1. NAME OF PROPERTY

Historic Name: Navesink Light Station

Other Name/Site Number: Twin Lights Historic Site

2. LOCATION

Street & Number: 100 Government/Lighthouse Road Not for publication:__

City/Town: Highlands Vicinity:__

State: NJ County: Monmouth Code: 025 Zip Code: 07732

3. CLASSIFICATION

Ownership of Property		Category of Property	
Private:	___	Building(s):	___
Public-Local:	___	District:	X
Public-State:	X	Site:	___
Public-Federal:	___	Structure:	___
		Object:	___

Number of Resources within Property

Contributing	Noncontributing
2	1 buildings
1	___ sites
___	___ structures
___	___ objects
3	1 Total

Number of Contributing Resources Previously Listed in the National Register: 1

Name of Related Multiple Property Listing:

Designated a
NATIONAL HISTORIC LANDMARK on

FEB 17 2006

by the Secretary of the Interior

4. STATE/FEDERAL AGENCY CERTIFICATION

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this ____ nomination ____ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ____ meets ____ does not meet the National Register Criteria.

_____ _____
Signature of Certifying Official Date

_____
State or Federal Agency and Bureau

In my opinion, the property ____ meets ____ does not meet the National Register criteria.

_____ _____
Signature of Commenting or Other Official Date

_____
State or Federal Agency and Bureau

5. NATIONAL PARK SERVICE CERTIFICATION

I hereby certify that this property is:

___ Entered in the National Register
___ Determined eligible for the National Register
___ Determined not eligible for the National Register
___ Removed from the National Register
___ Other (explain): _____

_____ _____
Signature of Keeper Date of Action

6. FUNCTION OR USE

Historic: Transportation Sub: Water Related

Current: Recreation/Cultural Sub: Museum

7. DESCRIPTION

Architectural Classification: Gothic Revival

Materials: Sandstone/Brick
Foundation: Granite
Walls: Brick/Stone/Wood
Roof: Wood/Metal - Copper and tern coated steel
Other:

Describe Present and Historic Physical Appearance.

Introduction

The Twin Lights at Navesink were established in 1828 on a promontory of land in Highlands, New Jersey, overlooking Sandy Hook peninsula and the Atlantic Ocean. The purpose of the light station was to guide shipping in and out of New York Harbor. The lighthouse's "twin" or "double" towers gave it a distinct appearance, preventing mariners from confusing the lights at Navesink with Sandy Hook Light about five miles to the north and the Sandy Hook Lightship nearby. The original twin towers were replaced in 1862 with the current castle-like structure which continued to serve as part of a system of navigational aides for the New York Harbor area until the station was decommissioned in 1949. The light station is now under the stewardship of the State of New Jersey and serves as a public park and historic site.

The 1862 Lighthouse

On June 20, 1860, Congress appropriated $72,941 for the construction of a new lighthouse at Highlands. Unlike the earlier stand alone towers, the U.S. Lighthouse Board built the new twin towers as one building—the two towers are connected by keepers' quarters and workrooms. The distance from the center of one tower to the center of the other tower is 223 feet. Reddish brown sandstone quarried at Bellville, New Jersey,[1] was used on the exterior of both towers and the eastern walls facing the ocean. Brick was used for the rest of the building exterior. The roof was originally slate, later covered with tin, and more recently with tern-coated steel to imitate the tin. Interior walls are brick, wood, and plaster. Some recent renovations have removed or covered portions of deteriorated interior plaster walls and ceiling, and been refinished with modern sheet rock. The front of the building has 26 windows on the first floor, all with arched tops, and four smaller windows on the second floor. There are two side windows on the second floor keeper's quarters, one for each of the apartment hallways that face the lighthouse towers. The rear of the building has 19 windows downstairs and four second floor windows in the keepers' quarters section. The 1862 lighthouse remains intact and the exterior relatively unaltered from its original construction.

Lighthouse Towers

South Tower

The south tower is square in shape, standing 53 feet tall, with a focal plane of 246 feet. The eastern side of the tower has two arched windows facing the ocean, and another window facing south. On the second landing there are two sets of smaller windows, one facing north, the other south. The thrust-bearing pedestal for the 1898 bivalve lens still exists on this landing. An interior brick cylinder forms a lining that supports the steps winding up to the top. There are 66 steps to the watch room. A door from the watch room allows access onto the exterior walkway that is surrounded by a brownstone parapet wall about three feet high. Back inside, the lamp room is entered by climbing a 10-step ladder/stair. A 16-sided lantern made up of 30 panes of

[1] Bellville is located near Newark, New Jersey. The material was taken out to the Newark Bay and transported by barge to Highlands.

glass and 18 solid metal plates encloses the lamp room. The glass panes are divided into three horizontal rows of ten with the bottom panes each measuring 27 inches wide by 30.5 inches high, the middle panes 27 inches wide by 38 inches high, and the top panes 27 inches wide by 44.5 inches high. Metal plates were used instead of glass on the backside of the lighthouse to block the beacon from shining landward. The plates are divided into three horizontal rows of six with measurements that correspond to the glass panes.

When completed in 1862, the south tower displayed the 1841 first-order lens used in the 1828 tower. In 1898, the south tower lamp room was slightly altered to accommodate the installation of a larger second-order electric bivalve lens. The rear metal panels were removed and a wooden addition was added to allow space for the lens to rotate and the keepers to work.[2] That addition was removed during a 1980s restoration and the original configuration of the lamp room was reconstituted.

The south tower roof is copper, with crenellated metal work on top. A ball ventilator with a metal spindle graces the top.

North Tower

The north tower is octagonal in shape and has three arched windows located at the different landings ascending the tower. The lowest window faces the ocean, the second and third to the north, then northwest respectively. There are 65 steps to the watch room, with the same type of metal door to exit onto the exterior of the lantern. A parapet wall, about 3 feet high, also surrounds this tower's exterior walkway. The lamp room is entered from the interior of the watch room up an 11-step ladder/stair. The north tower has the same number and size glass window panes and black-out panels as the south tower. The second landing from the base of the tower has three small windows. On the landing below the watch room is a center column where weights for the clockwork hung when used to rotate the light.

When completed in 1862, a first-order Fresnel lens was installed in the tower. The light was taken out of service in 1898 and remained dark until a fifth-order Fresnel lens dating to 1881 was installed in 1962. This light is now considered a private aid to navigation.

The north tower roof is copper, with crenellated metal work on top. A ball ventilator with a metal spindle graces the top.

Keepers' Quarters

Although the towers were completed in 1862, the new keepers' quarters connecting them was not completed until the following year. The Lighthouse Service allowed the four keepers and their families a spacious 18 rooms to accommodate workshops and living quarters. The center of the structure had the two larger quarters for the principal keeper and first assistant. Those quarters consisted of a basement, a large first-floor kitchen, and living room, and on the second floor two bedrooms with closet space. An attic extended across the top of these two apartments. Later, in

[2] Taken out of service in 1949, the bivalve lens was removed, later returned to the site, and currently on display at the powerhouse.

the 1950s, the Coast Guard divided the larger second floor bedrooms on the western side of the building into two smaller spaces. This allowed Coast Guard families three bedrooms on the second floor. Modern bathrooms were placed in each apartment in the 1930s.[3] The second and third assistants had apartments consisting of two rooms each in the lower wing sections. Today the principal keeper's quarters is used as employee housing by the New Jersey Division of Parks and Forestry. The first assistant keeper's quarters are used for a public restroom and museum storage space, while the north wing quarters houses the museum and visitor entrance. The south wing quarters are now the historic site office and auditorium.

Outbuildings

Power House

Work began on an electric powerhouse building, located southwest of the light station building, on April 22, 1898, and was finished on June 30 of that year. The first structure was built of wood with a concrete floor. It was meant to be temporary housing for the engines and dynamos needed to produce the electricity for the carbon arc electric light installed in the South Tower. In 1909, a more solid brick structure enclosed the old wooden building.[4] The only section left from the original structure is part of the concrete floor. The present building is 42 feet long by 26 feet wide with two large double wooden doors and two side doors. The walls are brick; the wooden roof deck is now covered with asphalt tile shingles. The four corner piers and finials and the arched windows all follow the design elements of the 1862 lighthouse complex. Interior walls are white glazed brick, with a stained wooden ceiling, and storage attic above. Four metal beams crossed the ceiling and were used to hoist the heavy electrical producing equipment into place. Today the structure is used as an exhibit building and houses the 1898 bivalve lens once used in the south tower.

Previously Existing Resources

The Lighthouse Reservation

The State of New Jersey now manages about five acres of property, a larger area than when the Lighthouse Service operated the station. Over the years adjoining property was acquired to provide a buffer between the original historic site and development in the surrounding community. A concrete post-and-pipe fence encompasses the original 1828 trapezoid shaped property line which surrounds all the current lighthouse structures.[5] The fence had been

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[3] Navesink Light Station, Plumbing System & Alterations, Jan 11, 1932, Office of the Supt. of Lighthouses, 3rd District, Staten Island, NY.

[4] National Archives, U.S. Light-House Board correspondence dated, June 11, 1909, Office of Engineer, 3rd District, Tompkinsville, New York.

[5] The State of New Jersey now owns property that includes the former Postal Telegraph and Western Union Telegraph station sites on the eastern side of the towers. A buffer property was purchased to the north and west of the original lighthouse track (see Green Acres acquisitions for the State of New Jersey, White 1984, Mascaille 1985, Garrahan 1996). Three of the U.S. property stone markers still exist indicating the original property boundaries.

originally built out of cedar and wire, but was replaced in 1926.[6]

At one time the lighthouse reservation also consisted of a road referred to as Government Road, that followed the same path as Government-Lighthouse Road does today from the current parking lot down the hill to Highlands Avenue. The road then wound its way down Highlands Avenue to what is now part of the exit ramp from State Highway Route 36, then down an incline to Bay Avenue in Highlands. The Government Road terminated at the lighthouse dock. The dock was used to land the lighthouse tender to transport supplies to the lighthouse. In later years when the Navesink keepers were required to be in charge of a system of buoys in Sandy Hook Bay, the Shrewsbury River, and the Navesink River, the dock was used to keep the lighthouse boat and store supplies. Parts of this dock still exist, although greatly altered by the Route 36 bridge. The State of New Jersey Department of Transportation owns and maintains the former Government Road tract that approaches the Route 36 bridge. The Borough of Highlands owns and maintains Highlands Avenue and Lighthouse-Government Road to the border of the original 1828 lighthouse tract.

Because of the known and potential remains of previously existing resources that are connected with the historic light station, the overall lighthouse reservation is considered a contributing site.

The 1828 Light Towers

On June 25, 1827, Jonathan Thompson, Collector of the District and Port of New York, and Superintendent of Lighthouses, signed a contract with Charles H. Smith of Stonington, Connecticut, to build two octagonal light towers at the Highlands of Navesink of "good blue split stone." The two towers had a focal plane of 246 feet above high water and were located 320 feet apart. Smith was also to build a separate dwelling house for the keeper with the same material. The house was to be 38 feet on the front by 22 feet deep, "one story nine feet high in the clear divided into two rooms with an entry between." There were to be four chambers as well. The total price for the contract was $8,440.[7]

The light towers and keepers' quarters were completed by May 9, 1828, and Joshua Doty was hired as the first keeper.[8] It was in these towers that the first Fresnel lenses in America were installed in 1841, leading the Lighthouse Board to remark in a 1852 report that "the Navesink lights are justly esteemed by intelligent navigators and others, who have compared them, as the best lights on the coast of the United States." Yet the same document went on to report that the towers and buildings of the light station were "very badly constructed of rubble stone, and their

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[6] The property outline was shown in a drawing of the reservation done by architect Joseph Lederle in 1861, titled "Profile on XY with elevations of towers and keepers' quarters" National Archives number 3-13s-16. It is not known what materials marked the property line at that time, the 1896 *Annual Report* describes "some 448 running feet of wire fence and about 154 running feet of picket fence" as being built. Today the original lighthouse property is surrounded by a concrete post and iron bar fence that was common at many other lighthouses. The supplies for this fence arrived in July of 1926 according to the Navesink Keeper's Logs (Microfilm copy at Twin Lights—shipment of fence supplies noted on July 7th, 9th, 14th, 21st, 23rd, 26th).

