Form No 10-306 (Rev 10-74)

1473

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

FOR FEDERAL PROPERTIES

FOR NPS USE ONLY
RECEIVED AUG 2 4 1989
DATE ENTERED

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

1 NAME

HISTORIC
Penfield Reef Lighthouse

AND/OR COMMON
Penfield Reef Lighthouse

2 LOCATION

STREET & NUMBER

__NOT FOR PUBLICATION

CITY, TOWN
X VICINITY OF Bridgeport

CONGRESSIONAL DISTRICT

STATE
Connecticut

CODE

COUNTY
Fairfield

CODE

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE	
__DISTRICT	X PUBLIC	__OCCUPIED	__AGRICULTURE	__MUSEUM
X BUILDING(S)	__PRIVATE	X UNOCCUPIED	__COMMERCIAL	__PARK
__STRUCTURE	__BOTH	__WORK IN PROGRESS	__EDUCATIONAL	__PRIVATE RESIDENCE
__SITE	**PUBLIC ACQUISITION**	**ACCESSIBLE**	__ENTERTAINMENT	__RELIGIOUS
__OBJECT	__IN PROCESS	__YES: RESTRICTED	__GOVERNMENT	__SCIENTIFIC
	__BEING CONSIDERED	X YES: UNRESTRICTED	__INDUSTRIAL	X TRANSPORTATION
		__NO	__MILITARY	__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, REGISTRY OF DEEDS, ETC.
U.S. Coast Guard Third District, Legal Dept., 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
_EXCELLENT	X DETERIORATED	_UNALTERED	X ORIGINAL SITE
_GOOD	_RUINS	X ALTERED	_MOVED DATE_____
_FAIR	_UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

Penfield Reef Lighthouse (Light List #0966), established in 1874, stands in five feet of water, marking a reef at the end of a shoal which extends southeastwardly from Fairfield Beach, Connecticut, into Long Island Sound. The structure consists of a square, two-story masonry dwelling with a mansard roof and a wood framed lighttower above, mounted on a cylindrical granite pier. The site also includes a boat landing which projects from the north side of the pier, and two flights of steps which connect the landing with the main deck above and a riprap breakwater below.

The cylindrical pier, standing on a riprap foundation 108 feet in diameter, is faced with rusticated granite blocks measuring five feet by two feet by two feet, tapering in nine courses from a diameter of forty-eight feet nine inches to forty-six feet six inches. The pier is filled with concrete above a base level of riprap, except for a square cavity in the center of the upper portion which houses the cistern, cellar, and water closet. The granite blocks are laid in a pattern of alternating header-stretcher and stretcher courses. The top of the pier, originally covered with granite slabs, is presently surfaced with cement. The original railing is missing and has no replacement.

The dwelling, measuring twenty-eight feet, two inches on a side, rises centrally from the pier. Several details contribute to a Second Empire style for the lighthouse: the square plan, mansard roof, quoins, and foot scrolled window surrounds. The first floor walls are lined with brick and faced with rough faced, grey granite ashlar with slightly projecting quoins. A watertable or base is defined by granite blocks of a larger scale. The projecting cornice at the base of the mansard roof supports wide, rain collecting gutters, from which pipes descended at the northwest and northeast corners of the structure through leaders into the cistern in the northeast corner of the cellar. Asphalt roofing presently covers both the lower slope of the mansard and the shaft of the lighttower which rises in the center of the south elevation. The lighttower is seven feet, six inches square at the level of the second story, and octagonal in plan at the level of the watchroom above. Surmounting the watchroom is an octagonal lantern with its surrounding gallery and conical roof.

On the first story, door and window openings are rectangular, embellished with a simple trim of granite blocks with dressed borders

See Continuation Sheet

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Penfield Reef Lighthouse

around rough-textured faces. At the window openings, a projecting sill upholds simple jambs under a peaked lintel. The south and west facades each contain three windows, while the north elevation contains one window and a kitchen door, and the east elevation, the main entrance and two windows. Door trim is similar to that at the window openings, here with the addition of quarter-round molding detail atop the lintels, which extend at either side to form ears. Neither door is original to the structure. The center window on the first story of the south or tower elevation is false, recalling the Georgian sense of symmetry. It contains an infill of granite ashlar, while the other windows on the first story each contain a six-over-six wood sash. On the second story of the south facade, the windows flanking the tower presently are covered over with sheathing. They originally held four-over-four wood sashes, and were ornamented with peaked and molded lintels, as well as suggestions of consoles and footscrolls. Other windows presently are blocked in with protective coverings.

