

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Section number _____ Page _____

SUPPLEMENTARY LISTING RECORD

NRIS Reference Number: 89001471 Date Listed: 05/29/90

New London Ledge Lighthouse New London CT
Property Name County State

Operating Lighthouses in Connecticut
Multiple Name

This property is listed in the National Register of Historic Places in accordance with the attached nomination documentation subject to the following exceptions, exclusions, or amendments, notwithstanding the National Park Service certification included in the nomination documentation.


Signature of the Keeper

05/29/90
Date of Action

=====

Amended Items in Nomination:

8. Statement of Significance: Level of Significance

All properties included in the multiple property nomination Operating Lighthouses in Connecticut were considered to meet the criteria within a statewide context.

10. Geographical Data: Acreage

The acreage is <1.

This information has been confirmed with John Herzan, National Register Coordinator, CTSHPO, by telephone.

DISTRIBUTION:
National Register property file
Nominating Authority (without attachment)

1471

UNITED STATES DEPARTMENT OF THE INTERIOR
 NATIONAL PARK SERVICE
NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY -- NOMINATION FORM
 FOR FEDERAL PROPERTIES

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 DATE ENTERED

SEE INSTRUCTIONS IN *HOW TO COMPLETE NATIONAL REGISTER FORMS*
 TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC
 New London Ledge Lighthouse

AND/OR COMMON
 New London Ledge Lighthouse, New London Ledge Light

2 LOCATION

STREET & NUMBER East side of main channel at entrance to New London Harbor,
 1/4 mile west of Black Ledge

CITY, TOWN _____ NOT FOR PUBLICATION
 CONGRESSIONAL DISTRICT _____

VICINITY OF New London

STATE Connecticut CODE _____ COUNTY New London CODE _____

2 CLASSIFICATION

| CATEGORY | OWNERSHIP | STATUS | PRESENT USE |
|---|--|---|--|
| <input type="checkbox"/> DISTRICT | <input checked="" type="checkbox"/> PUBLIC | <input checked="" type="checkbox"/> OCCUPIED | <input type="checkbox"/> AGRICULTURE <input type="checkbox"/> MUSEUM |
| <input checked="" type="checkbox"/> BUILDING(S) | <input type="checkbox"/> PRIVATE | <input type="checkbox"/> UNOCCUPIED | <input type="checkbox"/> COMMERCIAL <input type="checkbox"/> PARK |
| <input type="checkbox"/> STRUCTURE | <input type="checkbox"/> BOTH | <input type="checkbox"/> WORK IN PROGRESS | <input type="checkbox"/> EDUCATIONAL <input type="checkbox"/> PRIVATE RESIDENCE |
| <input type="checkbox"/> SITE | PUBLIC ACQUISITION | ACCESSIBLE | <input type="checkbox"/> ENTERTAINMENT <input type="checkbox"/> RELIGIOUS |
| <input type="checkbox"/> OBJECT | <input type="checkbox"/> IN PROCESS | <input type="checkbox"/> YES, RESTRICTED | <input type="checkbox"/> GOVERNMENT <input type="checkbox"/> SCIENTIFIC |
| | <input type="checkbox"/> BEING CONSIDERED | <input checked="" type="checkbox"/> YES, UNRESTRICTED | <input type="checkbox"/> INDUSTRIAL <input checked="" type="checkbox"/> TRANSPORTATION |
| | | <input type="checkbox"/> NO | <input type="checkbox"/> MILITARY <input type="checkbox"/> OTHER |

4 AGENCY

REGIONAL HEADQUARTERS: *(If applicable)* U.S. Coast Guard Third District
 Governors Island

STREET & NUMBER _____

CITY, TOWN New York _____ VICINITY OF _____ STATE New York 10004

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, U.S. Coast Guard Third District, Legal Department
 REGISTRY OF DEEDS, ETC. Governors Island