[7] National Archives, Records Group 26; contract to fit up the Lighthouses on the Highlands of Navesink, 1828, in files at Navesink Highlands Twin Lights Archives.

[8] National Archives, Record Group 26; letter about Doty in files at Navesink Highlands Twin Lights Archives.

present condition is very bad, owing to leaks and cracks." One of the lighthouse inspectors wrote that a common lead pencil could be pushed into the wall about six inches, further documenting the deterioration of the towers. The eventual recommendation was to replace the light station with a new one. After the new complex was completed on May 1, 1862, the old towers were knocked down.

Today, the only known remains of the former light towers are the two foundations.[9]

Oil Houses

Two separate oil houses were constructed to keep the kerosene fuel away from the main building. One was built in 1890 and the other completed in 1892. The locations of the oil houses are not known.[10]

Cisterns

One cistern was constructed in 1898, and sat between the south tower and the powerhouse. The Lighthouse Engineer at the Staten Island Depot approved it on October 10, 1898. Part of the foundation is still under the brick walkway that now runs between the buildings. It was uncovered in 1990 when new electrical service was run from the main lighthouse building to the powerhouse.

Earlier cisterns are shown on a building survey done in 1892.[11] The survey shows three cistern sites at the date of the drawing. One is shown on the northwest corner of the powerhouse building where the current historic site parking lot is located. A second cistern was directly behind the center of the 1862 lighthouse on the west side of the keepers' quarters, and the third cistern was approximately 79 feet to the north of the north lighthouse tower. This last site is currently the historic site's picnic grove and is located within the proposed nomination boundaries.

Barns/Stables

A drawing done in 1870 by Lighthouse Engineer Joseph Lederle shows a proposed two-story barn with a stable and carriage room on the first floor, measuring 25 by 14 feet. The second floor had a 6-foot ceiling. The front elevation shows two windows, one on the first floor, and a second-floor dormer type window, with a small door leading to the stable room, and larger

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[9] Richard Veit, Ph.D., "Navesink Twin Lights Archaeological Survey," October 1999. In the summer of 1999, the Monmouth University Field Archeological school dug test pits on the two tower sites briefly uncovering portions of them about six inches under the ground. The sites have been recorded and covered over with soil.

[10] Light-House Board *Annual Reports* for 1890 and 1892, Entries 269, 270.

[11] Navesink Light Station, Buildings Surveyed July 5th & 6th, 1892, by G.R. Bechler, corrected to June 6th 1893 drawing 1563, Office of Lighthouse Engineer 3rd Dist.-Tompkinsville, N.Y. Nov. 20, 1897.

double doors entering the carriage room.[12] It is not know if this particular barn was constructed, although an 1892 drawing shows a barn on the property with a slightly altered footprint.[13]

Non-Contributing Structures

Spermaceti Cove Life Boat Station

The Spermaceti Cove Life Boat Station, located north west of the light station building, was one of eight original United States Life-Saving Service structures built between Sandy Hook and Little Egg Harbor, New Jersey, in 1849.[14] In 1954, the U.S. Coast Guard donated the building to the Twin Lights Historical Society. It was moved by truck from the Spermaceti Cove Coast Guard Station, now part of Gateway National Recreation Area, Sandy Hook Unit, to Twin Lights Historic Site. The building is a wood frame boathouse with a cedar-shingle roof and walls; one pair of barn-like doors are located on the front end and a small door on the rear end. The building measures 26 feet wide by 29 feet deep.

The life boat building is located 42 feet west and slightly north of the north light tower.

[12] Joseph Lederle, Proposed Plan for a new Barn at Highlands of Navesink L. St., NJ, Engineer Office 3rd Light House Dist., March 25, 1870.

[13] Navesink Light Station, Buildings Surveyed July 5th & 6th, 1892, by G.R. Bechler, corrected to June 6th 1893 drawing 1563, Office of Lighthouse Engineer 3rd Dist - Tompkinsville, N.Y. Nov. 20, 1897.

[14] Edwin C. Bearss, *Historic Resource Study and Historic Structures Report, Spermaceti Cove Life-Saving Station, Sandy Hook Unit, Gateway National Recreation Area, New York/New Jersey* (Washington, DC: U.S. Department of Interior).

8. STATEMENT OF SIGNIFICANCE

Certifying official has considered the significance of this property in relation to other properties:
Nationally: X Statewide: _ Locally: _

Applicable National Register Criteria: A X B _ C X D _

Criteria Considerations (Exceptions): A _ B _ C _ D _ E _ F _ G _

NHL Criteria: 1 and 4

NHL Theme(s): V. Developing the American Economy
E. Transportation and Communication

Areas of Significance:

Period(s) of Significance: 1862-1949

Significant Dates: 1862, 1898, 1949

Significant Person(s):

Cultural Affiliation:

Architect/Builder: 1862 light station building designed by Joseph Lederle and constructed by the U.S. Lighthouse Board

Historic Contexts: XIV. Transportation
B. Ships, Boats, Lighthouses, and Other Structures

State Significance of Property, and Justify Criteria, Criteria Considerations, and Areas and Periods of Significance Noted Above.

Summary Statement of Significance

In the early 1820s, the federal government decided that the lighthouse at Sandy Hook[15] was not entirely meeting the needs of mariners in the region. The Highlands hills, used since the early 1700s as an observation post, became a logical place to establish a new seacoast beacon. The Navesink Light Station was constructed there in 1828 with two towers (and thus two lights), so that it might be distinguishable to mariners from Sandy Hook Light Station, which was located just five miles to the north and only had a single light. When the station was rebuilt in 1826, it continued to have two towers and two lights. From 1828 until 1949, the twin towers of Navesink served as one of the principal aids to navigation for vessels entering the United States' busiest port—New York harbor—and the station had the distinction of being the first in the United States to test several important lighthouse technologies. The revolutionary Fresnel lens, the use of mineral oil, and an electric flash bivalve lens were tested at Navesink before being put into wider use by the lighthouse establishment. In 1899 the station became the site of the first United States demonstration of commercial wireless telegraph. Furthermore, the fortress-like appearance of the 1862 light station was unique in American lighthouse design which had been standardized by the United States Lighthouse Board in the 1850s.

Significance as an Aid to Navigation

Built as part of a system of aids to navigation which marked the path into the Port of New York, the towers at Navesink played an important role in assisting the growth of commerce of this nation. New York served as the country's largest and most active port when maritime transportation was at it height in the United States, both in terms of cargo and passengers. After the opening of the Erie Canal in 1824, goods and people passed through New York to and from the interior of the country at an exponential rate. New York also served as the distribution point for goods arriving from European and southern markets. Noted maritime historian K. Jack Bauer stated of New York

> Few cities in history could boast the combination of favorable factors that New York possessed during the first half of the nineteenth century. Her economic hinterland had such size and diversity that it fed a stable flow of goods onto her docks. Her rapidly expanding industrial activity absorbed a seemingly endless flow of immigrants. Her rise to banking dominance during the second quarter of the century combined with her magnificent harbor and her driving, innovative shipping leadership to make her the great port of the United States.[16]

The lights at Navesink are among the few remaining intact twin light stations still in existence in the United States. Several multiple lights were built in the early days of lighthouse engineering

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[15] Sandy Hook was designated a National Historic Landmark in 1964.

[16] K. Jack Bauer, *A Maritime History of the United States: The Role of America's Seas and Waterways* (Columbia, SC: University of South Carolina Press, 1988), 119.

so that one lighthouse could be distinguished from others along the coast. In the case of Navesink, the double lights distinguished it from the nearby light at Sandy Hook. At one time there were seven sets of twin lights and one triple light, all on the Atlantic coast. The other twin lights were Plymouth (Gurnet) Lights, Massachusetts (1769); Newburyport Harbor Lights, Plum Island, Massachusetts (1788); Bakers Island Lights, Massachusetts (1789); Chatham Lights, Massachusetts (1808); Matinicus Rock Lights, Maine (1827); Cape Elizabeth Lights, Maine (1828); Cape Ann (Thacher Island), Massachusetts (1771, rebuilt 1861); North Point Lights, Maryland (1833); and the Three Sister Lights, Nauset Beach, Cape Cod, Massachusetts (1838). The only twin lights left fully intact are Navesink and Cape Ann.[17] Of the others, the tower at Cape Elizabeth has been modified; the towers serving Three Sisters have been modified and moved; a lantern is missing on one tower at Matinicus; and all other former twin light stations have only a single tower or no longer exist as in the case of North Point in Maryland. The development and installation of revolving lenses, whose distinctive flash signal served to distinguish lighthouses, ended the need for twin lights. In the case of Navesink, the two tower characteristic had been established in 1828 and remained when the newer towers were constructed in 1862.

Experiments in Lighthouse Technology

In 1822, French physicist Augustin Fresnel developed a lens bearing his name which evolved into an optic that revolutionized the lighting of lighthouses in Europe. Similar to a glass beehive in appearance, Fresnel's circular glass lens surrounded a light source at the center; catadioptric prisms were added at the top and bottom to refract the light into a concentrated horizontal beam. After hearing much criticism of the lights in American waters, Congress sent Commodore Matthew Perry to France to obtain two Fresnel lenses in 1838. After his return, the first-order lens was placed in the Navesink's south tower and the second-order lens in the north tower in 1841, thus making them the first light towers in the country to use the revolutionary lighting devices.

The purchase and installation of the lenses cost $24,000. Mr. Bernard, referred to as a 'French artisan,' an associate of Henry LePaute, manufacturer of these extraordinary lenses, came over from France to oversee their installation. The original intended recipients of the first French lenses were nearby Sandy Hook Light and Isle of Shoals Light on White Island in New Hampshire. However, upon examination, Mr. Bernard found the diameter of the top of the lantern at Sandy Hook to be too small to accommodate the larger lantern required for housing the fixed lens. Also the tower was not of sufficient elevation to take full advantage of the lens. The Navesink towers became the obvious substitute—each had a diameter of 16 feet at their tops and was 246 feet above sea level. A lantern sent from France was used to house the revolving lens and a second lantern was fabricated on site for the fixed lens.[18]

Stephen Pleasonton, Fifth Auditor of the U.S. Treasury, who oversaw the Lighthouse Service, reported in 1841, "The cost of these lenses . . . is nothing compared to the beauty and excellence

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[17] Cape Ann Light Station was designated a National Historic Landmark in 2000.