The octagonal watchroom has three windows facing west, south and east, respectively. Cladding now conceals these openings. A ladder in the watchroom leads to a trap door in the floor of the octagonal lantern above. The lantern walls are composed of eight rectangular glass panes in their upper half and eight cast-iron sections in their lower half. The north, east and west sections, each contain a ventilator, while the south section contains a replacement door to the lantern gallery. The conical cast-iron lantern roof was once lined with zinc, and retains a spherical ventilator surmounted by a lightning-conductor spindle. Galvanized metal sheeting covers the lantern gallery deck, applied over copper sheeting. The railing around the lantern gallery is supported diagonally, as illustrated in the 1874 Annual Report of the Lighthouse Board. This feature differs from the construction plans. A ladder leads from the north side of the lantern gallery to the mansard roof, which in historic illustrations is depicted with a sloping rather than a flat surface.

A prominent component of the interior is a winding stairway with turned balusters and newel and a graceful wood handrail. The stairway ascends in an oval from the entrance hall at the southeast corner on the first story to the rooms in the tower. Opening from the entrance hall on the first story are a sitting room, a kitchen and a supply room. On the second story are four bedrooms.

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Penfield Reef Lighthouse

The focal plane of the lighting apparatus is recorded as 51 feet above water level. A bullseye lens, run by clockwork manufactured in the lamp shop at Tompkinsville, New York, was in operation by 1889. The present light consists of a 1000 watt DCB-24 lantern, emitting a red signal every 60 seconds. A fog-signal operated by a fog detector sounds a blast every 15 seconds.

8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW			
_PREHISTORIC	_ARCHEOLOGY-PREHISTORIC	_COMMUNITY PLANNING	_LANDSCAPE ARCHITECTURE	_RELIGION
_1400-1499	_ARCHEOLOGY-HISTORIC	_CONSERVATION	_LAW	_SCIENCE
_1500-1599	_AGRICULTURE	_ECONOMICS	_LITERATURE	_SCULPTURE
_1600-1699	_ARCHITECTURE	_EDUCATION	_MILITARY	_SOCIAL/HUMANITARIAN
_1700-1799	_ART	X ENGINEERING	_MUSIC	_THEATER
X 1800-1899	_COMMERCE	_EXPLORATION/SETTLEMENT	_PHILOSOPHY	X TRANSPORTATION
_1900-	_COMMUNICATIONS	_INDUSTRY	_POLITICS/GOVERNMENT	_OTHER (SPECIFY)
		_INVENTION		

SPECIFIC DATES built 1874 BUILDER/ARCHITECT unknown

STATEMENT OF SIGNIFICANCE

Penfield Reef Lighthouse, established in 1874, embodies one of the most popular masonry dwelling-with-tower designs used by the U.S. Lighthouse Board during the 1860s and 1870s. This Second Empire design, based on the domestic architecture of the period, reflected the national enthusiasm for picturesque revival architectural styles. A picture of Penfield Reef was included in the Lighthouse Board's exhibit at the Centennial Exhibition in Philadelphia in 1876. Penfield Reef Lighthouse also is significant in the history of aids to navigation in Long Island Sound, as an important part of the federal program to accommodate increased commercial traffic in the Bridgeport Harbor area after the Civil War.

Penfield Reef Lighthouse was an essential part of the development of Bridgeport Harbor after the Civil War. Before Penfield Reef Lighthouse was constructed, the site was marked with a can buoy. Beginning in 1866 lobbying efforts from Bridgeport maritime interests resulted in a proposal by the U.S. Lighthouse Board in 1868 for a lighthouse to be constructed in the five feet of water there. Marking the shoal with a light and a fog signal would enable ships to travel directly between Bridgeport's burgeoning harbor and New York City at all hours and in all weather conditions. Compared with the depth of the site necessary for a masonry pier to be built at Race Rock in Long Island Sound, this was a modest challenge; however, the technology at that date required a costly circular pier of granite blocks, cut to fit together to form rings which could be filled with riprap. Cutstone foundations were the only solution available at the time for underwater sites in the latitudes where floating ice made the slender legs of a tubular pipe foundation, such as a screwpile light, unusable. The foundation proposed for the Race Rock site was used as a model for that at Penfield Reef.

