CAPE LOOKOUT NATIONAL SEASHORE

Cape Lookout Lighthouse

Keeper's Dwelling (1907)

HISTORIC STRUCTURE REPORT

Historical Architecture, Cultural Resources Division
Southeast Regional Office
National Park Service

2004

Cultural Resources
Southeast Region
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2002
Historic Structure Report
Cape Lookout Lighthouse Keeper's Dwelling
(1907)
Cape Lookout National Seashore
LCS#: 091838

Previous page, 1907 Keeper's Dwelling, 2002

The historic structure report presented here exists in two formats. A traditional, printed version is available for study at the park, the Southeastern Regional Office of the NPS (SERO), and at a variety of other repositories. For more widespread access, the historic structure report also exists in a web- based format through the SERO intranet, which includes links to individual files for a variety of photographs, documents, plans and other material used in compilation of the printed report.

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Foreword

We are pleased to make available this historic structure report, part of our ongoing effort to provide comprehensive documentation for the historic structures and landscapes of National Park Service units in the Southeast Field Area. Many individuals and institutions contributed to the successful completion of this work. We would particularly like to thank the staff at Cape Lookout National Seashore, especially the park's facility manager Mike McGee, cultural resources manager Michael Rikard, and superintendent Bob Vogel. We would also like to thank Dr. Graham Barden for his co-operation in providing access to the house and his willingness to discuss the building's history. We hope that this study will prove valuable to park management in their treatment of the building and to everyone in understanding and interpreting the lighthouse Keeper's Dwelling (1907) at Cape Lookout.

Chief
Cultural Resources Division
Southeast Regional Office
December 2004

Executive Summary

Research Summary

Most of the information for this HSR was compiled in the summer and fall of 2002, which included building investigation during the course of a site visit by the author in October 2002. The building investigation was non- destructive and, although comprehensive, was limited to visual examination of the structure and its materials. A limited budget did not allow laboratory analysis of painted finishes and other materials.

Historical research included a survey of available sources at the park, including a number of historic architectural drawings relating to the building's original construction in 1907 and to subsequent modifications during the historic period. Dr. Graham Barden, who had the house moved in 1958 and continues to occupy it, was interviewed during the October site visit and was helpful in providing details of the move. In addition, a large quantity of historic documents, drawings, and photographs are listed in Record Group 26, United States Coast Guard, at the National Ar-

chives, but budgetary restraints precluded extensive research into that collection. Continued research in that collection could provide a wealth of additional interpretive material for the Barden House and the entire lighthouse station complex.

In developing this historic structure report, NPS staff at the Park have been unstinting in their support for the project. In particular, Michael McGee, chief of maintenance, has been extremely helpful in all phases of the work as has Michael Rikard, chief of cultural resources, and Robert Vogel, park superintendent.

Historical Summary

A lighthouse has operated at Cape Lookout since 1812, with the present, second lighthouse completed in 1859. From the beginning, a range of ancillary structures have supported lighthouse operation, including quarters for the keepers and assistant keepers who, excepting three or four years during and shortly after the Civil War, manned the station continuously from 1812 until the light was automated in 1950. The Barden House, as it is now known, was the third Keeper's Dwelling built at the lighthouse station and was occupied by the lighthouse keeper and his family from the time it was completed in the fall of 1907 until the 1930s. In 1957, the Coast Guard, which had taken over operation of the nation's lighthouses in 1939, made the decision to surplus many of the buildings at the lighthouse station and at the Coast Guard Station. In 1958, Dr. Graham Barden acquired the Keeper's Dwelling and relocated it about 1.1 mile southwest of its original site.

Architectural Summary

The architect for the original design of the Barden House has not been identified, but the plans were originally developed around 1886 in Baltimore by the engineering department of the Lighthouse Board. Those plans were modified around 1904 and used for construction of the house, which was completed in October 1907. Included as part of that construction project was a new summer kitchen and a brick and concrete cistern, both of which remain on their original sites near the lighthouse.

There were few, if any, changes to the house prior to 1934 when plans were developed for installation of central heating and plumbing systems, neither of which existed in the original building. The work was probably not executed until 1938, but it included major modifications to the kitchen (Room 103) and to the rear bedroom (Room 203), which was partitioned to create a bathroom. In the late 1930s, a radio signal station was installed at the lighthouse, with the radio signal monitored by equipment located in the old sitting room (Room 101). At the same time, the old summer kitchen and its attached wood shed were converted for storage of equipment and batteries needed for the radio installation. A new coal and wood shed, which also remains on the original site, was built in 1939, the same year that the Lighthouse Board was absorbed into the Coast Guard. Also in the late 1930s, the house's original clap-

board siding was replaced by wood shingles. About 40% of the original window sash were also replaced, most likely prior to World War II, and the original louvered blinds were replaced by wood- framed screens around the same time.

The septic system was expanded in 1943 and a new radio tower installed nearby in 1949. Installation of an underwater electrical cable from Harker's Island allowed full automation of the lighthouse in 1950. As a result, the lighthouse keeper's position was abolished, and the house may have been abandoned at that time. In 1957, the Coast Guard declared the house and a number of other buildings at the lighthouse and Coast Guard stations to be surplus, and the following year, the old Keeper's Dwelling was acquired by Dr. Barden and relocated. The original foundation piers, the wooden steps to the porches, and probably the back porch balustrades as well were lost at that time, but the original fireplace and chimney were relocated along with the rest of the building.

Since the house was moved, there have been few other alterations to the historic structure, except for replacement of the 1930s cedar shingle siding with cedar clapboards in recent years. In addition, part of the wall built in the kitchen in the 1930s to house the water tanks for the heating system has been removed and the front door and part of the toilet have been replaced. There have also been some modifications to the building's electrical system, and the boiler, tanks, and most of the radiators from the 1930s heating system have been lost.

The building is in good condition, primarily because it was extremely well- structured and was built well above grade, which has protected it from extensive termite and water damage. However, the building is unheated, except for portable space heaters, and its electrical system is in poor condition.

Recommendations

The house should be returned to its original location at the lighthouse station and the exterior restored to its appearance in the 1940s. The interior should be rehabilitated for continued residential use, if that can be done without compromising its historic character.

Site

- Conduct limited archaeological survey of original site.
- Use archaeological findings and historic site plans to identify original location of house and return to that location.
- Preserve cistern and reconstruct gable roof.
- Follow recommendations of Cultural Landscape Report (to be developed) to determine additional site treatment.

Foundation

- Reconstruct original foundation, maintaining the distinction between foundation piers and the remaining underpinning which, historically, was added later.

- Match original foundation brick, if located, or, if not, match brick on existing historic chimney.
- Remove stucco from chimney, repair chimney as necessary.

Structure

- Inspect framing of kitchen floor and perimeter sills for possible damage; repair as necessary.
- Reconstruct floor framing for front porch.

Windows and Doors

- Repair and preserve all existing window sash.
- Repair and preserve all wood- framed window screens; where missing, install new wood- framed screens.
- Repair and preserve back door.
- Replace modern front door with replica of original.
- Remove plywood shutters on porches if the added security is unnecessary.

Exterior Finishes

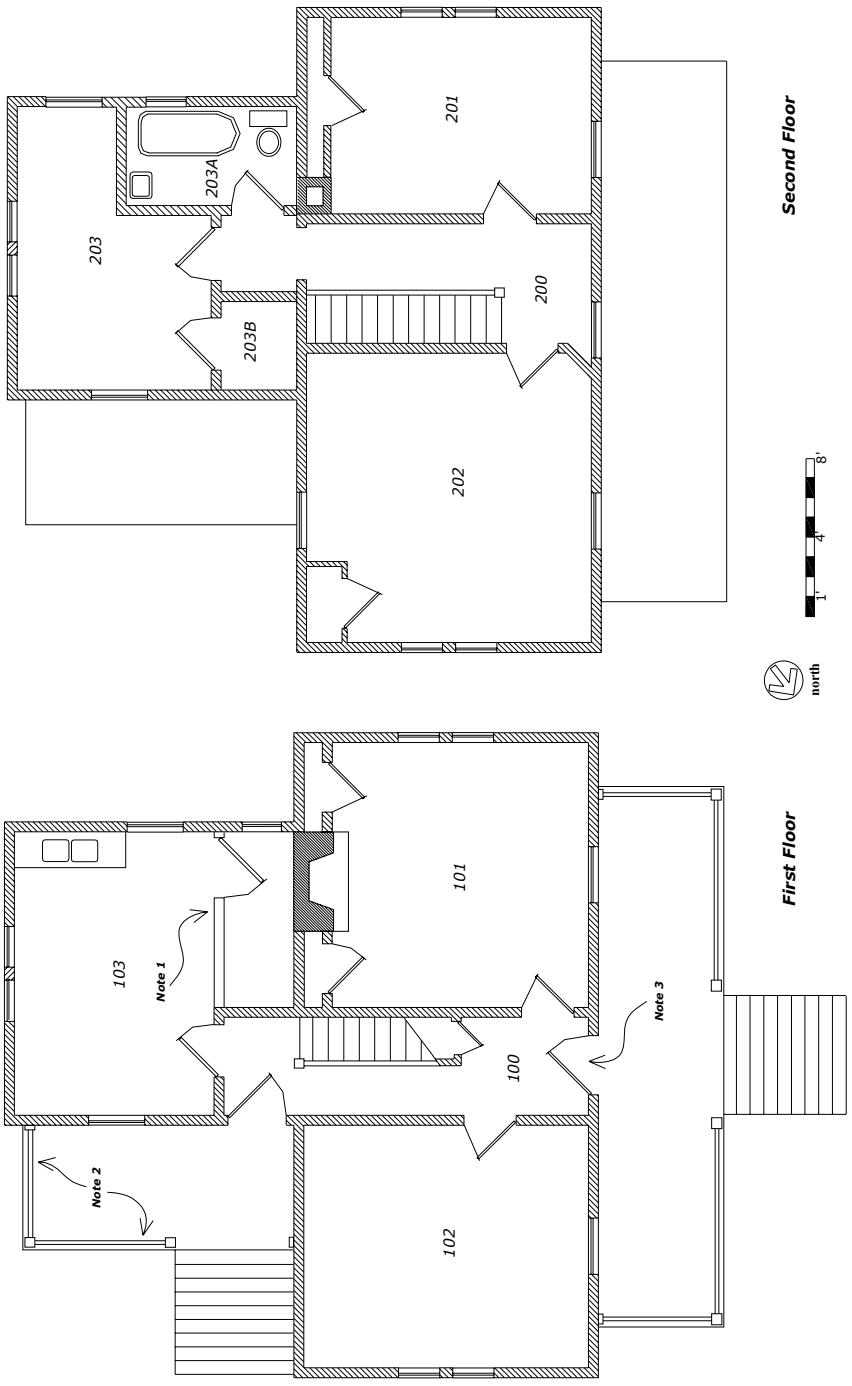
- Maintain present exterior finishes until house is relocated.
- Once relocated, replace cedar siding with cedar shingles.
- Repair and preserve existing window and door casing and trim and other elements of historic exterior woodwork.
- Continue research to document appropriate roof covering in the 1940s at the end of the period of significance.

Interior

- Repair, clean, and repaint existing wall and ceiling paneling.
- Reconstruct missing portion of closet wall and closet door in kitchen.
- Remove floor coverings, archiving samples of historic material.
- Repair floors as necessary; repaint where painted; revarnish where varnished.

Utilities

- Replace all water lines and, if necessary, cast- iron waste lines and vent stack, running lines as they were historically run.
- Replace all existing wiring, using existing conduit if possible; install modern fixtures as needed.
- Install hot- water heating system using existing radiators if house is to be occupied year- round; install electrical space heaters if not.
- Install fire- detection system.



NOTES

The house will be returned to its original location and the original brick foundation reconstructed. Existing siding should be replaced with cedar shingles.

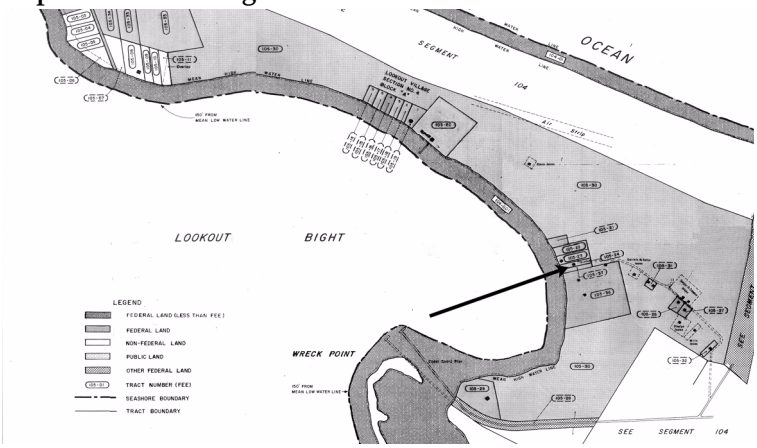
1. Reconstruct missing portion of wall and door; use reconstructed space for electrical panel, water heater, and other necessary equipment.
2. Restore balustrades to match those at front porch.
3. Replace modern door with door to match historic design of back door.

Administrative Data

Locational Data

Building Name:	Barden House
Location:	Cape Lookout Village
LCS#:	CALO 091838

Cape Lookout Village



Related Studies

Erenhard, John E. *Cape Lookout National Seashore: Assessment of Archaeological and Historical Resources.* NPS: Southeast Archaeological Center, Tallahassee, FL, 1976.

Holland, Francis Ross, Jr. *Bodie Island Light Station, North Carolina.* NPS, Division of History, 1967.

Holland, F. Ross. *A Survey History of Cape Lookout National Seashore.* NPS: Division of History, Office of Archaeology and Historic Preservation, January 30, 1968.

Loonam, John. *Cape Lookout Lighthouse.* Bertie, NC: Self- published, 2000. <http://www.itpi.dpi.state.nc.us/caroclips/CapeLookoutstory.htm> (13 January 2003).

Cultural Resource Data

National Register of Historic Places: Contributing structure in Cape Lookout Village Historic District, listed June 2000.

Period of Significance: 1907- 1950

Proposed Treatment: Structural stabilization, exterior restoration

PART 1
DEVELOPMENTAL HISTORY

Historical Background & Context

Cape Lookout lies at the southern tip of Core Banks, which stretch in a southwesterly direction from near Cedar Island to about four miles south of Harker's Island in eastern Carteret County, North Carolina. Its shoals, which extend over twenty miles into the Atlantic, were a hazard to navigation from the earliest days of European exploration. Cape Hatteras and its Diamond Shoals have long been the best known, but it was Cape Lookout that one of the area's earliest cartographers designated *Promontorium tremendum*, or "horrible headland."

The present lighthouse, constructed in 1859, is the second on the site, and there has been a succession of ancillary buildings as well. Besides kitchens, storage buildings, privies and other structures, there have been three dwellings built for the lighthouse keeper's residence. The first was constructed prior to 1833 and survived into the twentieth century. The second, brick "Keeper's Dwelling," as it was designated, was built in 1873 and remains on its original site just north of the lighthouse. The third dwelling, and the

Figure 1 Aerial view to southeast of Cape Lookout, with shoals stretching to the horizon. (CALO Coll., F-257)

Figure 2 Aerial view to north of Cape Lookout from Apollo 9 in 1969, with shoals clearly visible stretching to the southeast of the cape. (CALO Coll., F-478)

subject of the present study, was constructed in 1907 and removed to its present site some distance southwest of the lighthouse in 1958.

Lighthouses

The history of lighthouses dates to ancient times, with the most famous being the great Pharos of Alexandria, completed by Ptolemy II around 280 B. C. and considered one of the Seven Wonders of the Ancient World. The Romans, too, built lighthouses, some of which survive today, but the expense of construction and the difficulties in maintaining the fires that typically lit them limited their use.

The first American lighthouse was constructed in 1716 on Brewster Island in Boston Harbor, and it was followed by a few others during the Colonial period. The oldest of these to survive today is the lighthouse at Sandy Hook, New Jersey, which was built in 1764 by subscriptions from New York merchants who were being ruined by the loss of ships trying to navigate the treacherous entrance to New York Harbor.

In August 1789, one of the first statutes passed by the new United States Congress created the Lighthouse Establishment which assumed jurisdiction over the lighthouses that were already in existence and any new ones to be constructed. The law also authorized the first Federal expenditures for public works by providing that

> the necessary support, maintenance and repairs of all lighthouses, beacons, buoys, and public piers erected, placed, or sunk before the passing of this act, at the entrance of, or within any bay, inlet, harbor, or port of the United States, for rendering the navigation thereof easy and safe, shall be defrayed out of the treasury of the United States.[1]

Under the direction of the Secretary of the Treasury, the Lighthouse Establishment constructed the first Federally- funded lighthouse at Cape Henry, Virginia, in 1792, and a series of lighthouses and beacons began to appear along the Eastern seaboard. In 1796, the first lighthouse in North Carolina was completed near the mouth of the Cape Fear River, and the following year, Congress appropriated $44,000 for construction of lighthouses at Cape Hatteras and on Shell Island at Ocracoke Inlet. Both of those lights were completed in 1803, but none of these early lighthouses survives today.

1. Truman R. Strobridge, *Chronology of Aids to Navigation and the United States Lighthouse Service, 1716-1939*, <http://www.uscg.mil/hq/g-cp/history/h_USLHSchron.html> (26 December 2003).

Cape Lookout Lighthouse

Congress authorized a lighthouse "at or near the pitch [tip] of Cape Lookout" on March 26, 1804, and in February 1805, Joseph Fulford and Elijah Pigott deeded a four- acre tract "on the west side of Cape Hills" to the Federal government for the lighthouse. The site was surveyed the following year and a recommendation made to build the lighthouse on top of Blinds Hill, the highest of the now mostly- vanished "Cape Hills." Although $24,000 was authorized in 1804 for construction of the Cape Lookout lighthouse and of another at the mouth of the Mississippi River, the Secretary of the Treasury did not instruct the Customs Collector in Beaufort to advertise for construction bids until 1810. The contract for the lighthouse construction was awarded to Benjamin Beal, Jr., Duncan Thanter, and James Stepenson of Boston the following year and was completed in 1812.[2]

William Fulford, the second lighthouse keeper at Cape Lookout, described that first Cape Lookout lighthouse as it appeared during his tenure:

> The light- house is built with two towers; the inside one is brick- - the outside one is a wooden framed building, boarded and shingled, and painted in red and white stripes horizontally.[3]

2. F. Ross Holland, *A Survey History of Cape Lookout National Seashore* (National Park Service, Division of History, Office of Archaeology and Historic Preservation,1968), p. 25.
3. David Stick, *The Outer Banks of North Carolina* (Chapel Hill: University of North Carolina Press, 1958), p. 309-310.

