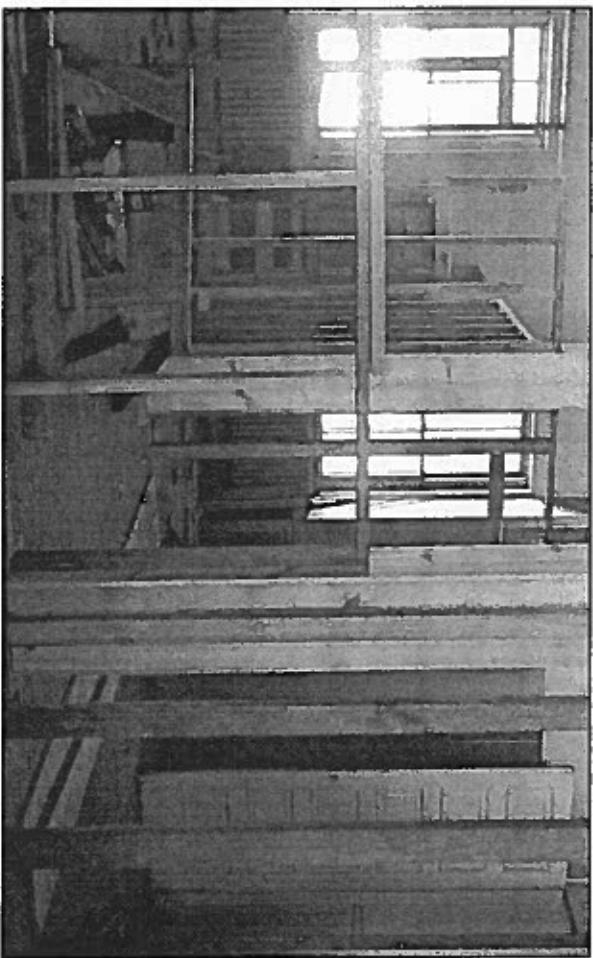


Figure 7. Circa 1935 photo of the remodeling of the north wing dormitory space in the north wing. (Photo No. 20753, Historic Photo Collection, RG 79, YNP Archives.)

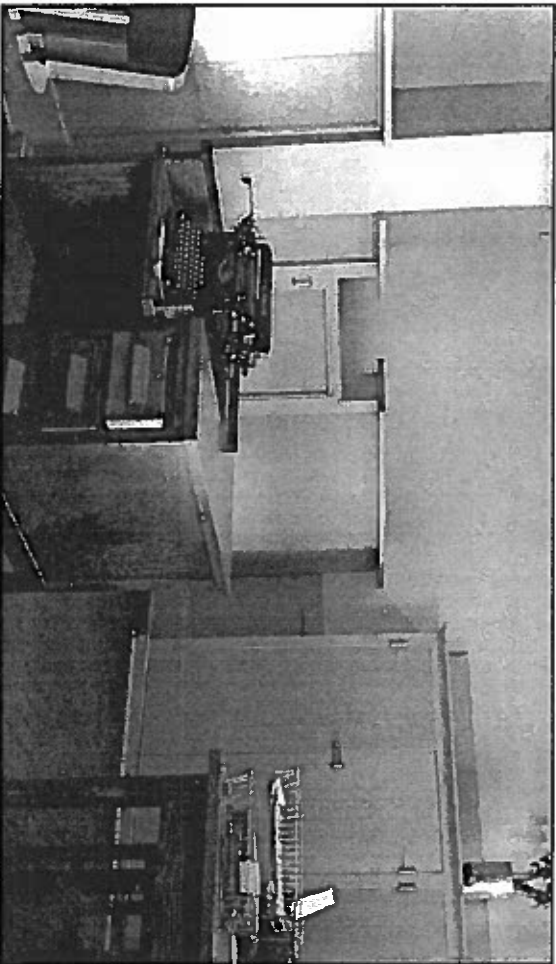


Figure 8. Interior finishes in remodeled office areas resulting from 1938/1939 remodeling. (Photo No. 30581, Historic Photo Collection, RG 79, YNP Archives.)



Figure 9. Circa 1960 photo of a meeting area in the first floor. Note the panel door and the 6' rail around the room. (Photo No. 20368, Historic Photo Collection, RG 79, YNP Archives)

In 1957, the park instituted another moderate-sized remodeling project. Once again, the changes occurred in the north wing – the space that had been altered most from the original plan. The original mess/kitchen area in the first floor of the north wing was remodeled to contain offices for the Superintendent and Assistant Superintendent and their staff and secretaries. The configuration of the offices was similar to the existing, with the exception that the space currently occupied by the conference room contained the payroll, cashier, auditing and purchasing offices. On the second floor the former latrine in the center wing was also remodeled. The original double doors leading from the stairway hall were removed from their opening, and an L-shaped hall added. The space was further divided into three rooms on the east side of the hall and one large file room on the west side of the wall. The job included installation of a sheetrock ceiling.¹⁵ The changes to the third floor were relatively minor, and included the remodeling of a hallway and washroom.¹⁶

Between 1957 and 1969 park maintenance personnel undertook numerous small projects that altered the appearance of the building's interior. For example, in 1958, personnel enclosed the spindles beneath the stair handrail with plywood. They also laid a tile floor in the first floor hallway in the north half of the building and applied "Masonite" flooring in several areas throughout the building. More substantial changes included the removal of the counter and the chair rail from the reception area in the personnel office and closing the doorway to the small dining room in the first floor of the south half of the building. In 1960, they replaced the earthquake-damaged ceiling with acoustical tile. In the remaining kitchen/dining

¹⁵ Drawing NP-YELL 8120-F, Drawing on file at DSC TIC.

¹⁶ List of improvements, Building 36 File, Park Maintenance Files

room on the first floor in the south half of the building, they removed the partition between the two dining rooms and stripped the kitchen of unneeded kitchen equipment, plumbing and its walk-in refrigerator. These changes were made to accommodate a new personnel office, in the former kitchen area, and a fiscal office, in the space formerly occupied by the dining rooms.¹⁷

In 1969, a major remodeling project was undertaken in the south half of the second floor – within the original dormitory and latrine. Like the earlier remodeling conducted in the north side of the building, offices in the south dormitory were created by building room partitions around the perimeter of the space, leaving an open reception area just inside from the hall. The original NCO quarters at the east end of the wing were not modified. The latrine was remodeled for use as a rest room and communications center.¹⁸

By the 1980s, the configuration of interior space in Building 36 approached the existing conditions. The 1960s removal of the personnel and payroll offices to the south half of the first floor freed the space adjacent to the Superintendent's office for use as conference room and accommodated slight changes in wall and ceiling finishes (Figure 10). An early 1980s remodel of the Superintendent's offices included reconfigurations of the reception and secretary's areas, and the application of new wall and ceiling materials, including wainscoting, throughout this suite of rooms.

Sometime between 1982 and 1995, another office was created in the second-floor north-wing maintenance/engineering area. Additional small changes have been made to various spaces throughout the building – usually involving the removal or addition of interior dividing walls.

¹⁷ Drawing by A. L. Haines, date April 1960, Building 36 File, Park Maintenance Files.

¹⁸ Drawing NP-YEL 8120 – K, Drawing on file at DSC TIC.

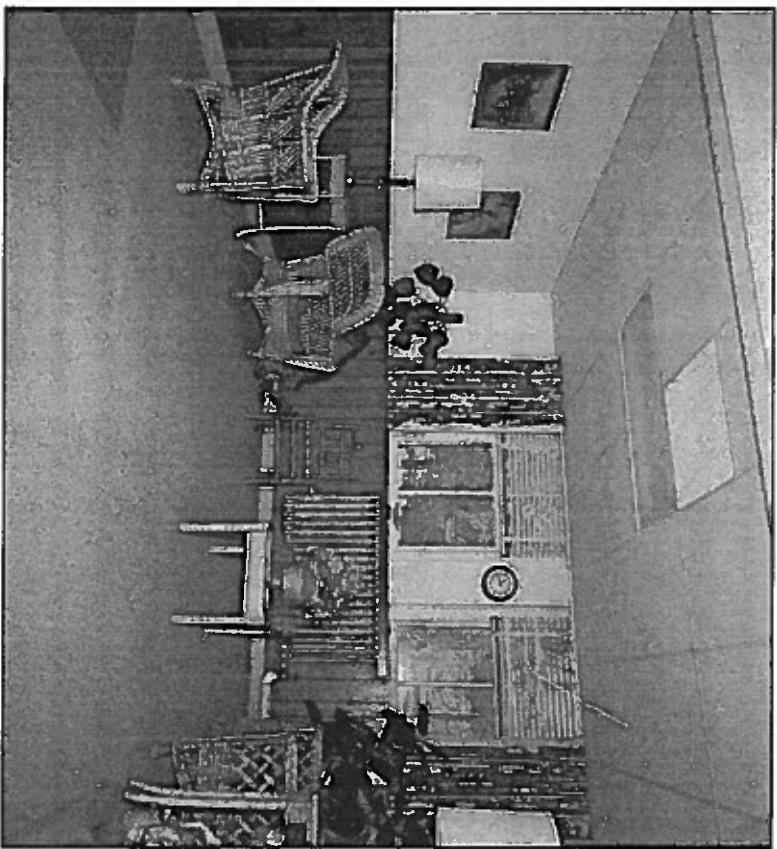


Figure 10. View of one of the reception areas in the Superintendent's Office circa 1975, prior to the most recent, 1982 remodel. Note the dropped ceiling that covers the top of the windows. (Photo No. 31031-9, Historic Photo Collection, RG-79, YNP Archives.)

C. Physical Description (Existing Conditions)

The Double Cavalry Barracks is a three-story, plus an attic, stone masonry bearing wall construction with a u-shaped plan. It was divided in the center into a north half and a south half, originally connected only on the outside by the front and rear balconies and first floor walkway. A later, circa 1960, renovation opened up the central interior corridor on the first floor. The north and south wings are connected by balconies under the roof line on the front of the building and by connecting balconies in the u-shaped space on the rear of the building. The balconies are supported by stone piers on the first floor and double wood columns on the upper floors. The building sits on a concrete foundation and is capped by a clay tile hip roof with two hip dormers on the front of the building. The rusticated stone masonry walls are laid up in a random, broken coursed ashlar pattern. There is a smooth-faced sandstone water table around the building and smooth-faced sandstone lintels and sills at the windows. Columbus sandstone was used for these features.

Fenestration includes double wood panel doors with four lites on the first floor and six lites on the upper floors, and a five lite transom at each of the interior corners of the front and rear facades that is repeated on all floors. The northeast set of doors on the first floor has an added plywood vestibule on the outside of the building. There are wood 2 over 2 double-hung windows with a single window pattern and double window pattern on the first floor and single windows on the upper floors. The double window pattern has a connected sandstone lintel with a rusticated stone pier between the windows.

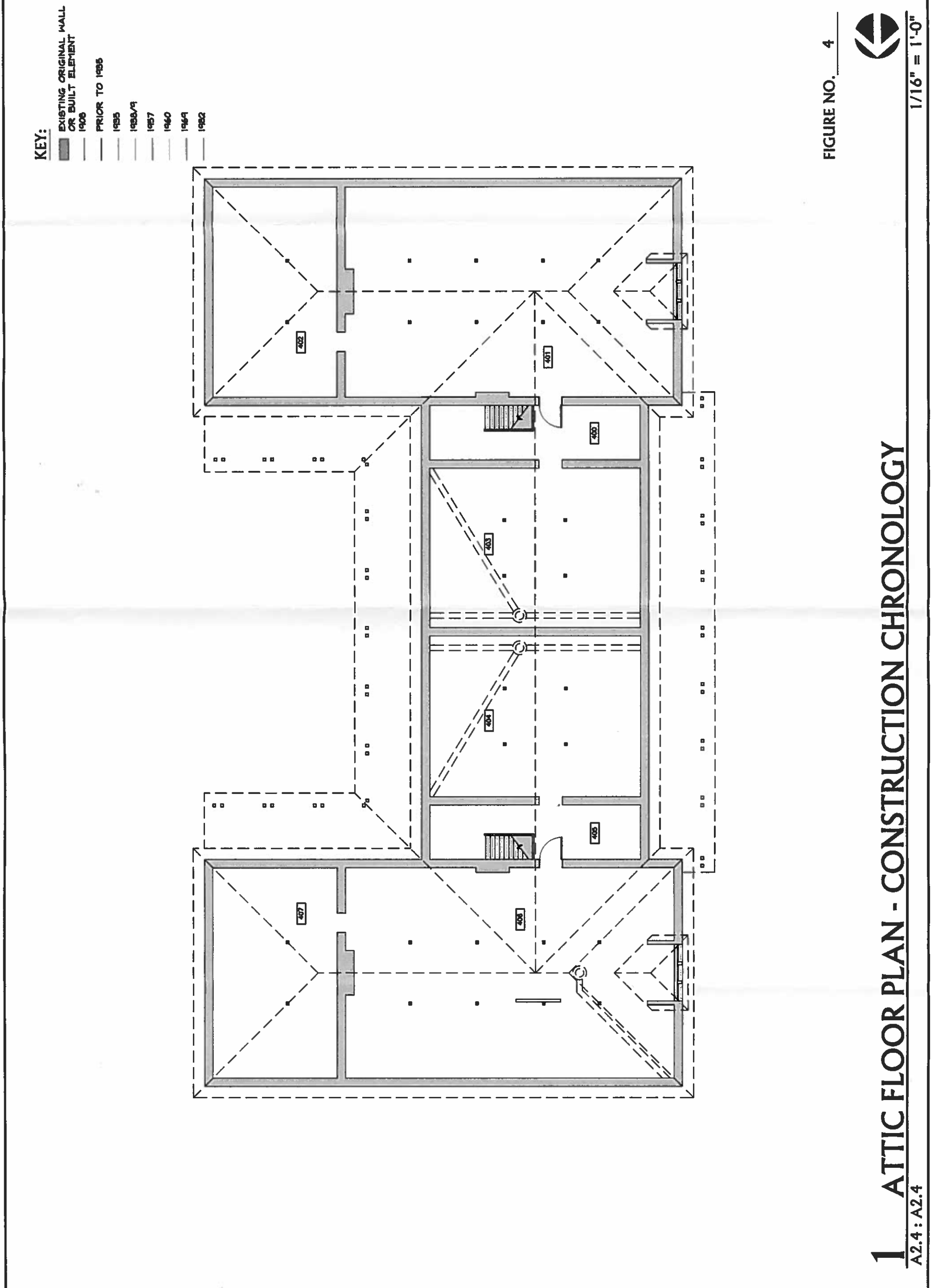
The exterior of the building has maintained its original materials with the exception of the added vestibule to the northeast corner of the first floor, metal storms on some windows, and the balconies have been repaired. Some materials were replaced after the 1959 earthquake.

The interior of the building has seen many remodels over the years since the original building was a cavalry barracks. However, there are many elements of the original building that remain. New finishes have been added and some of the historic fabric has been covered up with newer materials. As mentioned in the construction chronology, the room configurations have been altered in that the original large barracks rooms have been remodeled into smaller spaces, and the smaller rooms in the center of the building have been opened up into larger office or work areas.

The plaster finished stone exterior walls, as well as the plaster finished interior stone walls on each side of the stairwells and in the center of the building separating the two halves, are original to the building. There is also a stone and brick wall with plaster that separated the barracks from the NCO quarters. These walls have maintained the original openings of doors and windows on the exterior, even though some doors and windows on the rear of the building have been covered over from the inside. Original wood bases and chair rails exist on the outer walls as well as the interior stone walls in the office areas. The stairways have maintained their original configuration with original openings to the side offices. Many of the openings from the stairway have had new doors and frames added and the wainscot and balusters have been covered over with a plywood paneling. The wood cap on the wainscot remains as well as the handrails and newel post.

The rooms within the building that have remained are in the eastside of the wings. The first floor contains the boiler room and some storage rooms that have been converted to offices. On the upper two floors the original rooms have been made into large offices. The plaster walls remain with original tall wood paneled doors and transoms. There is an original wood wainscot in the corridor, and the wood casing around the doors, the wood base, and in many cases the wood chair rail still remain. In some second floor spaces, as well as many areas of the third floor, there are some of the original ductwork covered with plaster and wood trim that were part of the passive ventilation system. The original ventilators can be seen on the roof of the building. The third floor still has some of the original built-in bookcases, cabinets, and some of the radiators.

The following plans and photographs provide the documentation of Building 36's historic fabric.



OWNER: NATIONAL PARK SERVICE
PROJECT: MAMMOTH ADMINISTRATION BUILDING HSR
DRAWING: ATTIC FLOOR PLAN - CONSTRUCTION CHRONOLOGY

PROJECT NO. 03030.00
ISSUE DATE 06.30.03
REVISIONS

A&E ARCHITECTS
ARCHITECTURE
INTERIORS
HISTORIC
408 NORTH 30TH
BILLINGS, MT 59001
PH 408 248 2033
FAX 408 248 2427
224 N. HICKMAN BLVD.
MISSOULA, MT 59802
PH 408 721 5643
FAX 408 721 1887
WWW.AEARCHITECTS.COM

FIGURE NO. 4

1/16" = 1'-0"

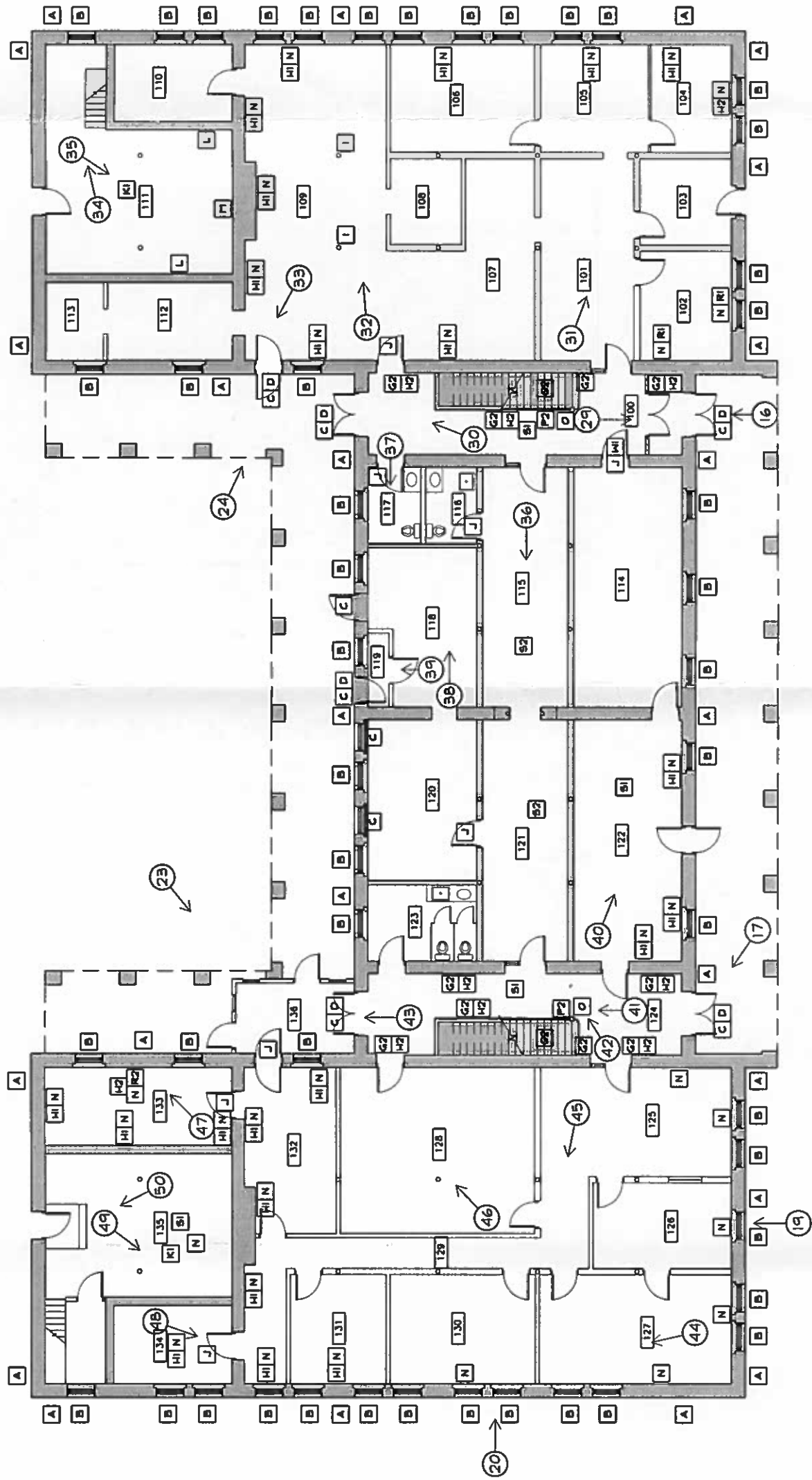
1 ATTIC FLOOR PLAN - CONSTRUCTION CHRONOLOGY
A2.4 : A2.4

A2.4

21

22

25



KEY:	
	EXISTING ORIGINAL WALL OR BUILT ELEMENT
	DENOTES PHOTOGRAPH FIGURE NUMBER & DIRECTION OF VIEW
A	ORIGINAL EXTERIOR STONE WALLS
B	ORIGINAL EXTERIOR WINDOW
C	ORIGINAL EXTERIOR DOOR(S)
D	ORIGINAL EXTERIOR TRANSOM
E	ORIGINAL BALCONY
F	ORIGINAL ROOF STRUCTURE
G	ORIGINAL MAINSCOT
H	ORIGINAL MAINSCOT (COVERED BY PANELING)
I	ORIGINAL WALL BASE (COVERED)
J	ORIGINAL IRON COLUMN
K	ORIGINAL DOOR OR WINDOW CASINGS
L	ORIGINAL CONCRETE FLOOR
M	ORIGINAL WOOD FLOOR
N	ORIGINAL INTERIOR STONE WALL
O	ORIGINAL INTERIOR BRICK WALL
P	ORIGINAL PLASTER-COVERED WALL
Q	ORIGINAL NEWEL POST & HANDRAIL
R	ORIGINAL BALUSTER
S	ORIGINAL BALUSTER (COVERED BY PANELING)
T	ORIGINAL WOOD STAIRS (COVERED)
U	ORIGINAL WOOD STAIRS (COVERED)
V	ORIGINAL CHAIR RAIL
W	ORIGINAL CHAIR RAIL (COVERED)
X	ORIGINAL CEILING
Y	ORIGINAL CEILING (COVERED)
Z	ORIGINAL HIGH RAIL TRIM
AA	ORIGINAL PASSIVE VENTILATION DUCT
AB	ORIGINAL INTERIOR DOOR
AC	ORIGINAL INTERIOR TRANSOM
AD	ORIGINAL INTERIOR TRANSOM (COVERED)
AE	ORIGINAL CABINET

FIGURE NO. 11



1/16" = 1'-0"