The domestic model which dominates the image of Penfield Reef had been used previously in Hudson River lighthouses. Joseph Lederle, Acting Lighthouse Engineer for the Third District of the Lighthouse Establishment, recommended in April 1868, that the Penfield Reef tower connected with the keeper's dwelling "...be built on the plan approved by the (Lighthouse) Board for the Hudson River stations." At Esopus Meadows, N.Y., Lighthouse, established in 1871, this exact design appears, in frame construction instead of masonry. Bridgeport Harbor Lighthouse, Ct., Hart Island in Long Island Sound, Sabin's Point Light Station, R.I., Long Beach Bar Light, and Colchester Reef Lighthouse on

See Continuation Sheet

9 MAJOR BIBLIOGRAPHICAL REFERENCES

see continuation sheet

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY 0.2 acre

UTM REFERENCES see location map

	ZONE	EASTING	NORTHING		ZONE	EASTING	NORTHING
A				B			
C				D			

VERBAL BOUNDARY DESCRIPTION

see site plan

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

see thematic form

STATE	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
Pennsylvania 19380

12 CERTIFICATION OF NOMINATION

STATE HISTORIC PRESERVATION OFFICER RECOMMENDATION

YES X 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

Beth L. Savage DATE 09/27/90

~~DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION~~

ATTEST: DATE

KEEPER OF THE NATIONAL REGISTER

GPO 899-214

Lake Champlain were listed in the Lighthouse Board records as utilizing this design, as well.

Procuring the needed appropriations from Congress delayed the approval of plans for the foundation until after March 3, 1871, when a total of $55,000.00 was made available. From 1871 until 1873 the riprap foundation and granite pier were under construction. The dwelling, of cut granite blocks on the first story and wood framing on the second, was erected in 1873, and the light was first exhibited on January 16, 1874.

A view of Penfield Reef appeared in the Annual Report of the Lighthouse Board for 1874, and, two years later, was included in the Centennial Exhibition. Ironically, the technology which Penfield Reef's foundation represented and the style of its dwelling-with-tower were already out of date. Penfield Reef, based on the design work and engineering of the 1860s and early 1870s, represents one of the last examples of a masonry domestic model lighthouses on a masonry foundation; however, its position near the Connecticut shoreline makes it one of the most visible lighthouses in the nominated group.

A fog-bell, struck by machinery, was the first fog apparatus at Penfield. The foghorn installed in Penfield Reef Light was audible fifteen or twenty minutes away, according to early reports. This apparatus was replaced in 1892 by a Daboll trumpet operated by duplicate Rider hot-air engines. In 1898 the Rider engines were replaced by two Hornsby-Akroyd oil engines.

A fourth order lens was equipped with clockwork in 1889, made for Penfield Reef at the Lighthouse Board's lamp shop in Tompkinville, New York. The light was automated in December 1971.

