

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Name of Property

County and State

Section number _____ Page _____

Name of multiple property listing (if applicable)

SUPPLEMENTARY LISTING RECORD

NRIS Reference Number: 14000287

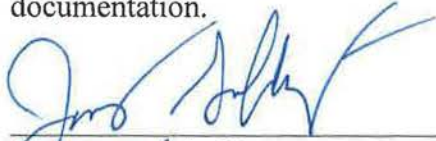
Date Listed: 6-4-2014

Property Name: Duxbury Pier Light (Light Station of the US MPS)

County: Plymouth

State: MA

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

6-4-2014
Date of Action

Amended Items in Nomination:

Section 3: Level of Significance

The property is listed at the National Level of Significance under Criterion C. It is listed at the State Level of Significance under Criterion A. This iron caisson "sparkplug" type light was the prototype and first successful use of new engineering that allowed for strong, and inexpensive construction off shore. It served as a model for many subsequent lights.

Section 8: Areas of Significance

Engineering is hereby added as an Area of Significance. This is the appropriate area under Criterion C, and reflects the importance for the caisson design of the light as a prototype.

The US Coast Guard and the Massachusetts State Historic Preservation Office was notified of this amendment.

DISTRIBUTION:

National Register property file

Nominating Authority (without nomination attachment)

287

MAR 31 2014

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form*. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions.

MASS-HIST. COMM
APR 25 2014
NAT. REGISTER OF HISTORIC PLACES
NATIONAL PARK SERVICE

1. Name of Property

Historic name: Duxbury Pier Light
Other names/site number: Bug Light, Duxbury Pier Lighthouse, Duxbury Pier Light Station
Name of related multiple property listing:
Light Stations in the United States Multiple Property Documentation Form, and Lighthouses of Massachusetts Thematic Group Nomination

2. Location

Street & number: Mouth of Duxbury Bay at Plymouth Bay, 5.1 mi NNE of Plymouth Rock
City or town: Plymouth State: Massachusetts County: Plymouth
Not For Publication: Vicinity:

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,
I hereby certify that this X 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 X meets ___ does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

X national ___ statewide ___ local
Applicable National Register Criteria:
X A ___ B X C ___ D

David L. DeBolt, Federal Preservation Officer, 26 MARCH 14
Signature of certifying official/Title: Date
United States Coast Guard
State or Federal agency/bureau or Tribal Government

In my opinion, the property meets ___ does not meet the National Register criteria.
Signature of commenting official: Date
Brona Swion 4/9/14
Title: SHPO State or Federal agency/bureau or Tribal Government


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4. 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 the Keeper

6.4.2014
Date of Action

5. Classification

Ownership of Property

(Check as many boxes as apply.)

- Private:
- Public – Local
- Public – State
- Public – Federal

Category of Property

(Check only **one** box.)

- Building(s)
- District
- Site
- Structure
- Object

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Number of Resources within Property

(Do not include previously listed resources in the count)

Contributing	Noncontributing	
<u> </u>	<u> </u>	buildings
<u> </u>	<u> </u>	sites
<u> 1 </u>	<u> </u>	structures
<u> </u>	<u> </u>	objects
<u> 1 </u>	<u> 0 </u>	Total

Number of contributing resources previously listed in the National Register 0

6. Function or Use

Historic Functions

(Enter categories from instructions.)

 Transportation
 Water-related

Current Functions

(Enter categories from instructions.)

 Transportation
 Water-related

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7. Description

Architectural Classification

(Enter categories from instructions.)

No style

Materials: (enter categories from instructions.)

Principal exterior materials of the property: Cast iron, glass

Narrative Description

(Describe the historic and current physical appearance and condition of the property. Describe contributing and noncontributing resources if applicable. Begin with a **summary paragraph** that briefly describes the general characteristics of the property, such as its location, type, style, method of construction, setting, size, and significant features. Indicate whether the property has historic integrity.)