1 FIRST FLOOR PLAN - HISTORIC FABRIC DOCUMENTATION

A2.5 : A2.5

A2.5

DRAWING FIRST FLOOR PLAN - HISTORIC FABRIC DOCUMENTATION
PROJECT MAMMOTH ADMINISTRATION BUILDING HSR
OWNER NATIONAL PARK SERVICE

PROJECT N° 03030.00
ISSUE DATE 06.30.03
REVISIONS



ARCHITECTURE
INTERIORS
HISTORIC
808 NORTH 29TH
BILLINGS, MT 59101
PHONE 406.248.2427
FAX 406.248.2427
224N HIGGINS SUITE B
MISSOULA, MT 59802
PH 406.721.9843
FAX 406.721.1887

WWW.AEARCHITECTS.COM

DRAWING
SECOND FLOOR PLAN - HISTORIC FABRIC DOCUMENTATION

PROJECT
MAMMOTH ADMINISTRATION BUILDING HSR

OWNER
NATIONAL PARK SERVICE

PROJECT N° 03030.00
ISSUE DATE 06.30.03
REVISIONS

A&E

ARCHITECTS^{PC}

ARCHITECTURE
INTERIORS
HISTORIC

804 NORTH 20TH
BIRMINGHAM, AL 35201
PHONE 205 248 2427
FAX 205 248 2427

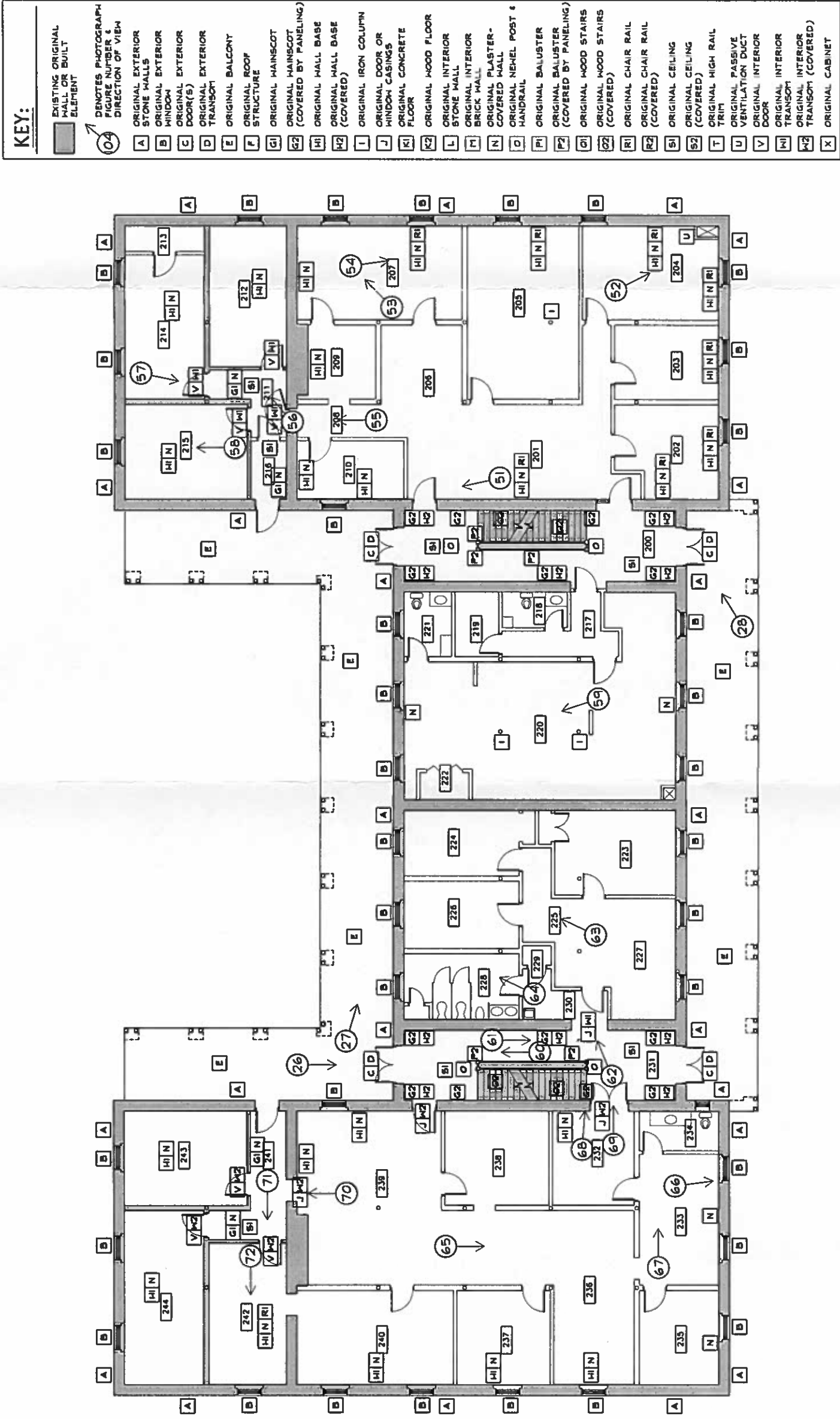
224 N. HIGGINS BLVD.
JESSUP, MD 20794
PHONE 301 584 3501
FAX 301 584 3501

www.aearchitects.com

FIGURE NO. 12

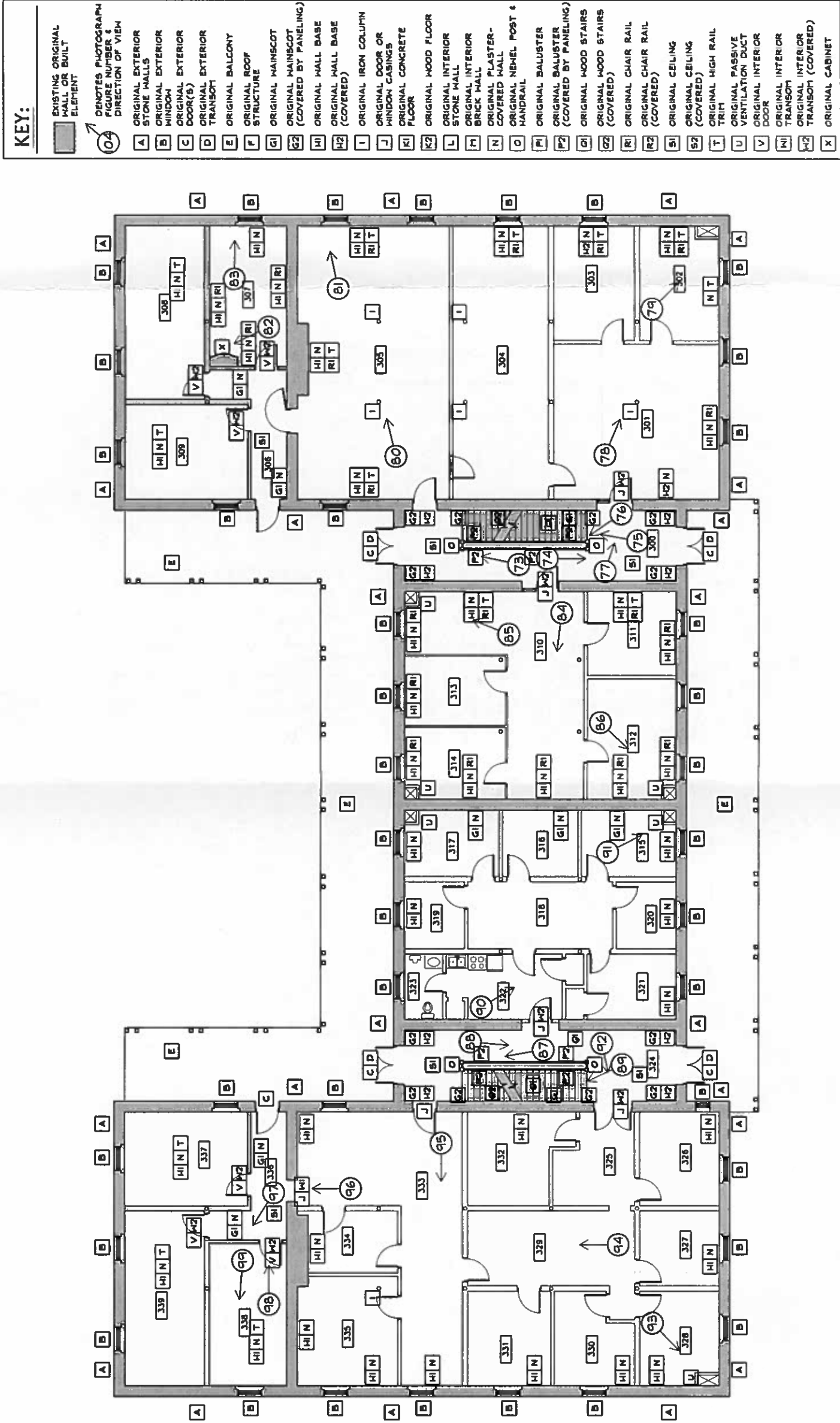
1/16" = 1'-0"

A2.6



1 SECOND FLOOR PLAN - HISTORIC FABRIC DOCUMENTATION

A2.6 : A2.6



1

THIRD FLOOR PLAN - HISTORIC FABRIC DOCUMENTATION

A2.7 : A2.7

1/16" = 1'-0"

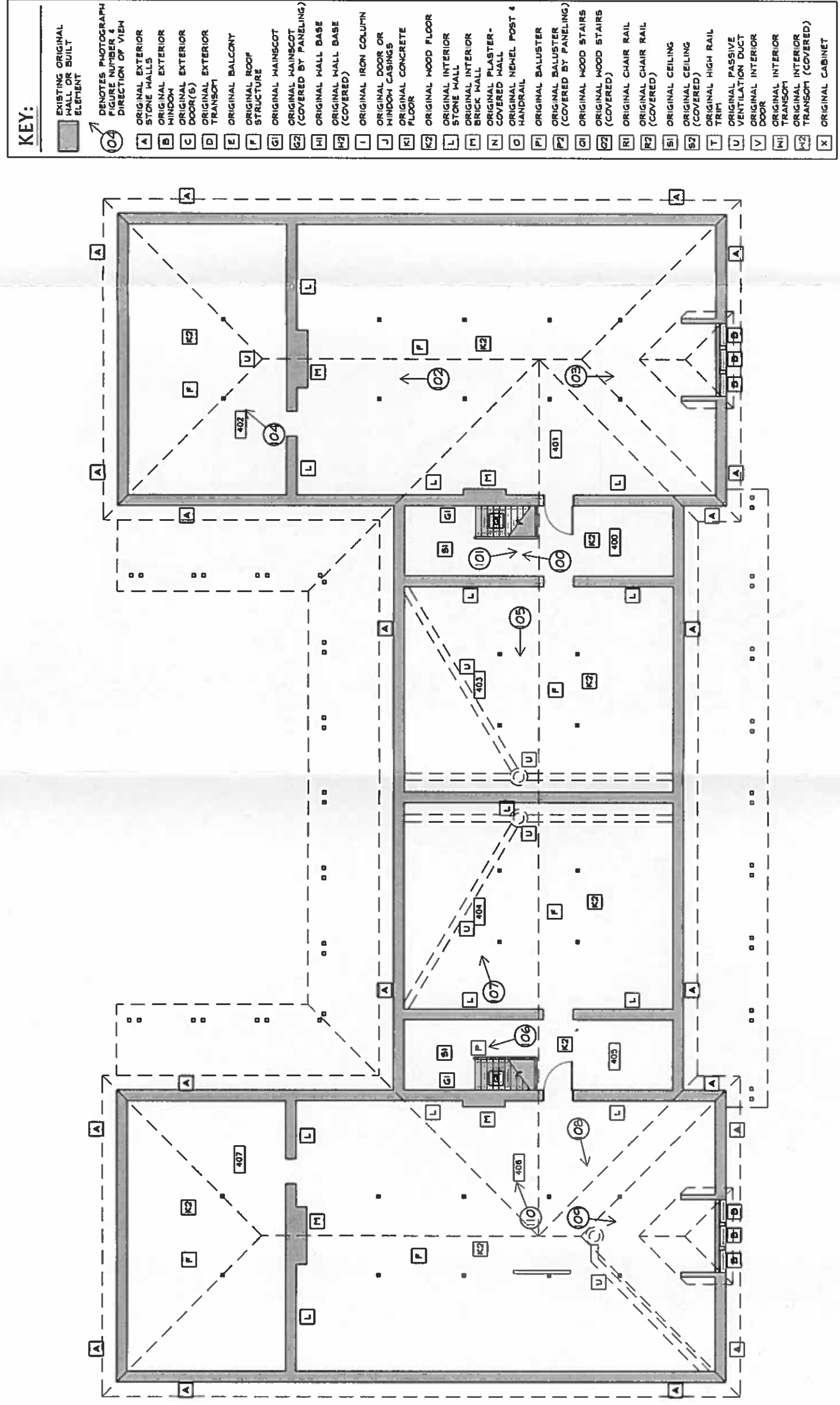
1 ATTIC FLOOR PLAN - HISTORIC FABRIC DOCUMENTATION

A2.8 : A2.8

1/16" = 1'-0"



FIGURE NO. 14



KEY:

- EXISTING ORIGINAL HALL OR BUILT ELEMENT
- DENOTES PHOTOGRAPH FIGURE NUMBER & DIRECTION OF VIEW
- ORIGINAL EXTERIOR STONE WALLS
- ORIGINAL EXTERIOR WINDOW
- ORIGINAL EXTERIOR DOOR(S)
- ORIGINAL EXTERIOR TRANSOM
- ORIGINAL BALCONY
- ORIGINAL ROOF STRUCTURE
- ORIGINAL MAINSCOT
- ORIGINAL MAINSCOT (COVERED BY PANELING)
- ORIGINAL WALL BASE
- ORIGINAL WALL BASE (COVERED)
- ORIGINAL IRON COLUMN
- ORIGINAL DOOR OR WINDOW CASINGS
- ORIGINAL CONCRETE FLOOR
- ORIGINAL WOOD FLOOR
- ORIGINAL INTERIOR STONE WALL
- ORIGINAL INTERIOR BRICK WALL
- ORIGINAL PLASTER-COVERED HALL
- ORIGINAL NEWEL POST & HANDRAIL
- ORIGINAL BALUSTER
- ORIGINAL BALUSTER (COVERED BY PANELING)
- ORIGINAL WOOD STAIRS
- ORIGINAL WOOD STAIRS (COVERED)
- ORIGINAL CHAIR RAIL
- ORIGINAL CHAIR RAIL (COVERED)
- ORIGINAL CEILING
- ORIGINAL CEILING (COVERED)
- ORIGINAL HIGH RAIL TRIM
- ORIGINAL PASSIVE VENTILATION DUCT
- ORIGINAL INTERIOR DOOR
- ORIGINAL INTERIOR TRANSOM
- ORIGINAL INTERIOR TRANSOM (COVERED)
- ORIGINAL CABINET

DRAWING ATTIC FLOOR PLAN - HISTORIC FABRIC DOCUMENTATION

PROJECT MAMMOTH ADMINISTRATION BUILDING HSR

OWNER NATIONAL PARK SERVICE

PROJECT # 03030.00
ISSUE DATE 06.30.03
REVISIONS

A&E ARCHITECTS
ARCHITECTURE
INTERIORS
HISTORIC

808 NORTH 29TH
BILLINGS, MT 59001
PHONE 406.248.2421
FAX 406.248.2427

224 N. HIGGINS SUITE B
MISSOULA, MT 59802
PHONE 406.721.5843
FAX 406.721.1887

WWW.AEARCHITECTS.COM

A2.8

Exterior

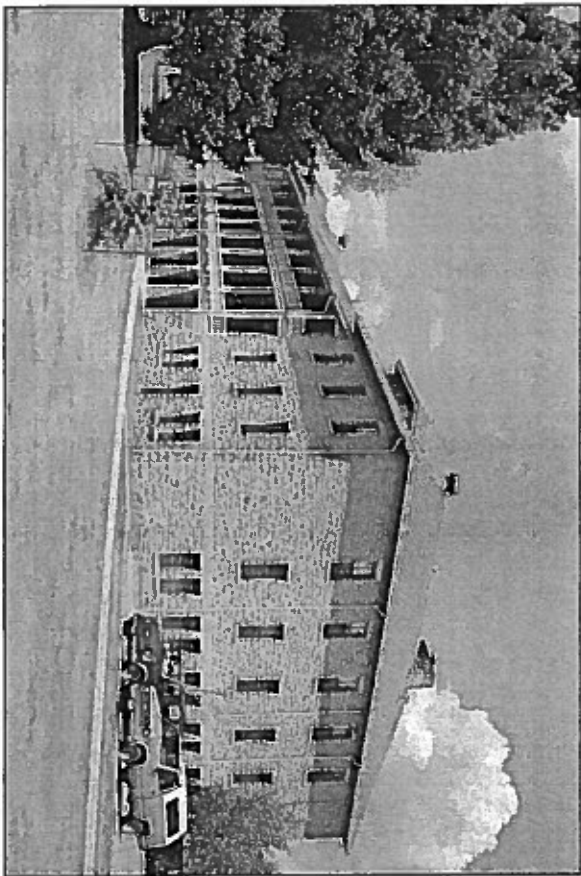


Figure 15: Looking northeast at the main facade of the Administration Building. The exterior of the building has remained intact since it was built in 1909. The exterior stonework is generally in good condition as are the balconies, windows, doors and the roof.

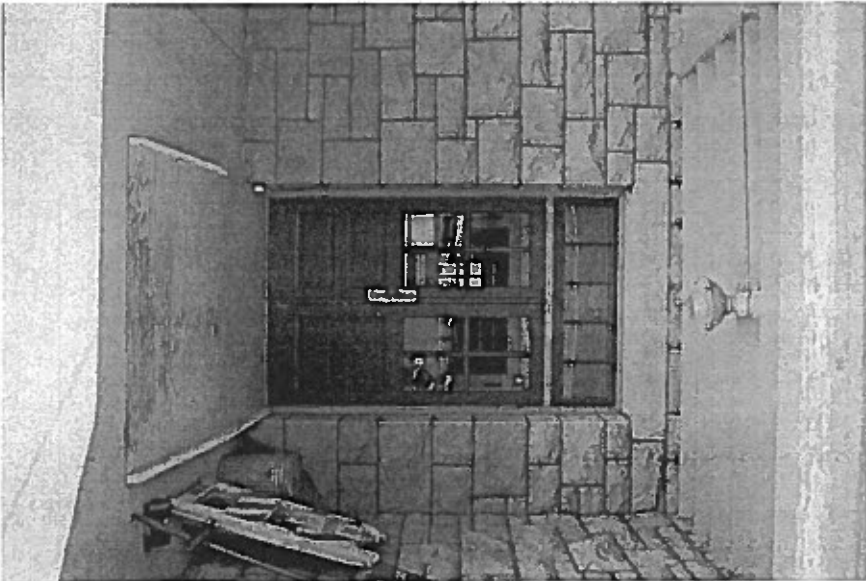


Figure 16: Looking east at the entrance to the southern half of the building. The doors and transom appear to be original to the building.

Figure 17: Looking northeast at the entrance to the northern half of the building. These doors appear to be original.



Figure 18: Looking southeast at the main facade of the Administration Building.

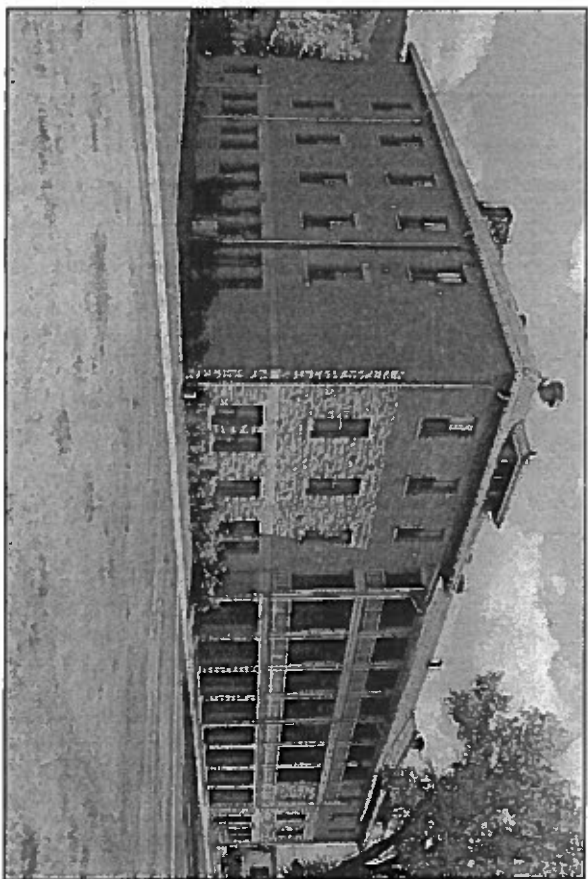




Figure 19: Looking east at a typical single wood double-hung window. The windows are original to the building.

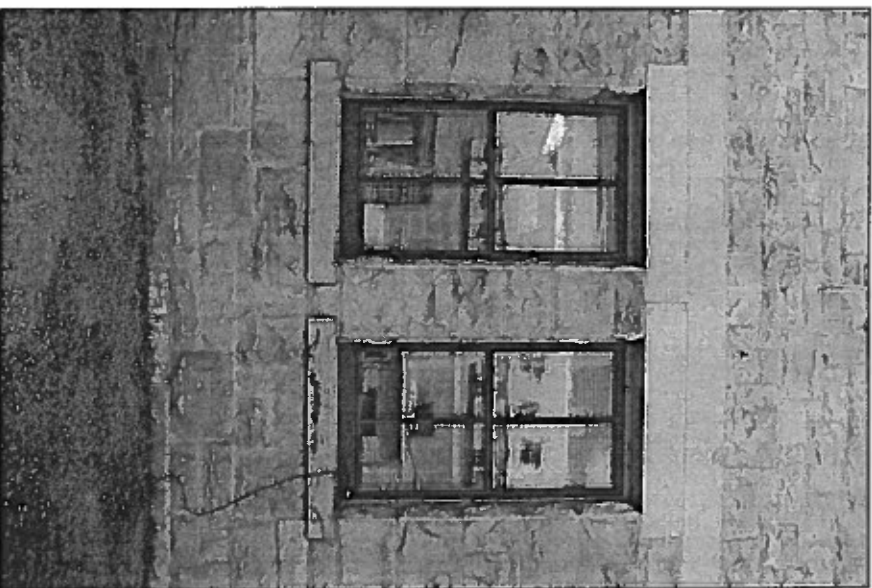


Figure 20: Looking south at a typical set of wood double-hung windows. The windows are original to the building.