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

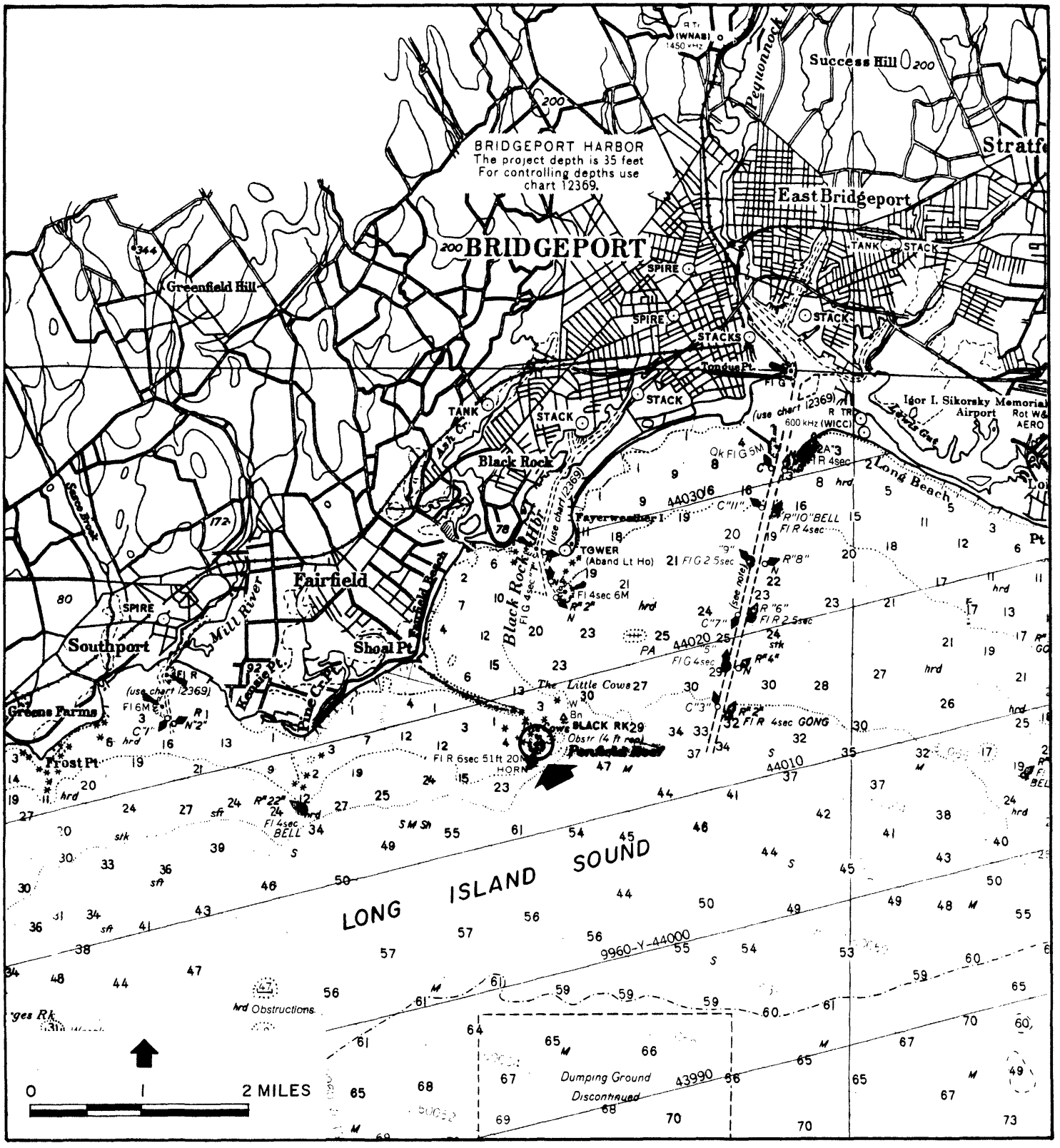
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Penfielf Reef Lighthouse

Descriptive List of Light Stations, Penfield Reef, 1880, National Archives Record Group 26.

Penfield Reef Lighthouse, Plans Approved December 8, 1870; U.S. Coast Guard Academy Library, Civil Engineering Drawings, Microfilm, Reel 5A.

U.S. Lighthouse Board, Annual Report of the Lighthouse Board, 1868-1875, 1877-1883, 1887-1889, 1892, 1894, 1898-1899, 1901-1902.