STREET & NUMBER _____

CITY, TOWN New York _____ STATE New York 10004

6 REPRESENTATION IN EXISTING SURVEYS

TITLE see thematic form

DATE _____

FEDERAL STATE COUNTY LOCAL

DEPOSITORY FOR SURVEY RECORDS _____

CITY, TOWN _____ STATE _____

7 DESCRIPTION

| CONDITION | | CHECK ONE | CHECK ONE |
|--|---------------------------------------|---|---|
| <input type="checkbox"/> EXCELLENT | <input type="checkbox"/> DETERIORATED | <input type="checkbox"/> UNALTERED | <input checked="" type="checkbox"/> ORIGINAL SITE |
| <input type="checkbox"/> GOOD | <input type="checkbox"/> RUINS | <input checked="" type="checkbox"/> ALTERED | <input type="checkbox"/> MOVED DATE _____ |
| <input checked="" type="checkbox"/> FAIR | <input type="checkbox"/> UNEXPOSED | | |

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

New London Ledge Lighthouse (Light List #1005), established in 1909, rises from Long Island Sound on the east side of the entrance to New London Harbor and marks two hazards to shipping: a sharp ledge of rock and a 200 foot long shoal on which it rests. The structure consists of a square concrete foundation and pier surmounted by a cube-like brick dwelling with mansard roof and cylindrical lantern. Presently, the dwelling is painted red with white trim.

Standing in twenty-eight feet of water, the foundation was constructed inside a timber crib fifty-two feet square and thirty-one feet high. The crib was filled with concrete, riprap and gravel and capped by a three foot layer of concrete. In 1938 the timber crib was removed and a new boarding ledge created. A riprap deposit, eighty-two feet square and ten feet deep, forms a bulwark around the foundation. Resting on the foundation is a concrete pier, fifty feet square, rising eighteen feet above low water and containing cellar space and two cisterns for the superstructure. On the southwest face of the pier are painted test markings for submarines. The fog signal is mounted on top of the pier on the southeast side.

The superstructure measures thirty-two feet square. Blocks of smooth faced granite are used for trim as quoins, door lintels, window sills, lintels and muntins, front and rear steps, cornice, frieze, water table and the wall facing below the water table. Some original detail has been altered at the cornice line: wood dentil detail has been removed from the cornice and the frieze is obscured with galvanized sheet metal. A third story contained within the mansard roof is lighted by three pedimented dormers on each facade. Rising from the center of the mansard roof is the upper half of the octagonal brick watchroom and a cast-iron lantern. The focal plane of the light is fifty-eight feet above mean high water.

Symmetry governs the design of each facade, altered only on the northwest elevation, where in 1942 the height of the kitchen windows was reduced. All the window openings now contain four-over-four light aluminum sash, and have flat, flush granite lintels and sills which extend beyond the jambs. Six of these windows are located on the

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New London Ledge Lighthouse

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northeast and southwest facade, respectively. On the southeast and northwest facades, paired windows flank both the doorways on the first story and the axial windows on the second story. The more imposing of the two doorways is located on the southeast facade, facing the Sound. Above this double-leafed door the date "1909" is carved into the lintel, the numerals presently highlighted with black paint. On the northwest facade is a single-leafed door. This orientation toward the open water is a reversal of the original 1906 plan.

Walls of the octagonal watchroom, presently painted white with black trim, contain alternating porthole windows and ventilators. A cast-iron lantern gallery, surmounting the watchroom and extending beyond its walls, is edged with a single pipe rail carried by plain cylindrical stanchions. Curved glass panes measuring twenty-four inches on a side are fitted in the top half of the lantern walls. The panes are separated by diagonal astragals and are set above curved cast-iron plates containing ventilators of two styles. Capping the lantern is a conical roof, presently painted red. The roof is composed of eight cast-iron sections and supports a spherical cast-iron ventilator and lightning spike.

New London Ledge is the only operating lighthouse in Connecticut which continues to be occupied. Interior space is utilized for both living quarters and aids to navigation operation, following the original intent of the design. Alterations to the interior, documented in plans on file at the lighthouse, have included kitchen remodeling, the installation and relocation of plumbing facilities, renewal of heating and lighting systems, and relocation of the fog signal. A center hall plan provides four rooms on the first story, four on the second, and three on the third, where an imposing double-leafed doorway leads to a room intended for equipment and supplies. Molded door and window trim is distinguished by corner block rosettes. Cast-iron stairs rise in the center hallway from the first to the third story, with cast-iron balusters and cast-iron newels supporting a wood handrail. Iron ship's ladders connect the third story, watchroom and lantern; the basement stairs are cast-iron.