Summary Paragraph

The Duxbury Pier Light is an offshore lighthouse established as a Federal aid to navigation in 1871. It was the first lighthouse in the United States built atop submerged terrain using a cylindrical cast iron caisson. The success of this design and construction method led to it being used for other late nineteenth century to early twentieth century lighthouses along the U.S. Atlantic, Gulf of Mexico and Pacific coasts. Also known locally as Bug Light, the Duxbury Pier Light is located at the mouth of Duxbury Bay near the entry to Plymouth Harbor, 5.1 miles north-northeast of the town of Plymouth in Plymouth County, Massachusetts. It marks the Duxbury Pier shoal, a hazard to navigation. This lighthouse structure is conical and 47 feet tall. It includes a cast iron tower superstructure and lantern supported by a cast iron caisson pier that is filled with concrete and surrounded by riprap. The caisson pier foundation is 25 feet in diameter at the base and approximately 15 feet tall. Its exterior is painted reddish brown. The superstructure's three-story tower is painted reddish brown on its first story and white on its second and third stories. The second story is surrounded by an open-air main gallery that is painted black. A lantern with glass glazing surrounded by an open-air gallery surmounts the tower. The lantern and gallery railing are painted black. While the interior of this property has been modified, the basic structure of caisson, tower superstructure, and lantern are original and possess a high level of historic integrity. The Duxbury Pier Light is owned by the U.S. Coast Guard and operated as an automated aid to navigation. It signals a flashing red light and is equipped with a modern fog signal. Both are powered by batteries recharged using a solar array. The only access to this property is by boat.

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Narrative Description

Contributing Resource (Lighthouse):

This registration is for a property consisting of one contributing resource, the Duxbury Pier Light. It is an offshore lighthouse operated as an automated aid to navigation. The Duxbury Pier Light is designated as number 12580 on the Coast Guard's regional Light List which includes all official aids to navigation in the northeast Atlantic coast region. This lighthouse is also known locally as "Bug Light" because of its resemblance to an insect sitting in the water when seen from afar. It is one of two lighthouses in the Plymouth Bay vicinity. The other is the Plymouth Light (also known as Gurnet Point Light), located at Gurnet Point approximately 2.7 miles northeast of the Duxbury Pier Light. This area has been the scene of substantial vessel traffic since colonial times and continues to be traversed by vessels going to and from the ports of Plymouth, Duxbury and Kingston. The Duxbury Pier Light sits in approximately two feet of water at low tide and marks a hazardous offshore shoal where Duxbury Bay meets Plymouth Bay to the southwest of Saquish Head.

Exterior

This lighthouse has the configuration of a truncated tapering cone with its midsection encircled by a roof-covered open-air gallery (Photo # 1). It includes a caisson pier foundation, tower, and lantern (Photo # 2). The tower sits flush upon the pier. The open-air gallery surrounds the tower's second story. The lighthouse's lantern sits upon the tower's flat roof.

The structure's foundation is a 15-foot tall cylindrical caisson pier made with cast iron plates bolted together. It tapers slightly from its base to the top, giving it a gradually conical profile. The pier's interior is filled with concrete. Its exterior is painted reddish brown. A metal ladder attached on the western side leads from water level to the light tower's first story doorway, which is secured shut. Another metal ladder on the pier's eastern side extends up through a trapdoor in the floor of the tower's second story gallery. This ladder provides access to the tower's interior by way of the gallery. The caisson foundation is surrounded by riprap that enhances its stability and provides protection from wave action and erosion.

The tower's first story exterior is painted the same reddish brown color as the pier. Two features differentiate it from the caisson pier foundation. One is that the tower's exterior cast iron plates are individually wider than those used in constructing the pier. The other difference is that the first story exterior is pierced with an entry fitted with a metal double-leaf door.

