



# **HISTORIC STRUCTURE REPORT**

## **FIRST ADMINISTRATION BUILDING**

### **GRAND CANYON NATIONAL PARK**

Preservation Studies Program  
College of Architecture & Landscape Architecture  
The University of Arizona

In conjunction with:  
Colorado Plateau/Cooperative Ecosystem Studies Unit (CP/CESU)

June 2008



# TABLE OF CONTENTS

---

## MANAGEMENT SUMMARY

---

Executive Summary	ii
Administrative Data	v

## DEVELOPMENTAL HISTORY

---

Historical Background & Context	2
written by Michael Anderson	
Chronology of Development & Use	10
researched by UA Project Team / written by Michael Anderson	
Physical Description	19
Summary	19
Site / Setting	25
Exterior	51
Interior	57
Plumbing	57
Mechanical	61
Electrical	62
Upper Level	67
Lower Level	102

## TREATMENT & USE

---

Ultimate Treatment & Use	118
Requirements for Treatment	124
Alternatives for Treatment	127

SOURCES CONSULTED	129
-------------------	-----

## APPENDICES

---

- A. List of Superintendents Who Resided in the First Administration Building
- B. Architectural Drawings of Historic Conditions
- C. Architectural Drawings & Photographic Documentation of Existing Conditions
- D. Code Compliance Evaluation
- E. Structural Engineering Evaluation
- F. The Secretary of the Interior's Standards for Rehabilitation
- G. The Secretary of the Interior's Guidelines for Rehabilitating Historic Buildings

## PROJECT TEAM

---

This Historic Structure Report was carried out between the National Park Service (NPS) and The University of Arizona (UA) through the Colorado Plateau/Cooperative Ecosystem Study Unit (CP/CESU) and Joint Ventures Agreement.

Principal Investigators	R. Brooks Jeffery & Kim Barker Preservation Studies College of Architecture & Landscape Architecture The University of Arizona
Researcher	Susan Bartlett
Student Researchers	Ashley Gramlich Jennifer Harrison Carol Heffern Jeff Hurt Mike Nervik Ashley Stewart
Code Evaluation	J. Chris Evans, Architect 3220 E. Terra Alta Boulevard No. 9 Tucson, AZ 85716
Structural Engineering Evaluation	Mark Turner Turner Structural Engineering Company 3026 N. Country Club Tucson, AZ 85716
Grand Canyon National Park	Amanda Zeman, Cultural Resource Specialist Robert Powell, Historical Architect Michael Anderson, Historian Jan Balsom, Resource Management Colleen Hyde, Museum Collections Kim Besom, Museum Collections Michael Quinn, Museum Collections Betty Upchurch, Librarian
Xanterra Parks & Resorts	Jon Streit, Executive Director, Operations Chuck Easton, Chief of Engineering



# **MANAGEMENT SUMMARY**

## EXECUTIVE SUMMARY

---

In 1919, the year in which Grand Canyon became a national park, management shifted from the U.S. Forest Service to the National Park Service. At that time, there were a number of resort facilities constructed by the Santa Fe Railway (Santa Fe) but very little federal presence. William Peters, the first Superintendent of Grand Canyon National Park, focused on the park's long-term viability and the development of park infrastructure.<sup>1</sup>

In the summer of 1920, a warehouse, mess hall, bunkhouse and combined stable and blacksmith shop were constructed. The following year, additional facilities, including a rooming house, a dormitory, an employee residence and an administrative headquarters (First Administration Building) were constructed. The two-story First Administration Building was designed by Daniel Hull, Chief Landscape Engineer for the National Park Service, in the emerging rustic style and constructed of native Kaibab limestone to blend with the surrounding environment. Projecting log rafters, wood siding and a multi-gabled roof further extended the rustic style.

The First Administration Building is significant as the park's first point of contact for information-seeking visitors and for its role in the management of Grand Canyon National Park. The building's lower level was dedicated to visitor services provided by National Park Service rangers, the construction of which was partly funded by a tour group of the *Brooklyn Daily Eagle* newspaper. Previously, a visitor's only source for information about the park was from the Santa Fe and the Fred Harvey Company. Administrative offices, including the superintendent's office, were located on the upper level.

The First Administration Building served its original function until the new Park Headquarters (Building 103) was constructed just south of the railroad tracks in 1929.

In 1931, Thomas C. Vint, Chief Landscape Architect for the National Park Service, designed a rehabilitation and major addition to the First Administration Building, changing its use into the superintendent's residence; this addition more than doubled the building's size. The addition's stone and wood construction, cedar shingled roof and exposed vigas were in keeping with the building's rustic style.

### Modern Alterations

The First Administration Building served as the superintendent's residence until it was rehabilitated into executive offices for Xanterra Parks & Resorts (Xanterra) in 1983. The rehabilitation included upgrading the heating and cooling systems; expanding the telephone and electrical capacity; eliminating or modifying anachronistic features; and, applying new interior finishes. Major interior alterations included the installation of a suspended ceiling and carpeting, and the subdivision of the historic garage into offices and bathroom.

Exterior preservation maintenance was completed in the late-1980s and included exterior painting and the repair of doors and windows. In 2006, the cedar shingle roof was replaced and the exterior painted.

### National Register of Historic Places

The First Administration Building was individually listed in the National Register of Historic Places on September 6, 1974. The nomination stated: "The significance of this structure lies in its long and varied association with the

---

<sup>1</sup> Michael F. Anderson, *Polishing the Jewel: An Administrative History of Grand Canyon National Park* (Grand Canyon, AZ: Grand Canyon Association, 2000), 14.

administrative history of the park. In that category of history, it is the most important surviving structure in the park.”<sup>2</sup>

In November 1975, the Grand Canyon Village Historic District, including the First Administration Building as a contributing building, was listed in the National Register of Historic Places. When Grand Canyon Village District was listed as a National Historic Landmark in 1997, the First Administration Building was again listed as a contributing building.

### **Current Condition**

Xanterra continues to occupy the building, which is leased from the National Park Service. The current contract is set to expire on December 31, 2011.

The First Administration Building is generally in fair condition and some of its primary character-defining features no longer function as required.

Poor drainage, weathered paving stones and two buckling retaining walls pose the most serious site problems. The lack of handrails along the exterior stairs poses a potential safety hazard.

For the most part, the exterior retains its original features in fair condition. Major exterior deficiencies include stone cracking, unsecured stones, inappropriate mortar repairs, decayed rafter ends and a deflected gable roof over Room Eight (see FIG. CD3 in the *Chronology of Development & Use* section for a floor plan with room numbers). The addition of a superstructure roof to cover the web of flexible duct from an evaporative cooling system, and the retention of the original bituminous roof below, creates a potential fire hazard.

Modern alterations to the interior that have concealed some of the original, primary character-defining features, include suspended ceilings that conceal the original rustic ceilings in Rooms Two and Eighteen, and modern carpet that conceals the original wood and stone flooring throughout the building. Poor site drainage has caused moisture infiltration to the north building wall evident at the lower level.

Insufficient attic collar ties and displaced foundation post supports are severe structural issues. The building does not meet accessibility code, has egress-related deficiencies and is not protected from fire. Additionally, fire, security and electrical systems were damaged by a nearby lightning strike.

### **Recommended Treatment**

This report recommends rehabilitation of the First Administration Building, maintaining its existing form and materials where possible.<sup>3</sup> To complete rehabilitation would elevate the condition of the First Administration Building to ‘good,’ and guarantee its continued functionality. Rehabilitation of the First Administration Building will allow both its continued use and its ability to function as a testament to its role in the administrative history of Grand Canyon National Park, its use as the superintendent’s residence during a period of rapid park growth, and as the park’s first building in the National Park Service rustic style.

---

<sup>2</sup> F. Ross Holland, *National Register of Historic Places, Superintendent’s Residence* (listed 6 September 1974).

<sup>3</sup> The List of Classified Structures (2006) lists stabilization as the ultimate treatment but stabilization is not a formalized treatment recognized by the Secretary of the Interior. Rehabilitation is an appropriate treatment that is generally supported by park management and plans.

The site should be assessed and re-graded in consultation with a landscape architect. The weathered paving stones should be re-set with compatible mortar and the buckling retaining walls repaired. Handrails should be installed in a manner sympathetic to the character of the building.

Most of modern interior alterations are reversible and some should be removed, including the suspended ceilings that conceal original rustic ceilings in Rooms Two and Eighteen, and the modern carpet that conceals wood and stone flooring throughout the building. A modern HVAC system should be installed and individual electric baseboard heaters removed.

Water penetration to the interior should cease when the site drainage is corrected; repair to damaged building materials should occur simultaneously. Structural members should be added where necessary as noted in the *Ultimate Treatment & Use* section of this report. Additional recommendations are contained in the *Ultimate Treatment & Use* section of this report.

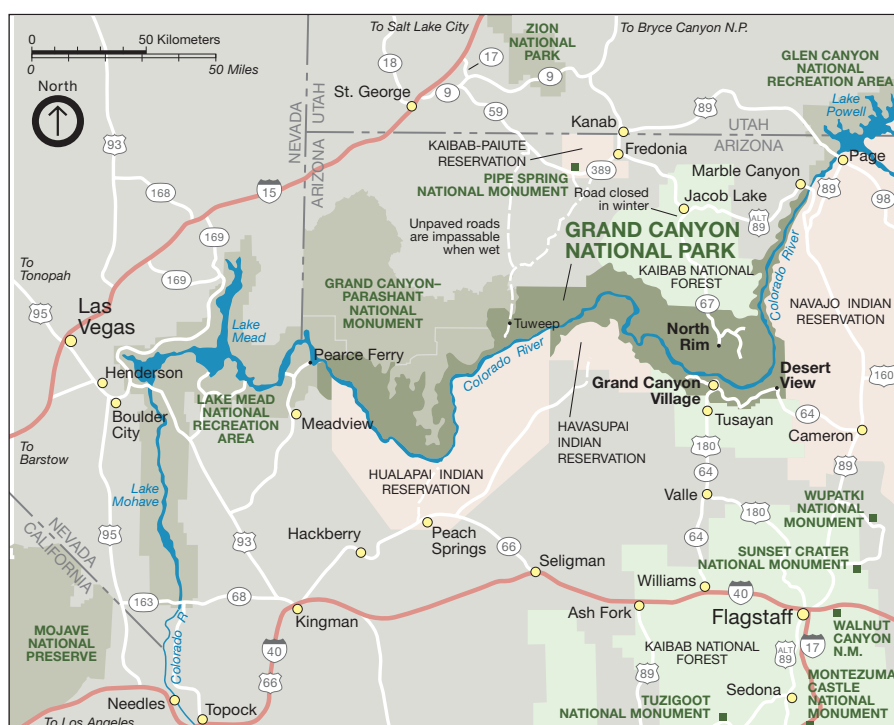


FIG. ES1: Location of Grand Canyon National Park (Source: National Park Service, Harpers Ferry Center). For a map of the specific location of the First Administration Building, see the *Site / Setting* section in *Physical Description*.

## ADMINISTRATIVE DATA

---

### FIRST ADMINISTRATION BUILDING

Building Number: 001

List of Classified Structures: 012020

#### Proposed Treatment<sup>1</sup>

Rehabilitation - 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<sup>2</sup>

#### Cultural Resource Data

National Register of Historic Places, Superintendent's Residence, listed 9/6/1974<sup>3</sup>

Period of Significance: 1921

Criterion A: Associated with events that have made a significant contribution to the broad patterns of our history

National Register of Historic Places, Grand Canyon Village, listed 11/20/1975<sup>4</sup>

Period of Significance: 1890-1975

Criterion A

Criterion C: Embodies distinctive characteristics of a type, period, or method construction, or that represent the work of a master, or that possess high artistic values, that represent a significant and distinguishable entity whose components may lack individual distinction

National Register of Historic Places, Grand Canyon Village, Boundary Increase, listed 10/24/1995

Period of Significance: 1896-1942

Criteria: A, C

National Historic Landmark, Grand Canyon Village, 2/18/1997

Period of Significance: 1897-1942

Criteria 1: Associated with events that have made a significant contribution to and are identified with, or that outstandingly represent, the broad national patterns of United States history and from which an understanding and appreciation of those broad patterns may be gained

Criteria 4: Embodies the distinguishing characteristics of an architectural type or specimen exceptionally valuable for the study of a period, style, or method of construction, or that represent a significant, distinctive, and exceptional entity whose components may lack individual distinction

---

<sup>1</sup> The List of Classified Structures (2006) lists stabilization as the ultimate treatment but stabilization is not a formalized treatment recognized by the Secretary of the Interior. Rehabilitation is an appropriate treatment that is generally supported by park management and plans.

<sup>2</sup> National Park Service. The Secretary of the Interior's Standards for Rehabilitation: [http://www.cr.nps.gov/hps/tps/standguide/rehab/rehab\\_standards.htm](http://www.cr.nps.gov/hps/tps/standguide/rehab/rehab_standards.htm) (accessed 7 September 2006).

<sup>3</sup> Criteria is inferred from a reading of the nomination; the nomination does not specify criteria.

<sup>4</sup> Criteria is inferred from a reading of the nomination; the nomination does not specify criteria.

Period of Significance: 1921-1982<sup>5</sup>

---

A separate disk containing photographic documentation of the First Administration Building is provided to Grand Canyon National Park with this report. Photographs were taken by The University of Arizona project team from March 2007 - January 2008. They show both character-defining features and deficiencies. Additionally, historic photographs of the First Administration Building contained in the park's museum collection and maintenance files were scanned and saved to this disk.

All known historic drawings of the First Administration Building were also scanned and saved to disk. These drawings are contained in both Appendix B and on a disk provided to Grand Canyon National Park with this report.

All records gathered as part of this report were returned to the park. It is recommended that source material as well as a copy of this report and archival copies of the photograph and drawing disks be stored in the park's museum collection.

---

<sup>5</sup> For the purposes of this report, the period of significance should include the dates in which the building maintained its original design and materials. This period represents the date of original construction and includes the construction of the addition. The period ends with the rehabilitation into executive offices.

# **DEVELOPMENTAL HISTORY**

## HISTORICAL BACKGROUND AND CONTEXT

---

### Historical Background and Context

In 1893 President Benjamin Harrison used the two-year-old Forest Reserve Act to proclaim Grand Canyon Forest Reserve, changing its land status from unassigned and largely uncontrolled public domain to a reserve nominally managed by the U.S. Department of Agriculture, Division of Forestry. The first semblance of management, however, did not arrive at Grand Canyon's South Rim until 1897, when a rider to a congressional appropriations bill led to a forest reserve permit system to exert some control over and knowledge of development and use. President Theodore Roosevelt heightened the federal government's management concern by declaring nearly all of the forest reserve to be a federal game preserve in 1906, and then in 1908, used the two-year-old Antiquities Act to proclaim Grand Canyon National Monument. The monument remained under the management of the Division of Forestry (renamed the U.S. Forest Service in 1905) until 1919, when the U.S. Congress created Grand Canyon National Park and transferred management to the three-year-old National Park Service.

Until 1908, when the canyon's federal status changed to national monument, any person was allowed to establish a home, business, or mining claim within and along the rims of Grand Canyon using any of various federal homestead or mining claim laws. After 1908 the national monument was "closed to private entry," and the forest service along with the General Land Office grew more scrupulous about people's claims to land. Nonetheless, pioneer prospectors, miners, and tourism operators had for more than twenty years filed their claims—protected by the monument's organic language--and established limited and crude tourism businesses from John Hance's meager accommodations east of Grandview Point as far west as Bill Bass's camp roughly 40 miles west of Grandview. When the promise of a railroad spur from the mainline Atlantic & Pacific Railroad at Williams to the South Rim loomed in the middle 1890s, several entrepreneurs, including James Thurber, Buckey O'Neill, and Ralph Cameron, rushed to file claims where that railway promised to end—at or near the head of the Bright Angel Trail. When the rail spur (the Grand Canyon Railway) was completed as planned in 1901, the Atchison, Topeka and Santa Fe Railway (hereafter, the Santa Fe, owner of the subsidiary railway) hired its own tourism operator, the Fred Harvey Company, to manage facilities it intended to build within its own 20-acre depot site. By the 1910s, the Santa Fe had chased away most other South Rim tourism operators and had secured development of the small town that grew up within and surrounding the depot—Grand Canyon, Arizona, more often referred to as Grand Canyon Village.

Although the U.S. Forest Service took its mission to manage Grand Canyon National Monument seriously, and planned to bring some order to the "boom town" that was growing haphazardly to accommodate the burgeoning tourist trade, it simply did not have congressional appropriations nor the management structure and experience to do so. Instead, it relied on the Santa Fe to develop tourism infrastructure and on the Fred Harvey Company to manage services while forest managers consulted and issued the required permits. The railroad did invest literally millions of dollars to build needed accommodations, including the El Tovar Hotel and Hopi House, the Lookout Studio and Hermits Rest. It also bought the Bright Angel Hotel in 1905, renovating it to accommodate middle-class tourists, built the village's power plants and other service facilities, and even constructed monument roads and trails to facilitate regional and inner-canyon tourism. It did not, however, develop the village as a community that would serve not only tens of thousands of



visitors each year, but a growing number of resident employees. Neither the federal, state, or county governments nor the forest service developed building and zoning codes, nor did they build residential streets, campgrounds, or other services. This lack of regulation, planning, and infrastructure resulted in unsanitary conditions unbecoming a national monument, including impromptu trash heaps, pit toilets, open-air incinerators, and unfettered livestock within the village.

The National Park Service arrived to assume management of the nation's 17<sup>th</sup> national park in late 1919. What it found was an environment of irrupting tourist visitation within the conditions noted above, some unfulfilled forest service development plans, miserable federal facilities, and the Santa Fe and Fred Harvey Company firmly entrenched as the South Rim's *de facto* owners. With their long experience making the economic, social, and political decisions for the South Rim, railroad and company managers understandably had developed a certain amount of disdain and a fair measure of arrogance toward the forest service and the incoming federal agency. The park's first superintendent, William Peters, whose most impressive credentials included time as a fighter pilot in the First World War, was clearly overwhelmed by the task at hand. His first inclination, a good one, and heartily approved by NPS director Stephen Mather, was to secure a new 20-year services contract with the Fred Harvey Company to continue what they had been doing all along.<sup>1</sup>

Park administrators would live with the private concessioner's condescension for more than a decade, but from the first, implemented strategies that would wrest ultimate control from their private partner. The Fred Harvey contract mirrored a national model that, although it encouraged private investment in commercial services and guaranteed a virtual monopoly and profits, also insisted on federal control over building sites, architecture, and materials as well as price controls over goods and services. The park service took on responsibility for developing roads, trails, and campgrounds, as well as interpretation of the park's scenic wonders. It also began to develop its own infrastructure, and would assume responsibility for visitor contacts as soon as it had the resources to do so. Superintendent Peters (August 1919-September 1920), the pioneer in this effort, directed initial government funding to meeting these goals. Some of his efforts, which were continued by his successors DeWitt Raeburn (October 1920 - December 1921), John White (December 1921 - February 1922), Walter Crosby (February 1922 - January 1924), J.R. Eakin (January 1924 - April 1927), and M.R. Tillotson (April 1927 - December 1938), included government construction then maintenance of new automotive roads; trail rehabilitation, construction, and maintenance; a modern sanitation system, dependable water system, and post office; residential streets, electrical power, fire towers, employee housing, and law enforcement.<sup>2</sup>

Of equal or greater importance, the park service developed the first practicable development plan for Grand Canyon Village. This blueprint, formulated between 1920 and 1924, drew on ideas of earlier forest service planners and concessioner architects, but was mostly the product of Daniel Hull, chief of NPS landscape engineers. The new plan identified four development zones, including an accommodation zone along the rim designed for commercial services and accommodations; an industrial zone surrounding the railroad tracks for support services; an administrative zone at the intersection of a future park entrance road and village loop road; and a residential zone south of the industrial and administrative zones and Bright Angel Wash. The plan took into account existing infrastructure of value, like formidable accommodations along the rim, but the principal element that would not be replaced then or today was the

---

<sup>1</sup> Michael F. Anderson, *Polishing the Jewel: An Administrative History of Grand Canyon National Park* (Grand Canyon, AZ: Grand Canyon Association, 2000), 13-14. The text for Parts 1.1 and 1.2 were rewritten by Michael F. Anderson in August 2008. Dr. Anderson relied on his own writings and research as well as the park naturalist's monthly reports and other archival material not identified in the following footnotes.

<sup>2</sup> *Ibid.*, 15.

set of rails along Bright Angel Wash ending at the railroad depot at the foot of El Tovar Hotel.

Superintendent Peters could not await the full fruition of the village master plan to get a start on developing necessary park service infrastructure. He was aware, however, that such a plan would soon be in the making and made some of his own decisions in the summer of 1920 to build a warehouse, mess hall, bunkhouse, and combined stable and blacksmith shop to the south of the railroad tracks. The following year, additional facilities, including a rooming house, a dormitory, and an employee residence, were completed. Within this hurried time frame of minor constructions, and before the village's first development plan was completed, the park's second superintendent, DeWitt Raeburn, oversaw construction of the First Administration Building, the park's Building #1.<sup>3</sup>

National Park Service administrators at the national and local levels selected the First Administration Building, its architecture, and its location for a variety of reasons. They needed a first point of contact in part to inculcate federal control, that is, to disseminate to the public park rules & regulations and other information including park interpretation. This was key to exerting some level of authority over the Santa Fe and Fred Harvey Company. The building was therefore located at the end of one of the primary village entrance roads (today's Navajo Street), at the foot of the hill leading up to the El Tovar (Bldg 542, 1905) and Hopi House (1905) and across from the Fred Harvey Garage (Bldg 551, 1914) and railroad depot (Bldg 549, 1910)—the focus of village activity. The park service had just begun to design administrative facilities along lines outlined by landscape architect Frederick Law Olmsted, that is, unobtrusive, “rustic” structures of heavy stone, wood, and glass. The building's architecture followed these guidelines, and thereby represented the park's first “artistic” federal building that visitors might consider in the same class as the concessioner's buildings. The structure's historic significance therefore rests with early federal efforts to manage Grand Canyon National Park, and its role as an early architectural example of what would become known as NPS Rustic Style.

The First Administrative Building was designed by Daniel Hull, Chief Landscape Engineer for the National Park Service. For the next ten years, the ground floor accommodated visitor services, its construction and furnishings partially funded by donations from a tour group organized by the *Brooklyn Daily Eagle* newspaper. This “Information Room” was manned by a park ranger, often the superintendent himself, and was a place to seek information, learn park regulations, review maps, examine natural history exhibits (fossils, plants, wildlife), and consult the park's research library.<sup>4</sup> It was, in fact, the only point of NPS-visitor contact at the entire South Rim, other than the park's south entrance station, until 1928. All administrative offices, including the superintendent's and park naturalist's offices, were located on the second floor. Cost of construction was \$12,600, an amount fairly typical for park rustic style structures of equivalent size in the 1920s and 1930s.

As one might glean from the above paragraphs, the 1920s were challenging, formative years for administrators at Grand Canyon National Park, whose overriding mission beyond preserving the scenery was to provide a first class visitor experience as tourist numbers increased from 44,100 in 1919, to 188,200 in 1929. By 1925 federal surveyors had mapped out a network of automotive roads to accommodate automobile tourism, which surpassed visitation by rail for the first time in 1927. The Bureau of Public Roads first completed two South Rim entrance roads, one from the east at Desert View, 25 miles along the rim to Grand Canyon Village, in 1931, and one from the south, connecting a new automotive road (AZ 64) from Williams at the park boundary, 8 miles through ponderosa pine forest to the village, in 1928. Both roads ended at the administration building and primary village concession facilities. This would

<sup>3</sup> Ibid., 17.

<sup>4</sup> F. Ross Holland Jr., *National Register of Historic Places Nomination: Superintendent's Residence B-1*. Listed 6 September 1975.

## CHRONOLOGY OF DEVELOPMENT AND USE

seem to place the building in an ideal location; however, that intersection was becoming increasingly crowded with motorists as the decade wore on and never had enjoyed sufficient space for visitor parking. In addition, the 1924 village plan had designated a different area as the formal administrative zone, along the new entrance road just south of the railroad tracks. This new location would relieve congestion at the intersection of the two new roads, and perhaps more importantly, encourage visitors to stop at a new administration building for orientation before proceeding to the concessioner's facilities.

In accordance with its plan, the park service completed this second administration building in 1929. While architectural historians consider the first administration building significant as an early example of the NPS Rustic Style, they consider this much larger, two-story facility as a culmination of the style. After 1957, when the park completed its combination visitor center and third administrative facility one mile east of the village, this building would serve several purposes, including its present use for ranger operations. The second administration building along with the Babbitt's grocery store (1926, burned in 1994) and post office (1935, now the magistrate's office) completed the administrative zone, which stood intact until the mid-1950s when growing numbers of administrators and federal functions led to a more decentralized administrative plan.

The question remained in 1929, what to do with the first administration building. In these final years of the park's first decade, park appropriations had increased arithmetically in keeping with the general prosperity of the National Park Service and nation as a whole. Even with the onset of the Great Depression in the early 1930s, appropriations remained strong while the park service benefited even more from President Herbert Hoover's tepid, and President Franklin

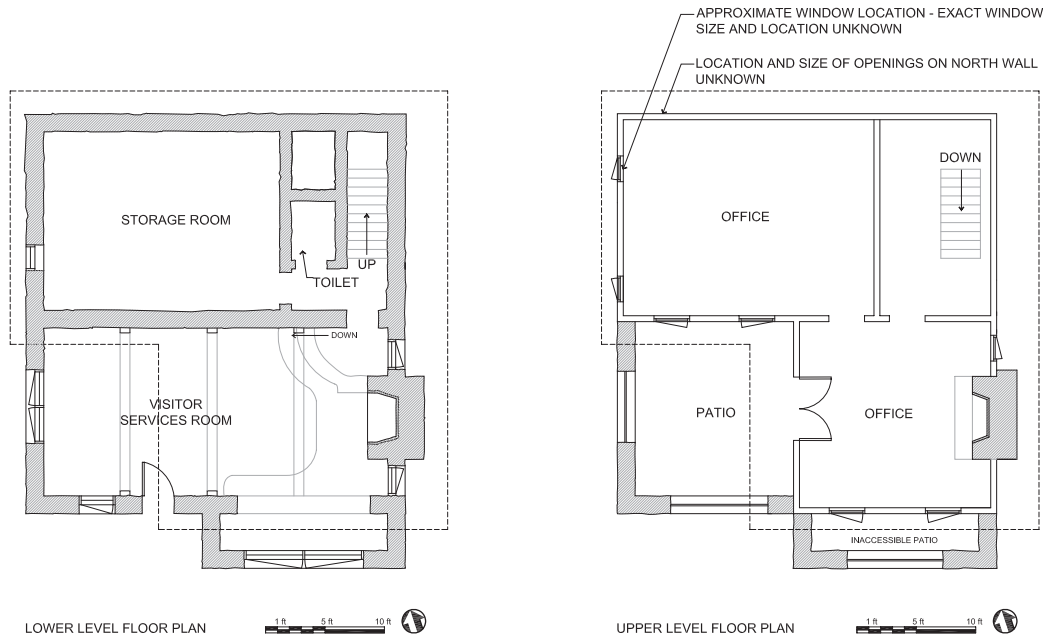


FIG. CD1: Lower and upper level floor plans of the original building (circa 1921-1931) based on annotations on the drawing set dated 11 April 1931. The location of bathroom fixtures is unknown.

Roosevelt's robust, emergency works programs. The park service had also developed a keen interest in natural history research and interpretation, conducting its own research programs through the park naturalist while fostering those of nationally prominent scientists. In 1928 the money and interest prompted construction of a new interpretive facility, Yavapai Observation Station, a little more than a mile east of the village, devoted principally to canyon geology. In 1931 the park completed the Wayside Museum of Archeology four miles west of Desert View, devoted to the canyon's human history. It is therefore consistent with the temper of the times that the park initially (by mid-1930) turned Building #1 into a naturalist's workshop--a museum of flora and fauna, a research facility, with natural history exhibits, "scientific library," and storage space for the park's collections of fossils, insects, flowers, birds, and other materials. This was the first iteration of today's Museum Collection. By August 1930, park naturalist reports listed Building #1, along with Yavapai Observation Station, the campground, and the Grand Canyon Lodge on the North Rim as the park's principal interpretive sites, and identified nature walks and automotive caravans originating at this location.

After rearranging offices, setting up display cases, and moving all of the park's natural history materials to the First Administration Building by mid-1930, it is uncertain why administrators changed their minds about the building's use in less than a year, but they did so, enlarging and rehabilitating it into a new superintendent's residence in 1931. The most logical explanation is that the superintendent since 1927, M.R. Tillotson, judged that his former residence simply did not measure up to his position's stature, standing as it did near the much more impressive El Tovar and considering the superintendent's job of hosting visiting dignitaries. When the park service arrived at Grand Canyon's South Rim, they inherited from the forest service a log cabin roughly half way up the hill to the El Tovar, which served as William Peters' and subsequent superintendents' home. As early as 1924, the park considered building a new residence and giving the log cabin to the concessioner, and the 1924 village plan itself imagined a new residence, but according to Tillotson's daughter, Jean Tillotson Anderson, in a 1970s interview, her family still lived in that cabin in 1931. One park photograph of the First Administration Building shows this cabin in the background—a one-story log structure with dry-laid stone foundation, well caulked, with a wood-stove chimney, that seems to have fronted the El Tovar drive for resident access. It appears to be in very good condition, but the architecture more closely resembled nearby Navajo hogans (associated with Hopi House) than the more classy NPS Rustic Style being built elsewhere in the village and the El Tovar's high-end Norwegian Villa/Swiss Chalet style. Tillotson's son Dean, in a 1981 interview, recalled that the cabin was "razed" in the early 1930s, soon after his family moved to their new residence. The remodeled administration building then served as the park superintendent's residence until 1983.

## **Rustic Architecture**

Prior to the creation of the National Park Service in 1916, railroad companies in the western national parks constructed buildings that lacked a consistent style and ran the gamut from Tudor Revival to Swiss Chalet to Indian Pueblo. Within the emerging field of landscape architecture and evolving vision of an architecture sympathetic to the natural environment, the early park service constructed smaller buildings of local materials that complemented the surrounding landscape and each other. From the late 1910s into World War Two, the NPS Landscape Division became more adept and this NPS Rustic Style more graceful throughout the National Park System until succumbing to the Modern Style of more utilitarian buildings of modern materials during and following the war.

In 1935, funded by the Civilian Conservation Corps, the National Park Service Division of Planning published *Park Structures and Facilities*, extensively illustrated with floor plans and photographs of state and national park facilities,

to educate the growing number of architects designing park architecture. In this volume, Albert H. Good extolled the virtues of rustic architecture, defining it as:

a style which, through the use of native materials in proper scale, and through the avoidance of rigid, straight lines, and over-sophistication, gives the feeling of having been executed by pioneer craftsmen with limited hand tools. It thus achieves sympathy with natural surroundings and with the past.<sup>5</sup>

Buildings were to be in harmony with the physical setting by using native building materials and natural coloration, such as warm browns and pale greens in a wooded setting. Buildings, horizontal in nature, were to be designed for viewing from all sides. When possible, rough rock footings should be used to connect the building with the land.

Amenable with these guidelines, the First Administration Building's stone and wood-frame exterior complements the surrounding terrain. Its lower story is uncoursed, load-bearing, native Kaibab limestone. The upper-level walls are wood board-and-batten and rough-sawn horizontal siding. The roof is gabled with heavy timber and covered with wood shingles. Chimneys, walkways and both privacy and retaining walls are all of native stone. Inside, locally quarried limestone floors and hand-hewn roof beams emphasize native materials and a rustic quality.<sup>6</sup> While visibly consistent with the original building, the 1931 addition's roof was constructed in a different manner. Whereas the rafters on the original building support the roof structure, the addition's rafters are decorative and do not provide support. However, the load-bearing stone on the lower level with horizontal wood siding above, cedar-shingled roof, and exposed vigas extend the rustic style on this part of the building.<sup>7</sup>

### Period of Significance

The First Administration Building is significant for its role in the early administrative history of Grand Canyon National Park, 1921-1931, as the superintendent's residence during a period of rapid park growth, 1931-1982, and as the park's first building constructed in the NPS Rustic Style. The National Register of Historic Places suggests that the First Administration Building is "the most important surviving structure in the park" in relation to the park's administrative history.<sup>8</sup> For the purposes of this report, the period of significance should include the dates in which the building maintained the design, materials, and functions for which it is significant.

The First Administration Building was constructed in 1921 and served its original purpose and significance as administration offices and visitor information center for nearly a decade. In 1931 an addition and rehabilitation extended the building's utility and significance as the superintendent's residence. The building was rehabilitated into executive offices in 1983. Although the exterior has been generally preserved and retains its original rustic materials and style, the rustic detailing on the interior was modified during rehabilitation efforts, ending the period of significance.<sup>9</sup> Thus, the period of significance is 1921-1982.

---

<sup>5</sup> Albert H. Good. *Park Structures and Facilities* (National Park Service, United States Department of the Interior, 1935), 3-4.

<sup>6</sup> William C. Tweed and Laura E. Soulliere, *National Park Service Rustic Architecture: 1916-1942* (United States Department of the Interior, National Park Service, Western Regional Office, Division of Cultural Resource Management, 1977).

<sup>7</sup> Billy Garrett, "Adaptive Use: The Superintendent's Residence at Grand Canyon National Park," *CRM Bulletin* vol. 7 no. 4 (December 1984): 6-7.

<sup>8</sup> F. Ross Holland Jr., *National Register of Historic Places Nomination: Superintendent's Residence B-1*. Listed 6 September 1975.

<sup>9</sup> Rehabilitation efforts were careful not to damage original interior features. Rustic ceilings and floors are masked behind modern drop ceilings and platform floors, respectively. Theoretically, these modern alterations could be removed and the period of significance extended.

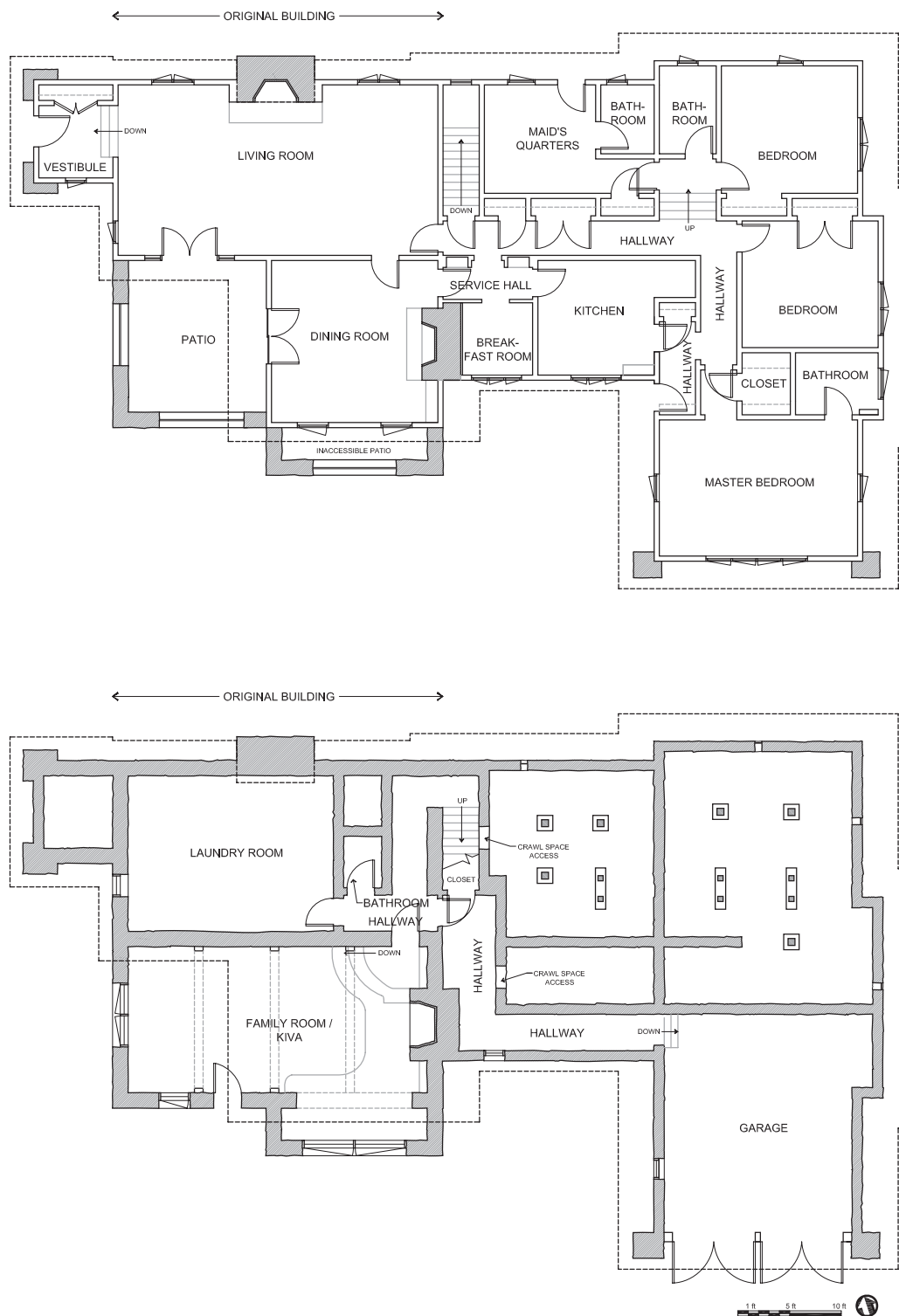


FIG. CD2: Upper level floor plan of the modified original building and addition, circa 1931. See *Superintendent's Residence* in Appendix B for the location of bathroom and kitchen fixtures.

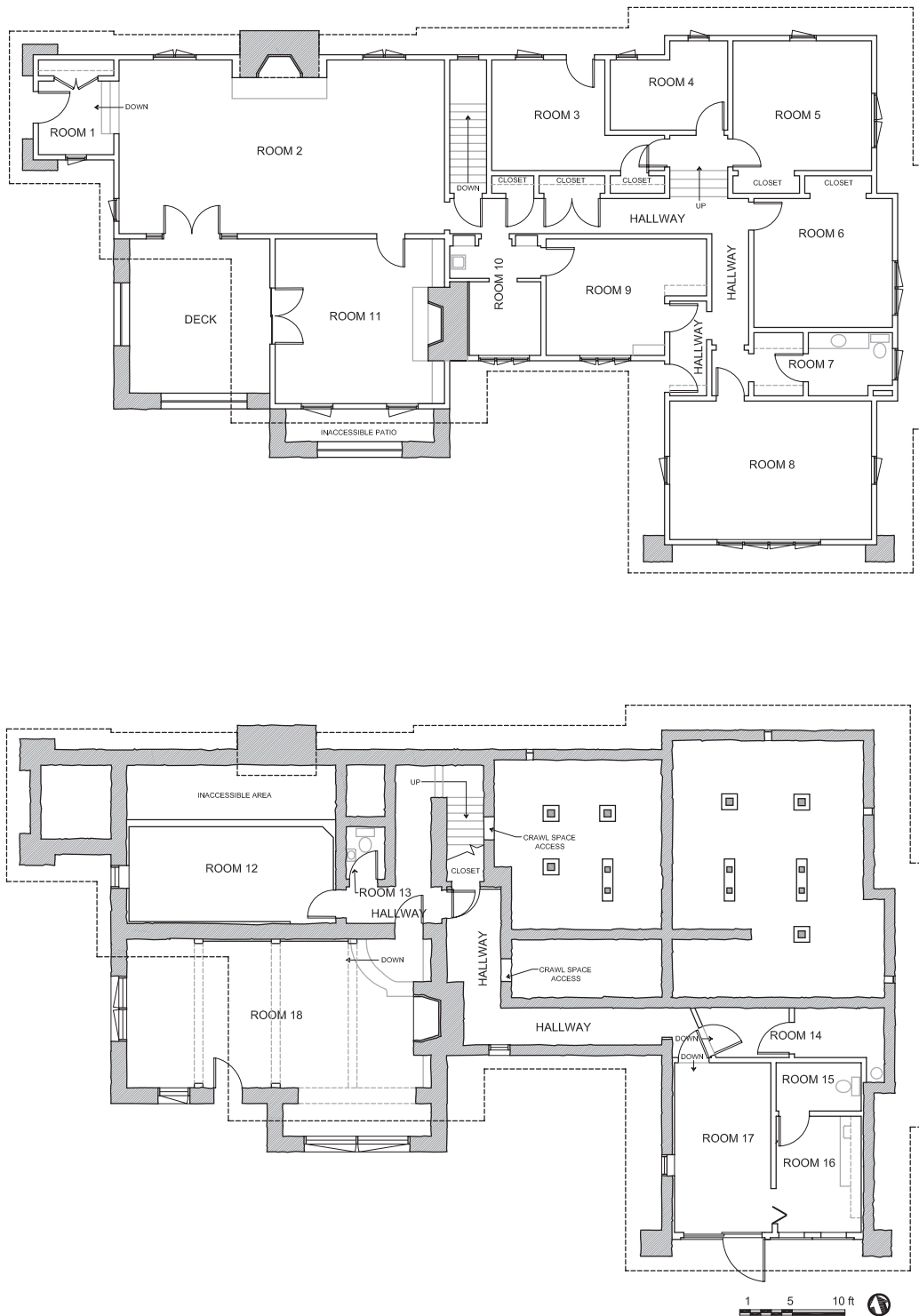


FIG. CD3: Upper and lower level floor plans after rehabilitation into offices in the 1980s.



## Chronology of Development and Use

Construction of the First Administrative Building was begun in June 1921 and completed on November 1, 1921. National Park Service landscape engineer Daniel Hull designed the building and supervised its construction, which cost \$12,600. The original masonry and frame building had a lower level with rooms for storage and visitor services and an upper level consisting of two rooms that functioned as offices for the park superintendent and chief naturalist. It served as the first park visitor center, with the first floor furnishings funded by a tour group under the auspices of the *Brooklyn Daily Eagle* newspaper. In 1919 this group visited the park and its members donated \$1,835.50 for construction of a gateway arch over an automobile road (that had not yet been built). NPS Director Stephen Mather and Superintendent Peters convinced the group to fund instead an information booth near the Grand Canyon Depot and El Tovar to fulfill better a needed visitor service. Rather than build a separate information booth, the donation was allocated to offset construction and furnishing of an information room within the First Administration Building.<sup>10</sup>

In the early 1920s, the information room was improved with a public library and exhibits on the flora, fauna, and geology of Grand Canyon. Mrs. Crosby, the wife of Superintendent Walter Crosby, collected flora and geologic specimens for display, and reference books and works of fiction for use by both the general public and the resident community. Park Ranger Fisk constructed cases, benches, and two tables for this room. Chief Ranger Smith colored a display map to show the local geology. The information room was constantly attended by a ranger or other qualified personnel and was “greatly appreciated by visitors to the Park.”<sup>11</sup>

The park service began to construct needed administrative offices, residences, service shops and other necessary buildings in 1920 with some notion of village zoning in mind, then crystallized their vision in the 1924 master plan for village growth. Even as the plan was developed, however, tourism increased at an unanticipated rate, and NPS functions and staff began to outgrow their initial facilities. As part of the 1924 plan, the park envisioned a much larger administrative headquarters within a new administrative zone and a modern residence for the park's superintendent. In 1929 a new administrative headquarters (Building 103) was constructed south of the railroad tracks alongside the new South Entrance Road. Administrative offices were immediately relocated to the new building while the old building underwent interior remodeling to become a naturalist's workshop and research library. By early 1931, administrators had changed their minds about the old building's use, and instead enlarged and rehabilitated the structure to become the superintendent's residence. The park naturalist relocated his office to the new administration building, and the naturalist's workshop was relocated to Building #208 (the old school, south of the Fred Harvey Garage) by 1935, according to Museum Collection photographs, where it remained until the park completed its new visitor center in 1957.

### Rehabilitation into the Superintendent's Residence

In 1931 NPS Chief Landscape Architect Thomas C. Vint completed rehabilitation and addition plans to convert the First Administration Building into a residence for the park superintendent. The project was included in a contract with Lewis Brothers of Phoenix along with construction of the Wayside Museum of Archeology and two park residences, and was completed at a cost of \$8,200. It was inspected and accepted by Grand Canyon National Park on October 14, 1931. Drawings of this rehabilitation and addition are contained in Appendix B. Plans with room uses can be found on the facing page.

---

<sup>10</sup> Report of the Director for Fiscal Year ending 30 June 1922, Museum Collection, Grand Canyon National Park.

<sup>11</sup> 1923 Annual Report, Museum Collection, Grand Canyon National Park.



The addition more than doubled the building's size. The total habitable floor area was increased to 3,500 square feet, including an entry vestibule, living room, maid's quarters, four bathrooms, three bedrooms, kitchen, breakfast room, laundry, and family room. East-west and north-south hallways intersected in the bedroom wing on the east side of the building. Ample storage was provided in the hallway closets and the lower level laundry room. A two-car garage was added for vehicle storage. Although the south elevation retained the appearance of the main façade, the main entrance was relocated to the second level and faced west. A secondary entrance provided access into the kitchen area on the upper level. The original entrance at the lower level was retained.

The addition's roof blended with the existing gable roof lines over the bedrooms and halls. However, the composition roof flattened into a minimal pitch over the kitchen window where it was edged with board rails to match the existing balconies. Support and wall lining for the basement utilized limestone excavated from the site. New sandstone walkways, stairs, retaining walls and natural landscaping were added on the site. Considerable maintenance was performed on the rehabilitated portion of the building. This consisted of cleaning, painting and repairing of radiators; repairing wiring and re-arranging lights; re-arranging shelving; and some interior painting.

### **Modifications**

In April 1932 a stone wall and wrought iron gate were erected in front of the building. This raised the height of, and lengthened, the existing wall. Harry Langley of the NPS Landscape Division designed and supervised the landscaping around the wall and residence soon thereafter.

Other minor repairs and modifications in the period after rehabilitation included:

- Modification of the interior stairs with the addition of more risers and increased headroom (September 1932);
- Installation of linoleum in the guest bathroom (January 1933);
- weather-stripping the windows and doors (February 1933);
- installing a retaining wall on the east side of the driveway (February 1937);
- Civilian Conservation Corps' excavation of a thirty-foot tunnel for water, steam, and sewage pipes into the basement (February 1938);
- Installation of an awning and roll shades over the patio (February 1938);
- Partial re-roofing by the Standard Roofing Company of Phoenix (September 1947);
- painting the exterior and re-glazing the windows (September 1947);
- installing built-up roofs on the flat roof portion and walking decks (September 1947);
- insulating with rock wool (December 1949); and
- installing linoleum around the kitchen sink (May 1954).

At some time between 1947 and July 1983, a superstructure gable was installed spanning the flat roof section over the kitchen area. The historic roof was retained below the modern roof and is still visible within the attic space. Park residences were insulated in 1975, and it is presumed that the First Administration Building was insulated at the same time. In 1957, following the Santa Fe's donation of utilities including the power house to the National Park Service, an individual steam heating unit was constructed to replace the central heating system boiler located in the Power House

(Building 567). This boiler unit was located in the northeast corner of the garage with an external brick flue on the east exterior elevation. The work was completed by H & J Construction Company of Phoenix. Drawings for this steam heating unit are contained in Appendix B. The brick flue was removed at some point prior to July 1986. The living room's rustic ceiling was covered with a suspended ceiling some time before 1983.

## Rehabilitation into Offices

Visitation to Grand Canyon National Park increased from 165,900 in 1931 to 2,448,500 in 1983. Automobile and bus traffic had increased exponentially, and the better part of this traffic passed in front of the superintendent's residence, which had been built quite close to the road. All residential structures had long since been moved from the rim to the expanding residential zone south of the railroad tracks. Furthermore, heating and cooling services had shifted from the concessioner, to the park, then to residents, who (including the superintendent) had to pay their own utilities. The superintendent's residence was apparently not well insulated. All in all, raising a family within the maelstrom of visitors and commercial services seemed an expensive and unsafe anachronism. As many as eleven permanent and acting superintendents and their families had lived here, but under the superintendence of Richard Marks (1980-1988), the decision was made to move.

Park administrators examined potential rehabilitation of the residence into office space but lacked the necessary funding to do so, and in any event, deemed the building too far from other park support offices to function efficiently. Perhaps the greatest drawback was the utter lack of parking space. Superintendent Marks instead approached AmFac, which had purchased the Fred Harvey Company in 1968, and whose office space in the Fred Harvey Garage across the street had become cramped, to see if they could use the space. Company officials agreed to use the space for executive offices, and in exchange, traded the use of a small house on Apache Street (Building 810) to the park. Plans for rehabilitation into offices were jointly developed by the park's historical architect and AmFac's Director of Maintenance/Engineering.<sup>12</sup>

Rehabilitation began in October 1983, and was completed in December of that year at a cost of \$69,000. Work included upgrading the heating and cooling systems, expanding the telephone and electrical capacity, eliminating or modifying anachronistic features, and applying new interior finishes, with all new construction purposely distinguishable from the original.<sup>13</sup> The work qualified AmFac for historic preservation tax credits.<sup>14</sup> Drawings of this rehabilitation are contained in Appendix B. Plans with new room names can be found following this section.

In order to accommodate office use, some of the historic doorways between rooms were altered or removed. These doorways were blocked with gypsum board and new openings were made where appropriate to the new spatial configuration. Doors were re-used wherever possible. Exterior walls of each room were furred with rigid foam boards to improve insulation and energy efficiency. New electrical and telephone lines were run through the furred walls where possible. Wall surfaces were textured in a manner similar to the original plaster. Doors and windows frames were extended to match the new interior wall plane. Nailing was kept to a minimum.

Although the original *Assessment of Actions Having an Effect on Cultural Resources* form included the removal of the

---

<sup>12</sup> Billy Garrett, "Adaptive Use: The Superintendent's Residence at Grand Canyon National Park," *CRM Bulletin* vol. 7 no. 4 (December 1984): 6-7.

<sup>13</sup> Ibid.

<sup>14</sup> It is unknown what tax credits were applied for as part of this rehabilitation project. It is presumed that tax credits were approved and received.



FIG. CD4: South wall of the original building, circa 1929-1930 (Source: GRCA Museum Collection, GRCA 36038).



FIG. CD5: South wall of the addition under construction. Note the roof between the two gables at arrow which had a railing and was since covered by a superstructural roof, 1931 (Source: GRCA Museum Collection, Photograph 151).





FIG. CD6: South wall before the construction of the stone patio wall, circa 1931 (Source: GRCA Museum Collection, GRCA 35482).



FIG. CD7: Patio wall under construction in front of the First Administration Building, 1932 (Source: GRCA Museum Collection, Photograph 148).



FIG. CD8: East wall showing the brick flue, circa 1958-1985 (Source: GRCA, Maintenance Files).



FIG. CD9: View facing northwest after the removal of the brick flue, circa 1958-1985 (Source: GRCA, Maintenance Files).





FIG. CD10: Stair to the eastern upper level entrance before replacement, June 1985 (Source: GRCA, Maintenance Files).



FIG. CD11: Stair to the eastern upper level entrance after replacement, July 1985 (Source: GRCA, Maintenance Files).



FIG. CD12 View of Room Two facing northwest before rehabilitation, circa 1983 (Source: GRCA, Maintenance Files).



FIG. CD13: View of Room Nine (kitchen) facing southwest showing the cabinet configuration before rehabilitation. Note aluminum windows on the south wall, 1983. (Source: GRCA, Maintenance Files).



FIG. CD14: View of Room Eighteen facing east showing the stone floor, steps, fireplace and built-in cabinets before rehabilitation, circa 1983 (Source: GRCA, Maintenance Files).



FIG. CD15: View of Room Eighteen facing west showing the ceiling configuration before rehabilitation, circa 1983 (Source: GRCA, Maintenance Files).



## PHYSICAL DESCRIPTION

---

furred down, non-historic ceiling in the living room (Room Two), this work was never completed. Conversion of the family room into a conference room (Room Eighteen) necessitated additional alteration. To provide a level floor surface, the irregular flagstone floor was covered with a plywood platform and carpeted. Overhead fluorescent lighting was installed in a plywood ceiling suspended between the beams. Power chases covered with cork board were built over the stone walls to run electricity to the lights.<sup>15</sup>

During rehabilitation, carpenter ants were discovered in the ceiling of Room Eighteen and powder post beetles in the eaves and siding. To remedy this problem, the building was tented and treated with Methyl bromide at a cost of \$2,170. While the patio deck was under repair for sheathing and joist replacement, and after the built-up roofing was removed, the deck was temporarily covered in plastic. Water and snow from a severe storm penetrated the plastic and caused damage to both the historic grained ceiling and modern plywood suspended ceiling of Room Eighteen, although ceiling damage was not serious enough to require replacement. The floor of Room Eighteen had been covered with plastic and was not damaged by the storm water.

An undated and unsigned *Assessment of Actions Having an Effect on Cultural Resources* form included the replacement of deteriorated shingles and sheathing as well as the patching of log rafter ends as needed. A separate *Construction Cost Estimate Breakdown* included estimates for patching 14 rafter ends, replacing one rafter and patching 24 purlins. It is presumed this work was completed in coordination with interior modifications and patio roofing.

In January 1984 thermal-pane, wood, frame-and-sash windows were delivered and subsequently installed in Room Ten. These wood windows replaced modern aluminum windows installed at an unknown earlier date. In April 1985 AmFac requested permission to modify the garage into two offices (Rooms Sixteen and Seventeen). Park administrators approved the work, provided that the exterior garage doors remained in place. Sliding glass doors were installed in the west room (Room Seventeen) on the inside of the garage doors. It is presumed that two windows were installed in the east room (Room Sixteen) at that time. In 1985 the exterior sandstone stairs on the southwest side of the building were replaced and new electrical service was installed at the east side of the roof. In the same year, the building underwent some masonry repair, although the location and extent of this work is unknown.

### Preservation Maintenance

In 1987 exterior preservation maintenance was completed at a cost of \$48,000. Work included both exterior painting and the repair of doors and windows. All storm windows, window screens and screen doors were repaired or replaced as needed and new glass was installed to replace missing or broken panes. Work was completed by JAGCO Development & Construction, Inc. of Las Vegas. In 1999 Xanterra Parks & Resorts (AmFac's new name) began an electronic system for maintenance records.<sup>16</sup> These electronic records indicate diligent, regular, and ongoing attention to the site, exterior, and interior of the First Administration Building. Regular site activities include trimming vegetation, pruning or removing trees, branches and brush, repairing and striping the sandstone steps on the southwest side of the building,

---

<sup>15</sup> Billy Garrett, "Adaptive Use: The Superintendent's Residence at Grand Canyon National Park," *CRM Bulletin* vol. 7 no. 4 (December 1984): 6-7.