The structural system includes the use of concrete in what was state-of-the-art technology for 1906, before flat slab construction was widely used. Drawings from the New Jersey Foundry and Machine Co. labeled

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"Second Floor Steel Plan" show that the floors are supported by steel I-beams, which are connected by tie rods between the bottom flanges. An eight inch layer of cinder concrete fills the space between the steel beams, while a three and one half inch top layer of cinder concrete anchors wood sleepers to which the wood flooring is nailed. The basement contains the base of a central cast-iron column which rises to the lantern. Unlike those in earlier lighthouses, this column has no structural function, but serves only as a channel for the clockwork mechanism weight drops. It is braced by metal ribs radiating to the exterior walls in the cellar.

The original fourth order Henry LePaute Fresnel lens, operated by clockwork and rotating on ball bearings, was furnished with a 35 millimeter double-tank incandescent oil vapor lamp. The present light, installed in 1984 when the Fresnel lens was removed, is a smaller automated rotating light, emitting three white flashes and one red flash every 30 seconds.

United States Department of the Interior
National Park Service

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Section number 7 Page Amendment

New London Ledge Lighthouse
New London, CT

Description (continued):

In 1989, New London Ledge Lighthouse was re-photographed and examined in the field in order to bring the National Register documentation fully up to date. Following are the features or characteristics of the lighthouse that differ from its condition and appearance as described in the National Register Inventory/Nomination form prepared in 1985.

The lighthouse is no longer occupied, but is under automatic operation using electricity generated on site by a diesel-fired generator.

The windows have exterior one-over-one, aluminum storm sash that is fitted with snap-in muntins in four-over-four pattern. The openings are blocked with black-painted plywood that is held in place with interior wooden cleats; installation of the plywood caused the removal of all interior window trim. The interior doors, however, retain their molded surrounds with rosette corner-blocks.

New London Ledge Lighthouse still retains the requisite degree of integrity for National Register eligibility.

8 SIGNIFICANCE

| PERIOD | | AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW | | | | |
|---|---|--|---|--|--|--|
| <input type="checkbox"/> PREHISTORIC | <input type="checkbox"/> ARCHEOLOGY-PREHISTORIC | <input type="checkbox"/> COMMUNITY PLANNING | <input type="checkbox"/> LANDSCAPE ARCHITECTURE | <input type="checkbox"/> RELIGION | | |
| <input type="checkbox"/> 1400-1499 | <input type="checkbox"/> ARCHEOLOGY-HISTORIC | <input type="checkbox"/> CONSERVATION | <input type="checkbox"/> LAW | <input type="checkbox"/> SCIENCE | | |
| <input type="checkbox"/> 1500-1599 | <input type="checkbox"/> AGRICULTURE | <input type="checkbox"/> ECONOMICS | <input type="checkbox"/> LITERATURE | <input type="checkbox"/> SCULPTURE | | |
| <input type="checkbox"/> 1600-1699 | <input type="checkbox"/> ARCHITECTURE | <input type="checkbox"/> EDUCATION | <input type="checkbox"/> MILITARY | <input type="checkbox"/> SOCIAL/HUMANITARIAN | | |
| <input type="checkbox"/> 1700-1799 | <input type="checkbox"/> ART | <input checked="" type="checkbox"/> ENGINEERING | <input type="checkbox"/> MUSIC | <input type="checkbox"/> THEATER | | |
| <input type="checkbox"/> 1800-1899 | <input type="checkbox"/> COMMERCE | <input type="checkbox"/> EXPLORATION/SETTLEMENT | <input type="checkbox"/> PHILOSOPHY | <input checked="" type="checkbox"/> TRANSPORTATION | | |
| <input checked="" type="checkbox"/> 1900- | <input type="checkbox"/> COMMUNICATIONS | <input type="checkbox"/> INDUSTRY | <input type="checkbox"/> POLITICS/GOVERNMENT | <input type="checkbox"/> OTHER (SPECIFY) | | |
| | | <input type="checkbox"/> INVENTION | | | | |

SPECIFIC DATES built 1909

BUILDER/ARCHITECT Hamilton R. Douglas Co.,
New London, Connecticut

STATEMENT OF SIGNIFICANCE

New London Ledge Lighthouse, established in 1909, is a significant landmark in the history of navigation aids in New London Harbor, marking a major hazard at the harbor entrance and replacing functionally the New London Harbor Lighthouse, constructed in 1801, long considered inadequate. In the history of lighthouse architecture, New London Ledge Lighthouse presents a rare example of a turn-of-the-century lighthouse on a water-bound site which is not of pre-fabricated cast-iron construction. Perhaps because the Congressional appropriation followed the initial site survey by 14 years, the design of the superstructure combines nineteenth century ideas and styles with those of the twentieth century in an unusual way. Original working drawings of the lighthouses, dated 1906, show the use of steel beams and cinder slab construction to support the wood floors, an early use of this technology in the United States.