The lighthouse station probably included a keeper's dwelling and perhaps a building for oil storage as well. Certainly by 1830, the station included additional buildings besides the lighthouse itself. In that year, Elijah Pigott and several others recorded a deed for the sale of fifteen more acres "on Cape Lookout" to the Federal government "for the accommodation of the Light House and other buildings erected there on. . . ."[4]

The light had a focal plane 104 feet above sea level, but from the beginning there were complaints about its effectiveness. Too often, mariners found themselves inside the shoals off Cape Lookout before the lighthouse was even visible. New lighting apparatus, which included thirteen lamps, was installed in 1848, but it did little to improve the effectiveness of the Cape Lookout Lighthouse.[5] Much of the blame for the light's deficiency lay with the Treasury Department's insistence on continued use of cheaper Argand lamps and reflectors rather than the far- more effective Fresnel lens, which was invented in 1822 and rapidly adopted all across Europe. Containing a central panel of magnifying glasses surrounded above and below by concentric rings of prisms and mirrors, the Fresnel lens was able to gather light, intensify it, and project it outward to a far greater degree than was possible with the old system of whale- oil lamps and reflectors.

4. Carteret Co. Deed Book V, p. 103.
5. U. S. Coast Guard, "Cape Lookout, NC" *Historic Light Stations*. <http://www.uscg.mil/hq/g-cp/history/WEBLIGHTHOUSES/LHNC.html> (13 January 2003).

The Treasury Department's management of the Lighthouse Establishment provoked Congress to initiate a major study of the system in 1851, which concluded that Cape Lookout was one of nine lighthouses "which require to be improved." In 1852, Congress established a permanent Lighthouse Board, which immediately began a program to expand and improve the country's system of lighthouses. Among the board's priorities was installation of Fresnel lenses in all the nation's lighthouses, a goal that was achieved by the time of the Civil War.

A first- order Fresnel lens was installed at Cape Lookout in 1856; but even with its new light, the Cape Lookout light tower was simply too short, and in March 1857, Congress appropriated $45,000 "for rebuilding and fitting out with first- order apparatus the lighthouse at Cape Lookout, North Carolina."[6] A new lighthouse was authorized for Bodie Island at the same time, and both lights were completed in 1859, with the Bodie Island light going into operation in July and the Cape Lookout light on November 1, 1859. Rising 169 feet above sea level and using the first- order Fresnel lens from the old lighthouse, the new light at Cape Lookout was visible for nineteen miles and became the prototype for later lighthouses along the Outer Banks. The old lighthouse was allowed to fall into ruin until it was finally pulled down sometime after 1868, and only a few of its foundation stones remain on the site today.

6. "Cape Lookout Light" <http://www.uscg.mil/hq/g-cp/history/WEBLIGHTHOUSES/LHNC.html>.

Figure 3 View to north of Cape Lookout Lighthouse. (NPS-SERO-CR, 2002)

The Lighthouse Keeper

Until the advent of electrically- powered, automated lights in the mid- twentieth century, a lighthouse keeper was routinely employed to maintain the station's light. At Cape Lookout, this meant that the keeper was on duty during the winter months from about 4 P. M. until after dawn, except during hurricanes or "Nor'easters," when the light had to be kept burning around the clock. Five- gallon containers were supplied with whale oil, later kerosene, from the small oil house that was located a few yards from the lighthouse, and the keeper carried them up the 203 steps to the lantern. Besides winding the mechanism that turned the lamp, the keeper also had to keep the lens clean and, when fuel ran low, trudge back down to the oil house for another container of oil.

James Fulford was the first keeper of the Cape Lookout Lighthouse, serving until January 1828 when William Fulford, who was perhaps his son, took over the post and occupied it for over fifteen years. Recently married and with a three- year- old daughter when he was first appointed, the younger Fulford had four more children before he retired from the post in 1854. His successor was John R. Royal, a carpenter living near the station with his wife and at least seven children. In 1859, S. Blunt was appointed the first in a series of assistant keepers who must have also lived near the lighthouse.

The Lighthouse Station

Lighthouse operations required a complex of support structures. In addition to an oil house,

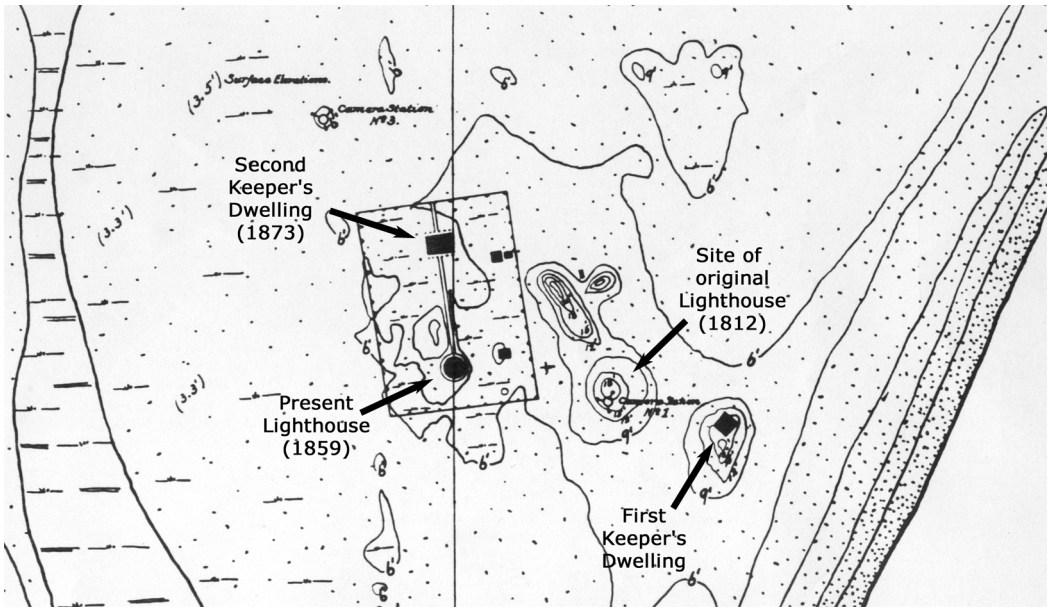


Figure 4 Survey of Cape Lookout Light Station in 1906. (U.S. Coast Guard, 1906, annotated by present author, 2003)

a dwelling for the keeper and his family was almost always constructed very near the lighthouse and was an integral part of any lighthouse station. At Cape Lookout, the original Keeper's Dwelling was built on a low hill just east of the lighthouse, but being close to the sea, it was constantly threatened by erosion. Keeper Fulford reported the difficulties in maintaining the site in 1850 as he was repeatedly forced to remove accumulating sand in order to prevent the house being "totally submerged." "The sand banks," one of his reports read, "are now higher than the tops of the windows; and only a few feet from them at high water mark. On the sea side it has washed away about 100 feet last year by abrasion and sea flows."[7]

The Civil War

In spite of these problems, the original Keeper's Dwelling was still occupied when the Civil War erupted in 1861. It must not have been the only residence near the lighthouse since the noted agriculturalist and rabid Confederate Edmund Ruffin described Core Banks in 1861 as uninhabited except for Portsmouth near Ocracoke and "a similar but smaller enlargement of the reef near Cape Lookout (where, about the light- house, there are a few inhabitants)."[8]

As the Union forces took control of the Outer Banks in 1862, the retreating Confederates blew up the lighthouse at Bodie Island and severely

7. "Cape Lookout Light," <http://www.uscg.mil/hq/g-cp/history/WEBLIGHTHOUSES/LHNC.html> (10 December 2002)
8. Edmund Ruffin, *Agricultural, Geological, and Descriptive Sketches of Lower North Carolina, and the Similar Adjacent Lands* (Raleigh, NC: Institution for the Deaf & Dumb & The Blind, 1861), p. 123. <http://docsouth.unc.edu/nc/ruffin/ruffin.html> (10 December 2002).

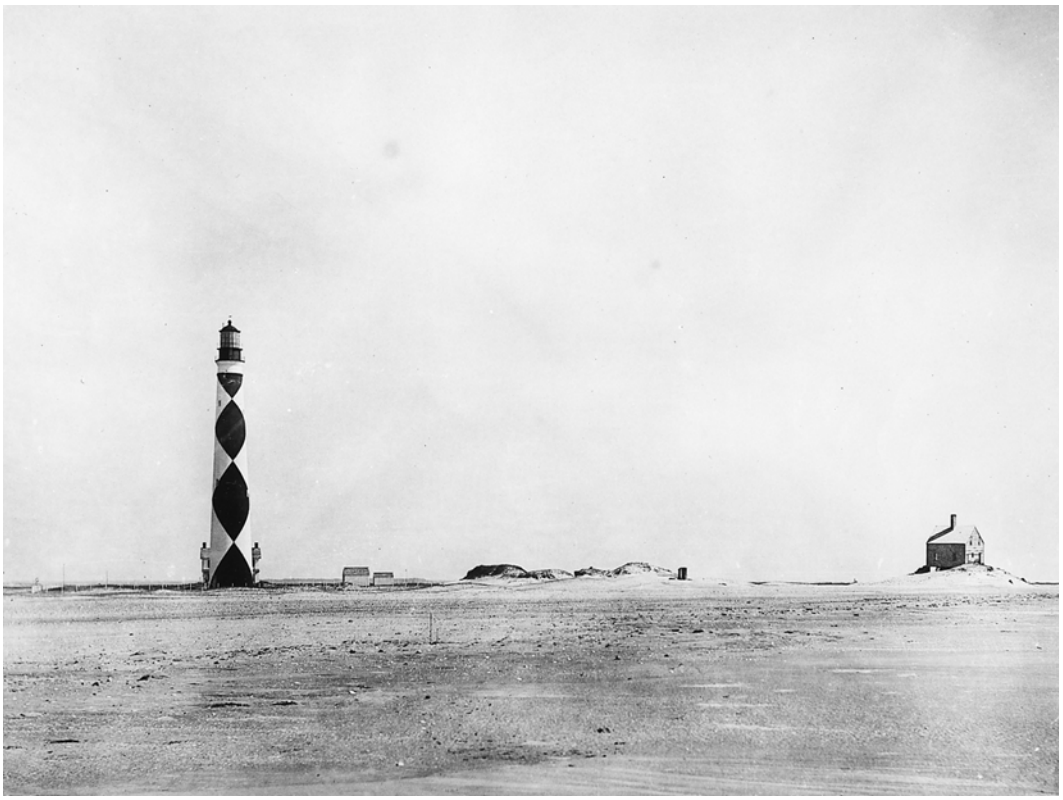


Figure 5 View to north of Cape Lookout Lighthouse in May 1899. The original Keeper's Dwelling is at right and the second Keeper's Dwelling (1873) is partly visible behind the lighthouse. (CALO Coll. D-01)

vandalized the lighthouse at Cape Hatteras. The Cape Lookout Lighthouse was not destroyed, but its lens was so badly damaged that it had to be removed. Not until 1863 did the Federal government install a new third- order lens and get the lighthouse back into operation, and it was 1867 before the original first- order lens was repaired and reinstalled. Also in that latter year, the original wooden stairs inside the lighthouse were replaced with the present cast-iron staircase.

Post-Civil-War Development

In 1871, the Lighthouse Board reported that the old keeper's quarters, which may have dated to the lighthouse's original construction in 1812, had become so dilapidated that there was "a positive danger of the building being destroyed in stormy weather . . . [which] would leave the keepers on a desolate coast without any shelter near their station." So in June 1872, $5,000 was appropriated for a new dwelling, construction of which was finished in April 1873, apparently using brick left over from construction of a similar dwelling that was completed at the Bodie Island Light Station the previous year.[9]

9. Francis Ross Holland, Jr., *Bodie Island Light Station, North Carolina* (NPS, Division of History, 1967), p. 42.

Figure 6 Cape Lookout Life-Saving Station, 1893, with the lighthouse barely visible on the horizon at extreme right. (CALO Coll. G-09)

Built as a duplex, the house provided quarters for the keeper, the assistant keeper, and their families. At the same time, the red- brick lighthouse was painted in its distinctive black- and-white diamond pattern for the first time.[10]

In April 1876, the Army Signal Corps established a weather observation station at Cape Lookout. Probably located in the lighthouse Keeper's Dwelling, the weather station became part of the Department of Agriculture's Weather Bureau when it was established in 1890, but was discontinued in 1904. Even with the lighthouse in operation, the shoals at Cape Lookout continued to take a heavy toll on shipping, and in 1887 the United States Life Saving Service opened a life- saving station a mile and a half southwest of the lighthouse. Under the direction of William Howard Gaskill, seven "surf men" served at the Cape Lookout Life- Saving Station, manning the lookout tower throughout the day and night during the active season, which ran from September 1 to April 30 until 1897 when it was extended from August 1 to the end of May.

Three new store houses were constructed at the Cape Lookout lighthouse station in 1889, and around that time, a little less than two acres of the fifteen- acre site was enclosed by a wire fence. There are reports that an iron oil house was built in the 1890s, but it is not visible in the first photograph of the station taken in 1899 (Figure 2) nor is it depicted on the 1906 site survey (Figure 4). The wood- framed building closest to the lighthouse in the photograph was the oil house, and it must have remained in use until the iron building was built, which probably occurred around 1907.

10. Holland, *Survey History of Cape Lookout*, p. 31.

Figure 7 View of Shackleford Banks after 1899 hurricane. (CALO Coll. F-184)

Cape Lookout has always suffered from storm damage, but the hurricane that struck on August 18- 19, 1899, was one of the deadliest ever recorded on the Outer Banks. Believed to be a Category 4 storm, the so- called *San Ciriaco* or "Great Hurricane" decimated the Banks. Winds at Hatteras reached 140 m.p.h. before the anemometer blew away, and the Outer Banks were submerged under as much as ten feet of water. The surge swept completely across Shackleford Bank, heavily damaging Diamond City and the other communities to the west of the lighthouse. Another hurricane at Halloween, though not as strong as the first, produced a greater storm surge and completed the destruction of the Shackleford Bank communities. So great were the damage and accompanying changes to the landscape that over the next year or two, the entire population abandoned Shackleford for Harker's Island and the mainland. A few residents relocated to Core Banks in the vicinity of the lighthouse and the Cape Hills, which even before 1899 were fast disappearing.[11]

Third Keeper's Dwelling

The extent of storm damage at the lighthouse station has not been documented, but it may have been substantial and might have forced final abandonment of the early- nineteenth- century keeper's quarters, if that had not already occurred. At least by 1904, planning had begun for a new keeper's quarters, the third on the site. Two story, wood framed, and located just a few yards west of the 1873 dwelling, the new house was completed in October 1907 at a cost of $4,479.

At the same time, a new "summer kitchen," which had a wood shed at one end, and a new privy were constructed on the site as well. With

11. Cape Lookout Life-Saving Station Journal, December 22, 1896.

Figure 8 View to northeast at Cape Lookout Light Station about 1913. The 1873 Keeper's Dwelling is just left of center; 1907 summer kitchen and new Keeper's Dwelling are at left. (CALO Coll. D-62)

Keeper Alfred B. Hooper and his family occupying the new house, the old 1873 quarters became the residence of the assistant Keeper James S. Davis and the second assistant William G. Rollinson.[12]

After destruction of the settlements on Shackleford Bank in the 1899 storms, a permanent settlement grew up on Core Banks between the Life- Saving Station and the Lighthouse. In the first decade of the twentieth century, there were as many as 80 residents at Cape Lookout, enough to warrant establishment of a one-room school house.[13] A post office was also established in April 1910, with Amy Clifton, wife of the lighthouse keeper, as post master. Post office records locate the post office "two miles north of the cape, near the light house landing," most likely in the 1907 Keeper's Dwelling. However, the widespread use of gasoline- powered boats after about 1905 made travel to Harkers Island, Beaufort, and elsewhere far more convenient, and it was soon apparent that the post office was not worth maintaining. It was discontinued in June 1911, barely fourteen months after its inception.[14] Nevertheless, Cape Lookout remained, according to one visitor "a bustling place" before World War I, espe-

12. A series of drawings obtained by the park from the Coast Guard's archives document the original construction of this building.

13. Fred A. Olds, "Cape Lookout, Lonesome Place," XLVI, #26, *The Orphan's Friend and Masonic Journal* (Oxford, NC, October 14, 1921).

14. U. S. Post Office Record of Appointments of Postmasters, 1832-Sept. 30, 1971; Records of Site Locations, 1837-1950.

cially after the Army Corps of Engineers announced in 1912 that a coaling station and "harbor of refuge" would be established at Cape Lookout Bight. Sand fences were installed in 1913 and 1914 to stabilize some of the dunes, and in 1915, work began on a rubble-stone breakwater to enlarge and protect the Bight.[15]

The project's most- ardent supporter was local Congressman John H. Small, who envisioned a railroad from the mainland that would help make Cape Lookout a significant port. Intending to capitalize on those plans, private developers organized the Cape Lookout Development Company in 1913 and laid out hundred of residential building lots and planned a hotel and club house to serve what they were sure would be a successful resort community. Unfortunately for all of those plans, there was less demand for a harbor of refuge than supporters had anticipated, and funding for the breakwater was suspended before it was complete. When plans for a railroad from Morehead City also failed to materialize, the development scheme was abandoned as well.[16]

United States Coast Guard

In 1915, the Life- Saving Service and the Revenue Cutter Service were combined into the United States Coast Guard, and in 1916 construction began on a new Coast Guard Station at Cape Lookout to replace the old 1886 life-saving station. At the same time, pay scales were improved and a more- rigorous system of testing and training was instituted in an effort to produce a more professional staff. In 1919, the old life- saving station was rehabilitated as barracks for personnel manning one of the Navy's newly- developed radio compass stations.