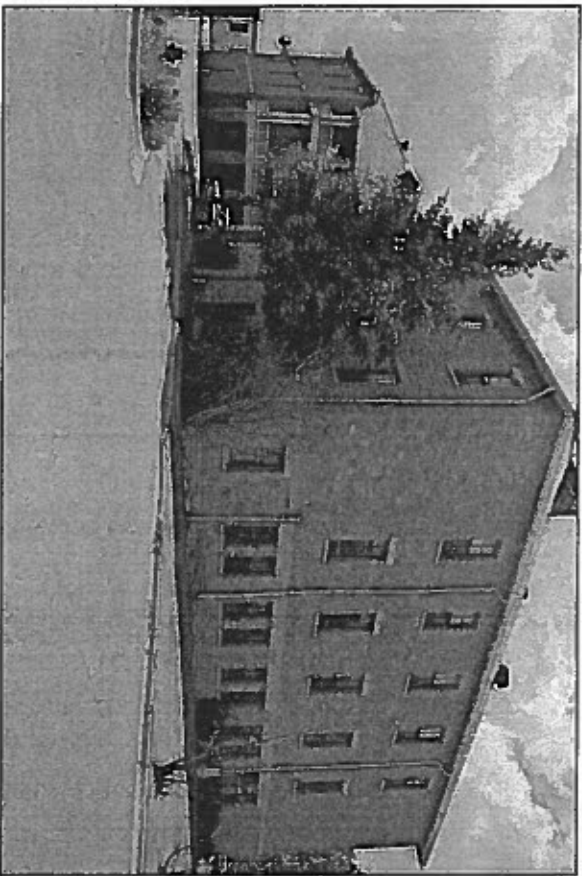


Figure 21: Looking southwest at the rear of the building.

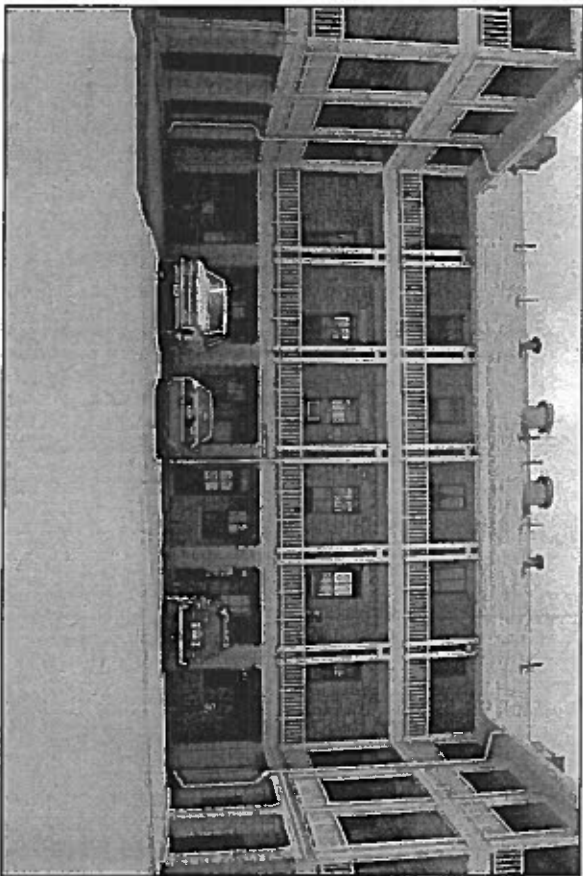


Figure 22: Looking west at the rear elevation and the connecting balconies on the building.

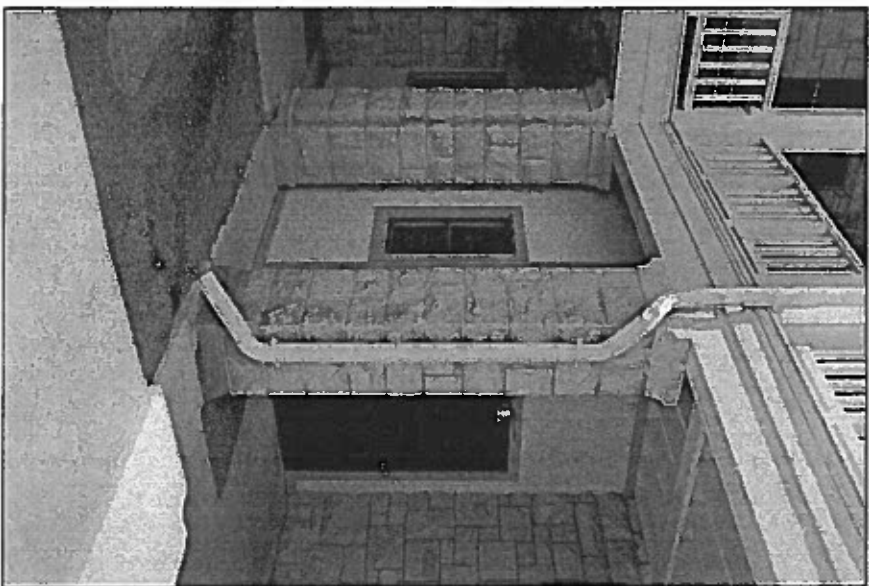
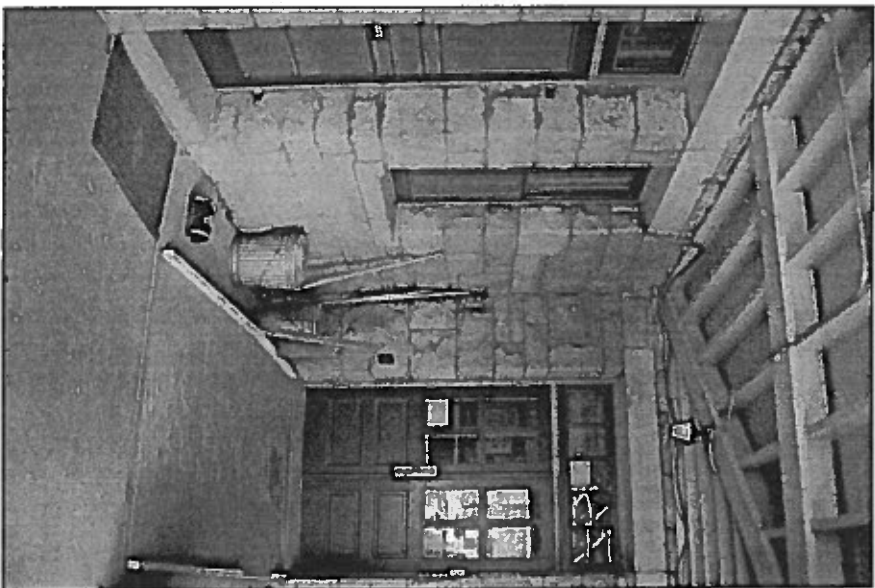


Figure 24: Looking southwest at the rear entrance to the south half of the building. These doors are original to the building.

Figure 23: Looking northwest at the rear entrance to the north half of the building. The vestibule has been added and is not original.



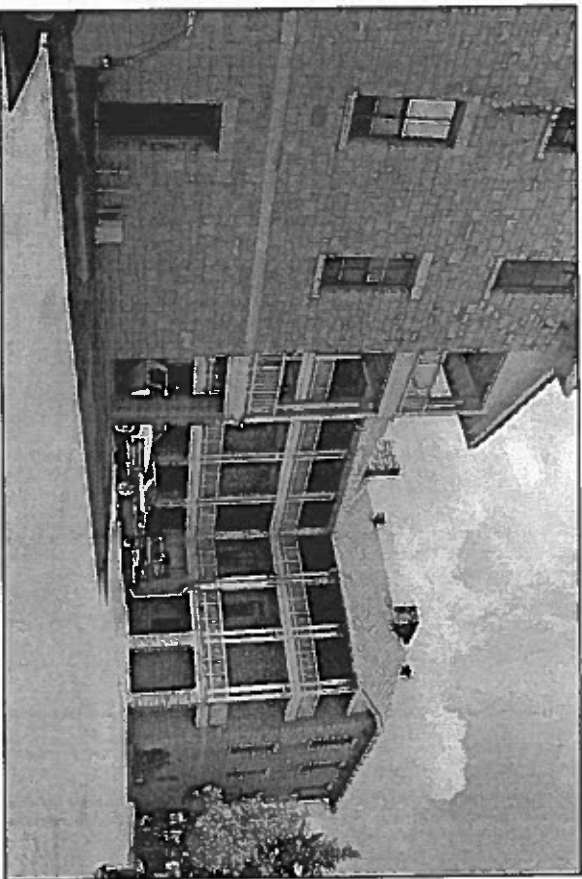
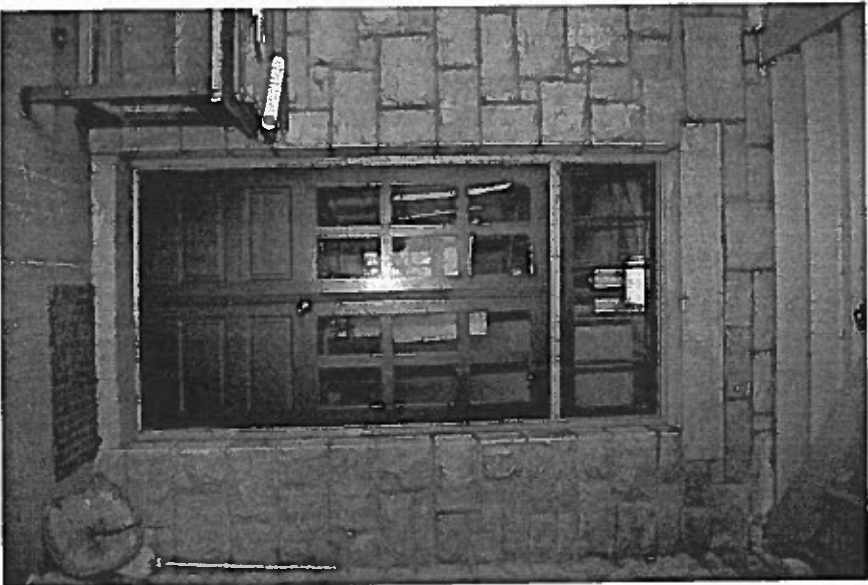


Figure 25: Looking northwest at the rear of the Administration Building.

Figure 26: Looking west at the entrance doors from the second floor balcony on the north half of the building. These doors appear to be original.



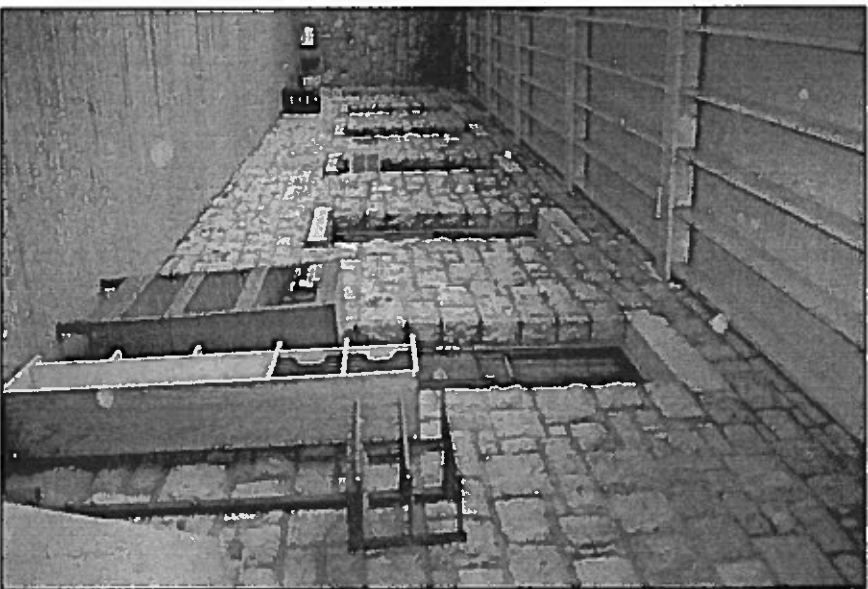


Figure 27: Looking southwest at the second floor balcony and structure. Additional connections were placed at the balcony and stone wall after the 1959 earthquake.

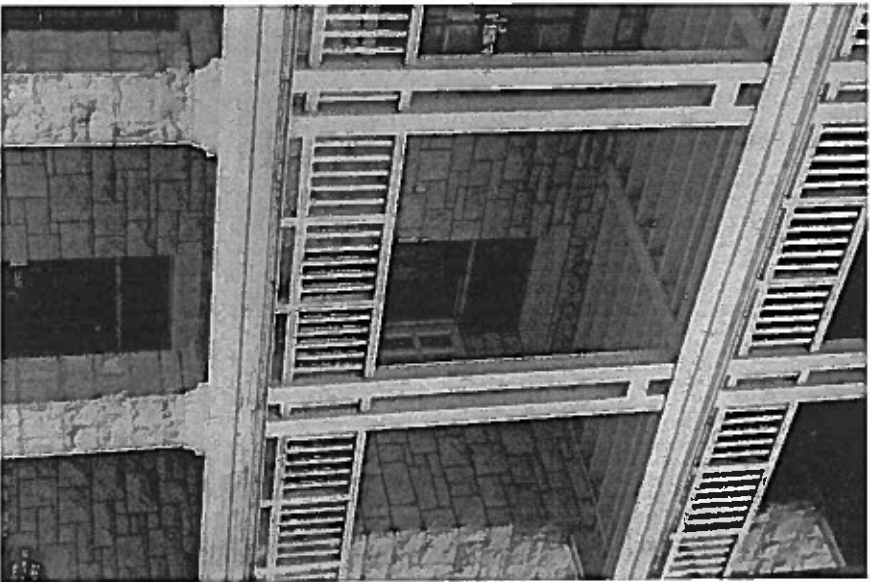


Figure 28: Looking southeast at the entrance doors from the second floor balcony on the front of the building.

First Floor Interior

Figure 29: Looking west at the double set of wood paneled doors in Hallway 100. The inside set of doors was added at a later date.

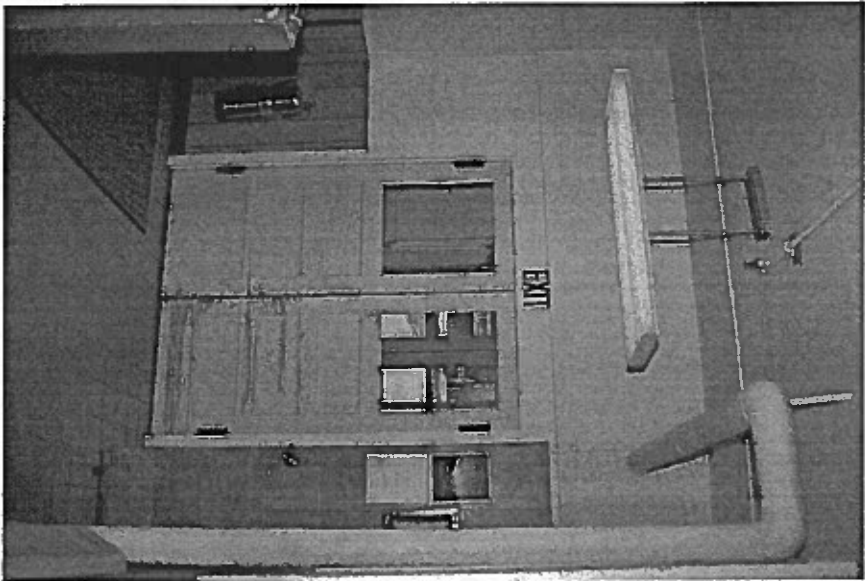
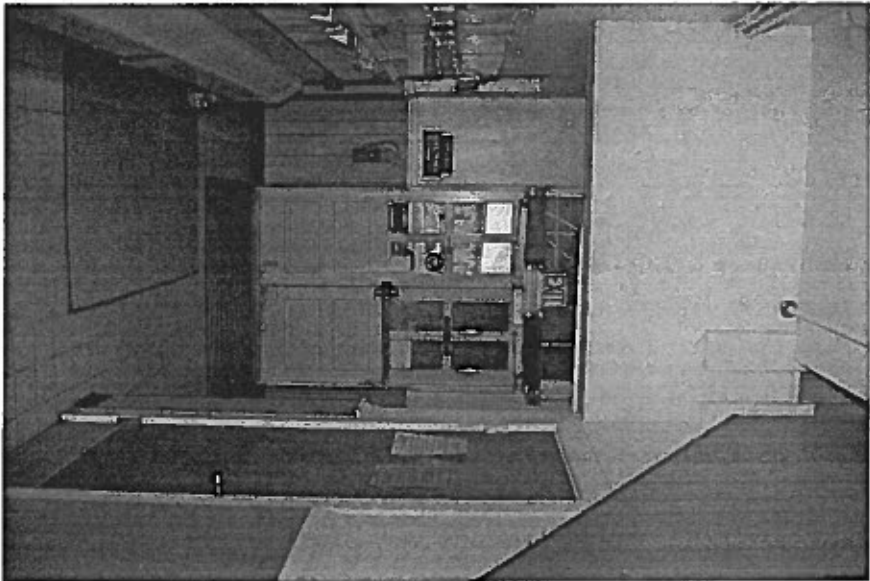


Figure 30: Looking east at the original doors and transom. The original corridor wainscot and base has been covered over with paneling, but the wood cap remains.

Figure 31: Looking southwest at the offices in the area of room 101. Note all of the later materials on the walls and ceilings that were not original to the building.

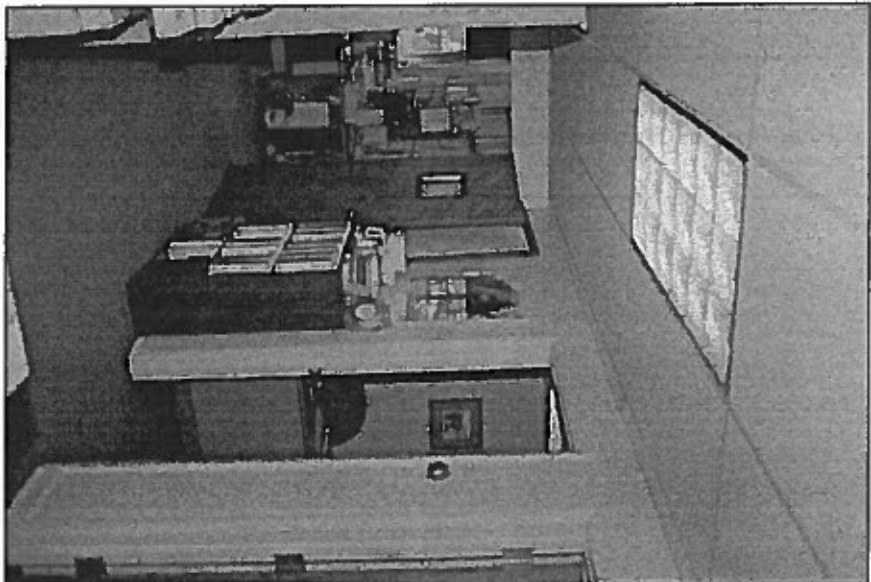
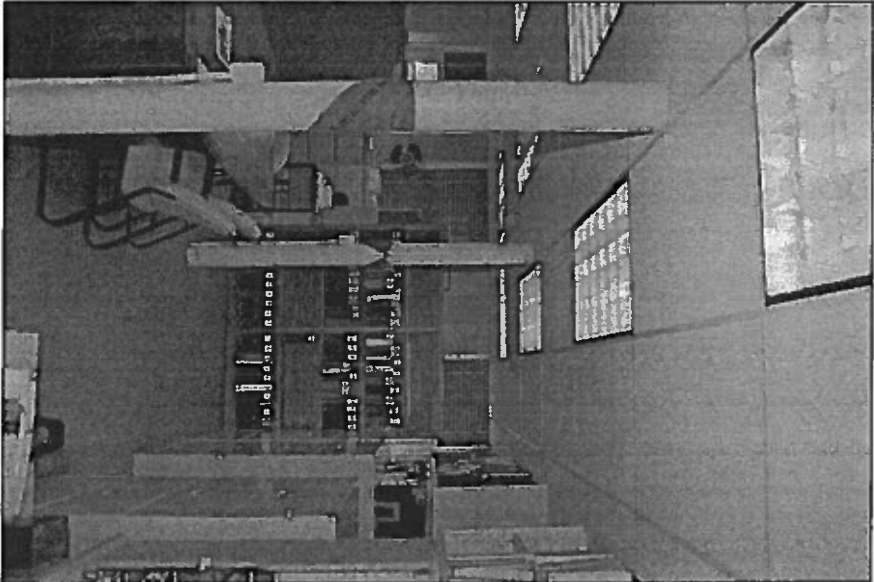


Figure 32: Looking south at room 109. Note the original iron columns. The ceilings have been covered over with new materials.

Figure 33: Looking northeast at a wood paneled door and transom in room 109. The base and door casings are all original to the 1909 building.

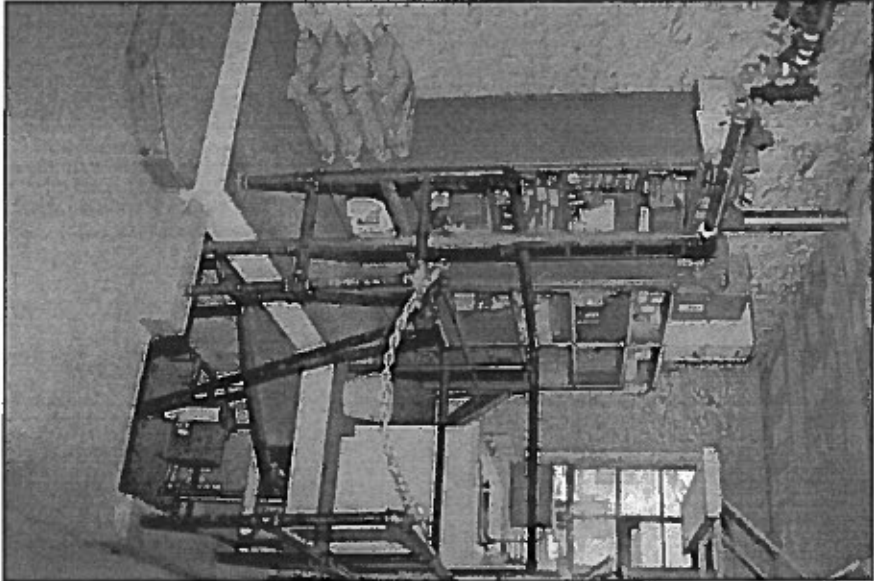


Figure 34: Looking south at the south boiler room in the original mechanical room 111. Note the original stone walls and concrete floor. The stairs lead to a lower mechanical room.

Figure 35: Looking northwest at the boiler room. Note the original brick and stone walls beyond. The ceiling has been covered with sheetrock.