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The tower's second story and third story are painted white. The second story is surrounded by the lighthouse's open-air main gallery. The gallery's deck is made of iron plates and is supported by 16 large, cast iron brackets attached to the tower's exterior at the top of the first story. A stanchion rises from the end of each bracket at the deck's outer edge (Photo # 3). Two horizontal metal rails run between these 16 stanchions to form a guardrail enclosing the gallery. The stanchions support the perimeter of the metal roof that covers the gallery. The roof's inner edge is supported by small cast iron brackets attached to the tower's exterior at the base of the third story. The gallery's deck, stanchions, guardrail and roof are painted black.

The second story gallery's deck is pierced with an opening on the eastern side where the metal ladder attached to the pier's exterior rises upward. This ladder extends through the opening, which is directly in front of the doorway providing access to the second story interior. This doorway is fitted with a rectangular metal door. A second doorway pierces the second story on the western side. It is fitted with a metal door hinged to the tower wall. This door's handle is missing and it is sealed shut. There are no window openings on the second story. Ones that existed formerly have been covered. The gallery's deck is empty except for a fog detecting sensor mounted atop a metal post on the western side. The tower's third story has two windows, one each on the northern and southern sides. Both hold six-over-six double-hung sash.

The fourth story includes the lighthouse's decagonal lantern and the open-air gallery surrounding it. The lantern and lantern gallery's floor and railing are painted black. The lantern sits centered atop the tower's flat roof and is an example of the fifth order type. It is topped with a vent ball and lightning rod. The lantern gallery is circular and enclosed with a two-tiered metal railing supported by 16 evenly-spaced stanchions. A solar array is attached to the lantern gallery railing on the south side, and a modern fog signal sits on the gallery deck's eastern side. The solar array recharges batteries that power the lighthouse's optic and fog signal. The fog signal is automated and sounds a 2-second blast every 15 seconds.

Interior

The tower's principal entrance is the second story doorway on the eastern side, which opens to the main gallery. Access to the first story interior is from the second story interior by way of a metal ladder. A second ladder provides access from the second story interior to the third story interior. A metal ladder on the third story provides access to the lantern room.

First Story: An opening in the second story's metal grating floor provides access to a 9-step metal ladder leading down to the first story's circular room. This room is smaller in diameter than the second story and third story rooms. The floor of the first story is concrete that is painted gray. There is a circular metal hatch in the center of the floor. It provides access to a cistern embedded in the concrete that fills the foundation pier. There are two rectangular, concrete platforms on the first story floor that formerly supported machinery.

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The first story room's surrounding wall is lined with brick and is painted white. There are three segmental-arch alcoves built into the surrounding brick wall (Photo # 4). They begin just above the floor and extend more than halfway up the wall. One is wider than the other two. These provided space for storage. The room's brick lining is pierced with a segmental-arch doorway on the western side. This doorway is fitted with a wooden two-leaf double door hinged to a simple wooden casing (Photo # 5). Each leaf has two panels, the lower of which is louvered. The doorknob is missing. This doorway provides access to the outer door on the first story's exterior wall. The exterior doorway is fitted with a metal two-leaf double door that is secured on the inside with a metal bar and rope. The first story's ceiling is spanned with four metal I-beams that support the second story's metal grating floor. The first story room is presently used to store a variety of tools and maintenance items.

Second Story: The second story consists of a circular room. Its surrounding wall is lined with brick that is painted white. The metal grating floor is a replacement for the original floor. A narrow walkway made with plywood and sprinkled with gravel runs around the room's circumference. The ceiling is spanned by metal I-beams that support metal grating identical to the second story floor. An 11-rung wooden ladder leads up to an opening in the ceiling. It provides access to the third story.

Third Story: The third story consists of a single circular room. The floor is metal grating. The ceiling is made with cast iron plates. The surrounding wall is lined with brick and is painted white. This wall is pierced with a window opening on the northern side and another on the southern side. These are fitted with six-over-six, double-hung sash. Electrical circuit boxes are hung on the brick wall and a bank of batteries sits on the metal grating floor. A 9-step metal ladder leads up the lantern room through an opening in the ceiling.