[18] Correspondence dated August 20, 1848 from S. Pleasonton to the Secretary of the Treasury and Jesse Hoyt, Superintendent of Lighthouses, New York; National Archives, Record Group 26, Entry 18.

of the light they afford. They appear to be the perfection of apparatus for Lighthouse purposes, having in view only the superiority of the light, which is reported by pilots to be seen in clear weather a distance of forty miles."[19] Pleasonton was also quick to point out that

> there are some drawbacks, however, in relation to their management, which would render them unfit for use in the United States upon a large scale, there being but one lamp which supplies all the light, with three or four concentric wicks, and this lamp, made upon the carcel principal, is very apt to get out of order, and the light become extinguished, if the keeper be not an intelligent mechanic, and capable at all times of making the necessary repairs.[20]

The lenses were praised by mariners and seen as far more effective than the reflector system they replaced. Lt. David D. Porter, U.S. Naval Commander of the U.S. Mail Steamer *Georgia*, stated, "The Navesink fixed and revolving lights, I consider the only perfect lights on our coast, not only as regards regularity of lighting, but in the brilliancy of the light."[21] Lt. T. A. Jenkins of the U.S. Coast Survey reported that "the French lens lights at Navesink, New Jersey and Sankaty Head, Nantucket, are, in the point of brilliancy and range, far superior to any other lights I have seen in this country."[22]

Although the lenses were seen to be enormously successful, it took enormous pressure and a total reorganization of the administration of lighthouses under the U.S. Lighthouse Board in 1852, to acquire them for all American lighthouses. The Board reported that "the lights at Navesink (two lenses) and the second order lens light at Sankaty Head, Nantucket, are the best lights on the coast of the United States" and that they "are to be considered, as a general rule, equal to European lights of the same classes."[23] The report also stated "that the Fresnel lens is greatly superior to any other mode of Lighthouse illumination, and in point of economy is nearly four times as advantageous as the best system of reflectors and Argand lamps." When comparing the lights at Navesink with the light at nearby Sandy Hook the report concluded that "the relative useful effect of the Navesink and Sandy Hook lights is in the proportion of 5.2 to 1: or, the Navesink lights are 5.2 more powerful and effective than the Sandy Hook Light."[24] Although Fresnel lenses required a large initial investment, they required smaller quantities of costly whale oil than was needed to light a system of lamps and reflectors, and thus over the long term were less expensive to operate. By the start of the Civil War, the vast majority of United States

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[19] Correspondence dated December 28, 1841, from Stephen Pleasonton to the Honorable John P. Kennedy, Chairman, Committee on Commerce, U.S. House of Representatives; Navesink Highlands Twin Lights Archives.

[20] Ibid.

[21] Correspondence dated July 1851, reproduced in U.S. Light-House Establishment, *Public Documents and Extracts from Reports and Papers Relating to Light-Houses, Light-Vessels, and Illuminating Apparatus, and to Beacons, Buoys, and Fog Signals, 1789-1871* (Washington, DC: Government Printing Office, 1871), 737. Hereafter referred to as Lighthouse Papers.

[22] Correspondence dated November 5, 1851, in Lighthouse Papers, 751.

[23] *1852 Report of the U.S. Light-House Board*, 10.

[24] Ibid., 23.

lighthouses possessed the superior Fresnel lenses.

In 1883, kerosene, or mineral oil, was first tested in the first-order lamp at Navesink. This illuminant proved highly successful and soon replaced lard oil as the standard fuel for lighthouse illumination.[25] Later, in 1898, Navesink would display a bivalve-type Fresnel lenses using the first electric arc lamp in the United States.[26] The bivalve lens, shaped like a clam shell, combined with the electric arc lamp produced a more powerful light than its "drum-style" counterpart.[27]

Architecture

Joseph Lederle submitted sketches for the Navesink Light Station in August 1860 and later, as a U.S. Lighthouse Board Superintendent of Construction, oversaw its construction.[28] Lederle was appointed Acting Engineer for the Third Lighthouse District in October 1862. He worked for the Third Lighthouse District, headquartered in New York, for nearly a decade, resigning in October 1871. It is not known what other lighthouses Lederle designed during his career with the Lighthouse Board. After resigning, he eventually opened his own architectural practice on Staten Island and is listed as having an office there until his death in 1895.

The design of Navesink Light Station is that of a fortress. Although the U.S. Lighthouse Board began to standardize lighthouse designs in the 1850s, no other United States lighthouse repeats the design used at Navesink or even resembles its unique appearance. Built during a period when massive Government architecture was in vogue, the design is reminiscent of the "battle gothic" style used in institutional buildings such as those built at Virginia Military Institute (NHL, 1974) and the Old Louisiana State Capitol (NHL, 1974). European lighthouses that incorporated many elements of castles in their designs might have influenced Lederle.

The castle-like appearance of Navesink is unusual, but the two towers makes it quite distinctive. Early on, the Lighthouse Board experimented with "twin" or "double" lights in locations where light stations were close together. In the case of Navesink, the Lighthouse Board wanted to ensure mariners did not mistake it for the Sandy Hook Light just five miles away or confuse it with the lightship stationed just off Sandy Hook. Navesink is the only surviving set of twin

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[25] U.S. Department of Commerce, *Lighthouse Service Bulletin*, Vol. IV, No. 21, September 1, 1931.

[26] Installation of an electric bivalve lens had been planned at Fire Island Light Station, New York, four years previously but never carried out when the Board decided a lightship would serve more effectively.

[27] U.S. Department of Commerce, "Navesink Again Becomes Most Powerful of American Lighthouses." *Lighthouse Service Bulletin* 4, no. 21 (September 1, 1931); reproduced in *The Keeper's Log* (Winter 1991). The *Lighthouse Service Bulletin* article also claimed that Navesink was for a number of years, "the only primary lighthouse lighted by electricity in this country and the only important shore station having a plant for the generation of electricity." During the 1880s experiments in electrifying aids to navigation had been conducted at the nearby lights at Statue of Liberty and Sandy Hook Beacon. Later, in the twentieth century, electricity would dramatically change the character of lighthouses in dispensing with the need for full-time keepers.

[28] It is not clear whether Lederle was an employee of the Light-house Board when he submitted his sketches for the tower. The USLHB correspondence index indicates he used an address in Sheboygan when submitting his sketches in August 1860; in November 1860, he was listed as the superintendent of construction, 3rd District, New York; National Archives, Record Group 26, Entry 38.

lights where the towers are incorporated into a single building.

Evolution of Communication Technology

The elevation of the grounds around the lighthouse made it an ideal spot to conduct communication activities. Colonists established an outpost here in 1746 to send warning signals to the colony of New York about approaching French war ships.[29] During the Revolutionary war General George Washington stationed a militia post to monitor British navy movements in Sandy Hook Bay. Even after the construction of the lighthouses, the hills remained an important communication center with the establishment of several different telegraph companies. In 1829, the Merchant's Exchange, a commodity exchange for buying and selling goods, erected a semaphore tower here. Another tower had previously been erected in nearby Sandy Hook in 1827. In his letter requesting the Lighthouse Service's permission to put the tower on the Navesink Light Station property, the president of the Merchant's Exchange stated

> The importance of this facility of communication to the commerce of the country is very obvious and to the revenue of the United States it is often equally essential. If a vessel is cast ashore and relief is not speedily given, the cargo is plundered and goes into the general consumption without paying duties; but by means of a rapid telegraphic communication, assistance may be immediately rendered with a fair prospect that the property of individuals and the duties to the Government may be saved and the lives of the persons on board preserved.[30]

The tower was used to relay messages between ships passing Sandy Hook and the Exchange's building in Manhattan, New York. The New York-Sandy Hook Telegraph Company, using magnetic telegraph equipment, replaced the semaphore in 1854. Other telegraph companies would follow including the Western Union in 1872, and the Postal Telegraph in 1898, who

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[29] Evidently the signal fire warning light did not work all that well as outlined in this letter from President John Hamilton to the Council of New York-relating to the destruction of the Beacon on the Highlands of Navesink

Perth Amboy
September 27th, 1746

Gentlemen-

I think it my Duty as well in Regard To His Majesty and the Trust Reposed in me, as to the Security and well Being of the Province the Lower Part of which is at this Time more Immediately Committed to Your Care, To Acquaint You that by undoubted Information I am Satisfied that the Beacon sometime ago Erected on the Highlands of Neversink was by pure Accident Set on fire not long Since in the Night, at a Time when it might very well have been Discovered by the Persons Appointed in your Government to Take and Communicate such an Alarm Notwithstanding which no Notice was Taken of it, This to me makes it more than Probable that the Watch appointed in your Government on this Particular Service have been too Negligent in their Duty and however Lucky it may be thought that Your Province has Escaped a false Alarm, Yet I make no Doubt but You are of Opinion with Me than an Alarm from Quarter when Rightly Given must be of the Utmost Importance and therefore hope you will for Our Mutual Security take such Steps in Regard to your Watches as will Effectually Prevent the Like Neglect for the Future, I am Gentlemen

Your most Obedient Humble Servant
John Hamilton

The Honorable His Majesty's Council of New York

[30] Correspondence dated October 24, 1829, from the president of the Merchant's Exchange to Secretary of the Treasury Samuel Ingham, National Archives, Record Group 26, Entry 17F, "Miscellaneous Letters Received (Alphabetical), 1801-52."

competed against each other sending messages about passing maritime traffic to clients around the country.

In 1899, Guglielmo Marconi placed an antenna and receiving station at the Navesink Light Station to demonstrate his wireless telegraph. Marconi had studied the works of several inventors experimenting with electromagnetic waves. He conducted his own experiments leading to the development of commercial wireless telegraph equipment that would become the forerunner of modern radio communications. By 1896 Marconi had patented a wireless telegraph system in England demonstrating it in several British locations including sending a signal across the English Channel. The New York Herald newspaper had hired him to bring his wireless telegraph to the United States and report on the 1899 America's Cup yacht races being held off the tip of Sandy Hook, New Jersey.[31] This demonstration worked so well that Marconi expanded his American operations, establishing the nation's first commercial wireless telegraph station at Navesink capable of sending and receiving messages on a regular basis. Eventually Marconi ship to shore communications equipment would become standard on ocean going vessels.

The United States Navy, which had observed Marconi's operation at Navesink, saw the value of using the light station for wireless telegraph. The Navy's Bureau of Equipment was instructed to build a small house on the lighthouse property and set it up for wireless operations sometime after 1903. Originally the intentions were to use Marconi's equipment, but the Navy could not come to terms with the inventor and they decided to use a competitor's wireless set instead .[32] The military operated wireless station was short lived. By 1909 the Navy had established a more favorable location near Fire Island, New York and the Navesink station was abandoned. The Postal Telegraph Company eventually purchased the structure and moved it from the lighthouse grounds to their property making living quarters for the telegraph operator. In 1985 through a land acquisition program the State of New Jersey purchased the former Postal Telegraph Company complex. The Navy telegraph building and Postal Telegraph Tower base are still standing as part of that acquisition and are administered as part of the Twin Lights Historic Site, but outside of the National Historic Landmark property boundary.

The United States Army also used the towers at the light station as a test site for experimental electronics and detection devices. From July 30 to August 9, 1935 heat-seeking equipment know as thermopiles were used to track ships approaching New York Harbor. The Army Signal Corp was experimenting with various methods of doing this and needed a high vantage point to test their equipment. The unparalleled view from the hill of the Navesink Light Station provided that vantage point. The tests required the use of a powerful searchlight, so the Lighthouse Service issued a notice to mariners warning them of its use. The notice attracted local attention with the *Long Branch Record* newspaper carrying a headline that said, "Ray Which Detects Ships Off Shore To Be Tested Secretly at Highlands." The *New York Times* noted the tests as well printing

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[31] Light-house Service records indicate that permission to use one or both of the towers as a signal station for reporting on yacht races was requested by the United Press in 1887, the *Evening Post* and Associated Press agents in 1895, the *Boston Herald*, *New York Herald*, etc., in 1899, the Associated Press in 1900 and 190; National Archives, Record Group 26, Entries 38 and 48 (File No. 1008).