The use of motor boats was widespread by 1910 and made it unnecessary for fishermen who worked the fisheries around Cape Lookout or employees at the Coast Guard and Lighthouse Stations to make their permanent residence at the Cape. Partly as a result of that, there was "a general exodus" of year- round residents at the end of World War I. The one- room school closed at the end of the 1919 school year, and some thirty or forty houses were moved from the Cape to Harkers Island around the same time.

Fred A. Olds had visited Cape Lookout in the early 1900s and was even instrumental in getting a schoolhouse built on the island. When he returned for a visit in 1921, however, he found Cape Lookout to be "one of the 'lonesomest' places in the country." Only two or three families were living there by that time, he wrote, and "most of the houses are mere shacks, innocent of paint." He also found the landscape littered with "thousands of rusted tin cans" and "grass or any green thing [was] conspicuous by its rarity." The lighthouse and the Coast Guard station were, he thought, "the only two real places in it all."[17]

15. Gary S. Dunbar, *Historical Geography of the North Carolina Outer Banks* (Baton Rouge, LA: Louisiana State University Press, 1958), p. 54. Also see plat for Cape Lookout Development Company, Carteret County Superior Court Records, Map Book 8, p. 13.
16. National Register Nomination.

Figure 9 Aerial view east of Lighthouse Station, about 1960 after removal of the 1907 Keeper's Dwelling. The shore line has since migrated within a few feet of the summer kitchen. (CALO Coll. D-16)

Most of the houses left at the Cape were used as "fishing shacks," according to the National Register, with only families associated with the Coast Guard Station and the lighthouse remaining in full- time residence. In the second quarter of the twentieth century, Cape Lookout was, the National Register states, "an isolated haven for seasonal fishermen and hardy vacationers, most of them connected to the place by deep family roots."

Although the Lighthouse Service began electrifying its lighthouses in 1900, the Cape Lookout light continued to utilize oil lamps until a new system of "incandescent oil vapor lamps" was installed in 1912. Using kerosene, these lamps were nearly three times as bright as the old, increasing visibility by three or four miles. In 1914, the light was changed from a fixed white beacon to a revolving light with two, ten- second eclipses per minute. A $90,000 lightship was anchored fourteen miles off the Cape in 1904, but during the 1933 hurricane, it was torn from its moorings and driven ashore. Salvaged from the wreck was the ship's generator and lighting apparatus which were installed in the Cape Lookout Lighthouse. Candle power was more than doubled and, for the first time, the Cape Lookout light was visible almost the entire length of the shoals.[18]

Another effect of the 1933 hurricane was the opening of Barden's Inlet, or "the Drain" as it

17. Olds, "Cape Lookout, Lonesome Place."

18. John Loonam, Cape Lookout Lighthouse (Bettie, NC: self-published 2000). <http://www.itpi.dpi.state.nc.us/caroclips/CapeLookoutstory.htm> (13 January 2003)

Figure 10 View to northwest, c. 1970, of 1873 Keeper's Dwelling, 1907 summer kitchen (left), and 1939 coal and wood shed (right). The 1907 Keeper's Dwelling stood between the Keeper's Dwelling and summer kitchen. (CALO Coll. D-16)

was more usually known, a low area between Core and Shackleford Banks which was flooded only during exceptional tidal events. The new inlet proved to be a boon to fishermen who now had a safe passage from Back Sound to Lookout Bight and the ocean beyond, thereby avoiding a long circuitous voyage around the western end of Shackleford Bank to Beaufort Inlet in order to reach the open sea. In 1938, regular dredging of the inlet began and has continued to the present.

According to the National Register nomination, the 1907 Keeper's Dwelling ceased to be used as a residence for the keeper and his family around 1930, although that may not actually have occurred until the late 1930s. In July 1939 the Lighthouse Service was incorporated into the U. S. Coast Guard; and that same year, the Coast Guard installed radio equipment in the sitting room (Room 101) and in the summer kitchen of the 1907 Keeper's Quarters.

After Pearl Harbor, the government expanded its military presence at Cape Lookout significantly. In April 1942, Cape Lookout Bight became an anchorage for convoys traveling between Charleston and the Chesapeake Bay. The 193rd Field Artillery was sent to the Cape to provide protection for the Bight, replaced that summer by heavier guns that remained in place throughout the war.[19] During the war the Coast Guard became part of the U. S. Navy, and the National Register nomination states that the 1907 Keeper's Quarters and other Coast Guard buildings at the Cape were used for military housing during that period.

19. Rex Quinn, *The Gun Mounts at Cape Lookout, Historic Resource Study* (National Park Service, 1986).

Development after WWII

In 1950, an underwater electrical cable was laid from Harker's Island to the lighthouse, which allowed the Coast Guard to have the light fully automated for the first time. With the dwellings and other support buildings no longer necessary, the Coast Guard declared surplus most of the buildings at the lighthouse station as well as some at the Coast Guard Station and offered them for sale in the fall of 1957, if they were removed from the site. Over the next few months, the 1907 Keeper's Dwelling, the old life- saving station, and the life- saving station boathouse were all relocated to new sites nearby. Some of the smaller support buildings on the east side of the lighthouse station complex were demolished, but the lighthouse, the 1873 Keeper's Dwelling, the 1907 summer kitchen, the c. 1920 concrete oil house, and the 1939 coal and woodshed remained intact.

Late in 1957, Dr. Graham Barden, Jr., son of North Carolina's long- time (1934- 1960) Third- District Congressman, acquired the old keeper's house and, in February 1958, relocated it to a new site about 1.1 miles southwest of the lighthouse.[20] He has continued to use it as a vacation house since that time.

In 1966 the Federal government established the Cape Lookout National Seashore, a fifty- four-mile stretch of the Outer Banks from Ocracoke Inlet to Beaufort Inlet. In October 1977, Dr. Barden conveyed title to his land and house at Cape Lookout to the government for inclusion in the National Seashore. At the same time, he obtained a twenty- five- year lease on the property, which expired on October 29, 2002.

The Cape Lookout Lighthouse Station, which no longer included the 1907 Keeper's Dwelling, was listed on the National Register of Historic Places in 1972. In 2000, the Cape Lookout Village Historic District was listed on the National Register as well. Encompassing around 810 acres, the National Register district contains twenty- one historic resources, including the lighthouse (1859), both surviving keeper's quarters (1873 and 1907), the old Life- Saving Station (1887), the old Life- Saving Station's boathouse (c. 1900), the Coast Guard Station (1917), and several private residences (c. 1910- c. 1950). Six of the ten historic private dwellings were built by fishermen or military personnel for their families from about 1910 to around 1950. Two houses were built about 1915 for Army Corps of Engineers workers, and two others were built as vacation cottages in the two decades before World War II. The National Park Service owns all of the property in the district, including the Cape Lookout Lighthouse, ownership of which was recently transferred from the U. S. Coast Guard.

20. Parcel 105-24, Segment 105, "Cape Lookout National Seashore," NPS, Division of Land Acquisition, 1976.

Chronology of Development & Use

Although there has not been exhaustive research in the Federal records of the Coast Guard and of the Lighthouse Service, there has been sufficient research by park staff, volunteers, and others as well as investigation of the existing building and additional historical research during the course of the present study to understand the broad patterns of the building's development and use. Built in 1907 as a residence for the principal lighthouse keeper and his family, the building has remained in residential use almost continuously since that time. Central heat, plumbing, electricity, and a radio telegraph installation were added in the 1930s, and there were major repairs, including re- roofing, re- siding, and replacement of about 40% of the window sash prior to its being moved. Although the house was moved to a new site in 1958 and has been under private stewardship since that time, it has retained nearly all of its historic materials and character.

Original Construction

There was a keeper and a first and a second assistant at the Cape Lookout Light Station by 1860, but it is unclear where they resided before construction of the brick, duplex residence in 1873. Even

Figure 1 1886 design for Keeper's Dwelling. (CALO Coll.)

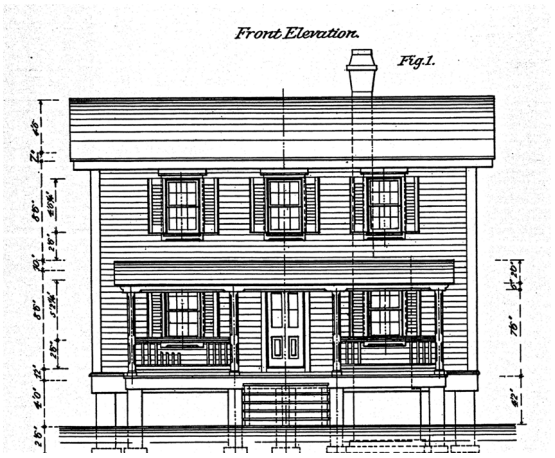


Figure 2 1907 design for Keeper's Dwelling, with floor plans identical to the 1886 plans. (CALO Coll.)

then, the original, wood- framed keeper's dwelling was in poor condition, and although it remained standing into the early twentieth century, it may have been abandoned much earlier. Certainly by the early 1900s, there had long been a need for additional housing that would accommodate the keepers and their families, and by 1904 plans had been developed for identical dwellings at Cape Lookout and at Bodie Island.

Although the design of nineteenth- century lighthouses was typically site- specific and unique, the Lighthouse Board, like the Life-Saving Service and other government agencies, utilized standardized designs for many of its buildings, including the keepers' dwellings. Such was the case with the Keeper's Dwelling at Cape Lookout, which was built using plans that were first developed by the Coast Guard in 1886. The most significant deviation from those plans was substitution of a full two stories rather than the story- and- a- half designed in 1886.

In contrast to the 1873 keeper's dwelling, which was brick, the new dwelling was wood framed in order to reduce the expense of construction. By 1906, the light station had been resurveyed and a site chosen for the new building. Thirty-five feet west of the old dwelling, the facade of the new house was in line with the old, but where the 1873 building was originally oriented to the north, the new building was oriented in the opposite direction. This change in orientation was made in response to changes in patterns of use in the vicinity of the light station, brought on in part by construction of the life-saving station in 1886 and of the several private residences that went up on the cape after 1899.

In addition to the house itself, construction included support buildings. A new "summer kitchen," which had an attached wood shed,

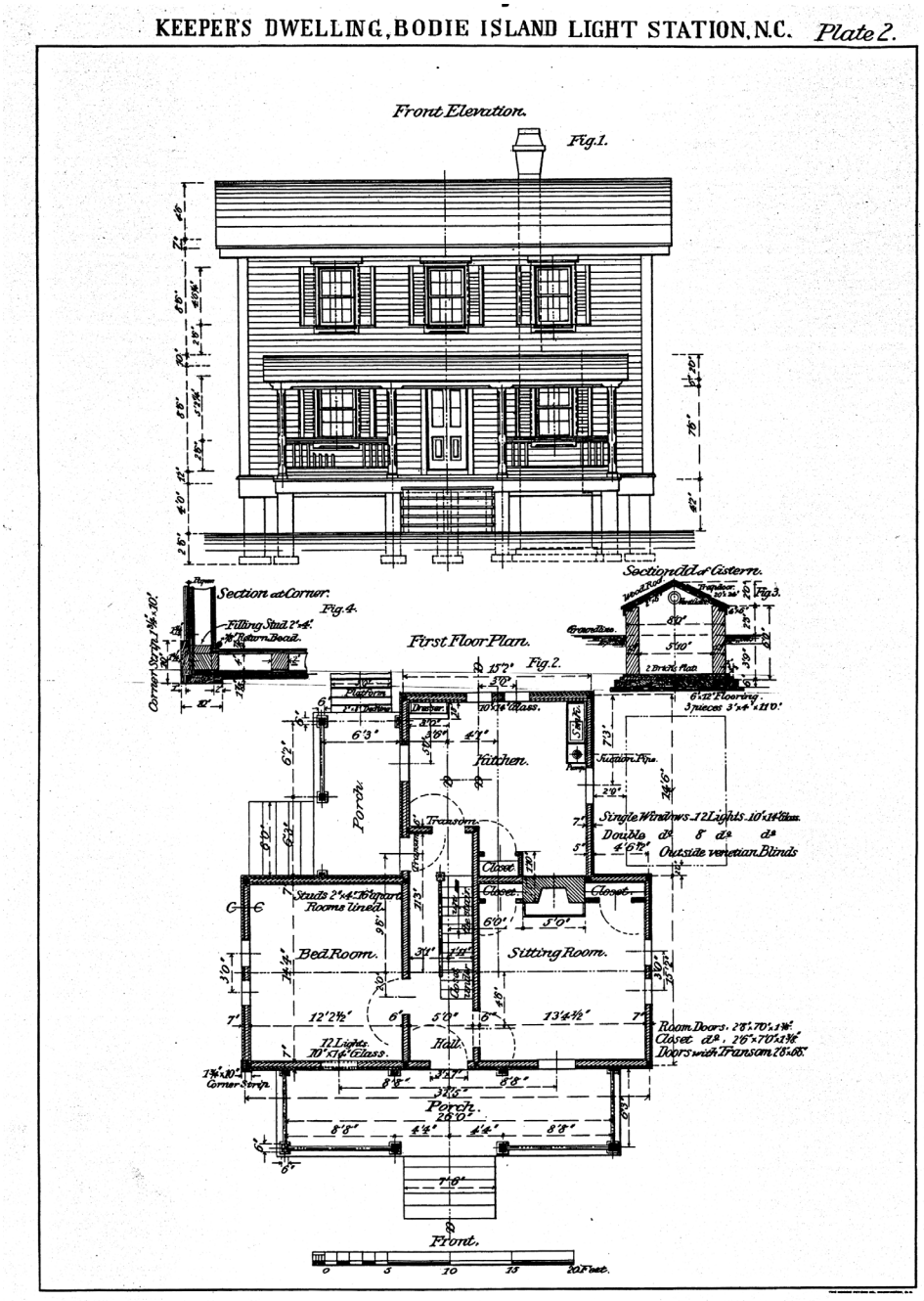


Figure 3 Original front elevation and first floor plan, planned for Bodie Island but actually built at Cape Lookout. (U.S Coast Guard, 1907)

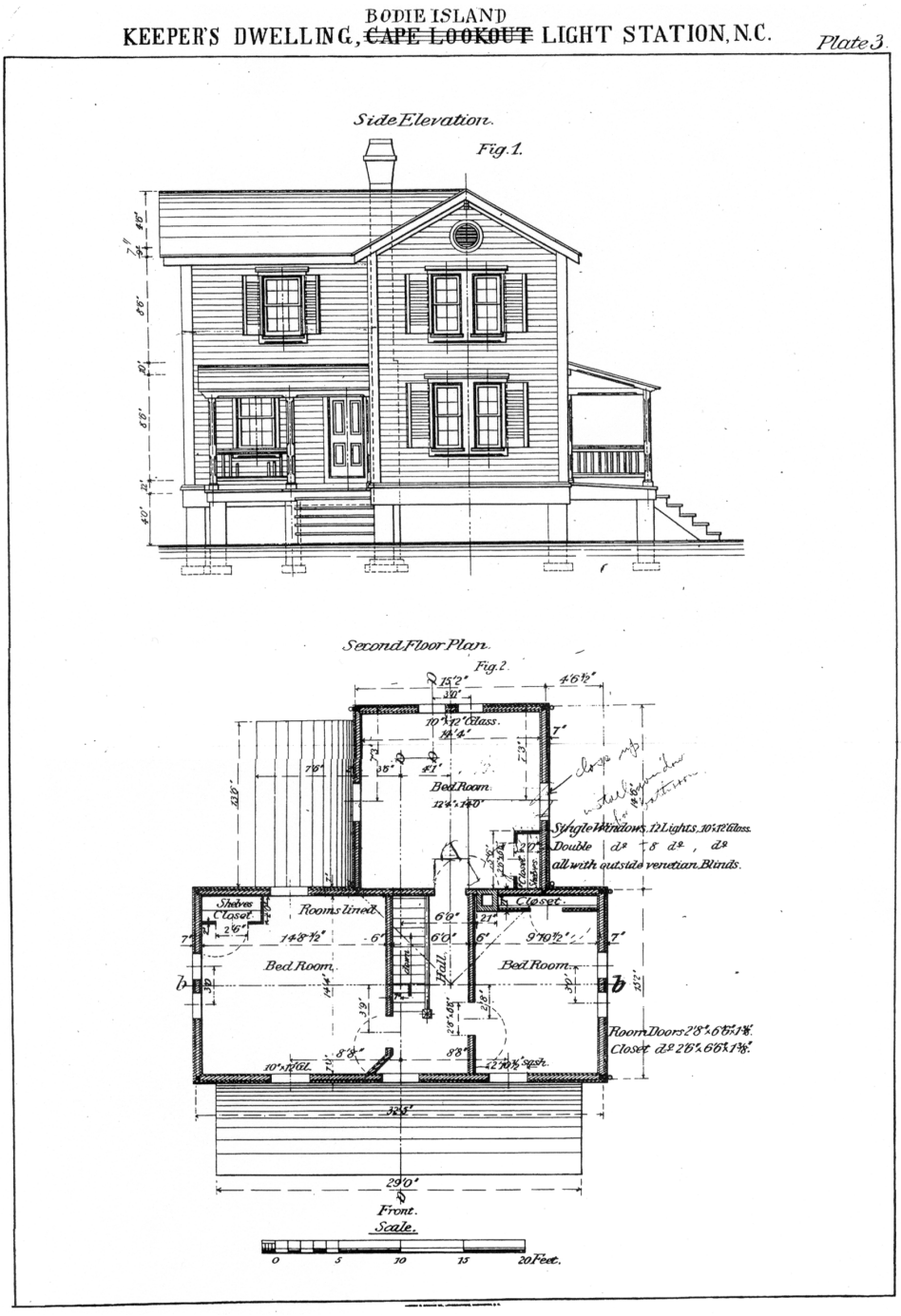


Figure 4 Original side elevation and second floor plan. (U. S. Coast Guard, 1907, with annotations from 1930s)