CONNECTICUT

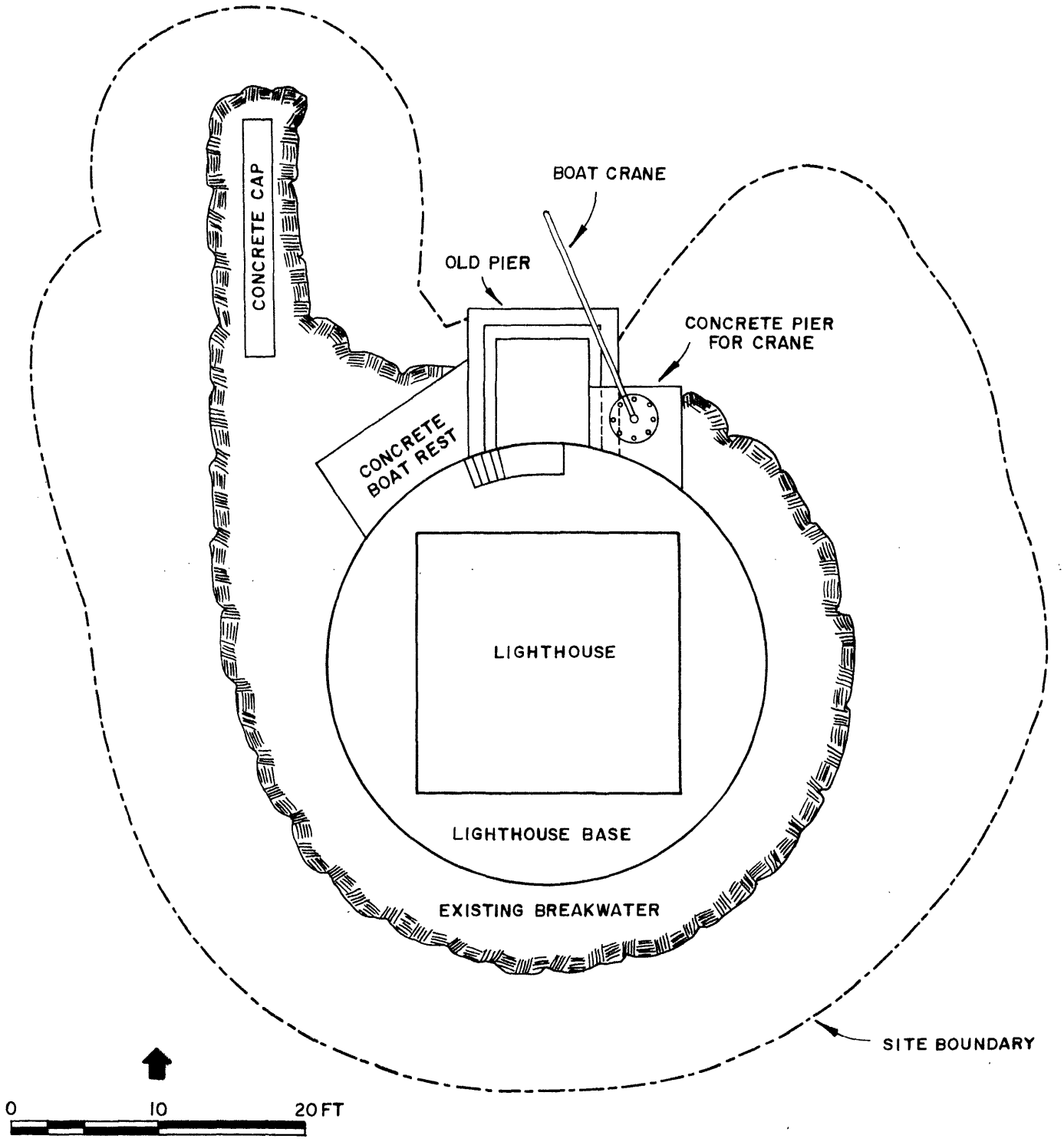
SITE LOCATION

PENFIELD REEF LIGHTHOUSE
Fairfield County, Connecticut

NOAA Nautical Chart Number 12363
Long Island Sound - Western Part

31st Ed. July 23, 1983
1:80,000

Longitude: 73° 13' 18" Latitude: 41° 07' 00"



SITE PLAN

PENFIELD REEF LIGHTHOUSE
Fairfield County, Connecticut

NPS Form 10-900-a
(8-86)

OMB Approval No. 1024-0018

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: 89001473 **Date Listed:** 09/27/90

Penfield Reef Lighthouse — **Property Name**
Fairfield — **County**
CT — **State**

Operating Lighthouses in Connecticut MPS
Multiple Name

This property is determined eligible for listing 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.

for Beth A. Savage
Signature of the Keeper

9-27-90
Date of Action

==========

Amended Items in Nomination:

8. Statement of Significance: Level

The appropriate level of significance for this property is State.

This information was confirmed with John Herzan, National Register Coordinator, CTSHPO, by telephone,

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

Description (continued):

In 1989, Penfield Reef 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.

There is now an aluminum pipe-railing encircling the top edge of the foundation pier.

The sash has been removed from all the windows, which are now filled with plywood covered by sheet-metal facing; much of the interior window trim remains in place.

The interior stairway remains in place, but the rail, balusters and newels have been replaced by a plain rail of common lumber.

Penfield Reef Lighthouse still retains the requisite degree of integrity for National Register eligibility.

NPS Form 10-900-a
(8-86)

OMB Approval No. 1024-0018

8/14/90

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

All photographs:

1. PENFIELD REEF LIGHTHOUSE
2. Long Island Sound off FAIRFIELD, CT
3. Photo Credit: HRC, Hartford, CT
4. May 1989
5. Negative filed with Connecticut Historical Commission, Hartford, CT