[32] Susan Douglas, *Inventing American Broadcasting, 1899-1922* (Baltimore: Johns Hopkins University Press, 1987), 111.

their headline as "Mystery Ray Sees Enemy At 50 Miles."[33]

Four years later in 1939 the Army Signal Corp was again at Navesink Light Station. This time it was to test the effects of higher altitudes on long-range radar sets. The Lighthouse Service permitted the Army to take over half of the lighthouse reservation including some interior sections in the north wing.[34] Photographs show several radar sets and equipment huts on the grounds of the lighthouse. Once testing was completed all evidence of these devices and accompanying buildings were removed.

History of Navesink Light Station

Early History

The Highlands of Navesink is a 200-foot-high peninsula protruding towards the Atlantic Ocean from New Jersey. It is protected by a low lying barrier beach known as Sandy Hook and the Shrewsbury River to the east, while surrounded by Sandy Hook Bay on the North, and the Navesink River to the south. In 1609, Robert Juet, a member of explorer Henry Hudson's crew aboard the ship *Half Moon*, wrote: "For to the Northward off us we saw high Hils [sic]. For the day before we found not above 2. Degrees of Variation. This is a very good Land to fall with, and a pleasant Land to see."[35] There is no other point of land higher than the Navesink Highlands heading south along the United States coastline to Florida. To the north mariners would be near Maine before seeing other coastal formations with equal height. This distinction later made the Highlands an ideal landmark to find the narrow entrances to New York Harbor.

During the eighteenth century, the Highlands was used as a signaling post to warn the inhabitants of New York City of approaching enemy ships. As shipping into New York Harbor increased, a lighthouse was built on Sandy Hook in 1764. Although Navesink may have had some type of beacon, a traditional light station was not established until 1828. The government purchased 2 3/4 acres of land from Nimrod Woodward for $600 and contracted Charles H. Smith of Stonington, Connecticut, to build the two towers and a keeper's dwelling for $8,440. David Melville of Newport, Rhode Island, supplied the lamps and reflector system then used for illumination. The towers were outfitted at a cost of $1,840.[36] The first keeper, Joseph Doty of Somerville, New Jersey, was appointed with an annual salary of $600 in May 1828.[37]

The principal keeper at Navesink was allowed four assistants after the installation of the Fresnel

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[33] Harry M. Davis, *History of the Signal Corps Development of U.S. Army Radar Equipment* (New York: Office of the Chief Signal Officer, Historical Section Field Office, 1944), 1:41.

[34] Ibid., 2:9.

[35] *Juet's Journal, The Voyage of the Half Moon from 4 April to 7 November 1609.* ed. Robert M. Lunny (Newark, NJ: New Jersey Historical Society, 1959), 27.

[36] Kim M. Ruth, "The Twin Lights of Navesink," *The Keeper's Log* (Fall 1991): 2-4.

[37] Correspondence dated April 28, 1828, from S. Pleasonton to Jonathan Thompson; National Archives, Record Group 26, Entry 18.

lenses in 1841. Each assistant was paid 30 dollars a month. The 1852 Report of the Lighthouse Board to the Secretary of the Treasury described the division of duties as follows:

> The principal keeper does not keep a watch during the night, but divides the four assistants into two watches, two for each tower, and alternating in their duties—the first watch from the time of lighting until midnight, and the second watch from midnight until daylight. The principal keeper generally retires to bed at nine o'clock, and is only called when something goes wrong.

The report went on to note that there were too many keepers at the station and put forward that one principal and two assistants were sufficient to perform the duties properly and efficiently and that no keeper, principal or otherwise should be exempted from keeping a regular watch.[38]

The 1852 Report also commented on the deteriorated condition of the towers.

> The two towers are very badly constructed of rubble stone, and their present condition is very bad, owing to leaks and cracks. There is no cellar for oil, nor storerooms in the towers for wicks, chimneys, cleaning-cloths, etc. The oil is kept on the ground floor, where the temperature is necessarily very variable.[39]

Construction of 1862 Towers

The U.S. Lighthouse Board *Annual Report* of 1857 stated

> The two Lighthouse towers at Navesink, N.J., marking the approach to the bay of New York, are in a dilapidated condition, the consequence of the original bad materials and workmanship, and it has been represented that there is apprehension that they are not capable of standing much longer the heavy winter storms of the coast.
>
> The position is one of great exposure, the lights of much importance, and it is believed it will not be safe to trust the stability of the present towers much longer. . . The estimated cost of construction of these two towers of cut stone, and fitting them with proper apparatus, is $72, 941.

The proposal was submitted to Congress during the fiscal year ending June 1859, and $72,941 was appropriated in June of the following year. The *Annual Report* of 1861 indicated that

> [t]he two first class light-house towers authorized to be erected at Navesink, New Jersey, entrance to New York bay, are near completion. The materials for these two towers had been contracted for in 1860, and nearly all delivered or ready for delivery early in the summer. There was a temporary suspension of the work after June 30, and resumed again

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[38] "Report of the Officers Constituting The Light-House Board, convened under instructions from the Secretary of the Treasury, to inquire into the condition of the Light-House Establishment of the United States, Under the Act of March 3, 1851." (Washington: Printed by A. Boyd Hamilton, 1852), 22-24.

[39] Ibid., 22.

> soon after by authority. The old towers at this light station are in very bad condition, which made it of the greatest importance to complete the new ones without delay.

The new towers were lit on May 1, 1862. The Lighthouse Board had upgraded the second-order rotating light in the north tower replacing it with a fixed first-order light. It is not known exactly why this was done except to eliminate some confusion with the Sandy Hook light ship's two lights.[40] The light ship was anchored in the Atlantic Ocean at the entrance to the Sandy Hook channel in view of the Navesink towers.

Once the towers, work room, and oil room were complete, the Board's Committee on Engineering urged that the construction of the dwelling be completed as the old keeper's dwelling was reported to be "not inhabitable or even safe."[41] A report of unexpended balance on the light station was $19,157.75, with the estimate for the dwelling portion of the station as $11,251. The 1863 Annual Report indicated that "the dwellings for light-keepers at Navesink have been completed, and the new station and structures present a highly ornate and substantial appearance."

Significant Events 1862-1949

In 1883, mineral oil or kerosene was tested at Navesink as a fuel for first-order lamps. The 1883 Annual Report stated, "After successfully experimenting here for several weeks, a mineral-oil lamp was placed in the north tower, in place of the lard-oil previously used. This is the first instance in which mineral oil, has been used in a first-order lamp in this country." The Lighthouse Board was always looking for new or improved fuels to burn in the lamps. Lard oil was smoky and difficult to work with. Mineral oil burned a lot clearer and made a more brilliant light. A mineral oil lamp was placed in the south tower the following year and eventually became the most commonly used fuel source in American lighthouses. Because mineral oil is highly flammable, after the adoption of its use, light stations across the country needed to have oil houses built away from the towers to protect against accidental ignition. At Navesink, two oil storage houses were built; one in 1890 and a second in 1892.

The next significant event at Navesink occurred in 1898, when the Lighthouse Board purchased a lens from the French Government, which had been displayed at the Chicago's World Fair. Manufactured by Henri LePaute, "The lens consisted of 386 separate lenses around a central bull's eye. It was 9 feet in diameter and 5 feet high and when set in position resembles a clam shell."[42] The new lens was designed for use in conjunction with an electric arc lamp and could produce a 25 million-candlepower light. After some indecision on the part of the Lighthouse Board about which light station should receive the lens, the Navesink south tower became its final destination. The Board thought that the importance of marking the entrance to New York harbor warranted placing the lens here. Since electricity was unavailable, a generating facility

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[40] U.S. Light-House Board 1862 *Annual Report*.

[41] Report of Lt. Col. Bache, dated July 19, 1862, National Archives, Record Group 26, Entry 1, "Journal of the U.S. Light-House Board."

[42] Kim M. Ruth, "The Twin Lights of Navesink," *The Keeper's Log* (Fall 1991): 5.

was built behind the lighthouse. An electrician was authorized by the Secretary of the Treasury to serve as a keeper, and maintain the electrical equipment.[43] Producing a flash of 25,000,000 candlepower, the light was described as a "flash of artificial sheet-lightning."[44] Flashing once every five seconds for duration of 1/10 of a second, it was visible 22 miles at sea. The powerful lens became one of the brightest beacons in the United States and there was little danger of it being mistaken for another lighthouse. It was so bright that the Lighthouse Board ordered solid metal panels be placed on the landward side of the south tower to alleviate complaints from neighbors who were kept up all night by the light.

Once installed in the south tower, the north tower light was no longer necessary and was reduced to backup status.[45] Even though the new lens rivaled a first-order lens in size, it was actually of the second order. In 1917, the electrical producing equipment operating in the powerhouse needed costly repairs. To save money the Lighthouse Service[46] switched to incandescent oil vapor lamps which greatly reduced the candlepower of the second-order lens. It was not until 1939 that commercial electricity became locally available and the light was returned to electricity at 9-million candlepower, again making it the brightest light in the United States.[47]

Deactivation and Current Disposition

In the 1930s the importance of the Navesink Light Station was seen as diminished because of the improved lightships marking the approaches to New York Harbor.[48] New technology such as radar and improved floating navigational devices eventually made this powerful seacoast light obsolete. The lens was taken out of service in 1949, crated up, and sent to the St. George Lighthouse Depot on Staten Island for disposal. The lens was subsequently given to the Boston Museum of Science and, in 1979, returned to Navesink under the care of the Twin Lights Historical Society.[49]

The U.S. Coast Guard declared the deactivated station surplus property in 1953, and in 1954, the General Services Administration turned the station over to the Borough of Highlands for use as a museum and public park. The Twin Lights Historical Society was formed to establish a museum with volunteers to staff it. Unable to keep up the required maintenance, the town approached the State of New Jersey to take over the facility. The New Jersey State Park Service, working with

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[43] Reference to correspondence dated May 21, 1898. National Archives, Record Group 26, Entry 38.

[44] Francis A. Collins, *Sentinels Along Our Coast* (New York: The Century Company, 1922), 104; reproduced in Kim M. Ruth, "The Twin Lights of Navesink," *The Keeper's Log* (Fall 1991): 6.

[45] *Annual Report* 1899, Entries 347 and 348; the light in the north tower was discontinued on September 15, 1898.

[46] Congress abolished the Lighthouse Board in 1910 at which time the Bureau of Lighthouses was created and more commonly referred to as the Lighthouse Service.

[47] U.S. Department of Commerce, "Navesink Again Becomes Most Powerful of American Lighthouses," *Lighthouse Service Bulletin* 4, no. 21 (September 1, 1931).

[48] Ibid.

[49] Navesink Highlands Twin Lights Archives, March 1951 notation in the lighthouse records.

the Twin Lights Historical Society, and the Rumson Garden Club raised close to a million dollars for restoration of the site, which began in 1978. "Exterior stone and brick work was cleaned, repainted and repaired, public restroom facilities were added, and exterior walkways, overlooks, and landscaping created to complement the restored building."[50] In 1987 the exhibits of the museum were redesigned to focus on the history of the lighthouse and its contribution to lighthouse technology and navigation.