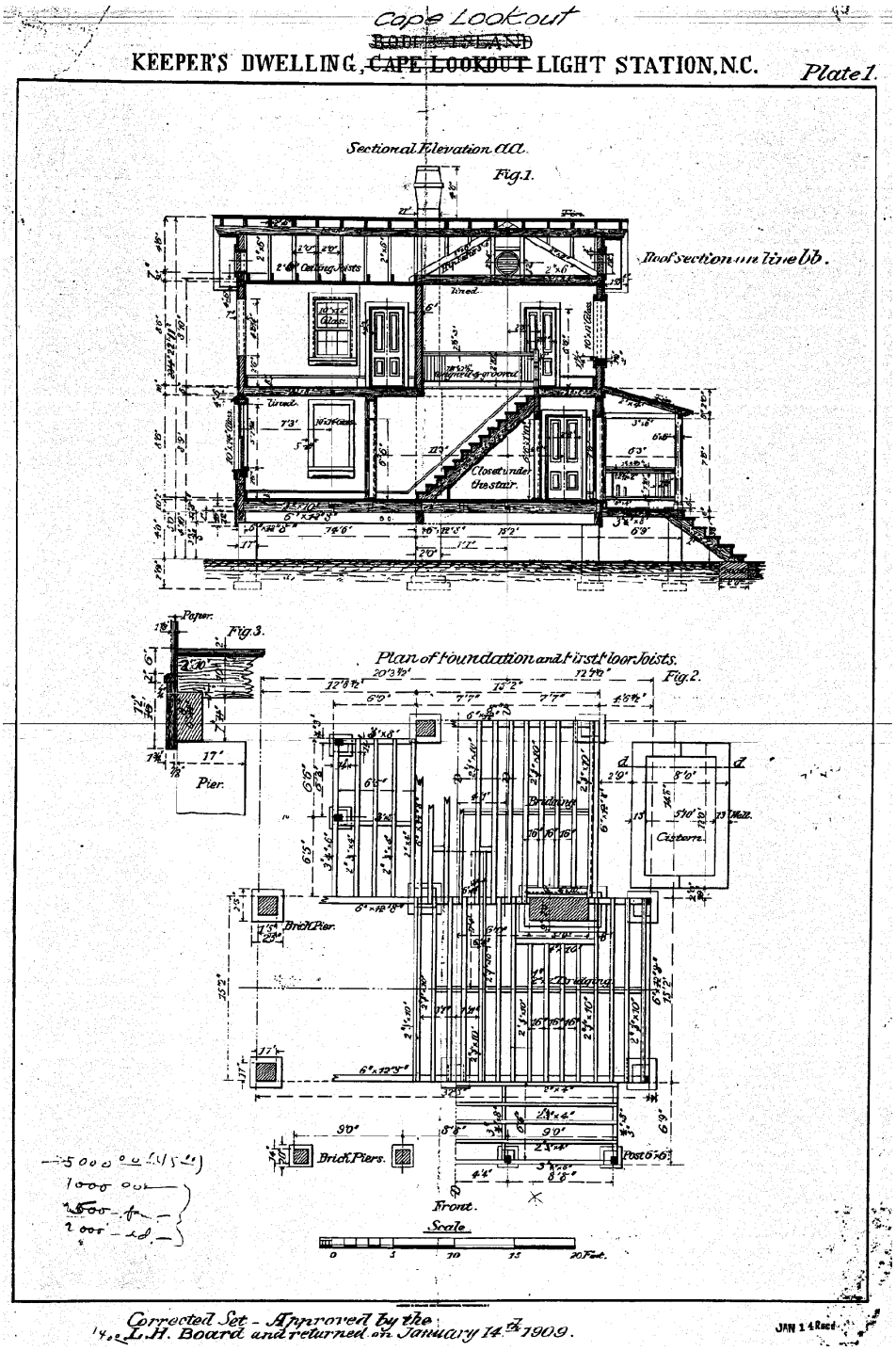


Figure 5 Original "as-built" section and framing. (U. S. Coast Guard, 1909)

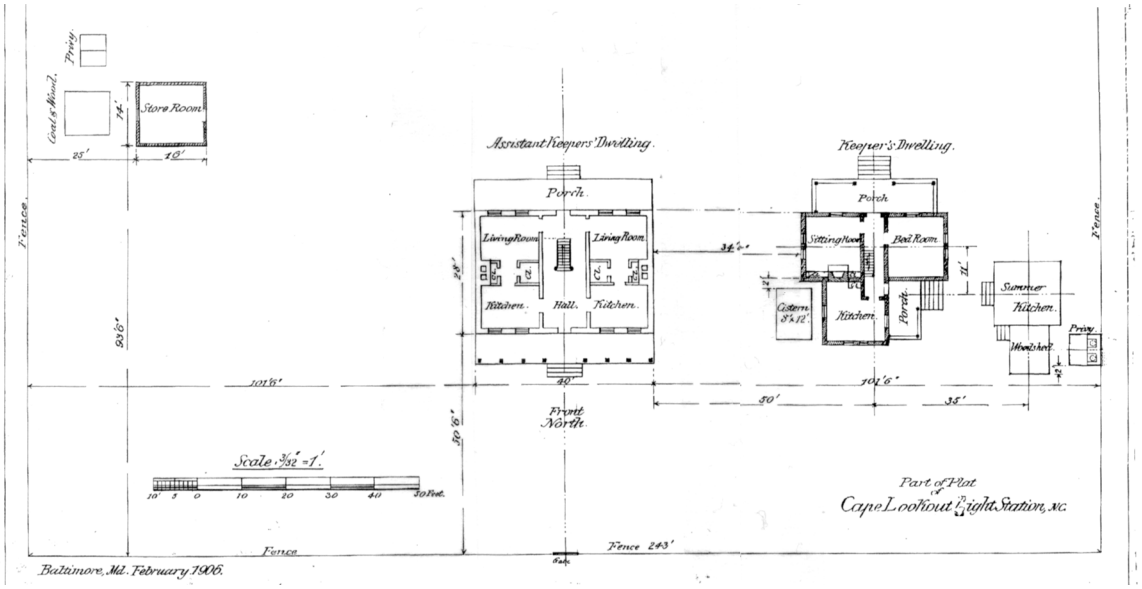


Figure 6 1906 site plan showing proposed location of new buildings. (U. S. Coast Guard, 1906)

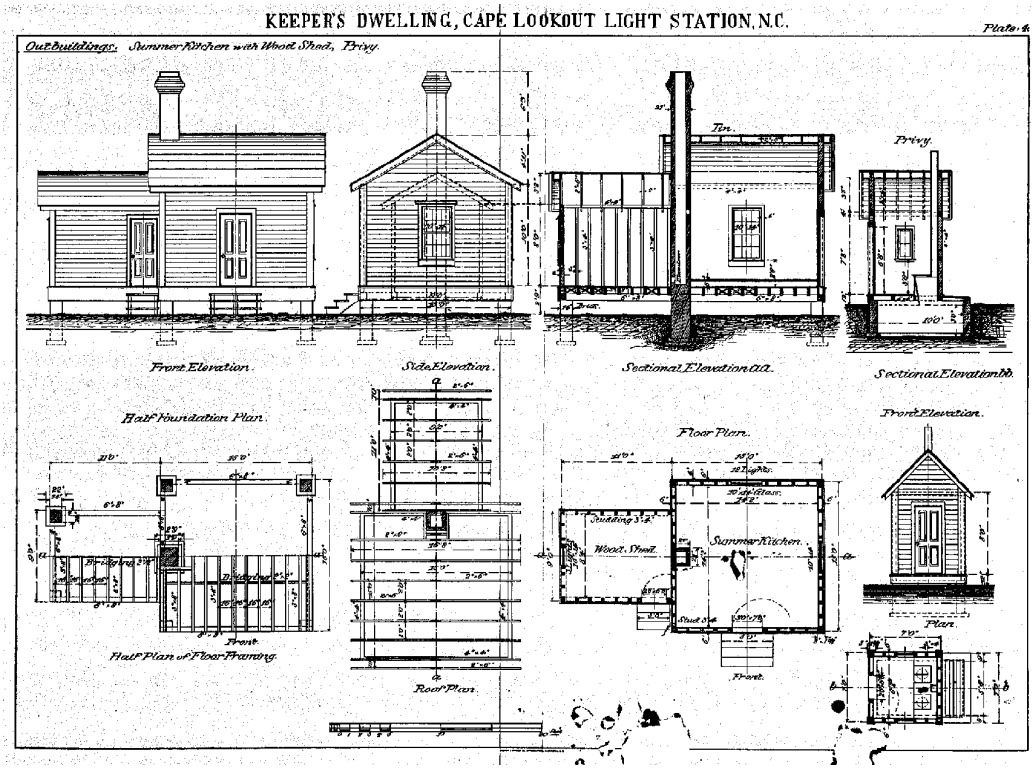


Figure 7 Original plans for summer kitchen and privy. (U.S. Coast Guard, 1907)

Figure 8 Keeper's house, at left, shortly after its construction in 1907. The summer kitchen, cistern, and privy are also visible in this image. (CALO Coll. D-13)

was built about ten feet west of the new house with its door and steps in line with the steps and back door to the new house. Behind the wood shed on the north end of the kitchen was the wood- framed privy. Just off the east side of the house's rear wing was a brick- and- concrete cistern. Measuring 8' by 12' with its walls around 2'- 3" above grade and a low- pitched, wood- framed, gabled roof, the cistern had a capacity of around 4, 000 gallons.

According to Coast Guard documents, construction of the new Keeper's Dwelling commenced on June 24, 1907, and was completed sometime in October 1907 at a cost of $4,479. It is assumed that Keeper Alfred B. Hooper and his family occupied the house by the end of 1907.

Before the 1930s, there appear to have been no significant changes to the structure, except perhaps replacement of the louvered shutters with wood- framed screens. The house was certainly repainted a number of times during that period, probably maintaining the original colors, which were described in 1909 as white with "lead color trimmings and green blinds." The 1873 keeper's dwelling was painted in a similar fashion.[21]

21. "Description of Light-House Tower, Buildings, and Premises at Cape Lookout, Seacoast of North Carolina, March 8, 1909. Stack 10EZ, Row 13, Compartment 5, Shelf 3, G-26, Records of the U. S. Coast Guard, National Archives.

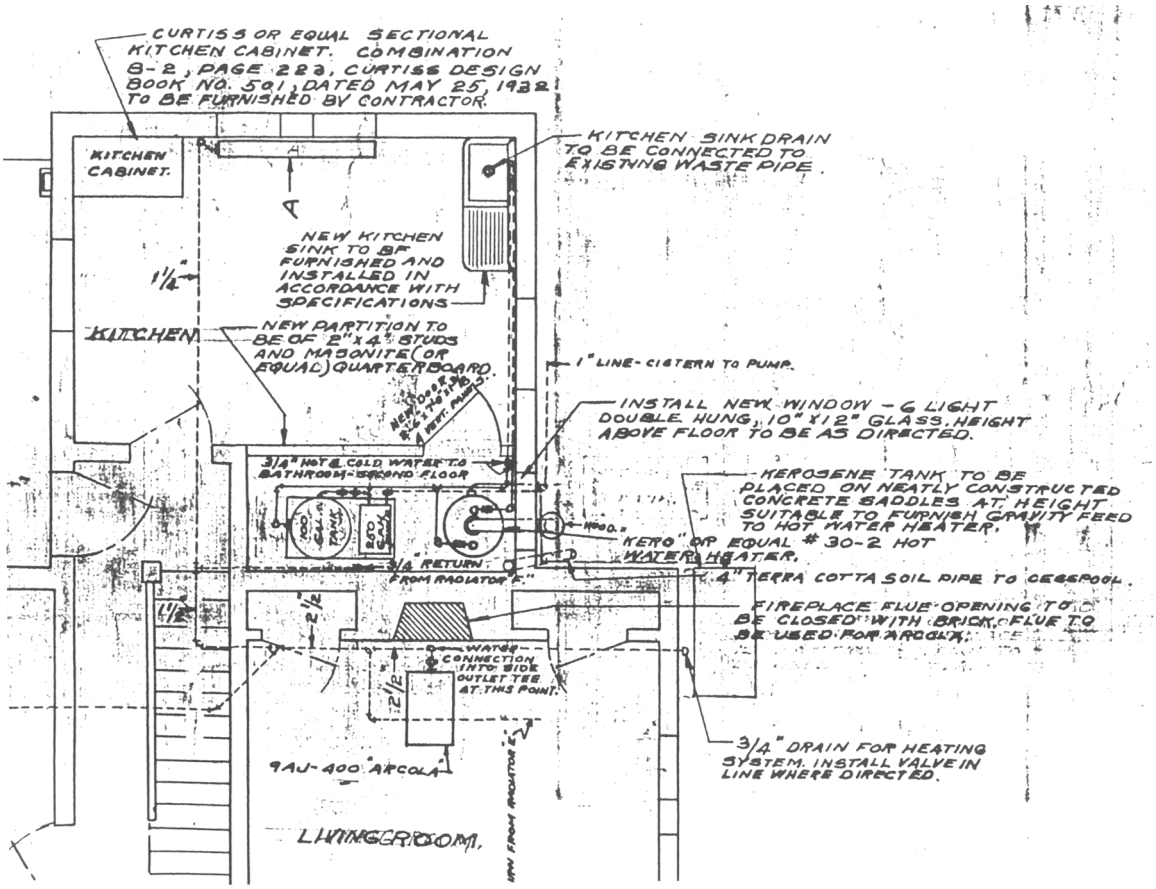


Figure 9 Detail of first floor showing changes for installation of plumbing and heating systems in 1934. (U. S. Coast Guard, 1934)

Depression-Era Changes

Some of the most significant changes to the lighthouse station occurred in the 1930s. In July 1933 a steel radio tower was unloaded at the light station, although not until January 1934 was it erected with the help of the life- saving station crew.[22] Eighty feet high, the tower was located just off the south end of the summer kitchen and utilized an antennae wire that was strung to the top of the lighthouse tower. Apparently at that time, the summer kitchen was converted for use as a "radio shack" for the radio operator and for storage of batteries that powered the equipment.[23]

In July 1934, the Coast Guard's engineers approved plans for installation of heating and plumbing systems, which the house had never had. However, the bathroom lavatory is stamped with the date "8/3/38"; if the fixture is original, as it appears to be, the plans must not have been executed until 1938 or 1939.

22. Cape Lookout Life-Saving Station Journal, July 21, 1933, and January 31, 1934.

23. In the CALO Collection is an undated revision of the 1907 site plan that documents the location of this equipment.

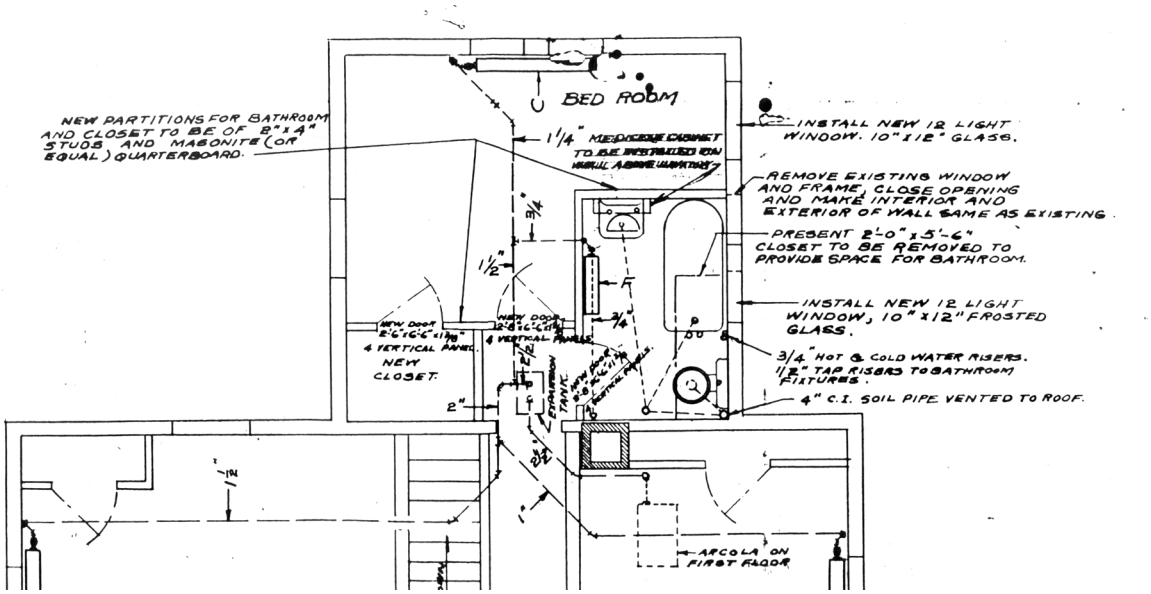


Figure 10 Detail of second floor changes for installation of plumbing and heating systems. (U.S. Coast Guard, 1934))

Installation of the heating and plumbing systems required several alterations to the building, mainly in the kitchen, Room 101, and Room 203. In the kitchen, the small closet or pantry on the northwest (front) wall was completely removed in order to construct a "pump room" to house not only the water pump but the large water tanks that were required for the new hot-water heating system. The wall creating the new space was a conventional stud wall finished with 1/4" or 3/8" hardboard, probably masonite. At the same time, a new window was installed to light the pump room, and a new four- panel door that matched the original doors elsewhere in the house was installed to close the room.

In the sitting room (Room 101), the fireplace was closed, and if there was a mantelpiece, it was removed as well. In front of the fireplace, the "Arcola" water heater was installed and vented into the old chimney stack. Piping for the hot- water heating system was run exposed throughout the house, with low, cast- iron, radiators typically installed beneath the double windows in every room but the halls and Room 101, which was presumably heated by the boiler. Outside, a kerosene tank was installed on an elevated concrete platform to supply fuel to the water heaters.

A plumbing system was also installed at the same time as the heating system. Installation of a bath room required major alterations to Room 203. The small closet originally built in the room was removed, and a small hall, closet, and bathroom were built along that side of the room. Walls for these spaces were conventionally framed and finished with hardboard panels like those used in the kitchen. The original window on what is now the southwest side of Room 203 was relocated and a new window

Figure 11 Partial view of Keeper's Dwelling (at left) around 1940, after being resided with cedar shingles. The structures between the two buildings have not been identified. (CALO Coll. D-01)

Figure 12 Historic photograph, c. 1943, showing foundation of 1907 Keeper's Dwelling on its original site. (CALO Coll, Royer Photographs)

installed to light the bathroom. New four-panel doors were specified for the new openings, but one of the original four- panel doors may have been re- used for the bathroom.