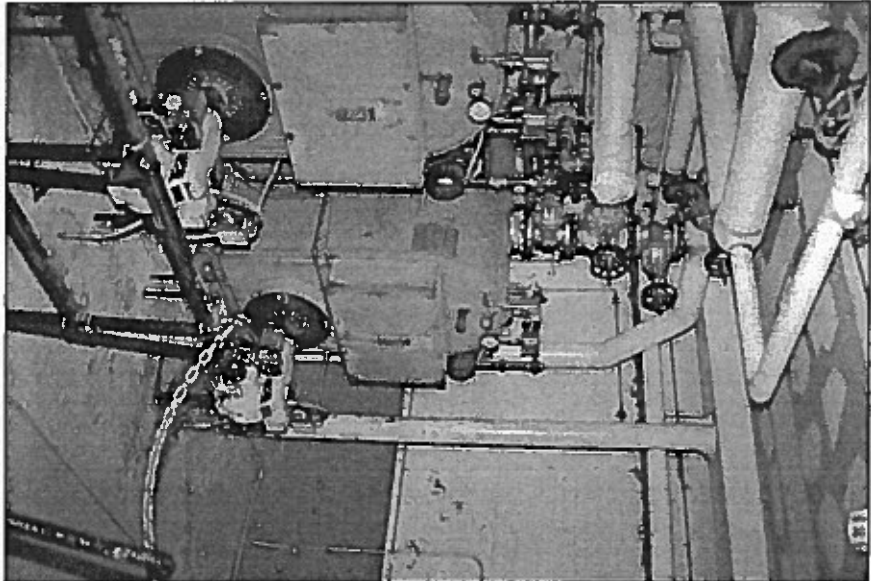
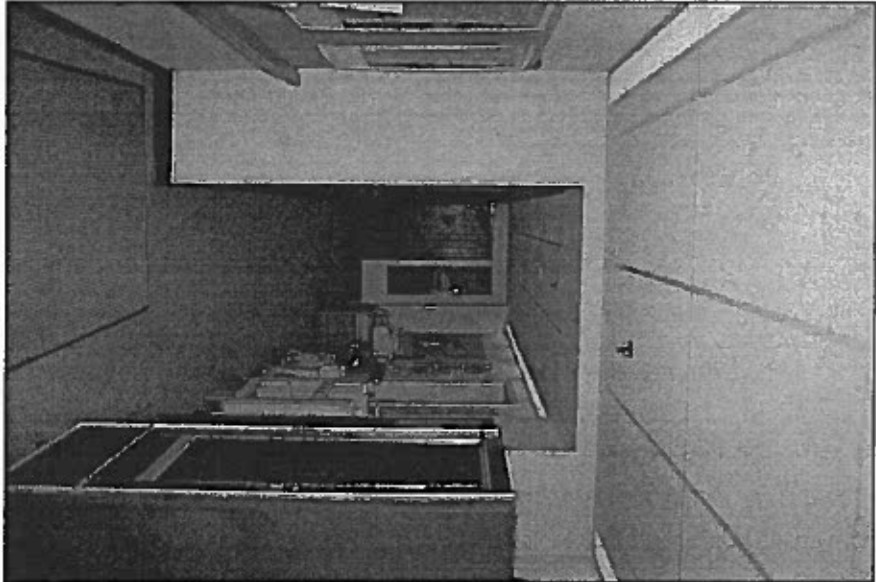


Figure 36: Looking north at the connecting hallway between the south and north halves of the building. Originally there was never a connection between the two wings on the interior. All of the materials are new to the building.

Figure 37: Looking north at a typical renovated bathroom on the first floor. All of the materials are new.

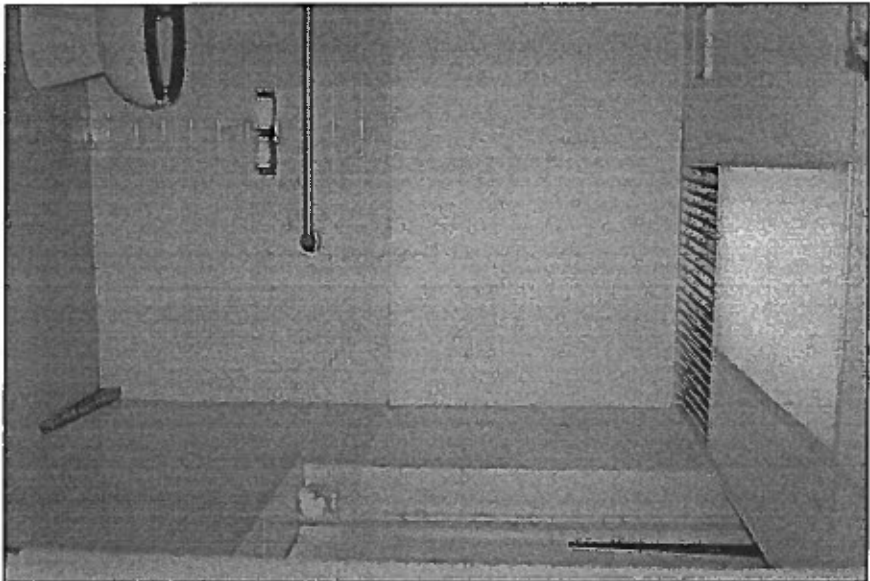
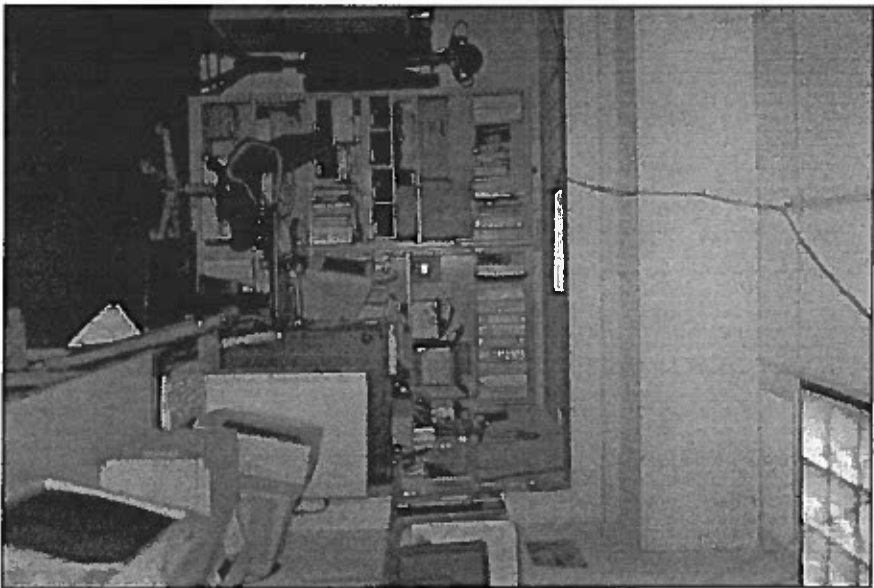


Figure 38: Looking south at room 118. A series of original small rooms have been opened up into a larger room with very little historic fabric left in the room.

Figure 39: Looking east at an original door and window in room 119. Note the original plaster wall and wood casing around the door and window.

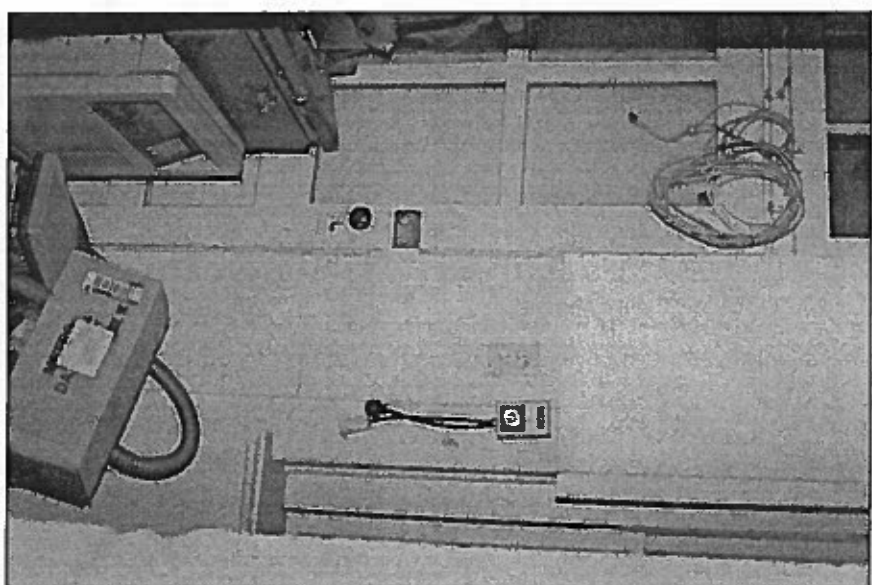


Figure 40: Looking southwest at room 122. This room has also been opened up from a series of small rooms. The exterior wall to the right has original materials and openings.

Figure 41: Looking east at the north stairway and hall. Note the original newel post and handrail. The original balusters on the right and the original wainscot on the left is under the paneling. The original wood stairs have been covered with carpet.

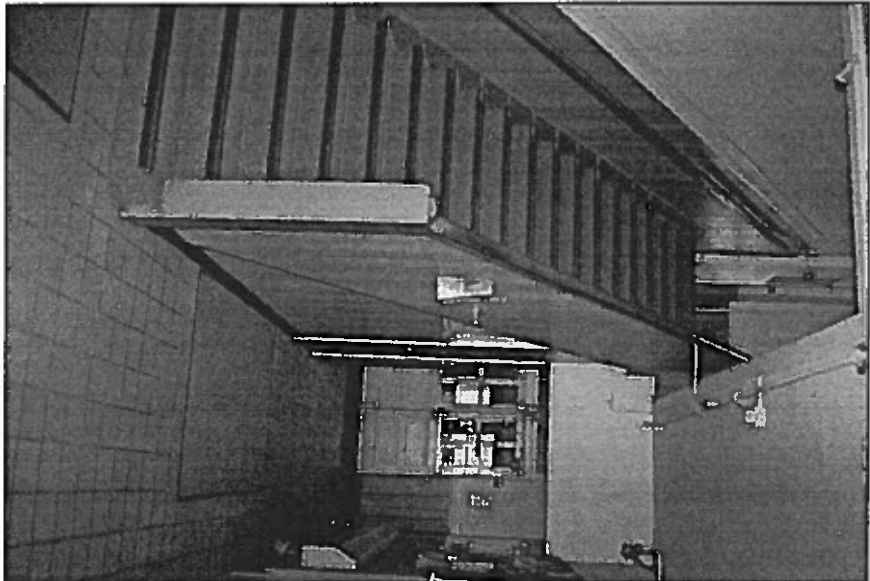
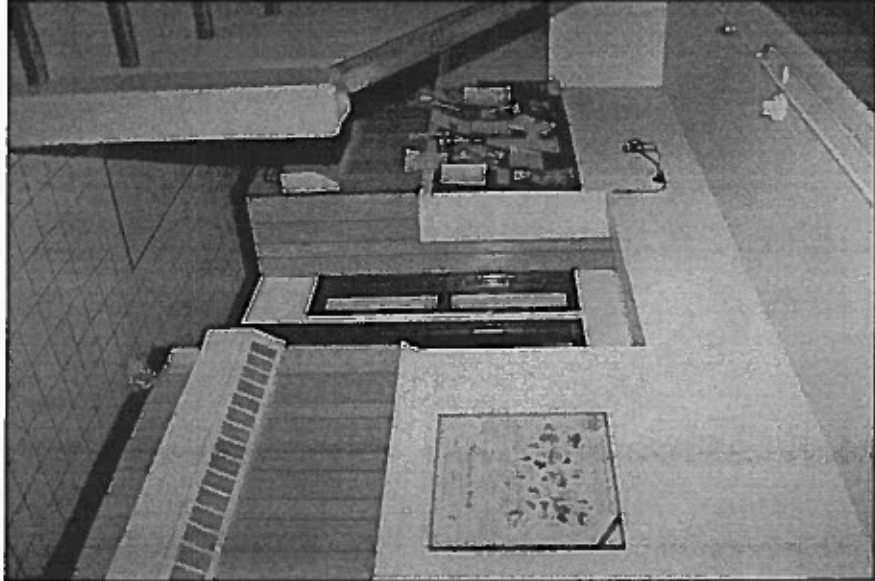


Figure 42: Looking southeast at the door into the central hallway from the stairway. The doors are new but the wall to the right is original. The original wood wainscot has been covered with paneling but the wood cap was not covered.

Figure 43: Looking east at the rear doors on the north end of the building. Note the original wood paneled doors and transom. The hardware has been modified over the years.

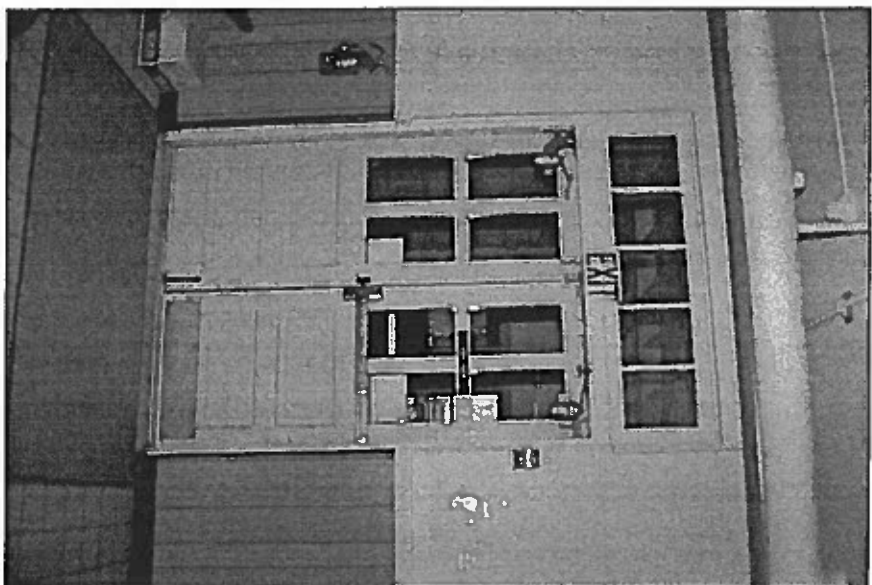
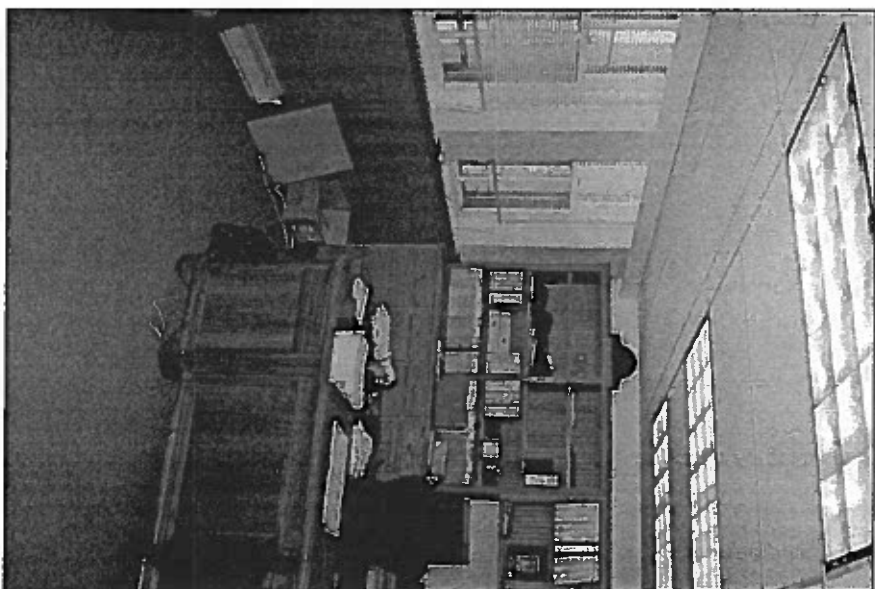


Figure 44: Looking northeast at the Superintendent's Office, room 127. With the exception of the windows and upper exterior walls, the room has new materials. The ceiling has also been lowered below the head of the window. The superintendent's office is typical of this wing of the building.

Figure 45: Looking northeast at the reception area, room 125, at the typical new materials.

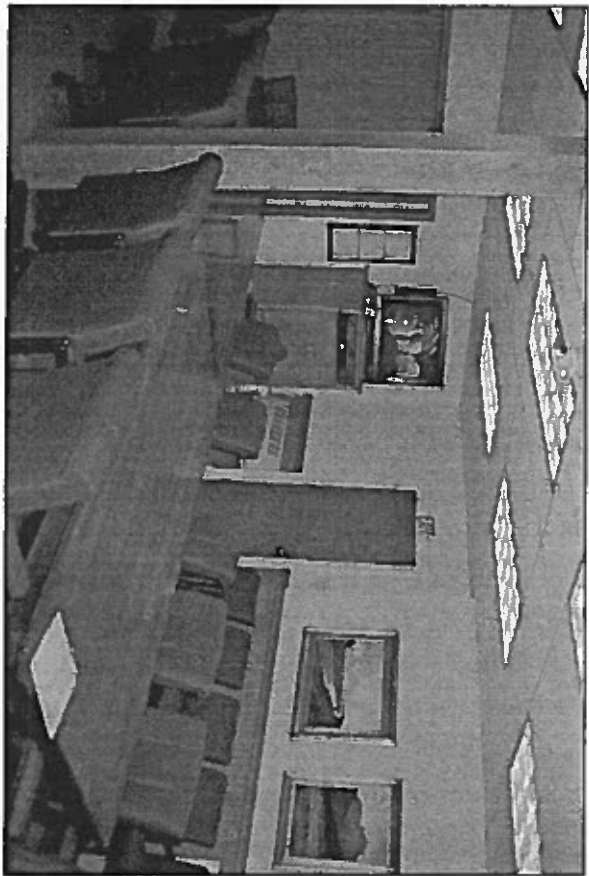
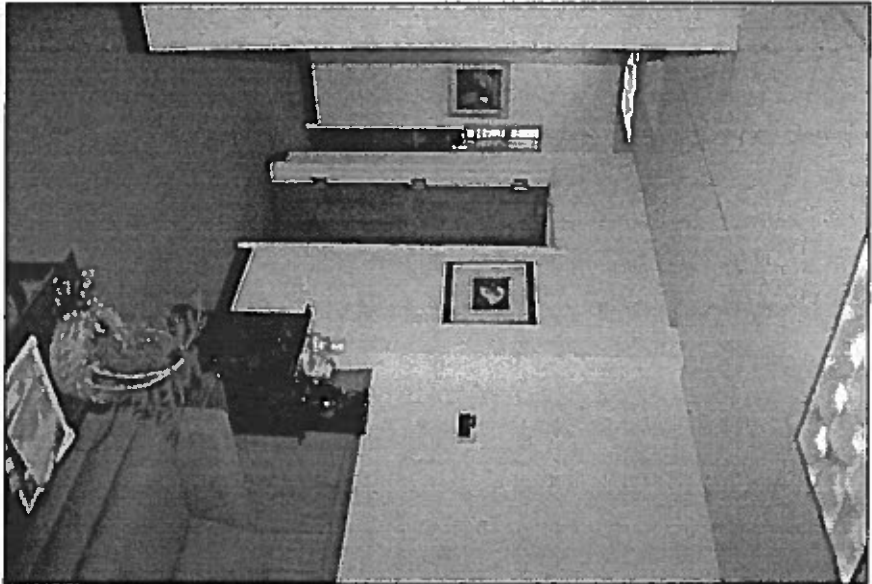


Figure 46: Looking southeast in conference room 128. All of the materials are new to the space.

Figure 47: Looking southeast at room 133. The wall and windows are original to the building including the casing and sill of the window.

The chair rail has been covered. The ceiling has also been lowered below the head of the window.

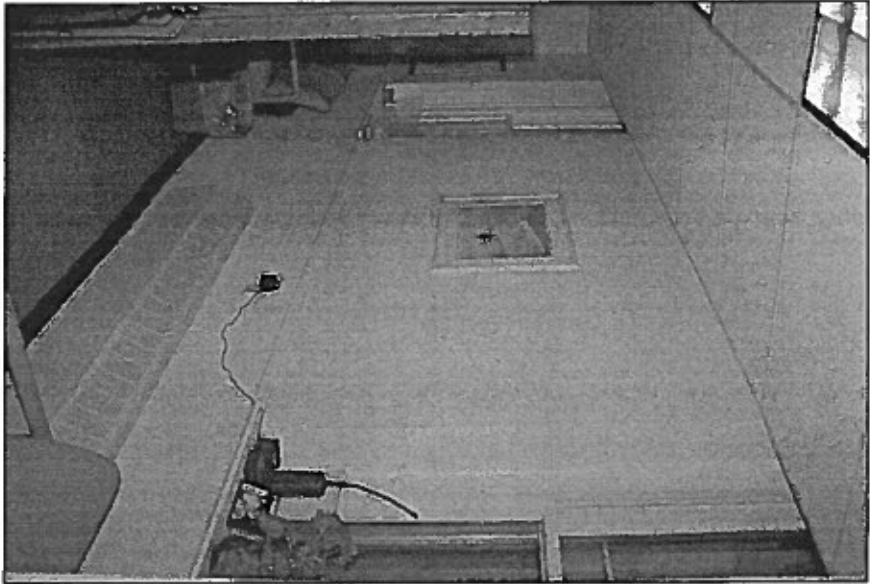
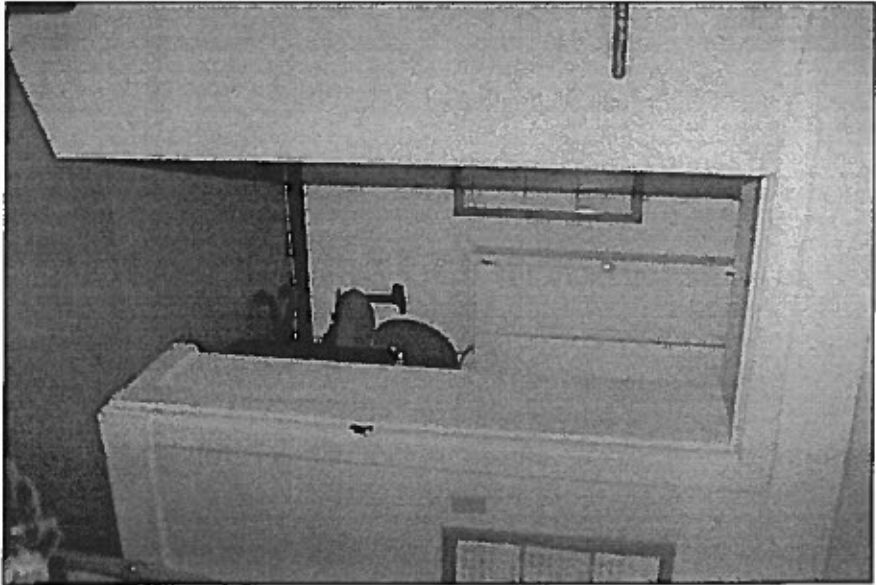


Figure 48: Looking west at the doorway from room 134. Even though the door is newer, the casing and base are original to the room.

Figure 49: Looking northwest at the boiler room 135 in the north wing of the building. Note the original plaster walls and ceiling.