The Navesink Light station is important to the history of American lighthouses. It marked the entrance to the New York Bays and the channels that led to the port of New York, one of the United States' busiest harbors. It was the first light station to exhibit a Fresnel lens, was the site of experimentation with mineral oil lamps, and was once the brightest light in America. As a major navigational aid, its beacons allowed commerce to thrive by providing vessels a chance to reach port and millions of passengers to safely reach the shores of the United States. Regionally, fisherman, coastal traders and other mariners were able to keep a watchful eye out for the powerful lights that steered them clear of navigational hazards. Today the structure's fortress-like architecture provides an interesting contrast to other historic light stations and modern navigational aids. As a New Jersey State Park and Historic Site it is visited annually by 100,000 people, who have an opportunity to learn about its significant history.

[50] Tom Laverty, "Navesink Twin Lights Museum," *The Keeper's Log* (Fall 1991): 9.

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Previous documentation on file (NPS):

__ Preliminary Determination of Individual Listing (36 CFR 67) has been requested.
_X_ Previously Listed in the National Register.
__ Previously Determined Eligible by the National Register.
__ Designated a National Historic Landmark.
__ Recorded by Historic American Buildings Survey: #
__ Recorded by Historic American Engineering Record: #

Primary Location of Additional Data:

_X_ State Historic Preservation Office
__ Other State Agency

_X_ Federal Agency
__ Local Government
__ University
_X_ Other (Specify Repository): Twin Light Historical Society

10. GEOGRAPHICAL DATA

Acreage of Property: approx. 2.66 acres

UTM References:	**Zone**	**Easting**	**Northing**
	18	586044	4471995

Verbal Boundary Description:

The boundaries are indicated on the accompanying base map (Tax Map for Borough of Highlands, October 1968) shown as block 19, lot 18 "State of N.J. Historical Museum "Twin Lights" Exempted."

Boundary Justification:

The boundary is based on the historic plot obtained by the U.S. Government in 1828 for the purposes of establishing a light station.

11. FORM PREPARED BY

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Date:	December 2001; Updated November 2004	
Edited by:	Jennifer M. Perunko, Historian, Maritime Heritage Program for National Park Service National Historic Landmarks Survey 1849 C St., N.W. Washington, DC 20240	
Telephone:	(202) 354-2211	

DESIGNATED A NATIONAL HISTORIC LANDMARK
February 17, 2006

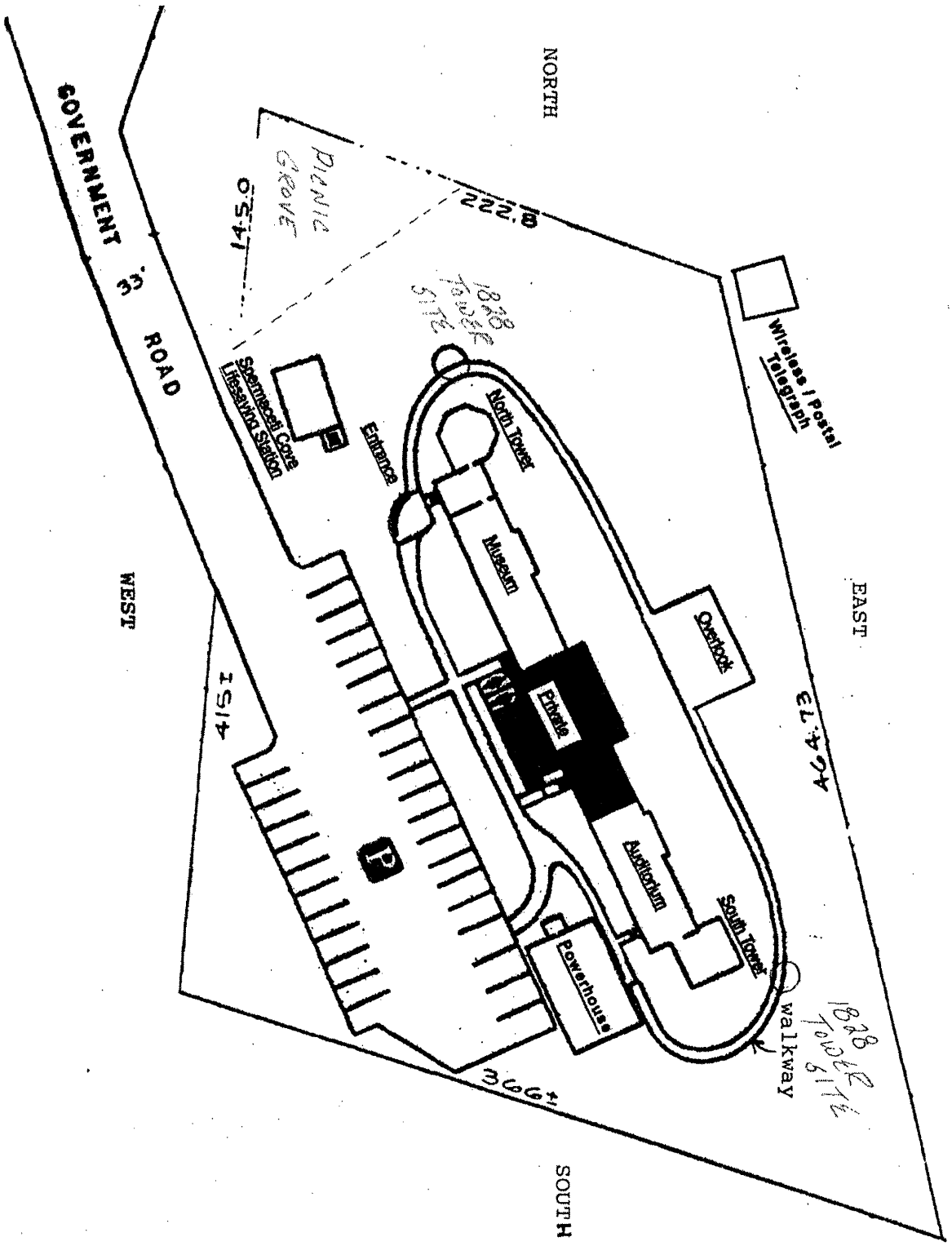


Figure 6: Current site plan of Navesink Light Station.

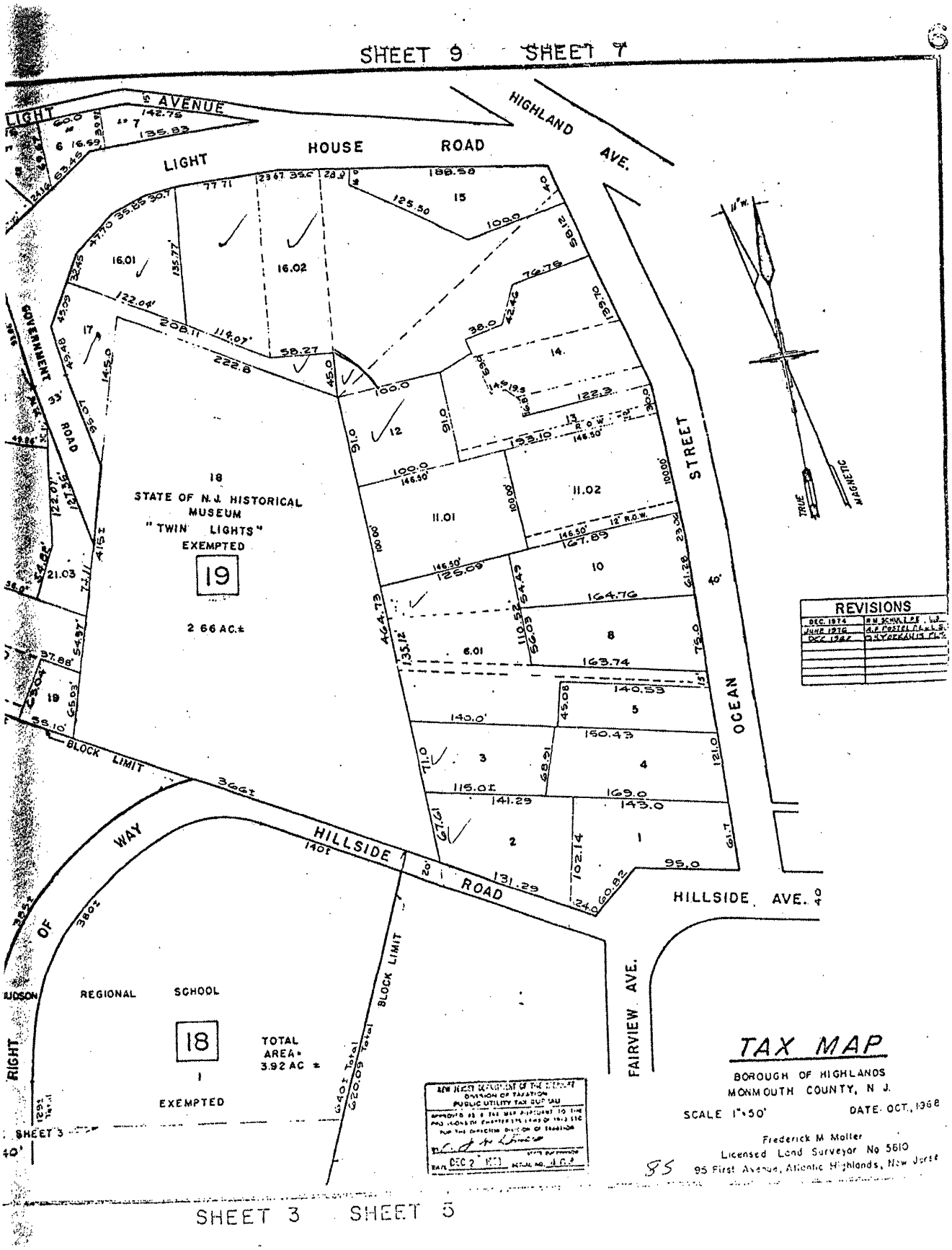


Figure 7: Boundary description for Navesink Light Station.