Galvanized steel water pipes and cast- iron waste lines were run exposed throughout the building and, along with the heating pipes, insulated with magnesia and felt where they ran through the crawl space and attic. Waste lines fed into a new cesspool constructed about 35' off the north side of the house. The privy which had been constructed in 1907 was probably removed at this time. In addition to the new bathroom fixtures, the old kitchen sink was also replaced with the present enameled cast-iron sink. Finally, while the cistern may have continued to collect runoff from the roof, a steady water supply was insured by drilling an artesian well which fed into the old cistern. It was probably at this time, too, that the wooden roof on the cistern was replaced with the present concrete slab.

The Lighthouse Service was merged with the Coast Guard in 1939, and the present wood and coal shed was constructed north of the 1873 keeper's house at that time.[24]

A number of the window sash were also replaced by the mid- twentieth century. Given the high level of maintenance that was generally given to the Coast Guard's buildings, it seems unlikely that the sash simply deteriorated. Further research into Coast Guard records might document the reason for replacement, which could have been necessitated by catastrophic storm damage, perhaps during the powerful hurricane that struck the area on September 14- 15, 1933.

24. The original shed, which had deteriorated, was reconstructed by the Park Service in recent years.

Figure 13 View from lighthouse to the north in June 1973. The summer kitchen is at lower left and the 1873 house is at lower center with the coal and wood shed behind. (CALO Coll. D-25)

The house was originally built on brick piers that were specified to put the finished floor at five feet above grade. Historic photographs show that, prior to World War II, the area between the piers was underpinned with a brick curtain wall.

The original louvered exterior shutters were also removed prior to World War II and replaced by wood- framed screens, many of which remain on the house. Probably at the same time the front porch, and perhaps the back porch as well, were screened.

The last significant change prior to World War II was replacement of the original clapboard with cedar shingles. Allowed to weather naturally, the cedar shingles produced a dark color on the body of the house, and with white trim, significantly altered the appearance of the structure.

Post-War Changes

The balustrades on the back porch were lost before the house was moved, but changes after World War II were minimal, aside from the routine painting that was typical of the Coast Guard's maintenance of its buildings. In 1950, an underwater electrical cable from Harker's Island allowed automation of the light house, and the last full- time lighthouse keeper moved off the island. The old 1873 house may have been essentially abandoned, but the Coast Guard continued to use the 1907 house and the old summer kitchen for its radio installation.

As the underwater cable was being laid, the Coast Guard relocated it radio beacon to the

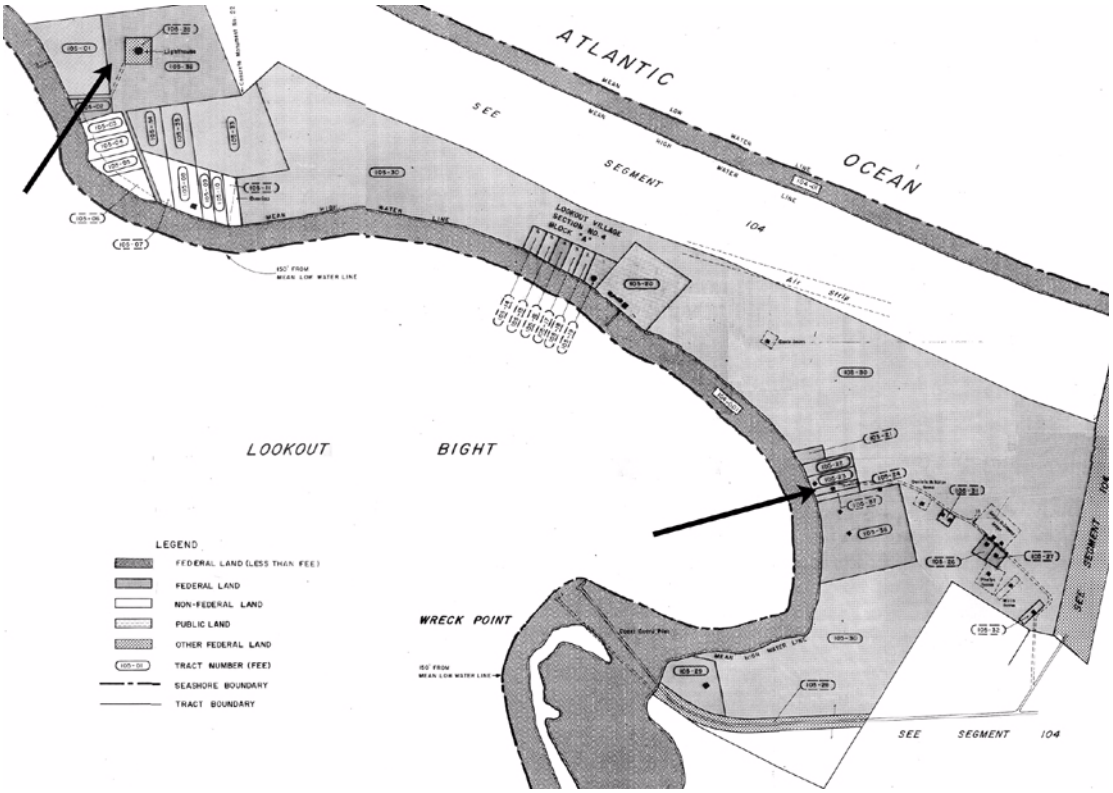


Figure 14 Parcel map of Cape Lookout, with arrows indicating original site, upper left, and present site of Barden House, at right. (NPS-SERO-Lands, 1976)

lighthouse station, constructing a 120'- tall steel tower to augment the shorter tower from the 1930s. Additional equipment appears to have been added in the old summer kitchen, and the sitting room of the old keeper's house became an office for the personnel monitoring the radio equipment. An outrigger was installed on the outside of Room 101 with a lead that connected to the antennae wires run between the 80' tower and a telescoping flag pole on the east side of the 1873 house.[25]

25. See "Alterations to Cape Lookout Lt. Station Radio Installation," dated 1/26/49, in CALO Coll.

The Move

With automation of the lighthouse and other changes that were occurring in Coast Guard operations, there were proposals for abandoning and removing all the buildings at the coast guard station and the light station, except for the lighthouse itself. A new life- boat station would then be constructed on Barden's Inlet just north of the lighthouse. All of the smaller support structures at the light- house and several of those at the Coast Guard Station were declared surplus and offered for sale if they were removed from the site. U. S. Representative Graham Barden's son, Graham, Jr., acquired the 1907 Keeper's Dwelling and, in February 1958, relocated it to a lot that he

owned about a mile southwest of the lighthouse.

Barden hired a contractor, Elzie Collins, to accomplish the move, which he did by placing the house on a "low- boy trailer with a bulldozer behind and a caterpillar tractor pulling in front."[26]

The house was set on a new concrete block foundation, and some repairs were necessary to the floor framing under the kitchen and the front porch, along with construction of new wood steps to both porches. The Arcola boiler, water tanks, and most of the piping in the attic and crawl space were removed. To make more space, the door and part of the wall to the pump room in the kitchen were also removed at that time. More recently, the house has been re- sided with 8" cedar siding and reroofed with cedar shingles. Other recent changes include replacement of the front door with a solid- core door; removal of a few of the wood- framed screens and some radiators; installation of plywood covers at the openings on the porches, and replacement of the toilet bowl with an antique bowl.

26. Interview with Dr. Barden, Jr., by the author in October 2002.

Time Line for Keeper's Dwelling	
Mar 26, 1804	Congress authorizes light station at Cape Lookout
Feb 18, 1805	Four acres purchased for light station
1812	First Cape Lookout Lighthouse constructed First Keeper's Dwelling constructed?
May 3, 1830	Elijah Pigott, et. al. execute deed for fifteen acres of land to expand light station
1852	Light House Board established
1856	First- order Fresnel lens installed at Cape Lookout Light Station
Nov 1, 1859	Second Cape Lookout Lighthouse begins operation
Apr 1862	Confederate soldiers disable Cape Lookout Lighthouse
1867	Civil War damage to Lighthouse repaired; new iron stairs installed
c. 1870	Original lighthouse tower collapses or is demolished
1873	Second Keeper's Dwelling constructed
Apr 1876	Weather Bureau station established at Cape Lookout
1887	Cape Lookout Lifesaving Station constructed
1899	*San Ciriaco* or "Great Hurricane" decimates Shackleford Banks
1904	Weather Bureau station discontinued
Jun 24, 1907	Construction begins on third Keeper's Dwelling (present Barden House)
Oct 1907	Third Keeper's Dwelling completed Second Keeper's Dwelling becomes residence for assistant keeper First Keeper's Dwelling demolished?
Apr 6, 1910	Cape Lookout Post Office opens with lighthouse keeper's wife as postmaster
Jun 17, 1910	Bureau of Lighthouses in Department of Commerce replaces Treasury's old Light House Board
Jun 10, 1911	Cape Lookout Post Office discontinued
1912	Incandescent Oil Vapor lamp installed at lighthouse
1913	Cape Lookout Land Company begins land acquisition at the Cape
1914	Construction commences on breakwater to create "harbor of refuge" at Cape Lookout Cape Lookout Development Company lays out lots and streets

Time Line for Keeper's Dwelling	
1915	Life- Saving Service becomes part of new U.S. Coast Guard
1916- 1917	New Coast Guard Station constructed on site of old Life- Saving Station
1933	Hurricane opens Barden's Inlet; lighthouse electrified
Jan 1934	First steel radio tower erected at light station
Jun 13, 1934	Plans approved for new heating and plumbing system for Keeper's Dwelling
1938	Dredging of Barden's Inlet begins; possible alterations to radio installation
Jul 1, 1939	Light House Service incorporated into Coast Guard
Dec 1939	Plans approved for new coal and wood shed
1940	Cape Lookout Life- Saving Station closed
Nov 1943	Additions to septic drainage system at light station
Jan 26, 1949	120' radio tower added at light station
1950	Lighthouse automated
1958	Keeper's Dwelling relocated by Dr. Graham Barden
1966	Cape Lookout National Seashore established
Oct 18, 1972	Cape Lookout Light Station listed on National Register of Historic Places
1992	Original first- order lens removed from lighthouse and installed at Block Island (RI) light
Jun 3, 2000	Cape Lookout Village Historic District established

Physical Description

Located about half way between the old Coast Guard and Light House Stations at Cape Lookout and facing in a northwesterly direction, the Keeper's Dwelling (1907)- - or the Barden House, as it is known today- - is a two- story, wood- framed structure that includes six main rooms encompassing about 1,225 square feet of floor space. The main footprint of the building is T- shaped with a front porch that runs almost the full width of the house and a smaller rear porch off the north side of the kitchen. Although the building is no longer on its original site and the foundation and porch steps are modern, nearly all of the building's other historic features and materials remain intact and in good condition.

This section contains a systematic description of the features, materials, and spaces in the Barden House, according to age, historical significance, and general integrity. Because the house has been moved, the original site of the building is also described at the end of this section.

Note: Floor plans are included at the end of this section.

Figure 1 View to south of Barden house. (NPS-SERO-CR, 2002)

Figure 2 View of flood wall surrounding house. (NPS-SERO-CR, 2002)

Site Features

Located on the sound side of Core Banks, the lot on which the Barden House sits encompasses .46 acre that includes about fifty feet of frontage along Lookout Bight. Designated Tract #105- 24 in the park's survey of the cape, the land is flat, sandy, devoid of trees, and slightly above the mean high tide. Besides the house itself, there are three prominent features on the site. Surrounding the house is a low wooden enclosure, built in recent years as a breakwater to prevent high tides and waves from undermining the house's foundation. The enclosure is approximately 52' along the front and rear (east and west) and 51' along the sides. It is set with posts, 3- 1/2" by 5- 1/2" on centers 8' to 9' apart and sunk about 3- 1/2' into the ground. The wall itself is constructed of pressure- treated, 2' by 6", tongue- and- groove pine.

Inside the breakwater on the south side of the kitchen is a modern concrete septic tank, with the tank exposed at grade. The drain field is reportedly located off the southeast side of the house. The system dates to the 1960s.

In the rear yard outside the breakwater is a modern wood- framed generator and pump house constructed in 1963. Wood- framed on creosote piles with an asphalt- shingle roof, it houses the 1500- watt, gasoline- powered generator for the house's electrical system. It also houses the pump for the drilled well that supplies water to the house.

Figure 3 View north in crawl space, showing lattice block used to allow floodwater to pass through the building. (NPS-SERO-CR, 2002)

Foundation

The house, which was originally built on 17"- square brick piers, is now set on a continuous foundation of concrete block that elevates the house about four feet above grade, which approximates its original elevation. Porches are supported by concrete block piers about 16" square. The character of the footings for the walls has not been documented. On the northeast side of the house, a section of the foundation is constructed with open concrete block that allows floodwaters to pass unobstructed through the crawl space. Without such openings, the foundation would be susceptible to major damage from the force of flood water against it. A small opening in the foundation on the south side of the kitchen wing provides access to the crawl space.

Figure 4 View of chimney. (NPS-SERO-CR, 2002)

Chimney: The house was constructed with a single brick chimney stack that originally served a fireplace in the sitting room (Room 101) and a cook stove in the kitchen. When the house was moved, the foundation of the chimney was lost, but the original fireplace and chimney stack were moved intact and reset on a concrete block foundation. The chimney is about 21" square as it rises through the roof. Above the roof, the stack is corbeled out to a width of about 30" at a double course of brick where the top third begins to corbel back in to the original width. The chimney rises about 18" above the ridge line of the roof. The chimney has been stuccoed and, no longer in use, is sur-

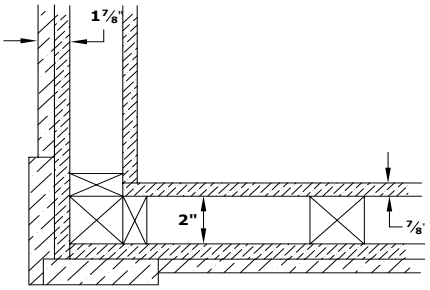


Figure 5 Typical corner section based on original drawings and field observations. (NPS-SERO-CR, 2002)

Figure 6 View of typical floor framing. (NPS-SERO-CR, 2002)

Figure 7 View southeast in attic. (NPS-SERO-CR, 2002)

mounted by an anemometer and other weather- related apparatus.

Structural System

The house is a balloon- framed structure, constructed using wire nails and circular- sawn lumber in dimensions that are typical of the early twentieth century. Like the old life- saving station and other buildings built by the Federal government, the house was well- constructed so as to withstand the harsh marine environment. Isolated areas of termite damage are visible in the basement crawl space, but overall the framing is in excellent condition. Sills are solid 6" by 8", lapped at the corners. Joists at the first floor are 2" by 10" and at the second floor 2" by 8". Bridging and a diagonally- laid sub- floor of 3- 1/4" tongue- and- groove boards are present at the first floor and, presumably, at the second floor as well.

Studs are 2" by 4" (actual dimensions are used throughout this description unless otherwise noted) on centers 16" to 18" apart. Tongue- and- groove, diagonally- laid, 7/8" by 10" sheathing appears to be present on all exterior walls.

The roof is framed with 2" by 6" rafters on 24" centers with a 3" by 8" ridge board which is expressed on the exterior of each gable. Decking of the main roof is mostly 6"- wide, tongue- and- groove boards. Porch ceilings and the soffit of the main house are the exposed underside of roof decking, most of it 5"- wide, double- beaded, tongue- and- groove boards. Narrower beaded boards are present on part of the soffit

around the north corner of the house and may represent later repairs to the building.

Windows and Doors

All of the present window and door openings on the house are historic, with all but two of those being a part of original construction. However, a number of the original sash have been replaced, although the original muntin pattern was maintained. Double windows are used on both stories of the three gable ends of the house, with single windows present elsewhere. Double window sash are four- over- four, 2'- 1"by 5'- 2" on the first floor and 2'- 1" by 4'- 6" on the second floor. Single window sash are six- over- six, 2'- 10" by 5'- 2", on the first floor and 2'- 10" by 4'- 6" on the second floor. Most of the sash are in generally good condition, except for paint, which is beginning to fail.

The shutters that were originally present at all window openings were replaced prior to World War II by wood- framed screens, most of which are still in place.

The original front door, which was similar to the existing back door, has been lost. The present front door is a modern, solid- core, wooden door, 3'- 0" by 7'- 0". The back door opening is 2'- 8" by 6'- 6" and has a single- light transom 15" by 32". The door, which is 1- 3/4" thick, has two, molded, vertical panels below two narrow, vertical lights. The presence of an added 1"- thick strip of wood along the outside stile of the door and alterations to that side of the door frame may be indications that the door is not original; but all of these changes

Figure 8 View of back door. Original front door was of a similar design. (NPS-SERO-CR, 2002)

Figure 9 View of typical double windows. (NPS-SERO-CR, 2002)

may simply be the result of old damage and repairs to the door, which closely resembles the door indicated on the original architectural drawings for the house. Vandals recently broke one of the back door's beveled- glass lights.

Figure 10 View to west of rear of Barden House. (NPS-SERO-CR, 2002)

Screen doors are present at both exterior doors. The screen door at the back door is hinged on the inside of the jamb to swing inward. The front door screen is hinged on the outside. Both doors probably date to the mid-twentieth century.

Window and door sills are 1- 3/4" thick. Casing for windows and doors is generally 1" by 4". Window casing includes a 1" by 2" broadly-chamfered, back band. In addition copper flashing surrounds each window opening, lapping on to the backband by about 3/4". A 1" by 2" drip cap finishes each header.

Windows that open on to the two porches are fitted with modern plywood covers, hinged at the top. The back door is fitted with a similar plywood cover hinged on the right side of the jamb. These are fastened by way of large bolts that are run through the window casing to the interior.

In addition to these window and door openings, each gable is fitted with a circular louver approximately 18" in diameter. These louvers cover a slightly larger, rectangular opening that provides ventilation to the attic.

Exterior Finishes

Siding: The historic cedar shingles were covered by the present siding after the house was

moved. The present siding is unpainted cedar, 1/2" by 8"and laid with an exposure of 6- 1/4" to 6- 1/2". It is in mostly good condition.