Fourth Story (Lantern): The floor of the fourth story lantern room is made with metal plates. A metal trapdoor hinged to the floor provides for access from the third story. The decagonal lantern room is surrounded by a parapet wall composed of 10 cast iron plates that are approximately three feet tall. It is painted gray on the inside. Every other plate is pierced with a circular vent. One of the parapet plates contains a single-leaf metal door with a wheel-like door handle (Photo # 6). This provides access to the lantern gallery. The glazing above the parapet wall is framed with vertical metal mullions. These hold 10 glass panes. Ten triangular roof plates rise from a soffit above the glazing and meet at a central vent opening at the ceiling's apex. An original cast iron pedestal stands in the center of the lantern room floor. This supports a modern 250-millimeter acrylic optic. The optic signals two red flashes every five seconds. Its focal plane is 35 feet above mean low water. This light signal is visible for a distance of six miles in clear weather.

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Changes through time

The Duxbury Pier Light looks much the same today as it did at the close of the nineteenth century. The structure's exterior configuration is the same as when built in 1871 except for the second story main gallery which was added in 1897 (cf. Historic View # 1 vs. Historic View # 2). The lighthouse was originally painted entirely brown. This daymark color was repainted in 1875 and 1882, and multiple times thereafter.

The lighthouse's daymark coloration remained brown until 1988 when it was repainted brown on the lower half and white on the upper half including the lantern. Subsequent work in 2001 included painting the pier's lower part a grayish color where it was exposed to tidal rise and fall. In addition, the pier's exterior above that and the tower's first story were painted reddish brown while the tower's second and third stories were painted white. The 2001 work included painting the main gallery, lantern, and lantern gallery black. Today, the structure's exterior paint retains the colors from 2001 except that the grayish paint around the base of the pier has deteriorated and is no longer visible.

Other exterior work at the Duxbury Pier Light included depositing tons of riprap around the pier foundation for additional protection and stability. Riprap was added in 1875, 1886, and 1890.

When the lighthouse was originally built, it included a cylindrical metal smokestack extending upward from the lantern gallery to a height above the lantern roof vent ball. This vented the structure's chimney flue. The smokestack remained in use throughout the period when the property was a manned light station. It was no longer used after the lighthouse was automated in 1964 and has been removed. A flagpole was installed on the lantern gallery during the repainting work in 2001.

The lighthouse's second story main gallery today is empty except for a fog detector. It served several functions from when it was added in 1897 until the lighthouse was automated in 1964. In addition to providing exterior deck space for the crew, it supported davits for hoisting the light station's boat and a hoist for supplies. The gallery included an enclosed room on the southern side that served as a privy. This had wooden siding and was lighted with a small four-pane window. A wood-frame fog signal equipment room lighted with a six-over-six double-hung sash window was on the gallery's eastern side, next to a fog bell. The main gallery's boat davits, hoist, privy, and fog signal equipment room have been removed.

The lighthouse's interior has also been changed from when the structure was built. Two water tanks were installed in 1886 to store fresh water for the keepers. In 1900, a 700-gallon cistern was installed below the first story floor in the caisson pier's concrete filling.

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Renovations accomplished in the middle 1980s and again in 2001 included removing the lighthouse's original wooden floors on the second and third stories, which originally served as living quarters for the lighthouse keepers. These floors were replaced with metal grating supported by steel I-beams.

A 1940's description written by a Coast Guardsman assigned to the lighthouse as a keeper states that the first story was used for storage, the second story functioned as a galley and living room, and the third story contained beds for the keepers. A May 1913 property description for the First Lighthouse District states there were a closet in the second story kitchen for dishes and two closets in the third story bedroom for clothes. These closets no longer remain. Another change concerns access from one story to another. The lighthouse's original plans and a 1913 description record that the structure originally had a spiral stairway made of "iron and wood." This no longer remains. The existing means of access between interior stories is by ladders.