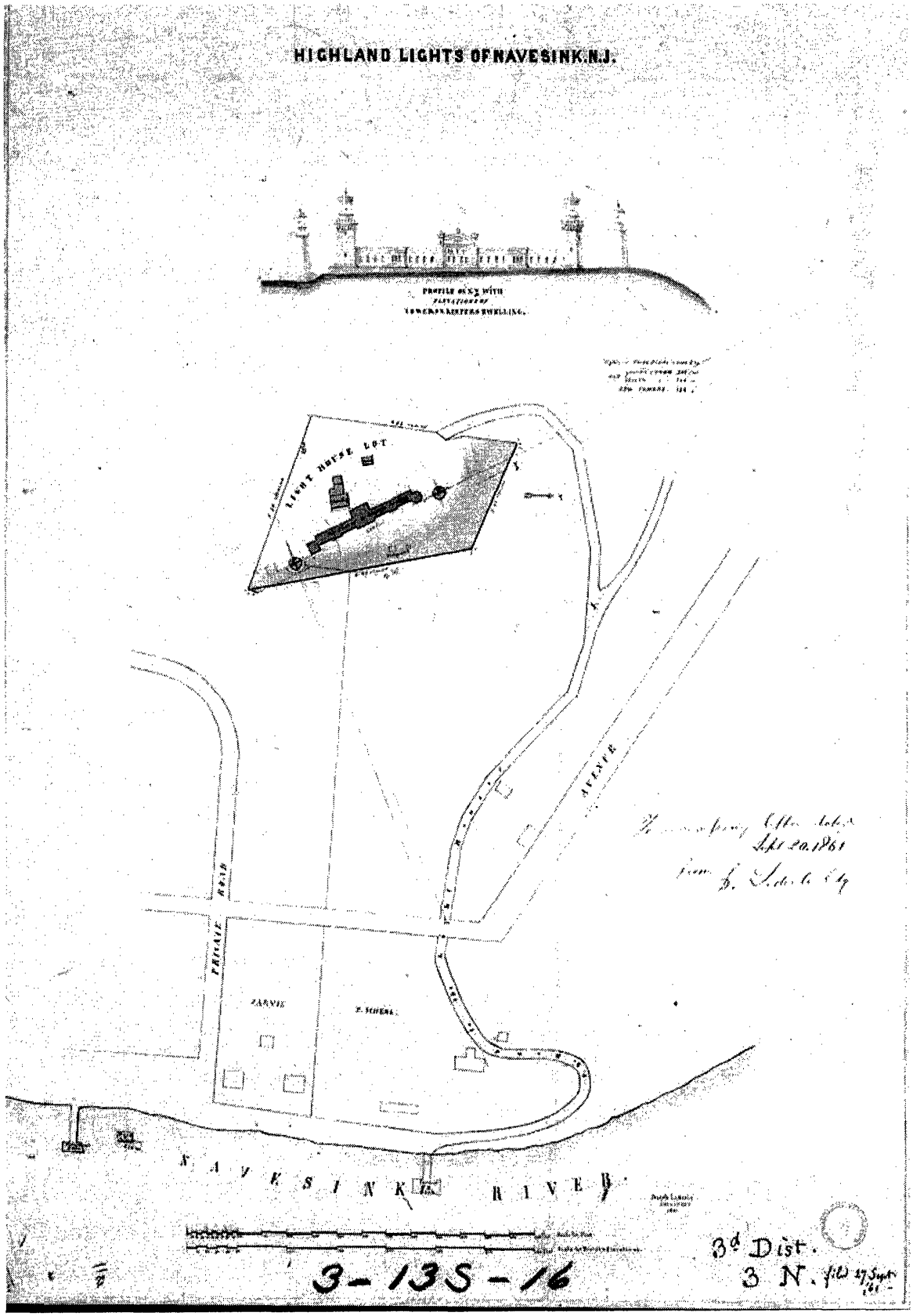


Figure 8: 1861 site map for Navesink Light Station, Record Group 26, National Archives.

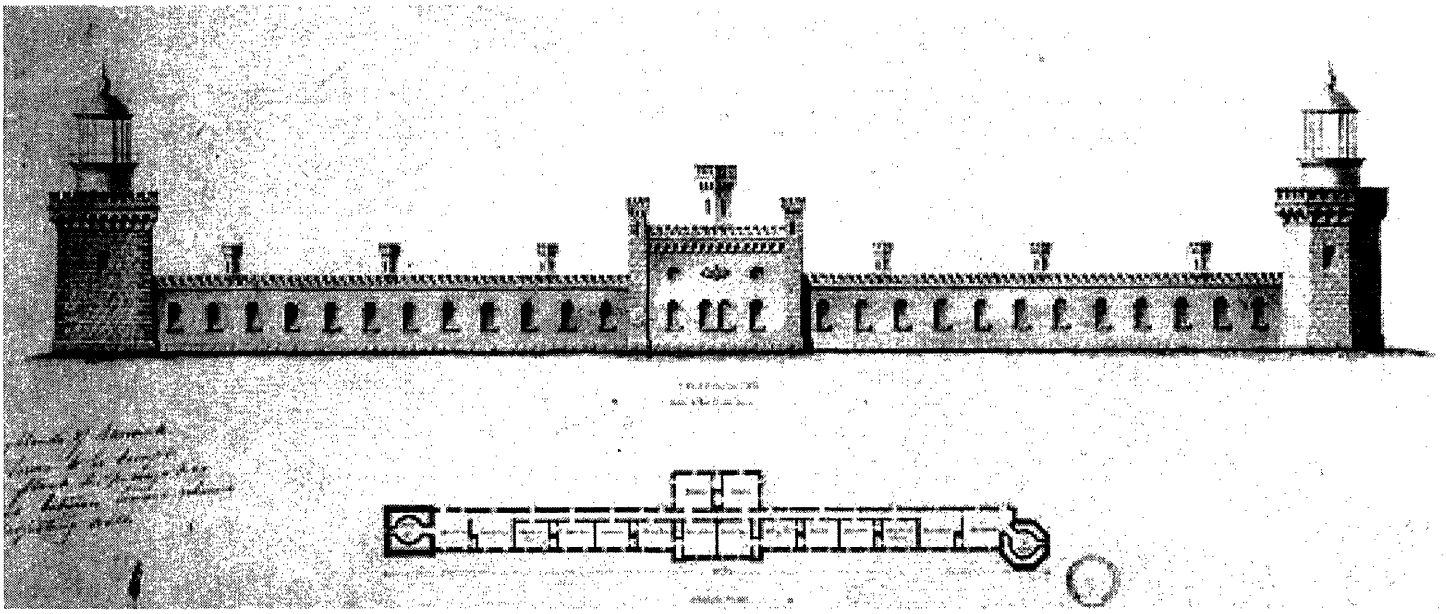


Figure 9: Elevation drawing of Navesink Light Station, circa 1861, Record Group 26, National Archives.

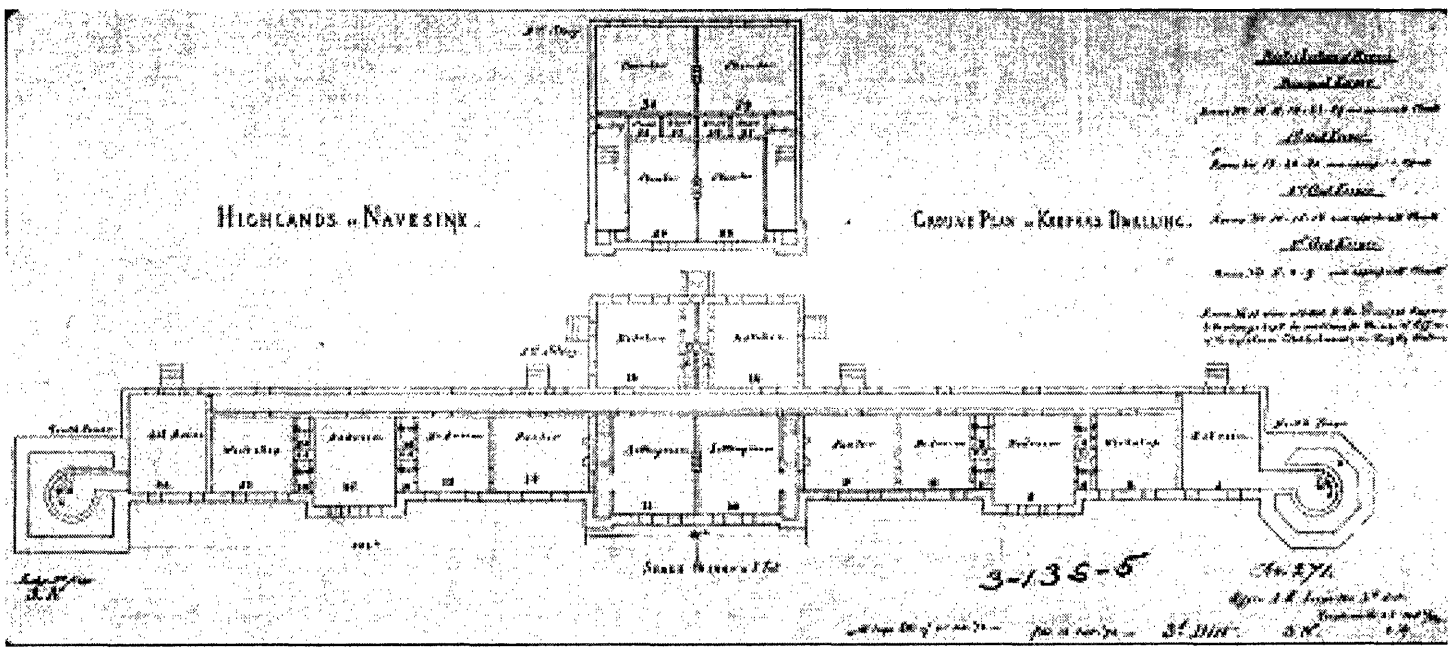


Figure 10: Ground plan of keepers dwelling, circa 1861, Record Group 26, National Archives.

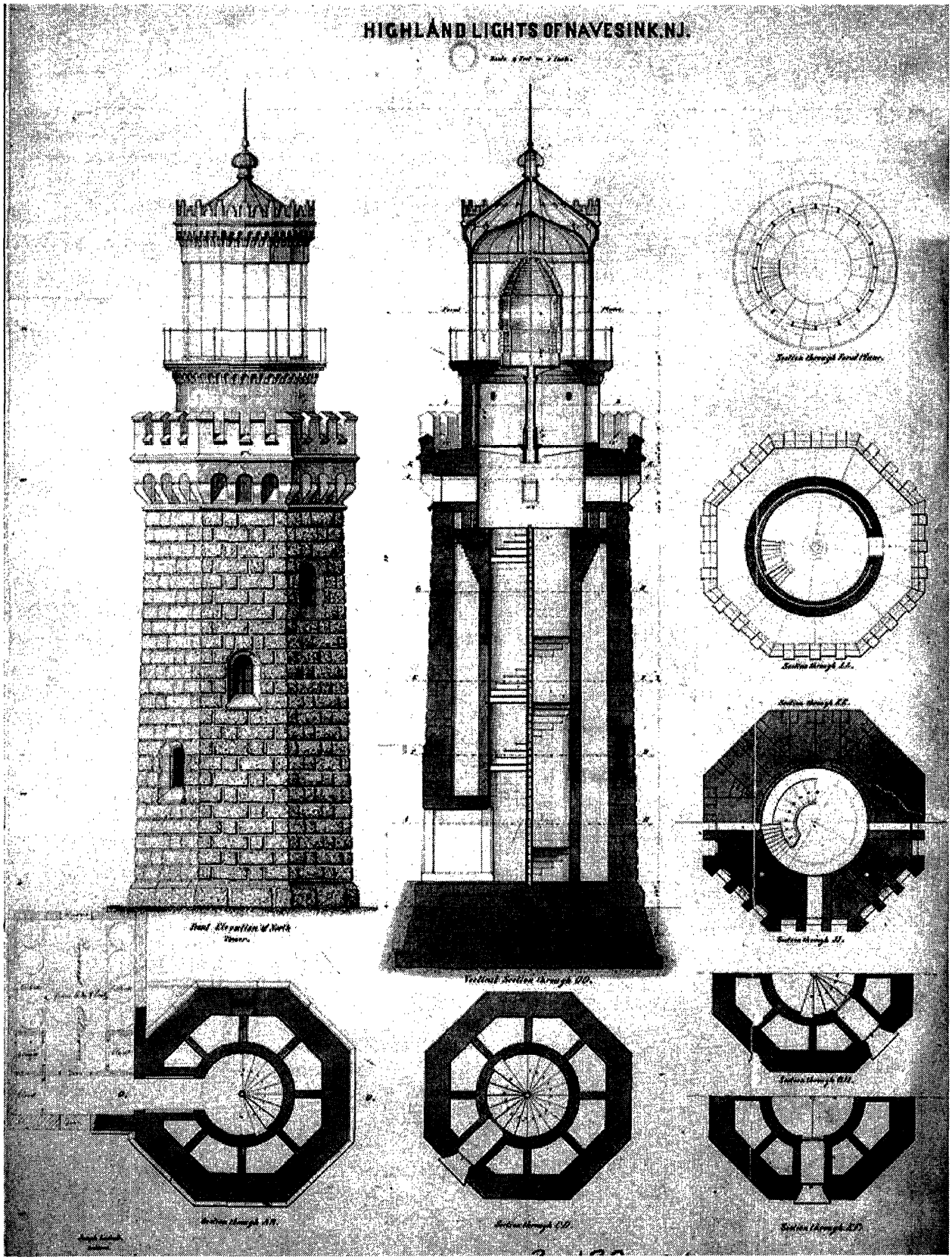


Figure 11: Plan for the nouth tower at Navesink Light Station, circa 1861, Record Group 26, National Archives.