Trim: Nearly all of the original, painted, exterior trim remains in place and in good condition. The exterior walls have 1- 1/2" by 11- 3/4" skirt boards and 1- 1/2" by 3- 1/2" drip caps.

Corner boards are 7/8" by 8- 1/2" or 10" with rabbeted connections between the two boards that make up each corner.

Eaves are unboxed with the ogee ends of the ridge boards exposed. Roof decking exposed in the eaves consists of 1" by 3", double- beaded, tongue- and- groove boards. Fascia boards are about 1" by 6".

Roof Covering: Roofing is over a solid wooden deck of 6"- wide tongue- and- groove material. The roof is finished with modern wood shingles and is in good condition.

Figure 11 View of typical window detail. (NPS-SERO-CR, 2002)

Figure 12 View of west end of front porch. (NPS-SERO-CR, 2002)

Porches

Most of the material on the two porches is historic, except for the front porch floor framing, which has undergone major repairs. Floor joists are typically 2" by 4" on about 18" centers. Flooring is tongue- and- groove, 1- 1/8" by 3", except on the west end of the front porch where the flooring is around 1- 1/8" by 2- 1/2". Posts are 5- 3/4" by 5- 3/4", nearly 8' tall, and have chamfered edges. Headers also have chamfered edges and measure around 2- 3/4" by 6". The ends of the headers project beyond the

Figure 13 View of front porch eave bracket. (NPS-SERO-CR, 2002)

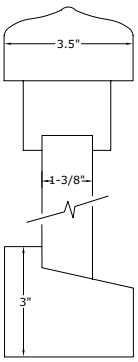


Figure 14 Section through typical porch balustrade. (NPS-SERO-CR, 2002)

Figure 15 View of southwest end of front porch. (NPS-SERO-CR, 2002)

Figure 16 View east of front porch ceiling. (NPS-SERO-CR, 2002)

posts and have ends that are sawn in a somewhat different fashion from the projecting ridge boards, having a quarter- round end with a flat return at the bottom rather than the ogee curve of the ridge boards. Porch rafters are typically 1- 3/4" by 3- 1/2" to 3- 3/4" and have exposed ends finished like the headers. The porch ceiling consists of the exposed underside of the roof decking, which is laid with 1" by 3- 1/4" beaded tongue- and- groove boards.

The balustrades have been lost from the back porch but survive intact on the front porch. They are 28" high, with a top rail 2" by 3- 1/2" and a bottom rail 3" by 3- 1/2". Balusters are 1- 3/8" by 1- 3/8" on 4" centers.

Modern, wooden steps rise to the front and back porches. Both sets of steps are about 6' wide and have a 6" rise and 11" run to the treads.

Hall (100)

Doors from the front and the back porch open into this hall. Measuring 5' by 18'- 3", it includes the staircase to the second floor along with a small closet beneath the stairs. The only significant alteration to the space was replacement of the original, two- light, front door with a modern solid door that blocks light into the hall.

Floor: Flooring is typical 3"- wide, tongue- and- groove pine. The finish is worn but the flooring is in generally good condition.

Ceiling: The ceiling is set at 8'- 6" and finished with 3"- wide, beaded, tongue- and- groove paneling painted white.

Walls: Walls are finished like the ceiling with 3"- wide, beaded, tongue- and- groove paneling, installed vertically and painted yellow.

Doors: In addition to the front door which opens into this space, the screen door at the back door also opens inward into the hall. The other door opening into this space is the door to the closet under the stairs. Measuring 1'- 10" by 6'- 6", it is constructed of 5"- wide, double-beaded, tongue- and- groove boards and is fitted with a surface- mounted rim lock and a plain metal knob.

Trim: Walls are trimmed with a 1" by 7- 3/4" baseboard and 1- 1/4" ogee- molded base cap. A 1" cove molding is used at wall corners and at the ceiling. Doors are trimmed with 1" by 6- 1/4" casing, which includes a plain 1- 1/4"- wide backband.

Lighting: Surface- mounted electrical conduit is mounted on the ceiling and runs the length of the room. There are, however, no lighting fixtures present.

Staircase: Stairs to the second floor rise from near the back door along the southwest wall. The stairs have a rise of 8" and a run of 9- 1/2" and are around 34" wide.

The stair balustrade includes a square newel post at the first floor measuring, 5- 3/4" by 5- 3/4", 41" high. The circular railing is 4" in diame-

Figure 17 View of hall from front door. (NPS-SERO-CR, 2002)

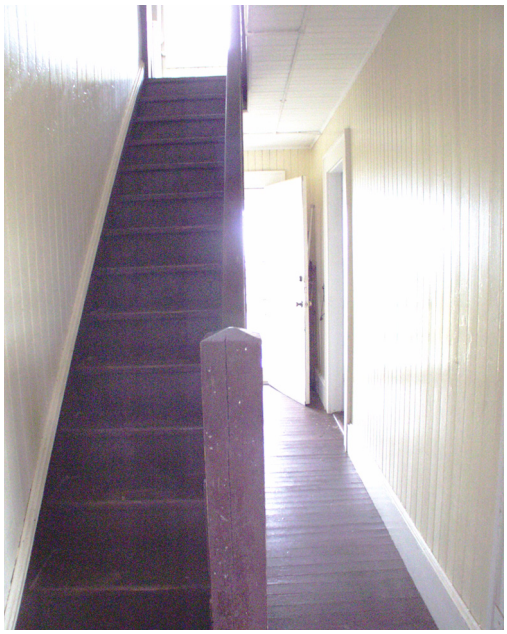


Figure 18 View to northwest in hall. (NPS-SERO-CR, 2002

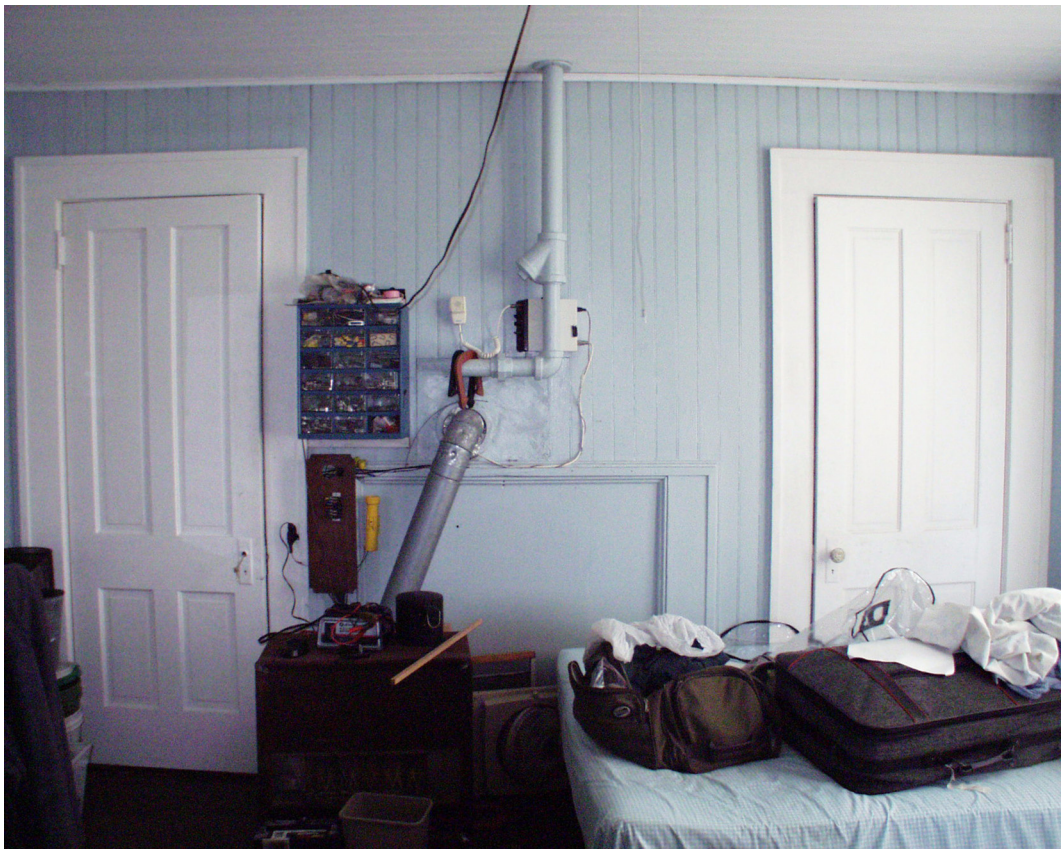


Figure 19 View to southeast in Room 101, the keeper's former sitting room. (NPS-SERO-CR, 2002)

ter and set at 34" from the floor. Balusters are square, 1- 3/4" by 1- 3/4", set on 4- 1/2" centers.

Room 101

Measuring 13'- 6" by 12'- 3", this room has the only fireplace in the house and was originally used as a sitting room by the keeper and his family. Entered from the hall, it features narrow closets on both sides of the fireplace. When the hot- water heating system was installed in 1934, the fireplace was closed and the boiler for the system placed in this room. In addition, when the Coast Guard installed a radio transmitter at the light house station, this room became the office and transmission room. The insulator for the incoming signal wire from the radio tower's outrigger is still present on the southwest wall.

Floor: Flooring is typical 3"- wide, tongue- and-groove pine. Although historic flooring appears to be intact, modern floor coverings and furniture precluded an assessment of its condition.

Ceiling: The ceiling is set at 8'- 6" and finished with typical 3"- wide, beaded, tongue- and-groove paneling painted white.

Walls: Walls are finished like the ceiling with typical 3”- wide, beaded, tongue- and- groove paneling, installed vertically and painted blue.

Doors: The door from the hall and the two closet doors are all 2’- 6” by 7’- 0” by 1- 3/8” with four vertical panels. Mortise locks are present at all three doors, but the knob is missing from one of the closet doors. The closet door knob is plain metal while the hall door knob is also metal but has a design impressed in its face. The closet door knob is probably typical of the original hardware.

Windows: All of the original sash appear to have been replaced, but the existing sash should be considered historic.

Trim: Trim is typical. Walls are finished with a 1” by 7- 3/4” baseboard and 1- 1/4” ogee- molded base cap. A 1” cove molding is used at wall corners and at the ceiling. Doors and windows are trimmed with 1” by 6- 1/4” casing, which includes a plain 1- 1/4”- wide backband. Windows have a 5”- wide apron and a 2- 1/2” stool.

Lighting: A single light fixture supplied by surface- mounted electrical conduit is mounted on the ceiling. Surface- mounted conduit, all of which may date to the 1930s, originally supplied another fixture, the base of which remains attached to the ceiling. Conduit also supplies a single receptacle mounted high on the northwest wall of the room.

Fireplace: The fireplace opening was around 3’- 8” by 3’- 8”, but it has been closed since installation of the heating system in the 1930s.

Figure 20 View to west in Room 101. (NPS-SERO-CR, 2002)

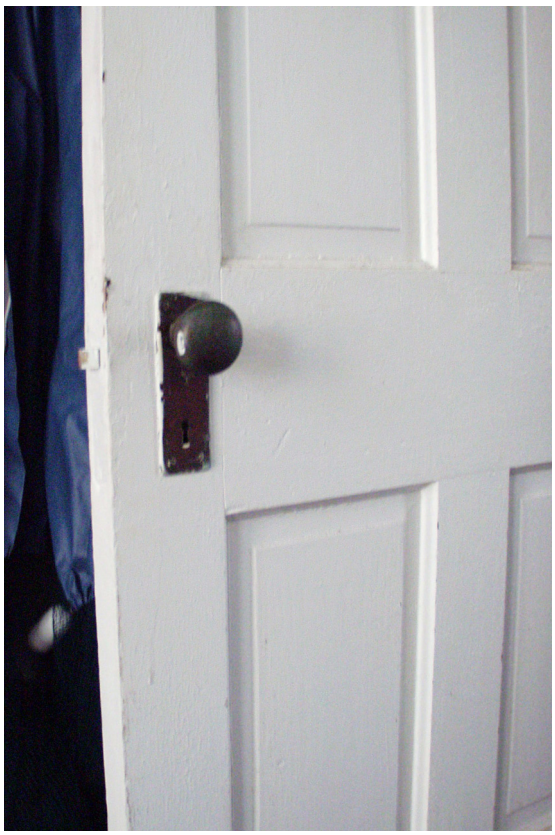


Figure 21 Detail of closet door in Room 101. (NPS-SERO-CR, 2002)

Figure 22 View to east in Room 102. (NPS-SERO-CR, 2002)

A 2- 1/4" diameter, cast- iron drain pipe and a 8"- diameter, terra- cotta flue from that system remain in place. There is no evidence for a mantelpiece.

Room 102

Measuring 12'- 4" by 14'- 4" and originally designated as a bedroom, this room is now used as a living room. Aside from alterations to the wiring, removal of the radiator, and the addition of some corner shelves, it retains most of its historic character.

Floor: Flooring is typical 3"- wide, tongue- and- groove pine. Although historic flooring appears to be intact, modern floor coverings and furniture precluded an assessment of its condition.

Ceiling: The ceiling is set at 8'- 6" and finished with typical 3"- wide, beaded, tongue- and- groove paneling painted white.

Walls: Walls are finished like the ceiling with typical 3"- wide, beaded, tongue- and- groove paneling, installed vertically and painted blue.

Doors: The door from the hall is 2'- 6" by 7'- 0" by 1- 3/8" with four vertical panels. A mortise lock is present but the knob is missing. In addi-

Figure 23 View to west in Room 102. (NPS-SERO-CR, 2002)

tion, the door has been damaged and the hinges bent, with the damage only partially repaired.

Windows: The upper sash in the front (northwest) window appears to be an original sash. The remainder are replacements but should be treated as historic.

Trim: Trim is typical. Walls are finished with typical 1" by 7- 3/4" baseboard and 1- 1/4" ogee-molded base cap. A 1" cove molding is used at wall corners and at the ceiling. Doors and windows are trimmed with 1" by 6- 1/4" casing, which includes a plain 1- 1/4"- wide backband. Windows have a 5"- wide apron and a 2- 1/2" stool.

Figure 24 View of ceiling in Room 102. (NPS-SERO-CR, 2002)

Miscellaneous: Two light fixtures and a fan are mounted on the ceiling. Surface- mounted conduit supplies the fan, but the lights are supplied

Figure 25 View to north in kitchen. (NPS-SERO-CR, 2002)

Figure 26 View to south in kitchen. (NPS-SERO-CR, 2002)

by exposed wiring run across the ceiling. On the northeast wall are cast- iron pipes that originally fed the now- missing radiator, which was located beneath the window.

Room 103

Historically used as a kitchen, this room contains most of its original features. Around 1934, the small closet in the north corner of the room was removed, a second window installed on the southwest wall, and a new partition constructed to create a space for the building's water tanks. The original sink was replaced and a built- in "dresser" was removed from the east corner around the same time.

Floor: Flooring is typical 3"- wide, tongue- and-groove pine. Although historic flooring appears to be mostly intact, except perhaps around the northwest side of the room, modern floor coverings precluded an assessment of its condition.

Ceiling: The ceiling is set at 8'- 6" and finished with typical 3"- wide, beaded, tongue- and-groove paneling painted white.

Walls: Walls are finished like the ceiling with typical, 3"- wide, beaded, tongue- and- groove paneling, installed vertically and painted blue.

Doors: The door from the hall is 2'- 6" by 7'- 0" by 1- 3/8" with four vertical panels. It has a 14"- high fixed transom. There is a mortise lock with a glass knob replacing the original.

Windows: Only the sash in the window that opens on to the porch are original. The smaller

window nearest the room's west corner was added around 1934. These and the remainder of the sash should be treated as historic.

Trim: Trim is mostly typical, but there were alterations and additions on the southwest and northwest walls in the 1930s. Walls are finished with typical 1" by 7- 3/4" baseboard and 1- 1/4" ogee- molded base cap. A 1" cove molding is used at wall corners and at the ceiling. Doors and windows are trimmed with 1" by 6- 1/4" casing, which includes a plain 1- 1/4"- wide backband. Casing at the added window is 1/4" narrower than original casing. Windows have a 5"- wide apron and a 2- 1/2" stool.

Miscellaneous: Surface- mounted conduit supplies the overhead light installed in the 1930s. Modern conduit has been added to supply a ceiling fan as well.

Figure 27 View to north in upstairs hall. (NPS-SERO-CR, 2002)

Room 200

This space has been little altered since its original construction. The oddly- angled wall at the front of the hall is an original feature and was designed to allow placement of the window in the center of the front facade of the house. A small hatch in the south corner of the room provides access to the attic.

Floor: Flooring is typical 3"- wide, tongue- and-groove pine, all of it intact and in good condition.

Ceiling: The ceiling is set at 8'- 6" and finished with typical 3"- wide, beaded, tongue- and-groove paneling painted white.

Figure 28 View of hall from head of stairs. (NPS-SERO-CR, 2002)

Figure 29 View north in upstairs hall. (NPS-SERO-CR, 2002)

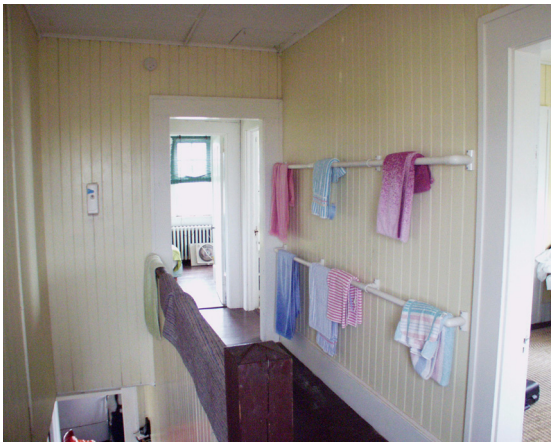


Figure 30 View east of upstairs hall. (NPS-SERO-CR, 2002)

Walls: Walls are finished like the ceiling with typical, 3"- wide, beaded, tongue- and- groove paneling, installed vertically and painted yellow.

Doors: Three doors open from this room, all of them 2'- 6" by 7'- 0" by 1- 3/8" with four vertical panels.

Window: The window at the front of the hall appears to have retained its original sash.