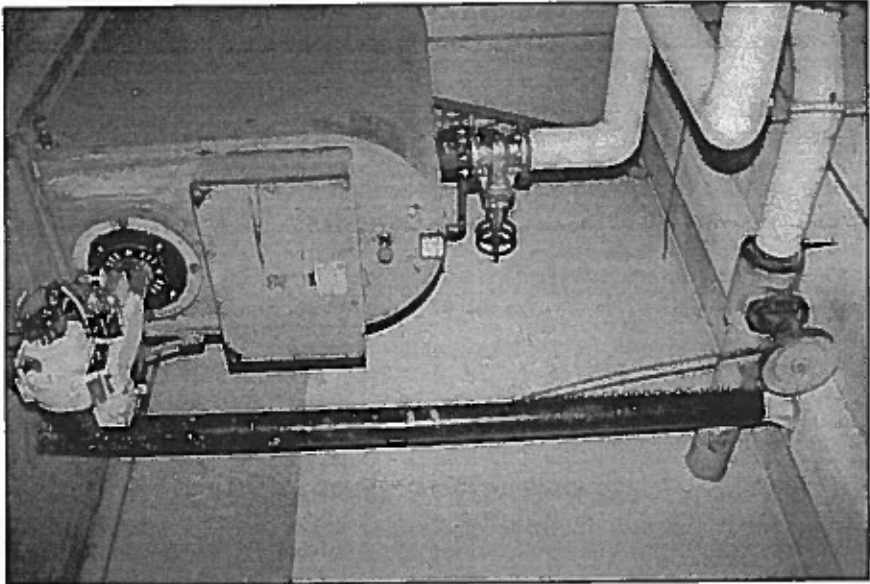
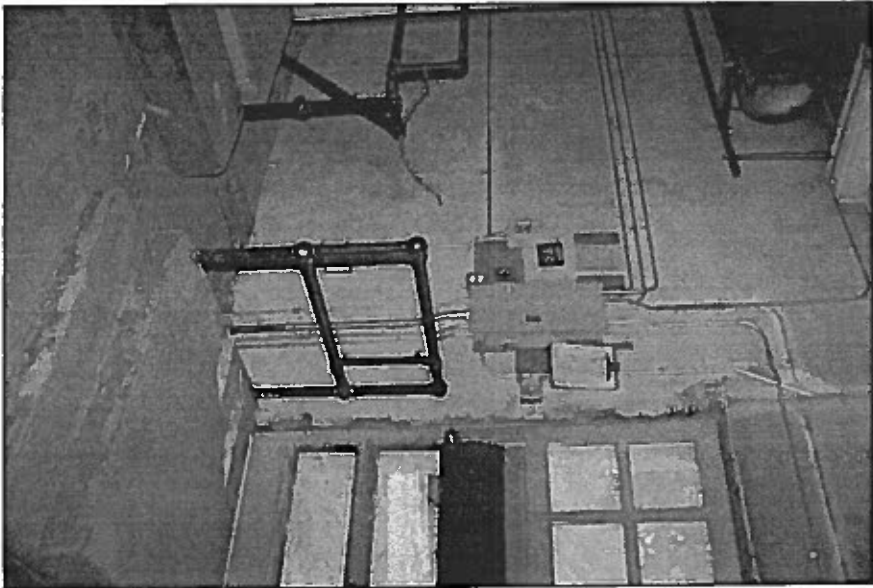


Figure 50: Looking northeast at the boiler room entrance and metal stair down to the lower area. Note the original plaster wall.

Figure 51: Looking northeast at the corridor wall of room 201. Note the original plaster wall with the original wood chair rail and trim at about 6 feet. The door has been changed and the transom filled in but the original wood casing and base along this wall still exists.

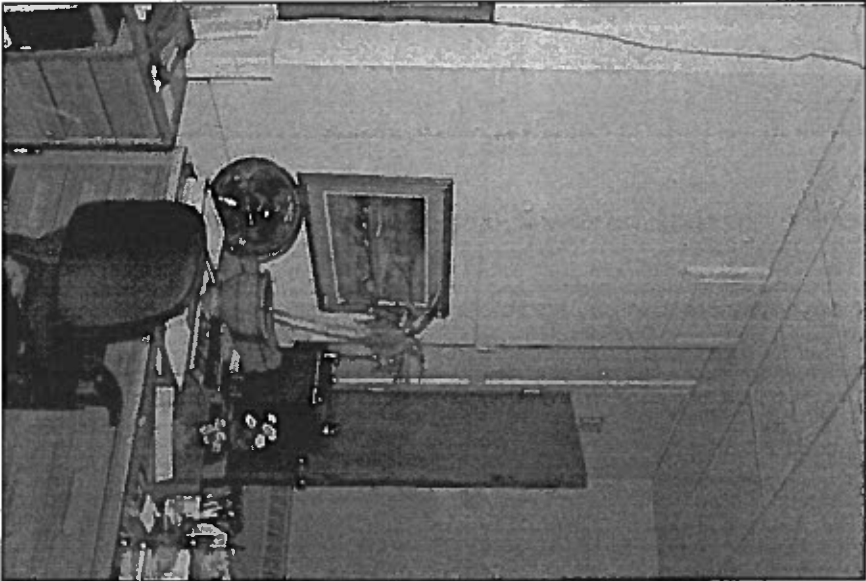
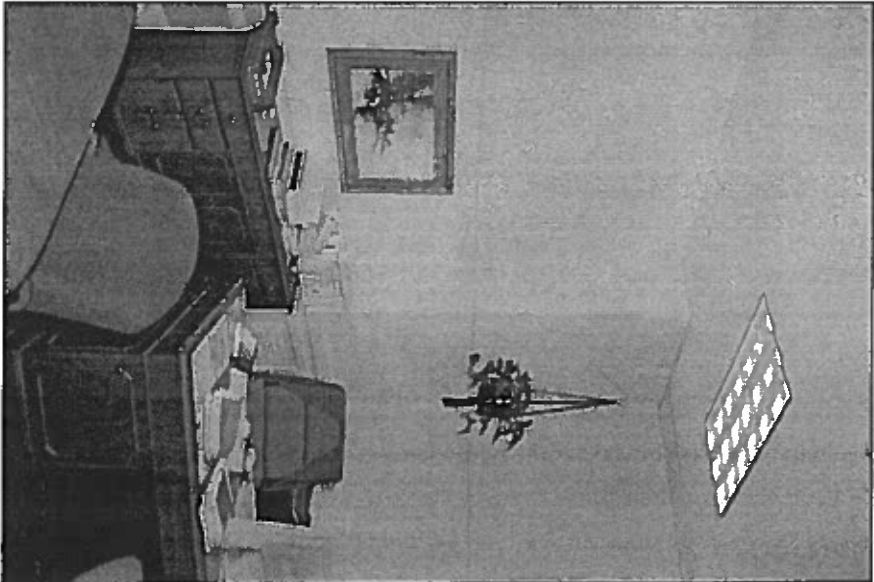


Figure 52: Looking southwest at the outside walls of room 204. Note the original passive ventilation shaft in the corner with the chair rail and high rail trim. This room also has the original base along with the plaster walls.

Figure 53: Looking southeast at room 207. Most of the materials are new to the space with the exception of the exterior wall to the right.

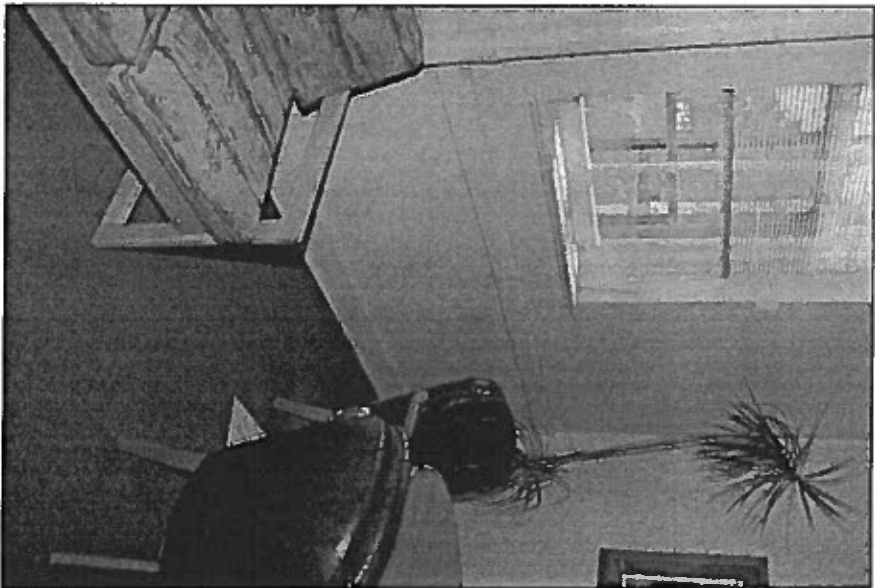


Figure 54: Looking southwest at room 207. Note the original plaster on the exterior wall along with the windows and upper rail, chair rail, and base. This is typical of rooms with exterior walls.

Figure 55: Looking east from room 201 into room 208 and beyond. Note the original door opening with transom to the NCO Quarters. All of the other materials to the right and left are new to the spaces.

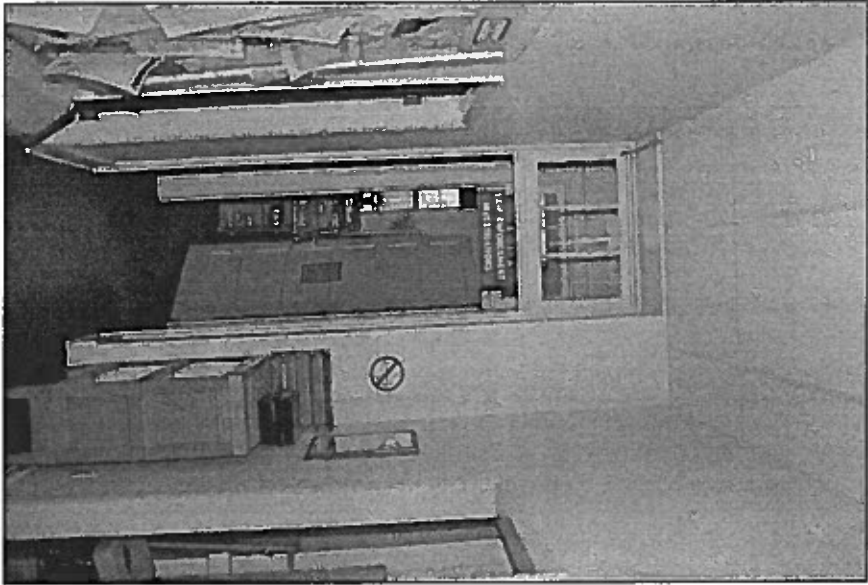
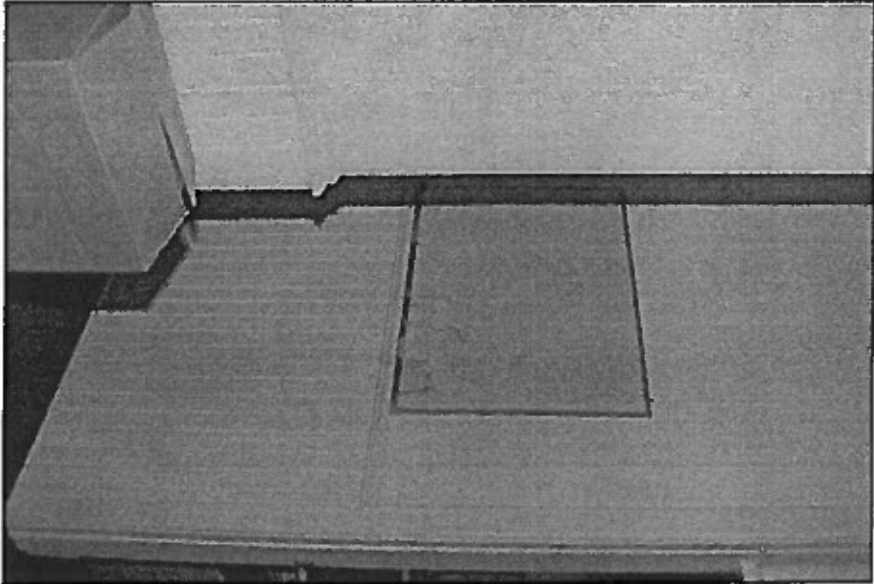


Figure 56: Looking southeast at corridor 211. Note the original wood wainscot and cap and casing around the door.

Figure 57: Looking west from room 214 to the corridor 211 at the original wood paneled doors and transoms. Also note the original casing around the doorway.



Figure 58: Looking east at room 215 where most of the room is original with exception of the lowered ceiling. The original ceiling is above the acoustical ceiling.

Figure 59: Looking northeast at room 220. Most of the materials are new to the space with the exception of the original materials on the exterior walls.

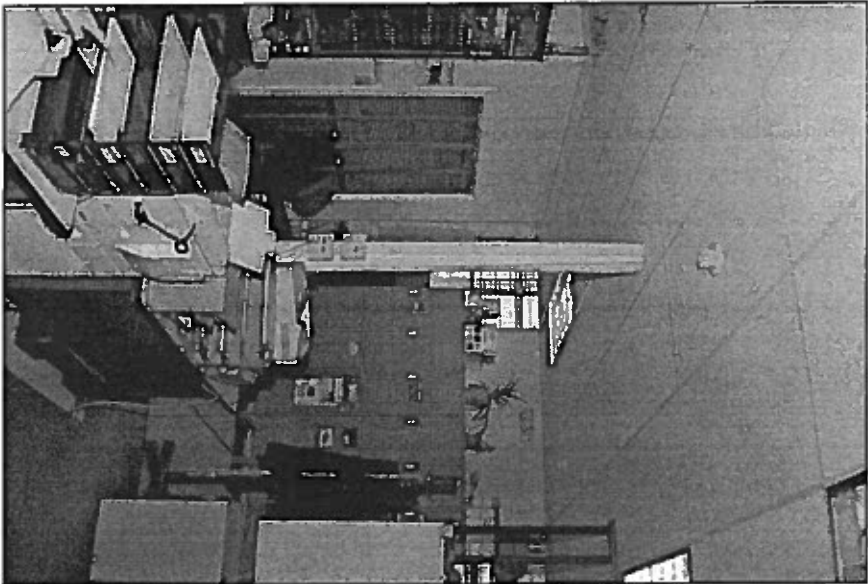
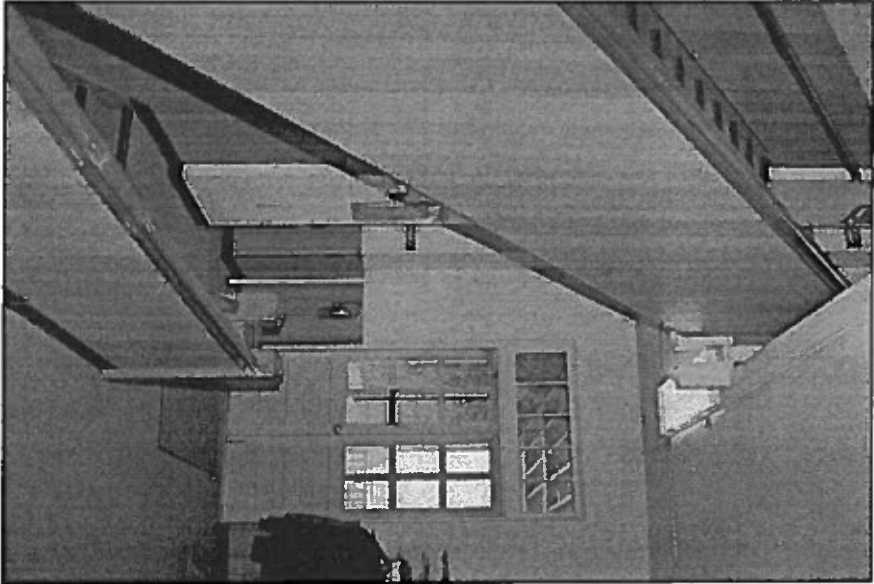


Figure 60: Looking east at the north stairway and corridor 231, towards the original doors to the balcony on the rear of the building. Note the panel-covered wainscot and stair balusters. The plaster walls are original to the space.

Figure 61 : Looking west at the north stairway and corridor 231 towards the original doors to the balcony on the front of the building.

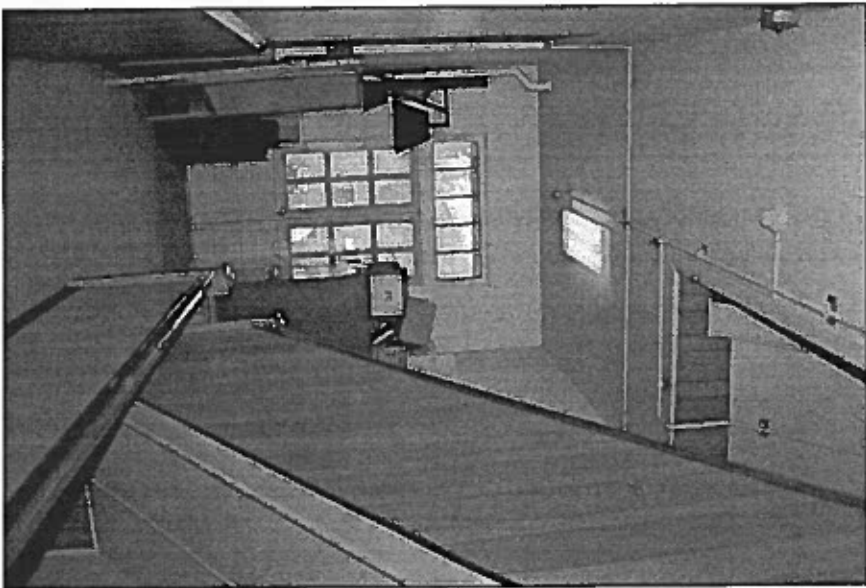
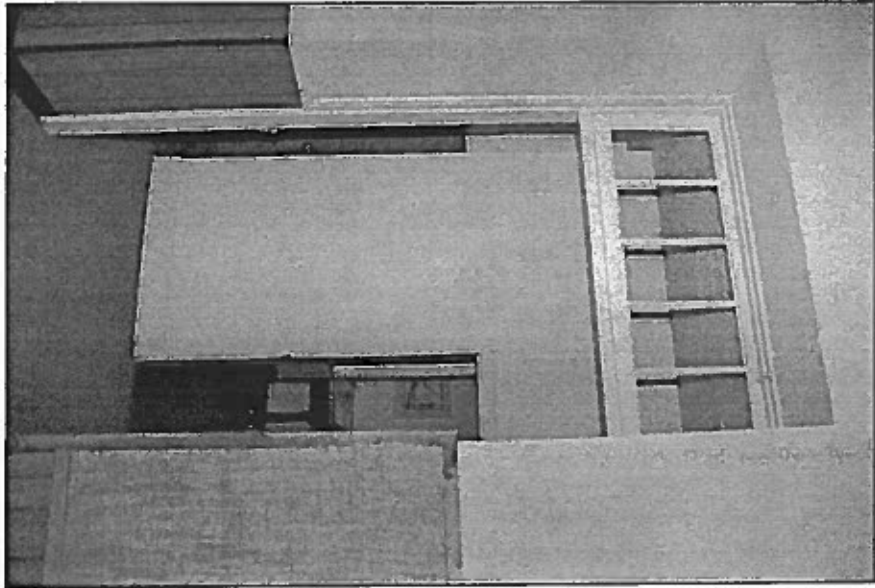


Figure 62: Looking south from stairway 231 to the doorway into room 230 and beyond. Note the original wood surround and transom.

Figure 63: Looking south in room 227 at the new materials in these spaces.

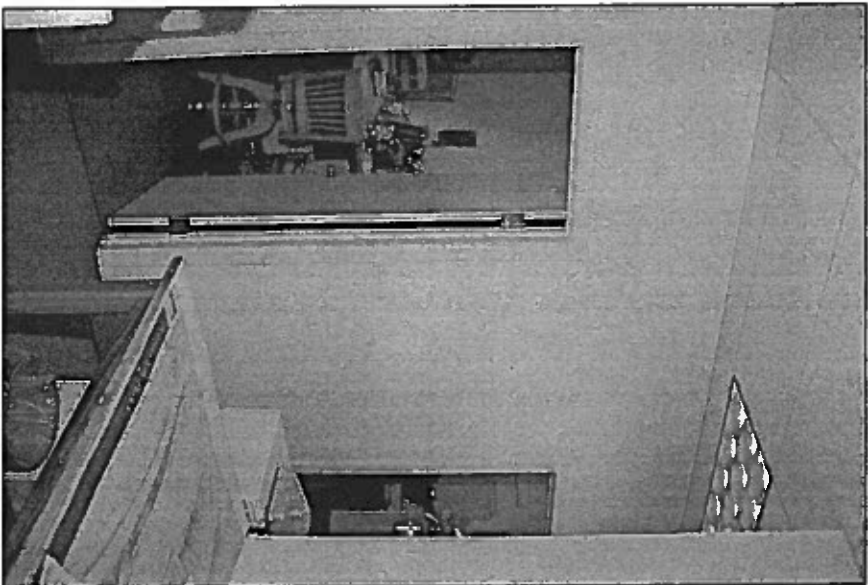
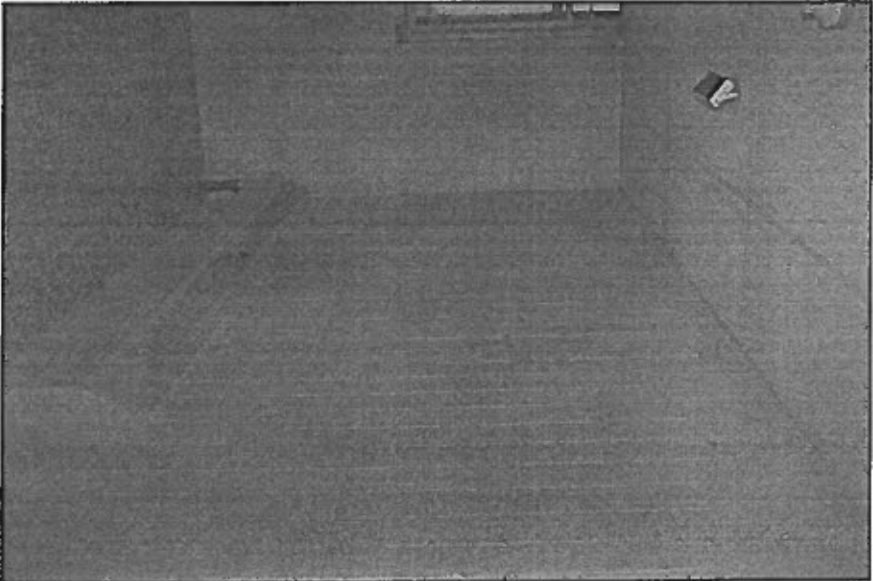


Figure 64: Looking east at the bathroom 228 and its new materials. The sill on the original window has also been replaced.

Figure 65: Looking west at room 239/236 where most of the materials are not original to the space.