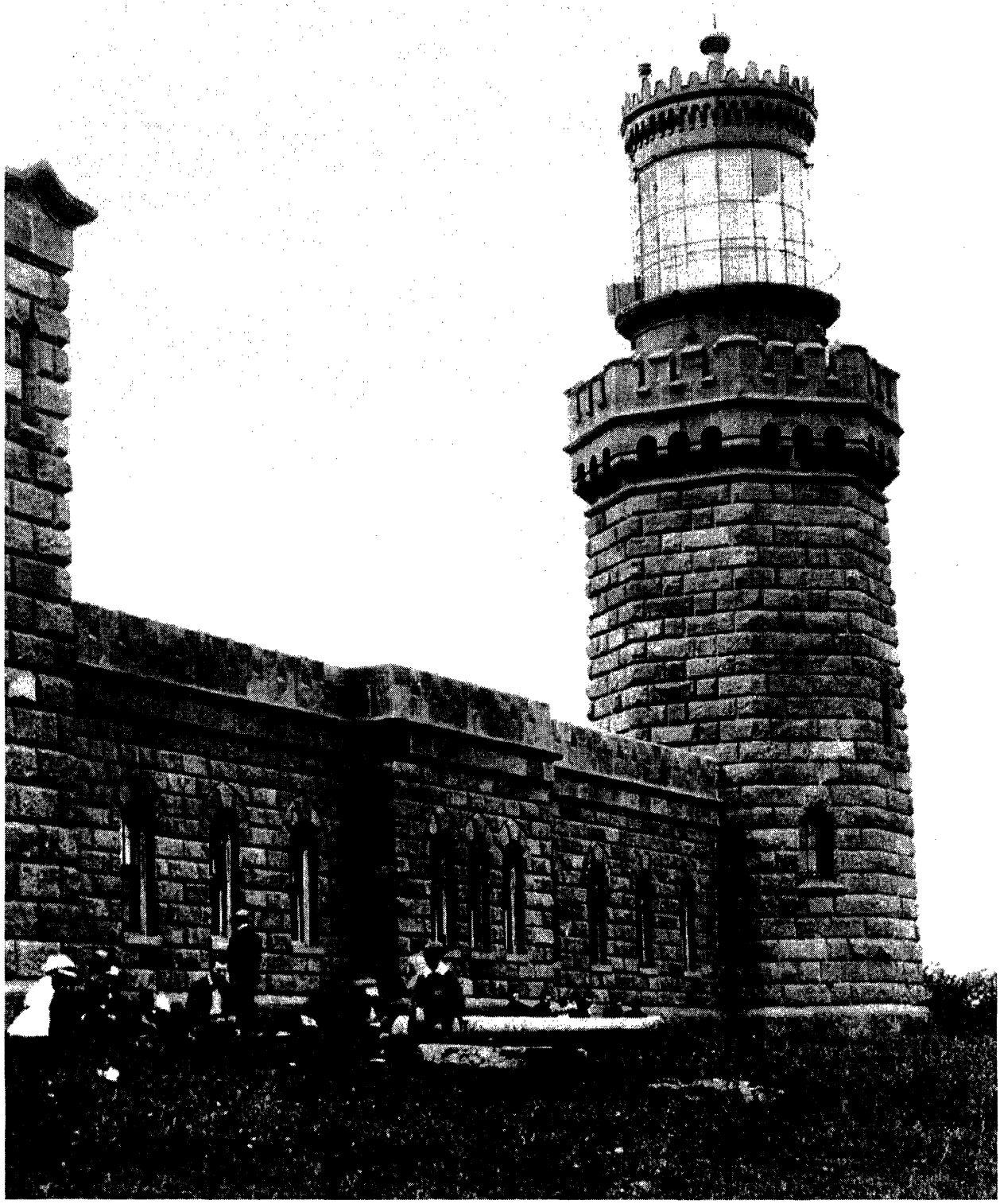


Figure 12: Navesink Light Station keepers' quarters and north tower, circa 1890s, Record Group 26, National Archives.

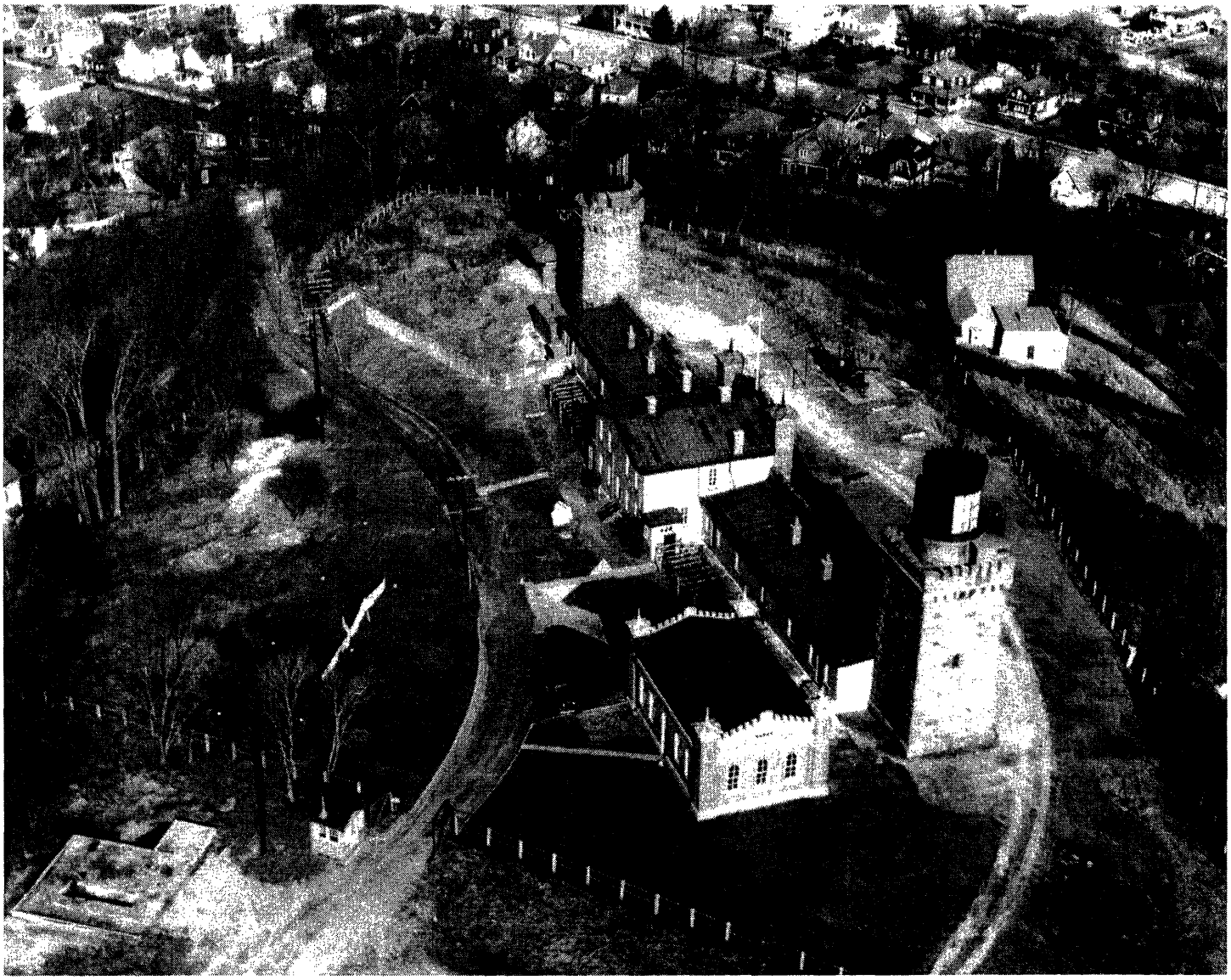


Figure 13: Bird's-eye-view of Navesink Light Station, circa 1940s, USCG Historian's Office.

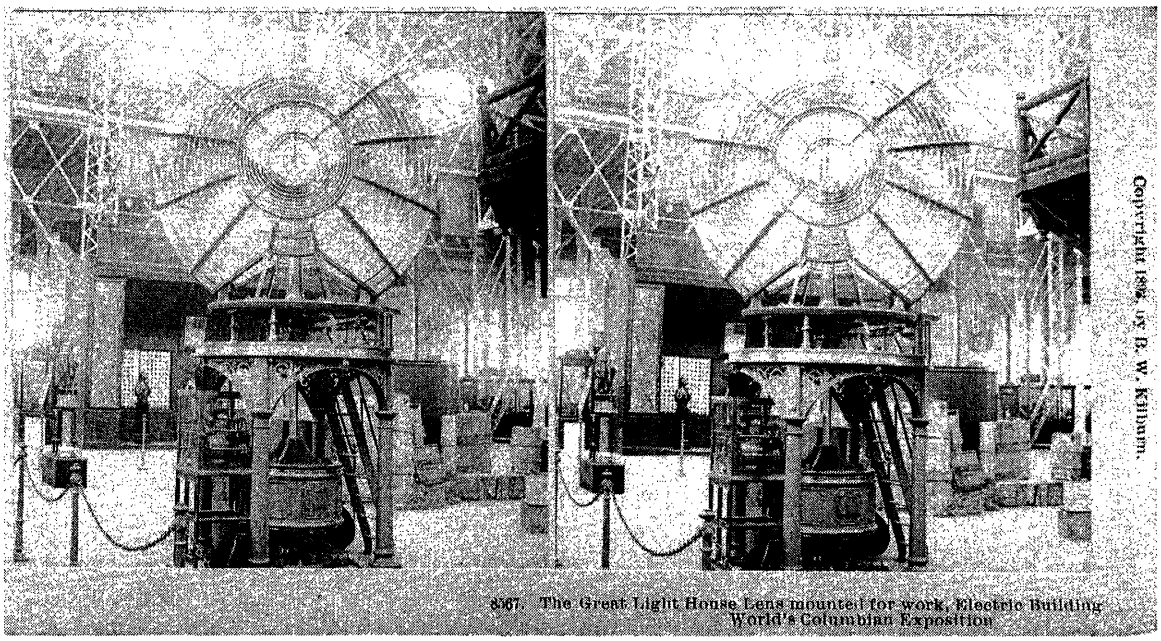
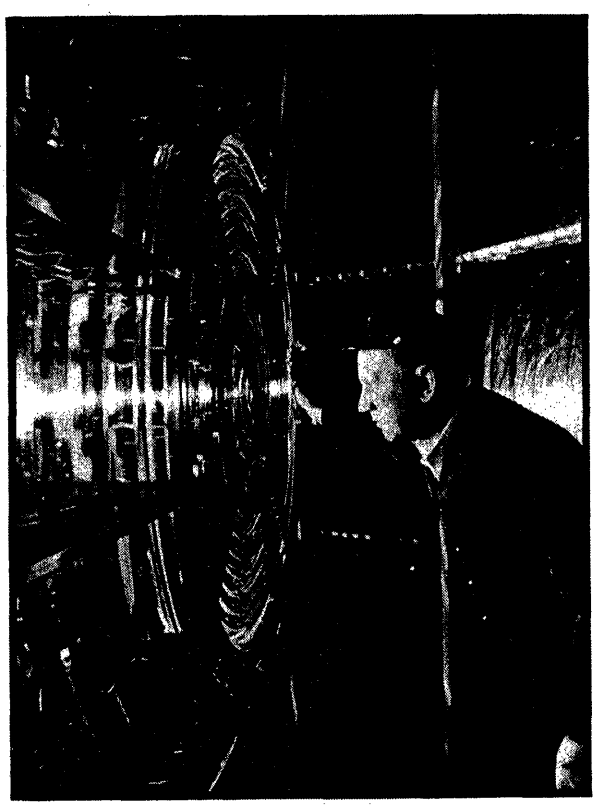


Figure 14: Bi-valve lens on display at the World's Columbian Exposition; image courtesy of the Twin Lights Historical Society.