The lighthouse's original optic was a fourth order Fresnel lens made by Henri LePaute of Paris, France. It was first exhibited on 15 September 1871 and signaled a red light produced by placing a red glass shade over the illuminating apparatus. This optic was maintained by U.S. Lighthouse Service keepers, followed by Coast Guard keepers, until the Duxbury Pier Light was automated in 1964. The original lens was eventually removed and replaced with modern equipment. The existing optic is a 250-millimeter acrylic lens that signals two red flashes every five seconds.

The fog signal installed at Duxbury Light in 1897 included a bell weighing 1,000 pounds and a mechanical mechanism for striking the bell at regular intervals. This bell was mounted on the second story main gallery next to a wood-framed fog signal equipment room that housed the clockwork striking mechanism, which was operated by a system of weights. The weight apparatus was mounted in a tall wood-framed box built atop the main gallery's roof directly above the fog signal equipment room.

The lighthouse's original fog bell was replaced with another in 1902. The replacement bell weighed 1,000-pounds and was made by McNeely and Company of Troy, New York. It measured 38.5 inches in diameter and 26.5 inches in height. During times of fog, a weight-activated clockwork mechanism operated the bell's striking device for four continuous hours. It could also be struck manually if necessary. The fog bell's characteristic signal was one stroke of the bell, followed by 15 seconds of silence. The existing fog signal is a modern automated unit powered by electricity. It is mounted on the lantern gallery and sounds a 2-second horn blast every 15 seconds. The lighthouse's modern aids to navigation are powered by batteries recharged using a solar array installed circa 1985. This solar array is mounted on a framework attached to the south side of the lantern gallery.

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8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- A. Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B. Property is associated with the lives of persons significant in our past.
- C. Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D. Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

(Mark "x" in all the boxes that apply.)

- A. Owned by a religious institution or used for religious purposes
- B. Removed from its original location
- C. A birthplace or grave
- D. A cemetery
- E. A reconstructed building, object, or structure
- F. A commemorative property
- G. Less than 50 years old or achieving significance within the past 50 years

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Areas of Significance
(Enter categories from instructions.)

Maritime History
Transportation

Period of Significance
1871 to 1964

Significant Dates
1871, 1897

Significant Person
(Complete only if Criterion B is marked above.)
N/A

Cultural Affiliation
N/A

Architect/Builder
U.S. Lighthouse Service, First District

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Statement of Significance Summary Paragraph (Provide a summary paragraph that includes level of significance, applicable criteria, justification for the period of significance, and any applicable criteria considerations.)

The Duxbury Pier Light is a lighthouse established as an aid to navigation in 1871. It is eligible for listing on the National Register under Criteria A and C, and is significant on the state level in U.S. history. This property's period of historical significance begins when it was established in 1871 and ends in 1964 when it was automated. It was built to mark the Duxbury Pier shoal, a hazardous area of shallow water alongside the navigation channel for Plymouth Harbor, Duxbury Bay, and Kingston Bay. The Duxbury Pier Light is eligible under Criterion A for its association with the Federal government's efforts to promote safe maritime transport in Massachusetts waters as part of its integrated system of navigational aids throughout the United States. This property is significant under Criterion C because it is the first U.S. lighthouse built offshore using a cast iron caisson foundation to support a prefabricated light tower made with cast iron plates. This combination of important nineteenth century lighthouse design elements was later used in building more than 40 other offshore lighthouses in the U.S. Today, the Duxbury Pier Light occupies its original location in an open-water setting that remains unchanged. It evokes feelings recalling its historic character as an isolated offshore lighthouse manned by keepers dedicated to fulfilling their duty to promote navigational safety. This property also continues to be associated with its original lighthouse function by serving as an operating Federal aid to navigation.