<sup>16</sup> Given that the building had been thoroughly rehabilitated in the 1980s, it is unlikely that any major problems emerged.

and securing adjacent rock retaining features. Exterior activities include removing pine needles from the roof and gutters, removing snow from the decks and porches, and cleaning storm drains. Interior activities include regular testing of the alarm and sensor systems, minor electrical work, and repairing and repainting doors and screens. Storm and screen windows are seasonally removed and installed. There also has been an ongoing need to seal and secure the building against water and rodent penetration. Patching holes or other methods to prevent rodent access are frequently noted in the electronic records.

Xanterra staff has occasionally undertaken more complex projects, including:

- regrouting the west stone walkway (July 1999);
- replacing the door glazing in Room Eighteen (January 2000);
- installing a handrail in Room Eighteen (July 2000);
- five staff spending 66 hours on an unspecified remodeling project (October 2000);<sup>17</sup>
- and installing new tile floor in Room Seven (2001).

In April 2006 Xanterra engineering staff moved the evaporative cooling unit from its location on the north stone retaining wall to a specially built stand above the wall. The new stand spans several feet over the wall, and the wall now has structural damage that may have been caused by the weight of the cooling unit resting directly upon the wall. Remaining plumbing hookups, electrical connections, and ductwork were completed in the following month. From 1999 to 2006, there have been at least a dozen documented instances of water penetrating Room Eighteen from the ceiling, which also serves as the patio floor above. In 2004 waterproofing repairs were attempted, and interim plastic sheeting was installed in the following two years. The roof was replaced in fall 2006. Although originally proposed as part of a total building and systems rehabilitation project (identified below), the pressing need for a roof system overhaul pushed this part of the project ahead of other work. The roof project included:

- replacement of roof sheathing and deteriorated cedar shingles with pressure-treated cedar sawn shingles;
- removal of asbestos-content, built-up roofing on two balconies and replacement with a new built-up roof to achieve a class "A" roof system over the entire roof deck area;
- inspection of gutters and downspouts and replacement where necessary;
- installation of copper flashing;
- rafter repair; and
- replacement of carved balusters at the patio railing in-kind, where necessary.

In 2005 the park received a cost estimate for required preservation maintenance in the amount of approximately \$250,000. The work has not yet been completed except where noted below.<sup>18</sup> This includes:

- replacement of roofing and repair of gutters and downspouts (completed in 2006);
- repainting the building exterior (completed in 2006);
- improvement to overall site drainage and installation of drains near foundations;
- repair or rebuilding of the dry-laid retaining wall;
- installation of exterior handrails along steps, where necessary;

---

<sup>17</sup> The location and extent of this remodeling project is unknown.

<sup>18</sup> Roof repairs totaling approximately \$87,000 were included in the \$250,000 estimate and completed in 2006. The exterior was painted in 2007.

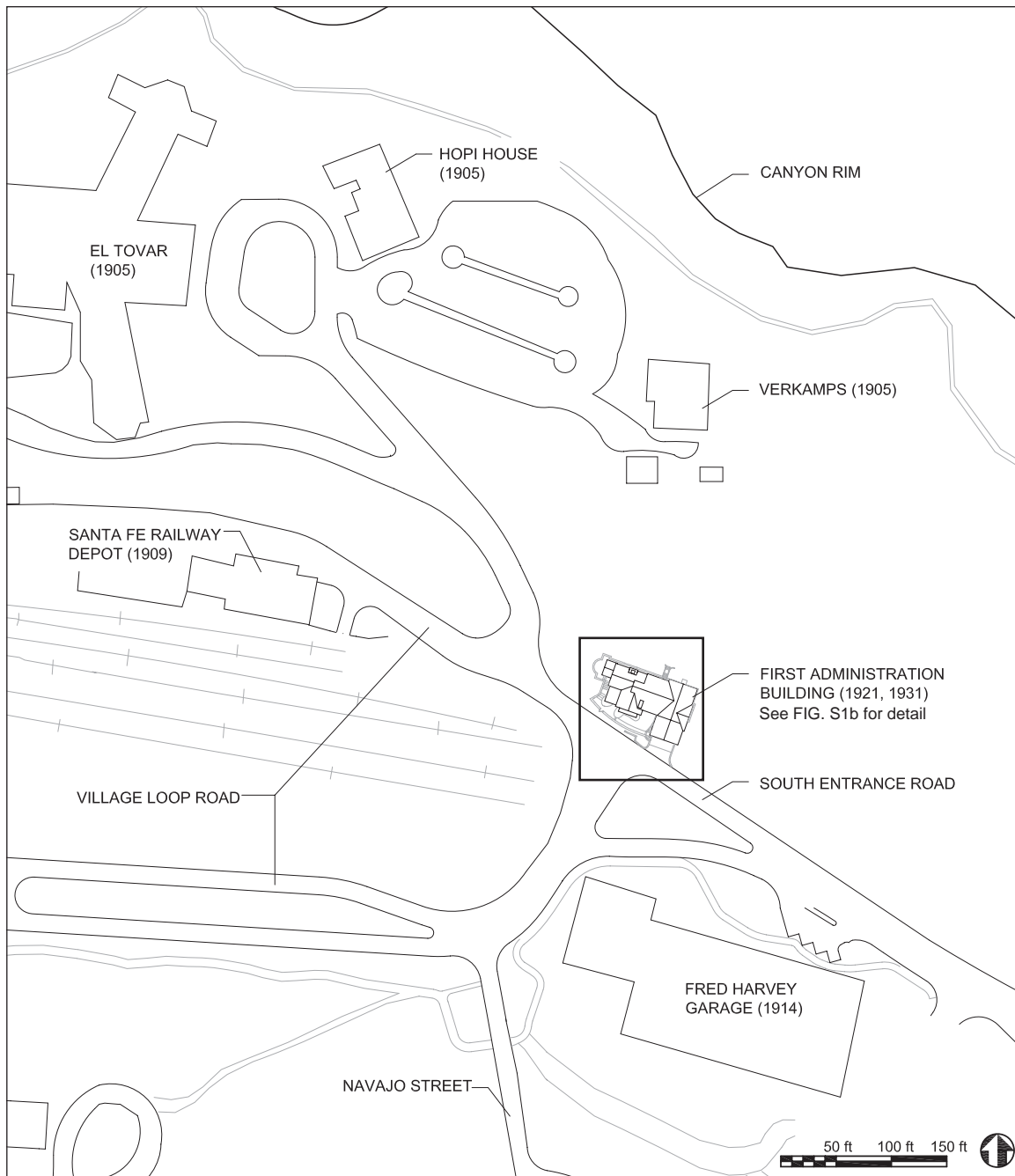


FIG. S1a: Site plan showing the location of the First Administration Building at the junction of park thoroughfares, 2008.

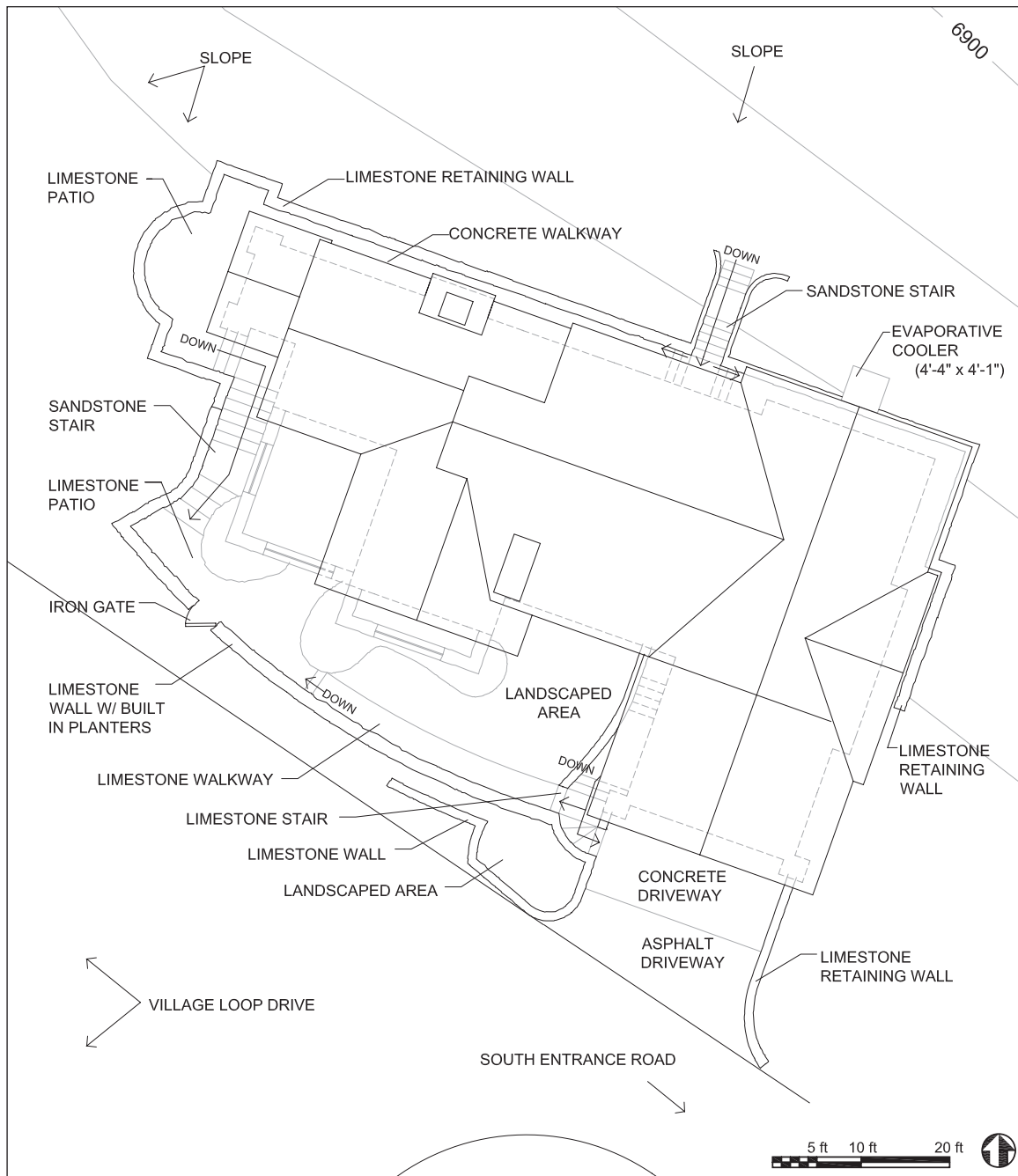


FIG. S1b: Site plan showing the site features of the First Administration Building, 2008.

- installation of a split system HVAC;
- repair of fire detection and alarm systems;
- replacement of galvanized pipes with pex piping;
- repair of vigas;
- plaster patching interior surfaces to prevent rodent intrusion;
- removal, resetting, and remortaring exterior sandstones;
- mitigation of lead paint on windows and doors;
- and repointing exterior mortar.

### **Contemporary Use**

Xanterra continues to occupy the building under contract with the National Park Service. The current contract (CC-GRCA001-02) is effective 1/1/2002 – 12/31/2011. There are currently ten Xanterra occupants in four units: Retail Section, Environmental Health & Safety, Lost & Found, and the Manager's Office. The Retail section, which is comprised of three offices, may be relocated to a new building in the old NPS maintenance area off Albright Street, allowing the Environmental Health & Safety Division to move their offices from the lower to the upper level of the building.

In 2006 the List of Classified Structures indicated that the First Administration Building was then in poor condition. The impact level was severe and the primary negative impact to the building was stated as structural deterioration. The overall management treatment was stabilization.

The following contains a systematic inventory of all features, materials and spaces according to significance, condition and impact level.

Significance is defined as the quality of being important, or the feature's association with the historical themes expressed in the *Historical Background & Context* section of this report. It is evaluated as High, Medium or Low.

Significance is exemplified in the primary character-defining features. The primary character-defining features have a high degree of integrity and work in combination to relay significance. The elimination or inappropriate alteration of

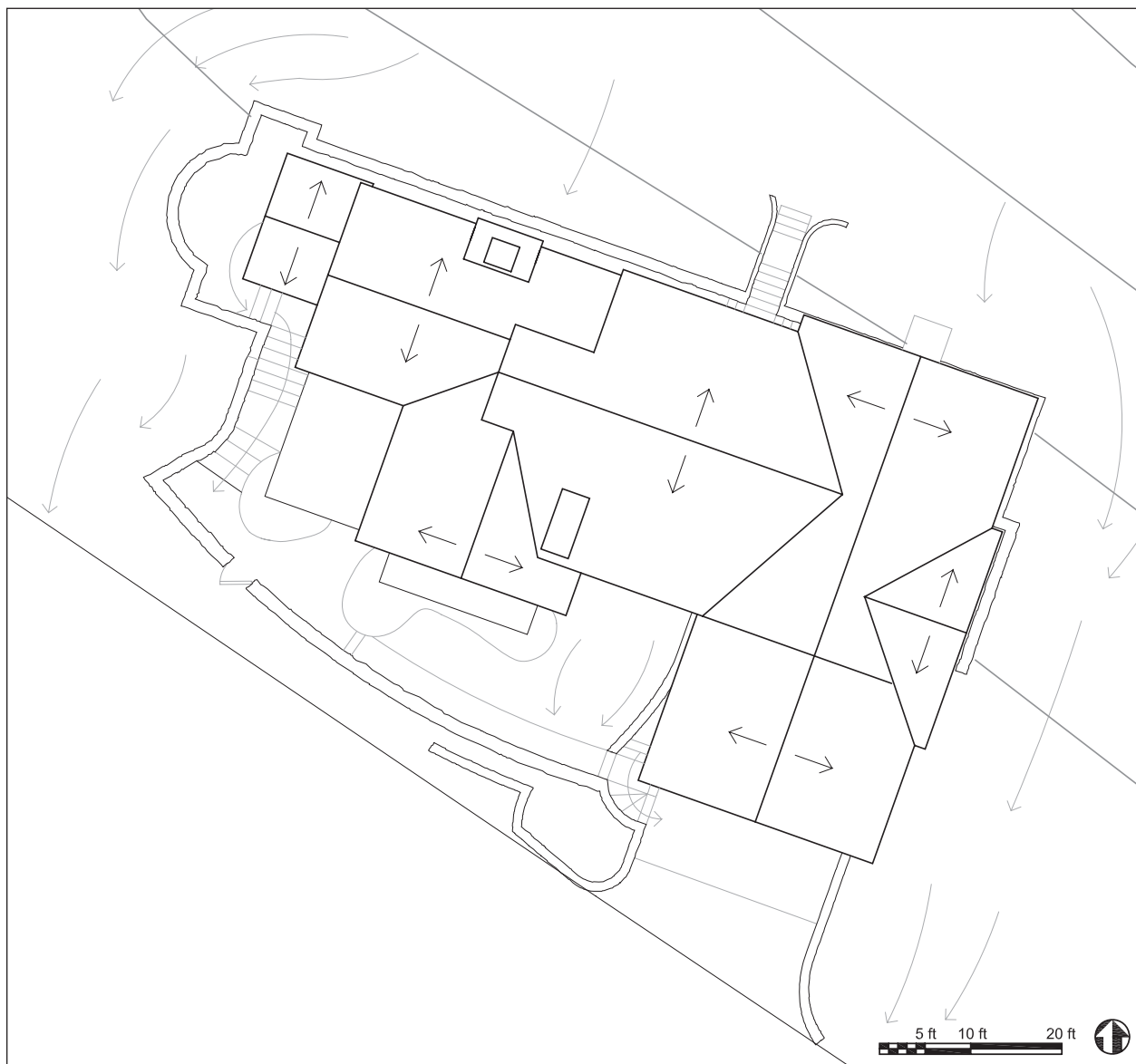


FIG. S2: Site plan showing drainage/runoff, 2008.

Site / Setting Deficiency/Alteration	Recommended Treatment*	Impact
Lack of handrails at the stairs is dangerous during inclement weather. See FIGS. S7, S8.	Install ADA-compliant handrails that are compatible with the historic character of the building in a manner sensitive to the building. Handrails should be installed in a way that is reversible in the future.	Severe
Buckling of north dry-stacked retaining wall potentially caused by the weight of the removed evaporative cooling unit. See FIGS. S9, S10.	Remove stones around the bulge and rebuild with existing stones, matching the historic design. See <i>Alternatives for Treatment</i> for additional information.	Severe
Eroded stone paving and projected incompatible mortar on stairs and landings poses a potential trip hazard. See FIGS. S11, S12.	Remove existing stone where necessary. Remove all incompatible mortar. Reset the stone. Replace stone in-kind and apply compatible mortar between stones. Compatible mortar should match the historic mortar in composition, texture, color and placement within the joints.	Severe
Water directed toward the north wall of the building due to site slope and improperly sloped walkway. See FIGS. S13, S14.	Evaluate the site in consultation with landscape architect and/or architect to direct water away from the building and regrade as necessary. Repave concrete walkway on the north side of the building with central valley to direct water away from the retaining wall and building perimeter.	Severe
Buckling east stone retaining wall has loose stones and cracked mortar. See FIG. S19.	Remove stones around the bulge and rebuild with existing stones, matching the historic design. See <i>Alternatives for Treatment</i> for additional information.	Severe
Excess debris on the north and west walkways prohibit proper drainage. See FIG. S15.	Clean walkway. Institute regular maintenance program.	Moderate
Blocked drainage pipe on the south patio caused by screen blocking debris. See FIG. S16.	Remove screen and debris. Clean the drainage pipe. Replace pipe if necessary.	Moderate
Blocked clay drain pipes near the west porch wall. See FIG. S17.	Remove debris and clean drainage pipe. Replace pipe if necessary.	Moderate
Trees in close proximity to building. See FIG. S18.	Trim trees that pose a potential fire hazard to the building.	Moderate
Blocked drainage pipe under the north stair landing.	Remove debris and clean drainage pipe. Replace pipe if necessary.	Moderate
* Note: Please see <i>Requirements for Treatment</i> for additional information on each recommendation.		



FIG. S3: Stone retaining wall along the east side of the two-car driveway, 2007.



FIG. S4: View facing west showing the stone patio wall at left, stone walkway at center, and the building at right, 2007.





FIG. S5: View facing west showing the stone patio wall, and the stone paving between the patio wall and building, 2007.



FIG. S6: View facing southeast showing the stone patio wall with built-in planters and iron gate, 2007.



FIG. S7: Iron gate in the stone patio wall. Note lack of handrails on stair in the background, 2007.



FIG. S8: Stair to the eastern entrance on the upper level. Note driveway at right, 2007.





FIG. S9: View facing east showing the stone retaining wall at left and the walkway between the retaining wall and the building at center. Note the elevated evaporative cooling unit at arrow, 2007.



FIG. S10: Buckled stone retaining wall on the north side of the building, 2007.



FIG. S11: Uneven paving near the entrance to Room One due to differential weathering of materials. Note the north stone retaining wall in the background, 2007.



FIG. S12: Uneven pathway and steps due to differential weathering of materials, 2007.



FIG. S13: View of the north stair showing site slope that directs water toward the north side of the building, 2007.



FIG. S14: View facing west showing the concrete walkway that directs water toward the building, 2007.



FIG. S15: Debris-filled walkway near the northeast retaining wall that directs water toward the foundation, 2007.



FIG. S16: Debris-filled drainage pipe on the south stone patio wall, 2007.





FIG. S17: Blocked drain pipes from the west porch, 2007.

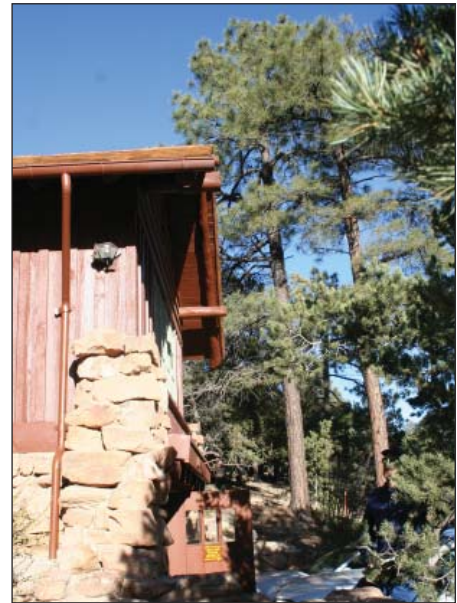


FIG. S18: Trees in close proximity to building, 2007.



FIG. S19: Loose stone and cracked mortar in buckling east stone retaining wall, 2007.

any one primary character-defining feature would have a negative affect on the significance of the building.

Condition is the feature's state at the time of assessment with respect to performance, stability and integrity. It is evaluated as Good, Fair or Poor, as specified by the List of Classified Structures.

Good	The structure and significant features are intact, structurally sound and performing their intended purpose. The structure and significant features need no repair or rehabilitation, but only routine or preventative maintenance.
Fair	a.) There are early signs of wear, failure, or deterioration though the structure and its features are generally structurally sound and performing their intended purpose, OR b.) There is a failure of a significant feature of the structure.
Poor	a.) The significant features are no longer performing their intended purpose, OR b.) Significant features are missing, OR c.) Deterioration or damage affects more than 25% of the structure, OR d.) The structure or significant features show signs of imminent failure or breakdown.

An impact is a detectable result of an agent or series of agents having a negative effect on the significant characteristics or integrity of a structure, and for which some form of mitigation or preventative action is necessary. It is evaluated as Severe, Moderate, or Low as defined by the List of Classified Structures. At least one of the criteria must be met for the declared impact level.

Severe	a.) The structure will be significantly damaged or irretrievably lost if action is not taken within two (2) years. b.) There is an immediate severe threat to visitor or staff safety.
Moderate	a.) The structure will be significantly damaged or irretrievably lost if action is not taken within five (5) years. b.) The situation caused by the impact is potentially threatening to visitor or staff safety.
Low	a.) The continuing effect of the impact is known, and will not result in significant damage to the structure. b.) The impact and its effects are not a direct threat to visitor or staff safety.

The physical description is divided into three sections: Site / Setting, Exterior and Interior. Within each section, both primary character-defining features and deficiencies are outlined. Treatment recommendations, rated according to priority, are outlined for each deficiency; a summary of recommended treatments is presented in the *Treatment & Use* section of this report. Drawings of the First Administration Building as it currently exists can be found in Appendix C.

### Summary

The First Administration Building is located in the Grand Canyon Village Historic District and is approached by vehicular traffic from the South Entrance Road and Village Loop Drive. It is northeast of the Santa Fe railroad tracks terminus on a south-facing, pine-covered hill.

The First Administration Building is a two-story Kaibab limestone building with a cedar shingle roof in the National

Park Service rustic style, with native limestone on the lower story and board and batten on the upper walls. Heavy timber rafter ends project from under a multi-gabled shingled roof.

In 2006, a List of Classified Structures update listed the First Administration Building in poor condition. The impact level was severe and the primary negative impact to the building was stated as structural deterioration.

After a thorough examination of the First Administration Building, this report finds that it is generally in fair condition with a moderate impact level. There are very few immediate and severe threats to visitor safety, and no evidence that the building would be significantly damaged within the next two years if these deficiencies were not immediately corrected. However, some of the building's primary character-defining features no longer function as required and action should be taken to correct these deficiencies within the next five years, as defined by the moderate impact level.

Poor drainage, weathered paving stones and two buckling retaining walls pose the most serious site problems. The lack of handrails along the exterior stairs poses a potential safety hazard.

For the most part, the exterior retains its original features in fair condition. Major exterior deficiencies include stone cracking, unsecured stones, inappropriate mortar repairs, decayed rafter ends and a deflected gable roof over Room Eight. The addition of a superstructure roof to cover the web of flexible duct from an evaporative cooling system, and the retention of the original asphalt-shingled roof below, creates a potential fire hazard.

Modern alterations to the interior have concealed some of the original, primary character-defining features, including suspended ceilings that conceal the original rustic ceilings in Rooms Two and Eighteen, and modern carpet that conceals the original wood and stone flooring throughout the building. Poor site drainage has caused moisture infiltration to the north building wall which is evidenced at the lower level.

Insufficient attic collar ties and displaced foundation post supports are severe structural issues. The building does not meet accessibility code, has egress-related deficiencies and is not protected from fire. Additionally, fire, security and electrical systems were damaged by a nearby lightning strike.

Detailed evaluations of code and structural deficiencies can be found in Appendices D and E.

#### **Site / Setting**

Significance: High

Condition: Fair

Impact: Severe



FIG. E1: Composite photograph of the south wall, 2007.



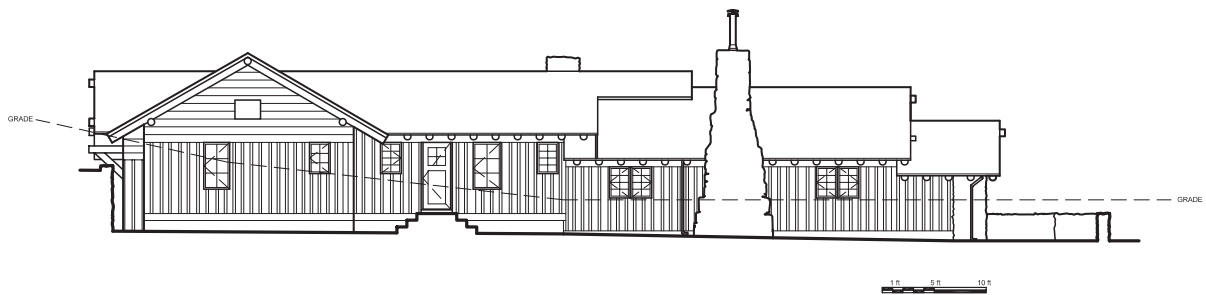


FIG. E2: Composite photograph of the north wall, 2007.

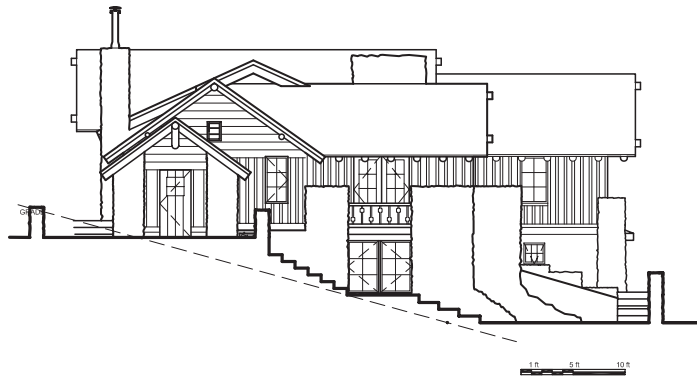


FIG. E3: East wall, 2007.



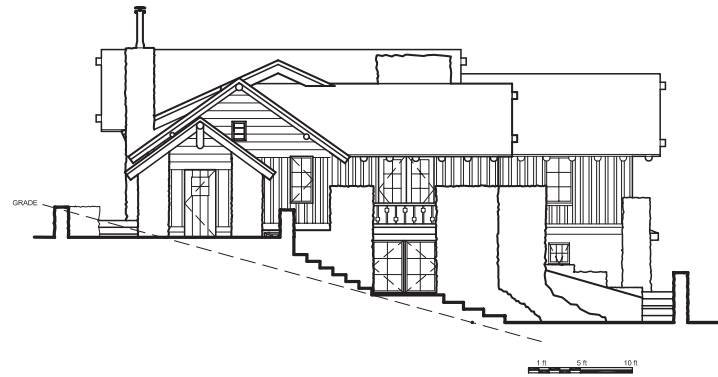


FIG. E4: West wall, 2007.

Exterior Deficiency/Alteration	Recommended Treatment*	Impact
Deflected roof over Room Eight. See FIG. E5.	Adjust ridge board and rafters to remove deflection, replacing specific members as required. Resheath and shingle roof.	Severe
Decayed rafters and outriggers. See FIGS. E6, E8.	Remove decayed area. Patch with wood splice. Where rot is more than 50% of the log section, replace the entire rafter tail or outrigger back into the structure. Paint to match existing.	Severe
Water directed onto rafter from roof valley. See FIG. E7.	Install gutter to match existing. Trim back rafter if necessary.	Severe
Insufficient and/or damaged collar ties in attic. See FIG. E10.	Remove damaged collar tie framing. Install collar tie at every rafter with screw connections.	Severe
Water directed toward foundation due to improperly placed leader on the west corner of the north elevation. See FIG. E13.	Move leader away from the building to direct water away from the foundation.	Severe
Settlement crack in stone patio wall. See FIG. E16.	Where necessary, remove stones. Reinstall stones with compatible mortar. Compatible mortar should match the historic mortar in composition, texture, color and placement within the joints. See <i>Alternatives for Treatment</i> for more information.	Severe
Unsecured stones in patio wall. See FIG. E17.	Secure loose stones with compatible mortar to match existing. Compatible mortar should match the historic mortar in composition, texture, color and placement within the joints.	Severe
Unsecured birdbath at patio corner. See FIG. E18.	Mount birdbath on the stone wall in the southwest corner of the patio using compatible mortar. Compatible mortar should match the historic mortar in composition, texture, color and placement within the joints.	Severe
Displaced metal flue on chimney to Room Two. See FIG. E21.	Straighten and securely anchor flue to chimney.	Severe
Lack of spark arrester on Room Two chimney. See FIG. E21.	Install spark arrester if fireplace in use.	Severe
Mortar cracks on chimney to Room Two. See FIG. E22.	Carefully remove cracked mortar and apply compatible mortar. Compatible mortar should match the historic mortar in composition, texture, color and placement within the joints.	Severe
Presence of asphalt shingles on the earlier roof under a superimposed roof. See FIG. E9.	Remove asphalt shingles. Alternately, cover shingles with an intumescent coating or other fireproofing material.	Moderate
Missing gutter on the south side of the east wall. See FIG. E11.	Install gutter to match existing.	Moderate
Gaps between roof decking boards. See FIG. E12.	When new roofing is required, install plywood sheathing over roof decking.	Moderate
Patio railing does not meet current code standards. See FIG. E15.	No treatment required.	Moderate
Wood in-fill in stone wall. See FIG. E19.	Remove wood in-fill. Install matching stone in-fill and set with compatible mortar to match existing. Compatible mortar should match the historic mortar in composition, texture, color and placement within the joints.	Moderate
Inappropriate repair including excessive and/or incompatible mortar. See FIGS. E23, E25.	Carefully remove excess mortar from stone. If necessary, apply compatible mortar. Compatible mortar should match the historic mortar in composition, texture, color and placement within the joints.	Moderate

Exterior Deficiency/Alteration	Recommended Treatment*	Impact
Gaps between building materials, potentially allowing rodent access into the building. See FIGS. E26, 21.	Fill gaps with material appropriate to location (for example, stone or wood) in consultation with the park historical architect. If necessary, paint to match existing.	Moderate
Cracked wood beam. See FIG. E27.	Replace in-kind. Paint to match.	Moderate
Warped window frame and sill. See FIG. E28.	Remove window. Repair window frame and sill. Reinstall.	Moderate
Damaged wood siding and/or roof sheathing. See FIGS. E29, E34 and E35.	Where possible, repair wood siding/roof sheathing with wood splice and paint to match existing. If necessary, remove damaged wood siding/roof sheathing and replace in-kind. Paint to match existing.	Moderate
Decayed garage door at ground level. See FIG. E31.	Remove decayed area and patch with epoxy or with wood splice if necessary. Paint to match existing.	Moderate
Cut fascia beam on east wall. See FIG. E37.	Install wood splice to match the existing beam. Paint to match existing.	Moderate
Damaged modern light fixture. See FIG. E40.	Repair or replace light fixture as necessary.	Moderate
Lack of light fixture at entrance to upper level hallway.	Repair or replace damaged modern light fixture near stair and assess need for additional light. Install additional light fixture if necessary. Light fixture should be compatible with the historic character of the building.	Moderate
Lichen growth on stone. See FIG. E20.	Lichen may be a result of excess moisture penetration. Evaluate the drainage and make changes as appropriate to effectively move water away from the building.	Low
Exposed nail ends. See FIG. E33.	Cut protruding nail ends. Patch wood. Paint to match existing.	Low
Exposed and/or loose wiring. See FIG. E36.	Remove if no longer functional. If wiring is necessary and functional, affix to the building in an inconspicuous location and in a straight line.	Low
* Note: Please see <i>Requirements for Treatment</i> for additional information on each recommendation.		



FIG. E5: East wall showing the deflected roof over Room Eight at arrow, 2008.



FIG. E6: Decayed outriggers on the south wall, 2007.



FIG. E7: Water directed onto a rafter from the roof valley on the north wall, 2008.



FIG. E8: Decayed rafter on the east wall, 2007.



FIG. E9: View into the attic where a roof was superimposed over an earlier pitched roof showing the web of flexible duct and potentially hazardous asphalt shingles on the earlier roof, 2007.



FIG. E10: Insufficient and damaged collar ties in the attic, 2007.





FIG. E11: Missing gutter on the south side of the east wall, 2007.



FIG. E12: Gaps between the roof decking boards, 2007.



FIG. E13: Downspout on the northwest corner of the building that drains water onto the patio floor and toward the building foundation, 2007.



FIG. E14: Split downspout on the east wall, 2007.



FIG. E15: View of the patio facing southeast showing the structural stone corners, wood railing and liquid-applied, waterproofing membrane flooring. Note birdbath location at arrow and low railing height, 2007.



FIG. E16: Structural cracks in stone patio wall, 2007.



FIG. E17: Gaps in the southwest corner of the patio stone support, 2007.



FIG. E18: Unsecured birdbath in the southwest corner of the patio stone support, 2007.





FIG. E19: Wood in-fill in the stone wall on the south wall at arrows, 2007.



FIG. E20: Lichen on the stone on the east wall, 2007.



FIG. E21: Skewed metal flue on the Room Two chimney. Note dangerous proximity of tree, 2007.

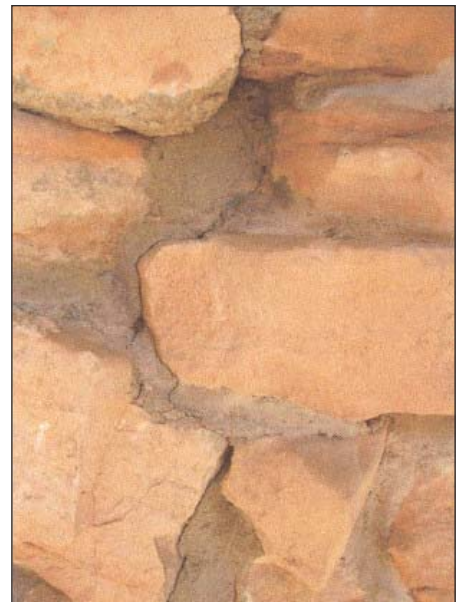


FIG. E22: Mortar cracks in the Room Two chimney, 2007.



FIG. E23: Inappropriate mortar repair on the south wall at arrow, 2007.

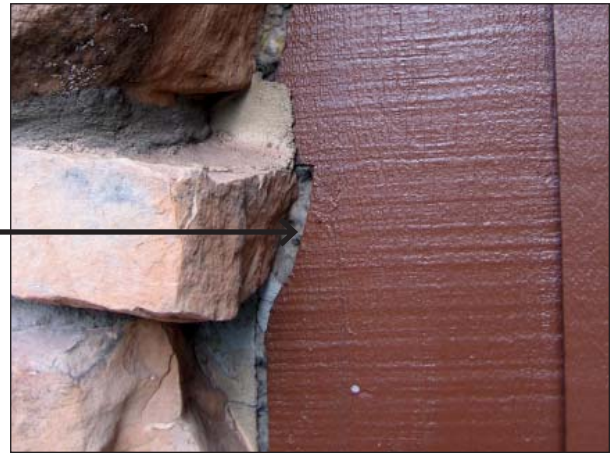


FIG. E24: Exposed insulation on the south wall at arrow, 2007.



FIG. E25: Discolored mortar on the west wall, 2007.



FIG. E26: Gap between the window and stonework on the south wall, 2007.





FIG. E27: Cracked wood beam on the south wall, 2007.



FIG. E28: Damaged wood sill on south window to Room Eighteen, 2007.



FIG. E29: Damaged wood siding on the south wall, 2007.



FIG. E30: Historic garage doors. Note the door at arrow opens to access a sliding glass door into Room Seventeen, 2007.



FIG. E31: Decayed wood garage door on the south wall, 2007.



FIG. E32: Separation of the siding on the north wall, 2007.



FIG. E33: Exposed nails on the east soffit, 2007.



FIG. E34: Damaged wood roof sheathing on the north wall, 2007.



FIG. E35: Unpainted wood roof sheathing on the east wall, 2007.



FIG. E36: Exposed wire on the east gable, 2007.



FIG. E37: Cut fascia beam on the east wall, 2007.



FIG. E38: Historic light fixture on the south wall of Room Eighteen, 2008.





FIG. E39: Historic light fixture on the west wall of Room One, 2008.



FIG. E40: Damaged modern light fixture on the west wall of Room Eight, 2008.



Primary Character Defining Features: Stone walls; built-in planters; iron gate; stone stairs and walkways

The First Administration Building is located in the Grand Canyon Village Historic District, just northeast of the Santa Fe railroad tracks terminus at the intersection of South Entrance Road and Village Loop Drive. The site slopes steeply down to the south and is vegetated with dense ponderosa pine, prickly pear cactus and yucca. An (east-west) area of land to the north of the building has been flattened and terraced to prevent erosion, and direct water around the building; the earth terracing no longer functions properly. Water is directed from the earth terracing toward poorly-defined swales on the east and west sides of the building.

ROOM NUMBER	ADMINISTRATIVE USE (1921-1930)	RESIDENTIAL USE (1931-1982)	OFFICE USE (1983-Present)
Room One	N/A	Vestibule	Vestibule
Room Two	Office	Living Room	Office
Room Three	N/A	Maid's Quarters	Office
Room Four	N/A	(Two) Bathrooms	Office
Room Five	N/A	Bedroom	Office
Room Six	N/A	Bedroom	Office
Room Seven	N/A	Bathroom & Closet	Bathroom
Room Eight	N/A	Bedroom	Office
Room Nine	N/A	Kitchen	Office
Room Ten	N/A	Breakfast Room	Office Storage & Kitchenette
Room Eleven	Office	Dining Room	Office
Room Twelve	Storage	Laundry	Office
Room Thirteen	Restroom	Bathroom	Bathroom
Room Fourteen	N/A	Garage & Utility Area	Utility Room
Room Fifteen	N/A	Garage	Bathroom / Lost & Found*
Room Sixteen	N/A	Garage	Lost & Found*
Room Seventeen	N/A	Garage	Lost & Found*
Room Eighteen	Visitor Information	Family Room	Conference Room
*Room was used as Nurse's Station during part of this period. It is presently used as Lost & Found.			

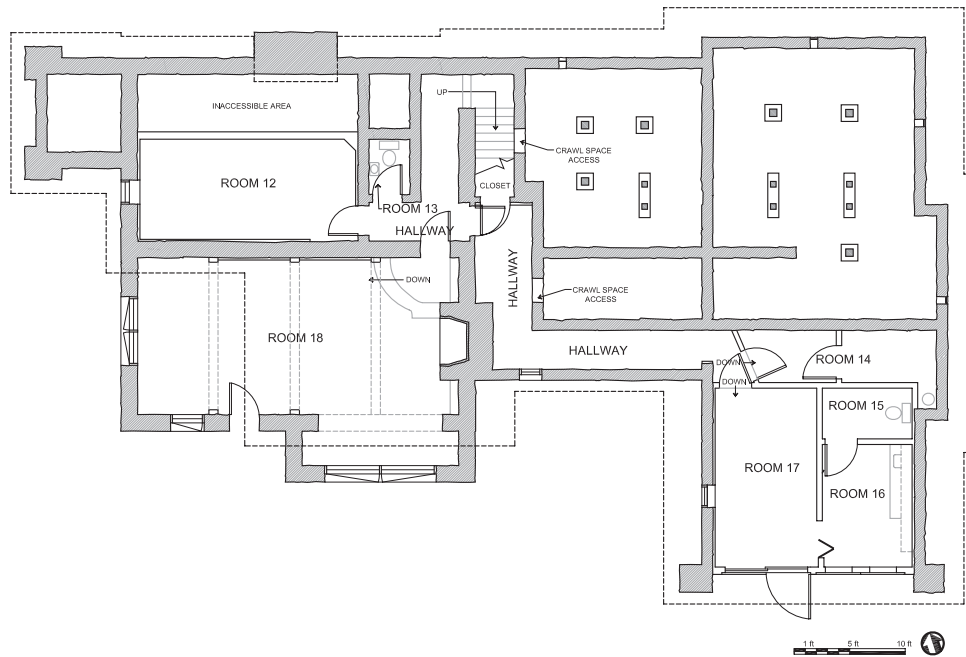
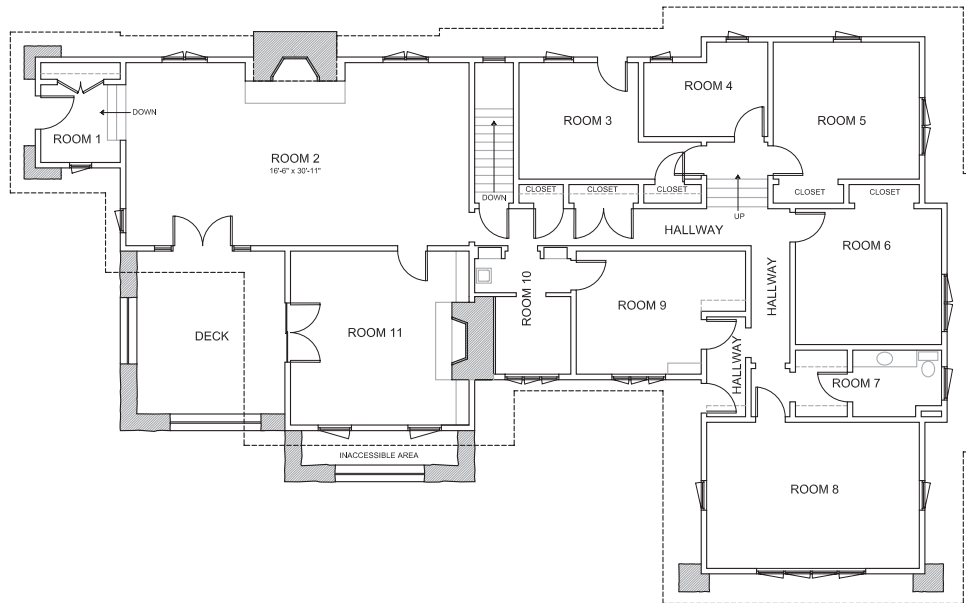


FIG. INT1: Upper and lower level floor plans, 2008.

In general, ponderosa pine trees shade the building, although several have been recently removed in fire-prevention efforts; stumps remain onsite. Tree branches extend over the roof in some locations.

The building is separated from the road to the south by a sidewalk and limestone patio wall. This wall creates an enclosed yard on the south side of the building that is paved with Kaibab limestone; the stone surface is uneven reflecting its natural form. Inside the walled yard, vegetation is low and spread out, and includes staghorn cholla. An iron gate provides access to the yard. Cholla and pincushion cactus grow in built-in planters on top of the stone wall on both sides of the gate and at the wall's corners.

Within the stone patio wall, two stairs lead to entrances on the upper level. The west treads and risers are sandstone and the east treads and risers are limestone. The edges of the treads are painted white to reduce the potential safety hazard. Rain, snow and ice collect on the stone stairs and create a potential safety hazard; no handrails are present. Incompatible mortar was applied between the stone stair pavers and has not weathered at the same rate as the adjoining stone; the hard mortar now projects above the stones and creates a potential trip hazard.

The stone patio wall continues around the west side of the building where it projects to form a curved area in front of the entrance into Room One on the upper level. This stone patio wall is approximately 3' high and has integrated drainages to direct water off the patio and to the west; the drainage pipes are currently blocked and prevent adequate drainage. Limestone paving on the patio floor is in poor condition and has incompatible mortar that creates a trip hazard.

The stone wall continues around the north side of the building where it functions as a retaining wall on the north and northeast sides of the building. The east retaining wall is buckled and has loose stones and cracked mortar. Excess debris between the wall and building currently prevents proper drainage from these areas.

A dry-stacked stone retaining wall is located approximately 3' away from the north building wall on the east side of the

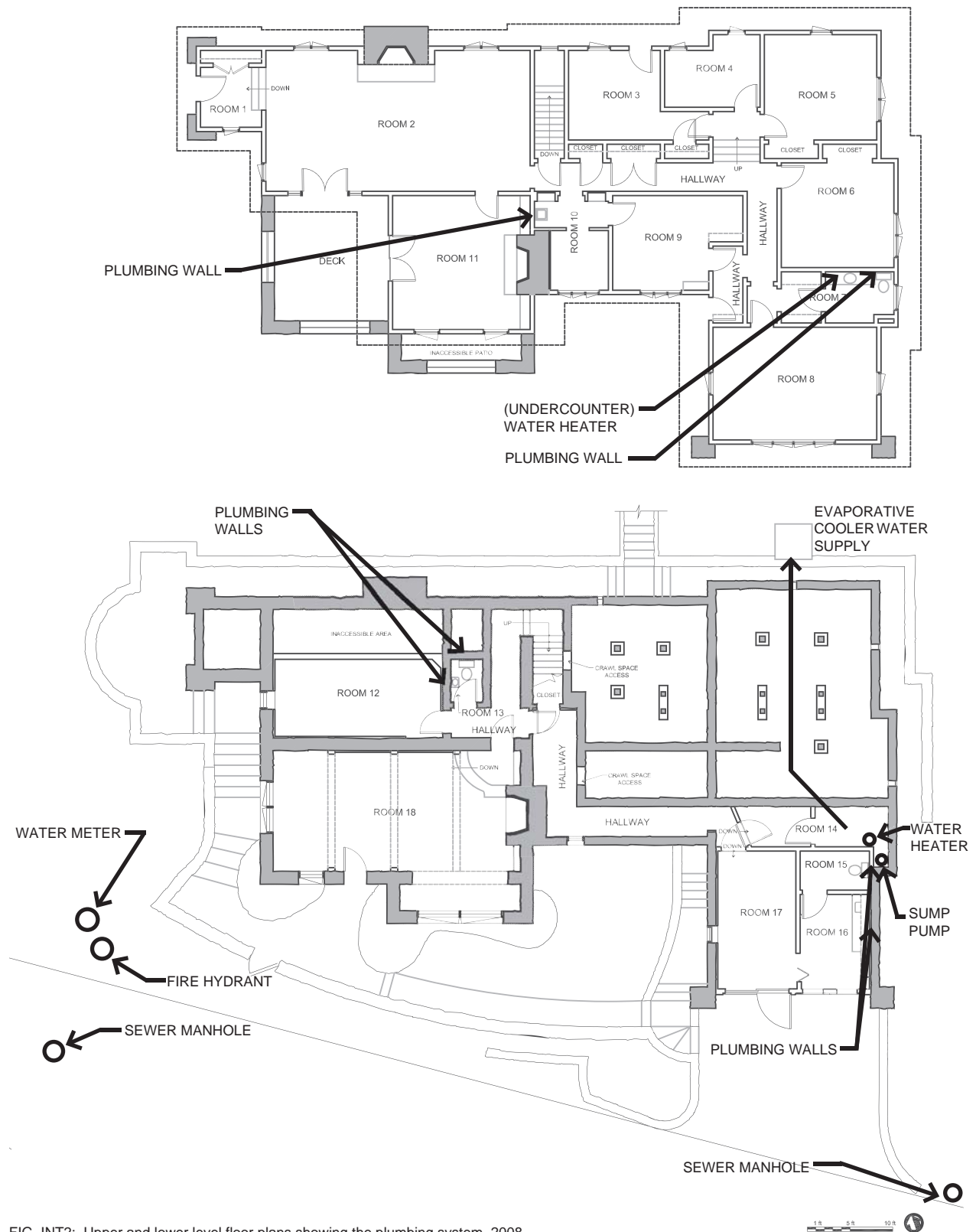


FIG. INT2: Upper and lower level floor plans showing the plumbing system, 2008.

north stair. This retaining wall is buckled where the evaporative cooler was once mounted. The evaporative cooler is now elevated above the stone wall on an independent steel frame. The area between the retaining wall and the building is paved with concrete, which is in poor condition. Sandstone steps lead through a break in the retaining wall and up the hill from the north exterior door. Drain pipes under the associated landing between the stairs and building are currently blocked. On the west side of the landing, water is directed westward. On the east side of the landing, water is directed eastward.

A two-car driveway is located on the southeast side of the building; the north side of the driveway is concrete, and the south side is asphalt. A limestone retaining wall is present on the east side of the driveway.

## Exterior

Significance: High

Condition: Fair

Impact: Moderate

Primary Character Defining Features: stone walls and piers; wood board and batten siding; wood clapboarding; exposed log rafters; wood porch railing; wood casement windows and related wood storm and screen windows; stone chimneys; multi-gabled, wood shingle roof; wood garage barn doors; stone birdbath

The First Administration Building has a wood-framed, multi-gabled roof covered with wood shingle roofing. The shingles were replaced in 2006. Copper flashing was installed during the roofing project. Gaps are present between the roof decking boards. The roof is currently deflected on the east side over Room Eight. Gutters are generally located along the eaves. The south side of the east wall does not have a gutter, and the water runs down a portion of that wall. Leaders direct runoff to the upper level walkway on the north side of the building and to the ground. An improperly

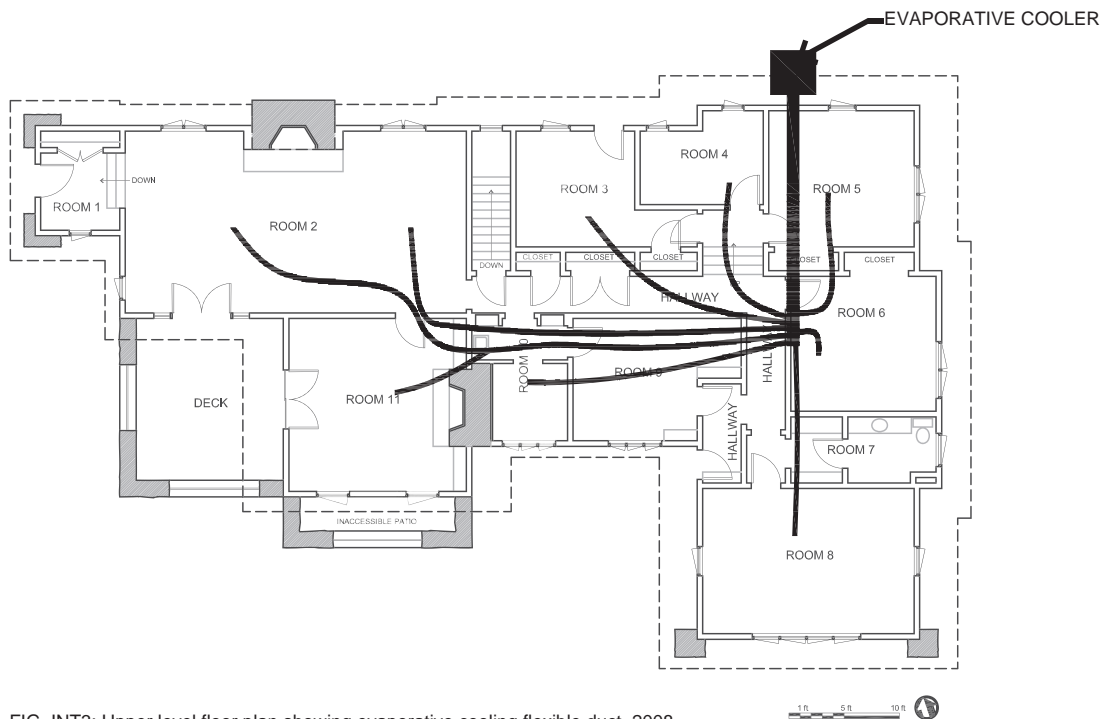


FIG. INT3: Upper level floor plan showing evaporative cooling flexible duct, 2008.

placed leader on the northwest corner of the building directs water toward the building foundation. Where necessary, connecting pipes direct runoff toward Village Loop Drive.

Projecting rafters and outriggers are of peeled log construction; they are decayed and generally in poor condition. The original section of the building has log rafters as the primary construction system and the log rafter tails project beyond the eaves and rakes. The projecting rafter tails on the addition are non-structural. The roof valley currently directs water onto a projecting rafter on the north wall.

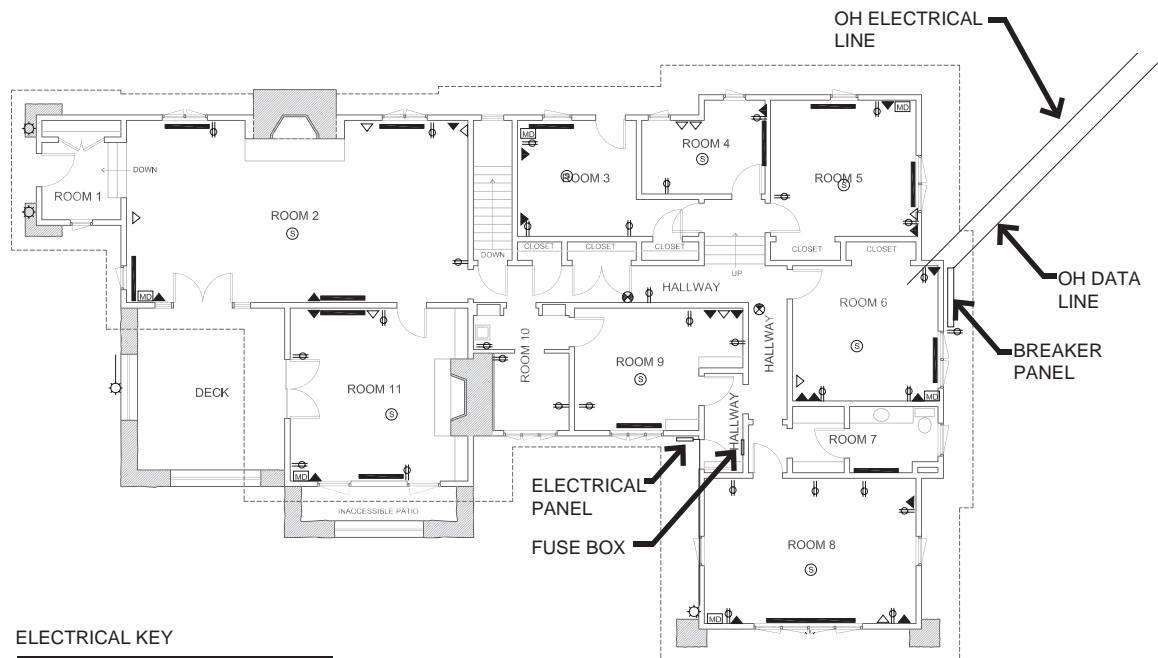
The existing low pitch roof was subsequently covered by a steeper 3:12 pitch roof superimposed over it. The historic roof was left intact under the new roof and remains so today. This historic roof, visible through the attic, is sheathed with asbestos shingles that are painted green.