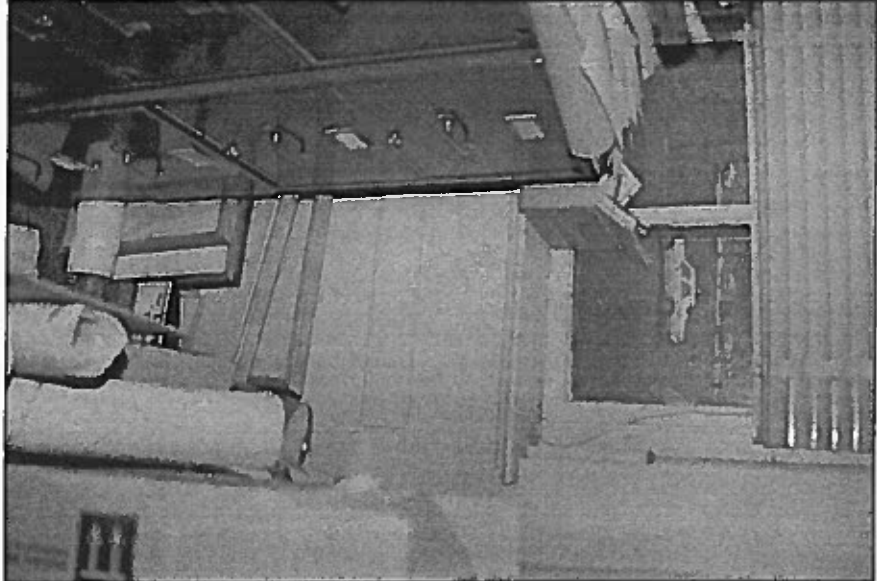


Figure 66: Looking west at a window detail in room 233. Note the original window casing, sill and the board backing for the original cast iron radiators.

Figure 67: Looking south at a circa 1930's bathroom from room 233. Note the beaded board walls that are not original to the building.

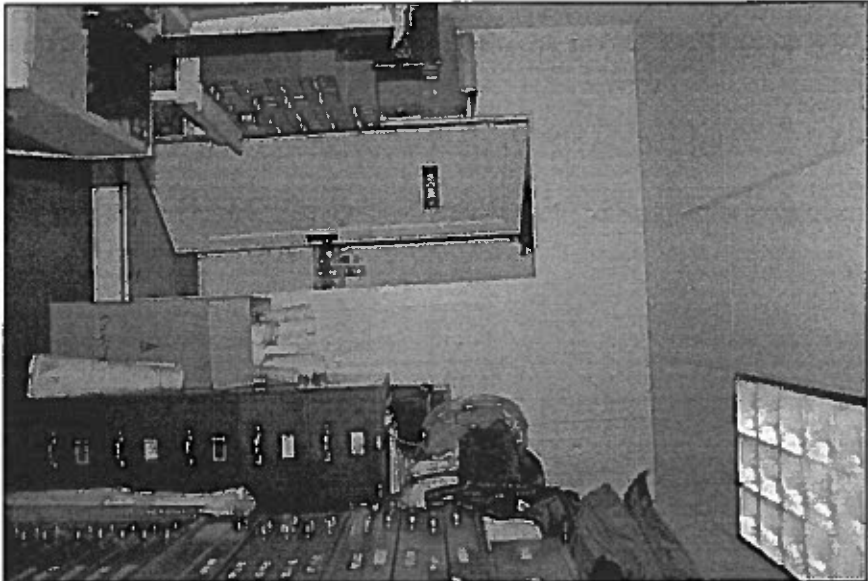
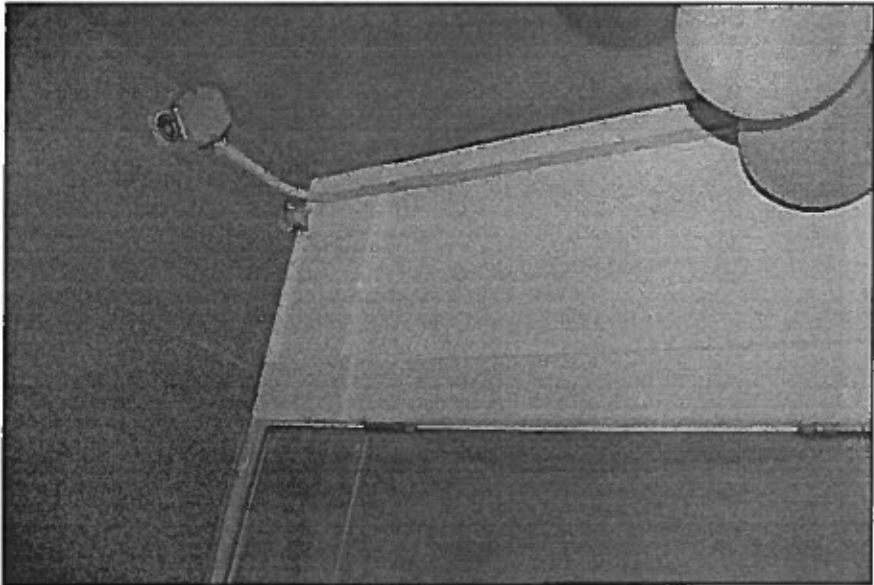


Figure 68: Looking south at the original wood base and casing at the door in room 232.

Figure 69: Looking south in room 232 at the transom above the ceiling in the door to the stairway. Note the original wood window and casing. The ceiling above the acoustical ceiling is original.

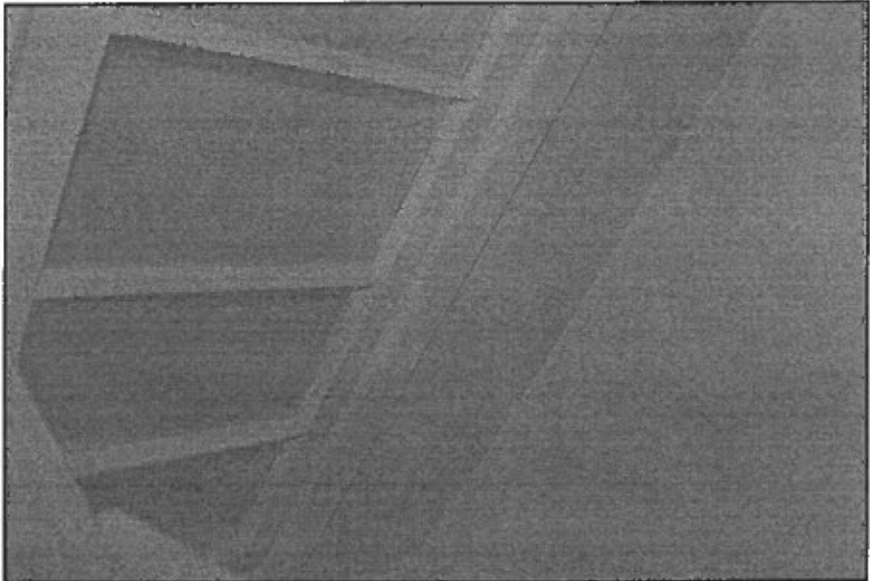
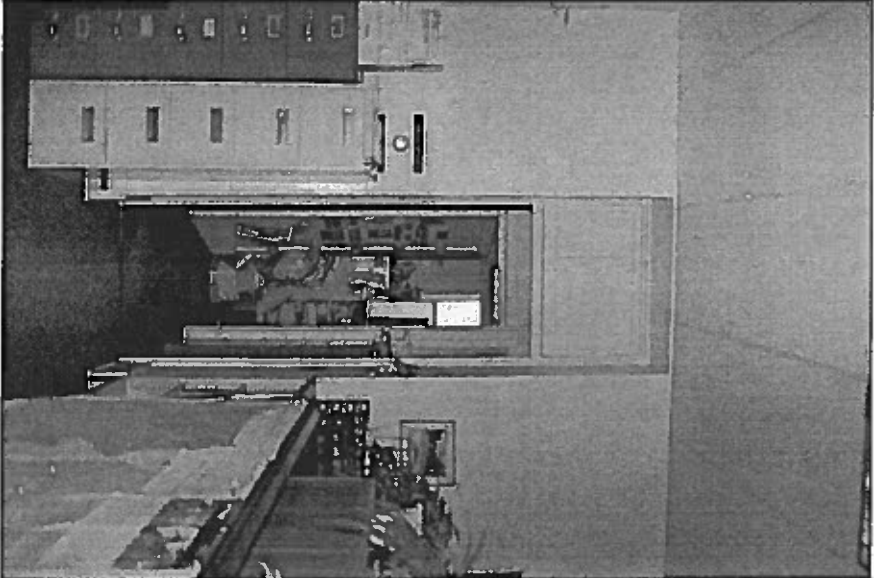


Figure 70: Looking east from room 239 to the original NCO Quarters. Note the original door and transom.

Figure 71: Looking at the original doorway and wall materials in the corridor to room 242. The rooms in this area are mostly original with the exception of the lowered ceilings.

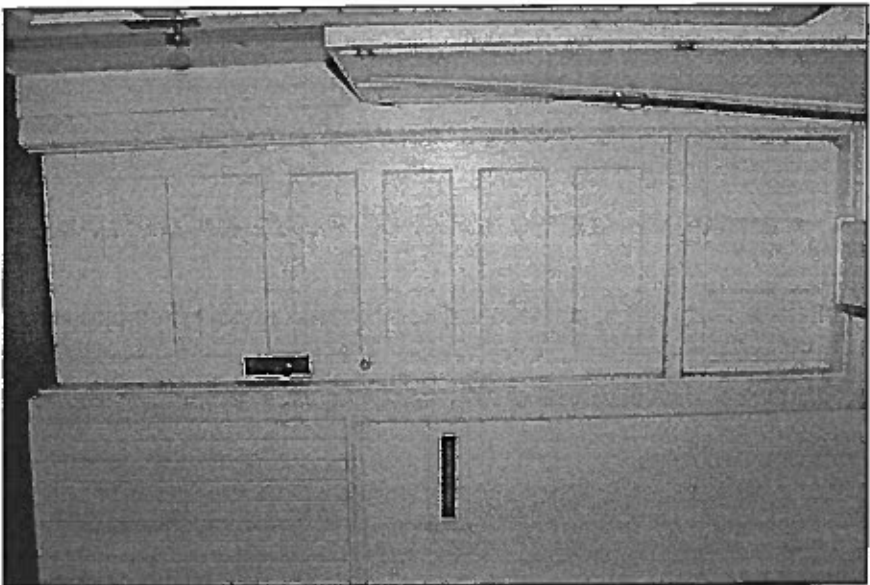
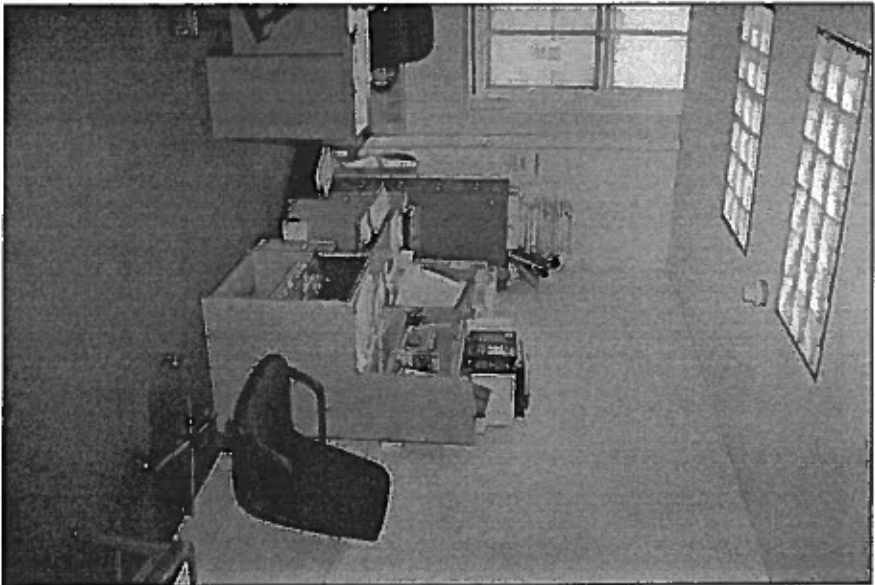


Figure 72: Looking northeast at room 242. The walls, including the chair rail, base and window, are original to the building. Note the lowered acoustical ceiling that drops below the window head.

Third Floor Interior

Figure 73: Looking east from stairway 300 at the original entrance doors to the balcony on the rear of the building. Most of the materials are original to the space with the exception of the paneling that covers the wainscot and balusters.



Figure 74: Looking west from stairway 300 at the original doors to the front balcony.

Figure 75: Looking southeast from stairway 300 at the stair to the attic. Note the original wainscot on the right wall.

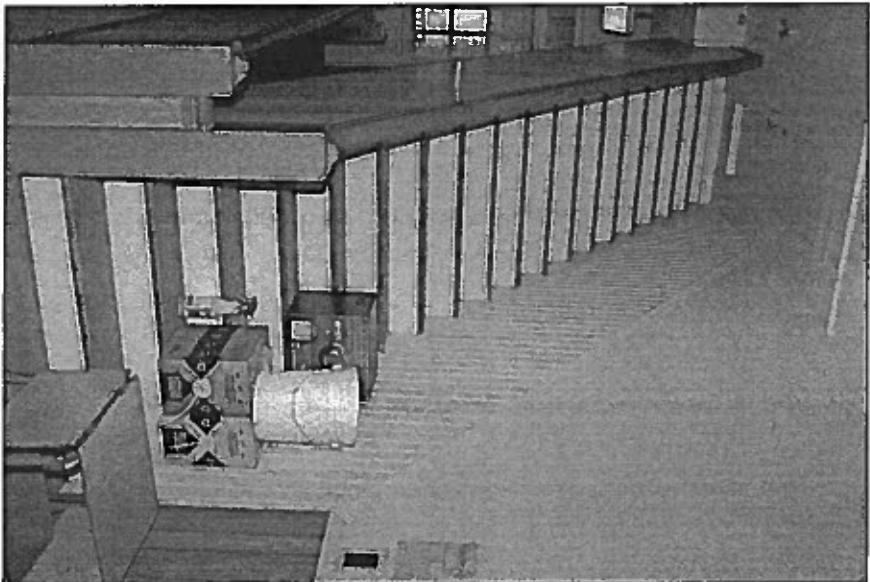


Figure 76: Looking northeast at the stair to the attic from stairway 300. Note the original balusters on the inside of the railing and wood treads.

Figure 77: Looking south at the entrance to room 301 from the stairway. Note the newer in-filled doorway.

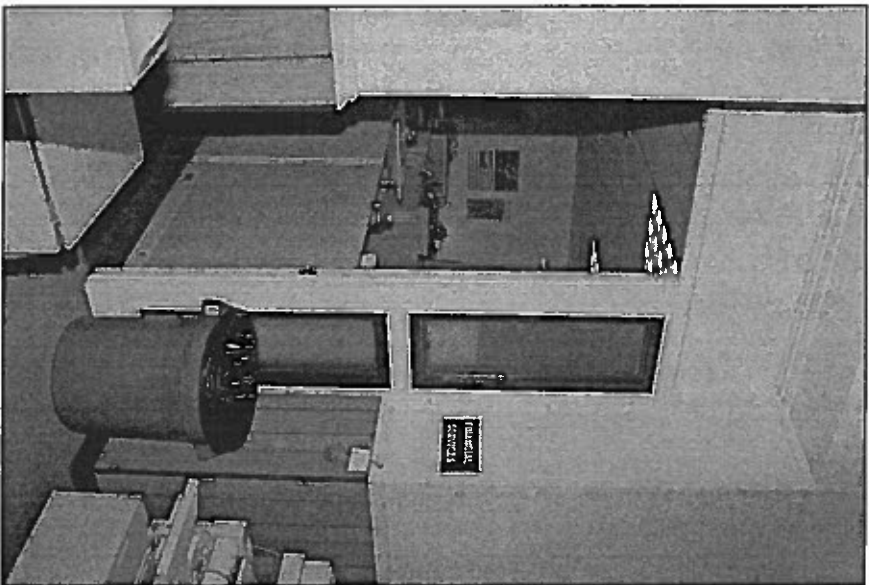
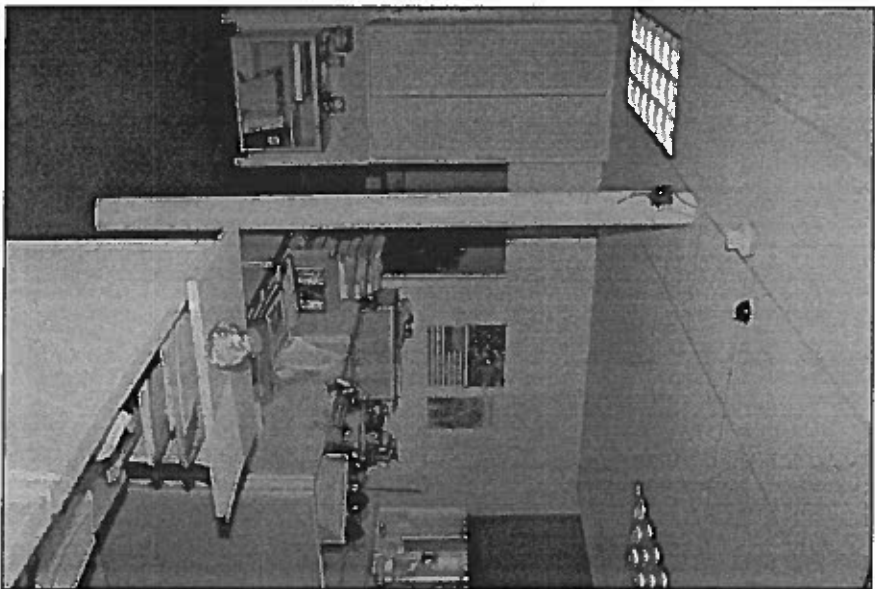


Figure 78: Looking south at room 301. Most of the materials are new with the exception of the exterior window walls. Note the original column.

Figure 79: Looking south at room 302. Note the corner area that encloses the ductwork from the passive ventilation system. Note the original chair rail and windows.



Figure 80: Looking south at room 305. Note the original columns and exterior walls.

Figure 81: Looking southeast at the exterior wall of room 305. Note the cast-iron radiator from the 1908 period.

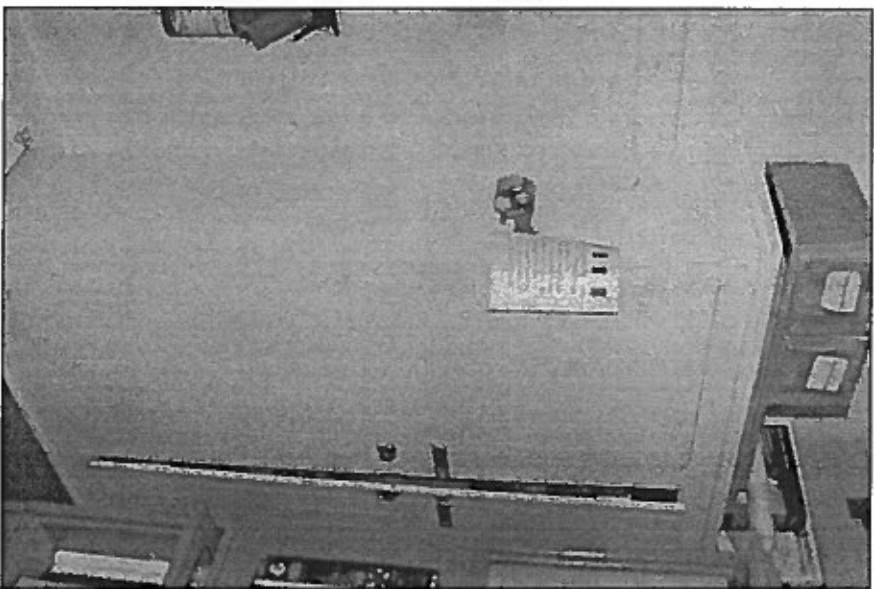


Figure 82: Looking east at an original built-in cabinet in room 307. Note the original wood vase and upper rail on the wall. The rooms in this part of the building are original.

Figure 83: Looking south at the exterior wall in room 307. Note the radiator on the wall from the 1908 period.



Figure 84: Looking north at room 310. Most of the walls and materials are new, however, the back wall is original.

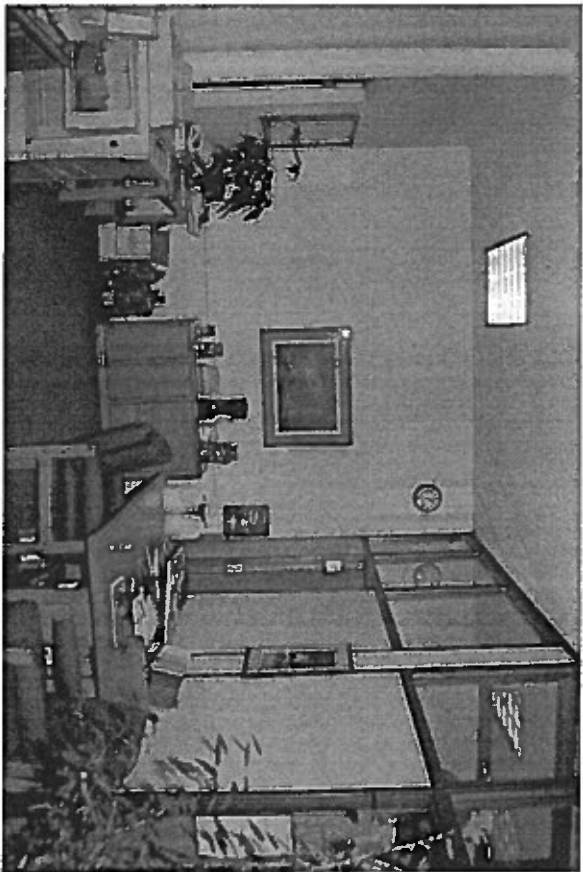


Figure 85: Looking southeast at room 310. Note the original walls and trim including the passive ventilation shaft and window.