New London Ledge Lighthouse is a rare example of combined lighthouse and keeper's dwelling, built during the twentieth century in a revival style and emphasizing the domestic model. This type of lighthouse design had flourished in the United States during the 1860s and 1870s. Stylistically, it reflects the influence of the early Colonial Revival in a variety of features, such as red brick and white trim, small-paned rectangular windows, prominent quoins, pedimented dormers, and a "hipped" roof with a dentiled cornice. The flooring system consisted of cinder concrete and steel I-beams, innovative materials and building techniques when the lighthouse working drawings were drafted in 1906. The proportions and the scale of details, however, reflect the taste of the late nineteenth century and the period's enthusiasm for and appreciation of early American architecture. In general, Colonial Revival buildings of the late nineteenth century lacked the sophistication of later, more authentic re-creations.

The lighthouse type appearing as a house with a cupola was begun in the United States in the 1830s with structures of frame construction. The idea of combining living and lighthouse functions in one structure, emphasizing the dwelling function, was a design practice which flourished under the U.S. Lighthouse Board. After mid-century, in the Hudson River and Long Island Sound, the country's enthusiasm for revival styles was reflected in such lighthouses as Penfield Reef and Stratford Shoal. The practice continued into the period of pre-fabricated cast-iron construction and included metal houses-with-towers,

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such as Southwest Ledge Lighthouse in Connecticut and Fourteen Foot Bank Lighthouse in Delaware.

Beginning in the early 1870s with the development at Hunting Island, S.C. of the pre-fabricated cast-iron lighthouses of truncated conical shape, the combination house and lighttower lost its domestic emphasis. During the 1870s, tubular cast-iron foundations were developed for erecting lighthouses on difficult sites, such as reefs, shoals, and ledges, in northern waters where ice floes made the screwpile lighthouse impractical. These foundations could be fabricated in sections and assembled on the site of installation. The development of superstructures which were also circular in section and constructed in the same economical way followed naturally. For waterbound sites such as that presented by Southwest Ledge, upon which New London Ledge Lighthouses rests, a cast-iron tubular foundation would have been the common choice from the late 1870s until the 1920s.

Instead, a square foundation of timber, 52 feet square and 31 feet high, was constructed by the T.A. Scott Company on the Thames River bank in Groton. According to the Connecticut Historic Resources Inventory, this company was involved in the construction of Race Rock Lighthouse. Towed into position over the Southwest Ledge shoal, the timber crib was filled with concrete and riprap and sunk in 28 feet of water to the bottom. On the concrete top layer of the foundation, which extended three feet above the water, the Hamilton R. Douglas Company of New London erected the lighthouse. They were builders also of the Groton Town Hall.

In the history of aids to navigation in the Thames River area, the site of New London Ledge was early marked as a hazard. The state of Connecticut ceded rocks and ledges off the harbor of New London to the federal government in 1790, as well as the lighthouse on the west shore. In 1794, Congress acted to establish a buoy on Southwest Ledge and other rocks to be funded by import duties and tonnage fees. Lobbying for a lighthouse on the site began in 1890, when the fog-signal and light at the old lighthouse in the harbor were felt to be inadequate in thick weather. In addition, the light was difficult to discern against the illumination of arc lights on the shore. The first site chosen for the new lighthouse, Black Ledge, was later abandoned for Southwest Ledge, which would otherwise have presented a hazard between a Black Ledge

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lighthouse and the ship channel. Since a Southwest Ledge Lighthouse already existed in Connecticut (near New Haven), the name was changed to New London Harbor Lighthouse.