The attic has damaged and inadequate collar tie framing.

The lower and upper levels of the building are differentiated on the exterior by their materials. The lower level is Kaibab limestone, and limestone piers extend upwards to approximately 2/3 of the building's height. These piers help aesthetically anchor the building and blend it with the local bedrock. Throughout the building's stone, the mortar is generally recessed into the joints and light in color. Stone deficiencies include inappropriate in-fill materials and repairs, and the presence of lichen. Two stone chimneys are present, one through the approximate middle of the building (Room Eighteen) and one on the north wall (Room Two). The metal flue on the Room Two chimney is currently skewed; mortar cracks are present on this chimney.

The upper level generally has vertical wood board and batten siding but horizontal wood clapboarding is present





#### ELECTRICAL KEY

- ⊙ EXTERIOR HALOGEN LIGHT
- MD MOTION DETECTOR
- ⊙ SMOKE DETECTOR
- ⊕ ELECTRICAL OUTLET
- △ DATA BOX
- ▲ PHONE JACK
- ⊙ EMERGENCY LIGHT
- ELECTRIC BASEBOARD

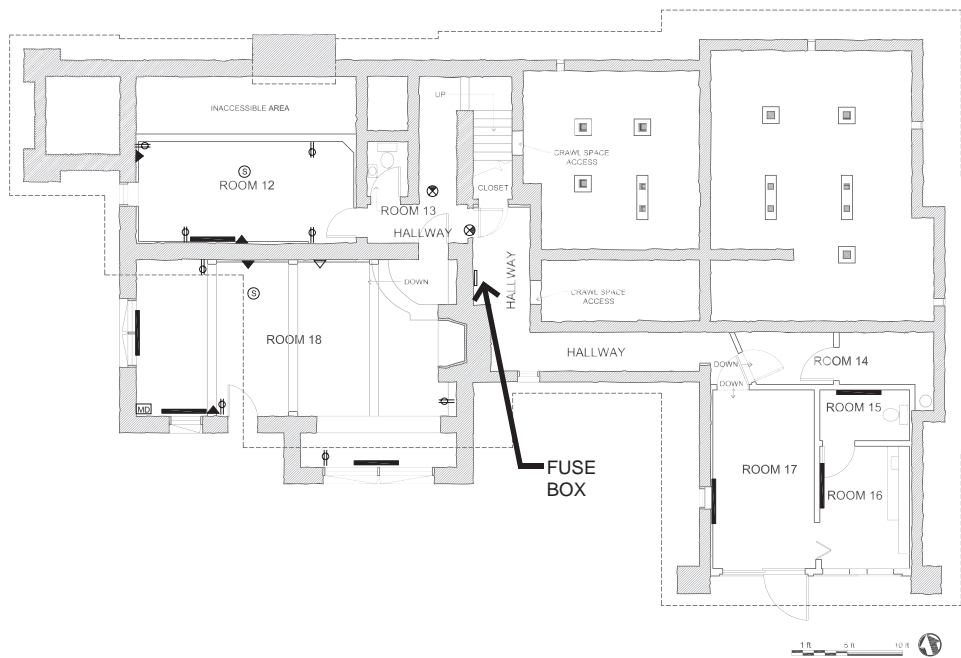


FIG. INT4: Upper and lower level floor plans showing the electrical system, 2008.

on a section of the south wall between the two gables. Wood clapboarding runs horizontally under the gables. Low decorative wood railing is present under the two gables on the south wall and around the upper level patio at the southwest corner of the building; this railing does not meet current code standards for height. All wood is generally painted brown with the exception of trim around the doors and windows which is painted green. The window frames, sashes, mullions and muntin bars are also painted green. The building was last painted in 2006.

Wood deficiencies not otherwise mentioned include damaged siding, cracked wood beams, warped window frame and sill, cut fascia beam and exposed nail ends. Exposed wiring is also present on the east gable. Gaps between some of the building materials may allow rodent access into the building.

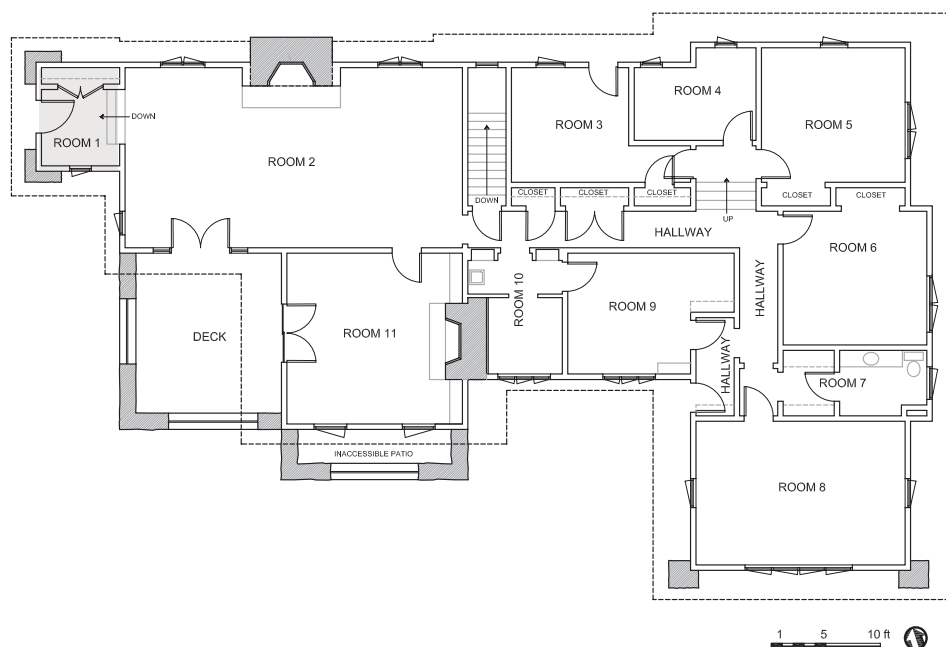


FIG. R1.1: Upper level floor plan showing the location of Room One as shaded, 2008.

The upper level patio is accessed through Rooms Two and Eleven. A stone birdbath rests on the southwest corner pier, and is not otherwise secured. Additional unsecured stones and a settlement crack are also present in the stone patio wall. In 2006, the patio flooring was replaced with a liquid-applied, waterproofing membrane. A drain in the northwest corner directs water off the porch.

There are five entrances into the building. On the lower level, entrance is gained directly into both Rooms Seventeen and Eighteen on the south wall. On the upper level, entry is gained into Room One by way of an exterior stair on the southwest side of the building, and into a corridor by way of an exterior stair on the west side of the driveway. Upper level entry is also gained into Room Three on the north side of the building.

Four-lite wood doors are present at the upper level entrances on the west and north walls. Eight-lite double wood doors access the upper level patio on both the south and west walls. An eight-lite wood door is present on the south wall.

The historic garage on the east side of the south wall has two pairs of wood barn doors. The doors are composed of vertical wood boards and each has both three windows and iron strap hinges. The door and hinges are both painted

brown and the window trim painted green. The doors are decayed near the ground.

Most of the building's windows are six-lite wood casement windows, which are present on all the walls in various sizes. Additional windows include four-lite and three-lite wood casement windows on the south wall, and eight-lite wood casement windows on the north wall. One pair of double eight-lite wood doors to the upper level patio are flanked by four-lite side-lites on the south wall. The other pair, on the west wall, does not have flanking windows; sliding glass

Room One Deficiency/Alteration	Recommended Treatment*	Impact
Cracked stone threshold at exterior door. See FIG. R1.4.	Fill cracks with compatible mortar. Compatible mortar should match the historic mortar in composition, texture, color and placement within the joints. Finish to match existing.	Moderate
Cracked stone floor. See FIG. R1.4.	Fill cracks with compatible mortar. Compatible mortar should match the historic mortar in composition, texture, color and placement within the joints. Finish to match existing.	Moderate
Lack of handrails at stair. See FIG. R1.2.	Assess the need for a handrail. If necessary, install a handrail with an appropriate design in a manner appropriate to the character of the building.	Low
Plaster cracks at ceiling. See FIG. R1.5.	Patch and repair plaster. Paint to match existing.	Low
Modern carpet over stair to Room Two.	No treatment required. Remove carpet and restore stair if appropriate for future use.	Low
* Note: Please see <i>Requirements for Treatment</i> for additional information on each recommendation.		



FIG. R1.2: View facing west showing the pitched ceiling, plastered walls and lack of handrails. Note the historic light fixture, 2007.

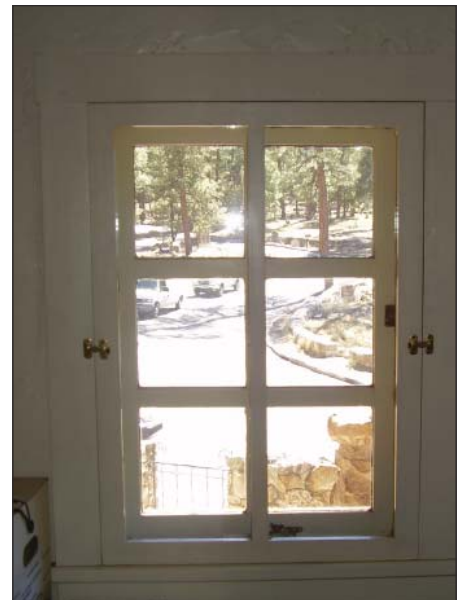


FIG. R1.3: Six-lite wood casement window and associated wood storm window on the south wall, 2007.



FIG. R1.4: Original stone floor cracking at joints. Note cracked threshold at arrow, 2007.



FIG. R1.5: Plaster cracks at junction of wall and ceiling, 2007.



FIG. R1.6: Historic four-lite wood door, 2007.



FIG. R1.7: Built-in closet on the north wall, 2007.

doors are present on the outside of this pair of doors.

Two types of historic iron light fixtures are mounted on the south and west walls. Cylindrical iron fixtures are centered above the garage doors and flank the Room One entrance. An additional cylindrical fixture is located above the west Room Eighteen window to provide lighting at the stair. These fixtures are mounted on iron hooks that extend from the building. A rustic geometric iron fixture is located between the Room Eighteen door and adjacent window on the south wall; it is mounted directly to the stone wall. It is presumed that these fixtures date to the construction of the original building and later addition. A modern fixture is located on the west wall of Room Eight to provide lighting at the stair; this fixture is damaged.

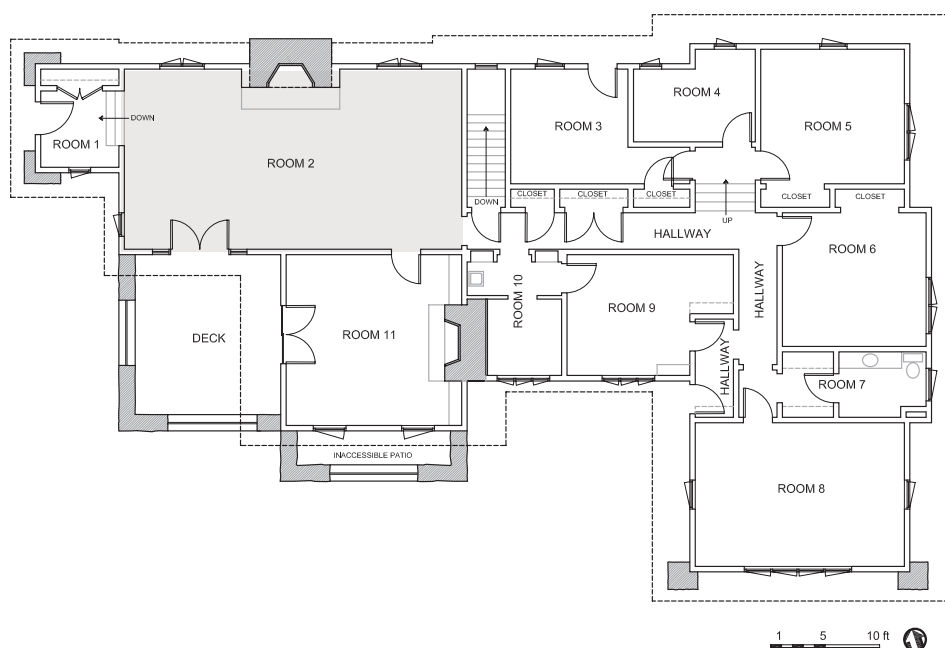


FIG. R2.1: Upper level floor plan showing the location of Room Two as shaded, 2008.

## Interior

The interior is divided into two levels, and entrance from the exterior can be gained on both levels. An interior stair provides access between the two levels. The upper level functions as the main level and has more floor space than the lower level.

The physical description of the interior is divided by room and organized by floor level. The room descriptions are ordered in a clockwise direction from the main entrance in Room One. The plumbing, mechanical and electrical systems are discussed first.

## Plumbing

The building is connected to the park water service; the water meter is located to the southwest of the building, near a fire hydrant on the north side of the sidewalk. The original water service was likely in Room Thirteen only. After the construction of the addition, water was also directed to the laundry room (Room Twelve) on the lower level, and



to the bathrooms (two in Room Four, one in Room Seven) and kitchen (Room Nine) on the upper level. When the residence was rehabilitated into offices in 1983, the plumbing fixtures in what is now Room Four were removed, as were the plumbing fixtures in Room Nine (kitchen). In the laundry room (Room Twelve), utility sinks on the east wall and a hot water heater in the southwest corner were removed. Plumbing walls were added for a drinking fountain (Room Ten), toilet (Room Fifteen) and sink (Room Sixteen) at that time.

There are currently five active plumbing walls:

- east walls of Rooms Fifteen and Sixteen for a toilet and sink, respectively
- north and west walls of Room Thirteen for a toilet and sink, respectively
- north wall of Room Seven for a toilet and sink
- west wall of Room Ten for a drinking fountain

Waste water is directed to a sump pump in the southwest corner of Room Fourteen and exited to a sewer line along the southeast corner of the building. Pipes in Room Fourteen lead to the evaporative cooler's supply line on the northeast side of the building.

Room Seven is serviced by a six gallon electric water heater located in the base cabinet. Room Sixteen is serviced by a six gallon electric water heater located in Room Fourteen. There is currently no hot water delivery to Rooms Ten, Thirteen and Fifteen.

The occupants of the First Administration Building report no problems with the plumbing system. The project team evaluated only the readily visible aspects of the plumbing system.

Room Two Deficiency/Alteration	Recommended Treatment*	Impact
Modern suspended ceiling conceals original rustic ceiling and pitch of opening into Room One. See FIGS. R2.2, R2.7.	Remove suspended ceiling in conjunction with the installation of a modern split system heat pump. Restore the original rustic ceiling.	Moderate
Modern fireplace screen of inappropriate design and shape. See FIGS. R2.4, R2.5.	Remove screen. Clean fireplace. Install free-standing fireplace screen that allows visibility of the arched opening.	Moderate
French doors to patio currently blocked by furniture. See FIG. R2.3.	Remove furniture currently blocking doors to patio.	Low
Faux-painted wood fireplace mantel. See FIG. R2.4.	Remove paint and refinish wood mantel.	Low
Modern carpet. See FIG. R2.8.	No treatment required. Remove carpet and restore wood floor if appropriate for future use.	Low
Modern electric heaters. See FIG. R2.9.	Remove electric heaters in conjunction with the installation of a modern split system heat pump.	Low
* Note: Please see <i>Requirements for Treatment</i> for additional information on each recommendation.		



FIG. R2.2: View of Room Two facing west. Note suspended ceiling covers trim over the doorway into Room One, 2007.



FIG. R2.3: View facing southwest showing the blocked French doors to the upper level patio, 2007.



FIG. R2.4: Stone fireplace with inappropriate modern screen and faux-wood painted mantel, 2007.



FIG. R2.5: Fireplace screen open to show the shape of the stone opening, 2007.



FIG. R2.6: View of Room Two facing east showing the doorway into the east-west hallway, 2007.



FIG. R2.7: Concealed rustic pitched ceiling above the suspended ceiling (accessed through a vent), 2007.



FIG. R2.8: Carpet pulled up to show concealed wood flooring, 2007.



FIG. R2.9: Modern electric heater, 2007.

### Mechanical

The original heating system was a steam powered generator that forced steam through insulated piping under a plenum floor to free-standing radiators throughout the building.

In 1956, a room (Room 14) was constructed within the garage's northeast corner to house an oil-fired boiler. The oil tank was buried inside the planter at the west end of the driveway and the boiler was exhausted by means of an exterior brick flue constructed on the building's east wall. The new boiler reused existing piping and radiators.

The radiators were removed and replaced by electric baseboard heaters in 1983. The boiler and buried oil tank were

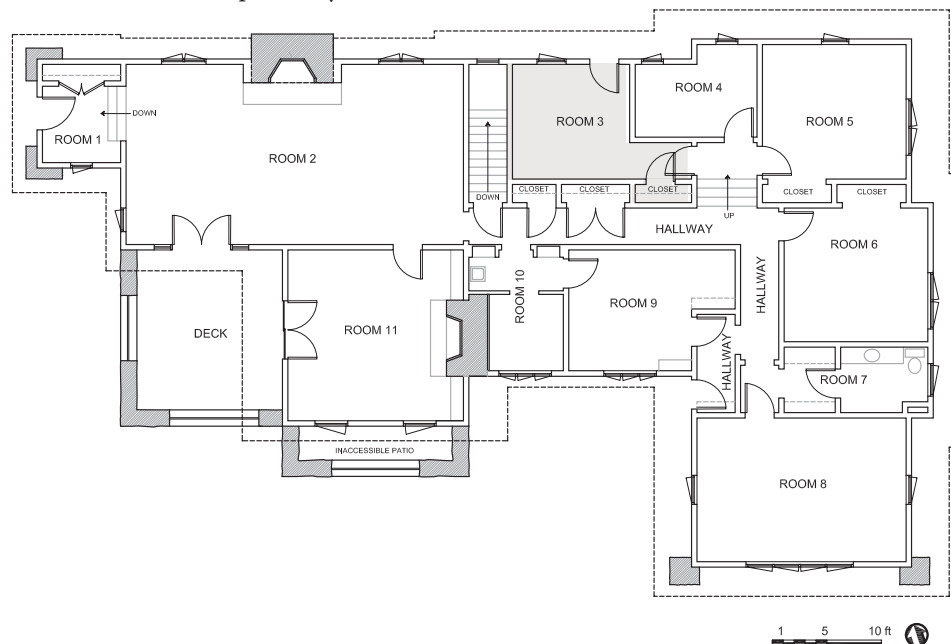


FIG. R3.1: Upper level floor plan showing the location of Room Three as shaded, 2008.

presumably removed at the same time. Baseboard heaters are generally wall-mounted just above the wood baseboard trim and all are presently in good condition.

Cooling is supplied to the upper level by means of a large evaporative cooling unit, located on an elevated steel frame above, and independent of, the north retaining wall. Water supply is piped from Room 14. Air is delivered via 9" flexible duct that snakes through the attic and above the suspended ceilings in each room on the upper level. Cooling ducts are not supplied to the lower level.

In addition, operable windows continue to allow passive ventilation.

Park staff expressed concern over the existing mechanical system, with cooling the lower level being an issue of primary concern along with identifying effective means to remove the evaporative cooling unit that threatens to undermine the integrity of the north retaining wall and replacing it with an alternative HVAC system. The project team evaluated only the readily visible aspects of the mechanical system.



### Electrical

The electrical system is comprised of breaker panels, wiring, conduits, electrical outlets and lighting fixtures. Power enters the northeast corner of the building from above-ground electrical lines. A breaker panel and meter are located on the north side of the east wall. Entry into the building is directed through the roof and floor.

Room Three Deficiency/Alteration	Recommended Treatment*	Impact
Concealed picture rail on the north wall. See FIG. R3.2.		Low
Modern carpet. See FIG. R3.3.	No treatment required. Remove carpet and restore wood floor if appropriate for future use.	Low
Modern electric heaters. See FIG. R3.6.	Remove electric heaters in conjunction with the installation of a modern split system heat pump.	Low
In-filled opening to Room Four. See FIGS. CD2 and CD3 in the <i>Chronology of Development &amp; Use</i> section, and FIG. R3.4.	No treatment required. A doorway into Room Four is not necessary at this time.	Low
* Note: Please see <i>Requirements for Treatment</i> for additional information on each recommendation.		



FIG. R3.2: View of Room Three facing northwest showing the exterior door and concealed picture rail, 2007.



FIG. R3.3: View facing north showing the exterior stair through the screen door, 2007.



FIG. R3.4: View of Room Three facing east showing the area of in-fill where a doorway was historically present into Room Four, 2007.



FIG. R3.5: Modern ceiling-mounted light fixtures, 2007.



FIG. R3.6: Modern electric heater and carpet, 2007.

In 1983, ceiling-mounted fluorescent lights were installed in most of the rooms. In addition to modern ceiling-mounted fluorescent fixtures, Room Eighteen retains its original incandescent fixtures mounted on the wood columns. Additional historic light fixtures are present in Room One, Room Ten, the stairwell and the exterior.

A sufficient number of electrical outlets are wall-mounted just above the baseboard trim, and others are integrated into electrical heating units. Additionally, small motion detectors are located in each office. Wiring is generally loosely connected to these units.

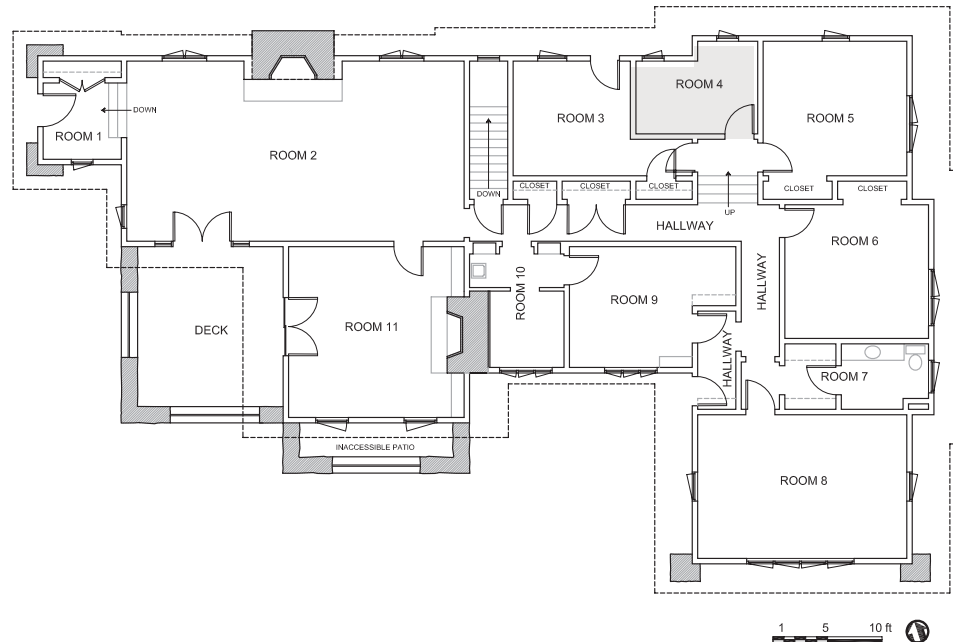


FIG. R4.1: Upper level floor plan showing the location of Room Four as shaded, 2008.

Approximately three years ago, a lightning strike on the hill between the First Administration Building and the canyon rim destroyed the building's electrical panel. The building's electrical panel and fire alarm devices were replaced at that time but the fire alarm wiring was retained.

Park staff expressed concern over the electrical system, specifically the potentially-damaged fire alarm wiring and the presence of fabric-wrapped wiring which may still be in use. Staff also expressed concern over the security of the exposed overhead data line.

The project team evaluated only the readily visible aspects of the electrical system.

#### Upper Level: Room One

Significance: Medium

Condition: Good

Impact: Low

Primary Character Defining Features: pitched ceiling; pitched opening into Room Two; stone floor; steps into Room Two; wood built-in closet with associated wood doors; four-lite exterior wood door; six-lite wood casement window and associated wood storm window; iron light fixture; wood door, window and baseboard

Room Four Deficiency/Alteration	Recommended Treatment*	Impact
Missing deadbolt in door. See FIG. R4.3.	Install deadbolt if necessary. Alternatively, patch hole with wood splice and paint to match existing.	Low
Removed north-south partition wall. See FIG. R4.4.	No treatment required. Partitioning of Room Four is not necessary at this time.	Low
Exposed wiring on the north side of the structural remnant of a north-south ceiling partition. See FIG. R4.4.	Re-route wiring so as to conceal it or to be more consistent with the architectural features.	Low
Modern carpet. See FIG. R4.5.	No treatment required. Remove carpet and restore wood floor if appropriate for future use.	Low
Modern electric heaters. See FIG. R4.5.	Remove electric heaters in conjunction with the installation of a modern split system heat pump.	Low
In-filled opening to Room Three. See FIGS. CD2 and CD3 in the <i>Chronology of Development &amp; Use</i> section, and FIG. R3.4 in the <i>Room Three</i> section.	No treatment required. A doorway into Room Three is not necessary at this time.	Low
* Note: Please see <i>Requirements for Treatment</i> for additional information on each recommendation.		

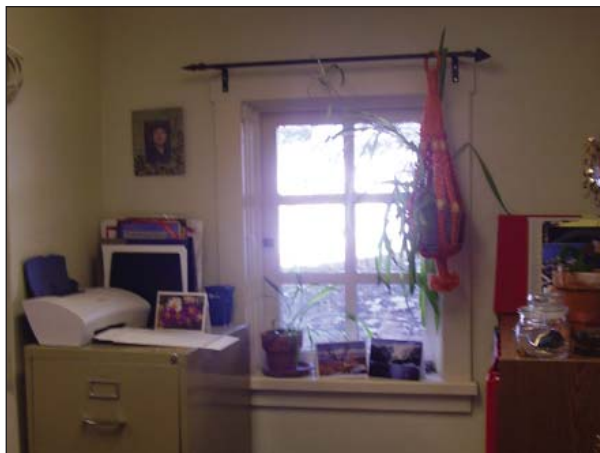


FIG. R4.2: Six-lite wood casement window on the north wall, 2007.



FIG. R4.3: Door missing deadbolt, 2007.





FIG. R4.4: View facing north showing the structural remnant of the removed partition wall. Note exposed wiring at arrow, 2007.



FIG. R4.5: Modern electric heater and carpet, 2008.

trim

Room One is located on the west side of the upper level, and is accessed from the exterior on the west wall and Room Two on the east wall. It is used as an entrance vestibule to the upper level.

Room One has a pitched ceiling that is plastered and painted white. The ceiling is flat at the center in an area of approximately one foot wide. An historic iron light fixture is suspended from this area on an iron chain. The fixture is cylindrical.

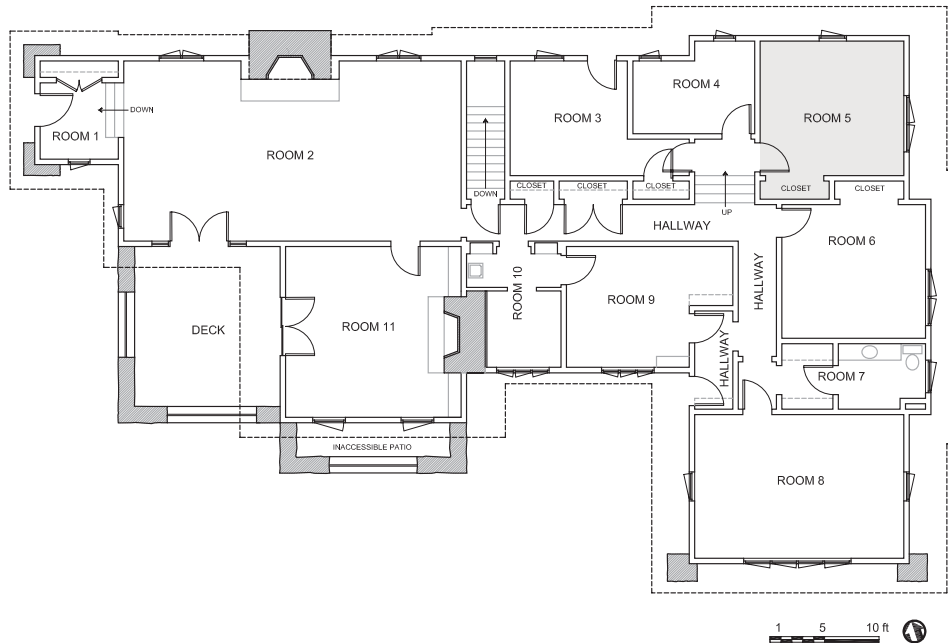


FIG. R5.1: Upper level floor plan showing the location of Room Five as shaded, 2008.

The walls are plastered gypsum board painted white. The plaster is cracked at the junction of the ceiling and walls. A built-in wood closet occupies the entire north wall and is accessed through two wood doors. On the east wall, three risers provide access into Room Two.

A four-lite wood entrance door composed of vertical wood boards is present on the west wall; a screen door is present on the outside of this door. A six-lite wood casement window is located on the south wall. White painted wood trim surrounds the doorways and windows.

The original stone flooring is exposed with the exception of the stair into Room Two which has modern tight-weave blue carpet. The stone threshold at the exterior door is cracked as are sections of the stone floor. Wood baseboard, approximately 6" high, is painted white.

Room One is not mechanically heated but benefits from natural convection.

## Room Two

Significance: High

Condition: Good

Impact: Moderate

Room Five Deficiency/Alteration	Recommended Treatment*	Impact
Concealed picture rail on the north and east walls. See FIG. R5.2.		Low
Missing closet doors. See FIGS. R5.3.	No treatment required. Install wood doors if appropriate for future use.	Low
Exposed wiring in the northeast corner. See FIG. R5.4.	Re-route wiring so as to conceal it or to be more consistent with the architectural features.	Low
Improper junction of picture rail. See FIG. R5.5.	Remove and re-install picture rail for proper junction.	Low
Modern electric heaters. See FIG. R5.6.	Remove electric heaters in conjunction with the installation of a modern split system heat pump.	Low
Modern carpet. See FIG. R5.6.	No treatment required. Remove carpet and restore wood floor if appropriate for future use.	Low
Damaged weather-stripping on north window. See FIG. R5.7.	Replace weather-stripping.	Low

\* Note: Please see *Requirements for Treatment* for additional information on each recommendation.



FIG. R5.2: View of Room Five facing east showing the double six-lite wood casement windows and concealed picture rail, 2007.



FIG. R5.3: View of Room Five facing southwest showing shelving in the closet and lack of closet doors, 2007.



FIG. R5.4: Exposed, loose wiring connected to the motion sensor, 2007.



FIG. R5.5: Junction of wood picture rail, 2007.



FIG. R5.6: Modern carpet and electric heater, 2007.



FIG. R5.7: Damaged weatherstripping on the north window, 2007.

Primary Character Defining Features: pitched opening into Room One; (concealed) wood floor; (concealed) heavy timber pitched ceiling; stone fireplace and hearth; four-panel wood door; eight-lite wood doors; fixed four-lite wood windows; six-lite wood casement window and associated wood storm window; eight-lite wood casement windows and associated wood screen windows; wood door, window and baseboard trim

Room Two is located on the north side of the upper level and is accessed from Room One to the west, the hallway from

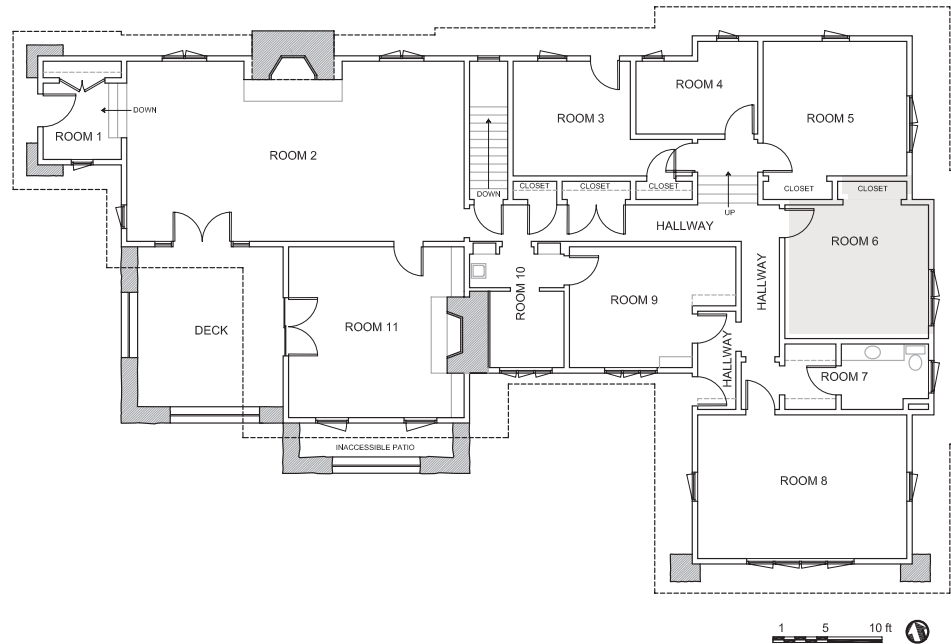


FIG. R6.1: Upper level floor plan showing the location of Room Six as shaded, 2008.

the east and Room Eleven from the south. French doors provide access to the exterior patio on the south wall, but are currently blocked by furniture. Room Two is currently used as an office.

This room was part of the original building; its fireplace and north windows were added during rehabilitation in 1931.

Room Two has a suspended, plastered gypsum ceiling painted white. Two supply air vents for the evaporative cooling system are centered on the ceiling along the east-west axis of the room. Fluorescent ceiling lights are surface-mounted.

The suspended ceiling conceals the original rustic pitched ceiling which is still present above. The concealed rustic ceiling consists of 14 exposed log rafters with roof sheathing above, connected to a central ridge beam with log collar beams attached at the saddle with decorative iron straps. Between each exposed log rafter are recessed wood panels scribed to the log and painted white. This original ceiling retains its integrity with the exception of small holes penetrating the south side of the ceiling to accommodate the modern evaporative cooling system.

The walls are plastered gypsum board painted white. A limestone fireplace is centered on the north wall and is flanked



by double eight-lite wood casement windows with screens. The fireplace's rubble masonry stone extends from floor to ceiling. The fireplace has a narrow stone hearth that projects approximately 2' from the fireplace opening and is

Room Six Deficiency/Alteration	Recommended Treatment*	Impact
Missing closet doors. See FIG. R6.2.	No treatment required. Install wood doors if appropriate for future use.	Low
Concealed picture rail on the east wall. See FIG. R6.3.		Low
Exposed wiring in the southwest corner. See FIG. R6.4.	Re-route wiring so as to conceal it or to be more consistent with the architectural features.	Low
Modern carpet. See FIG. R6.6.	No treatment required. Remove carpet and restore wood floor if appropriate for future use.	Low
Modern electric heaters. See FIG. R6.6.	Remove electric heaters in conjunction with the installation of a modern split system heat pump.	Low
* Note: Please see <i>Requirements for Treatment</i> for additional information on each recommendation.		



FIG. R6.2: View facing north showing the storage cabinet in the closet and lack of closet doors, 2007.



FIG. R6.3: View facing east showing the non-historic curtain rod and concealed picture rail, 2007.

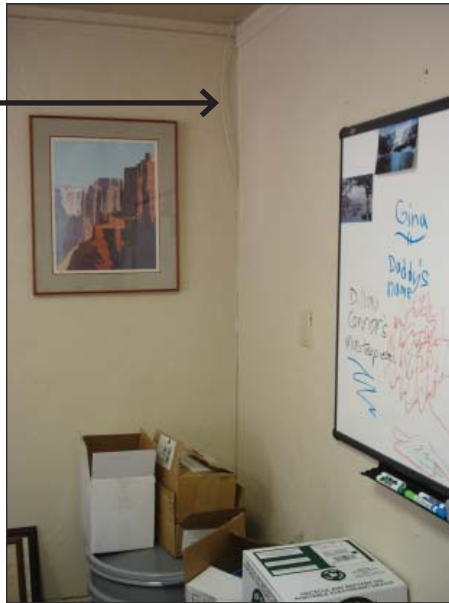


FIG. R6.4: Exposed wiring at arrow, 2007.



FIG. R6.5: View facing upwards showing the Room Six ceiling at left and unaltered closet ceiling at right, 2007.



FIG. R6.6: Modern electric heater and carpet, 2007.

The south wall has openings to both Room Eleven and the exterior patio. A four-paneled solid wood door leads to Room Eleven. Double eight-lite wood doors lead to the patio and are flanked by fixed four-lite wood windows. The doors and windows to the patio are currently blocked by office furniture.

lite

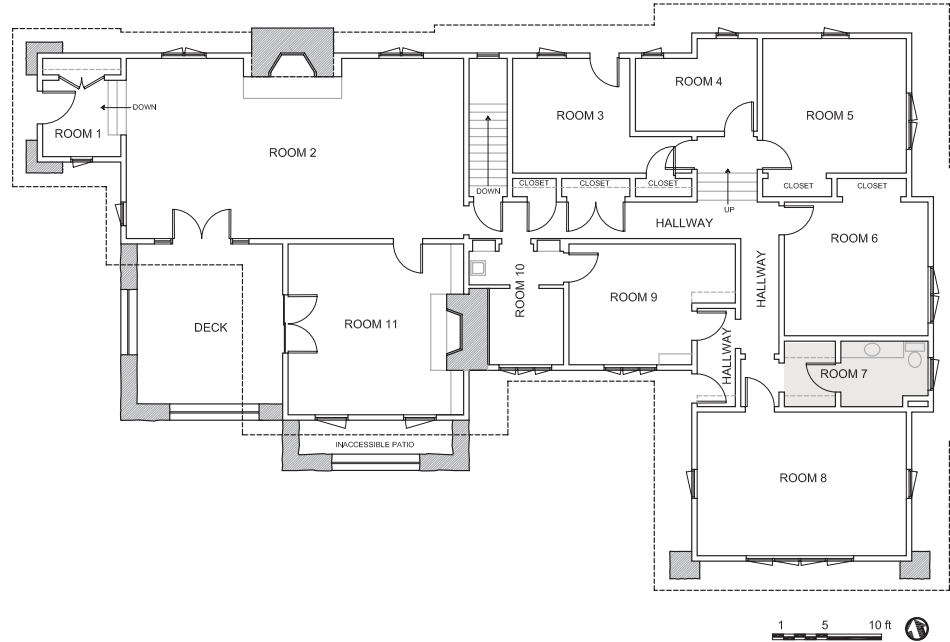


FIG. R7.1: Upper level floor plan showing the location of Room Seven as shaded, 2008.

The original wood flooring is covered with modern, tight-weave blue carpet, except in the area of the fireplace hearth. Wood baseboard, approximately 6" high, is painted white.

### Room Three

Condition: Good

Impact: Low

Primary Character Defining Features: (concealed) wood floor; four-lite exterior wood door and associated wood screen door; four-panel wood doors; six-lite wood casement window and associated wood storm window; wood door, window and baseboard trim; wood picture rail

Room Three is located on the north side of the upper level and is accessed from the hallway to the east and the exterior from the north. Prior to the rehabilitation in 1983, a doorway provided access between Rooms Three and Four (see FIGS. CD2 and CD3 in the *Chronology of Development & Use* section). Together with Rooms Four and Five, Room Three is four risers higher than the rest of the upper level. It is currently used as an office.

Room Three has a plaster gypsum ceiling painted white. Fluorescent ceiling lights are surface-mounted. Other ceiling

Room Seven Deficiency/Alteration	Recommended Treatment*	Impact
Removed partition wall. See FIGS. R7.3, R7.4 and FIGS. CD2 and CD3 in the <i>Chronology of Development &amp; Use</i> section.	No treatment required. Partitioning of Room Seven is not necessary at this time.	Low
In-filled opening to Room Eight. See FIG. R7.3. and FIGS. CD2 and CD3 in the <i>Chronology of Development &amp; Use</i> section.	No treatment required. A doorway into Room Eight is not necessary at this time.	Low
Modern tile floor. See FIG. R7.5.	No treatment required.	Low
Modern electric heaters. See FIG. R7.5.	Remove electric heaters in conjunction with the installation of a modern split system heat pump.	Low
* Note: Please see <i>Requirements for Treatment</i> for additional information on each recommendation.		



FIG. R7.2: View of Room Seven facing northeast, 2007.

AREA OF  
IN-FILL



MODERN  
OPENING



FIG. R7.3: View of Room Seven facing southwest showing the area of in-fill to Room Eight at left arrow, and modern opening at right arrow, 2007.



FIG. R7.4: View of Room Seven facing west showing the modern opening, 2007.



FIG. R7.5: Modern electric heater and tile flooring, 2007.



modifications include supply/return air grilles, a smoke alarm and a motion detector.

The walls are plastered gypsum board painted white. A four-panel wood door provides access to the hall on the east wall. On the south wall, an additional four-panel wood door accesses a closet with five interior shelves. A four-lite wood door accesses the exterior on the north wall. A six-lite wood casement window with associated storm window is also present on the north wall. White painted wood trim surrounds the doorways and windows. White painted wood picture rail is present on the west and south walls, and on the east and south walls in the narrow area on the east side

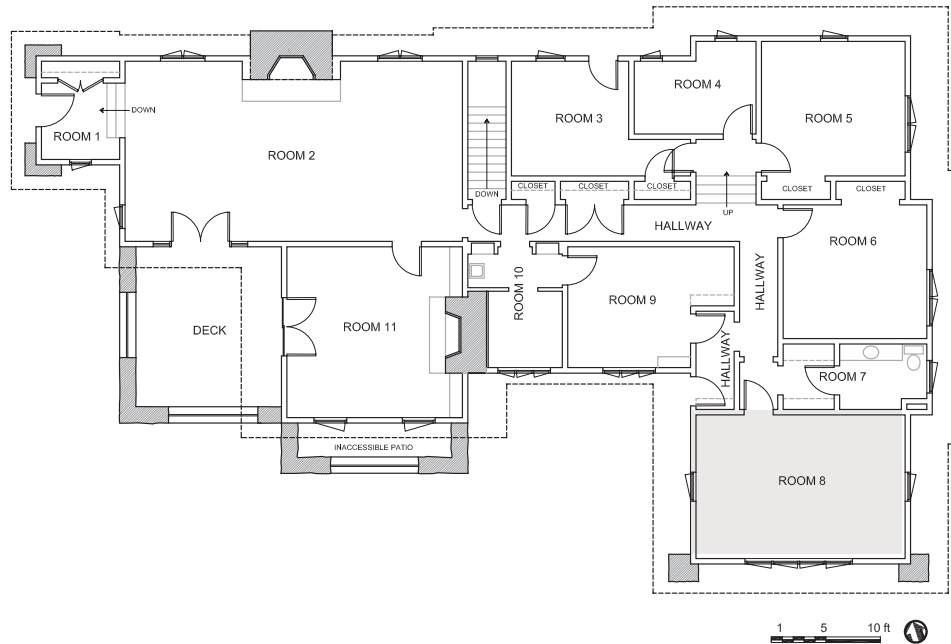


FIG. R8.1: Upper level floor plan showing the location of Room Eight as shaded, 2008.

of the room; the wood picture rail on the north wall is concealed by the furred wall.

The original wood flooring is covered with modern tight-weave blue carpet. Wood baseboard, approximately 6" high, is painted white.

An electric baseboard heating unit is wall-mounted on the north wall just above the wood baseboard.

#### Room Four

Significance: Medium

Condition: Good

Impact: Low

Primary Character Defining Features: (concealed) wood floor; four-panel wood door; eight-lite wood casement window; six-lite wood casement window; wood door, window and baseboard trim

Room Four is located on the north side of the upper level and is accessed from the hallway on the south wall. Prior to the rehabilitation in 1983, Room Four was two separate bathrooms, one of which had direct access into Room Three (see FIGS. CD2 and CD3 in the *Chronology of Development & Use* section). Together with Rooms Three and Five, Room Four is four risers higher than the rest of the upper level. It is currently used as an office.

Room Four has a plaster ceiling painted white. A structural remnant of the removed north-south partition wall is present at the ceiling. Fluorescent ceiling lights are surface-mounted. Other ceiling modifications include supply/return air grilles, a smoke alarm and a motion detector.

Room Eight Deficiency/Alteration	Recommended Treatment*	Impact
Exposed wiring on the north wall. See FIG. R8.3.	Re-route wiring so as to conceal it or to be more consistent with the architectural features.	Low
In-filled opening to Room Seven. See FIG. R8.3 and FIGS. CD2 and CD3 in the <i>Chronology of Development &amp; Use</i> section.	No treatment required. A doorway into Room Seven is not necessary at this time.	Low
Modern electric heaters. See FIG. R8.4.	Remove electric heaters in conjunction with the installation of a modern split system heat pump.	Low
Modern carpet. See FIG. R8.5.	No treatment required. Remove carpet and restore wood floor if appropriate for future use.	Low
Alteration of north entryway. See FIG. R8.5 and FIGS. CD2 and CD3 in the <i>Chronology of Development &amp; Use</i> section.	No treatment required. This minor modification provides adequate space within both Room Eight and the adjacent hallway at this time.	Low
* Note: Please see <i>Requirements for Treatment</i> for additional information on each recommendation.		



FIG. R8.2: Ceiling-mounted fluorescent light fixtures, 2007.

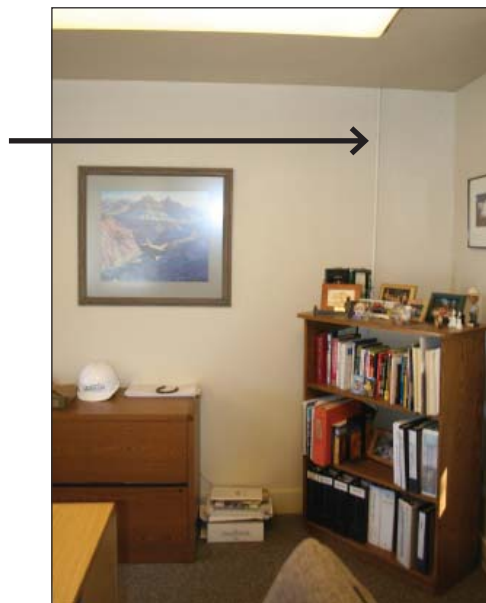


FIG. R8.3: Room Eight facing north showing exposed wiring at arrow and area of infill to Room Seven, 2007.



FIG. R8.4: Room Eight facing south showing modern electric heater at arrow, 2007.

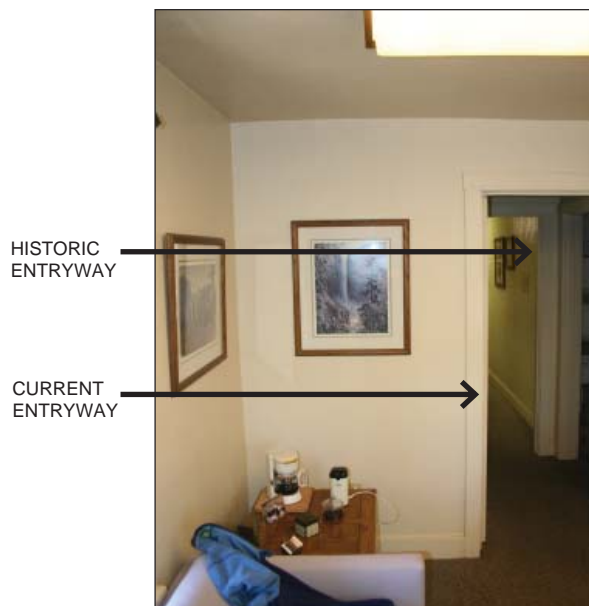


FIG. R8.5: Room Eight facing north showing modern carpet and altered entryway from hallway at arrows, 2007.

The walls are plastered gypsum board painted white. A four-panel wood door provides access to the hall through the south wall. On the north wall, eight-lite and six-lite wood casement windows provide additional light. There are no screens or storm windows. White painted wood trim surrounds the doorway and windows.

The original wood flooring is covered with modern tight-weave blue carpet. Wood baseboard, approximately 6" high, is painted white.

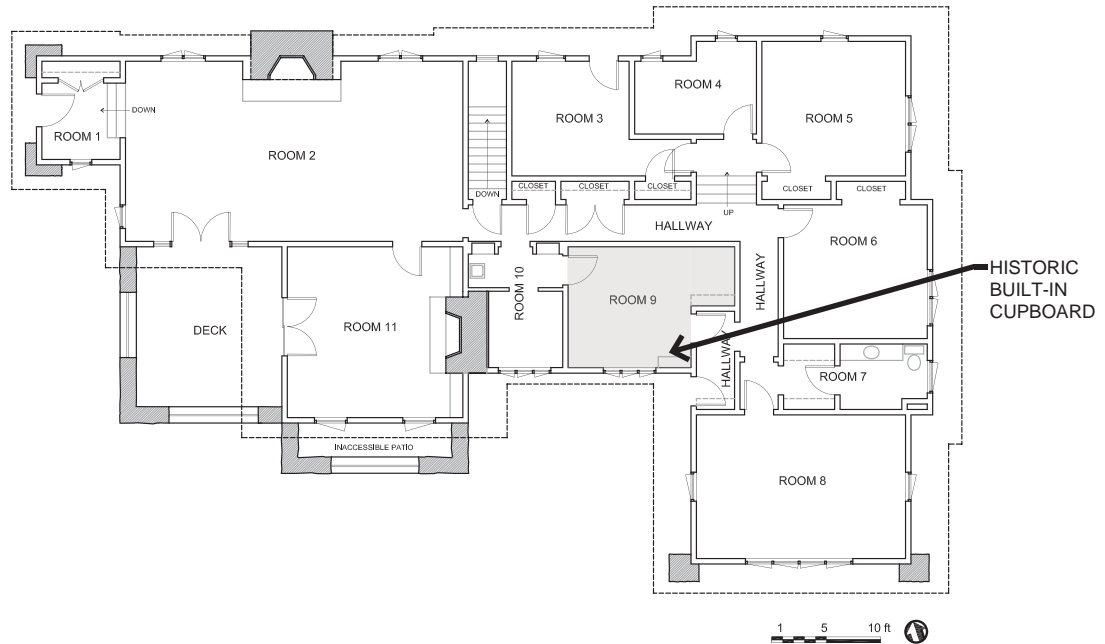


FIG. R9.1: Upper level floor plan showing the location of Room Nine as shaded, 2008.

An electric baseboard heating unit is wall-mounted on the north wall just above the wood baseboard.

#### Room Five

Significance: Medium

Condition: Good

Impact: Low

Primary Character Defining Features: (concealed) wood floor; four-panel wood door; six-lite wood casement windows and associated wood storm windows; wood door, window and baseboard trim; wood picture rail

Room Five is located on the northeast corner of the upper level and is accessed from the hallway on the west wall. Together with Rooms Three and Four, it is four risers higher than the rest of the upper level. It is currently used as an office.

Room Five has a plaster gypsum ceiling painted white. Fluorescent ceiling lights are surface-mounted. Other ceiling modifications include supply/return air grilles, a smoke alarm and a motion detector.

The walls are plastered gypsum board painted white. A four-panel wood door provides access to the hall from the west wall. A six-lite wood casement window with associated wood storm window is present on the north wall. Double six-lite wood casement windows with associated wood storm windows are located on the east wall. A closet on the south wall currently contains modern wood shelving; closet doors are not present. White painted wood trim surrounds the

Room Nine Deficiency/Alteration	Recommended Treatment*	Impact
Modern carpet. See FIG. R9.2.	No treatment required. Remove carpet and restore wood floor if appropriate for future use.	Low
Modern windows. See FIG. R9.3.	No treatment required.	Low
Altered wall configuration on the east side of the room. See FIG. R9.5 and FIGS. CD2 and CD3 in the <i>Chronology of Development &amp; Use</i> section.	No treatment required. This minor modification provides adequate space within both Room Nine and the adjacent hallway at this time.	Low
Modern electric heaters. See FIG. R9.6.	Remove electric heaters in conjunction with the installation of a modern split system heat pump.	Low
Removed kitchen cabinets and fixtures. See FIG. CD13 in the <i>Chronology of Development &amp; Use</i> section.	No treatment required. Kitchen cabinets and fixtures are not necessary at this time.	Low
* Note: Please see <i>Requirements for Treatment</i> for additional information on each recommendation.		



FIG. R9.2: View of Room Nine facing northwest showing the modern carpet, 2007.

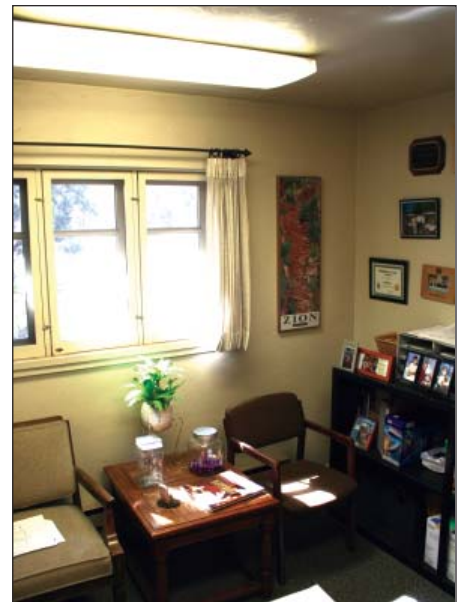


FIG. R9.3: View facing southwest showing the wood casement windows and related wood screen windows, 2007.





FIG. R9.4: View facing southeast showing the built-in cupboard and doorway into the hallway, 2007.



FIG. R9.5: View of the east wall of Room Nine which is used as storage space. Note the area to the right which was once part of a hallway coat closet at arrow, 2007.



FIG. R9.6: Modern electric heater, 2008.

doorways and windows. White painted wood picture rail is present on the west wall; the wood picture rail on the north and east walls is concealed by the furred walls.

The original wood flooring is covered with modern tight-weave blue carpet. Wood baseboard, approximately 6" high, is painted white.