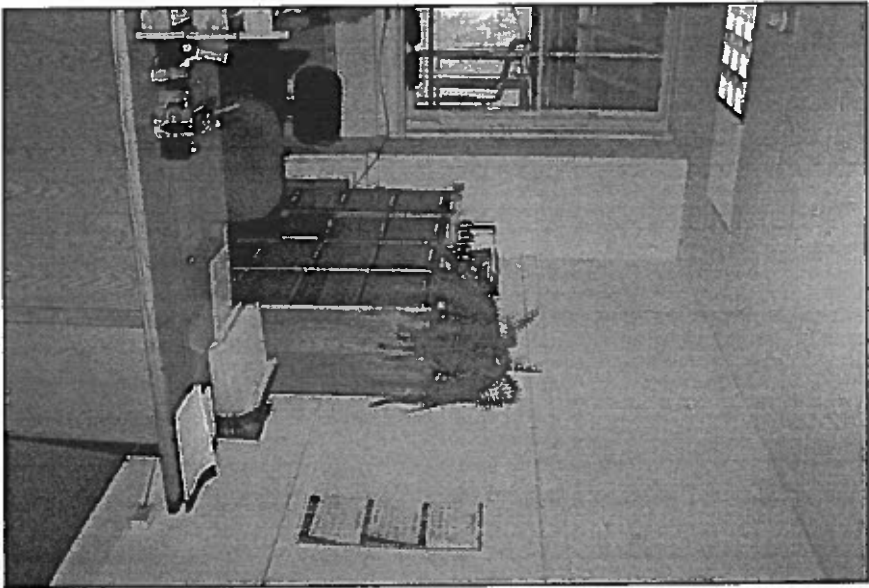
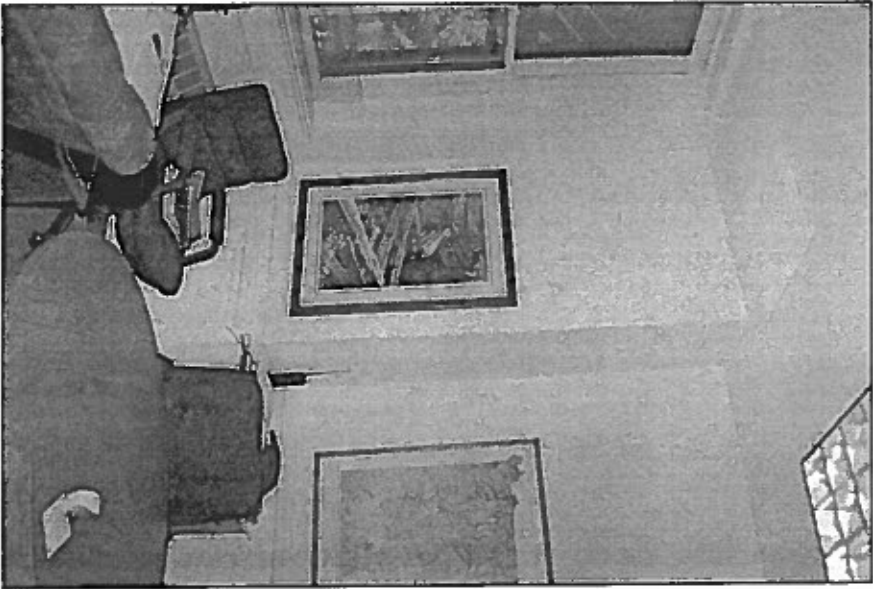


Figure 86: Looking southeast at room 312. Note the original walls and trim, including the passive ventilation shaft and window.

Figure 87: Looking east at the north stairway 324 and at the original doors to the rear balcony. Note the paneling covering the wainscot and balusters.

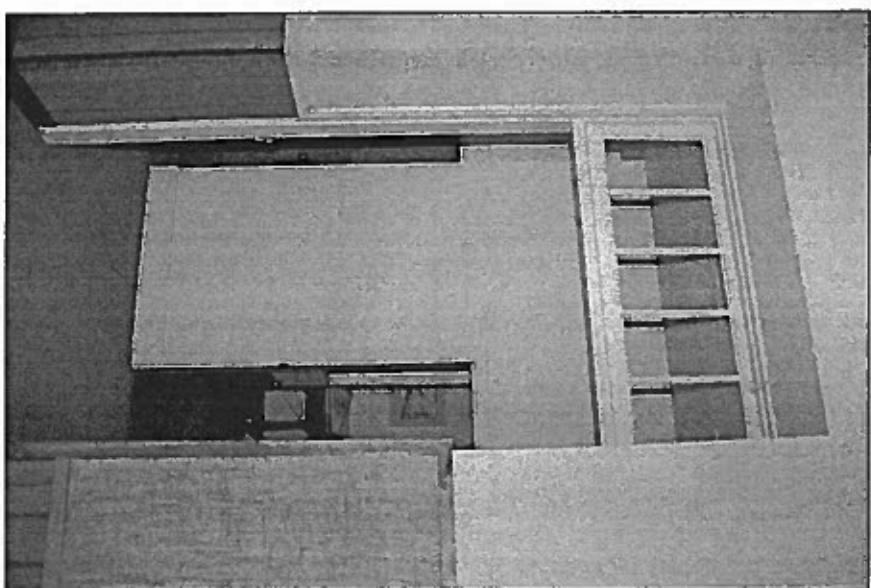
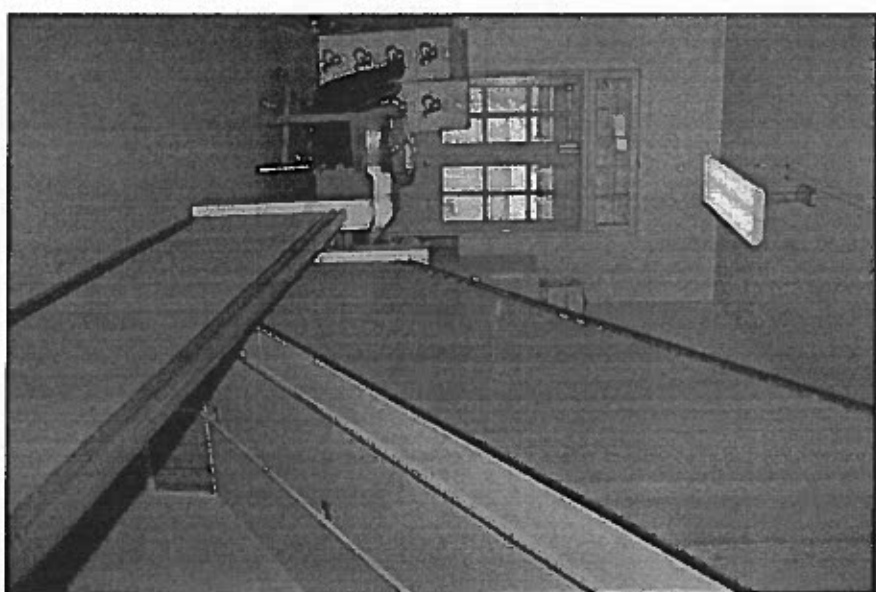


Figure 88: Looking west at the original front balcony doors from the stairway.

Figure 89: Looking northeast at the stair to the attic floor. Note the original wood wainscot and cap, wood treads, and newel posts.

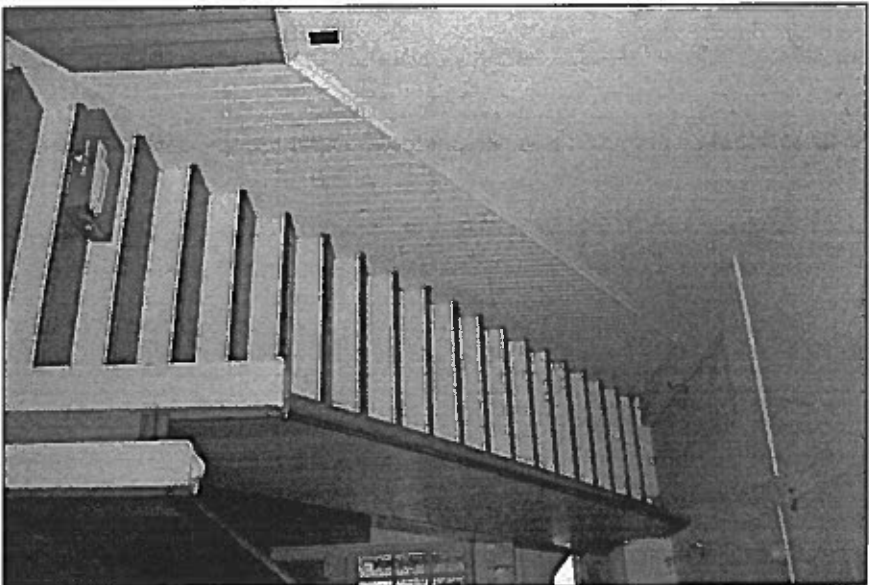
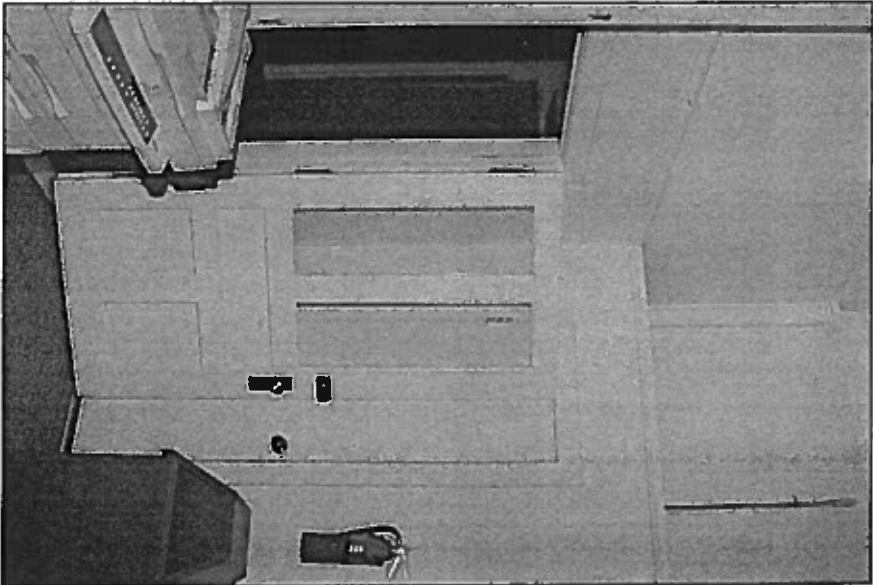


Figure 90: Looking southwest at a doorway in room 322. This wall and door has a combination of original materials as well as a 1930's renovation.

Figure 91: Looking southwest at room 315. Note the original built-in bookcase and ductwork for the passive ventilation system. Note the original wood base.

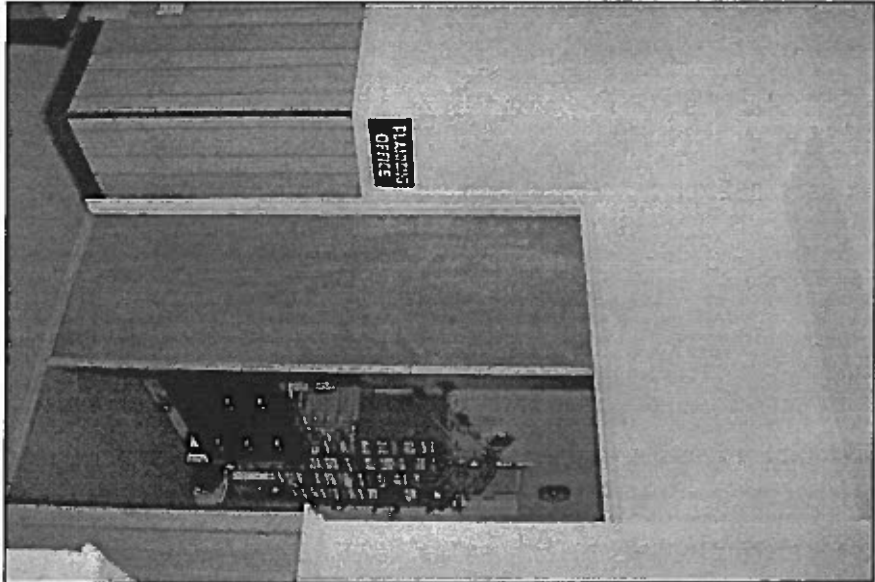


Figure 92: Looking northwest at the entrance to room 325 from stairway 324. The doors and transoms have been filled in and changed to new materials.

Figure 93: Looking northwest at room 328. Note the corner ventilation ductwork with the original base.

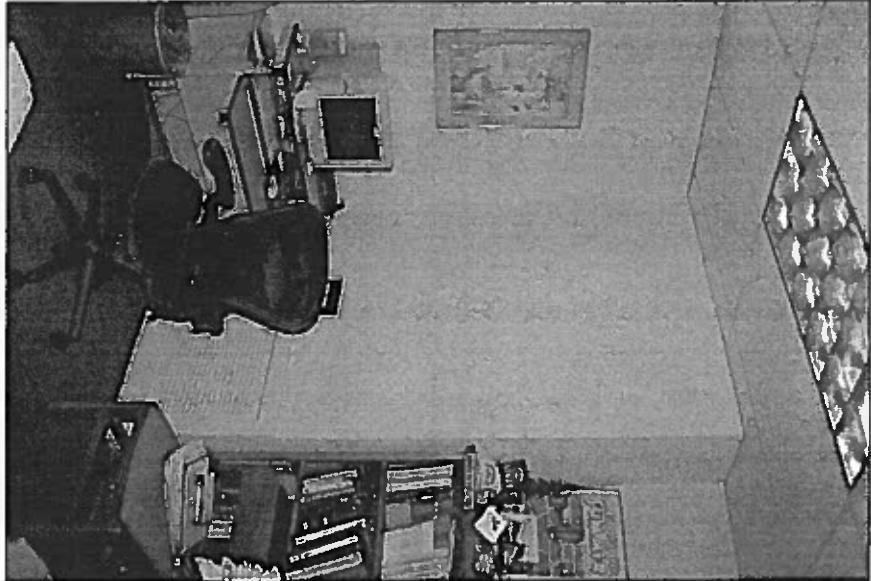
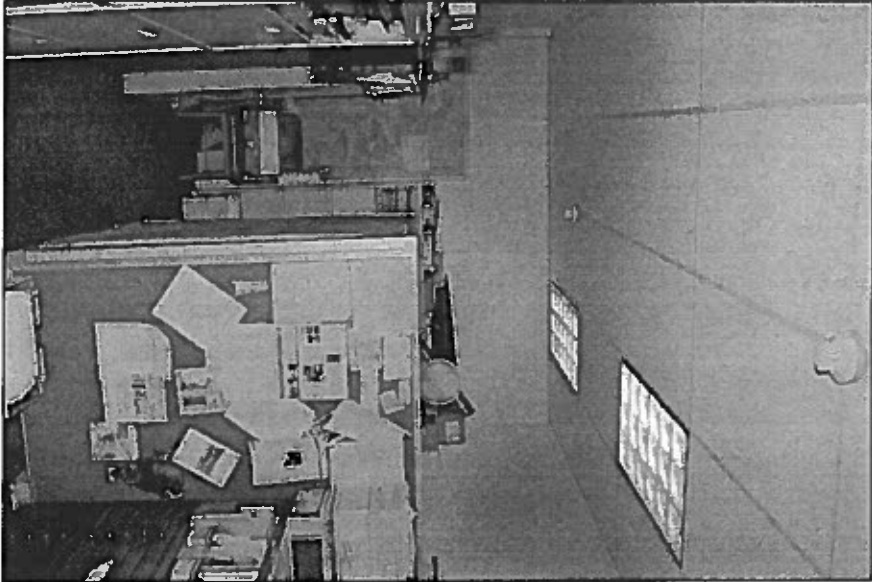


Figure 94: Looking east at room 329. Note the new ceiling and wall materials that are not original to the building.

Figure 95: Looking north at room 333. Most of the materials in these rooms are new with the exception of the outer wall and north wall to corridor 336.

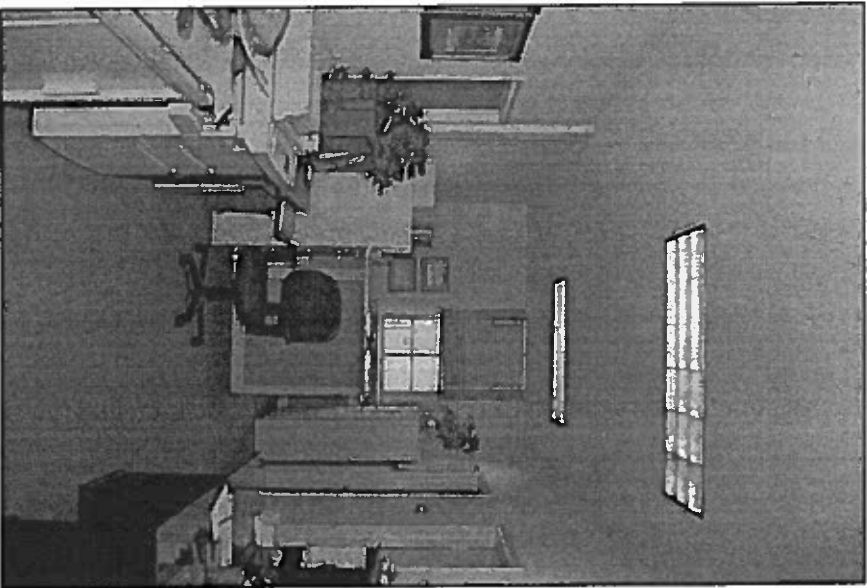
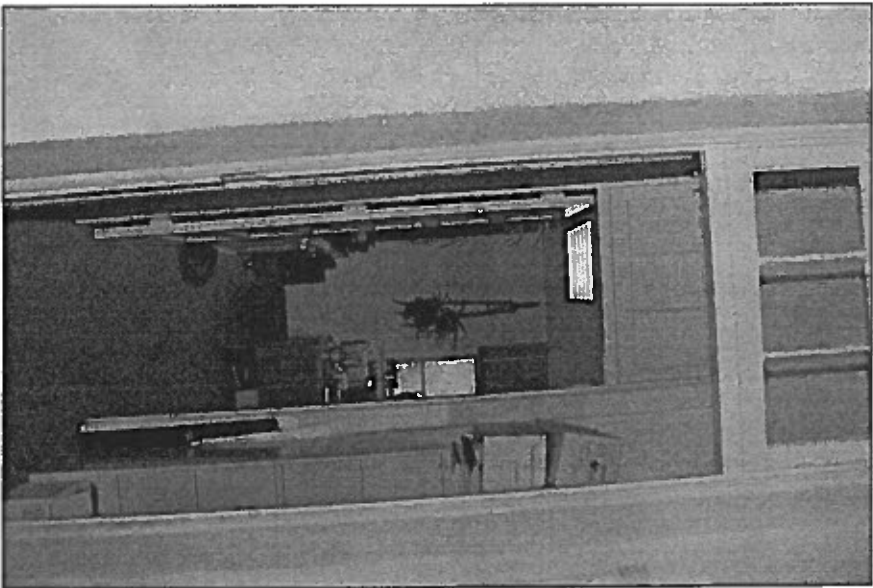


Figure 96: Looking east at the original wood doorway and transom to corridor 336 and room 337 beyond.

Figure 97: Looking northeast at corridor 336 and the original plaster walls and wood trim materials. All of the rooms in this area of the building are original.

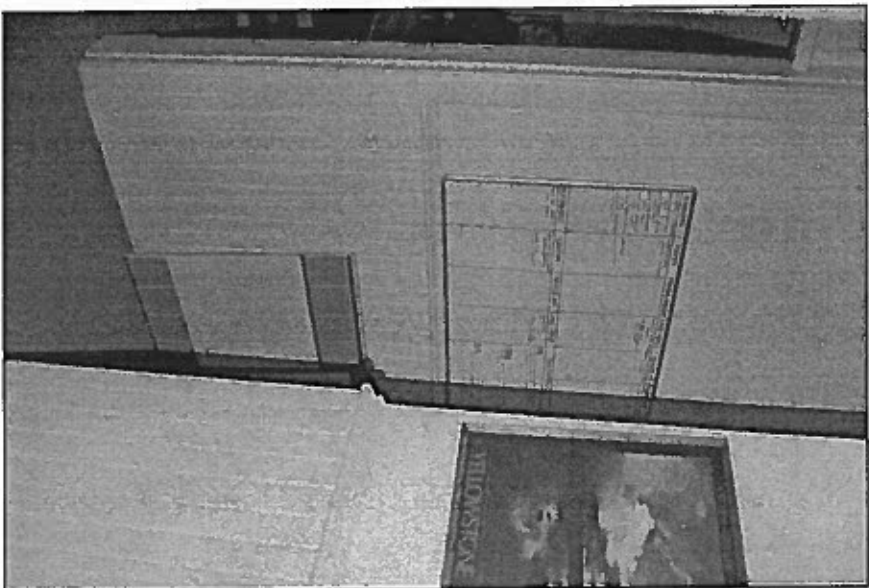
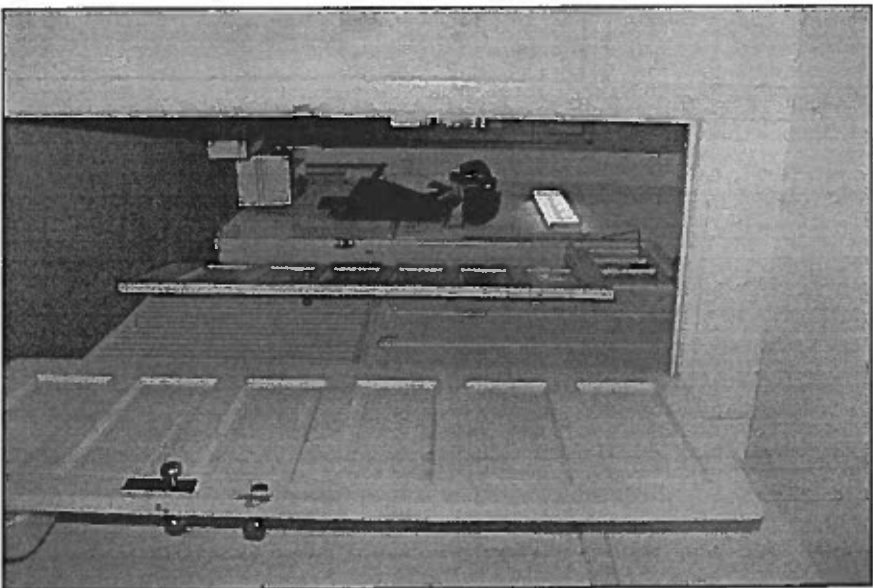
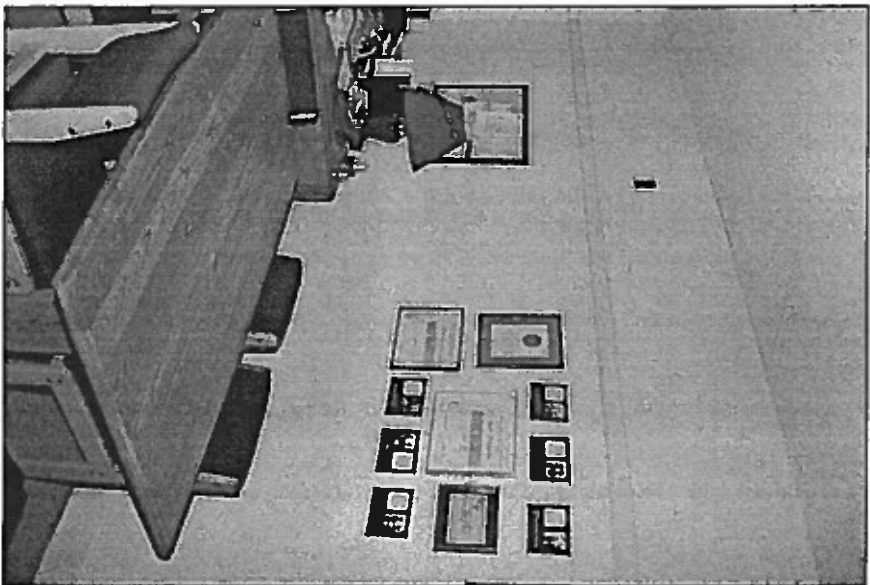


Figure 98: Looking south at the corridor from room 338. Note the original door with enclosed transom and original wood casing.