East and north elevations, camera facing southwest
Photograph 1 of 8

Tower, camera facing upward and northeast
Photograph 2 of 8

Typical exterior window treatment, camera facing northwest
Photograph 3 of 8

Exterior door surround, camera facing southeast
Photograph 4 of 8

Original interior doors and door trim
Photograph 5 of 8

Typical interior window treatment
Photograph 6 of 8

Staircase, viewed from first floor
Photograph 7 of 8

Lantern-deck railing, view north
Photograph 8 of 8



NAME OF PROPERTY: Penfield Reef Lighthouse

COUNTY WHERE LOCATED: Fairfield County, CT

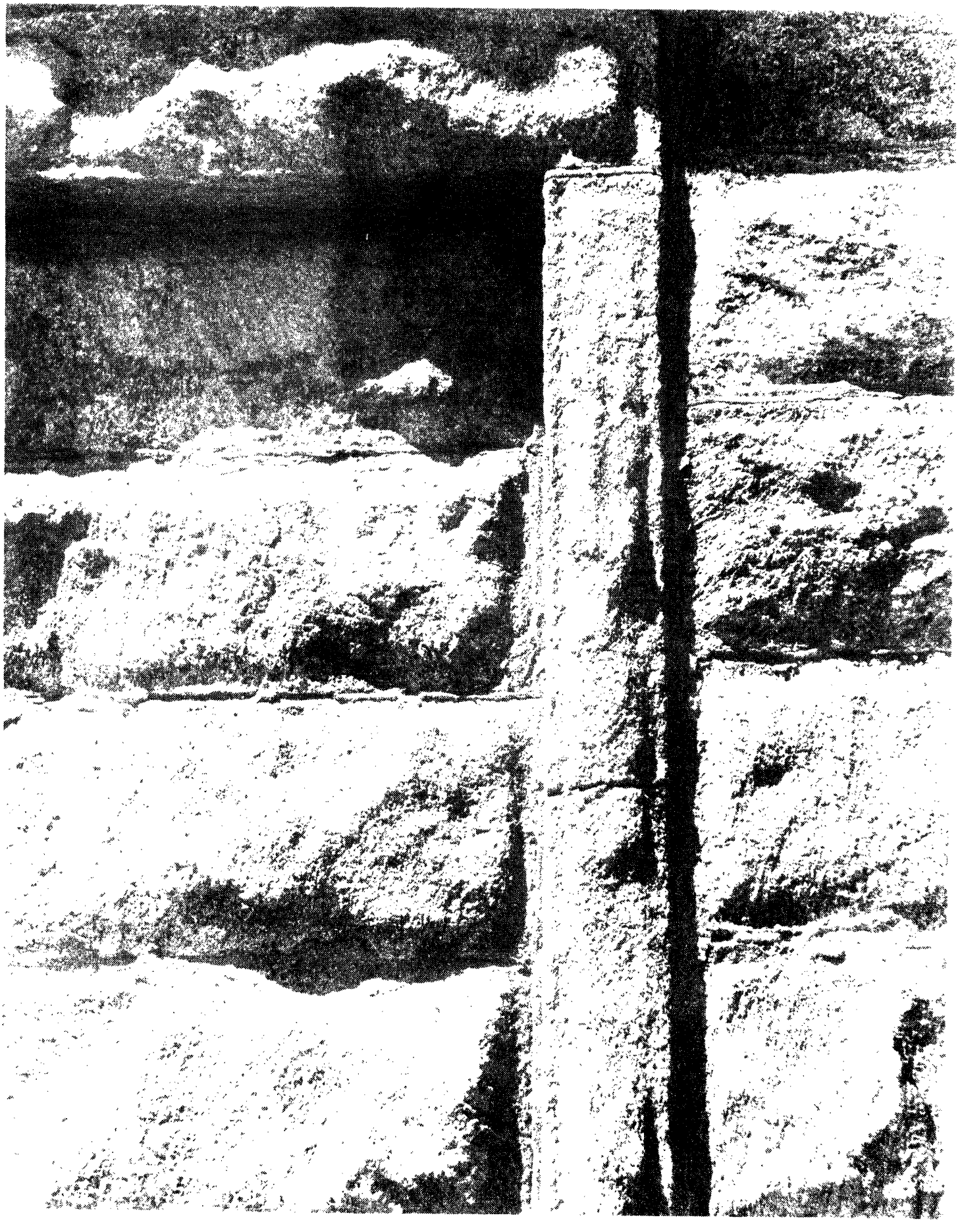
DATE OF PHOTOGRAPH: 1985

NAME OF PHOTOGRAPHER: John Milner Associates, Inc.

LOCATION OF THE PHOTOGRAPH NEGATIVE: John Milner Associates, Inc.
309 N. Matlack St., West Chester, PA

DESCRIPTION OF THE VIEW: Exterior, view from southeast.