Electric baseboard heating units are wall-mounted on the north and east walls just above the wood baseboards.

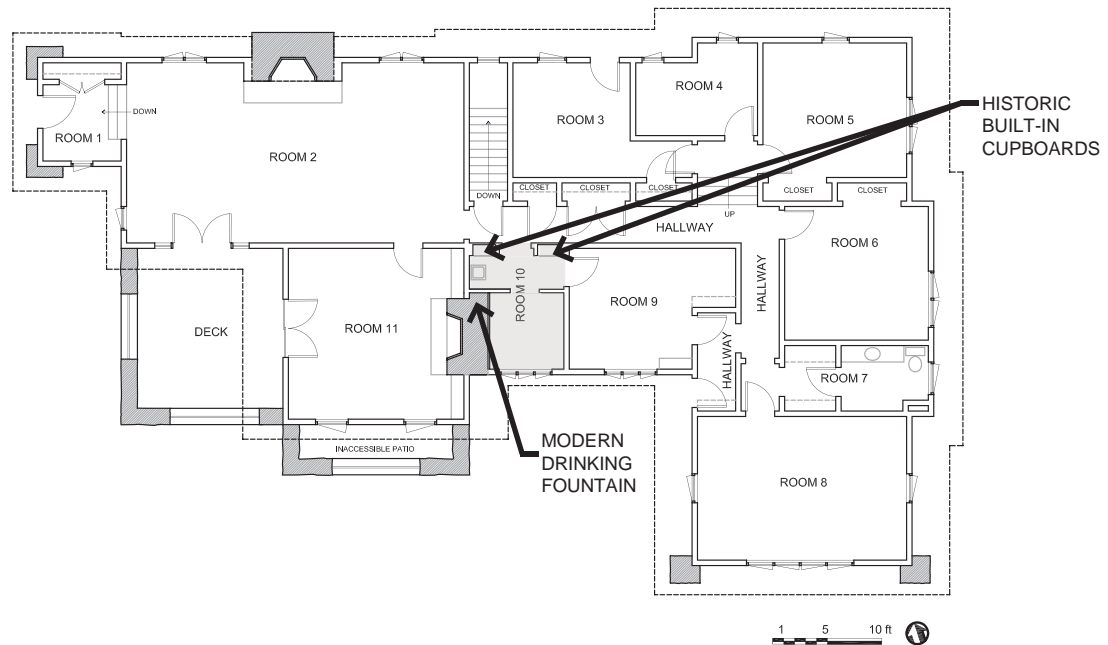


FIG. R10.1: Upper level floor plan showing the location of Room Ten as shaded, 2008.

### Room Six

Significance: Medium

Condition: Good

Impact: Low

Primary Character Defining Features: (concealed) wood floor; four-panel wood door; six-lite wood casement windows and associated wood screen windows; wood door, window and baseboard trim

Room Six is located on the east side of the upper level and is accessed from the hallway on the west wall. It is currently used as an office.

Room Six has a plaster gypsum ceiling painted white. Fluorescent ceiling lights are surface-mounted. Other ceiling modifications include supply/return air grilles, a smoke alarm and a motion detector.

The walls are plastered gypsum board painted white. A four-panel wood door provides access to the hall from the west

wall. Double six-lite wood casement windows with associated wood screen windows are located on the east wall. A closet on the north wall currently contains modern wood shelving; closet doors are not present. White painted wood trim surrounds the doorways and windows. White painted wood picture rail is present except on the east wall where concealed by the furred wall.

The original wood flooring is covered with modern tight-weave blue carpet. Wood baseboard, approximately 6" high, is painted white.

An electric baseboard heating unit is wall-mounted on the east wall just above the wood baseboard.

#### Room Seven

Significance: Medium

Condition: Good

Room Ten Deficiency/Alteration	Recommended Treatment*	Impact
Modern windows. See FIG. R10.2.	No treatment required.	Low
In-filled opening to Room Eleven. See FIG. R10.5 and FIGS. CD2 and CD3 in the <i>Chronology of Development &amp; Use</i> section.	No treatment required. A doorway into Room Ten is not necessary at this time.	Low
Modern wall-mounted drinking fountain. See FIG. R10.5.	No treatment required. Remove drinking fountain if not necessary for future use.	Low
Modern tile floor. See FIG. R10.6.	No treatment required.	Low
Light switch mounted on door trim. See FIG. R10.7.	No treatment required.	Low
* Note: Please see <i>Requirements for Treatment</i> for additional information on each recommendation.		



FIG. R10.2: Modern wood casement windows on the south wall, 2007.



FIG. R10.3: Historic glass ceiling light, 2007.



FIG. R10.4: Historic built-in cupboard on the north wall, 2007.



FIG. R10.5: View of Room Ten facing west showing the modern drinking fountain. Note this area was historically open into Room Eleven, 2007.



FIG. R10.6: Wood chair rail at arrow and modern ceramic tile flooring, 2007.



FIG. R10.7: Light switch installed on the north doorway trim, 2007.

Impact: Low

Primary Character Defining Features: (concealed) wood floor; four-panel wood door; eight-lite wood casement window and associated wood storm window; wood door, window and baseboard trim

Room Seven is located on the east side of the upper level and is accessed from the hallway on the west wall. It is divided into two areas: a storage area on the west side and a bathroom to the east.

Historically, this area was comprised of the master bathroom (accessed from Room Eight), and the master bedroom

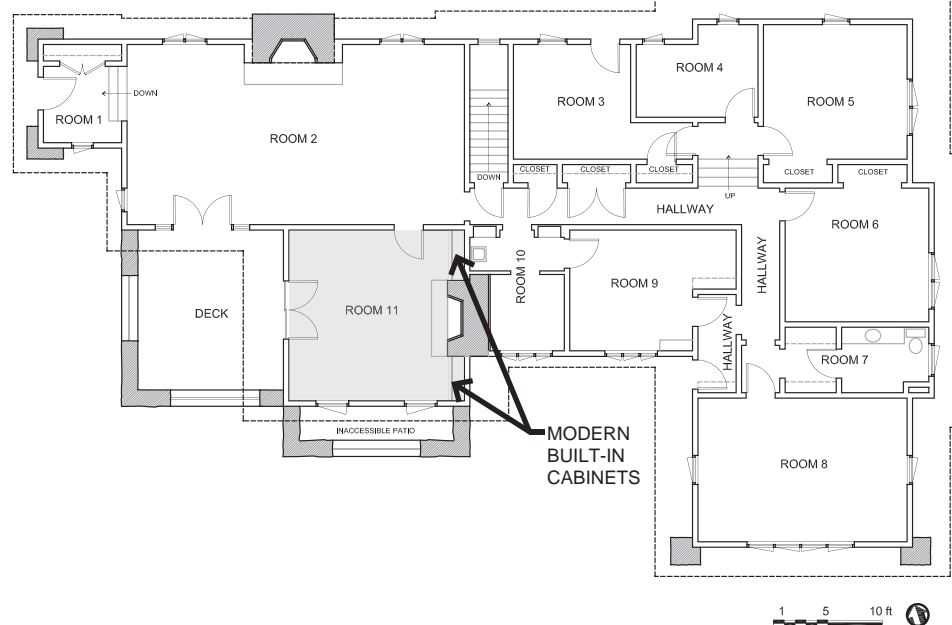


FIG. R11.1: Upper level floor plan showing the location of Room Eleven as shaded, 2008.

closet (accessed from a separate doorway in Room Eight); the bathroom and closet were separated by a partition wall (see FIGS. CD2 and CD3 in the *Chronology of Development & Use* section). In 1983, the opening between the bathroom and Room Eight was furred with gypsum board and the door trim was removed. At that time, an opening was made between the closet and bathroom, combining these two areas into Room Seven. The location of the doorway between the hallway and Room Eight was also altered, making Room Seven accessible to the hallway instead of Room Eight.

Room Seven has a plaster gypsum ceiling painted white. Fluorescent ceiling lights are surface-mounted. A supply/return air grille is also present on the ceiling.

The walls are plastered gypsum board painted white. The storage area has four wood shelves on the north wall and one rod and shelf on the south wall. A four-panel wood door is located between the closet and bathroom.<sup>19</sup> There is no door between the storage area and hallway; the door was removed from this location in 1983.

<sup>19</sup> This door may date from the 1931 addition. It may have originally been located at the closet/master bedroom doorway or the master bathroom/master bedroom doorway and relocated during the alterations in 1983.



An eight-lite wood casement window with associated two-lite wood storm window is located on the east wall. A modern toilet, sink and base cabinet are located on the north wall of the bathroom area. White painted wood trim surrounds the door and windows.

The flooring is modern ceramic tile and has black rubber baseboard.

An electric baseboard heating unit is wall-mounted on the south wall just above the baseboard.

#### Room Eight

Significance: Medium

Condition: Good

Impact: Low

Room Eleven Deficiency/Alteration	Recommended Treatment*	Impact
Modern built-in bookshelves. See FIG. R11.3.	No treatment required.	Low
In-filled opening to Room Ten. See FIG. R11.3 and FIGS. CD2 and CD3 in the <i>Chronology of Development &amp; Use</i> section.	No treatment required. An opening into Room Ten is not necessary at this time.	Low
Modern carpet. See FIG. R11.4.	No treatment required. Remove carpet and restore wood floor if appropriate for future use.	Low
Modern electric heaters. See FIG. R11.6.	Remove electric heaters in conjunction with the installation of a modern split system heat pump.	Low
* Note: Please see <i>Requirements for Treatment</i> for additional information on each recommendation.		



FIG. R11.2: Fireplace, mantel and hearth on the east wall, 2007.



FIG. R11.3: Modern built-in bookshelf flanking the fireplace. Note in-filled area to Room Ten at arrow, 2007.



FIG. R11.4: Fireplace hearth and tile. Note adjacent carpet conceals the historic wood flooring, 2007.



FIG. R11.5: Double eight-lite wood doors to the upper level patio on the west wall, 2007.



FIG. R11.6: Modern electric heater, 2007.



FIG. R11.7: Six-lite wood casement window on the south wall, 2007.

Primary Character Defining Features: (concealed) wood floor; four-panel wood door; six-lite wood casement windows and associated wood storm windows; wood door, window and baseboard trim

Room Eight is located on the southeast corner of the upper level and is accessed from the hallway on the north wall. It is currently used as an office.

Historically,

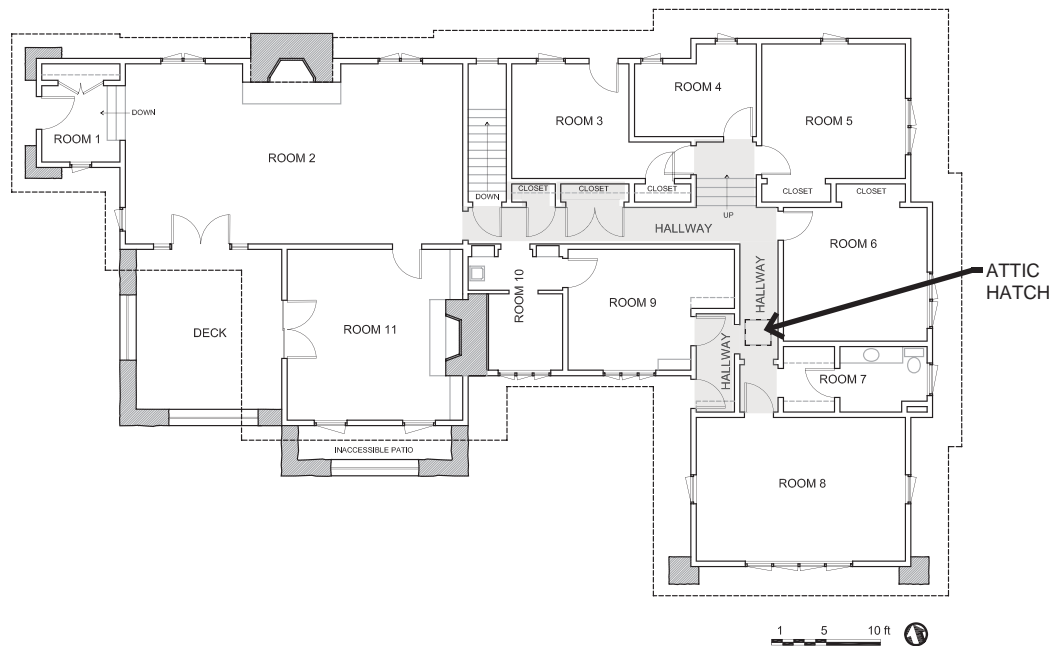


FIG. UH1: Upper level floor plan showing the hallways as shaded, 2008.

Room Eight functioned as the master bedroom and had direct access to both the bathroom and closet of Room Seven through two separate doorways (see FIGS. CD2 and CD3 in the *Chronology of Development & Use* section). In 1983, the opening between the bathroom and Room Eight was furred with gypsum board and the door trim was removed. The location of the doorway between the hallway and Room Eight was also altered, reducing the size of Room Eight and making the closet area of Room Seven accessible to the hallway instead of Room Eight.

Room Eight has a plaster gypsum ceiling painted white. Fluorescent ceiling lights are surface-mounted and trimmed in wood. Other ceiling modifications include supply/return air grilles, a smoke alarm and a motion detector.

The walls are plastered gypsum board painted white. Windows are located on three walls and include a six-lite wood casement window on the east wall, four six-lite wood casement windows on the south wall and a six-lite wood casement window on the west wall. All but the west window have related wood storm windows. A four-panel wood door provides access to the hall from the north wall. White painted wood trim surrounds the doorway and windows.

The original wood flooring is covered with modern tight-weave blue carpet. Wood baseboard, approximately 6" high, is painted white.

Electric baseboard heating units are wall-mounted on the south and west walls just above the wood baseboards.

#### Room Nine

Significance: Medium

Condition: Good

Impact: Low

Primary Character Defining Features: (concealed) wood floor; wood built-in cupboard; four-panel wood door; wood door, window and baseboard trim

Room Nine is located on the south side of the upper level and is accessed from the hallway on the east wall and Room Ten on the west wall. It is currently used as an office.

Room Nine has a plaster gypsum ceiling painted white. Fluorescent ceiling lights are surface-mounted. Other ceiling modifications include supply/return air grilles, a smoke alarm and a motion detector.

The walls are plastered gypsum board painted white. The wall configuration on the east side of the room has been modified where a former hallway coat closet was integrated into Room Nine (see FIGS. CD2 and CD3 in the *Chronology of Development & Use* section). This niche contains modern shelving on the south wall.

A four-panel wood door provides access to the hall from the east wall. On the south wall, three modern three-lite

Hallways and Closets Deficiency/Alteration	Recommended Treatment*	Impact
Door to lower level stair blocks upper level hallway when open. See FIG. UH4.	Keep door in closed position.	Severe
Sloped floor at the south side of the north-south hallway. See FIG. UH6.	Evaluate the structural sufficiency of the floor and repair as necessary.	Moderate
Inaccessible fuse box. See FIG. UH7.	Confirm that the panel has been abandoned. Inspect and correct as necessary.	Moderate
Modern carpet. See FIG. UH2.	No treatment required. Remove carpet and restore wood floor if appropriate for future use.	Low
Altered wall configuration at southwest entrance. See FIG. UH8.	No treatment required. These minor modifications provide adequate space within the hallway and Rooms Eight and Nine at this time.	Low
Modern tile floor. See FIG. UH9.	No treatment required.	Low
* Note: Please see <i>Requirements for Treatment</i> for additional information on each recommendation.		



FIG. UH2: View facing east showing the east-west hallway. Note the structural beam at arrow and closets at left, 2007.



FIG. UH3: View facing northwest showing the stair leading to Rooms Three-Five, 2007.



FIG. UH4: View facing west showing the closet doors in the east-west hallway. Note the open door to the lower level stair, 2007.



FIG. UH5: Closet interior, 2007.



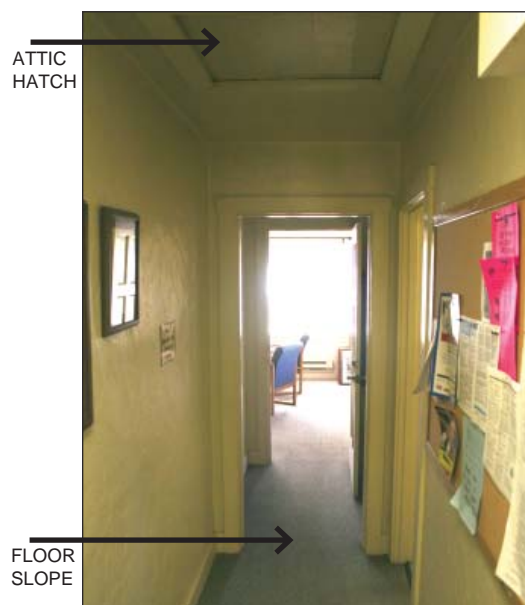


FIG. UH6: View facing south showing the north-south hallway. Note attic hatch and area of floor slope at arrows, 2007.



FIG. UH7: View facing south within the entrance vestibule showing the (presumably non-functional) electrical fuse box at left and four-lite exterior wood door at right, 2007.



FIG. UH8: View facing north within the entrance vestibule showing the area of in-fill where the former coat closet was integrated into Room Nine, 2007.



FIG. UH9: Ceramic tile flooring in the entrance vestibule, 2007.

windows with associated two-light wood screen windows provide natural light. An historic built-in wood cupboard is present on the east side of the windows. The cupboard has a two door cabinet below four open shelves and is painted white. A four-panel wood door provides access into Room Ten on the west wall. White painted wood trim surrounds the doorways and windows.

The original wood flooring is covered with modern tight-weave blue carpet. Wood baseboard, approximately 6" high, is painted white.

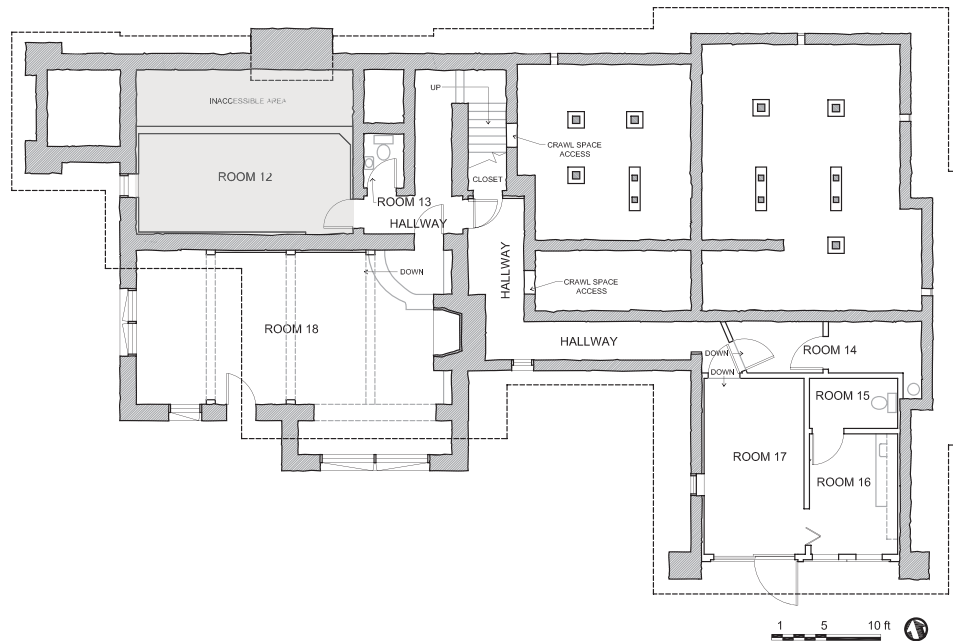


FIG. R12.1: Lower level floor plan showing the location of Room Twelve as shaded, 2008.

An electric baseboard heating unit is wall-mounted on the south wall just above the wood baseboard.

### Room Ten

Significance: Medium

Condition: Good

Impact: Low

Primary Character Defining Features: four-panel wood door; wood built-in cupboards; wood door, window and baseboard trim; wood chair rail; wood picture rail

Room Ten is located on the south side of the upper level and is accessed from the hallway to the north and Room Nine to the east. It is currently used as an employee kitchenette and storage area.

Historically, this room was divided into two areas: a service hall on the north side and a breakfast room on the south side (see FIGS. CD2 and CD3 in the *Chronology of Development & Use* section). An opening between the service hall and Room Eleven was furred with gypsum board and no trace remains of this historic access.

Room Ten has a plaster gypsum ceiling painted white. Fluorescent lights are surface-mounted in the south side of the ceiling. An historic incandescent light fixture is surface-mounted on the north side of the ceiling. A vent is also present on the ceiling.

Room Twelve Deficiency/Alteration	Recommended Treatment*	Impact
Egress path interrupted by intervening rooms (Rooms Seventeen and Eighteen).	Install an automatic fire suppression system. Remove door lock on interior door to Room Eighteen. Install no-exit signage in lower level hallway to Room Seventeen.	Severe
Modern carpet. See FIG. R12.2.	No treatment required. Remove carpet and restore historic floor if appropriate for future use.	Low
Modern gypsum walls conceals exposed stone walls. See FIGS. R12.2, R12.3.	No treatment required. Remove modern gypsum walls and restore historic stone walls if appropriate for future use.	Low
Alteration of wall configuration. See FIG. R12.2 and FIGS. CD2 and CD3 in the <i>Chronology of Development &amp; Use</i> section.	Investigate the condition of the inaccessible area behind the partition wall. If additional space is desired, remove partition wall and finish all walls, flooring and ceiling to be continuous.	Low
Modern electric heaters. See FIG. R12.6.	Remove electric heaters in conjunction with the installation of a modern split system heat pump.	Low
* Note: Please see <i>Requirements for Treatment</i> for additional information on each recommendation.		



FIG. R12.2: View of Room Twelve facing east showing chamfered corner at arrow and modern carpet, 2007.



FIG. R12.3: View facing west, 2007.



FIG. R12.4: Historic wood door with both historic and modern hardware, 2007.



FIG. R12.5: Six-lite wood hopper window with exterior screen, 2007.



FIG. R12.6: Modern electric heater, 2007.

The walls are plastered gypsum board painted white. Historic built-in wood cupboards flank the north doorway. The cupboards have a double door cabinet below four open shelves and are painted white. No door is present at the north wall doorway.

Access into Room Ten is also gained through a four-panel wood door on the east wall. Three modern four-lite wood

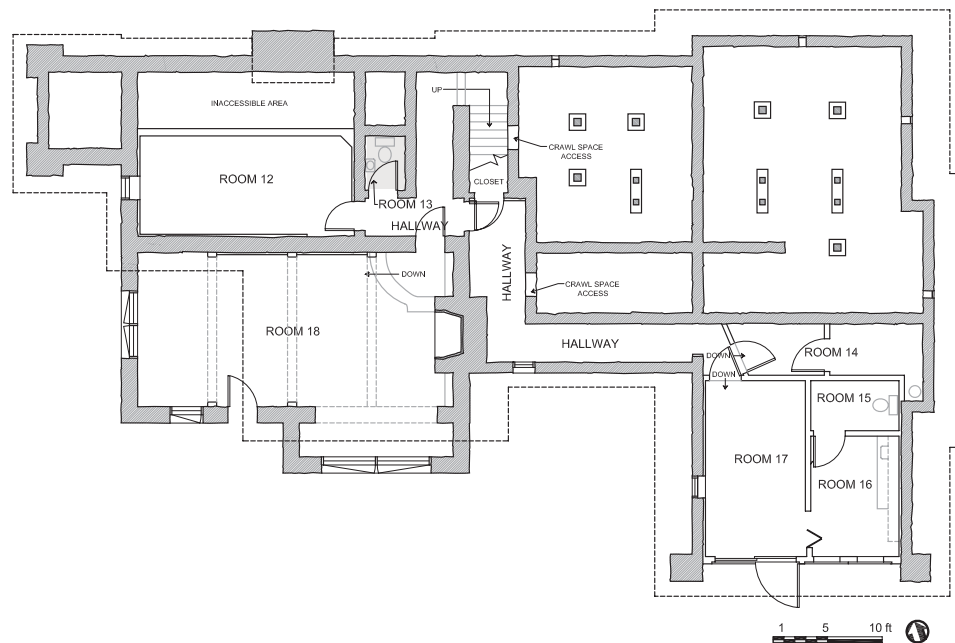


FIG. R13.1: Lower level floor plan showing the location of Room Thirteen as shaded, 2008.

windows with associated wood storm windows provide natural light on the south wall. A modern wall-mounted drinking fountain is present on the north side of the west wall.

White painted wood trim surrounds the doorways and windows. The north wall door trim was damaged by the installation of a light switch. White painted wood chair rail, approximately 3 ½" thick, is present on the east and west walls in the south side of the room. White painted wood picture rail is present on the north side of the wall opening between the two historic areas of the room.

Room Ten is not mechanically heated but benefits from natural convection.

The flooring is modern ceramic tile. Wood baseboard, approximately 6" high, is painted white.

#### Room Eleven

Significance: High

Condition: Good

Impact: Low



Room Thirteen Deficiency/Alteration	Recommended Treatment*	Impact
Modern seamless resilient flooring damaged by moisture penetration. See FIG. R13.3.	Remove flooring. Identify and repair source of water infiltration. Install new floor.	Severe
Ceiling plaster covers door frame. See FIG. R13.4.	No treatment required.	Low
Split door rail and stile. See FIGS. R13.5, R13.6.	Install in-kind wood splices. Paint to match existing.	Low
* Note: Please see <i>Requirements for Treatment</i> for additional information on each recommendation.		



FIG. R13.2: View of Room Thirteen facing north showing the painted stone wall, wood door and fixtures, 2007.



FIG. R13.3: Modern resilient flooring, 2008.



FIG. R13.4: Plastered door frame. Note coloration in photograph is due to flash photography, not actual appearance, 2007.



FIG. R13.5: Split door rail, 2007.



FIG. R13.6: Split door stile. Note coloration in photograph is due to flash photography, not actual appearance, 2008.

Primary Character Defining Features: (concealed) wood floor; stone fireplace; wood mantel; tile hearth; four-panel wood door; eight-lite wood doors; six-lite wood casement windows and associated wood storm windows; wood door, window and baseboard trim

Room Eleven is located on the south side of the upper level and is accessed from Room Two on the north wall. French doors provide access to the exterior patio on the west wall. Room Eleven is currently used as an office.

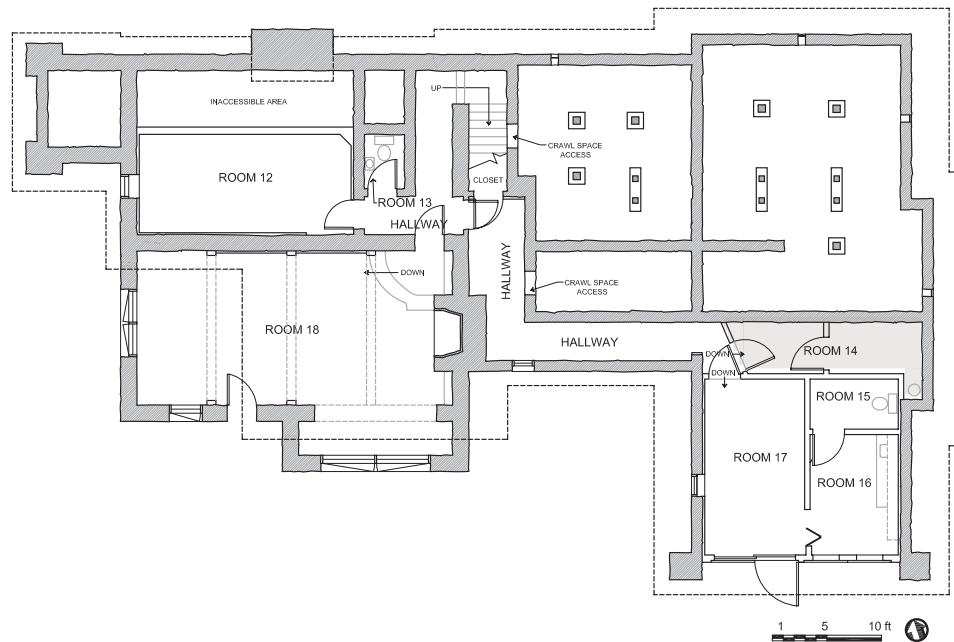


FIG. R14.1: Lower level floor plan showing the location of Room Fourteen as shaded, 2008.

This room was part of the original building. After the 1931 rehabilitation, this room was also accessed by Room Ten on the east wall (see FIGS. CD2 and CD3 in the *Chronology of Development & Use* section). In 1983, the opening into Room Ten was furred with gypsum board and no trace remains of this historic access.

Room Eleven has a plaster gypsum ceiling painted white. Fluorescent ceiling lights are surface-mounted. Other ceiling modifications include supply/return air grilles, a smoke alarm and a motion detector.

The walls are plastered gypsum board painted white. A four-panel wood door provides access to Room Two on the north wall.

A limestone fireplace is centered on the east wall and is flanked by modern built-in wood cabinets. The fireplace's rubble masonry stone extends from floor to ceiling. A dark stained wood mantel rests on stone corbels. The fireplace has a narrow tile hearth that projects approximately 2' from the fireplace opening. The modern 6 1/4" square tiles are teal and brown in color. The fireplace is located directly above a fireplace in Room Eighteen.

Two six-lite wood casement windows with associated three-lite wood storm windows are present on the south wall. On the west wall, double eight-lite wood doors lead to the patio. A set of modern eight-lite wood sliding doors are present on the outside of these doors for thermal comfort. White painted wood trim surrounds the doorways and windows.

The original wood flooring is covered with modern tight-weave blue carpet. Wood baseboard, approximately 6” high, is painted white.

Room Fourteen Deficiency/Alteration	Recommended Treatment*	Impact
Gaps between building materials allow rodent access into interior. See FIGS. R14.4, R14.5.	Seal gaps in consultation with park historical architect.	Severe
Room is not fully sheathed to prevent fire spread into the wall and ceiling structure. See FIG. R14.3.	Install fire-rated material on the ceiling and walls.	Moderate
Alteration of wall configuration. See FIGS. CD2 and CD3 in the <i>Chronology of Development &amp; Use</i> section.	No treatment required. The current use benefits from modern partition walls.	Low
* Note: Please see <i>Requirements for Treatment</i> for additional information on each recommendation.		



FIG. R14.2: View of Room Fourteen facing east, 2007.



FIG. R14.3: View facing northwest, 2007.



FIG. R14.4: Insulation and wire mesh around pipes, 2007.



FIG. R14.5: Wire mesh and foam spray, 2007.



Electric baseboard heating units are wall-mounted on the north and south walls just above the wood baseboards.

### Upper Level Hallways

Significance: Medium

Condition: Good

Impact: Low

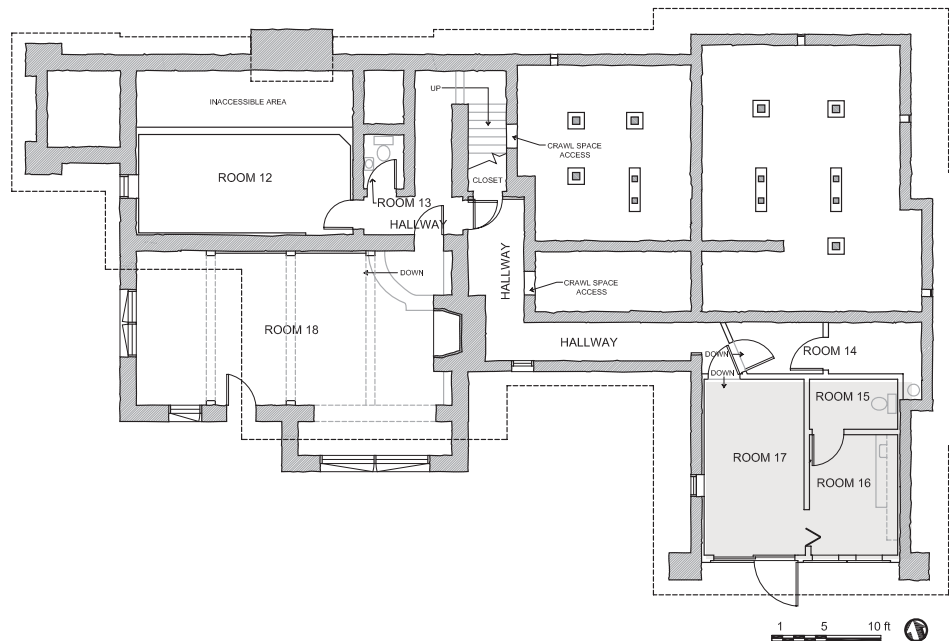


FIG. R15.1: Lower level floor plan showing the location of Rooms Fifteen, Sixteen, and Seventeen as shaded, 2008.

Primary Character Defining Features: (concealed) wood floor; four-panel interior wood doors; four-lite exterior wood door; wood door and baseboard trim; picture rail; stairway to elevated level

Three hallways service the upper level rooms contained within the 1931 addition. One hallway runs east-west between the doorways to Rooms Two and Six. This hallway intersects a north-south hallway at the doorway to Room Six and extends to the doorway of Room Eight. The floor is sloped at the south side of this north-south hallway.

Near the east side of the east-west hallway, four risers lead up to Rooms Three-Five. Wood railings are wall-mounted on both sides of the stair. A landing accesses Rooms Three-Five.

In 1983, the southern terminus of the north-south hallway was extended to the doorway directly into Room Eight, instead of a doorway to the north (see FIGS. CD2 and CD3 in the *Chronology of Development & Use* section).

At the south end of the north-south hallway, a short parallel corridor leads to an exterior door on the west wall. The configuration of this short parallel corridor was modified by integrating a former hallway coat closet into Room Nine in 1983(see FIGS. CD2 and CD3 in the *Chronology of Development & Use* section).

The hallways have plaster gypsum ceilings painted white, except in the area over the stair where the ceiling is sloped at the same pitch as the stair. Fluorescent ceiling lights are surface-mounted. A structural beam is visible at the ceiling in the east-west hall on the west side of the stair. A wood hatch provides access into the attic on the south side of the north-south hallway ceiling.

The walls are plastered gypsum board painted white. Four-panel wood doors provide access to the upper level rooms. A four-panel wood door provides access to the interior stair to the lower level. Two closets are located just east of this door on the north wall of the east-west hallway. One closet has a single wood shelf and rod accessed by a four-panel wood door and the other has five wood shelves accessed by double four-panel wood doors. A four-lite wood door provides access to the exterior on the west wall of the short north-south corridor. White painted wood trim surrounds the doorways and windows. White painted wood picture rail is present in the north-south hallway.

Modern emergency lights, a fire alarm and fire extinguisher are present in the hallways for safety. The evaporative cooler control is located on the south wall at the junction of the east-west and north-south hallways. A bulletin board is present on the west wall of the north-south hallway. An electrical panel is mounted on the east wall of the short north-south corridor; this electrical panel is likely no longer functional. A wood shelf is present on the south wall of the short north-south corridor.

The hallways lack baseboard heating units and evaporative supply/return air grilles.

The original wood flooring is covered with modern tight-weave blue carpet, except near the exterior door in the short north-south corridor where the floor is modern ceramic tile. Wood baseboard, approximately 6" high, is painted white.

#### Lower Level: Room Twelve

Significance: Medium

Condition: Poor

Impact: Moderate

Primary Character Defining Features: exposed stone wall; wood board and batten door with diagonal bracing and wood hardware; six-lite wood hopper window and associated wood window screen; wood door, window and baseboard trim

Room Twelve is located on the northwest corner of the lower level and is accessed from the hallway on the east wall. Room Twelve is currently used as an office.

Room Twelve has a plaster gypsum ceiling painted white. The ceiling is approximately 6" higher than the adjacent hallway. Fluorescent ceiling lights are surface-mounted. Other ceiling modifications include a smoke alarm and a motion detector.

The walls are plastered gypsum board painted white, except the east side of the south wall which is exposed stone painted white. This room was part of the original building but its size was later reduced by the addition of a partition wall dividing the room lengthwise; the area behind this wall is inaccessible. The northeast corner of the room is

Rooms Fifteen-Seventeen Deficiency/Alteration	Recommended Treatment*	Impact
Modern carpet and seamless resilient flooring. See FIGS. R15.2, R16.1, R17.1.	No treatment required.	Low
Alteration of wall configuration. See FIGS. R16.1 and 17.1, and FIGS. CD2 and CD3 in the <i>Chronology of Development &amp; Use</i> section.	See <i>Alternatives for Treatment</i> for recommendations on wheelchair accessibility in this area. The door opening between Rooms Sixteen and Seventeen could be widened and the folding door removed to allow wheelchair access between these rooms. The Room Fifteen bathroom could be made accessible with the addition of compliant hardware, grab bars and sink.	Low
Modern cabinets in Room Sixteen. See FIG. R16.2.	No treatment required. Remove if no longer necessary.	Low
Windows blocked in Room Sixteen. See FIGS. R16.3, R16.4.	Remove paper covering windows.	Low
Modern propane and electric heaters. See FIGS. R16.6, 17.3.	Remove heaters in conjunction with the installation of a modern split system heat pump.	Low
Modern sliding glass door in Room Seventeen. See FIG. R17.1.	See <i>Alternatives for Treatment</i> for recommendations on wheelchair accessibility in this area. Limit parking in front of the historic garage doors to handicapped parking. Construct and install a temporary ramp over the threshold of the sliding glass exterior door to allow wheelchair access into Room Seventeen.	Low
* Note: Please see <i>Requirements for Treatment</i> for additional information on each recommendation.		

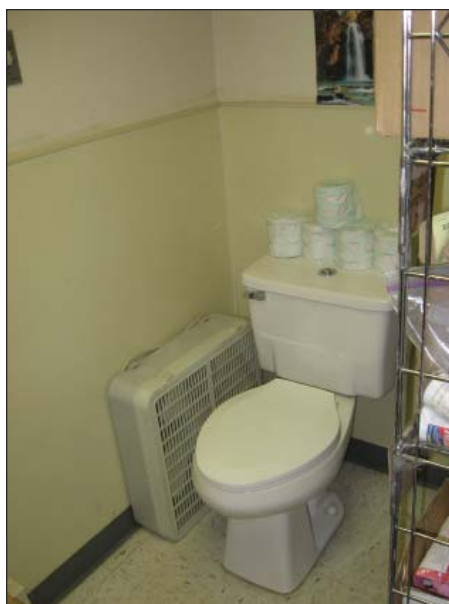


FIG. R15.2: View of Room Fifteen facing northeast, 2007.



FIG. R16.1: View of Room Sixteen facing north showing the modern partition wall and door into Room Fifteen, 2007.



FIG. R16.2: View of Room Sixteen facing northeast, 2007.



FIG. R16.3: View of Room Sixteen facing southeast. Note the blocked and covered windows, 2007.



FIG. R16.4: Detail of a window in Room Sixteen which corresponds to the glazing in the historic garage door on the exterior. Note paper covering the window lites, 2007.

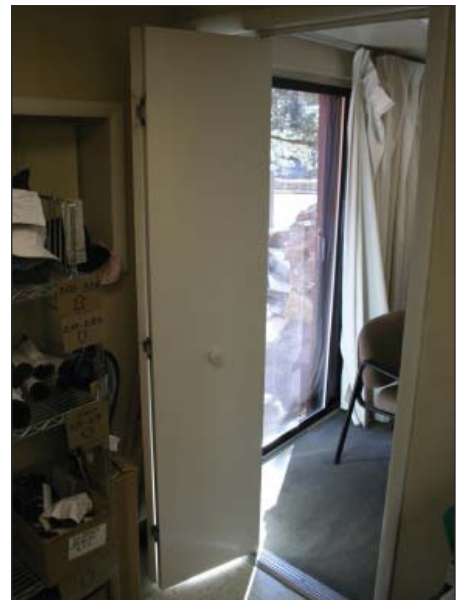


FIG. R16.5: View of Room Sixteen facing southwest showing the folding door into Room Seventeen, 2007.



FIG. R16.6: Propane heater in Room Sixteen, 2007.



FIG. R17.1: View of Room Seventeen facing south showing the modern partition wall at left and the sliding glass doors to the exterior at center. Note the historic garage door on the outside of the sliding glass door at right. See FIG. E31 for the configuration of the historic garage doors from the exterior, 2008.



FIG. R17.2: Six-lite wood hopper window on the west wall of Room Seventeen, 2007.

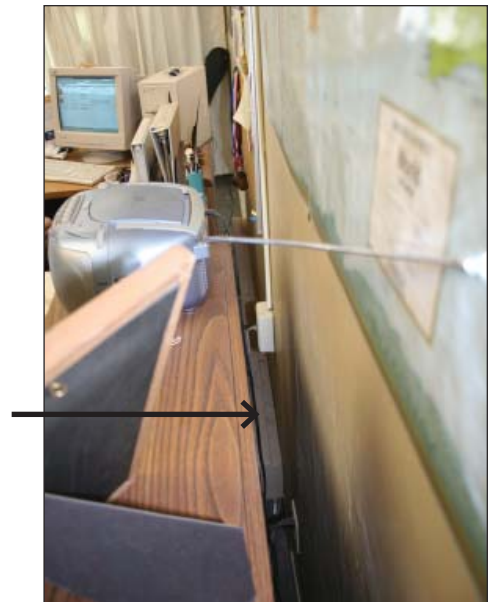


FIG. R17.3: Modern electric heater on the west wall of Room Seventeen behind the desk at arrow, 2007.



chamfered. A small six-lite wood hopper window is present on the west wall. The window is set toward the exterior of the stone wall, creating a deep sill on the interior. An historic wood board and batten door with diagonal bracing and wood hardware provides access to the hallway on the east wall. Modern wood shelving is mounted on the south wall. White painted wood trim surrounds the doorway and windows.

The floor is covered with modern orange carpet. Wood baseboard, approximately 6" high, is painted white.

An electric baseboard heating unit is wall-mounted on the south wall just above the wood baseboard.

### Room Thirteen

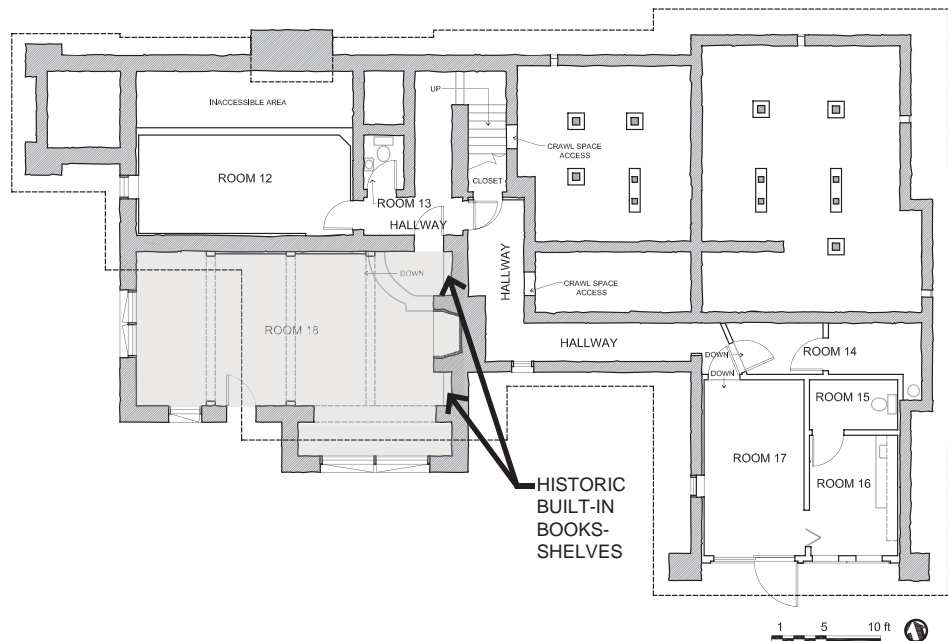


FIG. R18.1: Lower level floor plan showing the location of Room Eighteen as shaded, 2008.

Significance: Medium

Condition: Poor

Impact: Moderate

Primary Character Defining Features: exposed stone walls; four-panel wood door; wood door trim

Room Thirteen is located on the north side of the lower level and is accessed from the hallway on the south wall. Room Thirteen was part of the original building and continues to be used as a bathroom.

Room Thirteen has a plastered ceiling painted white. The ceiling is chamfered where it meets the east and west walls. An integrated light fixture and vent is present on the ceiling.

The walls are plastered and painted white, except the east wall which is exposed stone painted white. A modern toilet is

present on the north wall and a sink is present on the west wall. A four-panel wood door provides access to the hallway on the south wall. The door's rail and stile are split. White painted wood trim surrounds the doorway but is partially covered by the suspended ceiling.

Room Thirteen has modern seamless resilient flooring that is damaged by moisture penetration into the building at the approximate center of the north wall, near the concrete walkway above. Baseboard trim is not present.

Room Thirteen lacks an electric baseboard heating unit.

#### Room Fourteen

Significance: Low

Condition: Poor

Impact: Moderate

Primary Character Defining Features: n/a

Room Fourteen is located on the east side of the lower level and is accessed from the hallway on the west wall. Entrance to Room Fourteen is gained through a hollow-core wood door. There is a 6" step down into Room Fourteen from the hallway.

This room, together with Rooms Fifteen-Seventeen, was originally part of the two-car garage. Room Fourteen is now separated into two areas and access between them is gained through a hollow-core wood door. These areas contain the building's sump pump sewage system; electrical, alarm and tele-data panels; and storage space.

Room Fourteen has a suspended, plastered ceiling painted white. Fluorescent lights are ceiling-mounted.

The walls in the west area are exposed studs, except the north wall which is exposed stone with mounted plywood. The walls in the east area are exposed stone. On the east wall, a duct remains from the steam heating unit and is severed at the wall. Fiberglass insulation is present in the opening and foam spray is located between the stone and duct. A septic tank and pump, as well as a water heater, are located in the southeast corner.

Wire mesh and insulation are present in the ceiling and walls in an attempt to seal gaps between various building materials and prevent rodent intrusion.

The floor is concrete and lacks baseboard trim.

Room Fourteen is not heated.

#### Rooms Fifteen – Seventeen

Significance: Low

Condition: Fair

Impact: Low

Room Eighteen Deficiency/Alteration	Recommended Treatment*	Impact
Interior door lock prevents safe egress from other lower level rooms. See LH7 in the <i>Lower Level Hallways and Stairwell</i> section.	Remove the lock on the interior door to Room Eighteen for egress safety.	Severe
Interior door blocks lower level hallway when open.	Keep door in closed position.	Severe
Modern carpet on raised floor. See FIG. R18.3.	Remove carpet and raised floor. Restore stone floor.	Moderate
Modern suspended ceiling masks original rustic ceiling above. See FIG. R18.5.	Remove suspended ceiling in conjunction with the installation of a modern split-system heat pump. Restore original rustic ceiling.	Moderate
Modern cork boards mounted on north wall. See FIG. R18.6.	Remove cork boards. Repair wall, if necessary. Paint to match existing.	Moderate
Exterior door does not properly seal. See FIG. R18.11.	In conjunction with the removal of the raised floor, remove door and install an in-kind door to fit opening.	Moderate
Modern iron handrail at staircase. See FIG. R18.2.	Remove handrail. If handrail is determined necessary, install new handrail with appropriate design.	Low
Modern electric heaters. See FIG. R18.11.	Remove electric heaters in conjunction with the installation of a modern split system heat pump.	Low
* Note: Please see <i>Requirements for Treatment</i> for additional information on each recommendation.		



FIG. R18.2: View of Room Eighteen facing east showing the stone steps, built-in bookshelf, fireplace and mantel, 2007.



FIG. R18.3: Fireplace, mantel and hearth, 2007.



FIG. R18.4: View facing west showing surface-mounted ceiling lighting and exposed stone walls, 2007.



FIG. R18.5: Modern suspended plywood ceiling with east-west battens situated between the original north-south wood beams, 2007.



FIG. R18.6: View facing north showing the modern tack surfaces between the original wood posts, 2007.



FIG. R18.7: View facing south showing the wood posts, exposed stone wall and eight-lite exterior wood door, 2007.



FIG. R18.8: View facing south showing the large six-lite wood casement windows and modern electric heater at arrow, 2007.



FIG. R18.9: Drop chase located in the northwest corner of Room Eighteen, 2007.



FIG. R18.10: Incandescent light fixture on wood post corbel, 2007.

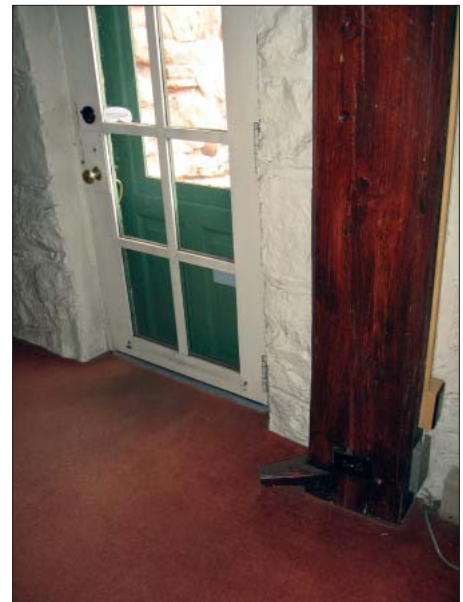


FIG. R18.11: Integrated door stop on wood post and modern carpet, 2007.



Primary Character Defining Features: six-lite wood hopper window; wood garage barn doors; exterior access

Rooms Fifteen – Seventeen are located on the southeast corner of the lower level and are accessed from the hallway on the north wall and the exterior on the south wall. There is a 6” step down into Room Seventeen from the hallway.

Together with Room Fourteen, these rooms historically comprised the two-car garage. Vehicular access into the garage

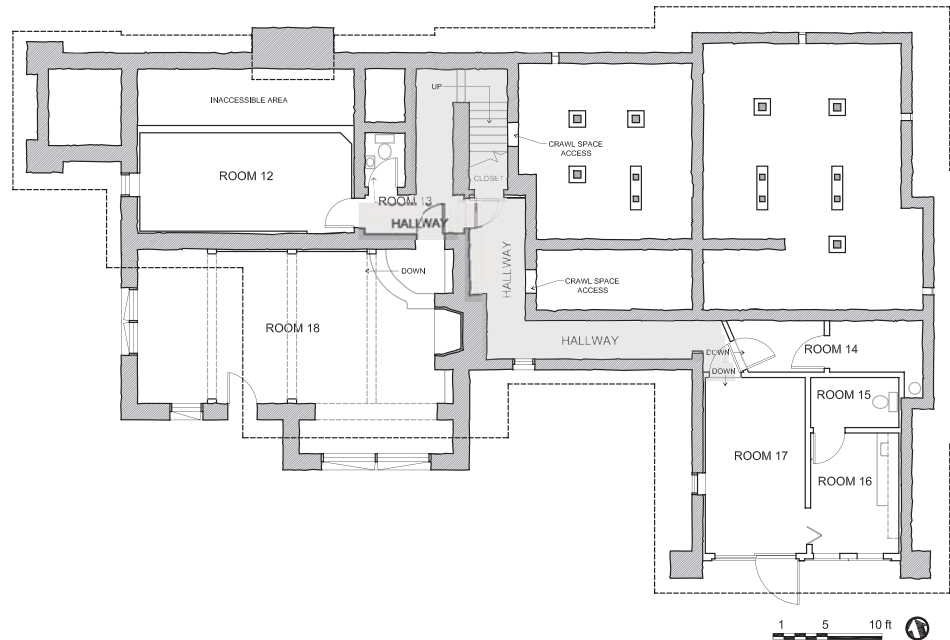


FIG. LH1: Lower level floor plan showing the hallways and staircase as shaded, 2008.

was historically provided by two pairs of double wood barn doors on the south wall. These doors remain in place but access has been altered on the interior. Sliding glass doors are present on the interior side of the west double barn doors and can be accessed when the east barn door of this pair is opened. The east double barn doors are blocked by a modern gypsum wall on the interior, except in the area of door glazing.

The garage was subdivided and converted into offices in 1985. Rooms Fifteen – Seventeen are currently used as a lost and found office and related storage. They retain remnants of when they were used as a nurse's station in the late 1980s, including the toilet in Room Fifteen, and the sink and cabinets in Room Sixteen.

#### *Room Fifteen*

Room Fifteen is located on the east side of the lower level and is accessed from Room Sixteen on the south wall.

Room Fifteen has a gypsum ceiling painted white. A fluorescent light is recessed into the ceiling.

The walls are plastered gypsum board painted white. Plastic wainscoting is present on the lower 3' of the walls. A modern toilet is present on the east wall. A vent is located on the wall above the toilet. Modern 2" wood trim surrounds the doorway on the south wall and is painted white.

The floor is modern seamless resilient flooring and has gray colored resilient baseboard.

Room Fifteen is not heated.

#### *Room Sixteen*

Room Sixteen is located on the southeast corner of the lower level and is accessed from Room Fifteen on the north wall and Room Seventeen on the west wall. A modern gypsum wall prevents access to the exterior barn doors on the south wall.

Room Sixteen has a gypsum ceiling painted white. Fluorescent lights are recessed into the ceiling.

The walls are plastered gypsum board painted white. A modern hollow-core wood door provides access to Room Fifteen from the north wall. Modern wood base and wall cabinets are located on the east wall. A sink is integrated into the plastic laminate countertop. Two modern six-lite windows on the south wall are currently blocked paper over each lite; these windows correspond with the windows on the exterior barn doors. A modern folding hollow-core wood door provides access to Room Seventeen on the west wall. Modern 2" wood trim surrounds the doorways and windows, and is painted white.

The floor is modern seamless resilient flooring and has gray colored resilient baseboard.

A propane heating unit is wall-mounted on the west wall.

#### *Room Seventeen*

Room Seventeen is located on the south side of the lower level and is accessed from the hallway on the north wall, Room Sixteen on the east wall and the exterior on the south wall.

Room Seventeen has a gypsum ceiling painted white. Fluorescent lights are recessed into the ceiling.