The construction of the lighthouse was delayed for more than a decade after initial consideration by Congress. In 1908 the contracts were awarded. Upon completion of the structure in 1909, the fourth-order Fresnel lens, manufactured in Paris by Henri LePante, was illuminated for the first time. Its 22,000 candlepower beam supplemented the weaker beam of New London Harbor Lighthouse, and in 1911 the fog-signal apparatus at New London Ledge Lighthouse replaced that at the older lighthouse. The Fresnel lens was replaced in 1984 with a smaller modern lighting apparatus.

Serving both as a hazard marker and an entrance beacon to a major harbor and river, New London Ledge Lighthouse is a rarity, a twentieth century east coast lighthouse which fulfills a function usually carried out by an early eighteenth century lighthouse, or its replacement on site.

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PAGE 1

Blueprints and Drawings, 1906-1980, (on file at New London Ledge Lighthouse).

Manning, Edward H., New London Ledge Lighthouse, Locally Known as Southwest Ledge Lighthouse, Some Notes on Its Construction and History, typescript, 1984 (New London Public Library).

The Day, New London, Connecticut, July 10, 1908; August 18, 1908; October 20, 1908; February 19, 1909; November 11, 1909; May 14, 1930; April 30, 1984; December 14, 1984.

United States Department of Commerce and Labor, Annual Report of the Commissioner of Lighthouses, 1906-1910, 1912, 1922.

United States Department of Commerce and Labor, Description of New London Ledge Light Station, 1913, National Archives Record Group 26, 10E2-13-5-2.

United States Lighthouse Board, Annual Report of the Lighthouse Board, 1890, 1894-96, 1899-1902, 1904.

9 MAJOR BIBLIOGRAPHICAL REFERENCES

see continuation sheet

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY 0.1 acre
UTM REFERENCES see location map

| | | | | | | | |
|---|----------------------|----------------------|----------------------|---|----------------------|----------------------|----------------------|
| A | <input type="text"/> | <input type="text"/> | <input type="text"/> | B | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | ZONE | EASTING | NORTHING | | ZONE | EASTING | NORTHING |
| C | <input type="text"/> | <input type="text"/> | <input type="text"/> | D | <input type="text"/> | <input type="text"/> | <input type="text"/> |

VERBAL BOUNDARY DESCRIPTION

see site plan

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

| | | | | |
|-------|--------------------------|------|--------|------|
| STATE | <u>see thematic form</u> | CODE | COUNTY | CODE |
| STATE | | CODE | COUNTY | CODE |

11 FORM PREPARED BY

NAME / TITLE

Dorothy B. Templeton/Historian

ORGANIZATION

John Milner Associates, Inc.

DATE

October 22, 1985

STREET & NUMBER

309 North Matlack Street

TELEPHONE

(215) 436-9000

CITY OR TOWN

West Chester

STATE

PA 19380

12 CERTIFICATION OF NOMINATION

STATE HISTORIC PRESERVATION OFFICER RECOMMENDATION

YES NO NONE

STATE HISTORIC PRESERVATION OFFICER SIGNATURE

In compliance with Executive Order 11593, I hereby nominate this property to the National Register, certifying that the State Historic Preservation Officer has been allowed 90 days in which to present the nomination to the State Review Board and to evaluate its significance. The evaluated level of significance is National State Local.