Narrative Statement of Significance (Provide at least **one** paragraph for each area of significance.)

The Duxbury Pier Light is eligible for listing in the National Register of Historic Places (NRHP) under Criterion A. It has made a significant contribution to the maritime and transportation history of Massachusetts. This property was the second lighthouse built in the Plymouth Bay area and the first one constructed offshore. Duxbury Pier Light marks a dangerous hazard to shipping and provides a prominent offshore landmark for mariners navigating the vicinity. Throughout this property's period of historical significance from its establishment in 1871 to its automation in 1964, the Duxbury Pier Light has exemplified the importance of the Federal government's nationwide system of aids to navigation and its role in promoting safe maritime transport in Massachusetts waters. This property continues to occupy its original offshore location and its open water setting remains the same as during its period of historical significance. Today, the Duxbury Pier Light conveys feelings that recall the dedication to duty characteristic of lighthouse keepers through the course of American history. It also continues to be associated with maritime safety by functioning as an operating lighthouse.

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The Duxbury Pier Light also qualifies for National Register listing under Criterion C. It was the first U.S. lighthouse built using a cylindrical cast iron caisson supporting a cast iron superstructure, a design and construction method that proved well suited for offshore locations. Structures built using this design concept came to be known as sparkplug lighthouses because of their similarity in shape to the sparkplug of an internal combustion engine. From when the Duxbury Pier Light was established in 1871 to 1926, more than 40 sparkplug-type lighthouses were built in U.S. waters. This property possesses substantial historical integrity and retains original distinctive aspects of design, materials, workmanship, and construction methods.

This lighthouse meets the registration requirements outlined in the multiple property documentation form *Light Stations in the United States*. It remains in its original location and its design, setting, materials, workmanship, feeling and association reflect its period of historical significance. This property retains much of its original exterior integrity except for the loss of limited features such as its main gallery's privy and fog signal machinery room, and the lantern gallery smokestack. The lighthouse's interior integrity has been modified by replacement of its spiral stairway and second story and third story floors by access ladders and metal grating floors supported by I-beams. The absence of these features does not detract significantly from the structure's overall integrity. The existing character and appearance of the Duxbury Pier Light retain the most important aspects of its original design that are significant in the history of American lighthouses.

Lighthouse Architecture

Constructed in 1871, the Duxbury Pier Light was the first cast iron caisson foundation offshore lighthouse built in the United States. It remains a well-preserved example of this important design type. The success of the Duxbury Pier Light contributed to the cast iron caisson pier foundation and light tower design becoming the preferred method used in building lighthouses at offshore locations in the U.S. Northeast and Mid-Atlantic regions during the remainder of the nineteenth century. These include three other Massachusetts lighthouses: Borden Flats Light built 1881 at Fall River, Deer Island Light built 1890 at the entry to Boston Harbor (dismantled in 1982), and Butler Flats Light built 1898 at New Bedford. Another Massachusetts offshore lighthouse, Cleveland Ledge Light constructed 1943 in Buzzards Bay, has a steel caisson foundation of different design.

The design and construction methods first implemented at the Duxbury Pier Light proved to be especially well-suited for offshore lights along the U.S. northeastern seaboard. The cast iron cylindrical caisson foundation was relatively easy and inexpensive to build, and resisted damage from storms and ice. Caisson piers of this type proved to be much better at withstanding severe winters than the pile-foundation method employed earlier for lighthouse foundations in several locales.

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U.S. Lighthouse Board architects and engineers used materials and methods first employed at the Duxbury Pier Light for the successful construction of more than 40 lighthouses after 1871. Based upon its structural characteristics, they developed an improved caisson foundation and light tower standardized design that included caissons made with prefabricated iron plates bolted together in courses. Caisson parts were produced to specification at a foundry, assembled partially or entirely onshore near the construction site, and equipped with a wooden cofferdam to keep out water. A caisson was then towed to the designated offshore location and sunk into place with excavation of submerged bottom materials, if necessary. After being leveled and stabilized, any remaining assembly was completed and the caisson commonly filled with rock and/or concrete. The light tower superstructure, made with prefabricated cast iron plates and bolted together, was subsequently erected on top.