The walls are plastered gypsum board painted white. A modern hollow-core wood door provides access to the hall from the north wall. Modern folding hollow-core wood doors provide access to Room Sixteen on the east wall. Modern

<b>Lower Hallway &amp; Stairwell Deficiency/Alteration</b>	<b>Recommended Treatment*</b>	<b>Impact</b>
Loose handrail on west stairwell wall. See FIGS. LH2, LH3.	Secure handrail in place.	Severe
Water damage on the north exposed stone stairwell wall. See FIG. LH5.	Repair source of moisture penetration. Clean stone wall and repaint.	Severe
Missing beam support in crawlspace. See FIG. LH11.	Install concrete base beam support.	Severe
Displaced stones in crawlspace. See FIG. LH11.	Remove all stone supports in crawlspace. Install concrete bases for posts supports.	Severe
Downward-sloping floor toward Room Eighteen. See FIG. LH7.	Evaluate the structural sufficiency of the floor and repair as necessary.	Moderate
Insufficient hallway width for egress-compliance.	No treatment required.	Moderate
Dead-end hallway created when interior door to Room Seventeen locked.	Install no-exit signage.	Moderate
Modern carpet stained. See FIG. LH7.	Remove modern orange carpet and replace with blue carpet to match. Remove all carpet and restore historic floor if appropriate for future use.	Low
Hallway dimly lit. See FIG. LH7.	Install additional light fixtures in the hallway.	Low
Faux-painted door to closet under the stair. See FIG. LH12.	Remove door and replace with wood door to match other interior doors.	Low

\* Note: Please see *Requirements for Treatment* for additional information on each recommendation.



FIG. LH2: View facing north showing the stair to the lower level. Note the exposed stone walls and the crawlspace access at arrow, 2007.



FIG. LH3: View of the stair facing south showing handrail and iron support, 2007.



FIG. LH4: Eight-lite wood casement window on the north stairwell wall, 2007.



FIG. LH5: Water damage on the exposed stone walls at the northwest corner of the stairwell, 2007.



FIG. LH6: Stair handrail termination at the lower level, 2007.

LOCKING  
MECHANISM

CARPET STAIN



FIG. LH7: View of the dimly-lit hallway facing south showing the historic wood door to Room Eighteen and floor deflection. Note locking mechanism on the hallway-side of the door and carpet stain at arrows, 2007.



FIG. LH8: View of the hallway leading to Rooms Fourteen-Seventeen facing south showing the six-lite wood casement window, stone walls and surface-mounted light fixture, 2007.



FIG. LH9: View of the hallway leading to Rooms Fourteen-Seventeen facing east showing the hollow-core wood door into Room Fourteen, 2007.



FIG. LH10: Fluorescent lighting recessed into hallway ceiling, 2007.



FIG. LH11: Displaced stones and missing supports under posts in crawlspace at arrows, 2007.



FIG. LH12: Faux-painted door to the closet under the stair, 2008.





# **TREATMENT & Use**

## ULTIMATE TREATMENT & USE

---

sliding glass doors allow access to the exterior on the south wall. A six-lite wood hopper window is present on the west wall. Wood trim is not present around the doorways or window.

The floor is modern tight-weave blue carpet. Modern wood baseboard, approximately 2" high, is painted white.

Electric baseboard heating units are wall-mounted on the east and west walls just above the wood baseboards.

### Room Eighteen

Significance: High

Condition: Poor

Impact: Moderate

Primary Character Defining Features: (concealed) stone floor; stone steps; exposed stone walls; interior board and batten wood door with diagonal bracing and wood hardware; eight-lite exterior wood door; six-lite wood casement windows and associated wood storm windows; heavy timber post and beam supports; stone fireplace and wood mantel; incandescent light fixtures; built-in wood bookshelves

Room Eighteen is located in the southwest corner of the lower level and is accessed from the hallway on the north wall and the exterior on the south wall. It is currently used as a conference room.

Room Eighteen was part of the original building and was originally used as the visitor Information Room, discussed in the *Chronology of Development & Use* section of this report. The room was extensively altered as part of the 1983 rehabilitation, but care was taken not to damage the original materials; all rehabilitation work was made reversible.

Room Eighteen has a modern rough-sawn plywood ceiling that is suspended approximately 2 ½" below the original wood board and batten ceiling. The plywood ceiling is situated between three original, north-south hand-hewn ceiling beams that remain exposed. The plywood ceiling is painted a light mustard yellow color and has east-west oriented battens painted the same color. The north-south wood beams are darkly stained. The original ceiling is presumably intact above the suspended ceiling.

Fluorescent ceiling lights are surface-mounted. A small drainage chase extends approximately 1' from the ceiling into the northwest corner of the room.<sup>20</sup>

The walls are exposed stone painted white. The north and south walls each have three floor-to-ceiling hand-hewn posts connected to the ceiling beams. They too are darkly stained. At approximately 5' off the floor, wood corbels project approximately 1' from these posts and hold small incandescent light fixtures with glass shades. The corbels are attached with steel hardware painted to resemble wood bolts. The west wood post on the south wall has an integrated door stop for the exterior door.

---

<sup>20</sup> Chase is defined by Francis D.K. Ching as: "A continuous space or recess built into a wall or through a floor for pipes or ducts." Francis D.K. Ching, *A Visual Dictionary of Architecture* (New York: Van Nostrand Reinhold, 1995), 122.

On the north wall, two modern electrical chases are present between the posts. The chases are trimmed with wood and finished with cork to serve as tack boards. They are painted a light mustard yellow color to match the modern suspended ceiling. The building occupant currently has no need for these tack surfaces. An original wood board and batten door with diagonal bracing and wood hardware provides access to the hallway on the east side of the north wall. This door can be locked from the hallway side, creating a potential safety hazard.

A limestone fireplace is centered on the east wall; its rubble masonry stone extends from floor to ceiling and is painted white. A wood mantel rests on stone buttresses; the mantel is painted yellow. A stone hearth projects approximately 3' from the fireplace opening and is approximately 5 ½' wide. The fireplace opening is rectangular in shape; a stove is situated partly inside the opening. The fireplace is flanked by historic built-in wood bookshelves that are painted yellow. Originally, windows were present on the east wall, flanking the fireplace; the windows were removed as part of the 1931 rehabilitation.

A rectangular bay is present on the east side of the south wall. Two large six-lite wood casement windows with associated wood storm windows are centered in this bay. To the west of the bay, an eight-lite wood door with associated screen door provides access to the exterior. The lower portion of this door was removed when the floor was raised; the door no longer creates a proper seal from the exterior. A six-lite wood casement window is present to the west of the door; it does not have a related storm or screen window.

Two six-lite wood casement windows are centered on the west wall. Door, window and baseboard trim are not present in Room Eighteen.

Room Eighteen currently has two steps down from the hall. These steps are wide and irregular in shape. They are exposed, waxed stone and the outer edge is regularly painted white for safety. A modern iron handrail was added on the east side of the steps for safety, presumably in 1983. The floor is otherwise raised on a modern plywood surface and covered with modern orange carpet. This modern floor surface conceals the original exposed stone floor and an additional floor level that spans from the steps across the east wall. The stone floor is exposed in the area of the fireplace to serve as a hearth.

Electric baseboard heating units are wall-mounted on the south and west walls just above the wood baseboards.

#### Lower Level Hallways and Stairwell

Significance: Medium

Condition: Poor

Impact: Severe

Primary Character Defining Features: exposed stone walls; (concealed) wood floor; wood board and batten doors with diagonal bracing and wood hardware; four-panel wood door; eight-lite fixed wood window; six-lite wood casement window; iron handrail and brackets in stairwell

The stairwell provides access between the upper and lower levels and is located on the north side of the building. The

lower level hallways service rooms contained within both the original building and the 1931 addition.

### *Stairwell*

The L-shaped stairwell was modified from its original configuration in 1932. It has a plaster ceiling painted white, except in the lower level where it is sloped at the same pitch as the stair. An incandescent ceiling light fixture is surface-mounted near the upper level stairwell door.

In the upper level area of the stairwell, the walls are plaster painted white. At the lower level, the walls are exposed stone painted white; water infiltration has caused the paint to peel on the north wall in this area. Wood trim, approximately 6" high, delineates the plaster and exposed stone walls. The trim is darkly stained.

An eight-lite fixed wood window is present at the upper level of the north stairwell wall. Darkly stained wood trim surrounds the window.

Access into the crawlspace is provided on the east wall. Within the crawlspace, water damage is present on the north wall. Some support stones are displaced under the posts along the north wall of the crawlspace. A beam support is also missing in the crawlspace.

An iron handrail is mounted on the west side of the stairwell and is supported on iron brackets. The handrail is currently loose.

The wood stair is covered with modern tight-weave blue carpet.

### *Hallways*

The lower level hallways have a plaster ceiling painted white. A mixture of recessed and surface-mounted fluorescent lights are present on the ceiling. Despite the presence of these fixtures, the hallways remain dark.

The walls are exposed stone painted white. Wood doors provide access to the various lower level rooms; see the above room descriptions for information on these doors. Modern emergency lighting is present on the south and west walls.

A closet is present under the stair and is accessed through a faux-painted door on the north wall of the hallway. Window screens are stored inside. A six-lite wood casement window is present on the south wall; the window is not centered within the north-south hallway.

The original wood flooring of the lower level hallways is concealed with modern orange carpet on the west side and modern tight-weave blue carpet on the east side; the orange carpet is stained. The hallway floor slopes downward toward Room Eighteen.



The following section recommends rehabilitation of the First Administration Building. The Secretary of the Interior defines rehabilitation 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.<sup>21</sup>

The First Administration Building continues to function as required by Xanterra Parks and Resorts, the occupant of the building, and in a manner acceptable to the building's owner, the National Park Service. However, a number of features no longer function as required and necessitate rehabilitation. Drainage, weathered paving stones and buckling retaining walls pose the most serious site problems. For the most part, the exterior retains all its original features in fair condition but some building components require repair or replacement. Modern alterations to the interior have concealed some of the original, primary character-defining features. Most of these alterations were made reversible and are able to be removed. Water penetration to the interior requires special attention.

Rehabilitation of the First Administration Building will maintain its existing form and materials where possible. Its rehabilitation will allow both its continued use and ability to function as a testament to its role in the administrative history of Grand Canyon National Park, its use as the superintendent's residence during a period of rapid park growth and as the park's first building in the National Park Service rustic style.

Rehabilitation treatment of the First Administration Building is generally supported by park management actions and plans. The List of Classified Structures (2006) lists stabilization as the ultimate treatment.<sup>22</sup>

To complete rehabilitation would elevate the condition status of the First Administration Building to 'good,' and guarantee its continued functionality.

### **Recommended Improvements**

This section presents the components of rehabilitation treatment, and details the order in which they should occur. Recommendations respect the primary character-defining features of the First Administration Building and are intended to retain and preserve those features. For a comprehensive list of deficiencies, and the exact location of their occurrences, please see the *Physical Description* section and the related drawings in Appendix C, the code-related deficiencies discussed in Appendix D and the structural deficiencies discussed in Appendix E.

Treatment recommendations, intended to stabilize the First Administration Building and extend its utility, will undoubtedly impact historic building materials. Although the overall emphasis is to retain original materials, it is recommended that some damaged original materials, specified below, be replaced to ensure structural stability.

When original/historic materials are to be moved offsite for repair, they should be properly marked so that they may return to their original location. All work, whether it for repair or replacement, should be documented by written summary and location mapping.

The ultimate treatment of preservation has three categories: Site / Setting Treatments, Exterior Treatments and Interior

---

<sup>21</sup> National Park Service, The Secretary of the Interior's Standards for Rehabilitation: [http://www.cr.nps.gov/hps/tps/standguide/rehab/rehab\\_standards.htm](http://www.cr.nps.gov/hps/tps/standguide/rehab/rehab_standards.htm) (accessed 13 September 2006).

<sup>22</sup> Stabilization is not a formalized treatment recognized by the Secretary of the Interior.

Treatments. Within each category deficiencies are organized by impact. Deficiencies listed as 'Severe' across the three categories should be addressed before those deficiencies listed as 'Moderate,' and those listed as 'Moderate' before those listed as 'Low.'

### **Site / Setting Treatments**

#### Severe

Evaluate the site in consultation with a landscape architect and/or architect to direct water away from the building and re-grade as necessary.

Repave the concrete walkway on the north side of the building with a central valley to direct water away from both the retaining wall and building perimeter.

Remove the existing stone on the stairs and landings where necessary to eliminate the trip hazard and/or drainage problem. Remove all incompatible mortar. Reset the stone and apply compatible mortar between. Compatible mortar should match the historic mortar in composition, texture, color and placement within the joints. Replace stone in-kind if necessary.

Repair the bulging drystacked retaining walls on the north and east sides of the building. See *Alternatives for Treatment* for additional information.

Install ADA-compliant handrails for safety on the exterior stairways that are compatible with the historic character of the building in a manner sensitive to the building. Handrails should be installed in a way that is reversible in the future.

#### Moderate

Remove debris on north and east walkways for proper drainage and institute a regular site maintenance program.

Remove debris from the drainage pipes and clean for proper drainage. Remove pipe screens. Replace pipes if necessary.

Trim trees in close proximity to building.

### **Exterior Treatments**

#### Severe

Remove stones around the settlement crack in the patio wall and reinstall with compatible mortar. Compatible mortar should match the historic mortar in composition, texture, color and placement within the joints. Alternately, stabilize the wall in place. See *Alternatives for Treatment* for additional information.

Install a gutter where the roof valley currently directs water onto a north wall rafter. Trim back rafter if necessary.

Remove areas of decay on rafters and outriggers and patch with wood splices using 'dutchmen' technique. Where rot is more than 50% of the log section, replace the entire rafter tail or outrigger back into the structure. Paint to match existing.

Adjust the ridge board and rafters to remove the roof deflection, replacing specific members as required. Resheath and shingle roof.

Secure loose stones in the patio wall with compatible mortar to match existing. Compatible mortar should match the historic mortar in composition, texture, color and placement within the joints.

Mount the birdbath on the southwest corner of the patio wall using compatible mortar. Compatible mortar should match the historic mortar in composition, texture, color and placement within the joints.

Move the gutter leader away from the west corner of the north wall to direct water away from the foundation.

Remove all damaged collar tie framing in the attic. Install collar ties at every rafter with screw connections.

Straighten and securely anchor the metal flue to the Room Two chimney on the north wall

Carefully remove cracked mortar on the Room Two chimney and apply compatible mortar. Compatible mortar should match the historic mortar in composition, texture, color and placement within the joints.

Install a spark arrester on Room Two chimney if fireplace in use.

#### Moderate

Remove the asphalt shingles located on the earlier roof under the superimposed roof. Alternately, cover the shingles with intumescent coating or other fireproofing material.

Remove the wood in-fill in the stone wall and replace with stone and compatible mortar to match existing. Compatible mortar should match the historic mortar in composition, texture, color and placement within the joints.

Fill the gaps between building materials with materials appropriate to the location in consultation with the park historical architect. If necessary, paint to match existing.

Install a gutter on the south side of the east wall where missing.

Replace the cracked wood beam over the south window of Room Eighteen. Paint to match existing.

Remove the warped window frame and sill on the south window to Room Eighteen. Repair and reinstall.

Repair the wood siding and roof sheathing where damaged with a wood splice. Paint to match existing. If necessary, replace in-kind. Paint to match existing.

Patch the decayed area of the wood barn doors with epoxy or a wood splice as appropriate. Paint to match existing.

Carefully remove excess mortar from stone. If necessary, apply compatible mortar. Compatible mortar should match

## REQUIREMENTS FOR TREATMENT

---

the historic mortar in composition, texture, color and placement within the joints.

Repair or replace the damaged modern light fixture on the west wall of Room Eight as necessary. Assess the need for additional light at the entrance to the upper level hallway, and install an additional light fixture if necessary. The light fixture should be compatible with the historic character of the building.

When new roofing is required, install plywood sheathing over the roof decking.

Install a wood splice to match the existing beam where the fascia is cut on the east wall. Paint to match existing.

### Low

Where lichen is present, evaluate the drainage and make changes as appropriate to effectively move water away from the building.

Remove exposed/loose wiring if no longer in service. If wiring is necessary and functional, affix to the building in an inconspicuous location and in a straight line.

Cut protruding nail ends in the east soffit. Paint to match existing.

When exterior door glazing requires replacement, replace with safety glass.

### **Interior Treatments**

#### Severe

In consultation with an electrical engineer, assess the functionality and safety of the current electrical system. Replace elements of the electrical system as necessary. Remove any fabric-wrapped wire as necessary.

Remove the flooring of Room Thirteen that is damaged by moisture penetration. Repair the source of water infiltration and install new flooring.

Seal the gaps in Room Fourteen in consultation with the park historical architect.

Secure the interior stairwell handrail in place.

Keep the stairwell and Room Eighteen doors in their closed positions when not in use to prevent blocking the hallways.

Repair the source of moisture penetration to the northwest corner of the stairwell. Clean the exposed stone wall and paint to match existing.

Remove all stone supports for beams and posts in the crawlspace. Install concrete base supports under each crawlspace post.

Moderate

Install a modern split system heat pump.

Install signage for low headroom over the appropriate doorways.

Install exit signage for all exterior exits except for that in Room Seventeen. Install no-exit signage at the lower level hallway to Rooms Fourteen-Seventeen.

Install a modern fire suppression system.

Install additional emergency lighting and a back-up battery.

Fill cracks in the Room One stone floor and threshold with compatible mortar. Compatible mortar should match the historic mortar in composition, texture, color and placement within the joints. Finish to match existing.

Remove the suspended ceiling in Room Two in conjunction with the installation of a modern split-system heat pump. Restore the original rustic ceiling.

Remove the fireplace screen in Room Two. Install a free-standing fireplace screen that respects the fireplace's arched opening.

Evaluate the structural sufficiency of the floor under the south side of the north-south hallway on the upper level, and in the lower level hallway near Room Eighteen. Repair as necessary.

Inspect the upper level fuse box and determine if abandoned. Correct as necessary.

Install fire-rated material on the ceiling and walls of Room Fourteen.

Remove the suspended ceiling in Room Eighteen in conjunction with the installation of a modern split-system heat pump. Restore the original rustic ceiling.

Remove the carpet and raised floor in Room Eighteen and restore the original stone floor.

In conjunction with the removal of the raised floor in Room Eighteen, remove the exterior door to Room Eighteen. Install an in-kind door to fit the opening.

Remove the cork boards on the north wall of Room Eighteen. Repair the exposed stone wall if necessary. Paint to match existing.

Remove the lock on the interior door to Room Eighteen for egress safety.



### Low

Remove the electric heaters in conjunction with the installation of a modern split-system heat pump.

Remove the carpet and restore the historic floor if appropriate for future use.

Re-route any exposed wiring so as to conceal it or to be more consistent with the architectural features.

Patch and repair the plaster in Room One where damaged. Paint to match existing.

Assess the need for a handrail at the Room One stair. If necessary, install a handrail with an appropriate design in a manner appropriate to the character of the building.

Remove the furniture in Room Two that currently blocks the French doors to the patio.

Remove the paint on the Room Two wood mantel. Refinish the wood mantel.

Install a deadbolt in the Room Four door where missing if necessary. Alternatively, patch hole with wood splice and paint to match existing.

Replace the damaged weather-stripping around the north wall window in Room Five.

Remove and re-install the picture rail in Room Five for proper junction.

Investigate the condition of the inaccessible area behind the partition wall in Room Twelve. If additional space is desired, remove the modern partition wall. Finish walls, flooring and ceiling to be continuous.

Repair the split door rail and stile in Room Thirteen with in-kind wood splices. Paint to match existing.

Remove the paper currently covering the windows in Room Sixteen.

Remove the handrail at the steps in Room Eighteen and assess the need for a handrail. If necessary, install a new handrail with an appropriate design in a manner appropriate to the character of the building.

Install additional light fixtures in the lower level hallway where necessary.

Remove the stained modern orange carpet in the lower level hallway and replace with blue carpet to match.

Remove the faux-painted door to the lower level closet. Replace with a wood door to match the other interior doors.

## ALTERNATIVES FOR TREATMENT

---

Rehabilitation of the First Administration Building must conform to National Park Service cultural policies and guidelines. It will be reviewed for compliance with the General Management Plan (1995), National Environment Protection Act (NEPA), Section 106 of the National Historic Preservation Act (NHPA) and all applicable codes and standards required by law and National Park Service policy.

As stated in the Director's Order on Cultural Resource Management (DO-28) and according to federal law and National Park Service policy, "all historic structures in which the Service has a legal interest are to be managed as cultural resources. Regardless of type, level of significance, or current function, every structure is to receive full consideration for its historical values whenever a decision is made that might affect its integrity."<sup>23</sup>

Section 106 of the National Historic Preservation Act (NHPA) mandates that all federal agencies, including the National Park Service, take into account the effects of their actions on properties listed, or eligible for listing, in the National Register of Historic Places.

Rehabilitation treatment should follow the Secretary of the Interior's Standards for the Treatment of Historic Properties, and the guidelines for applying those standards. See Appendices F and G for rehabilitation standards and guidelines.

Additionally, all treatments must comply with the requirements of the following codes and standards:

- International Building Code 2006
- International Existing Building Code 2006
- Minimum Design Loads for Buildings and Other Structures (ASCE 7-98)
- National Design Specifications for Wood Construction (NDS-2005)
- National Fire Protection Agency 101 Life Safety 2006
- National Fire Protection Agency 914 Code for Fire Protection of Historic Structures 2007
- National Park Service, Director's Order 58: Structural Fire Management
- Seismic Evaluation of Existing Buildings 2003 (ASCE 03-031)
- UFAS/ADA Accessibility Guidelines 2002

Compliance with appropriate codes must be addressed at the time of the work related to those materials.

### **Accessibility**

Treatments that address handicapped accessibility must comply with the Americans with Disabilities Act/Architectural Barriers Act Accessibility Guidelines (2004) and the Uniform Federal Accessibility Standards (1998) unless compliance with the requirements would threaten or destroy the historic significance of the building as determined in consultation with the State Historic Preservation Office.

None of the routes of travel to, entrances into or spaces within the First Administration Building currently meet ADA

<sup>23</sup> National Park Service, Director's Order #28: Cultural Resource Management: [http://www.cr.nps.gov/history/online\\_books/nps28/28chap8.htm](http://www.cr.nps.gov/history/online_books/nps28/28chap8.htm) (accessed 13 September 2006).

code. The First Administration Building is deficient regarding accessibility code in the following areas:

- route from any site access point to the building
- entrance into the building
- route of access on the upper and lower levels
- restroom facilities
- door hardware and thresholds
- drinking fountain

The irregular exterior stairs to the upper level impede ADA-compliant access to this, the primary floor. The dramatic site slope makes the addition of an ADA-compliant ramp to the upper level entrances impossible. Access to the lower level entrance to Room Eighteen is complicated by the iron gate at the stone patio wall, the irregular stone paving and the 9" step into the room. The wood barn doors, sliding glass doors and threshold in Room Seventeen currently prevent ADA-compliant access into this room.

Full compliance to ADA would threaten the First Administration Building's historic significance and destroy its integrity, and is therefore not recommended.

For discussion on the potential areas of accessibility, see the *Alternatives for Treatment* section of this report. For further discussion of compliance related to accessibility, see Appendix D.

### **Egress**

The First Administration Building's main floor is the upper level, which is accessed by stone stairs. These stairs and associated landings have irregular surfaces that pose potential trip hazards. A lack of handrails makes these stairs difficult to traverse during inclement weather. The two entrances on the lower level are complicated by the access issues discussed under *Accessibility*. Additional egress-related deficiencies include:

- landing slope at the entrance to the upper level hallway
- varying riser and tread dimensions to the upper level hallway
- balcony rail height
- lack of exit signage
- interior door heights, widths, hardware and thresholds
- unequal risers and lack of handrail for stair in Room One
- blocked upper level hallway by open stairwell door
- head clearance within stairwell
- interrupted path from Room Twelve by intervening rooms (Rooms Seventeen and Eighteen) at both lower level exits
- blocked lower level hallway by open Room Eighteen door
- impeded egress from lower level areas by Room Eighteen interior door lock
- dead-end lower level hallway when Room Seventeen interior door is locked
- lower level hallway width

For further discussion of code compliance related to egress, see Appendix D.

## SOURCES CONSULTED

---

Sources are grouped into topics and listed in the order in which the topic appears in the text. In addition to the sources below, Grand Canyon National Park archives and planning documents were extensively consulted.

### **GRAND CANYON NATIONAL PARK HISTORY**

Anderson, Michael F. *Polishing the Jewel: An Administrative History of the Grand Canyon National Park*. Grand Canyon, Arizona: Grand Canyon Association, 2000.

Garrett, Billy. "Adaptive Use: The Superintendent's Residence at Grand Canyon National Park." *CRM Bulletin* vol. 7, no. 4 (December 1984): 6-7.

Hughes, J. Donald. *In the House of Stone and Light: A Human History of the Grand Canyon*. Grand Canyon, Arizona: Grand Canyon Natural History Association, 1978.

### **NATIONAL PARK SERVICE HISTORY**

Frankeberger, Robert, and James Garrison. "From Rustic Romanticism to Modernism, and Beyond: Architectural Resources in the National Parks." *Forum* 16, no. 4 (Summer 2002): 8-21.

Ise, John. *Our National Park Policy: A Critical History*. Baltimore: The Johns Hopkins Press, 1961.

Moe, Richard. "Introduction." *Forum* 16, no. 4 (Summer 2002): 8-21.

Rothman, Hal. *American's National Monuments: The Politics of Preservation*. Lawrence, Kansas: The University Press of Kansas, 1989.

Shankland, Robert. *Steve Mather of the National Parks*. New York: Alfred A. Knopf, 1951.

Tweed, William C., Laura E. Soulliere, and Henry G. Law. *National Park Service Rustic Architecture: 1916-1942*. United States Department of the Interior, National Park Service, Western Regional Office, Division of Cultural Resource Management, 1977.

### **BUILDING PRESERVATION**

National Park Service. Guidelines for Rehabilitating Historic Buildings. <http://www.cr.nps.gov/hps/TPS/tax/rhb/guide.htm>. (accessed 7 September 2006).

National Park Service. Log Crown Repair and Selective Replacement Using Epoxy and Fiberglass Reinforcing Rebars. <http://www.cr.nps.gov/hps/tps/technotes/PTN28/index.htm> (accessed 7 September 2006).

National Park Service. NPS-28 Cultural Resource Management Guideline [http://www.cr.nps.gov/history/online\\_books/nps28/28chap8.htm](http://www.cr.nps.gov/history/online_books/nps28/28chap8.htm) (accessed 13 September 2006).

National Park Service. The Preservation and Repair of Historic Log Buildings. <http://www.cr.nps.gov/hps/TPS/briefs/brief26.htm> (accessed 7 September 2006).

National Park Service. The Secretary of the Interior's Standards for Rehabilitation. <http://www.cr.nps.gov/hps/TPS/tax/rhb/stand.htm> (accessed 7 September 2006).

National Park Service. The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings. <http://www.cr.nps.gov/hps/tps/standguide/> (accessed 30 January 2006).

### **WOOD CONSERVATION**

Attebery, Jennifer Eastman. *Building with Logs: Western Log Construction in Context*. Moscow, Idaho: University of Idaho Press, 1998.

Goodall, Harrison and Renee Friedman. *Log Structures: Preservation and Problem-Solving*. Nashville: The American Association for State and Local History, 1980.

Goodell, Barry, Darrel D. Nicholas, and Tor P. Schultz. Introduction to *Wood Deterioration and Preservation: Advances in our Changing World*, by Barry Goodell et al. Washington D.C.: American Chemical Society, 2003.

Hustler, Donald. *Log Cabin Restoration: Guidelines for the Historical Society*. American Association for State and Local History Technical Leaflet 74, May 1974.

Kudrjavytseva, E.I., and Litvintseva, A.P., "**The Role of Natural Conservation of Wood in Preservation of Wooden Architectural Monuments**," *Wood Structures: A Global Forum on the Treatment, Conservation, and Repair of Cultural Heritage*, ASTM STP 1351, S.J. Kelley, J.R. Loferski, A.J. Salenikovich, and E.G. Stern, Eds., American Society for Testing and Materials, West Conshohocken, PA, 2000.

Mattsson, J., "**Inspection and Evaluation of Decay in Log Structures**," *Wood Structures: A Global Forum on the Treatment, Conservation, and Repair of Cultural Heritage*, ASTM STP 1351, S.J. Kelley, J.R. Loferski, A.J. Salenikovich, and E.G. Stern, Eds., American Society for Testing and Materials, West Conshohocken, PA, 2000.

MacGregor, Roger, trans. *The Craft of Log Building*. Ottawa: Lee Valley Tools Ltd., 1982.

Renfro, Jim. *The Log Home Owner's Manual: A Guide to Restoring and Protecting Exterior Wood*. Bellevue, WA: Advantage Entertainment Inc., 1995.

Weaver, Martin E. *Conserving Buildings: A Guide to Techniques and Materials, Revised Edition*. New York: John Wiley and Sons, Inc., 1997.

# APPENDICES





## **APPENDIX A**

### **LIST OF SUPERINTENDENTS WHO RESIDED IN THE FIRST ADMINISTRATION BUILDING<sup>1</sup>**

---

Minor Raymond Tillotson (1927 – 1938)  
James V. Lloyd (acting) (1938-1939)  
Harold Child Bryant (acting) (1939 – 1940)  
James V. Lloyd (acting) (1940-1940)  
Frank Alvah Kittredge (1940 – 1941)  
Harold Child Bryant (1941 – 1954)  
Preston P. Patraw (1954 – 1955)  
John Sherman McLaughlin (1955 – 1964)  
Howard B. Stricklin (1964 – 1969)  
Robert R. Lovegren (1969 – 1972)  
Merle E. Stitt (1972 – 1980)  
Bruce W. Shaw (acting) (1980 – 1980)  
Richard W. Marks (1980 – 1988)

---

<sup>1</sup> Parenthetical dates below are the dates of service as Grand Canyon National Park Superintendent and not dates of residency.



## **APPENDIX B**

### **ARCHITECTURAL DRAWINGS OF HISTORIC CONDITIONS**

---

As part of this report, floor plans of the First Administration Building as it originally existed were created by the project team based on annotations on the 1931 plans.

All existing drawings of the First Administration Building are collected here in chronological order. The following rehabilitation drawings are contained in this section:

Superintendent's Residence, 4/11/1931 (7 sheets; TIC: 113\_3121A)

- Basement & Foundation Plan
- Upper Floor Plan
- Roof Plan
- South & North Elevations
- East & West Elevations
- Sections
- Details

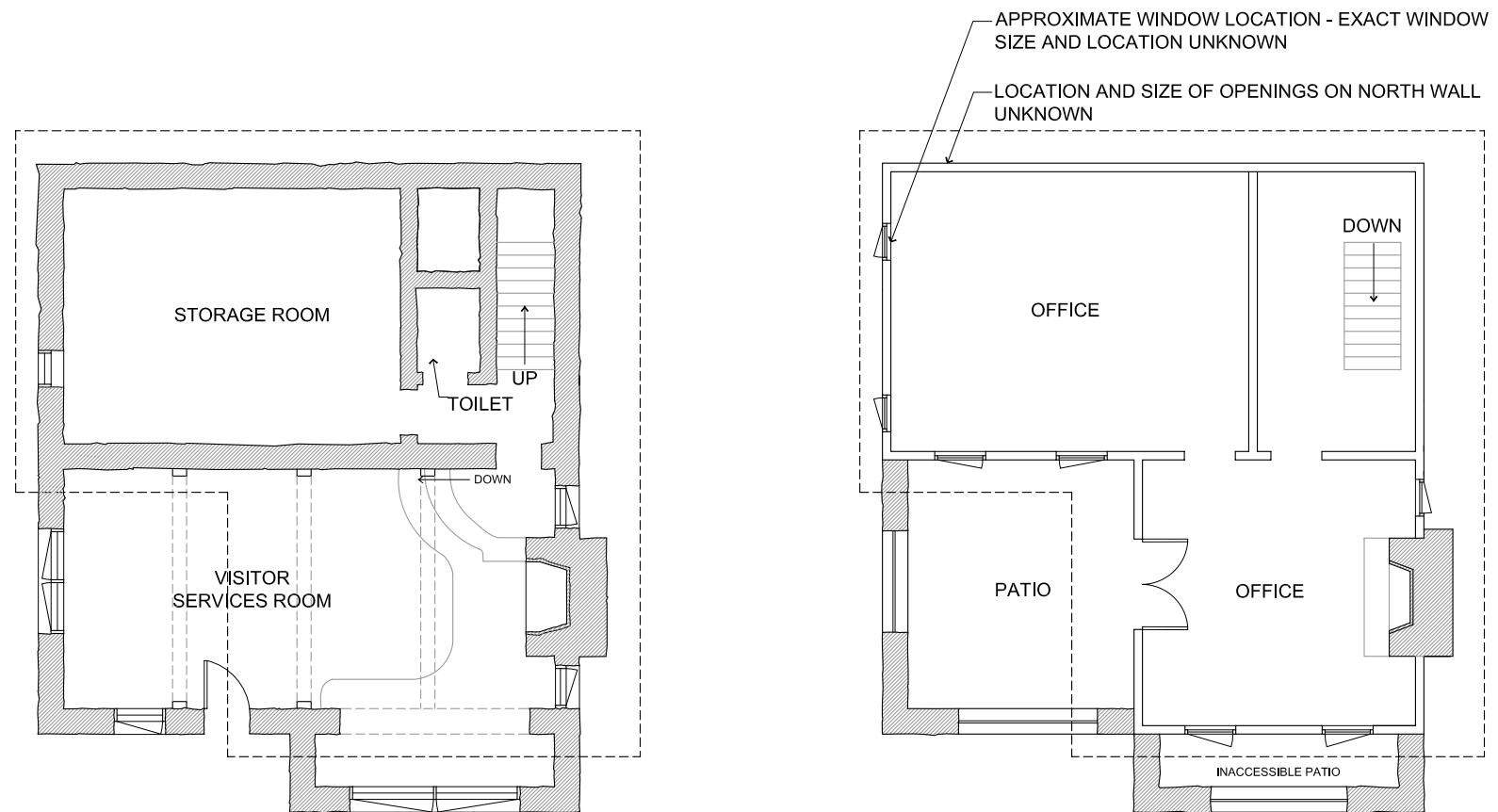
New Heating Plant for Supt. Residence, 5/1956 (2 relevant sheets; TIC: 113\_2051A)

Superintendent's Residence, Office Conversion (Upper Level Modifications), 8/1983 (TIC: 113\_60620)

NPS Building No. 1 Approved Rehabilitation, 10/3/1983 (3 sheets)

- Lower Floor Plan
- Upper Floor Plan
- Details





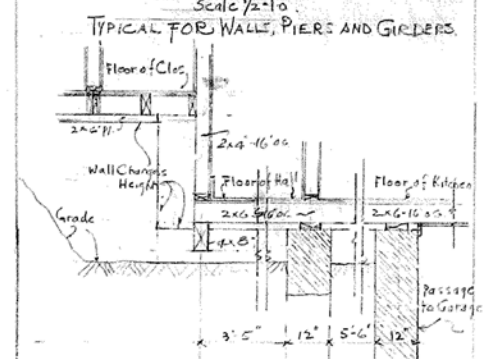
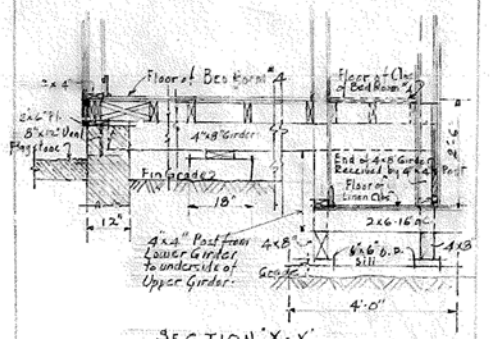
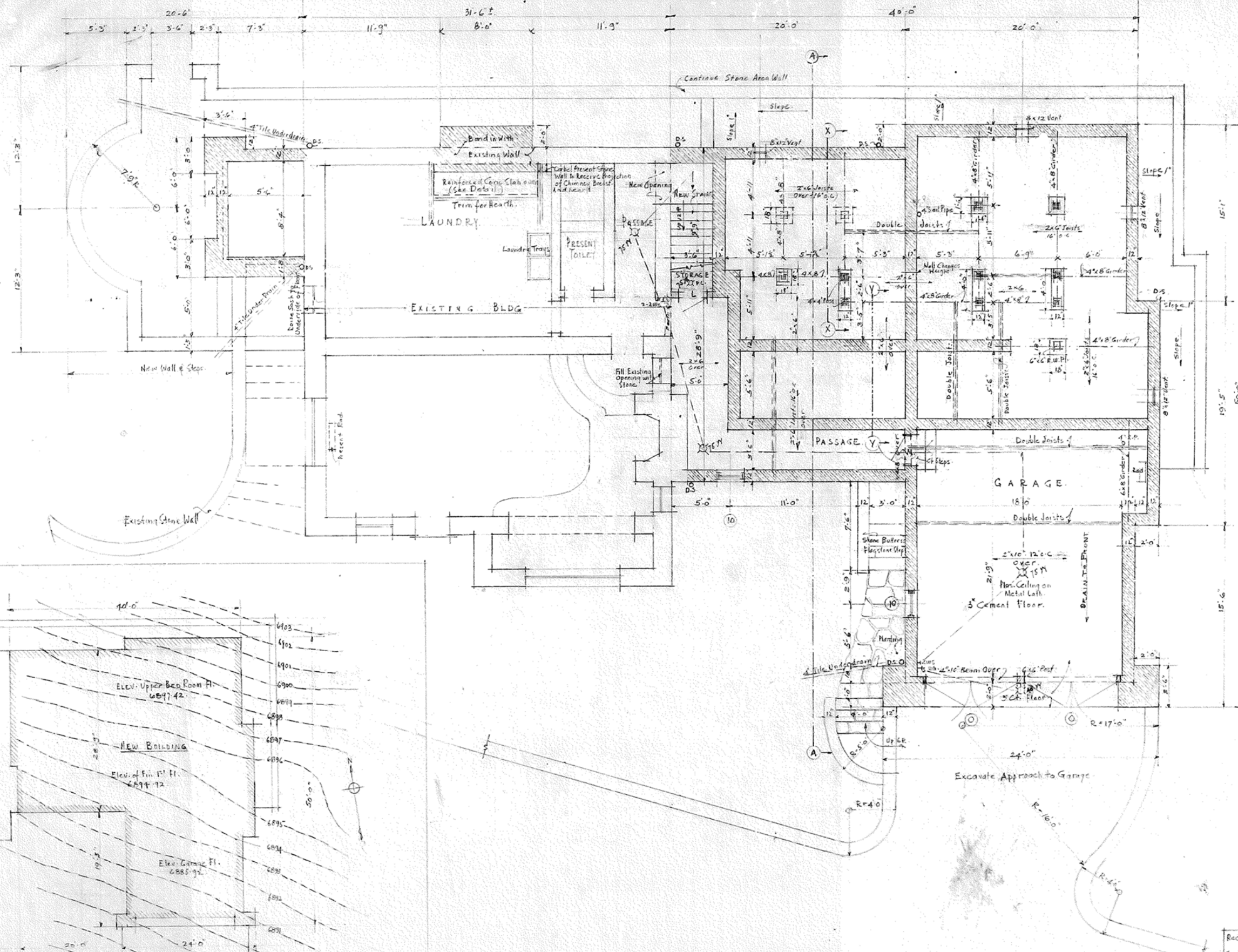
LOWER LEVEL FLOOR PLAN\*

UPPER LEVEL FLOOR PLAN\*

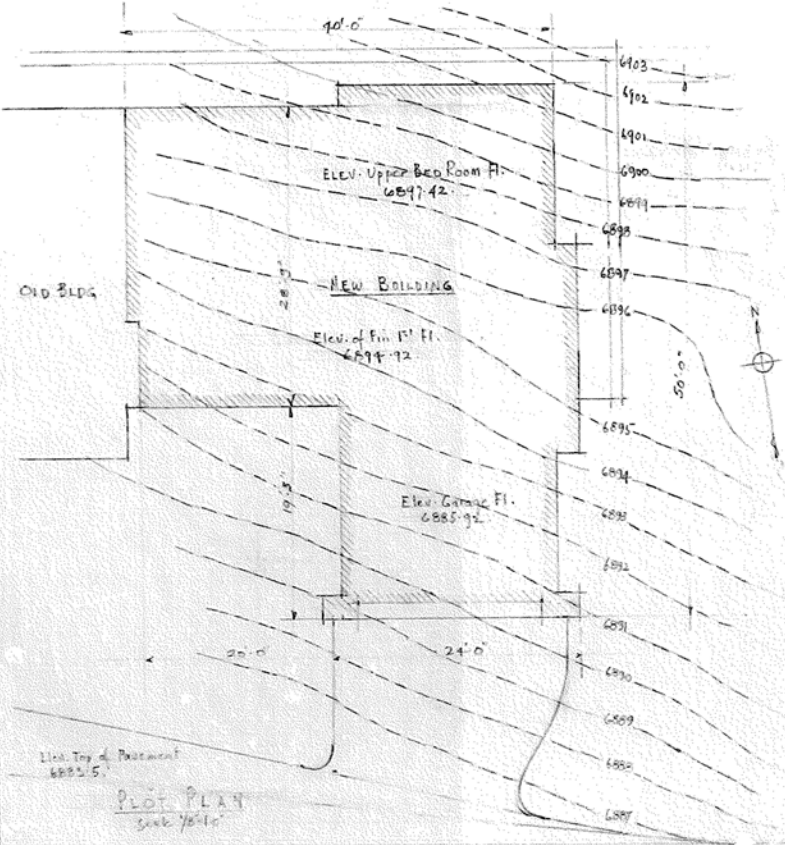
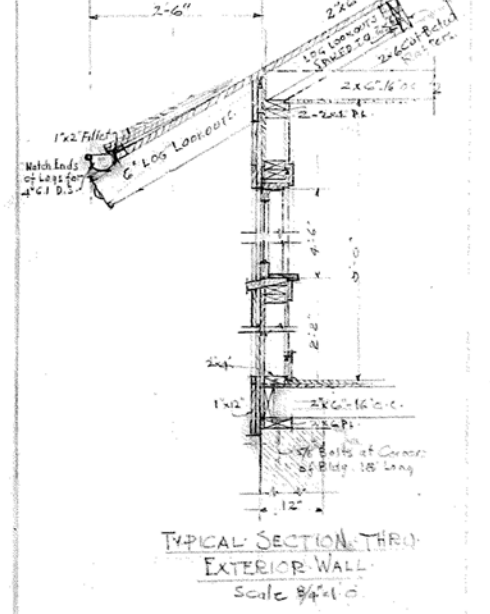
\* BASED ON ANNOTATIONS ON THE DRAWING SET DATED 11 APRIL 1931







NOTE: ON ALL STONE WALLS INDICATED AROUND EXCAVATED PORTIONS OF PLAN UTILISE EXCAVATED ROCK FACE AND NATURAL ROCKWORK AS FAR AS POSSIBLE ON INTERIOR FACES OF GARAGE AND PASSAGE TRUE UP EXCAVATED FACE OF ROCKWORK TO FORM FINISHED FACE OF WALL.

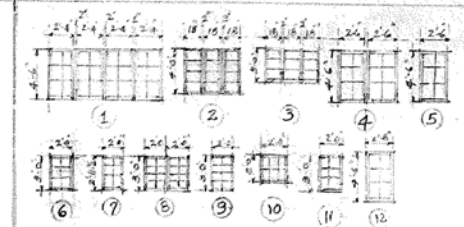
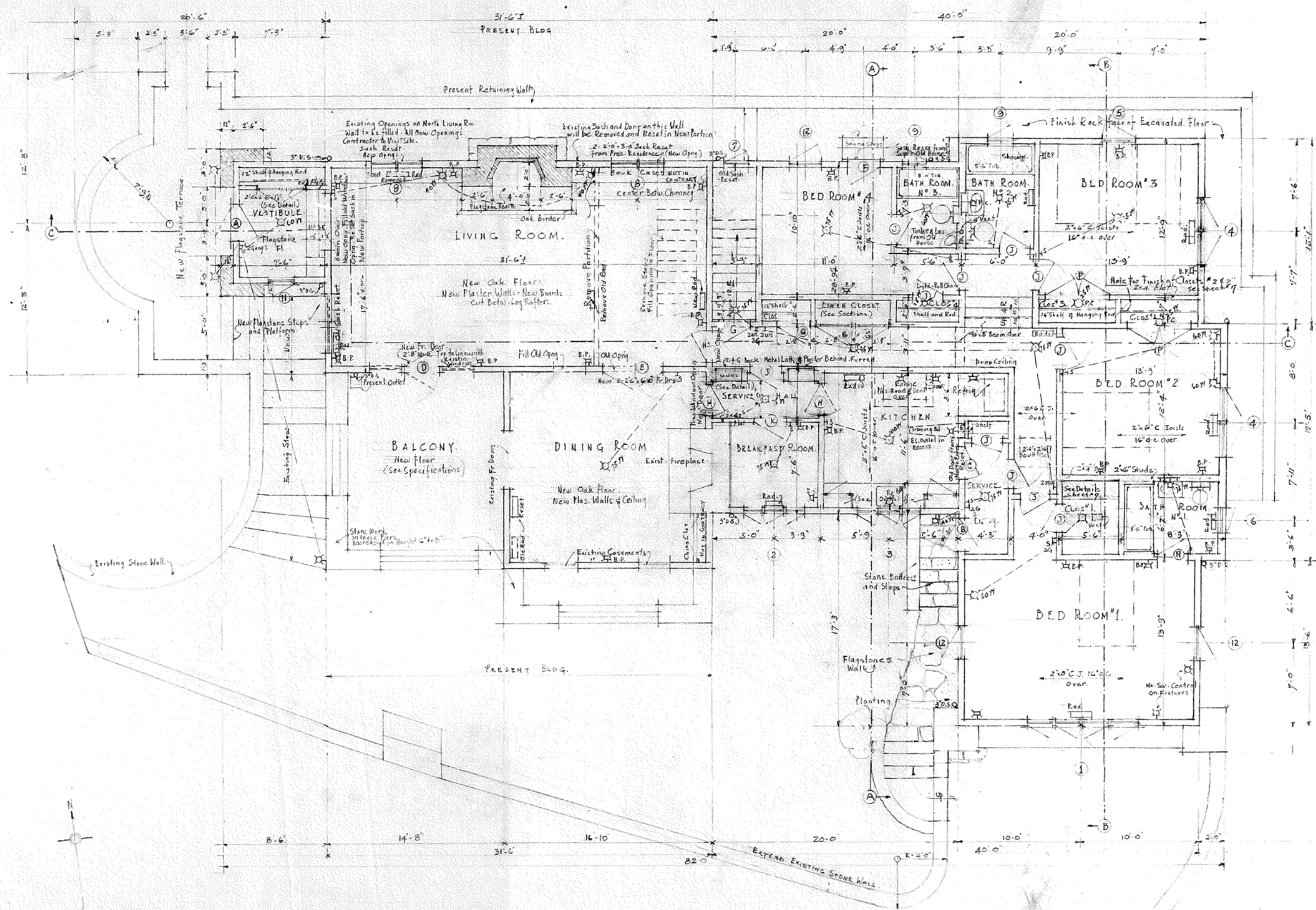


BASEMENT AND FOUNDATION PLAN  
Scale 1/4" = 1'-0"

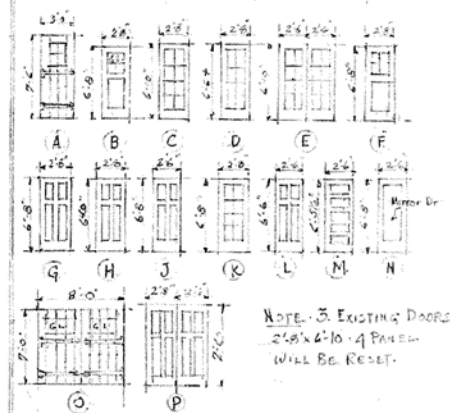
HALF-SIZE REPRODUCTION

Recommended by *John C. Vent* Date 4/17/51 Dr. by A.P.B.  
 Concurred by *John C. Vent* Date 4/17/51 Tr. by A.P.B.  
 Approved by *John C. Vent* Date 4/17/51 Ch. by C.M.C.  
 U.S. DEPARTMENT OF INTERIOR NATIONAL PARK SERVICE DATE 4-11-51  
 GRAND CANYON NATIONAL PARK, ARIZ. SHEET No. 1  
 SUPERINTENDENT'S RESIDENCE JOB No. GC 5121-A  
 DESIGNED BY LANDSCAPE DIVISION.