FEDERAL REPRESENTATIVE SIGNATURE

TITLE

DATE

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

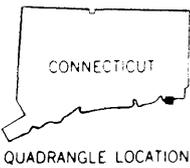
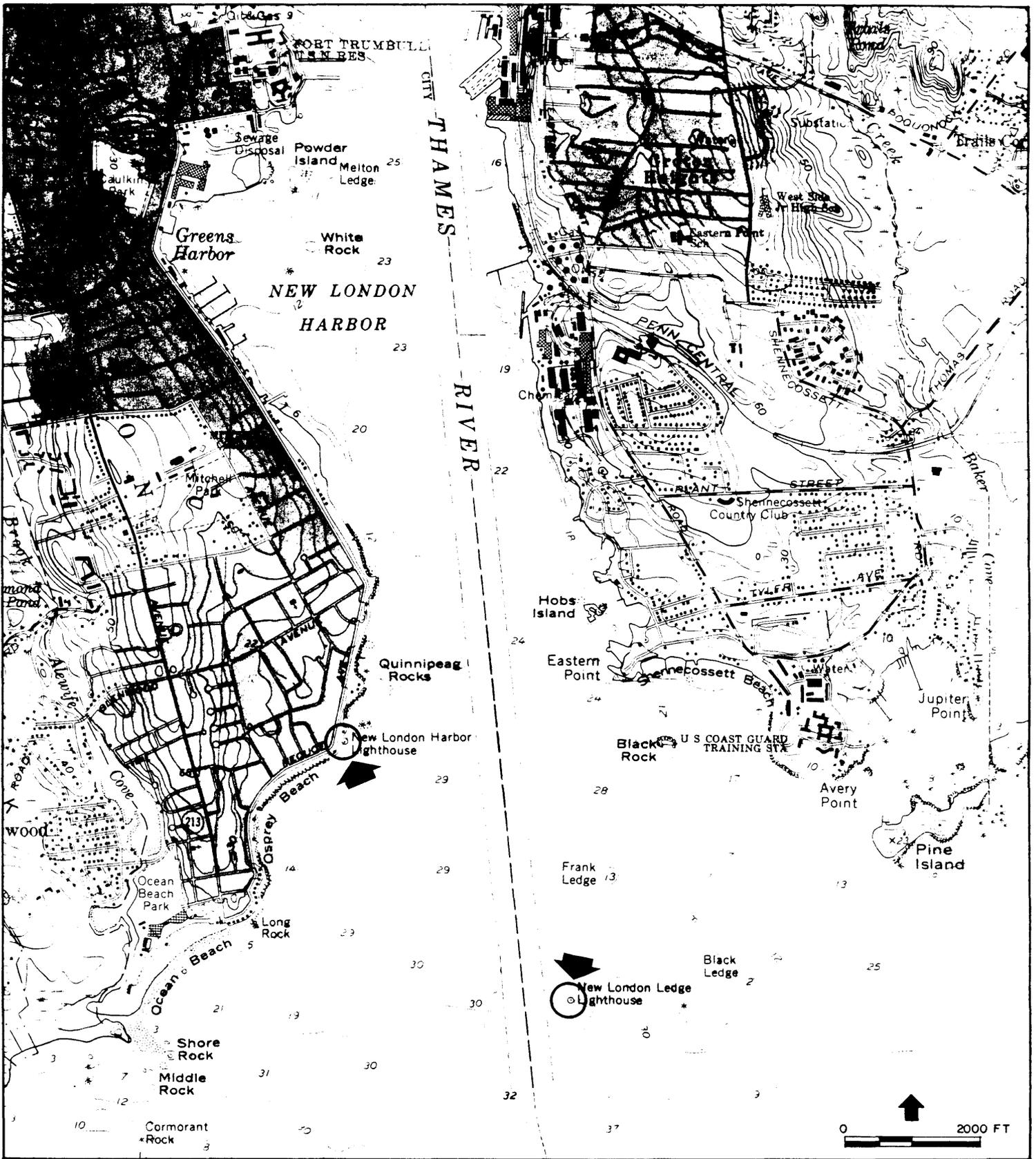
DATE

DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION

ATTEST:

DATE

KEEPER OF THE NATIONAL REGISTER

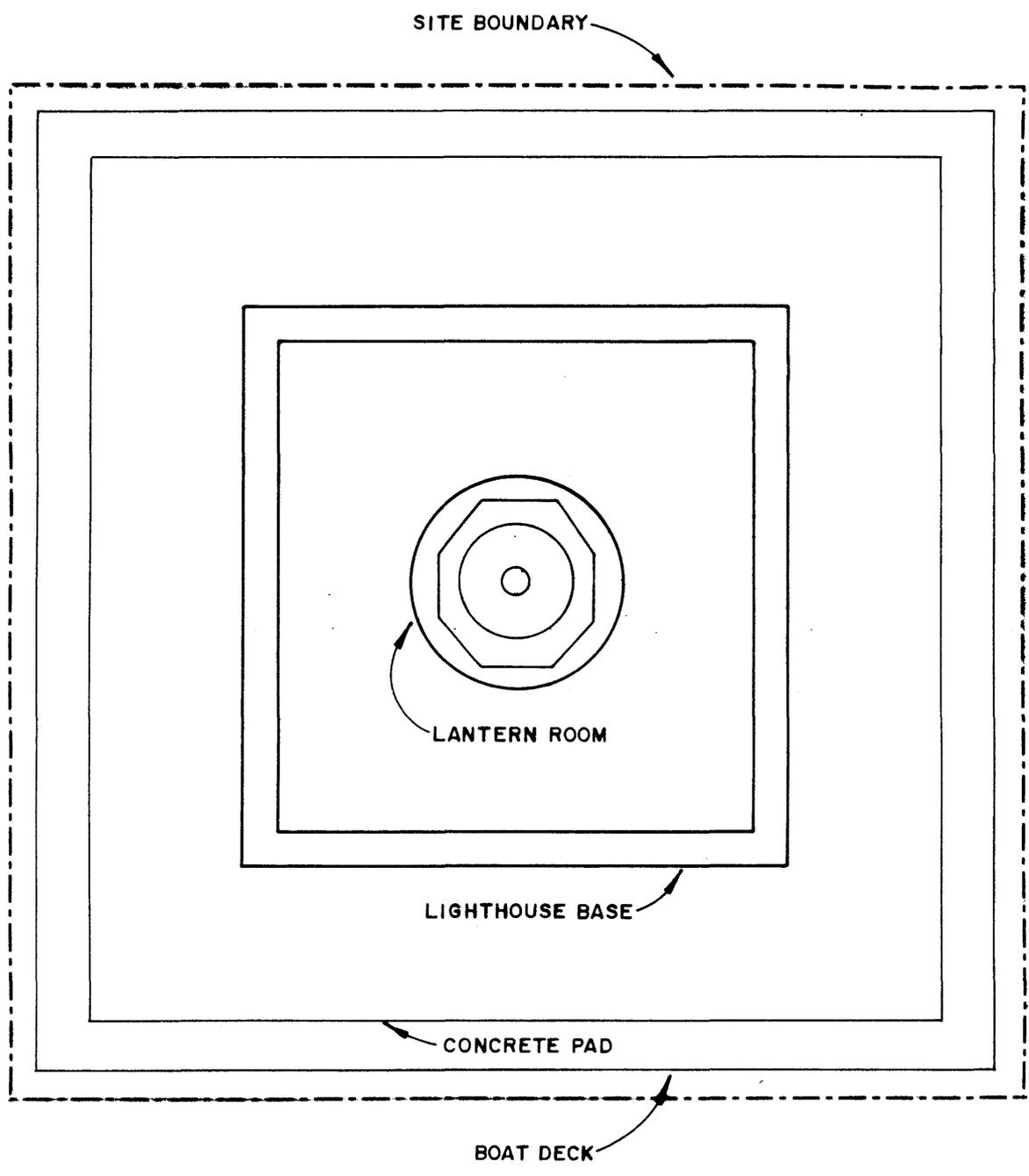


NEW LONDON LEDGE LIGHTHOUSE, NEW LONDON HARBOR LIGHTHOUSE
 New London County, Connecticut

New London, Connecticut Quadrangle, 1958
 1:24000

New London Ledge Lighthouse
 UTM References:
 18.744630.4576600

New London Harbor Lighthouse
 UTM References:
 18.743570.4577750



SITE PLAN

NEW LONDON LEDGE LIGHTHOUSE
New London County, Connecticut

United States Department of the Interior
National Park Service

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Photographs
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New London Ledge Lighthouse
New London, CT

All photographs:

1. NEW LONDON LEDGE LIGHTHOUSE
2. New London, CT
3. Photo Credit: HRC, Hartford, CT
4. April 1989
5. Negative filed with Connecticut Historical Commission,
Hartford, CT

Northeast (door) and northwest elevations, camera facing south
(The bar patterns on the northwest side of the foundation
are for submarines leaving the Thames River to calibrate
their periscopes.)

Photograph 1 of 8

Southwest (door) and southeast elevations, camera facing north

Photograph 2 of 8

Typical exterior window treatment, camera facing southwest

Photograph 3 of 8

Main entry (southwest elevation), camera facing north

Photograph 4 of 8

Interior staircase, looking down from second floor

Photograph 5 of 8

Double doors leading to third-story equipment-storage room; trim
is typical for interior doors

Photograph 6 of 8

Typical interior space and finishes, including plywood in windows
and removed interior window trim

Photograph 7 of 8

Lantern glazing

Photograph 8 of 8