Trim: Trim is typical. Walls are finished with 1" by 7- 3/4" baseboard and 1- 1/4" ogee- molded base cap. A 1" cove molding is used at wall corners and at the ceiling. Doors and window are trimmed with 1" by 6- 1/4" casing, which includes a plain 1- 1/4"- wide backband. The window has a 5"- wide apron and a 2- 1/2" stool.

Staircase: The staircase rises toward the front of the house into this space. The bannister, described above, utilizes a continuation of the hand rail as a newel post. On the opposite side of the stairs is a square newel post like the post at the foot of the stairs, 5- 3/4" by 5- 3/4" and 41". A low paneled wall, 34" high, serves as a balustrade on the southwest side of the stairwell. The top is a continuation of the hand rail with the paneling made up of typical 3" beaded tongue- and- groove. Against the wall and against the newel post at the top of the stairs is a wooden track for a movable gate, although the gate has disappeared. It was probably installed to prevent small children from falling down the stairs.

Room 201

Measuring 9'- 10" by 12'- 4", this is the smallest of the bedrooms. It features a long narrow closet across the southeast wall.

Floor: Flooring is typical 3"- wide, tongue- and- groove pine, all of it intact and in good condition.

Ceiling: The ceiling is set at 8'- 6" and finished with typical 3"- wide, beaded, tongue- and- groove paneling painted white.

Walls: Walls are finished like the ceiling with typical, 3"- wide, beaded, tongue- and- groove paneling, installed vertically and painted yellow.

Doors: The door from the hall is 2'- 8" by 6'- 6" with four vertical panels. The original hardware has been replaced by a newer but similar mortise lock and metal knob. The closet door is 2'- 6" by 6'- 6" with four vertical panels. The original hardware is missing and has not been replaced.

Windows: The sash in the single window on the northwest wall are replacements of the original sash. In the double windows, the upper sash in the northernmost (right- hand) window is original and the lower sash in the other window is original. All existing sash should be considered historic. Historic wood- framed screens have been replaced by aluminum screens.

Trim: Trim is typical. Walls are finished with 1" by 7- 3/4" baseboard and 1- 1/4" ogee- molded base cap. A 1" cove molding is used at wall corners and at the ceiling. Doors and windows are trimmed with 1" by 6- 1/4" casing, which includes a plain 1- 1/4"- wide backband. The windows have a 5"- wide apron and a 2- 1/2" stool.

Figure 31 View south in Room 201. (NPS-SERO-CR, 2002)

Lighting: In the center of the ceiling is a single light fixture supplied by surface- mounted conduit.

Miscellaneous: The closet still retains its original stained and varnished finish, which was probably typical of the original finish in most of the rooms in the house.

Room 202

Measuring 14'- 4" by 14'- 8", this room has been little altered since it was first constructed. The small closet, 1'- 9" by 3'- 9", is an original feature of the room.

Figure 32 View to west in Room 202. (NPS-SERO-CR, 2002)

Floor: Flooring is typical 3"- wide, tongue- and-groove pine, all of it intact and in good condition.

Ceiling: The ceiling is set at 8'- 6" and finished with typical 3"- wide, beaded, tongue- and-groove paneling painted white.

Walls: Walls are finished like the ceiling with typical, 3"- wide, beaded, tongue- and- groove paneling, installed vertically and painted yellow.

Doors: The door from the hall is 2'- 8" by 6'- 6" with four vertical panels. The original mortise lock is present but the knobs have been lost. The closet door is 2'- 6" by 6'- 6" with four vertical panels. The original door knob is missing.

Windows: The sash in the single window on the rear (southeast wall) are original as are those in the left (northern) window on the northeast wall. The lower sash of the front window is also original, but the remaining sash are replacements of the original. All sash should be treated as historic.

Trim: Trim is typical. Walls are finished with 1" by 7- 3/4" baseboard and 1- 1/4" ogee- molded base cap. A 1" cove molding is used at wall corners and at the ceiling. Doors and windows are trimmed with 1" by 6- 1/4" casing, which includes a plain 1- 1/4"- wide backband. The windows have a 5"- wide apron and a 2- 1/2" stool.

Figure 33 View east in Room 202. (NPS-SERO-CR, 2002)

Lighting: In the center of the ceiling is a single light fixture supplied by surface- mounted conduit

Miscellaneous: Under the double windows is one of the house's historic (c. 1934) radiators.

Room 203

Originally measuring about 14'- 0" by 14'- 6"", this bedroom was greatly altered for installation of a bathroom in the 1930s. At that time, the small closet that was originally constructed in the west corner of the room was removed and a larger closet, bathroom, and small hall constructed along that wall. The original window on the southwest wall was also relocated and an additional window installed to light the new bathroom.

Floor: Flooring is typical 3"- wide, tongue- and-groove pine, most of it intact and in good condition.

Ceiling: The ceiling is set at 8'- 6" and finished with typical 3"- wide, beaded, tongue- and-groove paneling painted white.

Walls: Walls are finished like the ceiling with typical, 3"- wide, beaded, tongue- and- groove paneling, installed vertically and painted blue.

Doors: The original door into this room was relocated when the room was altered in the 1930s, leaving the original door opening as a

Figure 34 View southeast in Room 203. (NPS-SERO-CR, 2002)

simple cased opening without a door. It measures 2'- 8" by 6'- 6", has four vertical panels and its original hardware. The closet door, which appears to date to the 1930s, is 2'- 6" by 6'- 6" with four vertical panels.

Windows: The original window on the southwest wall was relocated for construction of the bathroom in the 1930s. Only the lower sash is original, but both should be treated as historic. Original sash remain in the single window on the northeast wall and in the left (northern) window on the southeast wall. The lower sash of the window on the southwest wall is also original. The remainder are later replacements, but all should be treated as historic.

Trim: Trim is typical. Walls are finished with 1" by 7- 3/4" baseboard and 1- 1/4" ogee- molded base cap. A 1" cove molding is used at wall corners and at the ceiling. Doors and windows are trimmed with 1" by 6" casing, which includes a plain 1- 1/4"- wide backband and is 1/4" narrower than original casing. The windows have a 5"- wide apron and a 2- 1/2" stool.

Lighting: In the center of the ceiling is a single light fixture supplied by surface- mounted conduit.

Miscellaneous: One of the historic radiators, 26" high and 60" long, is located under the double windows.

Room 204

Until this bathroom was created in the 1930s, the house was served by an outside privy. The room measures 5'- 2" by 8'- 8". The existing toilet was installed by the present owner, who salvaged it from another location. The enameled, cast- iron, pedestal tub, which is 5' long, and lavatory appear to be the original fixtures.

The window, which dates to the 1930s, is 2'0" by 4'- 6", four over four, and has a translucent pressed glass with a star- burst pattern.

Utilities

As originally constructed, the house had no modern conveniences except perhaps running

Figure 35 View of radiator in Room 203, which was typical of those installed in the 1930s. (NPS-SERO-CR, 2002)

Figure 36 View to south of bathroom installed in 1930s. (NPS-SERO-CR, 2002)

water to a sink in the kitchen. Water was drawn, probably using a hand pump, from the below- grade cistern built next to the kitchen wing.

In 1934, indoor plumbing and central heat were installed in the house. The existing kitchen sink and bathroom fixtures date to that period. Most elements of the hot- water heating system have disappeared, including the boiler, which was in Room 101 and may have been kerosene fired, the kerosene- powered pump and storage tanks on the northwest wall of Room 103, the expansion tank in the attic, and several of the radiators. A significant amount of piping remains in the building, with that in the attic still wrapped in "magnesia and felt" insulation, as originally specified.

Water is currently supplied to the house by electric pump from a drilled well. A modern septic tank system handles waste water.

It is not clear when the building was first wired for electricity, but it must have occurred by the time the Coast Guard moved their radio radar equipment from the Coast Guard Station to the Lighthouse Station in 1938 or 1939. Until installation of the underwater cable from Harker's Island to the lighthouse in 1950, electricity was generated on site, but the building never had an extensive electrical system.

Original Site

The original site of the house at the lighthouse station was 35' west of the present Keeper's Quarters (1873) at the lighthouse station. Remaining on the site are the "summer kitchen" and the brick- and- concrete cistern

Figure 37 View to southwest of original site of Barden House, showing brick cistern and summer kitchen constructed along with the house in 1907. (NPS-SERO-CR, 2002)

Figure 38 Waste line from kitchen at original site. (NPS-SERO-CR, 2002)

that were built at the same time as the Barden House. In addition to the lighthouse, an early-twentieth- century, reinforced- concrete, fuel-storage building and the coal and wood shed built in 1939 remain on the site. All of the other historic structures as well as the wire fence that enclosed the core of the lighthouse station compound have been removed.

Since the house was removed from the site, the surrounding landscape has changed rather dramatically. Through much of the nineteenth and early twentieth centuries, Core Bank and Shackleford Bank were separated by "the Drain," a low area that was flooded only during exceptional tidal events, and it was possible to walk from the lighthouse across the Drain to Shackleford Bank. In 1933, however, a hurricane turned "the Drain" into a channel connecting Back Sound and Lookout Bight. Because this greatly shortened the route fishermen had to take to get from Back Sound to the open sea, there was soon an effort to make the channel permanent. In 1937, Third District Congressman Graham Barden was successful in having funds appropriated for the Army Corps of Engineers to begin dredging the channel, an operation that began in 1938 and continues today.

While a boon to fishermen, the dredging operation has been blamed by some for a huge shift in the shoreline toward the lighthouse.

In 1940, Barden's Inlet was about 1,000 wide, and the light- house station was more than 1,500 feet from the shoreline. By 1962, however, the channel had widened considerably, and the lighthouse station was less than 800 feet from the shoreline. By the time the Corps of Engineers initiated a study of the situation in 1978, the distance between the lighthouse and the shoreline of Barden Inlet was reduced to less than 400 feet.[27]

Storms exposed the foundation of the Coal House in 1999, and comparison of the site today with historic photographs makes clear the threat that exists to the entire complex. Over two thousand square feet of the historic light station compound is now below the high water mark, and there are no signs that the erosion is abating. Only periodic beach replenishment by the Army Corps has kept the remainder of the light station complex intact.

Figure 39 View to northeast showing present shoreline of Cape Lookout Bight at lighthouse station. Summer kitchen is at right and coal and wood shed is at center. (NPS-SERO-CR, 2002)

27. U. S. Army Corps of Engineers, *Erosion Study: Cape Lookout Lighthouse* (Wilmington, NC, 1978), 12.

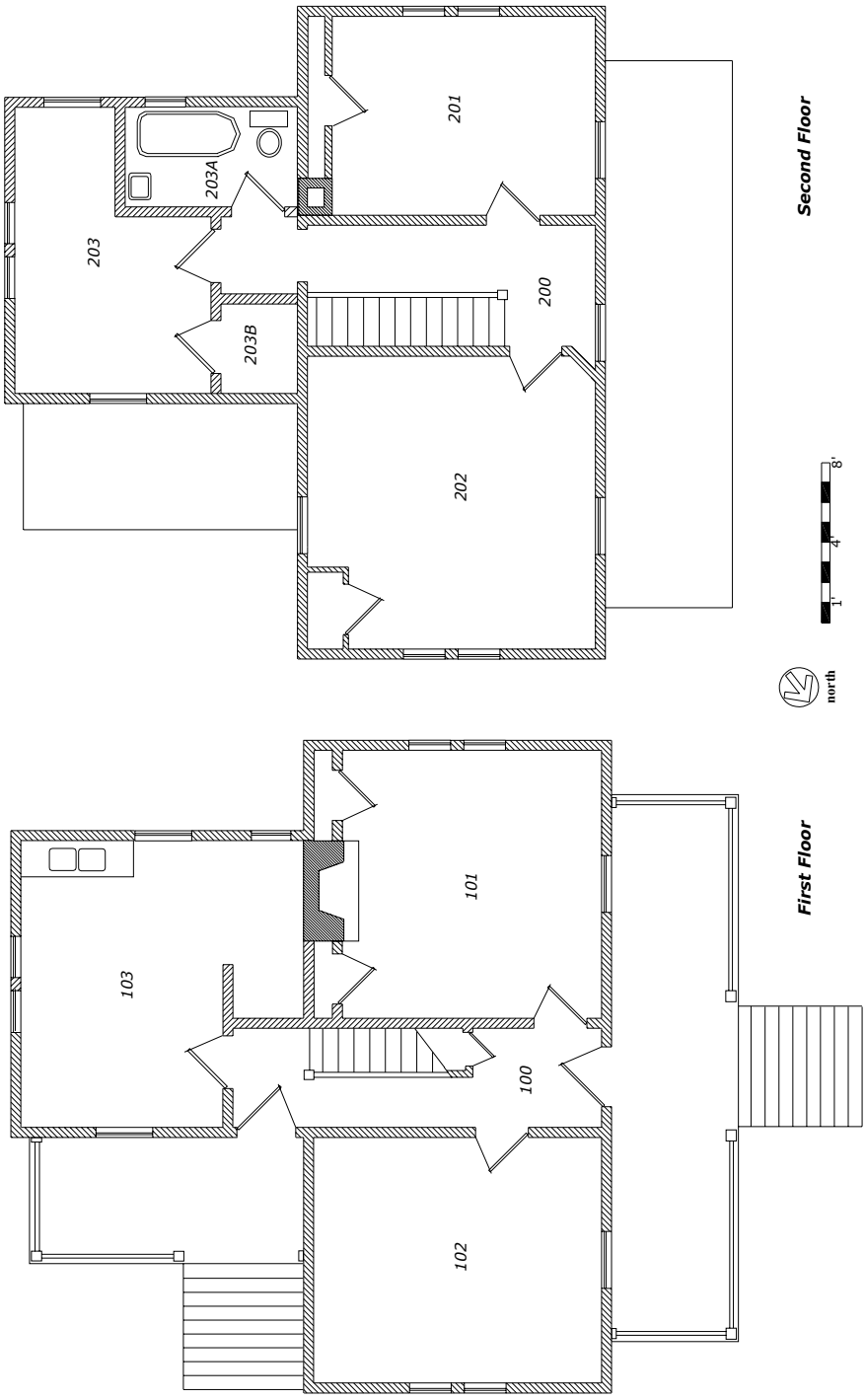


Figure 40 Plans of 1907 Keeper's Dwelling at it exists today. (T. Jones, NPS-SERO-CR, 2002)

PART 2
TREATMENT & USE

Introduction

Exceptionally well- preserved, the 1907 Keeper's Dwelling, now generally known as the Barden House, is one of the more- prominent buildings at Cape Lookout. Moved from its original site at the light station in 1958, it has nevertheless retained its architectural integrity, having undergone relatively few modifications since the historic period.

It is not possible to make comprehensive recommendations for treatment and use without considering the building's context and, in particular, its relationship to the other buildings in the newly-designated Cape Lookout Village Historic District. Like the old life- saving station and the life- saving station boat house, the Keeper's Dwelling was moved from its historic site in 1958. The consequence of these moves was the diminishment of the historic integrity of not only the lighthouse station and the Coast Guard Station but also of the entire village, where small cottages were characteristic throughout the historic period. Certainly return of these buildings to their original locations would greatly enhance

the park's ability to interpret the cape's historic resources.

On the other hand, there have also been radical changes to the historic landscape around the lighthouse station that complicate decision-making regarding the location of the Keeper's Dwelling. In particular, the movement of Barden's Inlet to within yards of the house's original site, while not precluding the house's return to that site, presents a significant issue that must be addressed.

In addition, there have been major changes to the overall landscape at the cape in the last thirty years as a result of the maturing of slash pines planted in some areas in the 1960s and the general growth of smaller trees and shrubs all across the cape. Consequently, the long views up and down the cape that were a defining characteristic of the historic period are no longer possible.

All of these issues cannot be addressed within the context of this historic structure report, but the implications of building relocation and site restoration or of maintaining the status quo should and will be considered in the following narrative.

This section of the historic structure report is intended to show how a plan for treatment of the Keeper's Dwelling can be implemented with minimal adverse affect to the historic building while still addressing the few problems that exist with the building. The following narrative outlines issues surrounding use of the building as well as legal requirements and other mandates that circumscribe its treatment. These are followed by an evaluation of the various alternatives for treatment—preservation, rehabilitation, and restoration—before describing in more detail the ultimate treatment recommendations.

Ultimate Treatment & Use

Because the Cape Lookout Village Historic District is a relatively new addition to the National Register, the park has not set a program of use for the buildings in the village that are now used as private residences, including the 1907 Keeper's Dwelling, the old life- saving station, and the life- saving station boat house. The authorizing legislation (Public Law 89- 366) for Cape Lookout National Seashore mandated the park's establishment for the purpose of preserving "for public use and enjoyment an area in the State of North Carolina possessing outstanding natural and recreational values." However, by the time the seashore was actually established in 1976, the area's cultural resources at Portsmouth and at the Cape Lookout Light Station were also recognized. The general management plan (GMP) developed for the park by the Denver Service Center in 1982 states that one of the park's management objectives is "[t]o preserve intact, as feasible, the historic resources of the national seashore and to recognize that dynamic natural forces have influenced them throughout their existence and will continue to influence them."[1]

The GMP envisioned interpretation of the park's cultural resources that would "emphasize man and his relation to the sea"

1. Cape Lookout *General Management Plan*, p. 4.

with maritime history a focus at the lighthouse and the cultural and economic life of the Outer Bankers at Portsmouth Village."[2] Since that time, additional cultural resources besides the lighthouse station and Portsmouth have been recognized through National Register listing. In 1989, the Cape Lookout Coast Guard Station, with four intact historic structures, was listed on the National Register; and in June 2000, the Cape Lookout Village Historic District, with fourteen historic residential buildings that included the 1907 Keeper's Dwelling, was listed as well.

An amendment to the 1982 GMP was completed in January 2001, but it only addressed improvements in overnight accommodations and transportation services for visitors to Core Banks and not the additional cultural resources that had been recognized since 1982. Nevertheless, these additional listings, which like the earlier listings are of statewide significance, do not appear to require any marked departure from the management approach established in 1982 for Portsmouth and the Cape Lookout Light Station.

Three points from the 1982 GMP are particularly relevant to treatment decisions on the buildings in the Cape Lookout Village and in the Coast Guard complex as well.