WINDOW SCHEDULE		
No.	SIZE AND DESCRIPTION	
1	3'-2 1/2" x 4'-4 1/8" Casement Outswing	
2	3'-1 1/2" x 4'-0" 1/8"	
3	3'-1 1/2" x 3'-0" 1/8"	
4	2'-2 1/2" x 4'-0" 1/8"	
5	1'-2 1/2" x 4'-0" 1/8"	
6	1'-3' x 2'-0" 1/8" Casement from E. Wall Basement Reset	
7	2'-2' x 3'-0" 1/8" Casement from N. Side Reset	
8	2'-2' x 3'-0" 1/8" Casement from E. House Reset	
9	1'-2' x 3'-0" 1/8" " " " " " "	
10	1'-2' x 2'-0" " " " " " "	
11	1'-2' x 3'-0" 1/8" Casement Outswing	
12	1'-2' x 4'-0" 1/8" 3 Casements from N. Side of Living Room Reset	



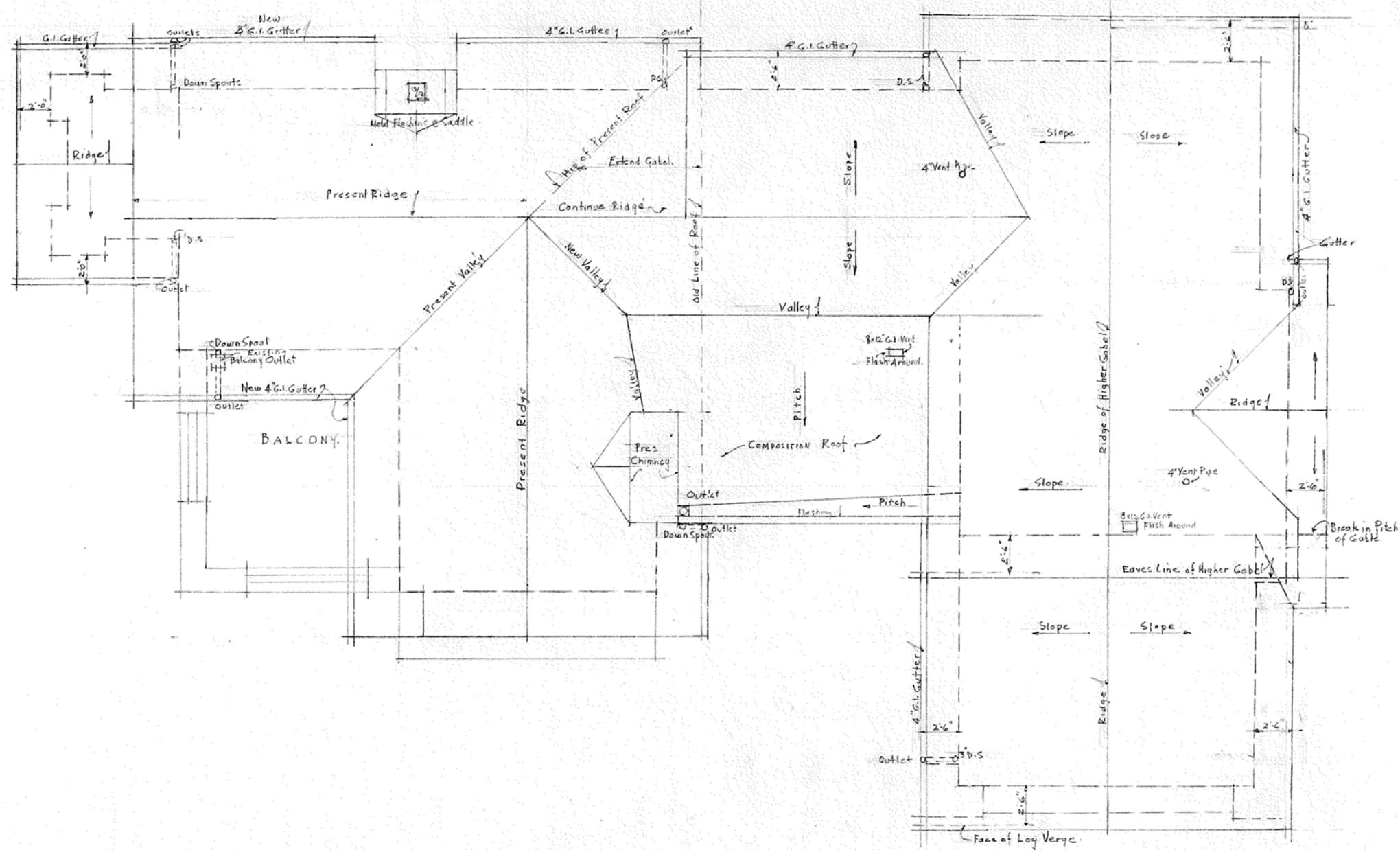
DOOR SCHEDULE		
No.	SIZE AND DESCRIPTION	
A	3'-0" x 7'-6" 1/4" BUILT UP SASH DOOR W/ STRAPS	
B	2'-8" x 6'-8" 1/8" SASH 4 WOOD PANEL	
C	2'-8" x 6'-8" 1/8" FR. DR. RESET FROM NORTH ENTRY	
D	2'-8" x 6'-8" 1/8" FR. DR. TOP TO LINE WITH WINDOW	
E	2'-2' x 6'-10" 1/8" " MATCH OTHER FR. DR.	
F	2'-8" x 6'-8" 1/8" SASH DOOR WOOD PANEL	
G	2'-8" x 6'-8" 1/8" FOUR PANEL WOOD DOOR	
H	2'-10" x 6'-8" 1/8" " " " "	
J	2'-6" x 6'-5" 1/8" " " " " " "	
K	2'-8" x 6'-8" 1/8" FR. DR. IN BREAKFAST ROOM	
L	2'-6" x 6'-6" 1/8" 4 PANELS - BASEMENT STORAGE CLO.	
M	2'-6" x 6'-5" 1/8" 5 PANELS - DOOR RESET FROM HOUSE	
N	2'-6" x 6'-5" 1/8" MIRROR DOOR	
O	2'-4' x 7'-0" 2 1/2" BUILT UP DOOR SASH PANEL	
P	2'-2' x 7'-6" 1/8" FOUR PANEL DOOR - CLOSETS	

ELECTRIC OUTLETS - SYMBOLS

- ⊗ CEILING OUTLET (SWITCH CONTROL)
- ⊕ BRACKET WALL OUTLET SWITCHES INDICATED
- ⊖ BASE OUTLET
- ⊗ (P.C.) CEILING OUTLET - PULL CHAIN (NO SWITCH)
- ⊕ 2G 2Gang Switch Control
- ⊖ 2W 2 Way Switch

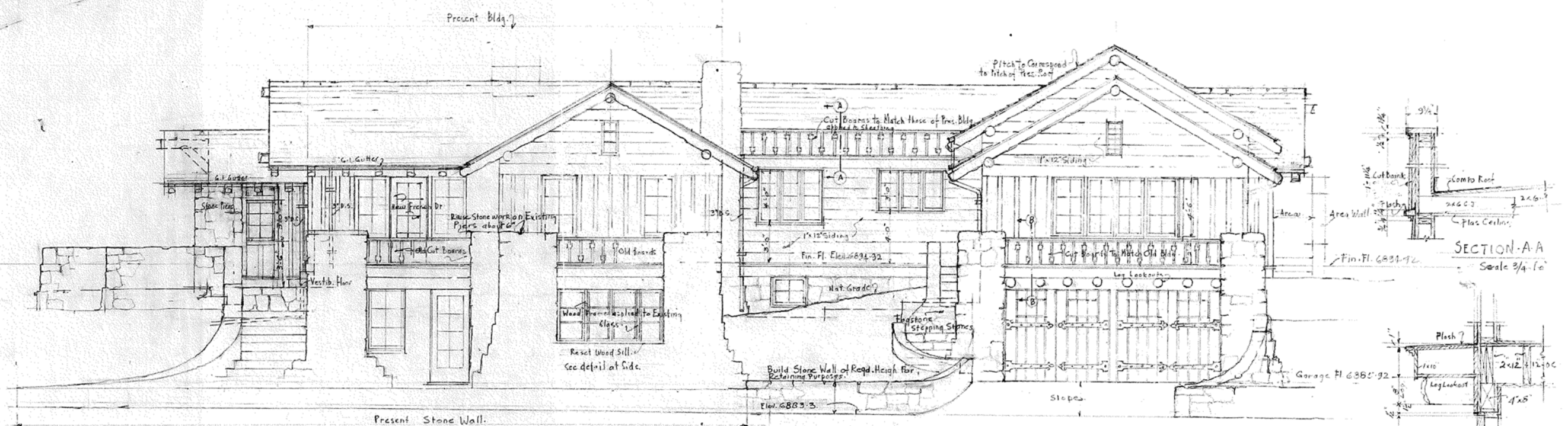
Recommended by *John C. Vint* Date *1/17/31* Dr. by A.P.B.  
 Concurred by *John C. Vint* Date *1/17/31* Tr. by A.P.B.  
 Approved by *John C. Vint* Date *1/17/31* CR by C.M.C.  
 U.S. DEPARTMENT OF INTERIOR NATIONAL PARK SERVICE DATE 4-11-31  
 GRAND CANYON NATIONAL PARK SHEET NO. 2  
 SUPERINTENDENT'S RESIDENCE  
 DESIGNED BY LANDSCAPE DIVISION



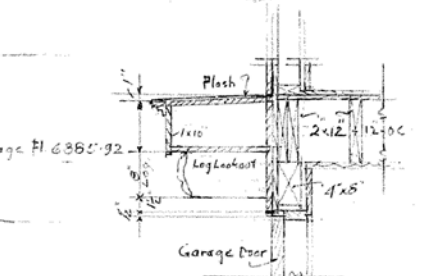
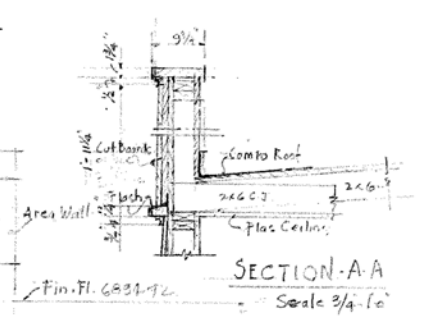


ROOF PLAN  
Scale 1/4" = 1'-0"

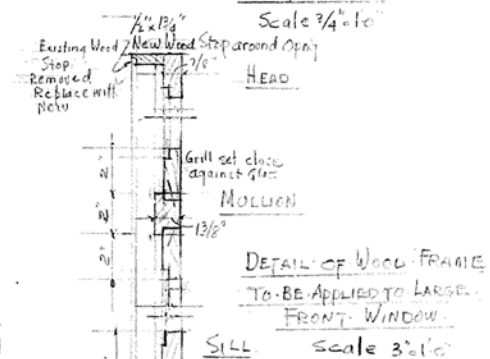
Recommended <i>L. C. Vint</i>	Date <i>7/1/31</i>	Dr. by A.P.B.
Concurred <i>W. H. Johnson</i>	Date <i>7/1/31</i>	Tr. by A.P.B.
Approved <i>W. H. Johnson</i>	Date <i>7/1/31</i>	CK by C.M.C.
U.S. DEPARTMENT OF INTERIOR NATIONAL PARK SERVICE		Date 4-11-31
GRAND CANYON NATIONAL PARK		SHEET NO. 3
SUPERINTENDENT'S RESIDENCE		OF 7 SHEETS
DESIGNED BY LANDSCAPE DIVISION		JOB NO. GC 3121-A



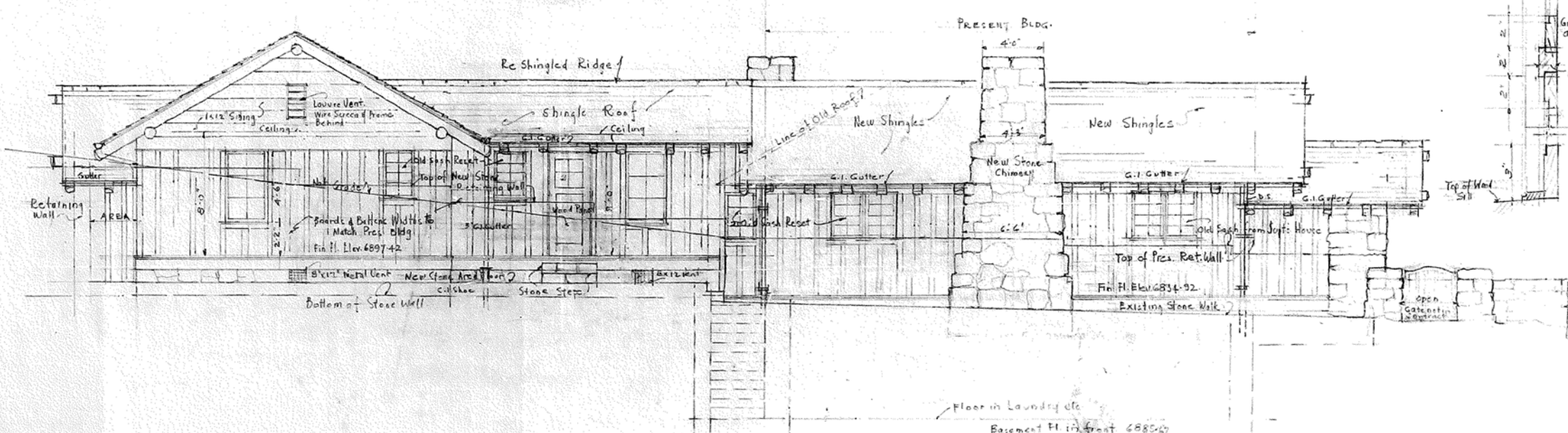
SOUTH ELEVATION  
Scale 1/4"=1'-0"



SECTION B-B  
Scale 3/4"=1'-0"



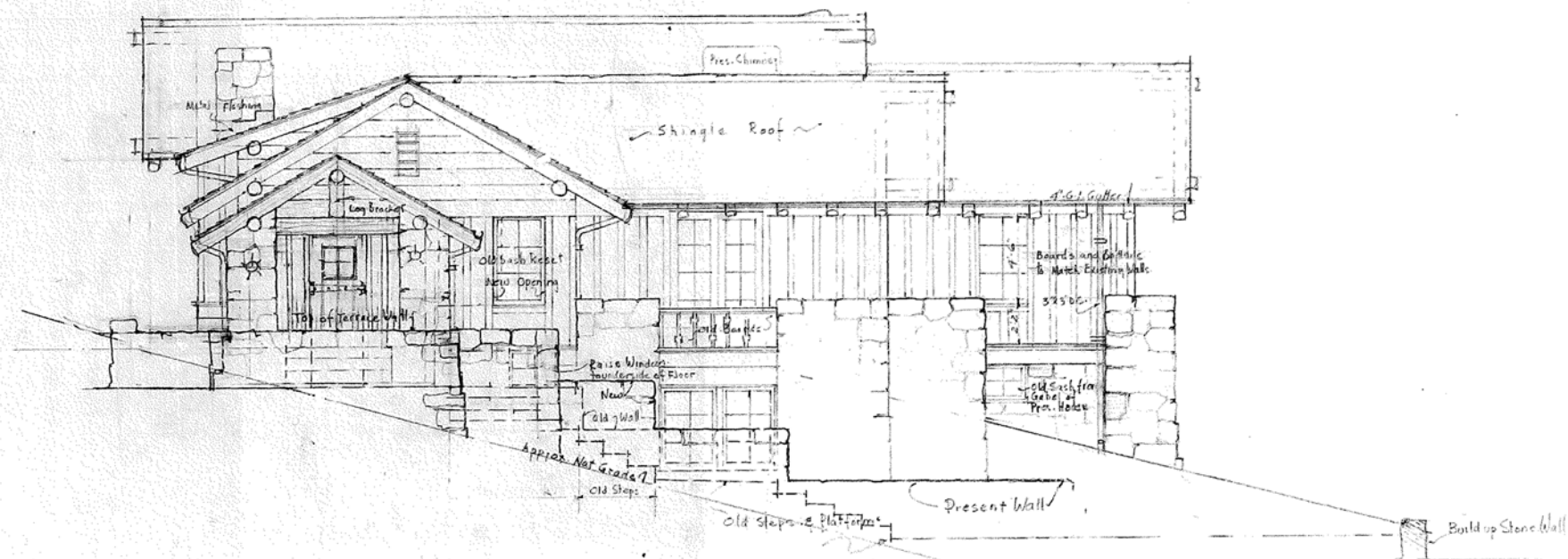
DETAIL OF WOOD FRAME  
TO BE APPLIED TO LARGE FRONT WINDOW  
Scale 3"=1'-0"



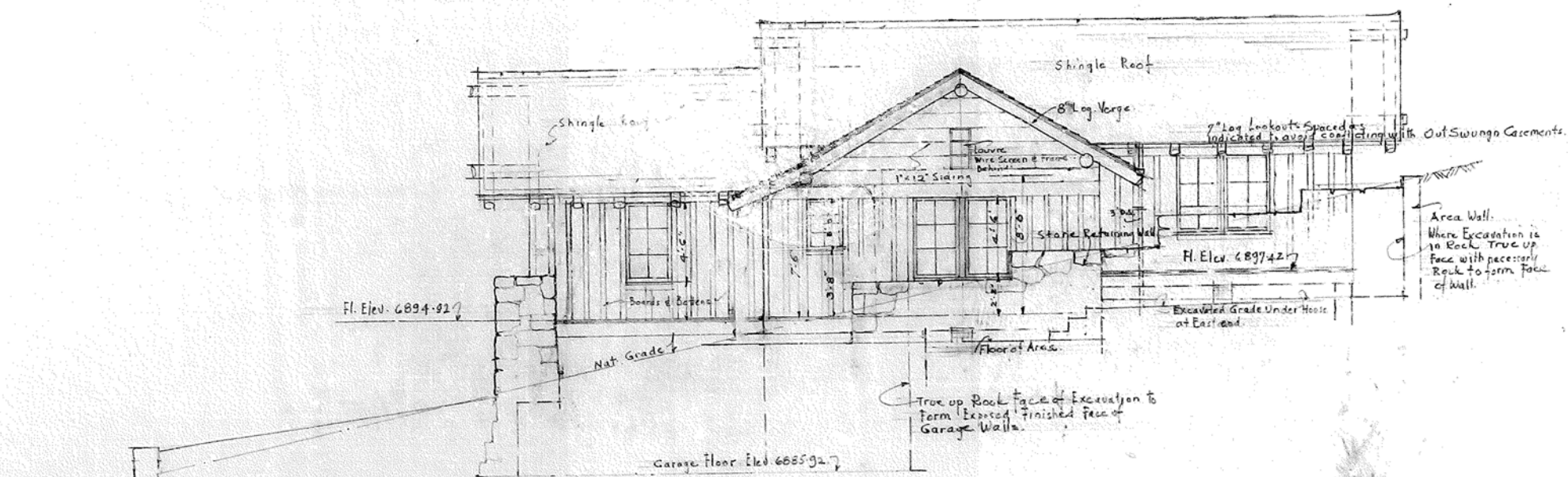
NORTH ELEVATION  
Scale 1/2"=1'-0"

Recommended *St. C. Vint* Date *9/1/31* By *A.P.S.*  
Chief Landscape Architect  
Concurred *W. H. Johnson* Date *7/1/31* Tr by *A.P.S.*  
Superintendent  
Approved *Wm. H. Johnson* Date *6/2/31* Ch. by *C.M.C.*  
Director National Park Service  
U.S. DEPARTMENT OF INTERIOR NATIONAL PARK SERVICE  
GRAND CANYON NATIONAL PARK  
SUPERINTENDENT'S RESIDENCE  
DESIGNED BY LANDSCAPE DIVISION  
DATE 4-11-31  
SHEET # 4  
OF 7 SHEETS  
JMS:H  
GC 5121-A



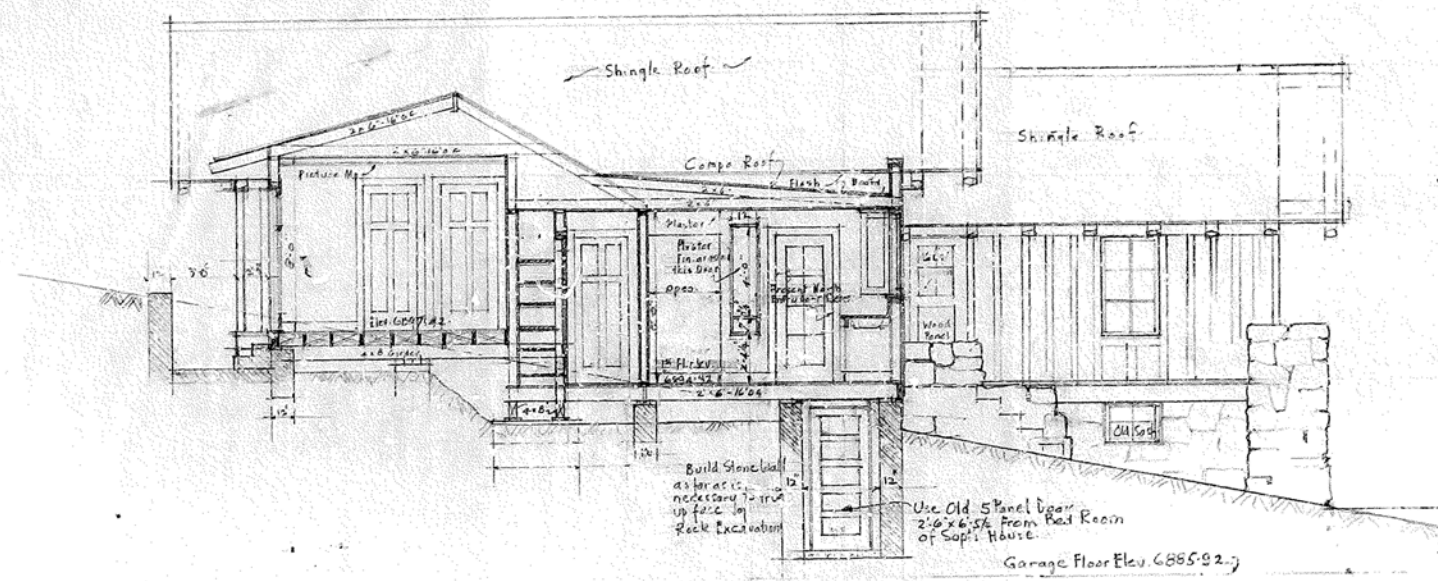


WEST ELEVATION  
Scale 1/4" = 1'-0"

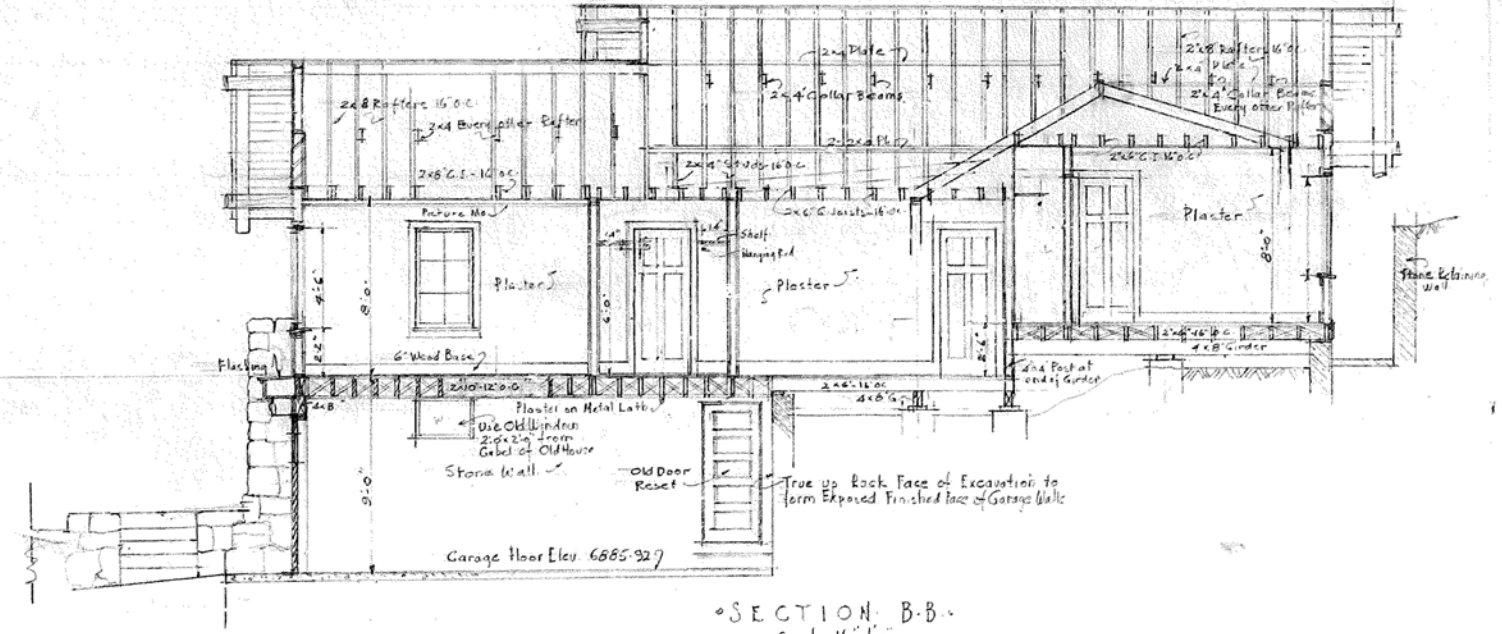


EAST ELEVATION  
Scale 1/4" = 1'-0"

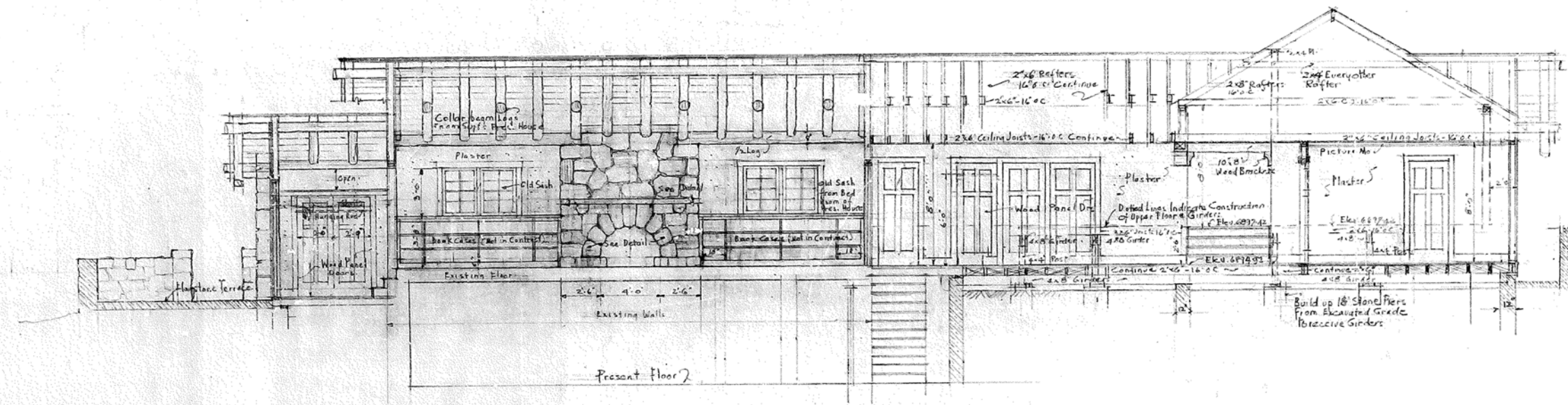
Recommended	<i>J. C. Hunt</i>	Date 4/17/31	Dr. by APB
Concurred	<i>W. H. Watson</i>	Date 4/17/31	Tr. by APB
Approved	<i>W. H. Watson</i>	Date 4/17/31	Cr. by CMC
Director, National Park Service			
U. S. DEPARTMENT OF INTERIOR, NATIONAL PARK SERVICE			DATE 4-11-31
GRAND CANYON NATIONAL PARK			SHEET No. 5
SUPERINTENDENT'S RESIDENCE			JOB No.
DESIGNED BY LANDSCAPE DIVISION			GC 31214



SECTION A-A  
Scale 1/4"=1'-0"



SECTION B-B  
Scale 1/4"=1'-0"



SECTION C-C  
Scale 1/4"=1'-0"

Recommended	<i>[Signature]</i> Chief Landscape Architect	Date 4/9/31	Dr by A.P.R.
Consented	<i>[Signature]</i> Superintendent	Date 4/10/31	Tr by A.P.R.
Approved	<i>[Signature]</i> Director National Park Service	Date 4/10/31	Ch by CMC
U.S. DEPARTMENT OF INTERIOR NATIONAL PARK SERVICE			DATE 4-11-31
GRAND CANYON NATIONAL PARK			SHEET N° 6
SUPERINTENDENT'S RESIDENCE			Job N°
DESIGNED BY LANDSCAPE DIVISION			GC-3121-A

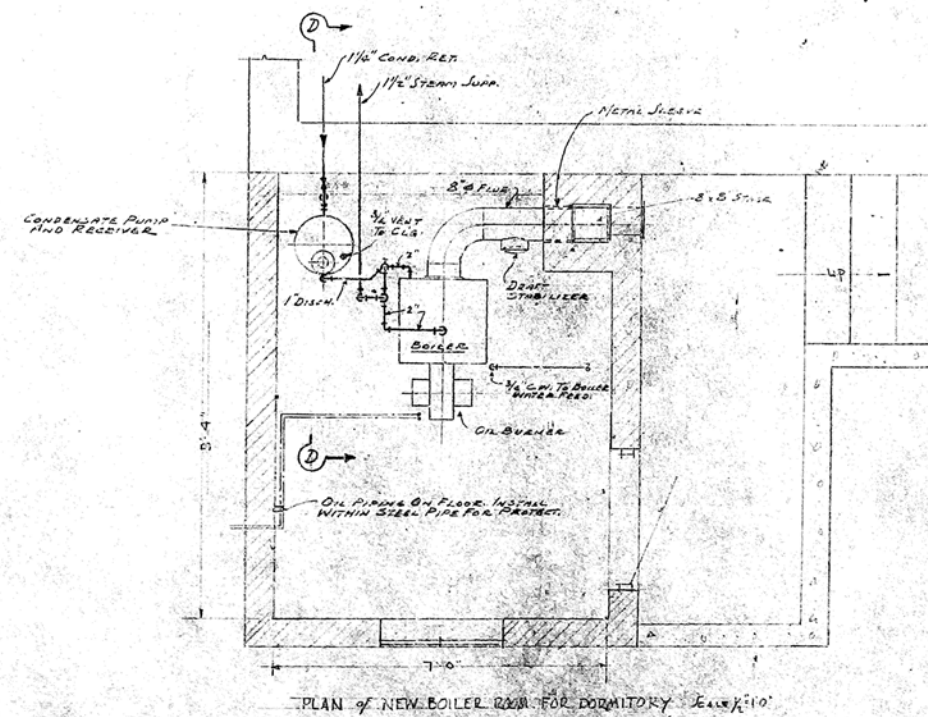
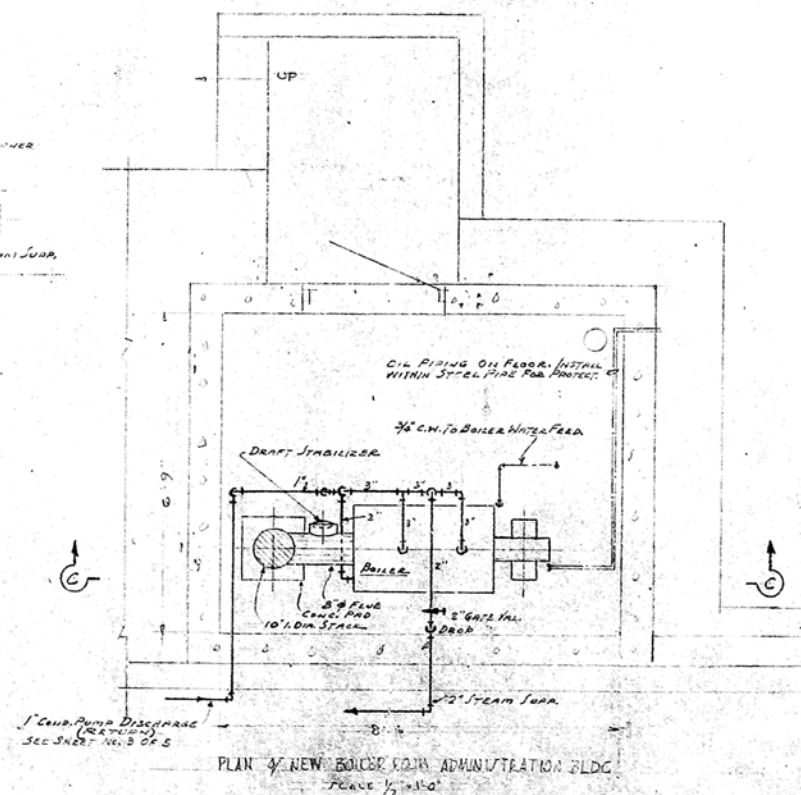
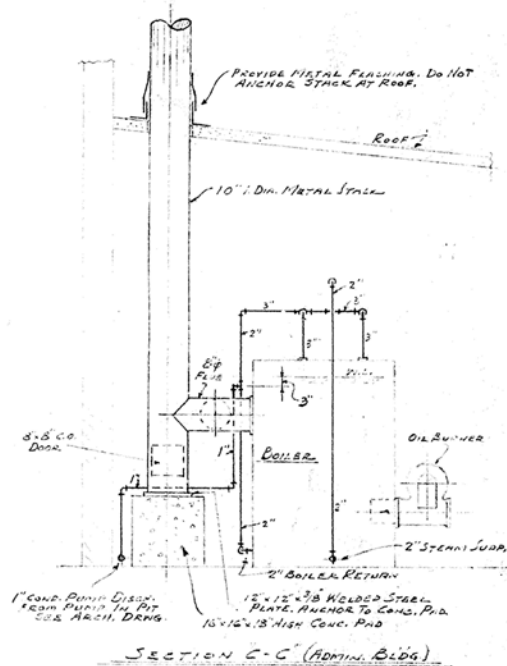
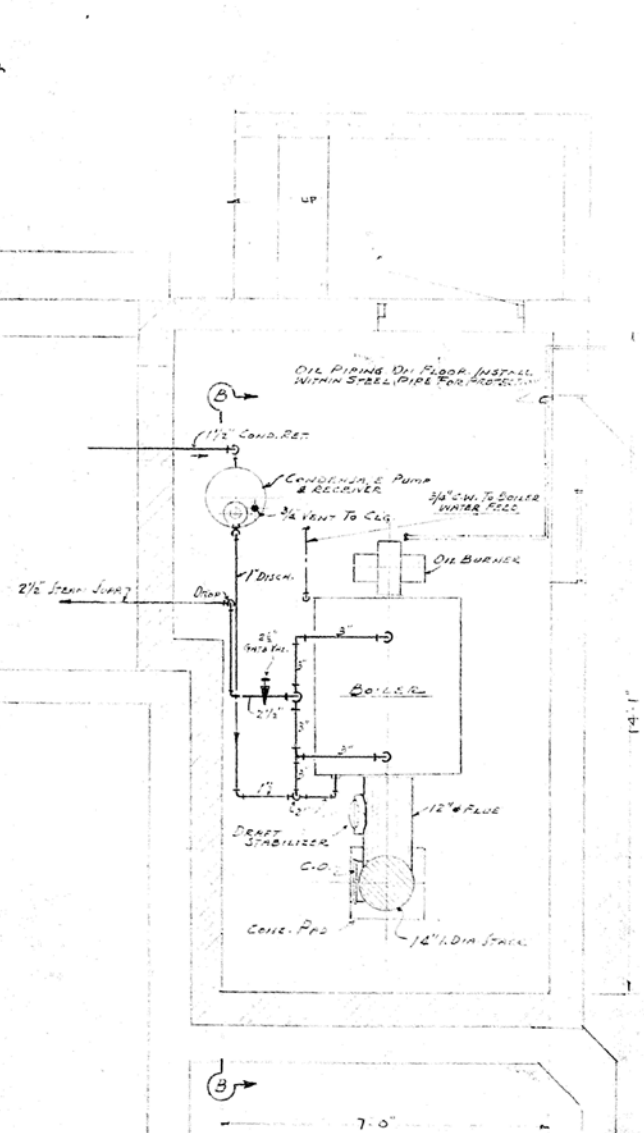
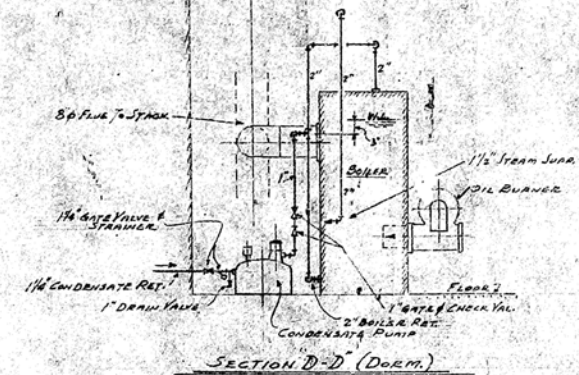
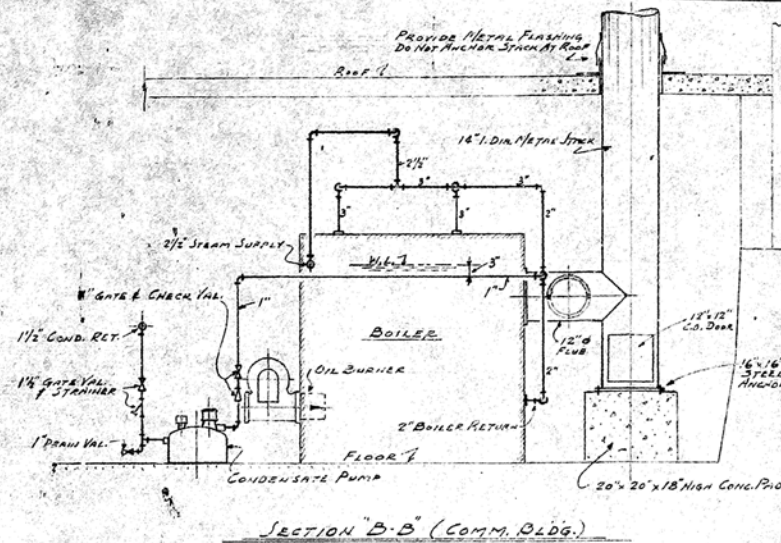
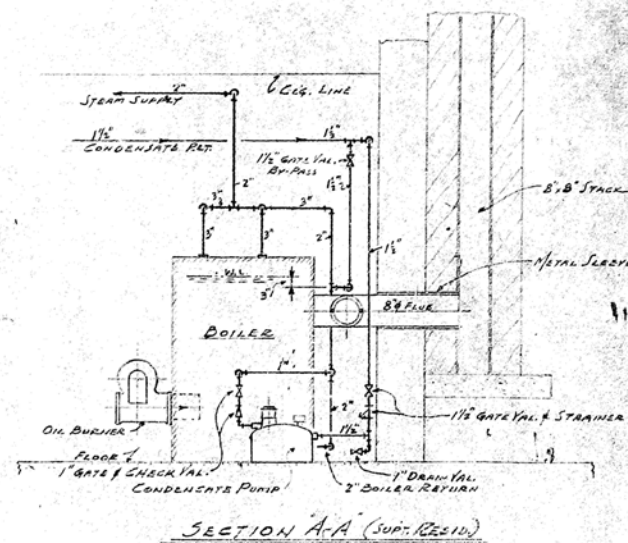
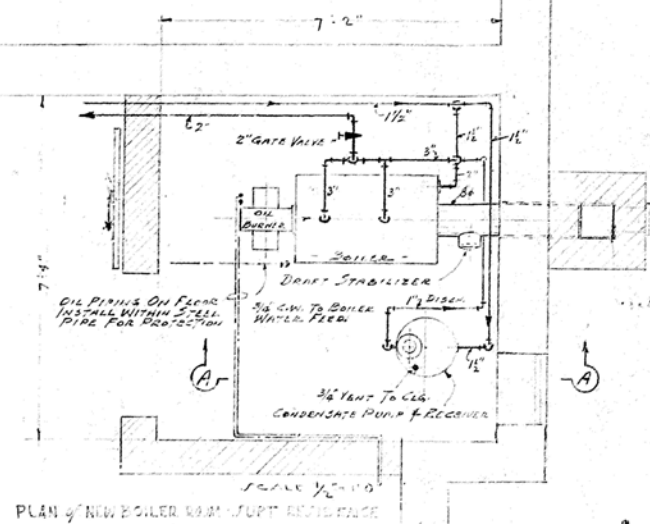












COMMUNITY BUILDING - SEE SHEET No. 1045 FOR CONTINUATION OF STEAM, CONDENSATE AND OIL PIPING  
JURY RESIDENT RES. - do No. 2045 do do do  
ADMINISTRATION BLDG. - do No. 3045 do do do  
DORMITORY BLDG. - do No. 4045 do do do



ORIENTATION  
REVIEWED

OPERATIONS  
REGION

WASHINGTON

INTERP.  
REGION

WASHINGTON

COOP. ACTV.  
REGION

WASHINGTON

DES. & CONST.  
STERN

A.

L.A. WASHINGTON

A.

E. L.A.

OTHER

PREPARED

DESIGNED

DRAWN

CHECKED

REVISED

DATE INITIAL

REGION

THREE

PCP

4-89

SHEET 5 OF 5

DRAWING NO.

N.P.

G.C. 2051

DATE MAY-1950

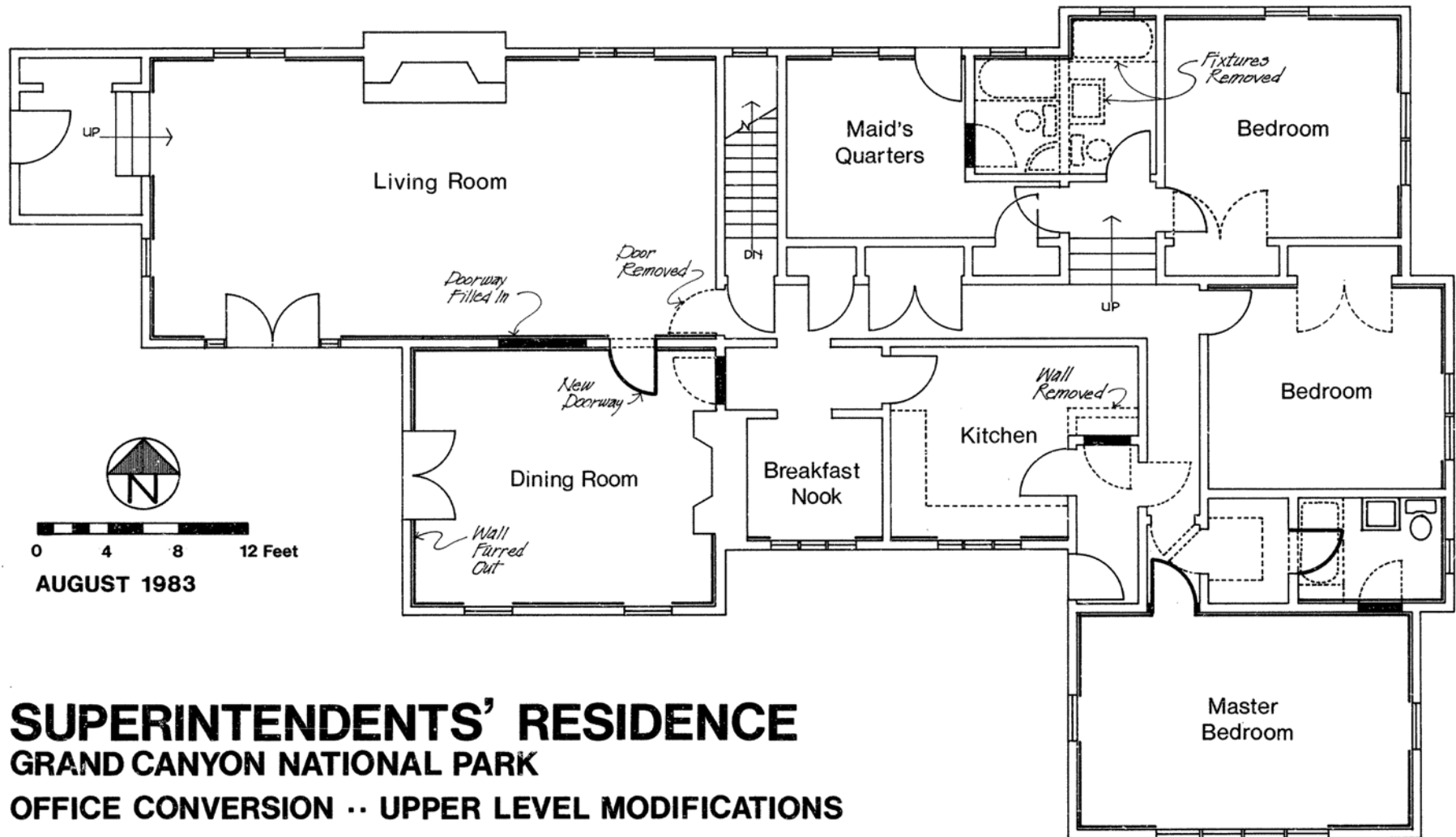
RECOMMENDED	DATE	
	UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE REGIONAL ARCHITECT PREPARED BY REGIONAL ARCHITECT OFFICE	
	HEATING PLANTS FOR JURY RES. COMMUNITY BLDG. DORMITORY ADMIN. BLDG.	
	HEADQUARTERS, L.A. AREA LOCATION WITHIN AREA GRAND CANYON NATIONAL PARK NAME OF AREA	
APPROVED <i>Harlan J. Price</i>		

# Administration Building

(1921)

# Residential Addition

(1931)



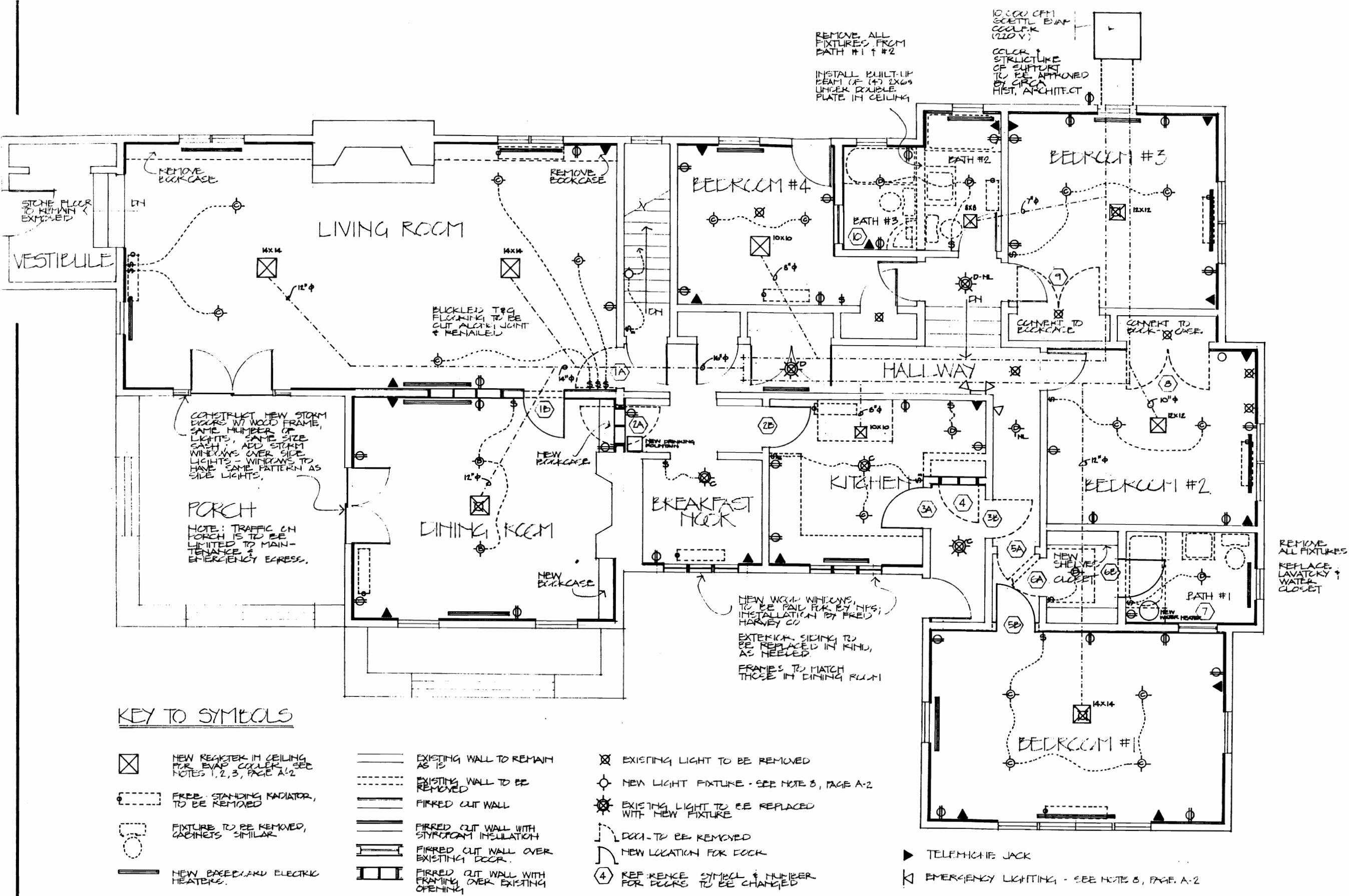
## SUPERINTENDENTS' RESIDENCE

### GRAND CANYON NATIONAL PARK

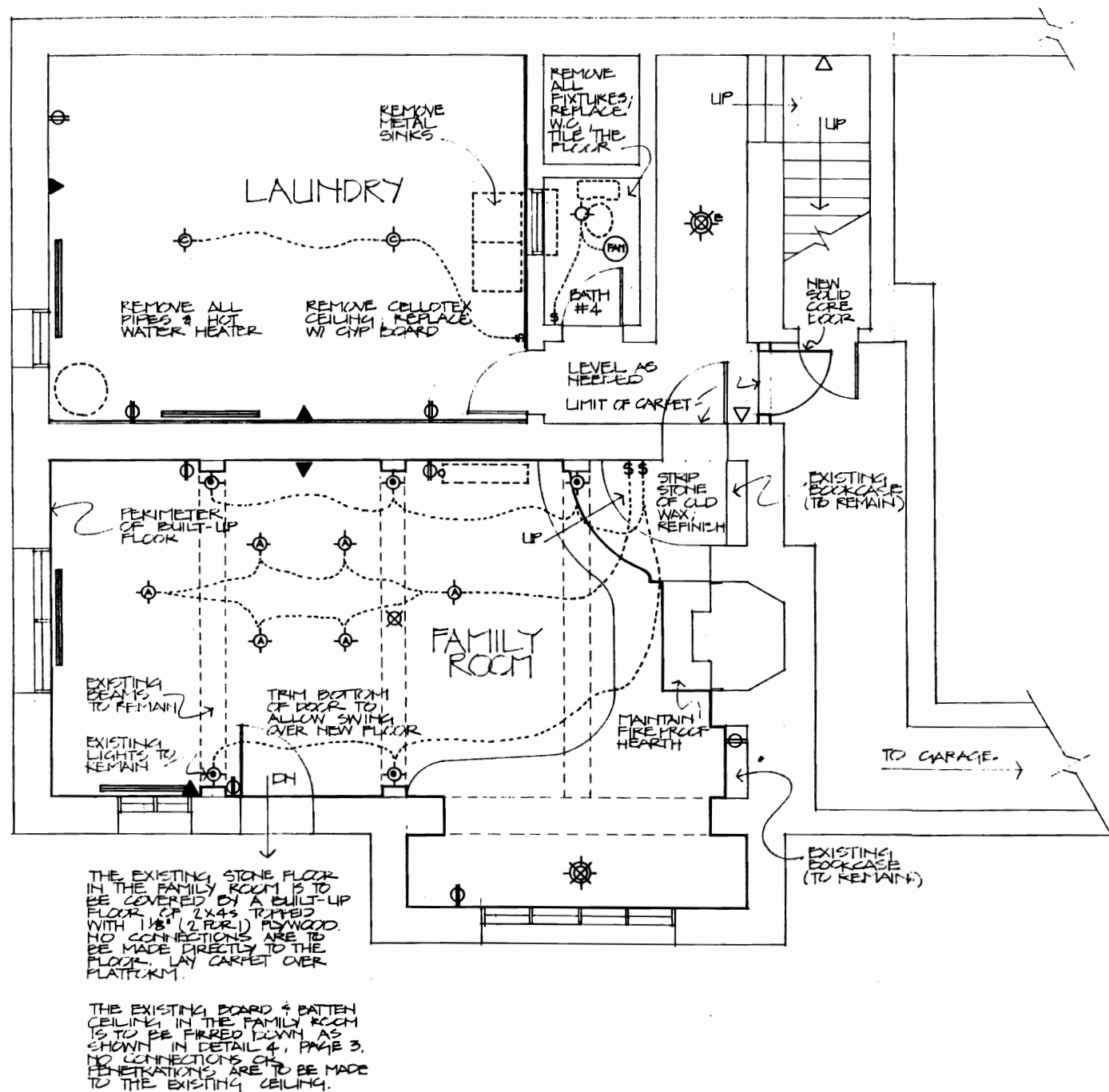
### OFFICE CONVERSION -- UPPER LEVEL MODIFICATIONS

REDUCED SIZE REPRODUCTION

113/60620 1 of 1







## DOOR SCHEDULE

REF. NO.	DISPOSITION
1	MOVE DOOR FROM #1A TO #1B
2	MOVE DOOR FROM #2A TO #2B OR LEAVE #2A IN THE WALL IF THE ORIGINAL SWINGING DOOR FOR #2B CAN BE LOCATED. CONVERT #2B TO STANDARD EDGE HUNG UNIT. USE HARDWARE FROM DOOR #7.
3	MOVE DOOR FROM #3D TO #3A
4	REMOVE & STORE DOOR; USE DOOR KNOB ON INSIDE OF #6B
5	MOVE DOOR FROM #5A TO #5B
6	MOVE DOOR FROM #6A TO #6B
7	LEAVE DOOR IN WALL, USE HARDWARE ON DOOR #2B.
8+1	REMOVE & STORE

NOTE: DEAD BOLTS ARE TO BE INSTALLED IN ALL OFFICE DOORS.

## GENERAL NOTES:

### MECHANICAL

- ALL SHEET METAL DUCTS IN THE ATTIC ARE TO BE INSULATED.
- ALL ROUND PIPE IS TO BE FLEXIBLE.
- REGISTERS ARE TO BE LENLY #2500 OR EQUAL.