The cast iron caisson foundation's first use after the Duxbury Pier Light was at the Craighill Channel Lower Range Front Light in Maryland, built 1873 in Chesapeake Bay. Its design and construction were similar to the Duxbury Pier Light except that a wooden box caisson was added to enclose the cast iron caisson's base to provide a stable base on the submerged bottom. The Craighill Channel Lower Range Front Light's caisson was sunk into place, leveled and stabilized, and its interior filled with rock and concrete as at the Duxbury Pier Light.

Further improvements in caisson foundation construction for lighthouses appeared soon after this. One engineering development was the pneumatic caisson. It was first used in U.S. lighthouse construction at the Fourteen Foot Bank Light in Delaware, built in 1887. The pneumatic type of caisson has an airtight room at the open bottom of the cylinder. This room was usually constructed of wood and kept filled with pressurized air to keep water from leaking in. The pressurized enclosure enabled workmen to excavate into the submerged land beneath the caisson while keeping dry. The caisson sank further into the subsurface as bottom materials beneath it were dug out. Another caisson type used in lighthouse construction was the open caisson. In this procedure, a cast iron caisson cylinder open at both the top and bottom was lowered into position and allowed to sink into the bottom by its own weight. The cylinder's base was sharpened around its perimeter to make a cutting edge. This, along with excavating bottom materials from within the cylinder, enabled the caisson to sink several feet into the seabed. In any of these caisson construction methods, wooden piles might also be driven into the bottom to provide a firmer footing.

There were two principal foundation construction methods used to build offshore lighthouses in the U.S. before cylindrical caissons were adopted. One was to use straight piles or screw-piles. Piling foundations structures were inexpensive and relatively quick and easy to construct. However, they were not strong enough to withstand the force of moving ice floes or impacts from out-of-control vessels. The other method was to construct a stone pier foundation. While this was suitably strong for offshore locations, stone pier foundations were expensive and time-consuming to build. Cylindrical caisson foundations made from cast iron plates were less costly and could be built quicker than stone piers.

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Cast iron's use as a building material for caisson foundations and light towers depended on the ample production of iron and developing efficient designs for using it. The convergence of these factors took place in the United States during the middle nineteenth century. While cast iron had been used in Europe for architectural structural and decorative purposes from the early eighteenth century, it was not employed extensively for architecture in the United States until after 1840. Its use was inhibited prior to then by limited iron production and difficulties in transporting the iron to urban centers where it could be used most readily. In addition, iron masters had not yet discovered how to reduce iron ore using readily-available anthracite (hard) coal. Developments during the 1840s included discovery of the Marquette Iron Range in Michigan's Upper Peninsula, increasing pig iron availability, and the extension of railway lines to areas nearer foundries where castings were produced. These factors motivated founders, businessmen, and architects to devise new uses to which the material could be applied.

The initial use of cast iron in U.S. lighthouses was limited largely to the lanterns positioned atop masonry or wooden light towers. It was not until the 1850s that iron began to be used extensively in building the overall structures. Lighthouse Establishment architects and engineers focused on their early attention on designing and constructing skeletal tower structures such as the one built from 1847 to 1849 at Minot's Ledge in Massachusetts. Even though this lighthouse was destroyed in a storm in 1851, it was soon followed by the development and adoption of a variety of innovative and successful designs. A skeletal tower lighthouse generally consisted of a central vertical stairway cylinder and four to eight slanted peripheral supporting columns braced and tied together by cross-members. Skeletal towers were designed to be built in areas with sandy or loamy soil, including offshore locations such as in the Florida Keys. Another cast iron design employed the elegant Second Empire architectural style. Examples of this include the Ship John Shoal Light in New Jersey and the Southwest Ledge Light in Connecticut, both completed in 1877. Other variants included conical and cylindrical towers. Cast iron towers were often lined with brick for added stability and increased insulation.