- The 1982 plan "perpetuates the present level of use and development of Core Banks/Portsmouth Island. . . ." (*GMP*, p. 3)
- Pointing out the resources state level of significance, the 1982 plan meant "to preserve intact, as feasible, the historic resources of the national seashore and to recognize that dynamic natural forces have influenced them through their existence and will continue to influence them." (*GMP,* p. 4)
- "As appropriate, some structures may be perpetuated through adaptive use. Contemporary public and/or administrative rights will be allowed with necessary modifications. The qualities that qualified these resources for listing on the National Register of Historic Places will be perpetuated to the extent practicable." (*GMP*, p. 35)

Use: In keeping with these parameters, residential use of the village's small houses should be continued, if rehabilitation can be accomplished with minimal alteration to the building's historic character. Continuation of the use for which a historic building was designed is almost always preferable to any other use, since new uses almost always require significant alterations to the historic structure. Alternative uses have been considered for the 1907 Keeper's Dwelling (see below), but clearly continued residential use of the structure is the preferred alternative.

If the building is returned to its original location, as is recommended below, residential use is still recommended. This could be continued through private leasing or the building could simply be used to house visitors and volunteers.

2. *Ibid.*

Treatment: The building should be returned to its original location at the light station, which is very well documented and so should require a minimum of conjecture in reconstructing its brick foundation on the original site. In addition to reconstructing the building's foundation, the exterior of the building should be restored to its appearance just prior to 1950 by replacing the present cedar siding with cedar shingles, reconstructing the back porch balustrades, and replacing the missing front door.

The house retains its historic residential interiors and these should be maintained and preserved, regardless of use. This should include the modifications from the 1930s.

Requirements for Treatment & Use

The key to the success of any historic preservation project is good judgement in determining where replacement of a deteriorated building element is necessary. Deterioration in a portion of an element should not necessitate total replacement of the element, since epoxy consolidants and fillers can often be used to repair the damaged area, often without even removing the damaged element to make the repair. While total replacement of a damaged element is often recommended, especially in rehabilitation projects, the success of most preservation projects can be judged by the amount of historic material that remains. Even "replacement in kind" does not typically address natural processes that give the historic materials an aged appearance that cannot be duplicated except by the passage of time.

Because it is a contributing building in a National Register district, legal mandates and policy directives circumscribe treatment of the Keeper's Dwelling. The NPS' Cultural Resources Management Guideline (DO- 28) requires planning for the protection of cultural resources "whether or not they relate to the specific authorizing legislation or interpretive programs of the parks in which they lie." Therefore, the house should be understood in its own cultural context and managed in light of its own values so that it may be preserved unimpaired for the enjoyment of present and future

generations.

To help guide compliance with legal mandates and regulations while still maintaining the building's historic integrity, the Secretary of the Interior's Standards for the Treatment of Historic Properties have been issued along with guidelines for applying those standards. Standards are included for each of the four separate but interrelated approaches to the treatment of historic buildings: preservation, rehabilitation, restoration, and reconstruction. These approaches define a hierarchy that implies an increasing amount of intervention into the historic building. Rehabilitation, in particular, allows for a variety of alterations and even additions to accommodate modern use of the structure. However, regardless of approach, a key principle embodied in the Standards is that changes be reversible, i.e., that alterations, additions, or other modifications be designed and constructed in such a way that they can be removed or reversed in the future without the loss of existing historic materials, features or characters.

Modern building codes and accessibility issues are a major factor in designing repairs to historic structures and often necessitate significant changes to the building. Assuming continuation of leasing of the Keeper's Dwelling for residential use, public access will be restricted, and full compliance with accessibility codes should, therefore, not be necessary. If short- term residential use by visitors and volunteers is considered, however, better access to the building would be desirable but could not be achieved without major changes to the building. The elevation of the house above grade (about four feet) makes a ramp impractical, and even if a lift were installed in the back porch, the second floor would remain inaccessible. With the single bathroom located on the second floor, it is impractical to consider making all of the changes necessary to make the house fully accessible to the handicapped.

Electrical and plumbing systems and fixtures are in poor condition and must be rehabilitated if the house is to be occupied. Installation of a smoke/fire detection system would also be required.

Treatment of the building should be guided by the International Building Code, including that code's statement regarding historic buildings:

> **3406.1 Historic Buildings.** The provisions of this code related to the construction, repair, alteration, addition, restoration and movement of structures, and change of occupancy shall not be mandatory for historic buildings where such buildings are judged by the building official to not constitute ***a distinct life safety hazard*** [emphasis added].

Threats to public health and safety will be eliminated, but because this is an historic building, alternatives to full code compliance are recommended where compliance would needlessly compromise the integrity of the historic building.

Alternatives for Treatment & Use

Use: As discussed earlier in this report, the highest and best use for most historic buildings is the use for which the structure was originally designed. For the 1907 Keeper's Dwelling, this use is residential. Adapting the building as a visitor contact station might be considered, but since the 1873 Keeper's Dwelling has already been adapted for that purpose, there seems little reason to consider doing the same to this building. In the future, more intensive interpretation of the historic district might necessitate additional exhibit space, but since much of the original interior of the 1873 Keeper's Dwelling has already been lost, that building would be better used for that purpose. In addition, the great difficulties in providing handicapped access to the 1907 Keeper's Dwelling mitigate against adaptation of the building for any public use that required such access.

Residential use could be by lease to private individuals, especially if the house remains on its present site. Even relocated to the light station, such use could still be considered if exterior appearance and use were carefully controlled. Interpretation of the light station could even be enhanced by more residential activity on the site, since historically there were two or more families, often with children, as well as the other employees of the station on the site.

Treatment: If the house remains on its present site, there is no compelling reason to restore exterior features like the missing front door and balustrades.

Finally, given the well- preserved nature of the interior of the house and the significance of the structure to the light station, recreation of the historic furnishings and decorations in the house might be explored. However, given the park's basic mission, treatment and use of the 1907 Keeper's Dwelling as a sort of house museum does not appear justified.

Recommendations for Treatment & Use

The 1907 Keeper's Dwelling, like all of the government- constructed buildings at the Cape, was well- designed, well- constructed, and generally well- maintained. Although relocated from its original site and under private stewardship for forty- five years, it remains in excellent condition and retains nearly all of its historic features. Little intervention is necessary to continue residential occupancy, and only minor alterations would be necessary to return the building to its appearance in the historic period.

Site

Relocation of the building to its original site is recommended, if the park can reverse some of the erosion of the site by Barden's Inlet and insure the site's stability. At least two features associated with the house remain visible on the original site: the cistern located between the site and the 1873 Keeper's Dwelling and the waste line from the kitchen sink. The site is very well documented in historic Coast Guard plans, and the original site can be established with a minimum of conjecture. Because relocation of the house would require excavation for foundations, a limited archaeological survey should be conducted to identify subterranean features, which may include portions of the house's original

foundation.

The remains of the cistern between the original site and the 1873 Keeper's Dwelling should be preserved, and the gable roof that originally sheltered it should be reconstructed.

Additional site features such as walkways should be identified in a Cultural Landscape Report that will be necessary for determining treatment of the entire site.

In summary:

- Conduct limited archaeological survey of original site.
- Use archaeological findings and historic site plans to identify original location of house.
- Preserve cistern and reconstruct gable roof.
- Follow recommendations of Cultural Landscape Report (to be developed) to determine additional site treatment.

Foundation

The house was originally constructed on brick piers, 17" square; but by World War II, the entire foundation of the house had been underpinned with brick. In building a new foundation for the house, the original piers should be replicated following the original plans and then a brick curtain wall should be constructed between the piers to replicate the appearance of the original foundation.

The height of the foundation piers was specified to bring the finish floor level to five feet above grade. Historic photographs suggest that the 1907 building was set on the same level as the 1873 building, and because the original grade level can probably not be determined, the building's relationship to the 1873 building should serve as the guideline in re- establishing foundation height.

Archaeological investigation may locate some of the original foundation brick. If so, the new foundation brick should match those. If none are located on site, brick similar to those used on the existing historic chimney should be matched.

The condition of the chimney above the roof line could not be assessed during this study, but significant repairs are probably needed, and it may be necessary to rebuild the entire chimney above the roof. The modern stucco coating should be removed if that can be accomplished without destroying the face of the brick. The fireplace will not be reopened (it was closed in the 1930s), and there are no plans to use the chimney shaft for venting a furnace or a water heater.

In summary:

- Reconstruct original foundation, maintaining the distinction between foundation piers and the remaining underpinning which, historically, was added later.
- Match original foundation brick, if located, or, if not, match brick on existing historic chimney.

- Remove stucco from chimney, repair chimney as necessary.

Structure

Overall, the condition of the building's wood frame is excellent. Isolated areas of termite damage are visible on the sills near the chimney, but there is no visible evidence of extensive infestation. There were some repairs to the joists for the kitchen floor after the house was moved, one being replaced with an under- sized member that should be replaced. When the building is lifted from its foundation, perimeter sills should be carefully inspected and repairs made if necessary.

Floor framing for the front porch has been repaired on several occasions, resulting in a random assortment of joists. Reconstruction of the floor framing in that area using the original specifications is recommended.

In summary:

- Inspect framing of kitchen floor and perimeter sills for possible damage; repair as necessary.
- Reconstruct floor framing for front porch.

Windows and Doors

All of the original window openings remain along with the two windows added in the 1930s. Some of the original sash have been replaced, matching the original. All sash presently in the building are considered historic and should be repaired as necessary and preserved.

Most of the historic wood- framed window screens that were installed prior to World War I remain in place. These should be repaired and preserved, and where they are missing they should be replaced with new wood- framed screens that match the original. Only if the intent is to restore the building to its appearance before the 1930s should the screens be removed and louvered shutters restored to the building.

The back door is original and should be repaired and preserved. The missing beveled glass lights should be replaced. The original front door, which matched the back door, has been lost. A new door should be installed that matches the design of the back door.

If the house remains on its existing site, the plywood shutters at the windows and doors on the porches should probably remain in place, primarily for the security they provide. If the house is returned to its original site, the shutters can be removed.

In summary:

- Repair and preserve all existing window sash.
- Repair and preserve all wood- framed window screens; where missing, install new wood- framed screens.
- Repair and preserve back door.
- Replace modern front door with replica of original.
- Remove plywood shutters on porches if the added security is unnecessary.

Exterior Finishes

Siding: The original lap siding was replaced or covered by cedar shingles prior to World War II. These in turn were replaced by the present cedar siding in the last quarter of the twentieth century. The existing siding is in fair condition and should remain in place as long as the house is on its present site. If the house is returned to the light station, the siding should be replaced with cedar shingles.

Trim: Nearly all of the existing window and door casing and trim as well as corner boards, drip cap and mud sill, and other elements of the exterior woodwork are historic and should be repaired and preserved. Missing elements should be replicated and installed, using existing casing and trim as a model.

Roof Covering: Although the house was originally roofed with wood shingles, those were probably replaced before the World War II. No photographs of the house have been located that would show the character of the roof covering in the 1940s; but by that time, the Coast Guard was using asphalt shingles on some of the buildings at the Coast Guard Station. It is quite possible that asphalt roofing was used on the Keeper's Dwelling as well toward the end of the historic period. The existing wood shingles are in good condition; by the time they need replacing, additional research should be able to identify the appropriate roof covering for the house.

Porch ceilings are the exposed rafters and decking of the roof structure. Soffits are also the exposed underside of the roof decking. Any treatment of the roof should maintain the existing appearance of those features.

In summary:

- Maintain present exterior finishes until house is relocated.
- Once relocated, replace cedar siding with cedar shingles.
- Repair and preserve existing window and door casing and trim and other elements of historic exterior woodwork.
- Continue research to document appropriate roof covering in the 1940s at the end of the period of significance.

Interior

There have been very few interior alterations since the 1930s. Virtually all of the original flooring and wall and ceiling paneling remains intact and in good condition. It needs only minor repairs, cleaning and repainting.

The wall that was added to create a utility closet in the kitchen in the 1930s was partly removed after the house was relocated. It should be reconstructed in order to provide a space for the house's utilities. Fiberboard like that used historically should be used to finish the wall, and the door should match the door to the closet that was added in Room 203 in the 1930s.

Interior rehabilitation will include removal of existing floor coverings in order to inspect the condition of the flooring and make any neces-

sary repairs, which will most likely be necessary in the kitchen and in the bathroom. If historic linoleums are present, samples should be archived by the park. If the floors have been painted, that probably occurred during the historic period so that paint should continue to be used as a floor finish. If varnished finishes are present, these should be restored.

In summary:

- Repair, clean, and repaint existing wall and ceiling paneling.
- Reconstruct missing portion of closet wall and closet door in kitchen.
- Remove floor coverings, archiving samples of historic material.
- Repair floors as necessary; repaint where painted; revarnish where varnished.

Utilities

Plumbing: New water and sewer lines will be necessary when the house is moved. All existing water lines within the house should be replaced, run in the same manner as the historic system. Cast- iron waste lines and vent stacks within the house may not require replacement.

The existing kitchen sink and bathroom lavatory and footed tub should be rehabilitated and preserved. The bathroom toilet (which replaced the historic fixture) may be rehabilitated and preserved if possible, or replaced with a new fixture if that is not possible.

Electrical: The building's entire electrical system should be rehabilitated. All wiring should be replaced, using existing conduit if possible. Concealed wiring is not recommended unless it can be installed by fishing lines through walls and ceilings without disturbing historic paneling. A new breaker panel should be installed in the reconstructed utility closet in the kitchen. Additional convenience receptacles should be added in all rooms to eliminate the necessity of extension cords. Historically, overhead light fixtures were simple keyless fixtures using unshaded light bulbs. Since the interior of the house will not be open to the public, this precedent need not be followed, and ceiling fans and other modern lighting may be used.

Heating: If the house is only occupied on a seasonal basis, central heating is not necessary. If central heating is needed, the historic hot- water heating system should be recreated, using the historic radiators that remain in place. If central heating is not installed, the radiators should still remain in place. Electrical baseboard or other space heaters can be installed as necessary.

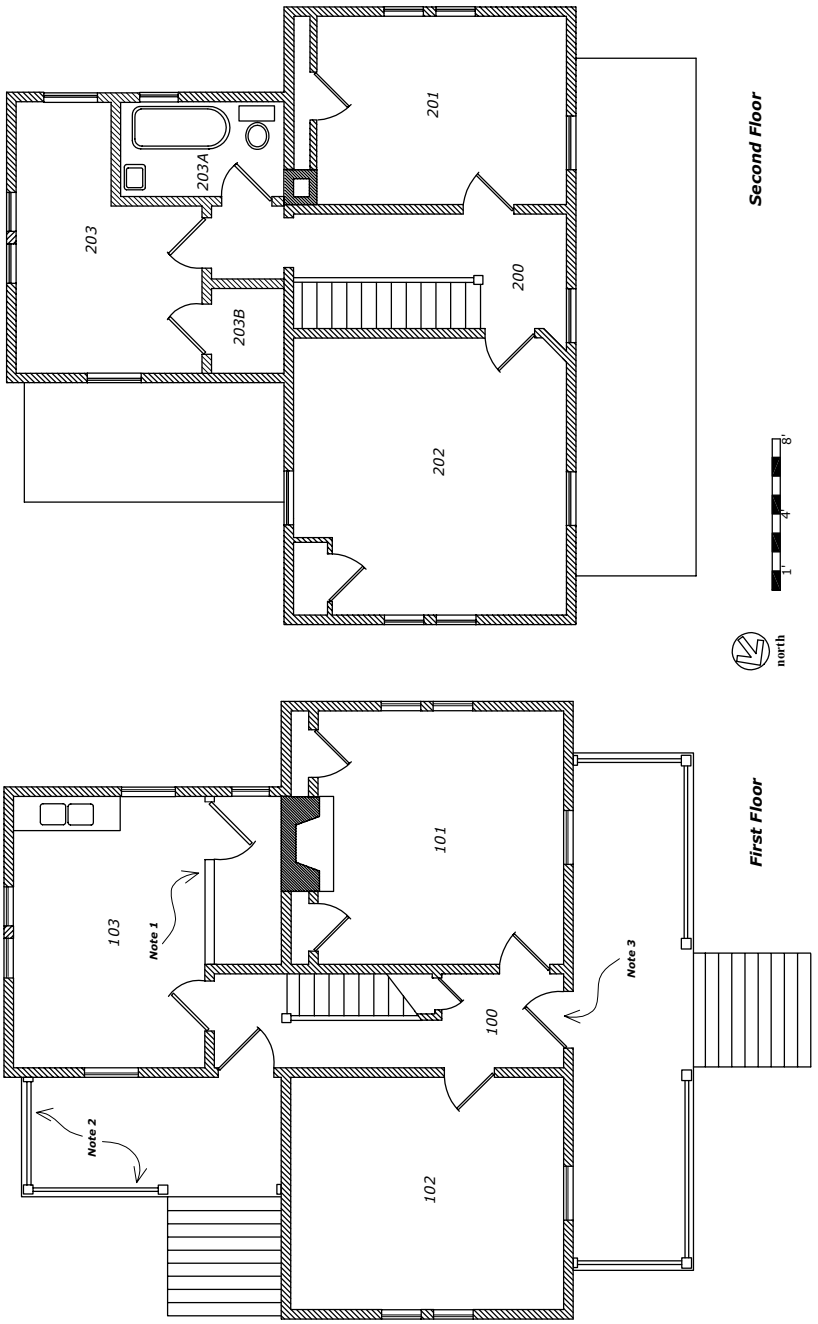
Life Safety: Smoke/fire detectors should be installed in all rooms and in the attic and the basement, if it is enclosed. A sprinkler system is not recommended, but if one were to be installed, lines should be run exposed on the first floor in order to leave the ceilings intact.

In summary:

- Replace all water lines and, if necessary, cast- iron waste lines and vent

stack, running lines as they were historically run.

- Replace all existing wiring, using existing conduit if possible; install modern fixtures as needed.
- Install hot- water heating system using existing radiators if house is to be occupied year- round; install electrical space heaters if not.
- Install fire- detection system.



NOTES

The house will be returned to its original location and the original brick foundation reconstructed. Existing siding should be replaced with cedar shingles.

1. Reconstruct missing portion of wall and door; use reconstructed space for electrical panel, water heater, and other necessary equipment.
2. Restore balustrades to match those at front porch.
3. Replace modern door with door to match historic design of back door.

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