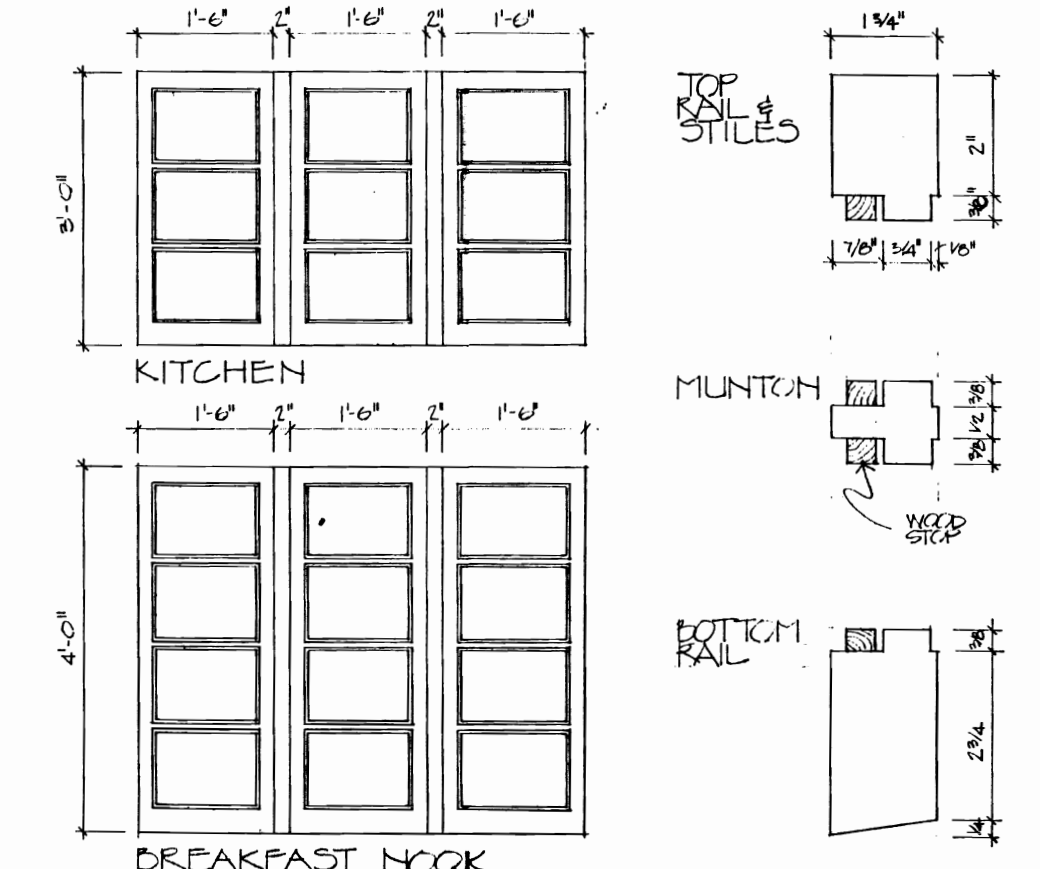
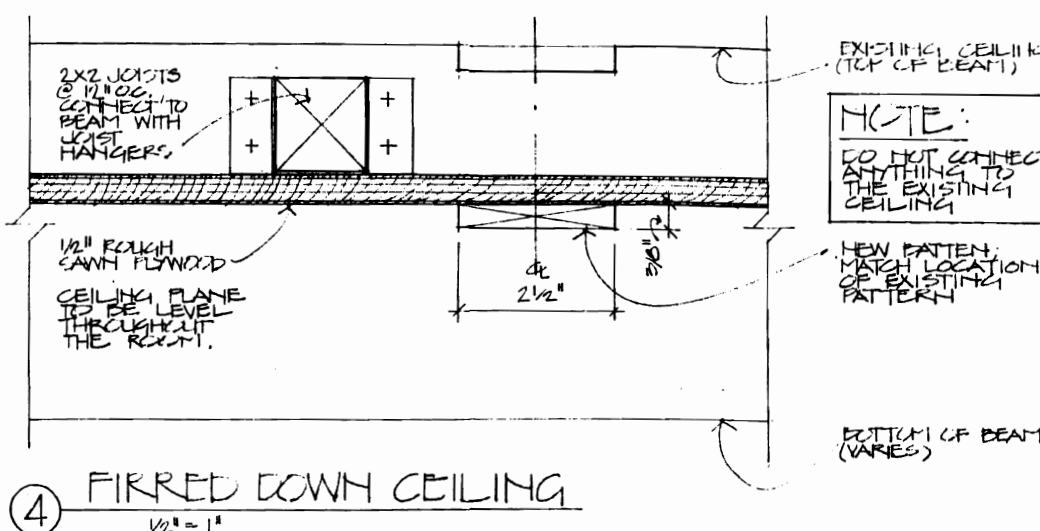
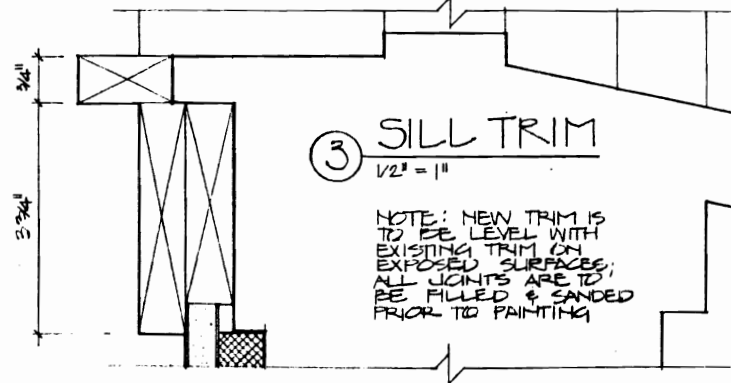
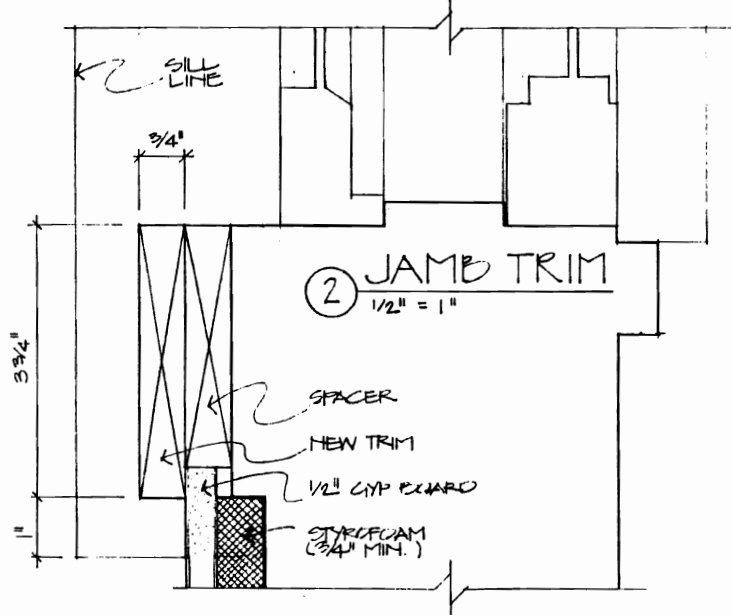
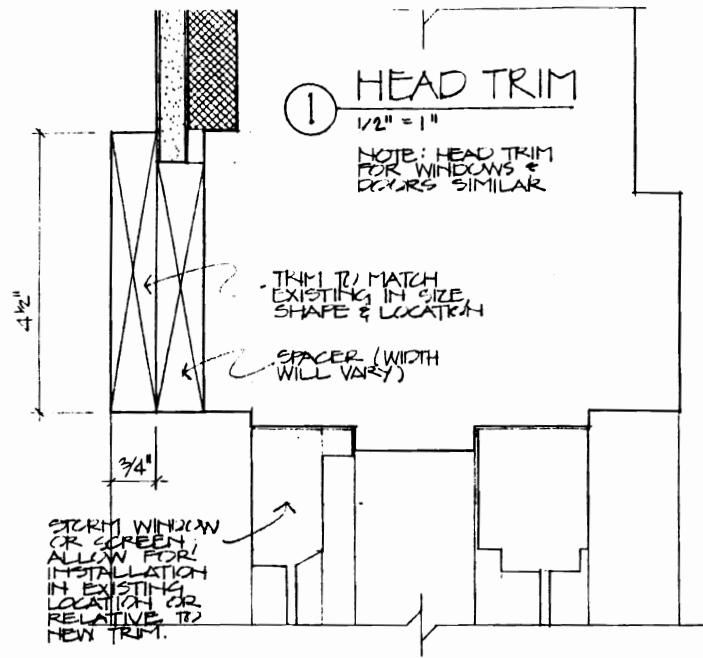
### ELECTRICAL

- NIGHT LIGHT
- ALL OLD WIRE REMOVED & REPLACED
- NO WIRE SMALLER THAN #12.
- NEW ELECTRICAL PANEL TO BE INSTALLED ON EXTERIOR, TO REPLACE 3 EXISTING PANELS, 200 AMP SERVICE.
- FIXTURES:
  - "A" - SWG1
  - "B" - SWA
  - "C" - LB440A LITHONIA
  - "D" - LB240A LITHONIA
  - "E" - (RECESSED CAN)

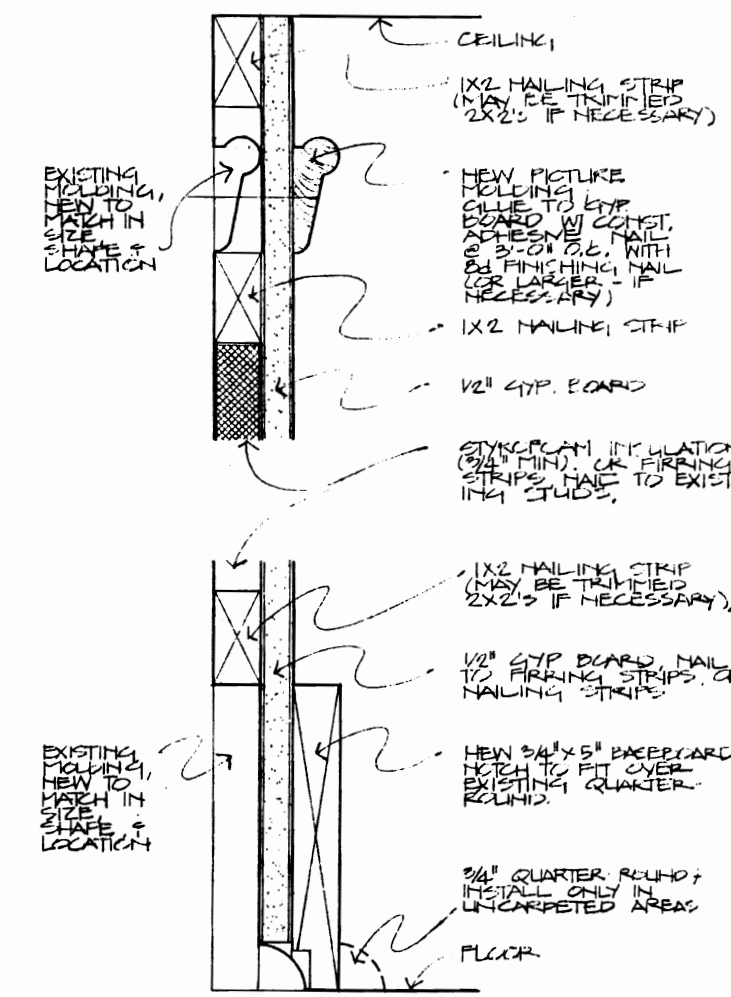
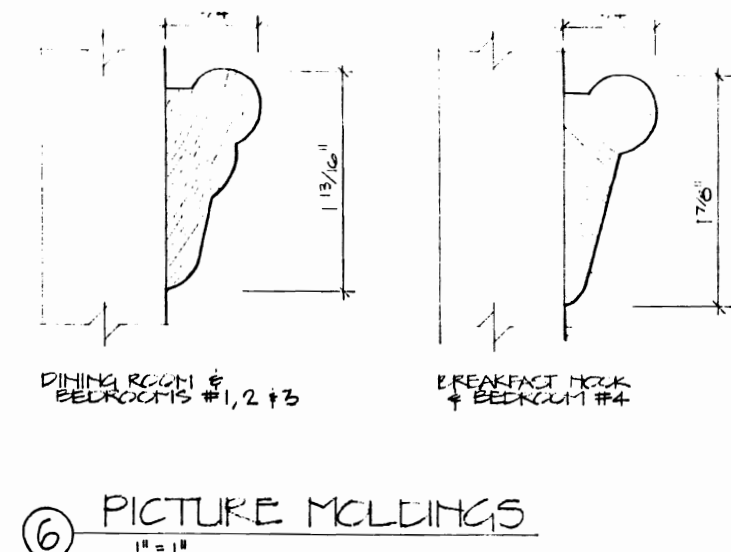
EMERGENCY LIGHTING - ELU-2 LITHONIA

### OTHER

- ALL INFILL FRAMING IS TO BE INSTALLED USING DOUBLE-HEADED NAILS.
- ALL WROUGHT IRON CURTAIN RODS ARE TO BE REINSTALLED ON NEW TRIM OVER ORIGINAL LOCATION.
- WALLS ARE TO BE REPAINTED EXISTING COLOR.
- FLOORS ARE TO BE CARPETED EXCEPT AS NOTED ON PLANS.
- FRED HARVEY CO. REP'S. ARE TO PACK, MARK & STORE IN A SAFE PLACE WITHIN THE BUILDING, ALL HISTORIC LIGHTING FIXTURES.
- NPS IS TO REMOVE & DISPOSE OF ALL PIPES, RADIANT HEATERS, BULKER, AND MODERN PLUMBING FIXTURES.
- NPS IS TO REMOVE HISTORIC FURNITURE IDENTIFIED BY THE GRCA HISTORIC ARCHITECT FOR STORAGE IN A SAFE & SECURE LOCATION.
- ALL NEW WORK IS TO BE STAMPED WITH THE DATE OF CONSTRUCTION, IN AN INCONSPICUOUS PLACE.



⑤ REPLACEMENT WINDOWS



⑦ FIRRED OUT WALLS

PROJECT NO:	REVISIONS
DRAWN BY: EGG 10/9/83	BY: DATE:
CHECKED BY:	

## **APPENDIX C**

### **ARCHITECTURAL DRAWINGS & PHOTOGRAPHIC DOCUMENTATION OF EXISTING CONDITIONS**

---

Drawings of the First Administration Building as it currently exists were created by the project team based on field measurements. The following are contained in this section:

- Site Plan
- Roof Plan
- Upper Level Floor Plan
- Lower Level Floor Plan
- South Elevation
- North Elevation
- West Elevation
- East Elevation

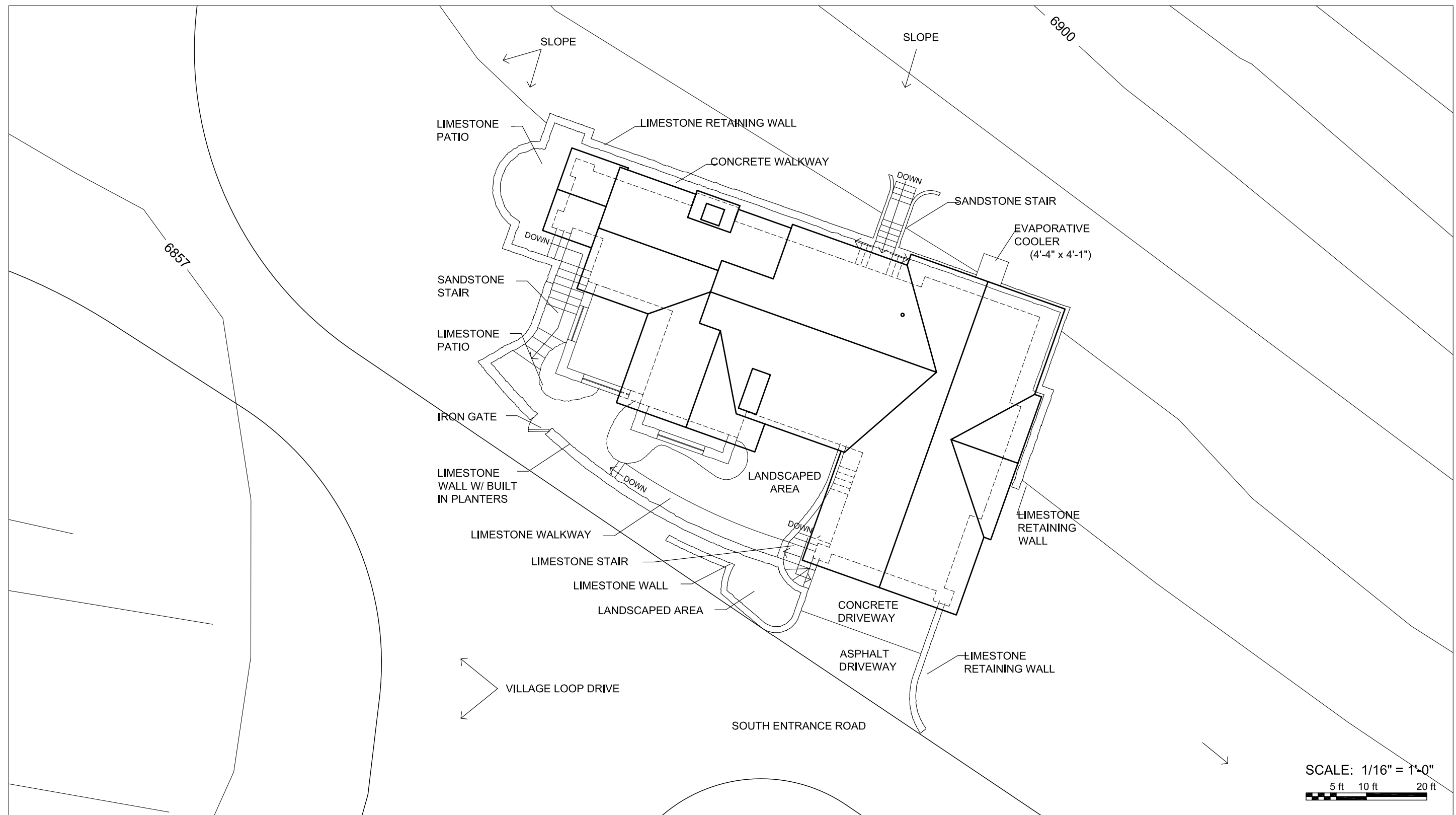
Additionally, the following condition assessment drawings are marked with deficiencies:

- Site Plan
- Roof Plan
- Upper Level Floor Plan
- Lower Level Floor Plan
- South Elevation
- North Elevation
- West Elevation
- East Elevation

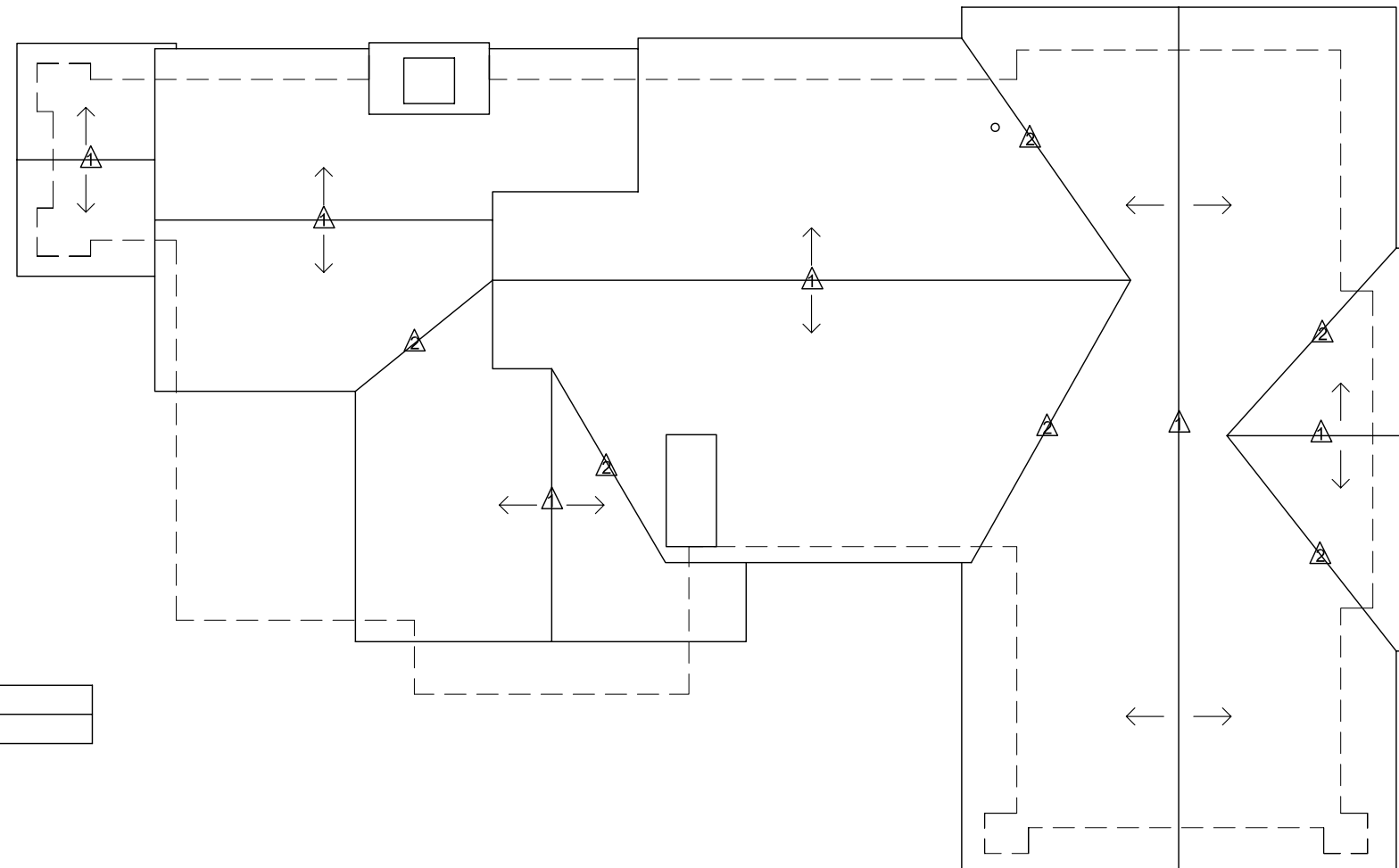
A disk containing photographic documentation of the First Administration Building was provided to Grand Canyon National Park with this report. Photographs were taken by The University of Arizona project team in March through January 2008. They show both character-defining features and deficiencies.

Additionally, historic photographs of the First Administration Building contained in the park's museum collection and maintenance files were scanned and saved to disk. This disk was provided to Grand Canyon National Park with this report.



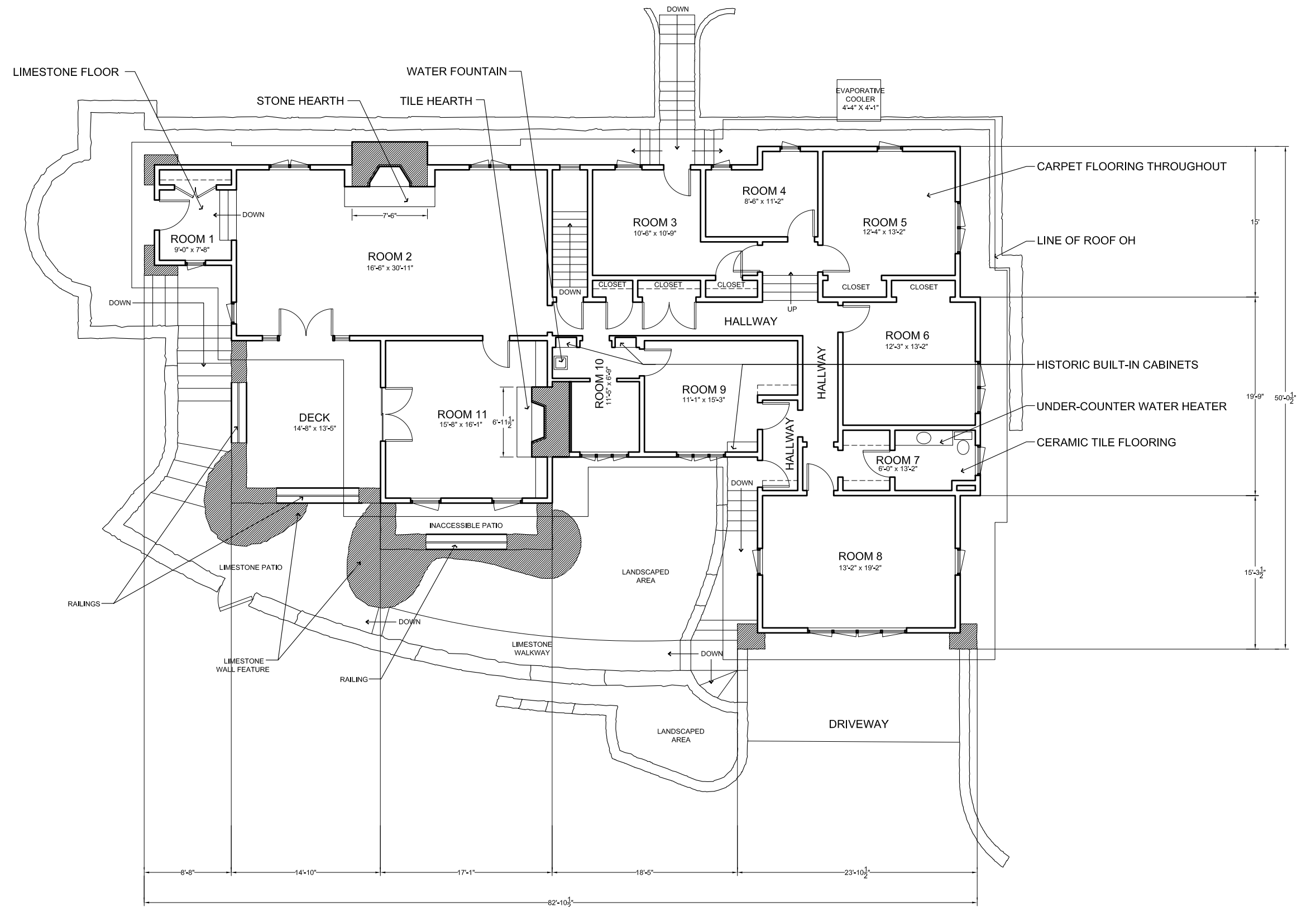




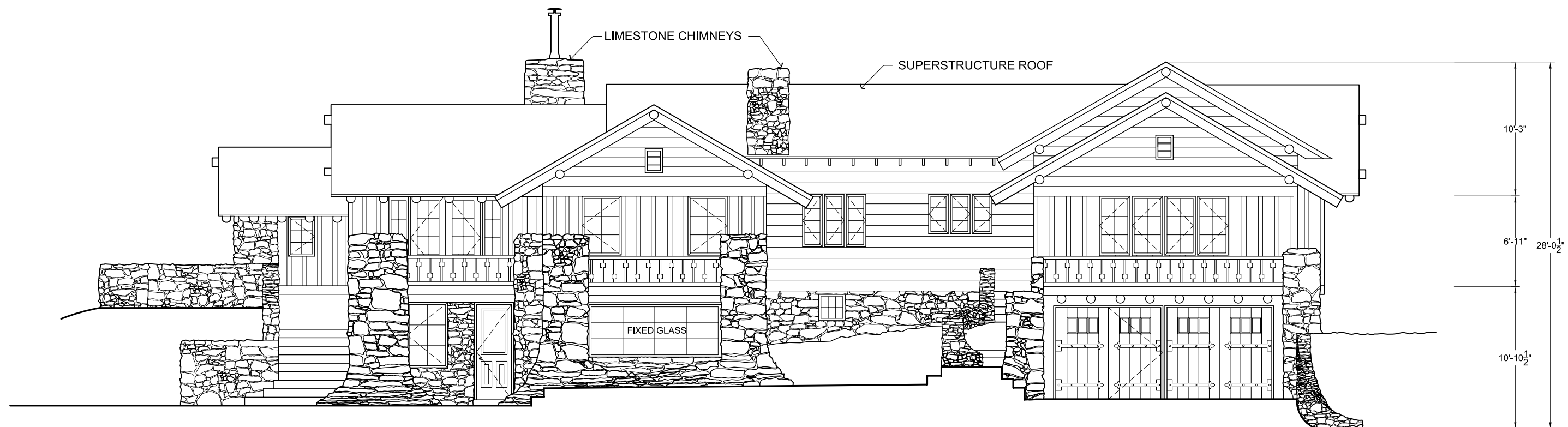


	Roof Ridge
	Roof Valley with Metal Flashing

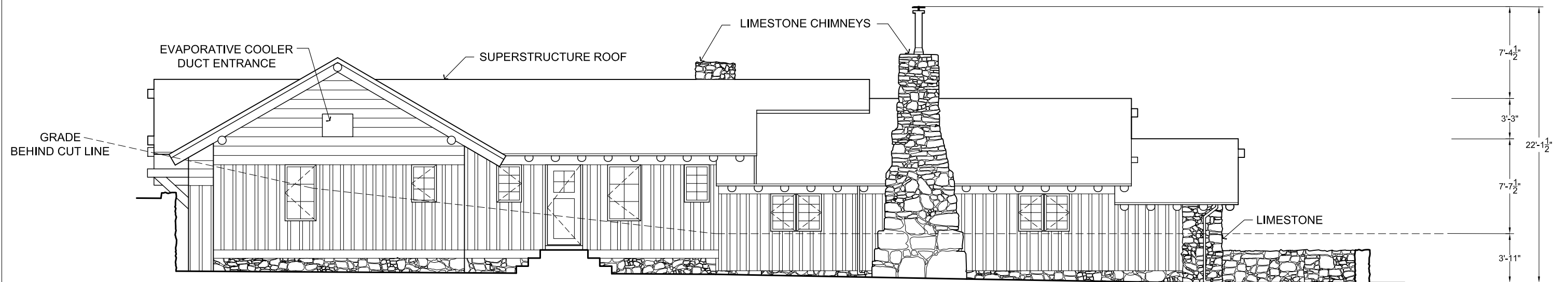






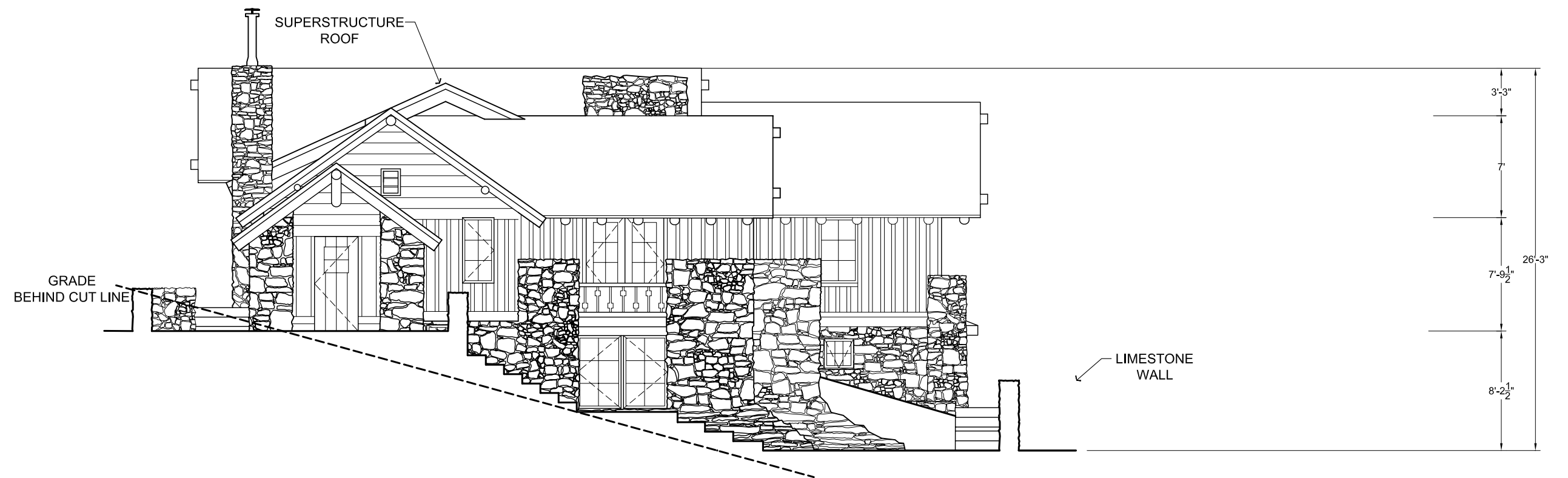


RENDERING INDICATES TYPE OF MASONRY NOT ACTUAL LOCATION AND SIZE OF INDIVIDUAL STONES

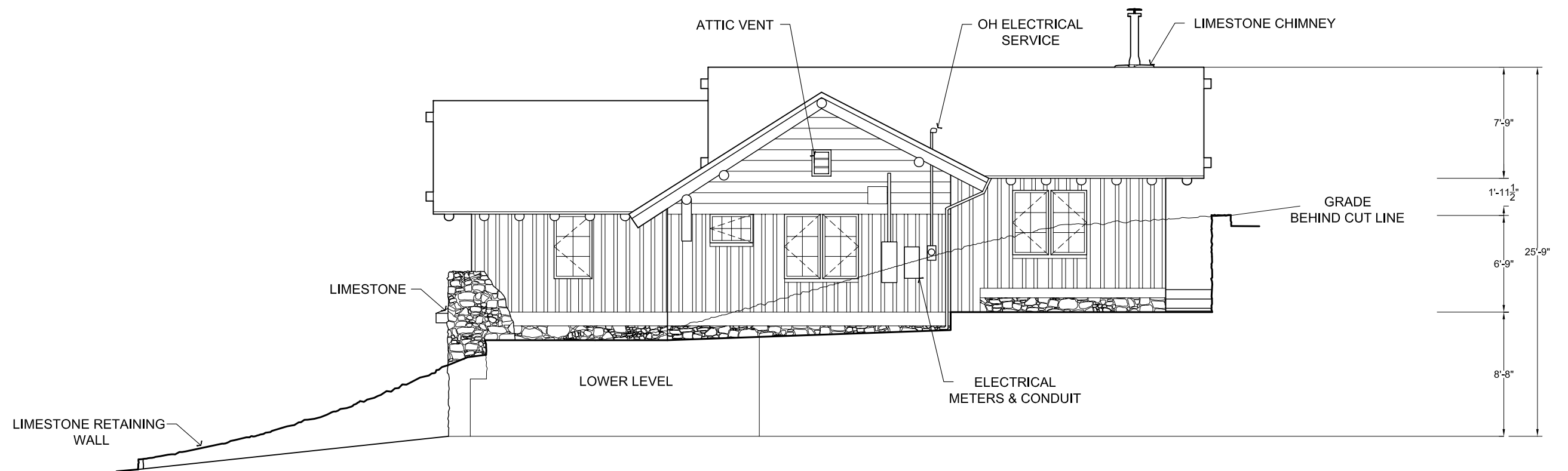


RENDERING INDICATES TYPE OF MASONRY NOT ACTUAL LOCATION AND SIZE OF INDIVIDUAL STONES

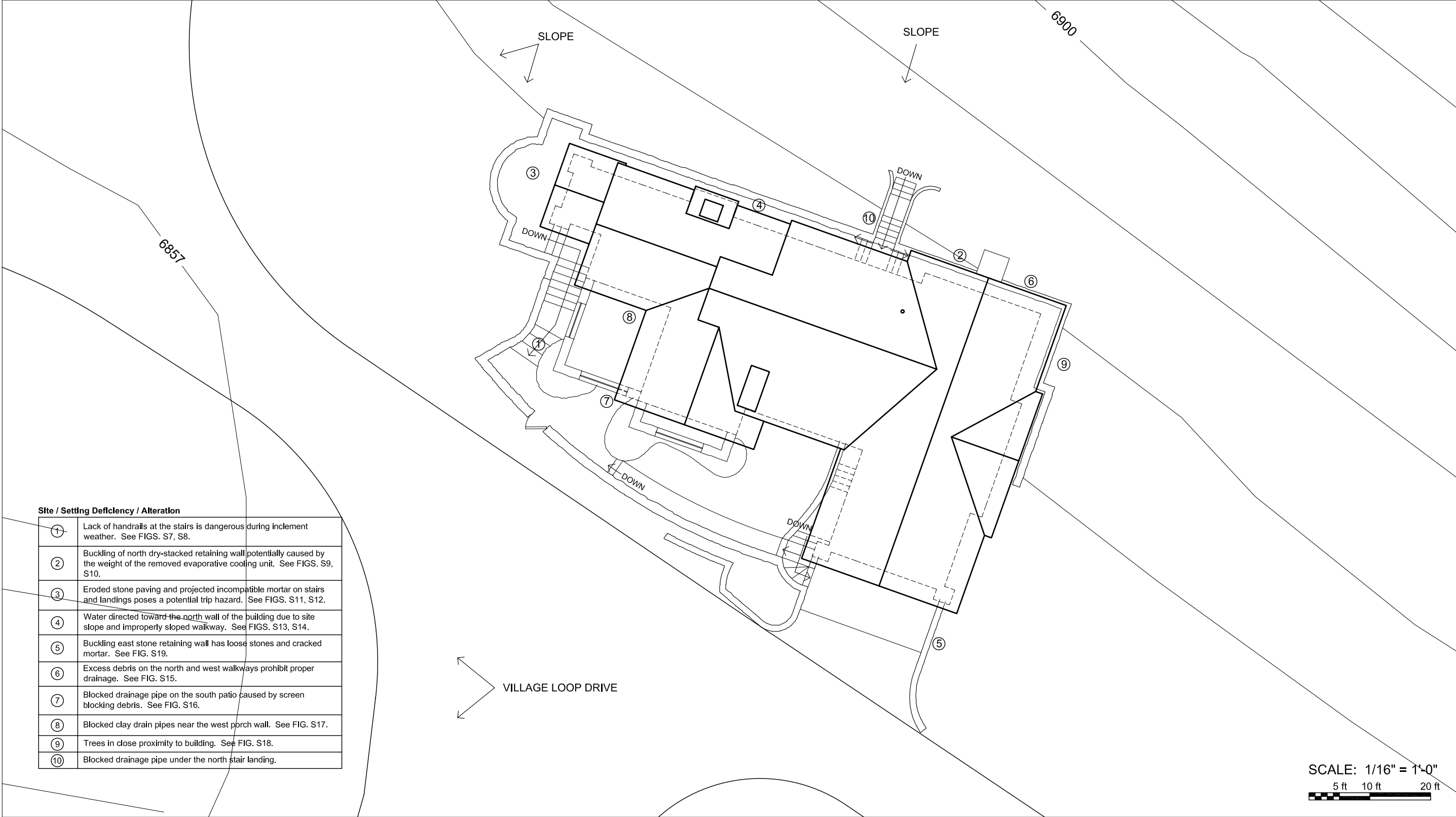




RENDERING INDICATES TYPE OF MASONRY NOT ACTUAL LOCATION AND SIZE OF INDIVIDUAL STONES

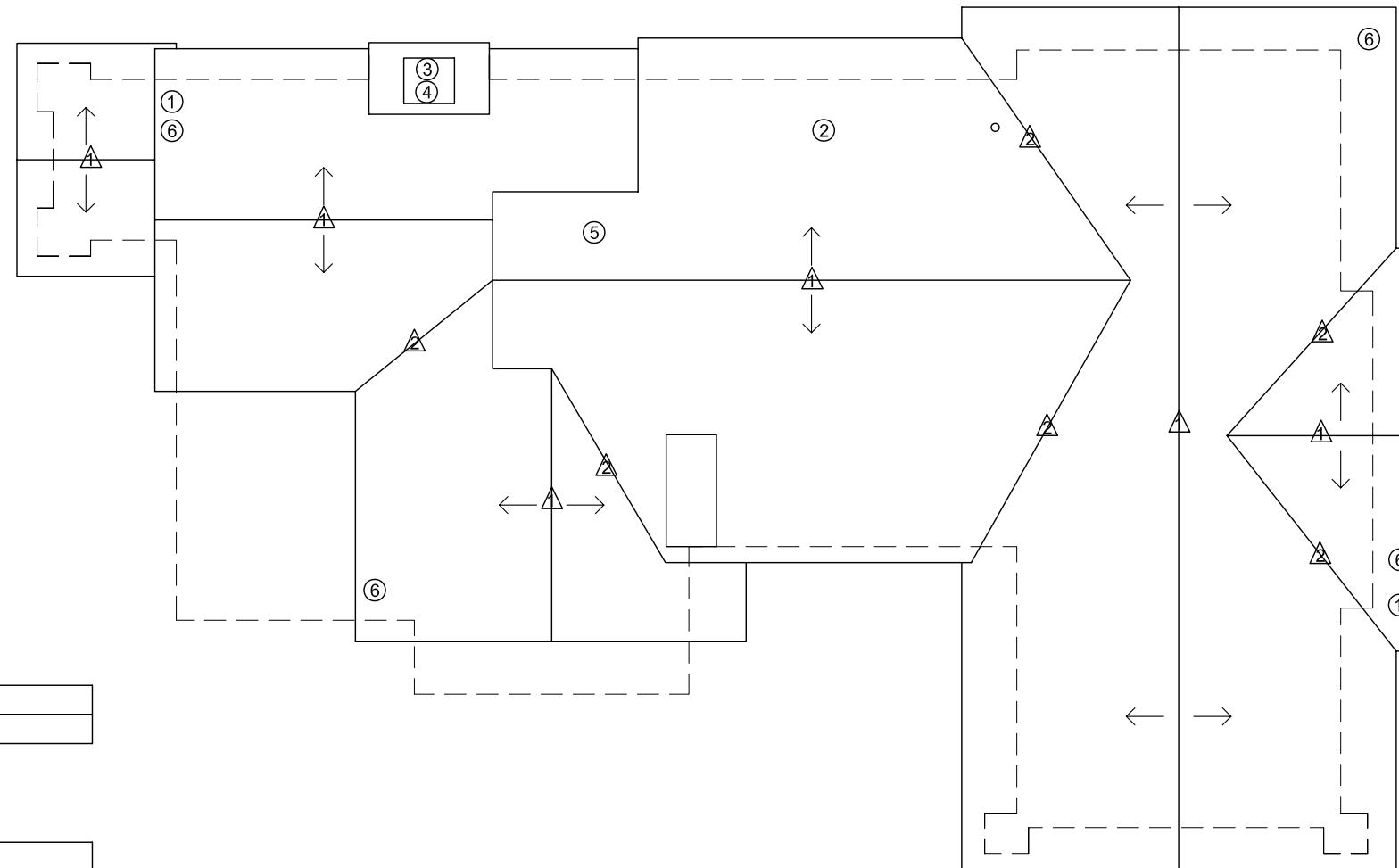


RENDERING INDICATES TYPE OF MASONRY NOT ACTUAL LOCATION AND SIZE OF INDIVIDUAL STONES



Site / Setting Deficiency / Alteration	
①	Lack of handrails at the stairs is dangerous during inclement weather. See FIGS. S7, S8.
②	Buckling of north dry-stacked retaining wall potentially caused by the weight of the removed evaporative cooling unit. See FIGS. S9, S10.
③	Eroded stone paving and projected incompatible mortar on stairs and landings poses a potential trip hazard. See FIGS. S11, S12.
④	Water directed toward the north wall of the building due to site slope and improperly sloped walkway. See FIGS. S13, S14.
⑤	Buckling east stone retaining wall has loose stones and cracked mortar. See FIG. S19.
⑥	Excess debris on the north and west walkways prohibit proper drainage. See FIG. S15.
⑦	Blocked drainage pipe on the south patio caused by screen blocking debris. See FIG. S16.
⑧	Blocked clay drain pipes near the west porch wall. See FIG. S17.
⑨	Trees in close proximity to building. See FIG. S18.
⑩	Blocked drainage pipe under the north stair landing.





	Roof Ridge
	Roof Valley with Metal Flashing

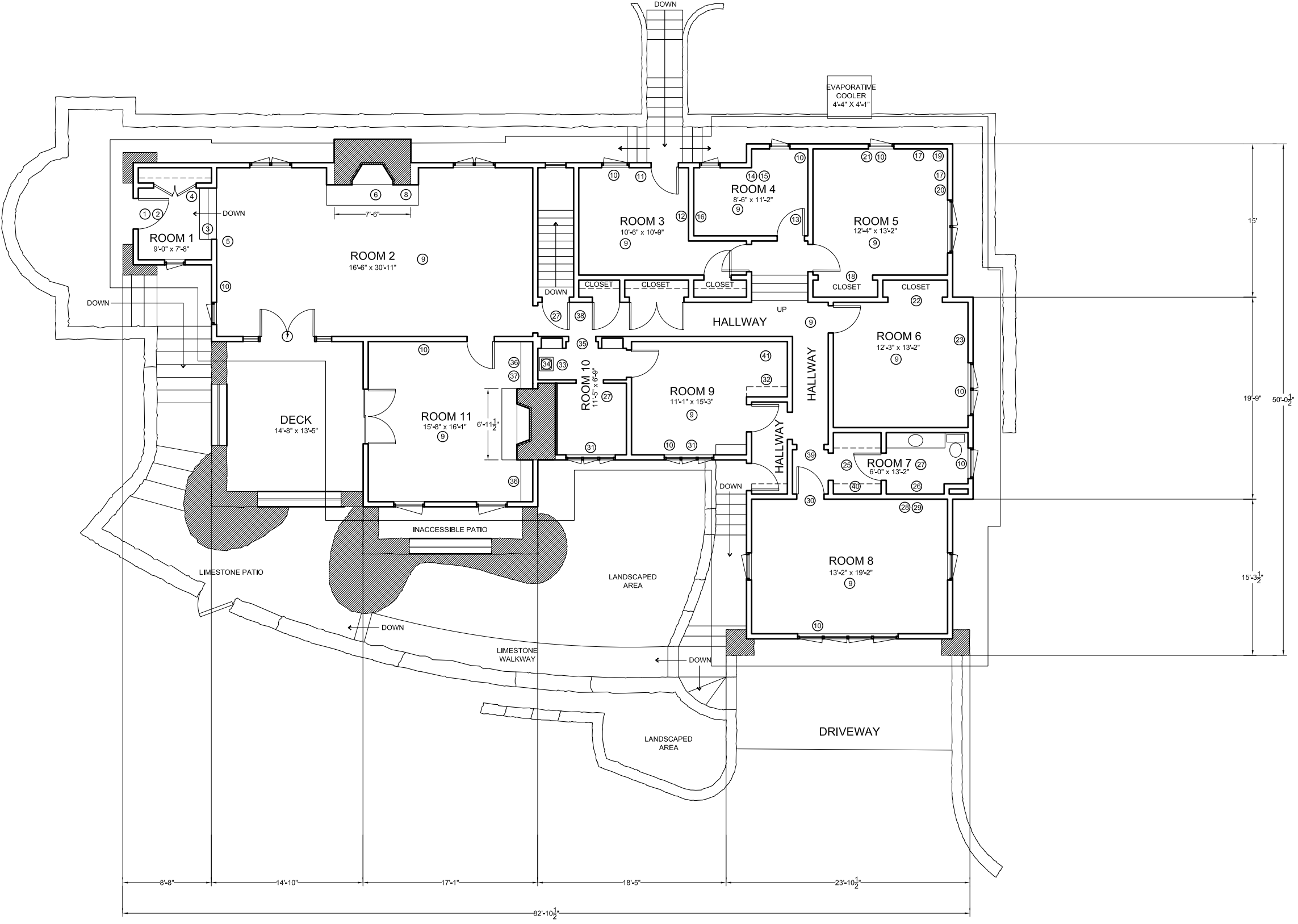
**Roof Deficiency/Alteration**

①	Decayed rafters and outriggers. See FIGS. E6, E8.
②	Insufficient and/or damaged collar ties in attic. See FIG. E10.
③	Displaced metal flue on chimney to Room Two. See FIG. E21.
④	Lack of spark arrester on Room Two chimney. See FIG. E21.
⑤	Presence of asphalt shingles on the earlier roof under a superimposed roof. See FIG. E9.
⑥	Damaged wood siding and/or roof sheathing. See FIGS. E29, E34 and E35.



Interior Deficiency / Alteration

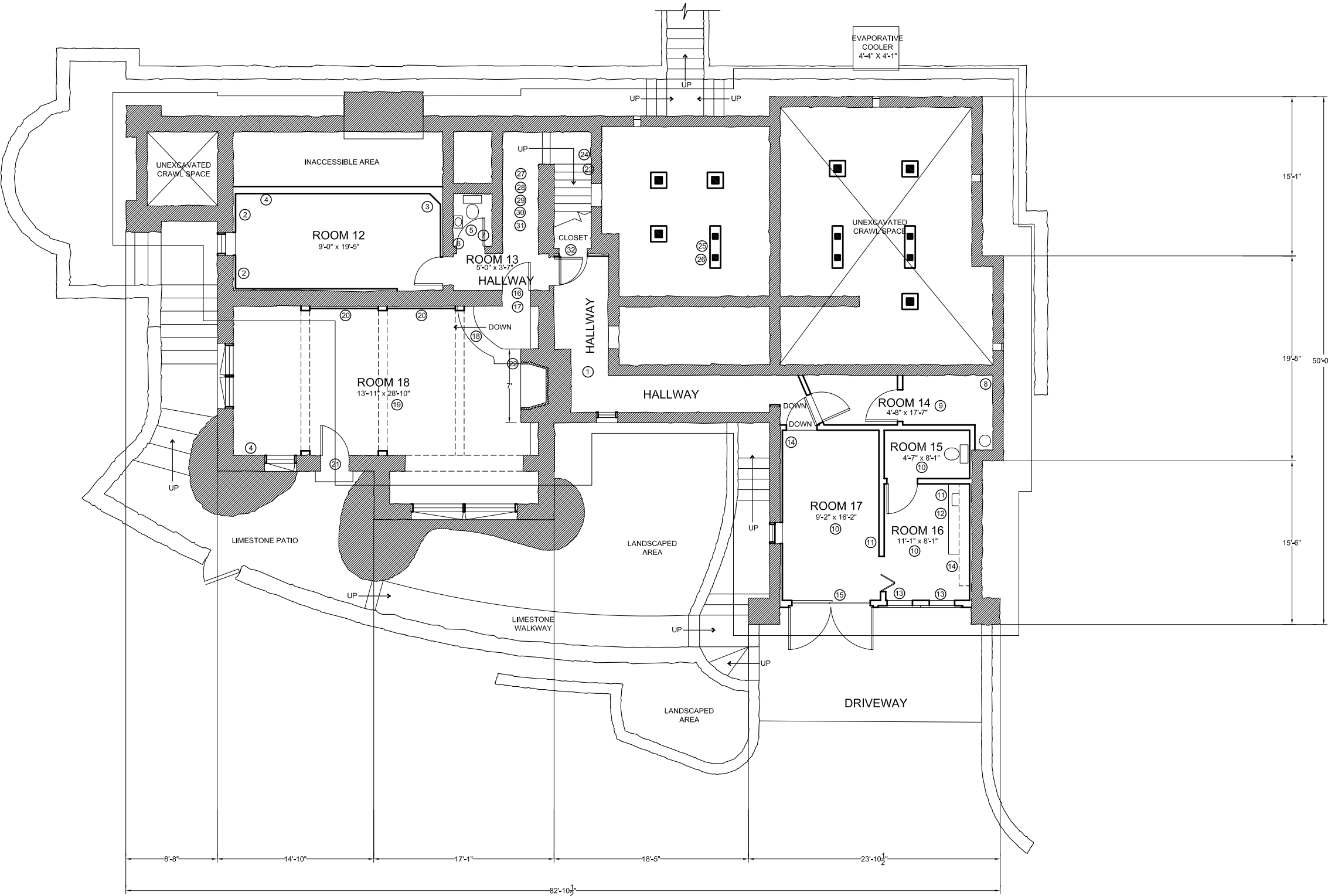
①	Cracked stone threshold at exterior door. See FIG. R1.4.
②	Cracked stone floor. See FIG. R1.4.
③	Lack of handrails at stair. See FIG. R1.2.
④	Plaster cracks at ceiling. See FIG. R1.5.
⑤	Modern suspended ceiling conceals original rustic ceiling and pitch of opening into Room One. See FIGS. R2.2, R2.7.
⑥	Modern fireplace screen of inappropriate design and shape. See FIGS. R2.4, R2.5.
⑦	French doors to patio currently blocked by furniture. See FIG. R2.3.
⑧	Faux-painted wood fireplace mantel. See FIG. R2.4.
⑨	Modern carpet. See FIGS. R2.8, R3.3, R4.5, R5.6, R6.6, R8.5, R9.2, R11.4, UH2.
⑩	Modern electric heaters. See FIGS. R2.9, R3.6, R4.5, R5.6, R6.6, R7.5, R8.4, R9.6, R11.6.
⑪	Concealed picture rail on the north wall. See FIG. R3.2.
⑫	In-filled opening to Room Four. See FIGS. CD2 and CD3 in the <i>Chronology of Development &amp; Use</i> section, and FIG. R3.4.
⑬	Missing deadbolt in door. See FIG. R4.3.
⑭	Removed north-south partition wall. See FIG. R4.4.
⑮	Exposed wiring on the north side of the structural remnant of a north-south ceiling partition. See FIG. R4.4.
⑯	In-filled opening to Room Three. See FIGS. CD2 and CD3 in the <i>Chronology of Development &amp; Use</i> section, and FIG. R3.4 in the <i>Room Three</i> section.
⑰	Concealed picture rail on the north and east walls. See FIG. R5.2.
⑱	Missing closet doors. See FIGS. R5.3.
⑲	Exposed wiring in the northeast corner. See FIG. R5.4.
⑳	Improper junction of picture rail. See FIG. R5.5.
㉑	Damaged weather-stripping on north window. See FIG. R5.7.
㉒	Missing closet doors. See FIG. R6.2.
㉓	Concealed picture rail on the east wall. See FIG. R6.3.
㉔	Exposed wiring in the southwest corner. See FIG. R6.4.
㉕	Removed partition wall. See FIGS. R7.3, R7.4 and FIGS. CD2 and CD3 in the <i>Chronology of Development &amp; Use</i> section.
㉖	In-filled opening to Room Eight. See FIG. R7.3, and FIGS. CD2 and CD3 in the <i>Chronology of Development &amp; Use</i> section.
㉗	Modern tile floor. See FIGS. R7.5, R10.7, UH9.
㉘	Exposed wiring on the north wall. See FIG. R8.3.
㉙	In-filled opening to Room Seven. See FIG. R8.3 and FIGS. CD2 and CD3 in the <i>Chronology of Development &amp; Use</i> section.
㉚	Alteration of north entryway. See FIG. R8.5 and FIGS. CD2 and CD3 in the <i>Chronology of Development &amp; Use</i> section.
㉛	Modern windows. See FIGS. R9.3, R10.2.
㉜	Altered wall configuration on the east side of the room. See FIG. R9.5 and FIGS. CD2 and CD3 in the <i>Chronology of Development &amp; Use</i> section.
㉝	In-filled opening to Room Eleven. See FIG. R10.5 and FIGS. CD2 and CD3 in the <i>Chronology of Development &amp; Use</i> section.
㉞	Modern wall-mounted drinking fountain. See FIG. R10.5.
㉟	Light switch mounted on door trim. See FIG. R10.7.
㊱	Modern built-in bookshelves. See FIG. R11.3.
㊲	In-filled opening to Room Ten. See FIG. R11.3 and FIGS. CD2 and CD3 in the <i>Chronology of Development &amp; Use</i> section.
㊳	Door to lower level stair blocks upper level hallway when open. See FIG. UH4.
㊴	Sloped floor at the south side of the north-south hallway. See FIG. UH6.
㊵	Inaccessible fuse box. See FIG. UH7.
㊶	Altered wall configuration at southwest entrance. See FIG. UH8.

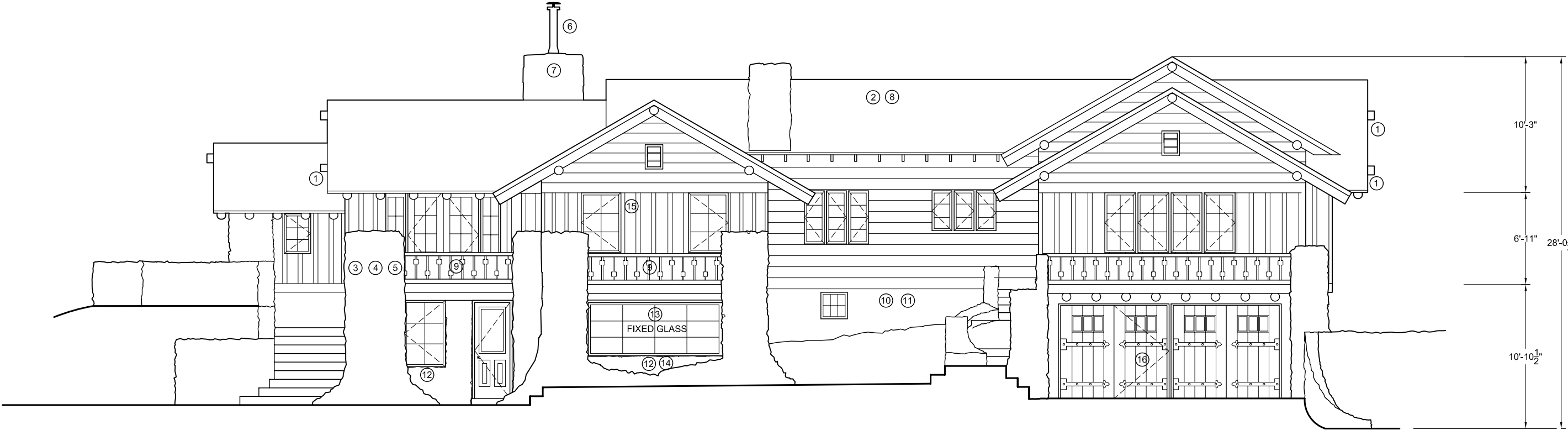




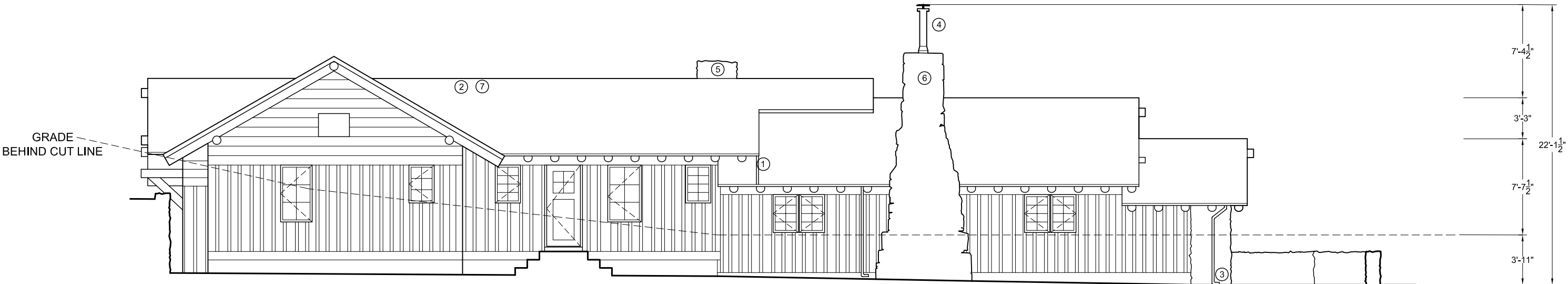
Interior Deficiency / Alteration

①	Egress path interrupted by intervening rooms (Rooms Seventeen and Eighteen).
②	Modern gypsum walls conceals exposed stone walls. See FIGS. R12.2, R12.3.
③	Alteration of wall configuration. See FIG. R12.2 and FIGS. CD2 and CD3 in the <i>Chronology of Development &amp; Use</i> section.
④	Modern electric heaters. See FIGS. R12.6, R18.11.
⑤	Modern seamless resilient flooring damaged by moisture penetration. See FIG. R13.3.
⑥	Ceiling plaster covers door frame. See FIG. R13.4.
⑦	Split door rail and stile. See FIGS. R13.5, R13.6.
⑧	Gaps between building materials allow rodent access into interior. See FIGS. R14.4, R14.5.
⑨	Room is not fully sheathed to prevent fire spread into the wall and ceiling structure. See FIG. R14.3.
⑩	Modern carpet and seamless resilient flooring. See FIGS. R15.2, R16.1, R17.1.
⑪	Alteration of wall configuration. See FIGS. R16.1 and 17.1, and FIGS. CD2 and CD3 in the <i>Chronology of Development &amp; Use</i> section.
⑫	Modern cabinets in Room Sixteen. See FIG. R16.2.
⑬	Windows blocked in Room Sixteen. See FIGS. R16.3, R16.4.
⑭	Modern propane and electric heaters. See FIGS. R16.6, 17.3.
⑮	Modern sliding glass door in Room Seventeen. See FIG. R17.1.
⑯	Interior door lock prevents safe egress from other lower level rooms. See LH7 in the <i>Lower Level Hallways and Stairwell</i> section.
⑰	Interior door blocks lower level hallway when open.
⑱	Modern carpet on raised floor. See FIG. R18.3.
⑲	Modern suspended ceiling masks original rustic ceiling above. See FIG. R18.5.
⑳	Modern cork boards mounted on north wall. See FIG. R18.6.
㉑	Exterior door does not properly seal. See FIG. R18.11.
㉒	Modern iron handrail at staircase. See FIG. R18.2.
㉓	Loose handrail on west stairwell wall. See FIGS. LH2, LH3.
㉔	Water damage on the north exposed stone stairwell wall. See FIG. LH5.
㉕	Missing beam support in crawlspace. See FIG. LH11.
㉖	Displaced stones in crawlspace. See FIG. LH11.
㉗	Downward-sloping floor toward Room Eighteen. See FIG. LH7.
㉘	Insufficient hallway width for egress-compliance.
㉙	Dead-end hallway created when interior door to Room Seventeen locked.
㉚	Modern carpet stained. See FIG. LH7.
㉛	Hallway dimly lit. See FIG. LH7.
㉜	Faux-painted door to closet under the stair. See FIG. LH12.