9,000,000 CANDLEPOWER: THE LENS AT NAVESINK

Keeper Murphy L. Rockette of the Navesink Light station at the land end of Sandy Hook, New Jersey, inspects his bulbs, looks for dust flecks on his prisms. His lens, a bivalve worth $20,000, is turned six times each minute in a pot of mercury by electric current supplied by the Jersey Central Power & Light Co.

Figure 15: Bi-valve lens installed in south tower; image courtesy of Twin Lights Historical Society (from *Fortune*, January 1937, Vol. XV, No. 1)

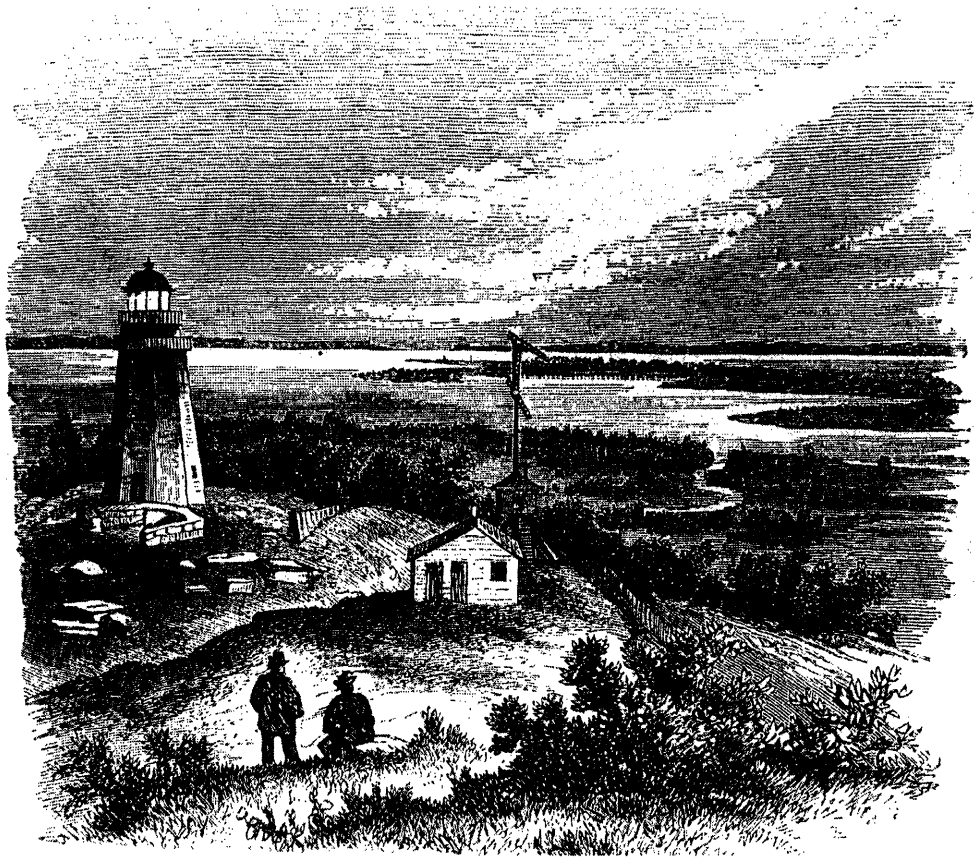


Figure 16: Historic sketch of Navesink Light Station depicting 1862 north tower and foundation of 1828 north tower; also in sketch is semaphore tower.

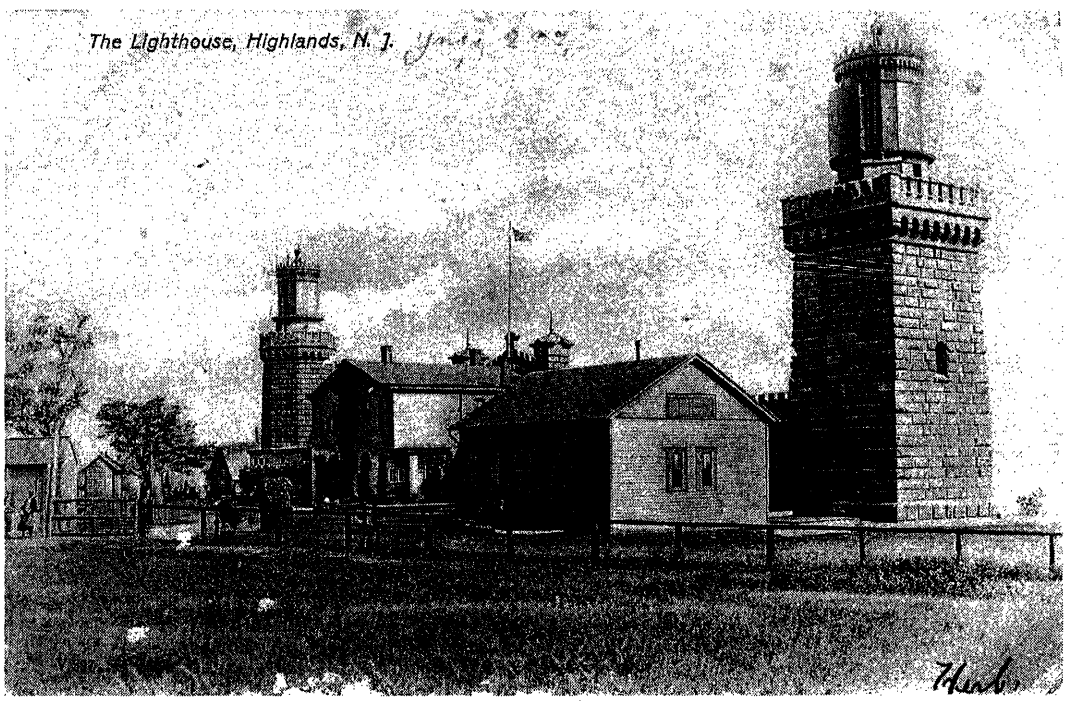
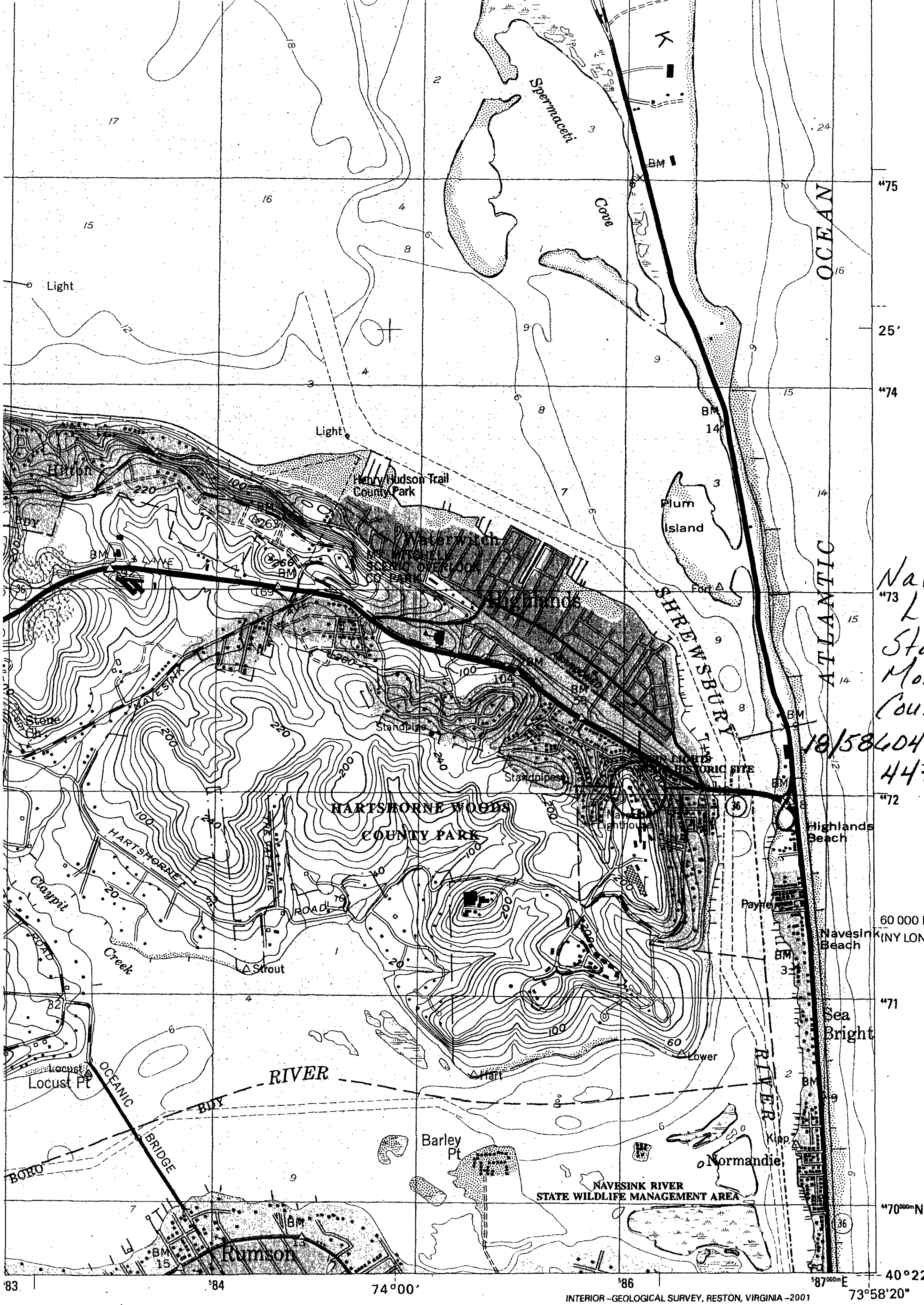


Figure 17: Historic postcard of Navesink Light Station showing 1898 power house (replaced in 1909 with current building); image courtesy of Twin Lights Historical Society.



Navesink Light Station
Monmouth County, NJ
18/584044/4471995

ROAD CLASSIFICATION

Primary highway

Light-duty road, hard or