PHOTOGRAPH NUMBER: 1



NAME OF PROPERTY: Penfield Reef Lighthouse

COUNTY WHERE LOCATED: Fairfield County, CT

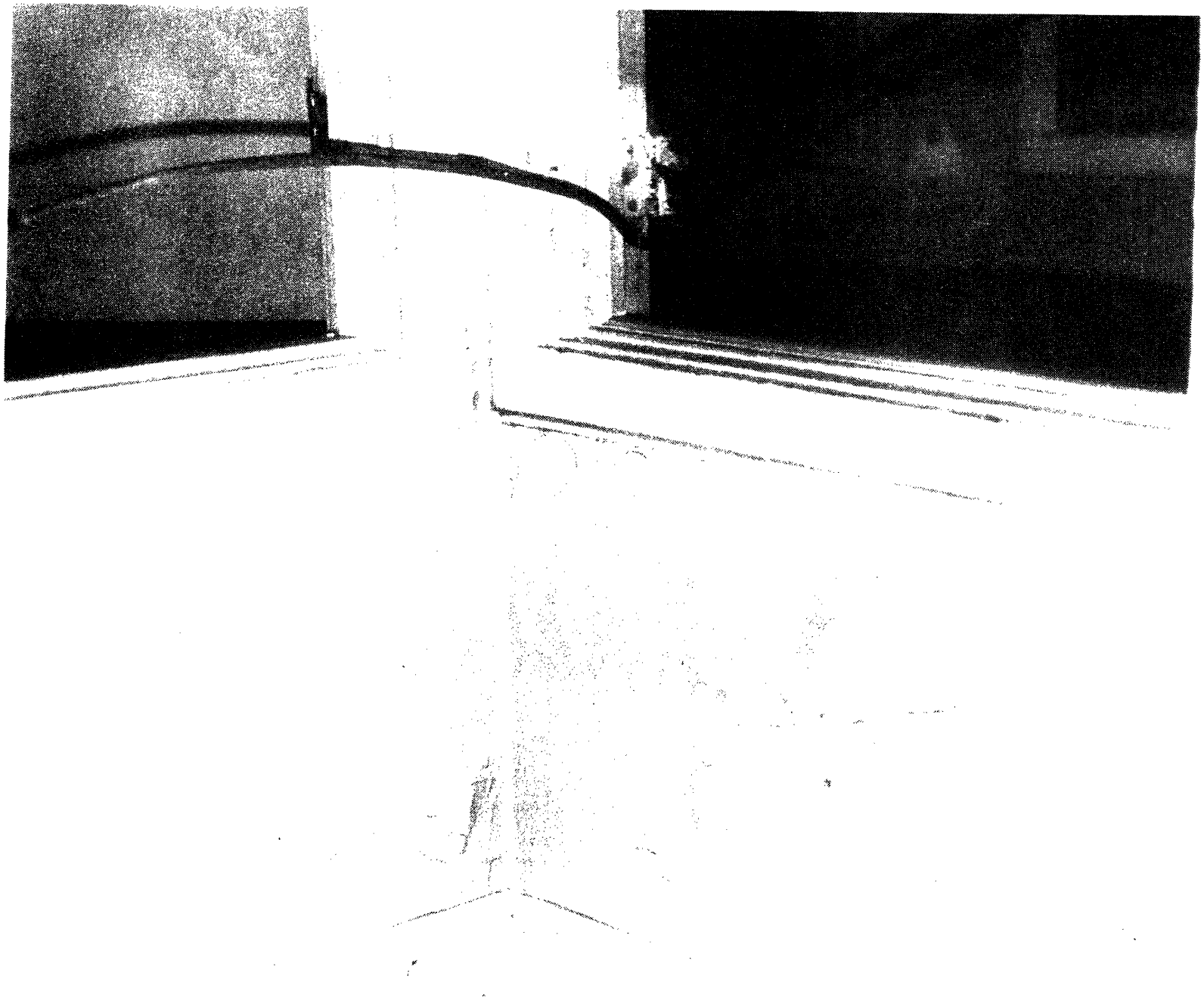
DATE OF PHOTOGRAPH: 1985

NAME OF PHOTOGRAPHER: John Milner Associates, Inc.

LOCATION OF THE PHOTOGRAPH NEGATIVE: John Milner Associates, Inc.
309 N. Matlack St., West Chester, PA

DESCRIPTION OF THE VIEW: Detail, blind middle window on south elevation.