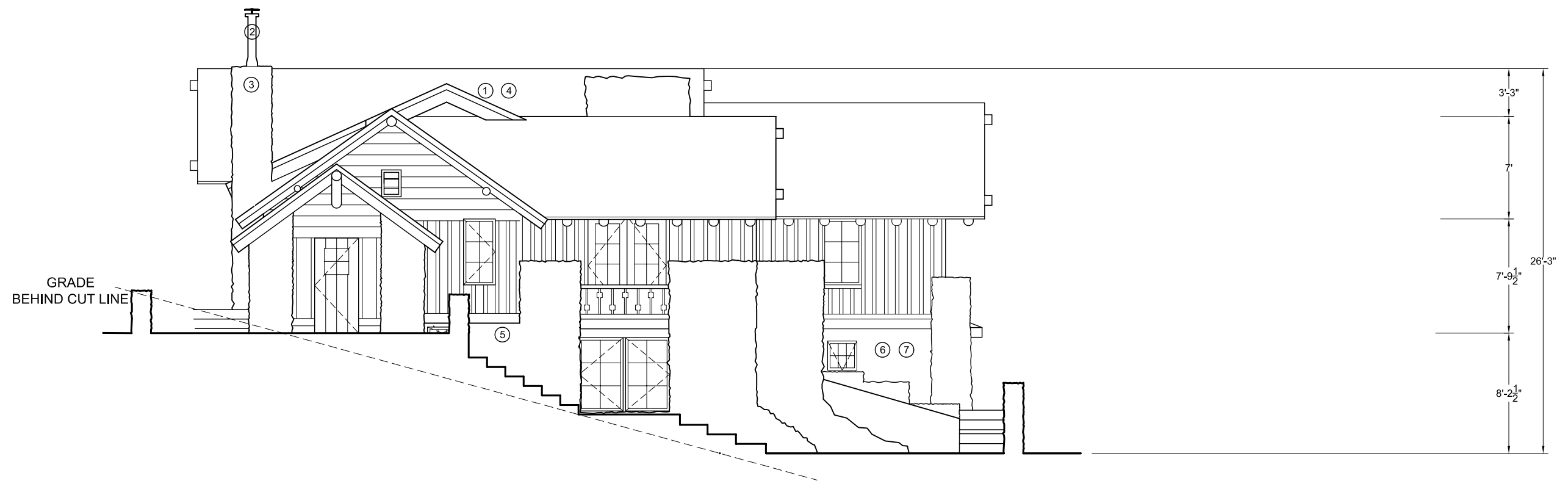




Exterior Deficiency/Alteration	
①	Decayed rafters and outriggers. See FIGS. E6, E8.
②	Insufficient and/or damaged collar ties in attic. See FIG. E10.
③	Settlement crack in stone patio wall. See FIG. E16.
④	Unsecured stones in patio wall. See FIG. E17.
⑤	Unsecured birdbath at patio corner. See FIG. E18.
⑥	Displaced metal flue on chimney to Room Two. See FIG. E21.
⑦	Lack of spark arrester on Room Two chimney. See FIG. E21.
⑧	Presence of asphalt shingles on the earlier roof under a superimposed roof. See FIG. E9.
⑨	Patio railing does not meet current code standards. See FIG. E15.
⑩	Wood in-fill in stone wall. See FIG. E19.
⑪	Inappropriate repair including excessive and/or incompatible mortar. See FIGS. E23, E25.
⑫	Gaps between building materials, potentially allowing rodent access into the building. See FIG. E26.
⑬	Cracked wood beam. See FIG. E27.
⑭	Warped window frame and sill. See FIG. E28.
⑮	Damaged wood siding and/or roof sheathing. See FIGS. E29, E34 and E35.
⑯	Decayed garage door at ground level. See FIG. E31.

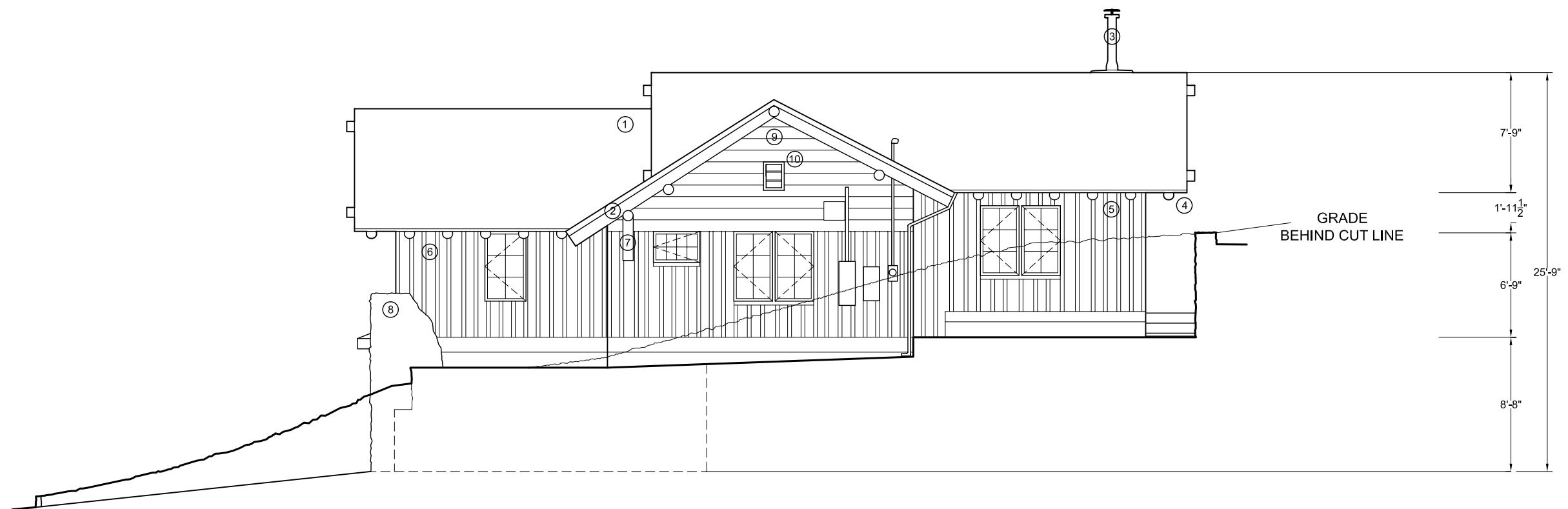


Exterior Deficiency/Alteration	
①	Water directed onto rafter from roof valley. See FIG. E7.
②	Insufficient and/or damaged collar ties in attic. See FIG. E10.
③	Water directed toward foundation due to improperly placed leader on the west corner of the north elevation. See FIG. E13.
④	Displaced metal flue on chimney to Room Two. See FIG. E21.
⑤	Lack of spark arrester on Room Two chimney. See FIG. E21.
⑥	Mortar cracks on chimney to Room Two. See FIG. E22.
⑦	Presence of asphalt shingles on the earlier roof under a superimposed roof. See FIG. E9.
⑧	Damaged wood siding and/or roof sheathing. See FIGS. E29, E34 and E35.



**Exterior Deficiency/Alteration**

①	Insufficient and/or damaged collar ties in attic. See FIG. E10.
②	Displaced metal flue on chimney to Room Two. See FIG. E21.
③	Lack of spark arrester on Room Two chimney. See FIG. E21.
④	Presence of asphalt shingles on the earlier roof under a superimposed roof. See FIG. E9.
⑤	Inappropriate repair including excessive and/or incompatible mortar. See FIGS. E23, E25.
⑥	Damaged modern light fixture. See FIG. E40.
⑦	Lack of light fixture at entrance to upper level hallway.



**Exterior Deficiency/Alteration**

①	Deflected roof over Room Eight. See FIG. E5.
②	Decayed rafters and outriggers. See FIGS. E6, E8.
③	Displaced metal flue on chimney to Room Two. See FIG. E21.
④	Missing gutter on the south side of the east wall. See FIG. E11.
⑤	Gaps between roof decking boards. See FIG. E12.
⑥	Damaged wood siding and/or roof sheathing. See FIGS. E29, E34 and E35.
⑦	Cut fascia beam on east wall. See FIG. E37.
⑧	Lichen growth on stone. See FIG. E20.
⑨	Exposed nail ends. See FIG. E33.
⑩	Exposed and/or loose wiring. See FIG. E36.



## **APPENDIX D**

### **CODE COMPLIANCE EVALUATION**

---



**FIRST ADMINISTRATION BUILDING  
GRAND CANYON NATIONAL PARK  
BUILDING CODE REVIEW**

15 November 2007

prepared by:

**J. CHRIS EVANS ARCHITECT**  
3220 E. Terra Alta Blvd. No. 9 Tucson, Arizona 85716  
520.319.8835 evansarch@hotmail.com



prepared for:

Historic Structure Report, First Administration Building  
Preservation Studies Program  
College Of Architecture and Landscape Architecture  
University Of Arizona



## **FIRST ADMINISTRATION BUILDING GRAND CANYON NATIONAL PARK BUILDING CODE REVIEW**

15 November 2007

### **Summary**

As an existing building and an historic property, the First Administration Building at Grand Canyon National Park is generally not required to meet *current* Code standards (The exception to this is the accessibility requirements defined in the ADA/ABA). Codes for existing structures are generally applied in cases of change of occupancy, or when alterations are made to the facility. Separate code requirements have been created to provide flexibility for protection of existing historic structures, while at the same time addressing issues of life safety. So a status review of code compliance for an existing building (not facing a change of use or alteration) primarily focuses on issues of life safety and accessibility.

The First Administration Building is listed on the National Register of Historic Places, and therefore consideration of the historic significance of the property must be taken into account when making specific recommendations.

The National Park Service and the Grand Canyon National Park have not adopted specific building codes for the Park's facilities, nor have they adopted a specific code for historic structures. Based on review of various codes, NPS directives, and discussions with Robert Powell, Historical Architect for the Grand Canyon, the following codes and standards have been adopted for the analysis of the First Administration Building.

International Building Code	2006
International Existing Building Code	2006
Uniform Federal Accessibility Standards (UFAS)	1984
ADA-ABA Guidelines	2004
ADA Accessibility Guidelines (ADAAG)	2002
NFPA 914 Code for Fire Protection of Historic Structures	2007
NFPA 101 Life Safety	2006

The International Building Code and International Existing Building Code were selected in part because they are part of the International Code Council, which has been widely adopted across the country in recent years and is intended to bring uniformity to the broad range of codes and jurisdictions.

UFAS, ADA-ABA, and ADAAG codes and standards have been adopted per NPS *Director's Order 28: Cultural Resource Management Guideline*. NFPA codes have been adopted per NPS *Director's Order 58: Structural Fire Management*.

## Building Code Review

IBC 2006 (assumes new construction)

Occupancy	B—Business
Construction Type	V-B
Fire Rating	0 hours (<30 feet to nearest structure)
Area Limitation	9000 s.f. maximum ( existing OK)
Height Limitation	2 story
Occupancy Load	upper floor: 2011 s.f./100 s.f. per person = 21 lower floor: 1088 s.f./100 s.f. per person = 11 total load = 32 (per 1003.2.2)
# of Exits required?	2 (existing OK)
Sprinklers required?	no (per Chapter 9, Section 903.2)
Exit signs required?	yes (per Chapter 10, Section 1003.2.10—"Access to exits shall be marked by readily visible exit signs <b>in cases where the exit or path of travel is not immediately visible to the occupants.</b> ")
Fire alarm required?	no (per Chapter 9)
Corridor Egress thru R2?	OK (per Chapter 10, Section 1004.3.2.5, exception 1)
Corridor Egress thru R18?	no (per Chapter 10, Section 1004.3.2.5)

## Accessibility

Section 4.1.7(1) of the ADA Accessibility Guidelines (ADAAG) requires **alterations** to historic structures to comply with the requirements for other existing buildings unless it is determined that compliance with the requirements would threaten or destroy the historic significance of the building. In addition, Section 4.1.7(3) of the ADAAG establishes the following minimum requirements for all historic structures (significant issues for First Administration Building in **bold**):

**(a) At least one accessible route complying with [4.3](#) from a site access point to an accessible entrance shall be provided.**

EXCEPTION: A ramp with a slope no greater than 1:6 for a run not to exceed 2 ft (610 mm) may be used as part of an accessible route to an entrance.

**(b) At least one accessible entrance complying with [4.14](#) which is used by the public shall be provided.**

EXCEPTION: If it is determined that no entrance used by the public can comply with [4.14](#), then access at any entrance not used by the general public but open (unlocked) with

directional signage at the primary entrance may be used. The accessible entrance shall also have a notification system. Where security is a problem, remote monitoring may be used.

**(c) If toilets are provided, then at least one toilet facility complying with 4.22 and 4.1.6 shall be provided along an accessible route that complies with 4.3.** Such toilet facility may be unisex in design.

**(d) Accessible routes from an accessible entrance to all publicly used spaces on at least the level of the accessible entrance shall be provided.** Access shall be provided to all levels of a building or facility in compliance with 4.1 whenever practical.

(e) Displays and written information, documents, etc., should be located where they can be seen by a seated person. Exhibits and signage displayed horizontally (e.g., open books), should be no higher than 44 in (1120 mm) above the floor surface.

The Department of Justice's guidelines for the implementation of the ADA require alternative methods of access where compliance with the special access provisions in 4.1.7(3) would threaten or destroy the historic significance of a qualified facility. However, this *"does not require a public entity to take any action that would threaten or destroy the historic significance of an historic property."* (ADA.gov/reg2.html; DOJ implementation guidelines, Section 35.150) In addition, this facility would be subject to Section 106 of the National Historic Preservation Act, which requires that the Park Service consider the effects of any *"undertaking on buildings and facilities listed in or eligible for listing in the National Register of Historic Places..."* (ADAAG, 4.1.7 (2i)).

Accessibility at the First Administration Building is severely limited by the building's sloped site and stair entrances. Although a ramp could be built to gain access to the R1 entrance, full accessibility for the facility would require, among other items, the installation of several mechanical lifts and an elevator. Meeting even the minimum ADA requirements for historic structures would require substantial cost and likely alter the character-defining features of the building. The State Historic Preservation Office should determine whether the modifications are impacting the character-defining features. It is possible that conformance with the minimum requirements would result in the First Administration Building losing its listing on the National Register. One solution to consider is changing the use of the facility to minimize the need for public or employee access; this would be in keeping with ADA recommendations.

Deficiency	Recommended Treatment	Impact
There is no accessible route from the site access point to the building	Install new ramp from a site access point to R1 West Entrance, upper level; access from the west and enter exterior entry court from the north; alternate: none	Ramp should not be installed if it cannot be built without retaining walls or guard rails; these elements would likely interfere with the visual continuity of the exterior appearance, which is a character-defining feature of the building; this will require that the slope of the ramp should not exceed 1:20. Compliance with this provision will not resolve interior accessibility problems that will require substantial cost.



There is no accessible entrance into the building	Remove 2.5" ht. threshold and replace with maximum 1/2" threshold at West Entrance on upper level (alternate: raise floor in R1 vestibule and exterior); modify or replace door as necessary; remove and replace exterior stone pavers and re-grout flush with top of stone; positive drainage away from door is critical to allow removal of tall threshold	Exterior door and stone pavers are character-defining features of the building; of limited value if accessible route from a site access point to the building is not provided
There is no accessible route on the main level	Install a mechanical lift at stair in R1 vestibule; widen upper level corridor door at R2 and R7/8 to 32" clear; widen doors into offices R6 and R8, bath R7 to 32" clear; replace all knob handles with door hardware that meets accessibility requirements in rooms R2, and R6 thru R11; alternate: none	Of minimal value if accessible route from a site access point to the building is not provided
There is no accessible toilet	Modify bath and storage area R7 into accessible bath facility; provide minimum door width, minimum turning space, accessible lavatory and accessible toilet, including minimum height of seat and grab bars; alternate: none	Of minimal value if accessible route from a site access point to the building is not provided, or if an accessible route on the main level is not provided
Lost and Found R17 not accessible from exterior because of sliding glass door threshold	Provide ramp that can provide temporary access when necessary; to be installed by employee during business hours	Permanent installation would likely interfere with garage door operation
<b>Other Accessibility Issues</b>		
Drinking fountain is not accessible	Install accessible drinking fountain or bottled water unit	Of minimal value if accessible route from a site access point to the building is not provided, or if an accessible route on the main level is not provided
Wood door knobs at R18 (interior) and R12 do not meet accessibility requirements; crystal knobs at doors R2 thru R11 do not meet accessibility requirements	None	Wood door knobs are character-defining feature; crystal knobs have likely been replaced
Lower level is not accessible	None	



Figure 1: West Entrance, upper level



Figure 2: West Entrance, upper level from interior R1

## Egress

The First Administration Building is a two-story structure with several intermediate levels. Egress is complicated by the multiple levels and the severely sloped site. The main (upper) level is serviced by two primary exits and one secondary exit. The exterior stairways that provide access to these three exits have significantly deteriorated due to erosion of the pavers. In addition, the layout of the South Entrance stairway does not meet egress requirements for tread size and riser height.

The lower level has two at-grade exits, but each exit has limited or impeded access and the egress path is not clearly visible or identified. The Lost and Found Department, occupying Rooms 15-17, locks the door to the corridor connecting it to the rest of the building; this creates an unsafe dead-end corridor from the other side. The lower level also has an exit via the stair up to the main floor, but use of this as a primary means of egress would require additional treatment to the stairwell.

Many doors throughout the building are not large enough to meet egress requirements, exit door hardware does not conform to minimum standards, and exit signs have not been installed.

Deficiency	Recommended Treatment	Impact
Exterior		
There is no handrail for the exterior stairway at the West Entrance, upper level (outside R1)	Install new handrail, one side only	Handrail should be easily removable, visibility of handrail should be minimized, and installation should minimize permanent damage to substrate

There is no handrail for the exterior stairway at the South Entrance, upper level	Install new handrail, one side only	Handrail should be easily removable, visibility of handrail should be minimized, and installation should not do permanent damage to substrate
There is no handrail for exterior stairway (outside R3) at the North Entrance, upper level	None	Stair receives little use; other access is provided
Walking surfaces on the exterior of the building near the upper level West Entrance (at R1 door) and on the adjacent stairway have eroded posing trip hazard; stairs are not slip resistant, and walking surfaces do not drain properly	Remove existing stone where necessary and install new stone pavers; grind existing grout flush with stone or re-grout with mortar that is compatible with stone hardness; provide slip resistant texture on stair treads; provide positive drainage and install new drains as necessary	Stone paving is a character-defining feature; slip-resistant texture might be attained by cutting small grooves into the stone near the outside edge of the tread (avoid applying new slip-resistant material over stone, if possible); consider underground heating system for stairs to minimize freeze--thaw damage to stone
Walking surfaces on the exterior of the building near the upper level South Entrance door and on the adjacent stairway have eroded posing a trip hazard; stairs are not slip resistant	Remove existing stone where necessary and install new stone pavers; grind existing grout flush with stone or re-grout with mortar that is compatible with stone hardness; provide slip resistant texture on stair treads; provide positive drainage and install new drains as necessary	Stone paving is a character-defining feature; slip-resistant texture can be attained by cutting small grooves into the stone near the outside edge of the tread (avoid applying new slip-resistant material over stone, if possible); consider underground heating system for stairs to minimize freeze--thaw damage to stone
Walking surfaces on the exterior of the building near the North Entrance (at R3 door) and on the adjacent stairway have eroded posing a trip hazard; stairs are not slip resistant	Grind existing grout flush with stone or re-grout with mortar that is compatible with stone hardness	Stair receives little use; other access is provided
Stone stair outside Conference Room R18 has step that is 9 inches tall; exceeds maximum of 8" required by NFPA 101; 14" tread does not meet minimum requirements for landings	Reduce threshold height to reduce overall height to 8" max.; install 36" deep landing on exterior using stone to match existing	Stone paving is a character-defining feature
Exterior stairway to South Entrance on upper level: risers vary from 8-9.5" and treads vary from 10-20"; these dimensions and variations do not meet code	Remove existing stone pavers and replace with new stone steps; max riser height 8"; tread width variation to meet code	Stone paving is a character-defining feature
Exterior stairway to South Entrance on upper level: landing slope exceeds minimum code requirement	Remove existing stone pavers and replace with new stone steps to meet slope requirement; max riser height 8"	Stone paving is a character-defining feature
Conference Room R18 exterior door has 1.5" ht. threshold, which exceeds the 1/2" maximum	Reduce threshold to 1/2"; modify door as necessary	
Patio balcony railings too low (22") for guard rail	None	Modifying the height of the railings would significantly impact the exterior appearance of the building
Lower level corridor egress path for R12 is interrupted by intervening rooms at both exits	None; Alternate: install an automatic sprinkler system throughout entire building per IBC 1003.2	Modifying the egress path would likely require the modification of character-defining features of the building; sprinkler system does not provide full code compliance



Figure 3: Stairs to West Entrance, upper level      Figure 4: Stairs to South Entrance, upper level



Figure 5: Conference Room R18 Exterior Entrance

Deficiency	Recommended Treatment	Impact
Interior		
No exit signs provided for the 2 lower level exits or the 2 primary exits on the upper level	Provide exit signs in accordance with NFPA Section 7.10; exit sign not required at main entry (West Entrance door) per IBC 1003.2.10, exception 2; exit sign not required at sliding glass door in R17, per IBC 1003.2.10, exceptions 1 and 2	

All exit doors do not meet egress code requirements for door hardware; knob and deadbolt require 2 separate actions to open door	Install sign that says "Door to remain unlocked while building is occupied" on or adjacent to door, per Section 7.2.1.5.4 of NFPA 101	Sign should be removable, and installation should not adversely affect substrate materials
Door between Corridor and R2 is 30" wide and does not meet minimum requirement of 32" clear for egress	Remove door and widen opening to 32" clear	Wood doors may be a character-defining feature; retain door for future use
Door opening between corridor and R7/R8 is 30" wide and does not meet minimum requirement of 32" clear for egress	Widen opening to 32" clear	
Head clearance within stairwell is 6'-6" and does not meet the minimum 6'-8" height requirement	None	6'-6" clearance provides adequate headroom for safety
R12 door height is 6'-2" and does not meet minimum code requirement of 6'-8"	Door cannot be made code compliant; convert to alternate use or install warning sign re: low headroom	
R13 door height is 6'-3" and does not meet minimum code requirement of 6'-8"	Door cannot be made code compliant; convert to alternate use or install warning sign re: low headroom	
Door between hallways in Basement is 6'-3" tall and does not meet the minimum code requirement of 6'-8"	Door cannot be made code compliant; install warning sign re: low headroom	
R18 interior door height is 6'-5" and does not meet minimum code requirement of 6'-8"	Door cannot be made code compliant; install warning sign re: low headroom	
When R18 interior door is open, it blocks hallway egress	Modify door to swing into Conference Room R18 if possible	Door is a character-defining feature; modification not required if egress access through corridor to R17 is limited
Stairwell door opening blocks hallway access on upper level when open	None; alternate: door may be removed	Stairwell is not part of the emergency egress of the building; retain door for future use
Stairs in R1 Vestibule have unequal risers, no handrails	Raise floor elevation in R1 Vestibule to get equal risers; provide handrails each side of stair	
R18 exterior door height is 6'-5" and does not meet minimum code requirement of 6'-8"	Door cannot be made code compliant: install warning sign re: low headroom	
Basement corridor between R17 and R18 does not meet required width for egress	None	Width cannot be modified without altering character-defining features (stone walls)
Basement corridor between R17 and R18 creates dead-end hallway when door into R17 is locked	R17 Door should remain unlocked while building is occupied, and sign stating such shall be installed; Alternate: limit corridor access and provide sign indicating that door is not an exit on door between corridors	Alternate may require stairwell modifications so that it may become part of the egress system
R18 interior door has lock, limiting egress for R12	Lock should be removed	

## Building Systems

Electrical, mechanical and plumbing systems generally appear to be in good working order and code compliant. This review was a visual inspection only and did not include an exhaustive investigation into the current condition of existing equipment, wiring or pipes.

Deficiency	Recommended Treatment	Impact
No evaporative cooling in Basement	None; not required	would be nearly impossible to install because of low ceiling heights in basement; small air conditioner may be alternate option
Electrical fuse box at South Entrance on upper level is plastered shut and inaccessible	Confirm that panel has been abandoned; inspect and correct as necessary	
There is no exterior light at South Entrance on upper level	Repair existing light; confirm adequate illumination for exiting	



Figure 6: Electrical service entrance on exterior east wall

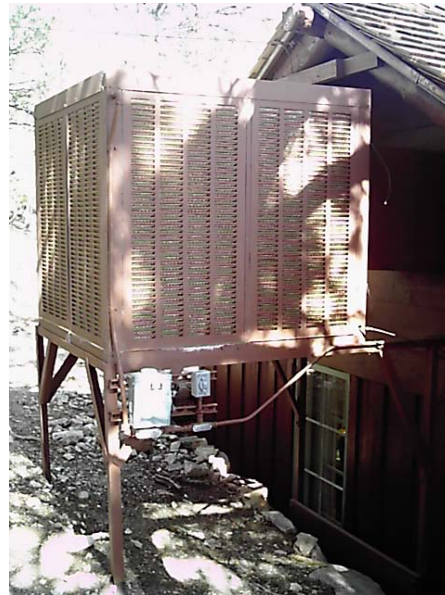


Figure 7: Evaporative cooler on north side of R5

## Fire Protection

A fire protection assessment by a contractor for the Regional Structural Fire Management Office identified the following deficiency:

*“Interior walls appear to be covered with combustible surfacing which does not meet Class A or B interior finish requirements. Remove and/or cover with Class A or B rated surfacing material such as gypsum wall board or treat surface with an approved fire retardant.”*

It is unclear which building materials this refers to; it is likely a reference to materials in the downstairs Hallway, near R14, which would require Class A or B surfaces.



Deficiency	Recommended Treatment	Impact
Conference Room R18 has rough wood panels on wall and ceiling	Remove and/or cover with Class A or B rated material	This does not refer to log members, which are character-defining features
Emergency lighting on upper level does not meet the illumination provisions of Section 7.9 of NFPA 101, esp. R1 and R2	Install additional emergency lighting per code in R1 and R2; and in South Exit Hallway if necessary	
Emergency lighting does not have battery backup in all locations	Provide battery backup for all emergency lights	
R14 Utility Closet is not fully sheathed to prevent fire spread into wall and ceiling structure	Provide Class A, B or C rated material on all wall and ceiling surfaces	
Interior walls in R14 and adjacent corridor appear to be covered with combustible surfacing which does not meet Class A or B interior finish requirements	Apply approved fire retardant; Alternate: cover or replace material with Class A or B rated materials	Avoid finishes that would alter the appearance of the wood surface in the corridor

Although a sprinkler system and fire alarm are not required at the First Administration Building, Director's Order 58 includes the following policy statement regarding the protection of cultural resources:

*"In the preservation of historic structures..., every attempt will be made to comply with national building and fire codes. When these cannot be met without significantly impairing a structure's integrity and character, the management and use of the structure will be modified to minimize potential hazards, rather than modifying the structure itself.*

*Subject to the previous paragraph, when warranted by the significance of a historic structure..., adequate fire detection, warning and suppression systems will be installed. 'Pre-fire plans' will be developed for historic structures...designed to identify the floor plan, utilities, hazards, and areas and objects requiring special protection. This information will be kept current and made available to local and park fire personnel."*

The First Administration Building's historic status may warrant the installation of additional fire protection measures beyond code requirements. However, care must be taken to minimize the impact on the existing structure. The First Administration's attic and crawl spaces would provide ideal locations for future sprinkler systems, as long as the existing ceiling remains in place.



Figure 8: Upper level corridor showing emergency lighting in upper left corner

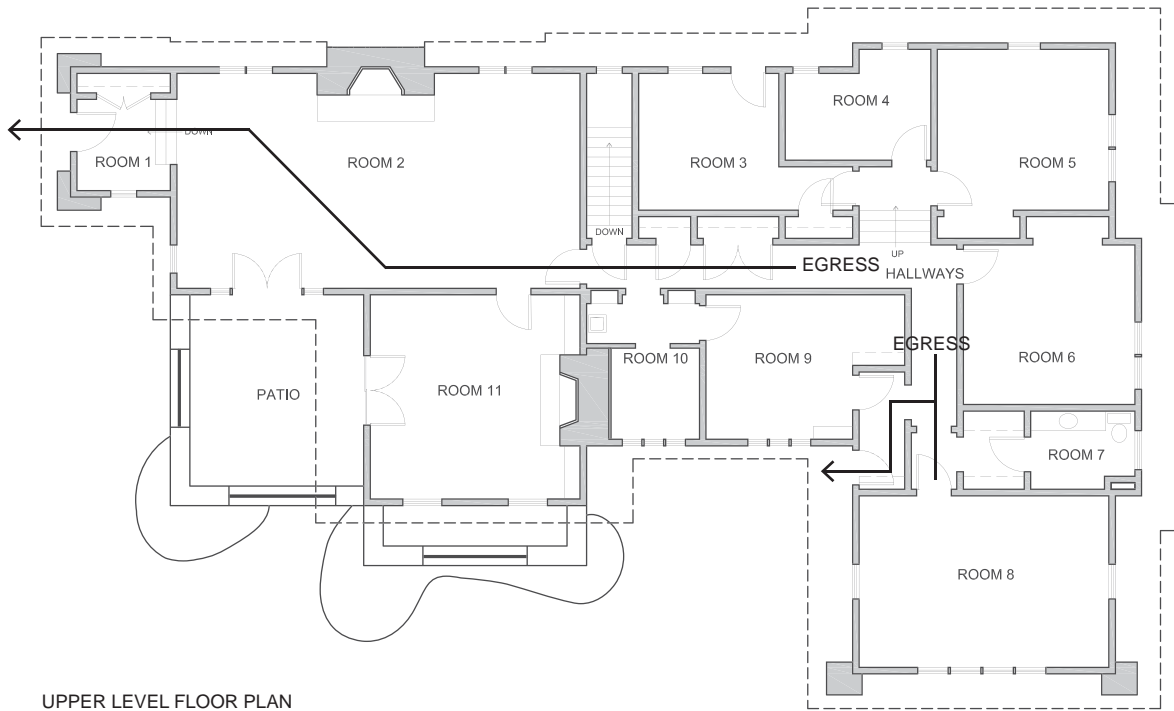
### Miscellaneous Code Issues

Deficiency	Recommended Treatment	Impact
Doors and adjacent window panels at 1) upper level West Entrance R1, 2) upper level South Entrance, and 3) R2 and R11 doors onto Patio do not appear to have appropriate safety glazing installed	When glazing requires replacement, install approved glass to meet safety code requirements; glass should have stamp indicating that it meets safety requirements	Glazing should match existing in color and appearance
Tree branches have grown within 12" of chimney for fireplace in R2; may pose future fire hazard	Trim trees	

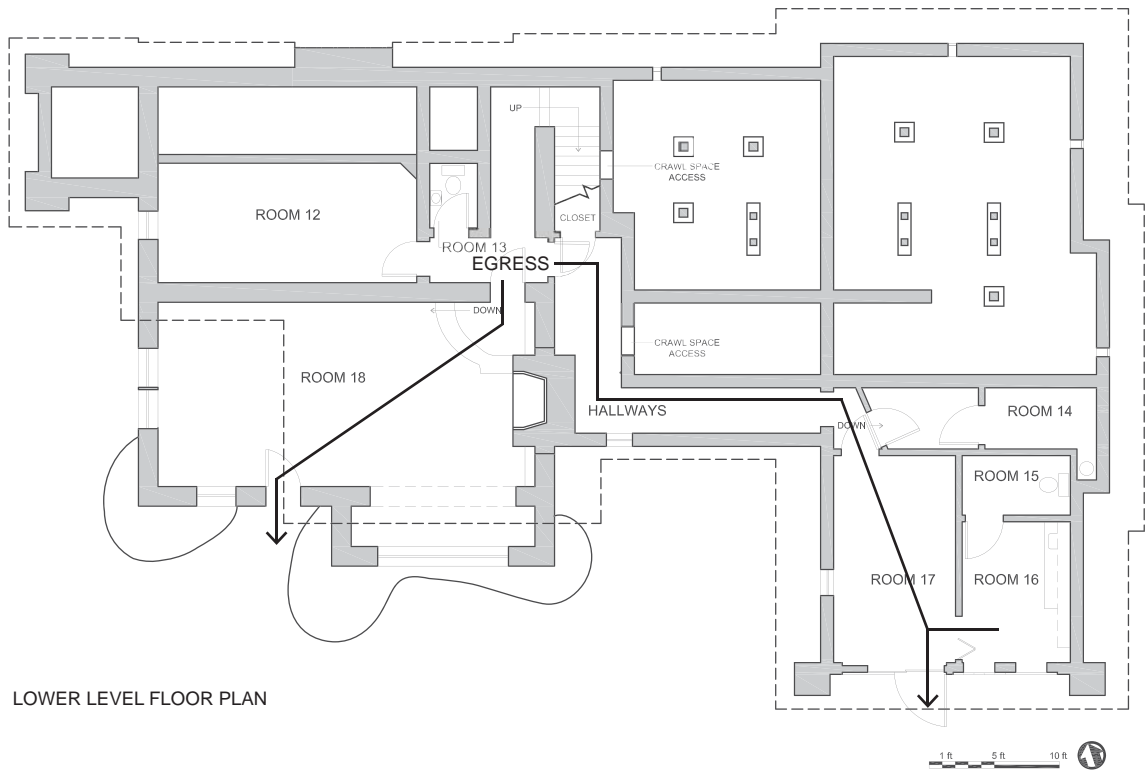
### Hazardous Materials

Amanda Zeman, Cultural Resource Specialist for the Grand Canyon National Park indicated that lead paint and asbestos abatement have been completed for the building. From visual inspection, no other suspected hazardous materials were identified. Asphaltic roofing materials that are located within the attic space and have been covered up by new construction do pose an increased fire hazard.

Deficiency	Recommended Treatment	Impact
Old asphaltic roof located within attic space poses an increased fire hazard	Cover with intumescent coating or alternative fireproofing; Alternate: removal of asphalt is ideal solution if access is reasonable and adequate	



UPPER LEVEL FLOOR PLAN



LOWER LEVEL FLOOR PLAN



## **APPENDIX E**

### **STRUCTURAL ENGINEERING EVALUATION**

---



## APPENDIX F

### THE SECRETARY OF THE INTERIOR'S STANDARDS FOR REHABILITATION

(copied from the National Park Service website:  
[http://www.cr.nps.gov/hps/tps/standguide/rehab/rehab\\_standards.htm](http://www.cr.nps.gov/hps/tps/standguide/rehab/rehab_standards.htm))

---

**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 shall 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.



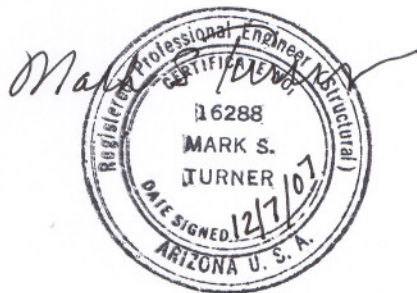


STRUCTURAL CONDITION ASSESSMENT  
FIRST ADMINISTRATION BUILDING  
GRAND CANYON VILLAGE  
GRAND CANYON NATIONAL PARK

FINAL REPORT

PREPARED FOR  
DEPARTMENT OF PRESERVATION STUDIES  
UNIVERSITY OF ARIZONA  
COLLEGE OF ARCHITECTURE  
AND LANDSCAPE ARCHITECTURE

PREPARED BY  
TURNER STRUCTURAL ENGINEERING CO.



SUBMITTED

DECEMBER 7, 2007



# TURNER STRUCTURAL ENGINEERING COMPANY

December 7, 2007

Mr. Brooks Jeffery  
University of Arizona  
College of Architecture  
And Landscape Architecture  
PO Box 210075  
Tucson, AZ 85721-0075

RE: FIRST ADMINISTRATION BUILDING  
STRUCTURAL CONDITION ASSESSMENT  
FINAL REPORT

Dear Brooks:

In accordance with your request Turner Structural Engineering has performed a structural condition assessment of the First Administration Building located in Grand Canyon Village in Grand Canyon National Park.

In the course of preparing this report, we have reviewed available drawing documentation and photographs, that you provided, and performed a site visit to observe the condition of the building.

Our investigation was limited to items that could be readily observed. No removal of building finishes, no testing or structural analysis work was performed.

In general we would characterize the building to be in fair condition. There are several structural deficiencies that require attention. Briefly, the areas of most concern are two locations along the exterior perimeter stone masonry retaining wall; deficient floor framing supports in the crawl space; and deficient collar ties at the roof joists in the attic space. Additionally, there are exterior drainage issues and exterior wood elements that have deteriorated due to weather that require attention.

In the following pages we list our on site observations, list the structural deficiencies observed, and list our recommendations for repair and upgrade.

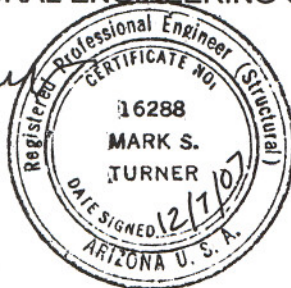
If you have any questions, please don't hesitate to contact us.

Sincerely,

TURNER STRUCTURAL ENGINEERING COMPANY

*Mark S. Turner*

Mark S. Turner, PE





First Administration Building  
Grand Canyon Village

Document Review:

We reviewed construction drawings dated 1931 prepared by the National Park Service for an addition to the Superintendent's Residence. No drawings were available for the original construction, we were told the date of the original construction was 1921.

The addition drawings indicate the original building was a full two story structure. The addition to the east end is a partial two story structure, with the addition matching the 2<sup>nd</sup> floor level of the original structure and built over a crawl space, with the exception of the portion built over the garage area at the lower level.

The original building was the National Park Service administration office and with the addition became the Superintendents Residence. The building today houses the offices of Xanterra, the Grand Canyon concessionaire, and the Lost and Found Office occupies the former garage space.

The building as it exists today is much the same as indicated in the drawings. Modifications include conversion of former bedrooms and bathrooms to offices, and kitchen and dining room to offices, but, with the exception of minor alterations, the walls and room layouts are still generally intact.

The addition drawings indicate the roof structure to be of timber log rafter with timber log collar tie beams in the original structure and the addition is framed with standard dimension lumber. The drawings seem to indicate in the original structure that the heavy timber members continue out to form the eave outlookers. In the addition the timber log outlookers do not form part of the main roof structure; they are supported at the exterior walls and don't extend into the structure more than a foot or two.

The construction materials of the original floor system is not indicated. The addition floor framing typically consists of wood decking on 2x6 floor joists at 16 inches on center. Much of the floor area of the addition is elevated over a crawl space, with the floor joists supported on a series of 4x8 wood beams supported on stone piers.

The typical wall framing above ground level has board and batten wood material on the exterior face over wood frame stud bearing walls with drywall and plaster on the interior faces. Below grade construction materials of the walls of the original construction are not noted. The foundation walls of the addition are called out as stone masonry walls.

The drawings indicate much exterior stone masonry accent walls, site walls, retaining walls, and exterior stone paths and stairs.

**Site Observations:**

A site visit was made on July 26, 2007 the following observations were made:

**Exterior**

The building appears much the same as shown on the Addition drawings. One exception occurs along the north wall of the building. There is an exterior landing at the same level as the interior floor, with steps down to the walkway in the east and west directions. There also is a break in the retaining wall at this location with a stone masonry stair that goes up the slope to the north.

At the north side walkway, the walkway is 3 to 4 feet wide and extends the full length of the north side of the building. The walkway is interrupted by a cast concrete steps and landing. There is a stone masonry retaining wall on one side of the walkway and the north wall of the building on the other.

The height of the retaining wall varies from approximately 4 feet at the west end to a maximum of 6.5 feet near the east end. The grade slopes upwards north of the retaining wall, such that runoff drains into the walkway. The whole walk area at the rear of the building does not appear to drain very well. The central north exterior stair and landing also tend to trap the drainage in the area, especially to the east.

The roof appeared to have recently been re-roofed with new cedar shingles.

There is a lot of exterior stone masonry walkways, site walls, retaining walls, chimneys, and stone masonry pilasters built up on portions of the structure. Generally, the condition of the stone and mortar appears to be good. A few problem areas were observed and are listed in the structural deficiency list that follows.

**Interior**

Most all of the structural members are hidden by the building finish materials. There were plaster ceilings throughout. There is an attic access hatch in the hallway at the east end of the building. A portion of the roof framing was observed in the attic space. The roof framing consisted of 2x roof framing members and 2x ceiling joist members as indicated on the Addition drawings.

There were two crawl space access hatches, one in the interior stairwell to the lower level, and a second hatch in the lower level passageway to the garage. The floor framing over the crawl spaces consisted of 2x framing supported on wood beams as indicated on the Addition drawings. The problem areas observed in the crawl space are listed in the structural deficiency list that follows.



Structural Deficiency Issues:

1. Chimney – exterior north side; some minor cracks in the mortar (refer to photo 1); also the metal flue protruding from the top of the stone masonry chimney appears to be skewed (refer to photo2).
2. Gap between retaining wall and building – northeast corner; area does not appear to drain adequately; area run-off from slope above retaining wall drains into gap (refer to photo 3).
3. Retaining wall at evaporative cooler location – north east corner; the wall has partially failed; there is some stone bulging out of place; there is a gap behind some of the stone (refer to photo 4); a large stone has pushed out and is nearly touching the wood board stiffener that is part of the new supports for the evaporative cooler refer to photo 5 and 6); the stone wall at this location is retaining approximately 5.5 feet of sloping earth fill.
4. Retaining wall on east side just south of jog in the retaining wall; stone masonry wall is retaining approximately 5 feet of earth at this location; stone is bulging out; wall is coming apart; loose stone; displaced stone; cracks in the mortar (refer to photo 7).
5. Timber log outlookers – most of the outlookers that protrude beyond the edge of the roof or roof gutters are weather deteriorated (refer to photo 8). The outlookers on the original building are part of the roof structure. The outlookers on the addition are cosmetic only.
6. Fascia timber on east elevation – the edge member on the east roof overhang has a large portion of the beam cut and missing (refer to photo 9).
7. The southeast corner of the end of the east elevation gable roof is sagging; a timber brace (not shown on the addition drawings) has been added at some time in the past; but it is currently sagging (refer to photo 10).
8. Garage Doors – at the current Lost and Found Office the entry doors are weather deteriorated at the base.
9. Fascia siding over windows on south elevation – windows at the lower level meeting room; the wood is deteriorated at the fascia beams (refer to photo 11).
10. Stone masonry guardrail wall around balcony area; there is some cracks and some loose mortar in the stone masonry (refer to photo 12).
11. Attic: the collar ties are on every other roof rafter; some of the collar ties have splits in them; some are broken and have been partially repaired (refer to photo 13).



12. The wood plank roof decking has gaps between the adjacent boards (refer to photo 14).
13. Floor support beams at crawl space areas: floor beams are typically supported on a wood stub post bearing on stacked rocks; in several locations the stacked rocks have fallen apart and the support is gone (refer to photo 15).
14. Floor support beams at crawl space areas: the floor beams at the exterior wall are supported on stone rubble (refer to photo 16).
15. The plaster on the interior face of the interior stairwell has discolored and is flaking off, due to moisture penetration thru the below grade wall.



1. Minor cracks in stone masonry chimney



2. Skewed Metal Flue Chimney



3. Gap between wall and building



4. Gap behind the stones in wall





5. Gaps behind stone in stone masonry retaining wall



6. Stone wall bulging into wood board



7. Bulge in wall – mortar separating from stone



8. Weather deteriorated exposed ends of outlookers





9. Missing portion of fascia beam



10. Braced and sagging gable end



11. Deteriorated wood fascia members



12. Cracks in stone masonry guardrail wall





13. Split and partially repaired collar tie



14. Gaps visible in wood plank roof decking



15. Missing pilaster floor beam support



16. Floor beam bearing on stone rubble

## Recommendations

The building generally is in fair structural condition, given its age, but for the building to maintain this condition well into the future regular maintenance of the building finish materials need to be kept up. Additionally, we recommended the following deficiency items be addressed:

1. Chimney – exterior north side; there should be a maintenance program set up to observe the stone masonry and to rout out and re-point any cracks observed. The skewed metal flue at the top of the chimney should be evaluated to see if it is properly anchored, and if not, to straighten the flue and securely anchor it.
2. Gap between retaining wall and building – northeast corner; correct the poor drainage. To correct the drainage a survey should be performed to establish the existing grades and then the finish materials should be removed, the area re-graded to drain properly, and then reinstall the finish materials.
3. Retaining wall at evaporative cooler location – north east corner; the wall should be repaired before further deterioration or complete failure occurs. Most likely the wall will have to be partially taken down and rebuilt in the vicinity of the partial failure.
4. Retaining wall on east side just to south of jog in the retaining wall; the wall should be repaired before further deterioration or complete failure occurs. Most likely the wall will have to be partially taken down and rebuilt in the vicinity of the partial failure.
5. Timber log outlookers – typically the tops and ends of the exposed outlookers have experienced the most damage. Depending on their condition the outlookers should be repaired or replaced and protected. The outlookers that are non-structural (addition area) could be replaced more easily than those that are part of the roof structure (original building area). If the tops and ends aren't protected they will continue to deteriorate.
6. Fascia timber on east elevation – repair or replace the fascia member which is missing a portion of the beam.
7. The sagging gable end on the east elevation should be repaired. The most likely cause of the sagging is an inadequate connection of the horizontal outlooker member. Both the horizontal member and the brace connections should be evaluated and redone as required to eliminate the sagging.
8. Garage Doors – at the Lost and Found Office; the bases of the entry doors should be repaired to prevent further deterioration.
9. Fascia siding over windows on south elevation – windows at the lower level meeting room; the deteriorated wood members should have paint scraped and repainted for protection.



10. Stone masonry guardrail wall around balcony area; there should be a maintenance program set up to observe the stone masonry and to rout out and re-point any cracks observed.
11. Attic roof framing; the damaged collar tie framing members should be replaced with new ones, existing connections should be upgraded from nailed to screwed connections, and new collar ties added so that there is a tie at every rafter, instead of every other one.
12. Wood plank roof decking; in modern wood frame construction and modern codes the wood planking does not offer much diaphragm value for bracing the walls of the building. To improve the lateral bracing we recommend plywood sheathing be installed over the decking. Typically, the best time to do this is when an older building undergoes a re-roofing. However, this building has recently had a new roof installed, so it will be some time before its due again.
13. Floor support beams at crawl space areas; all of the interior stone pilasters should be replaced throughout the crawl space with new concrete bases.
14. Floor support beams at crawl space areas: all of the stone pilasters at the exterior walls should be replaced throughout the crawl space with new concrete bases.
15. Moisture intrusion at stairwell wall: provide waterproof membrane on the exterior face of the stairwell wall to prevent moisture intrusion; patch and repair the interior plaster finish and repaint.

#### Closing Statement

The First Administration Building is primarily a wood framed structure, and due to the inherent redundancy and lighter weight of wood framed structures has the expectation of performing better under lateral forces of wind or earthquake than structures of the same era that are constructed with unreinforced masonry walls or concrete frames. However, a complete vertical and lateral load analysis is beyond the scope of this assessment report.

## APPENDIX G

### GUIDELINES FOR REHABILITATING HISTORIC BUILDINGS

(copied from the National Park Service website:  
[http://www.cr.nps.gov/hps/tps/standguide/rehab/rehab\\_approach.htm](http://www.cr.nps.gov/hps/tps/standguide/rehab/rehab_approach.htm))

#### Choosing Rehabilitation as a Treatment

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

#### Identify, Retain, and Preserve Historic Materials and Features

Like Preservation, guidance for the treatment **Rehabilitation** begins with recommendations to identify the form and detailing of those architectural materials and features that are important in defining the building's historic character and which must be retained in order to preserve that character. Therefore, guidance on **identifying, retaining, and preserving** character-defining features is always given first. The character of a historic building may be defined by the form and detailing of exterior materials, such as masonry, wood, and metal; exterior features, such as roofs, porches, and windows; interior materials, such as plaster and paint; and interior features, such as moldings and stairways, room configuration and spatial relationships, as well as structural and mechanical systems.

#### Protect and Maintain Historic Materials and Features

After identifying those materials and features that are important and must be retained in the process of **Rehabilitation** work, then **protecting and maintaining** them are addressed. Protection generally involves the least degree of intervention and is preparatory to other work. For example, protection includes the maintenance of historic material through treatments such as rust removal, caulking, limited paint removal, and re-application of protective coatings; the cyclical cleaning of roof gutter systems; or installation of fencing, alarm systems and other temporary protective measures. Although a historic building will usually require more extensive work, an overall evaluation of its physical condition should always begin at this level.

#### Repair Historic Materials and Features

Next, when the physical condition of character-defining materials and features warrants additional work **repairing** is recommended. **Rehabilitation** guidance for the repair of historic materials such as masonry, wood, and architectural metals again begins with the least degree of intervention possible such as patching, piecing-in, splicing, consolidating, or otherwise reinforcing or upgrading them according to recognized preservation methods. Repairing also includes the limited replacement in kind--or with compatible substitute material--of extensively deteriorated or missing parts of features when there are surviving prototypes (for example, brackets, dentils, steps, plaster, or portions of slate or tile roofing). Although using the same kind

of material is always the preferred option, substitute material is acceptable if the form and design as well as the substitute material itself convey the visual appearance of the remaining parts of the feature and finish.

## Replace Deteriorated Historic Materials and Features

Following repair in the hierarchy, **Rehabilitation** guidance is provided for **replacing** an entire character-defining feature with new material because the level of deterioration or damage of materials precludes repair (for example, an exterior cornice; an interior staircase; or a complete porch or storefront). If the essential form and detailing are still evident so that the physical evidence can be used to re-establish the feature as an integral part of the rehabilitation, then its replacement is appropriate. Like the guidance for repair, the preferred option is always replacement of the entire feature in kind, that is, with the same material. Because this approach may not always be technically or economically feasible, provisions are made to consider the use of a compatible substitute material. It should be noted that, while the National Park Service guidelines recommend the replacement of an entire character-defining feature that is extensively deteriorated, they never recommend removal and replacement with new material of a feature that--although damaged or deteriorated--could reasonably be repaired and thus preserved.

## Design for the Replacement of Missing Historic Features

When an entire interior or exterior feature is missing (for example, an entrance, or cast iron facade; or a principal staircase), it no longer plays a role in physically defining the historic character of the building unless it can be accurately recovered in form and detailing through the process of carefully documenting the historical appearance. Although accepting the loss is one possibility, where an important architectural feature is missing, its replacement is always recommended in the **Rehabilitation** guidelines as the first or preferred, course of action. Thus, if adequate historical, pictorial, and physical documentation exists so that the feature may be accurately reproduced, and if it is desirable to re-establish the feature as part of the building's historical appearance, then designing and constructing a new feature based on such information is appropriate. However, a second acceptable option for the replacement feature is a new design that is compatible with the remaining character-defining features of the historic building. The new design should always take into account the size, scale, and material of the historic building itself and, most importantly, should be clearly differentiated so that a false historical appearance is not created.

## Alterations/Additions for the New Use

Some exterior and interior alterations to a historic building are generally needed to assure its continued use, but it is most important that such alterations do not radically change, obscure, or destroy character-defining spaces, materials, features, or finishes. Alterations may include providing additional parking space on an existing historic building site; cutting new entrances or windows on secondary elevations; inserting an additional floor; installing an entirely new mechanical system; or creating an atrium or light well. Alteration may also include the selective removal of buildings or other features of the environment or building site that are intrusive and therefore detract from the overall historic character. The construction of an exterior addition to a historic building may seem to be essential for the new use, but it is emphasized in the **Rehabilitation** guidelines that such new additions should be avoided, if possible, and considered only after it is determined that those needs cannot be met by altering secondary, i.e., non character-defining interior spaces. If, after a thorough evaluation of interior solutions, an exterior addition is still judged to be the only viable alternative, it should be designed and constructed to be clearly differentiated from the historic building and so that the character-defining features are not radically changed, obscured, damaged, or destroyed. Additions and

alterations to historic buildings are referenced within specific sections of the Rehabilitation guidelines such as Site, Roofs, Structural Systems, etc., but are addressed in detail in New Additions to Historic Buildings (see nav bar, right).

## **Energy Efficiency/Accessibility Considerations/Health and Safety Code Considerations**

These sections of the guidance address work done to meet accessibility requirements and health and safety code requirements; or retrofitting measures to improve energy efficiency. Although this work is quite often an important aspect of **Rehabilitation** projects, it is usually not a part of the overall process of protecting or repairing character-defining features; rather, such work is assessed for its potential negative impact on the building's historic character. For this reason, particular care must be taken not to radically change, obscure, damage, or destroy character-defining materials or features in the process of meeting code and energy requirements.