Figure 99: Looking northeast at room 338.
Note the original wood base and high wood
rail on the plaster walls.



Attic Floor Interior

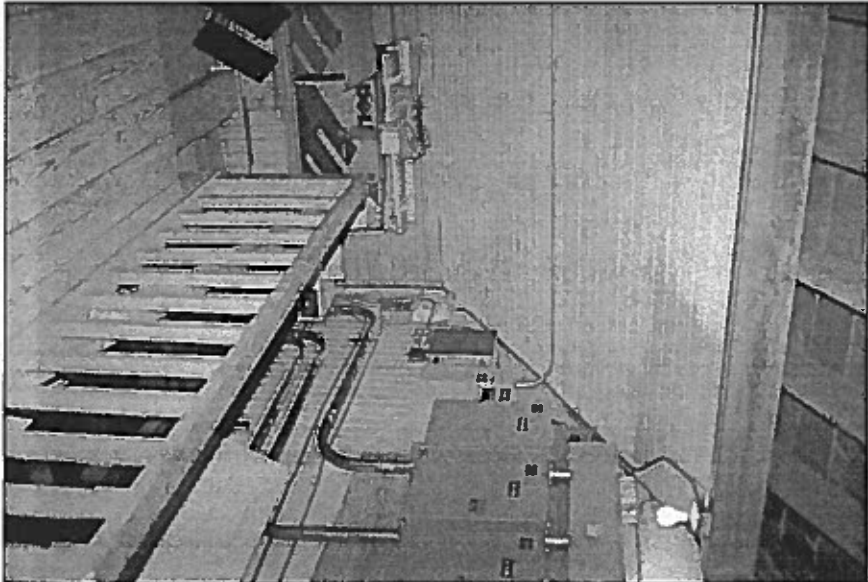


Figure 101: Looking southwest at the stone wall and roof along the stairway in room 400.

Figure 100: Looking southeast at the south stair area of room 400. Note the original wainscot and ceiling that extend up from the third floor.





Figure 102: Looking east at room 401. Note the original brick area.



Figure 103: Looking west at room 401. Note the original dormer and windows from the attic.

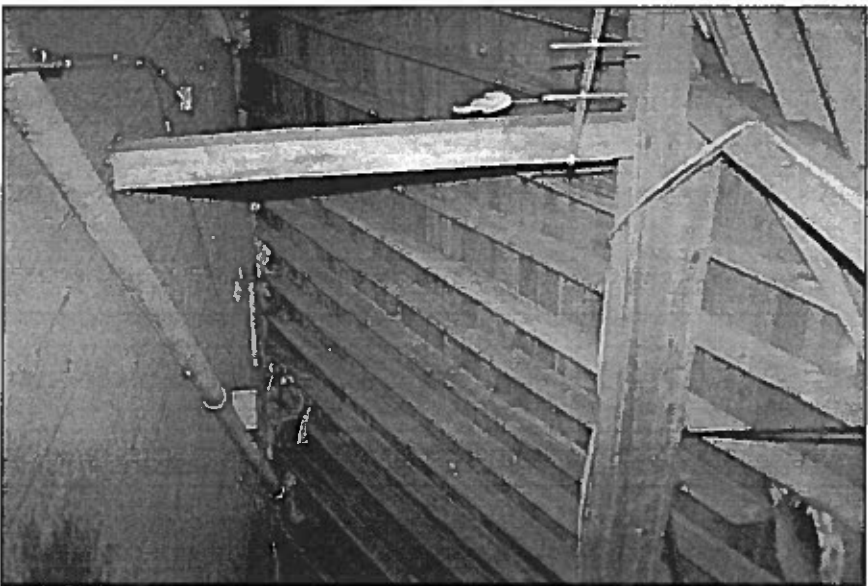


Figure 104: Looking southeast at room 402.
Note the original structure and remaining
upper part of the ventilation ductwork.

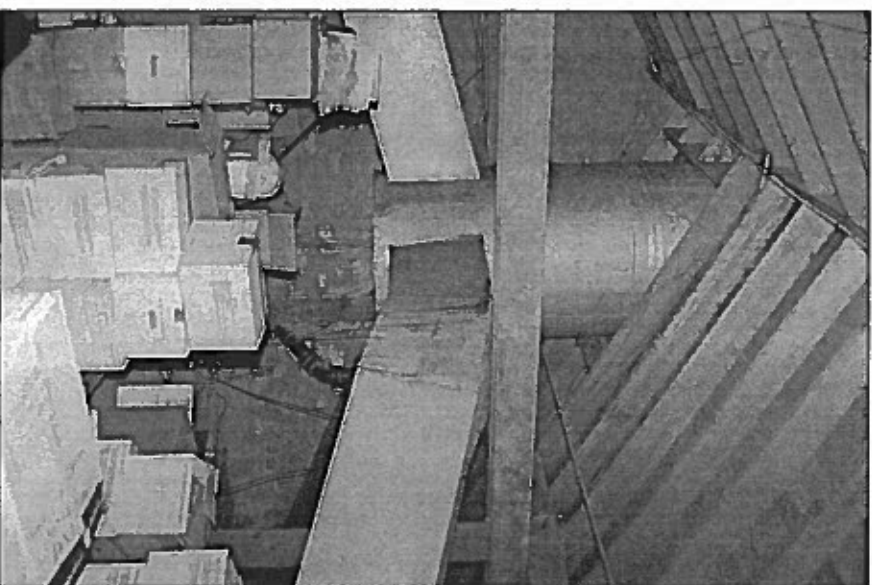


Figure 105: Looking north at room 403 and
the passive ventilation system ductwork.
Also, note the stone center wall of the
building.

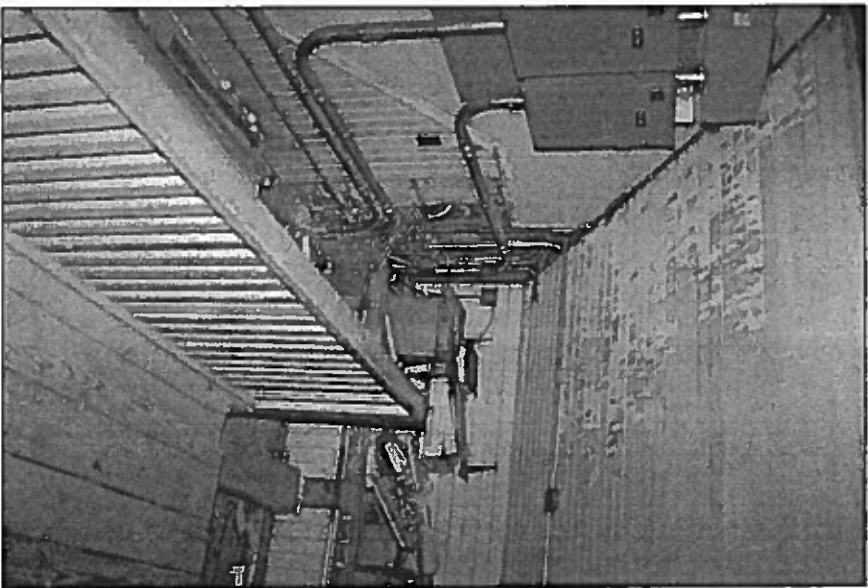
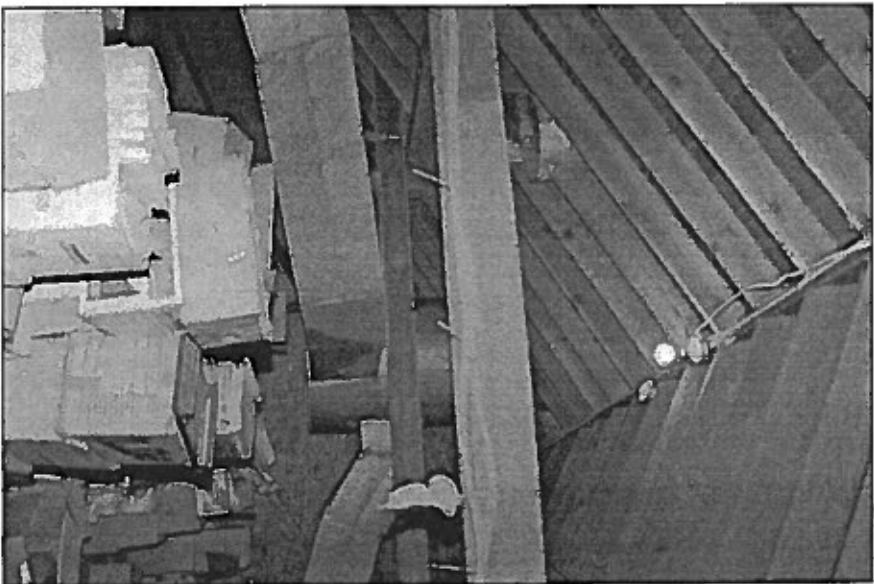


Figure 107: Looking south at room 404. Note the original roof rafters and the passive ventilation ductwork.

Figure 106: Looking east at the north stairway in room 405. Note the original wood wainscot and wood ceiling material.



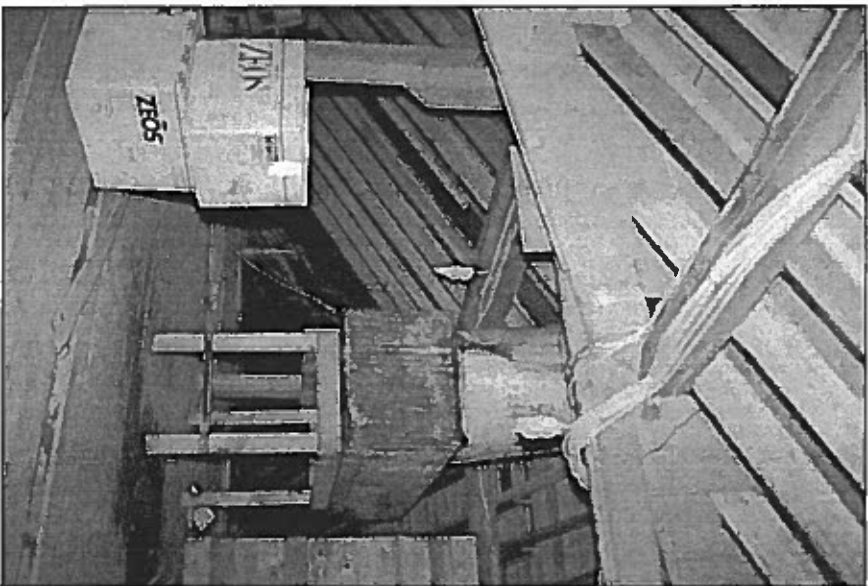


Figure 108: Looking north at room 406 and the passive ventilation system ductwork.



Figure 109: Looking west at the dormer windows in room 406. Note the structural replacement members added after a fire in 1911.



Figure 110: Looking south at room 406 and evidence of the fire in 1911. The brick and stone walls are scorched and there are remaining burnt rafters. New rafters were placed beside them.

PART 2. TREATMENT AND USE

A. Ultimate Treatment

The Double Cavalry Barracks (Building 36) is a contributing building within the Mammoth Hot Springs Historic District. The building has long been used as administrative offices of the Park and it is the intention of the Park to continue this use. However, this use requires that the building be brought up to code for fire and safety, seismic considerations, ADA requirements, and to provide additional security for the people working in the building.

The ultimate treatment considered for this building is rehabilitation or adaptive reuse.

Rehabilitation is defined as the act or process of returning a property to a state of utility through repair or alteration that makes possible an efficient contemporary use while preserving those portions or features of the property that are significant to its historical, architectural, and cultural values. In order to achieve this level of preservation treatment, it will require some preservation of existing elements of historic fabric as well as restoration of elements that are missing. It is, therefore, important to retain and preserve as much of the historic fabric as possible, restore areas that have been altered, and provide for additional historic features that capture the character of the original building.

B. Requirements for Treatment

The following specific recommendations are based on the level of preservation treatment of rehabilitation or adaptive reuse as described above:

Exterior

1. Preserve and maintain the stonework, including the rusticated walls, water table, window sills, and lintels. Restore the Columbus sandstone sills that are deteriorated. This can be accomplished with a sandstone patch or in-kind replacement.
2. Preserve and maintain the balconies on the front and back of the building.
3. Preserve and maintain the clay tile roof of the building, along with the chimneys and metal ventilators. The present roof appears to be original and there was no documentation that it was ever replaced. Because of the years of wear, it will have to be replaced in the near future. Replace the tile roof in-kind to the original
4. Preserve and maintain the original window openings.
5. Restore the original 2 over 2 lite wood windows.
6. Preserve and maintain the door openings and restore the existing doors. Routine wear, as well as the attachment of various hardware, has caused deterioration of the wood elements. In some cases these doors will have to be replaced but they should be replaced in-kind. Hardware should be compatible with the historic doors.

Interior

1. Protect the extant historic fabric in the stairways of the building in both the north and south halves. This includes the stairs, wood treads and risers, the railing and balusters (under the paneling), and the wood wainscot (under the paneling), along with the wood wainscot cap. A carpet runner could be used on the stairs if needed to protect them with the sides showing the original wood. The stair to the attic shows the original wood color on the treads. The wood floors should be restored or replaced where necessary.
2. In the areas of the exterior walls of the stairway where additional seismic walls are added, the casing and wainscot should be replaced with new to match the existing historic wainscot and cap.
3. Restore all original openings from the main hallways into interior space, fit with double wood paneled doors and transoms above. The 2000 International Building Code allows for these openings in a B occupancy because the building is going to be fully fire sprinkled. The openings will have to be provided with additional heads on each side of the glass surface. A local building official would be able to allow this option. If it is still decided to put in one-hour door assemblies, put in the glass transom window (tempered glass) with a rated wall on the office side and add a one-hour wood door and frame to match the original. Provide an expanded fire sprinkler system on each side of the glass transom to meet code if the firewall is eventually removed.
4. Preserve as much of the original wall and ceiling plaster as possible.
5. Lighting should be similar to a schoolhouse-type fixture to help tie the architectural features together.
6. The corridor that is proposed between the two stairways should also be renovated with similar materials to tie the areas together. This would include, but not be limited to, the wood wainscot and wood-paneled doors.
7. In the office areas of the center sections and the north and south wings, historic elements should be reproduced to tie the architectural theme together. This would include the use of simple historic wood casing around openings, wood paneled doors (in some cases half lites could be put in if needed), and historic base and chair rail.
8. The window opening should remain as is, even with the added wall thickness. Extend the wood sill and match in-kind.
9. It would be appropriate to restore the wood floors in the office areas, utilizing area rugs where necessary. This would also tie the building together architecturally. It is realized, however, that carpet will have to be put down in some high-traffic areas.
10. The wall sheetrock surfaces should be finished with a plaster texture to match the surface of the preserved plaster.
11. Ceilings should be kept high, at least above the window openings on the outside walls and above the door openings into the hallways. Mechanical and electrical could be run in lowered sheetrock soffits on the interior of the spaces away from the window and door walls.
12. Where acoustical ceilings are required, retain to the maximum extent possible, the high ceilings and use smooth panels with no channel patterns.
13. In public spaces, such as reception areas, conference rooms and special offices, restore the high ceilings using sheetrock. Use a plaster finish and appropriate period lighting.

14. In the openings to the NCO quarters, on the east end of the second and third floors, restore and reuse the high wood paneled doors with transoms.
15. Wood wainscot like that found in the NCO quarters hall could be used in public spaces to add texture to the walls.
16. The design of new bookshelves and cabinets should mimic the style of historic-era furnishings as represented in the third floor offices.
17. Period colors should be used to break up some of the spaces to avoid the sterile white look throughout.
18. To the maximum extent possible, bury all mechanical, electrical and fire suppression systems.
19. Minimize the impact of fire alarms, emergency lighting, and fire detection systems by painting the fixtures the color of the walls and minimizing their size.
20. Mechanical registers should be painted to blend in with walls and minimize impacts on the surfaces of the rooms.

A review of current renovation plans indicates that several of these recommendations are already being considered. The other recommendations are needed in order to restore the historic character-defining architectural features and create a unified theme for the building

A general recommendation would be to carefully document with photographs and drawings the major rooms that contain character-defining features once the rooms are cleared of furnishings.



APPENDIX "A" Secretary of the Interior's Standards for Preservation Treatment



The Secretary of the Interior's Standards for Preservation Treatment include four levels A) Preservation
B) Rehabilitation C) Restoration and D) Reconstruction.

A. PRESERVATION is defined as: *the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project.*

1. A property will be used as it was historically, or be given a new use that maximizes the retention of distinctive materials, features, spaces, and spatial relationships. Where a treatment and use have not been identified, a property will be protected and, if necessary, stabilized until additional work may be undertaken.
2. The historic character of a property will be retained and preserved. The replacement of intact or repairable historic materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate, and conserve existing historic materials and features will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. The existing condition of historic features will be evaluated to determine the appropriate level of intervention needed. Where the severity of deterioration requires repair or limited replacement of a distinctive feature, the new material will match the old in composition, design, color, and texture.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

PRESERVATION AS A TREATMENT. When the property's distinctive materials, features, and spaces are essentially intact and thus convey the historic significance without extensive repair or replacement; when depiction at a particular period of time is not appropriate; and when a continuing or new use does not require additions or extensive alterations, Preservation may be considered as a treatment.

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

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.

3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
10. New additions and adjacent or related new construction will be undertaken in a such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

REHABILITATION AS A TREATMENT. When repair and replacement of deteriorated features are necessary; when alterations or additions to the property are planned for a new or continued use; and when its depiction at a particular period of time is not appropriate, Rehabilitation may be considered as a treatment.

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

1. A property will be used as it was historically or be given a new use which reflects the property's restoration period.
2. Materials and features from the restoration period will be retained and preserved. The removal of materials or alteration of features, spaces, and spatial relationships that characterize the period will not be undertaken.
3. Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate and conserve materials and features from the restoration period will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.
4. Materials, features, spaces, and finishes that characterize other historical periods will be documented prior to their alteration or removal.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize the restoration period will be preserved.
6. Deteriorated features from the restoration period will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials.

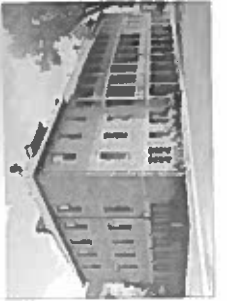
7. Replacement of missing features from the restoration period will be substantiated by documentary and physical evidence. A false sense of history will not be created by adding conjectural features, features from other properties, or by combining features that never existed together historically.
8. chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
9. Archeological resources affected by a project will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
10. Designs that were never executed historically will not be constructed.

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

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

1. Reconstruction will be used to depict vanished or non-surviving portions of a property when documentary and physical evidence is available to permit accurate reconstruction with minimal conjecture, and such reconstruction is essential to the public understanding of the property.
2. Reconstruction of a landscape, building, structure, or object in its historic location will be preceded by a thorough archeological investigation to identify and evaluate those features and artifacts which are essential to an accurate reconstruction. If such resources must be disturbed, mitigation measures will be undertaken.
3. Reconstruction will include measures to preserve any remaining historic materials, features, and spatial relationships.
4. Reconstruction will be based on the accurate duplication of historic features and elements substantiated by documentary or physical evidence rather than on conjectural designs or the availability of different features from other historic properties. A reconstructed property will re-create the appearance of the non-surviving historic property in materials, design, color, and texture.
5. A reconstruction will be clearly identified as a contemporary re-creation.
6. Designs that were never executed historically will not be constructed.

RECONSTRUCTION AS A TREATMENT. When a contemporary depiction is required to understand and interpret a property's historic value (including the re-creation of missing components in a historic district or site); when no other property with the same associative value has survived; and when sufficient historical documentation exists to ensure an accurate reproduction, Reconstruction may be considered as a treatment.



APPENDIX "B"

List of Original Drawings

Drawings referenced in this Report:

Drawing No.	Drawing Name	Date
YELL 8120 (11 sheets)	TWO COMPANY BARRACKS	04/08
YELL 8120 A	TWO COMPANY BARRACKS	09/08
YELL 8120 B	TWO COMPANY BARRACKS	07/11
YELL 8120 C	TWO COMPANY BARRACKS	06/35
YELL 8120 D	TWO COMPANY BARRACKS	1936
YELL 8120 E	TWO COMPANY BARRACKS	02/51
YELL 8120 F	TWO COMPANY BARRACKS	03/57
YELL 8120 G	TWO COMPANY BARRACKS	02/51
YELL 8120 H	TWO COMPANY BARRACKS	02/55
YELL 8120 I	TWO COMPANY BARRACKS	03/57
YELL 8120 J	TWO COMPANY BARRACKS	03/61
YELL 8120 K	TWO COMPANY BARRACKS	0169
YELL 2089	PROPOSED SLEEPING QUARTERS LAYOUT-BARRACKS BLDG/MAMMOTH	10/39
YELL 80025	ADMIN. BUILDING 36 (FORMER TWO COMPANY BARRACKS)	11/68

- Source of Drawings:

National Park Service

Denver Service Center

Technical Information Center (TIC)

Denver, Colorado
- and

Office of the Chief of Maintenance

Yellowstone National Park Headquarters

Mammoth Hot Springs, Wyoming



APPENDIX "C" Bibliography



Bibliography

Government Documents

Battle, David G. and Erwin N. Thompson. "Fort Yellowstone Historic Structure Report," National Park Service, Denver Service Center, 1972.

Culpin, Mary Schivers. "The History of the Construction of the Road System in Yellowstone National Park, 1872-1966: Historic Resource Study Volume I." Selections from the Division of Cultural Resources, Rocky Mountain Region, National Park Service, No. 5, 1994.

Unpublished Documents

Simmons, R. Laurie and Thomas H. Simmons. "National Register Nomination for Mammoth Hot Springs Historic District," 2000. Copy available from Wyoming State Historic Preservation Office, Cheyenne, WY.

Yellowstone National Park Maintenance Files, Office of the Chief of Maintenance, Yellowstone Park Headquarters, Mammoth Hot Springs, Wyoming.

Collections:

Record Group 79, National Archives and Records Administration, Yellowstone National Park, Mammoth Hot Springs, Wyoming.

Superintendent's Monthly Reports and Superintendent's Yearly Reports, Yellowstone National Park Library, Mammoth Hot Springs, Wyoming.

Yellowstone National Park Museum Collections, Mammoth Hot Springs, Wyoming.