PHOTOGRAPH NUMBER: 2



NAME OF PROPERTY: Penfield Reef Lighthouse

COUNTY WHERE LOCATED: Fairfield County, CT

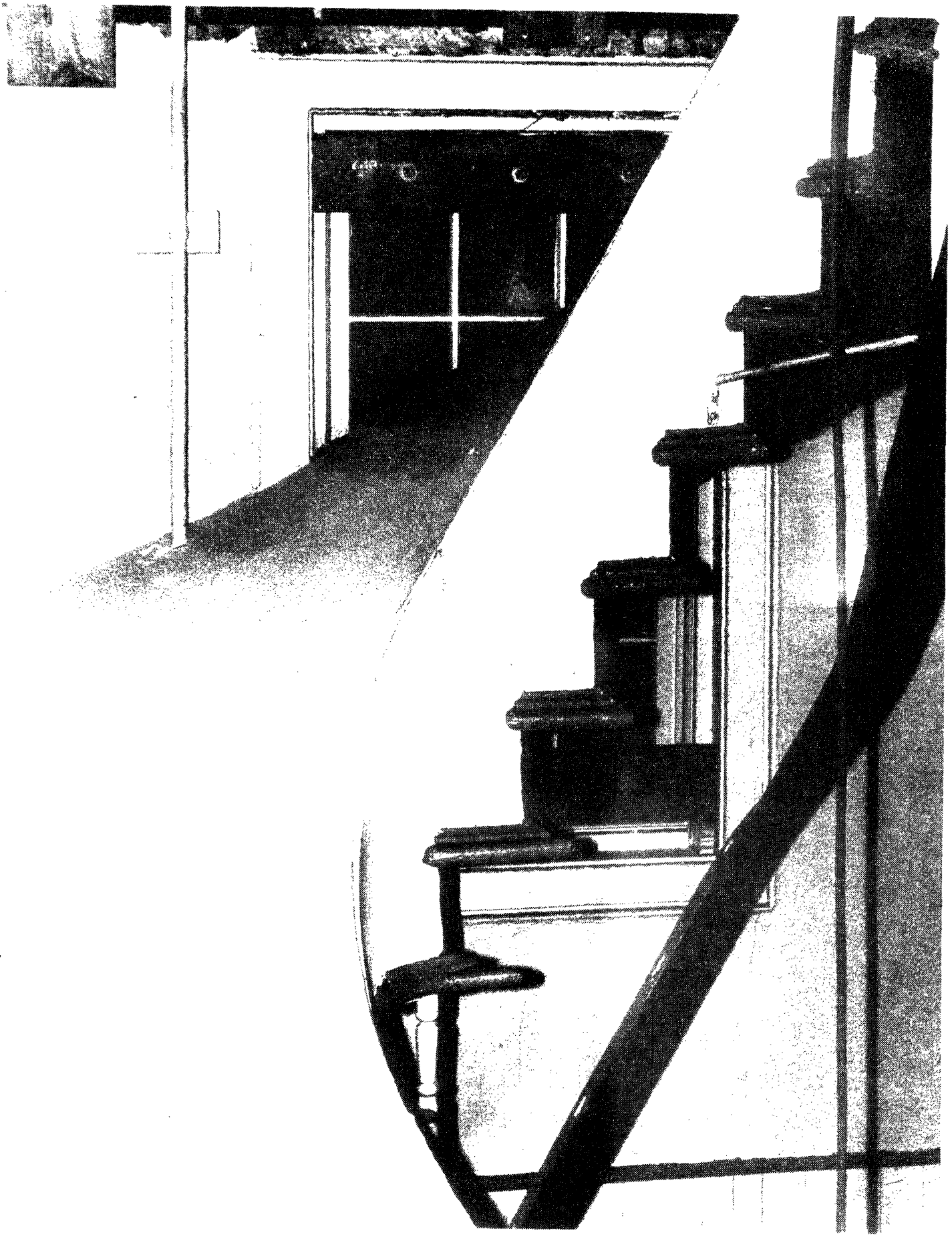
DATE OF PHOTOGRAPH: 1985

NAME OF PHOTOGRAPHER: John Milner Associates, Inc.

LOCATION OF THE PHOTOGRAPH NEGATIVE: John Milner Associates, Inc.
309 N. Matlack St., West Chester, PA

DESCRIPTION OF THE VIEW: Detail, interior woodwork, second floor.

PHOTOGRAPH NUMBER: 3



NAME OF PROPERTY: Penfield Reef Lighthouse

COUNTY WHERE LOCATED: Fairfield County, CT

DATE OF PHOTOGRAPH: 1985

NAME OF PHOTOGRAPHER: John Milner Associates, Inc.

LOCATION OF THE PHOTOGRAPH NEGATIVE: John Milner Associates, Inc.
309 N. Matlack St., West Chester, PA

DESCRIPTION OF THE VIEW: Staircase, connecting second and third floors.

PHOTOGRAPH NUMBER: 4