The U.S. Lighthouse Establishment employed a variety of superstructure designs during the early stages of constructing offshore lighthouse towers atop cast iron cylindrical caisson foundations. Following construction of the Duxbury Pier Light, attention soon shifted to developing an improved standardized design that could be utilized extensively throughout the Northeast and Mid-Atlantic regions. This came to be called the "sparkplug" lighthouse because of its similarity, when seen from afar, to the profile of an internal combustion engine sparkplug. The *Annual Report of the Lighthouse Board* for 1898 contains a plate showing a cross-section plan of the newly constructed New Haven Outer Breakwater Lighthouse in Connecticut. It is an example of the "sparkplug" design and is similar to that used in construction of the Borden Flats Light (1881), the Deer Island Light (1890), and the Butler Flats Light (1898) in Massachusetts. A nearly identical plan was used in 1901 for construction of the West Bank Light in Lower New York Bay.

Duxbury Pier Light
Name of Property

Plymouth County, MA

The specifications and plans for sparkplug-type lighthouse were printed in large quantities and distributed to companies interested in competing for Federal lighthouse construction contracts. The cast iron parts used for the caissons, towers, and interior floors along with architectural details such as hoods, brackets, and posts were manufactured by companies such as West Side Foundry of Troy, New York, and Variety Iron Works of Cleveland, Ohio. The various parts were fitted together at onshore locations for preliminary approval by lighthouse engineers. After passing inspection, these components were numbered before being dismantled and then shipped to the U.S. Lighthouse District that contracted the work. A caisson would commonly be partially or entirely assembled onshore, and then brought to the designated offshore location. Once the foundation was in place, the lighthouse superstructure shell could be erected in a matter of days. Finishing work such as installing the brick lining, interior partitions, stairways, flooring, windows, and doors extended the construction time.

History of the Duxbury Pier Light

From early in the colonial period, the Massachusetts coastline's many bays and harbors were important sites for maritime commercial activity. However, these waterways also contain an abundance of natural hazards that present serious threats to shipping.

Numerous local efforts were undertaken during the eighteenth century to establish aids to navigation in order to enhance maritime safety. The first lighthouse built in Britain's North American colonies was the Boston Light in Massachusetts. Funded by local merchants, it was constructed in 1717 on Little Brewster Island near the entry to Boston Harbor. Other colonial period light stations in Massachusetts were constructed in 1746 at Brant Point on Nantucket Island, on Gurnet Point facing Plymouth Bay in 1769, and on Thatcher's Island off Cape Ann in 1771.

Maritime commerce in Massachusetts increased in volume and value through the remainder of the eighteenth century and into the nineteenth century. Along with greater amounts of shipping traffic came increases in the number of shipwrecks and losses of life. This situation occurred elsewhere along the eastern seaboard and led to localized efforts to improve maritime safety. Following the American Revolution, the idea of an organized nationwide approach to establishing and administering aids to navigation began to take hold. One of the first Acts of Congress following adoption of the U.S. Constitution was a 1789 law that codified the Federal government's leading responsibility for operating lighthouses.

The Federal government's Lighthouse Establishment achieved mixed successes and failures during its early decades. Problems with how the government built and operated lights led to numerous complaints from maritime interests and the public. This was largely due to an over-emphasis on economy of operation where financial concerns generally overruled the need for high quality facilities and equipment.

Duxbury Pier Light
Name of Property

Plymouth County, MA

Over time, this resulted in United States lighthouses being considered among the poorest in the world. This led the U.S. Congress in 1852 to adopt measures to reform the Federal government's lighthouse program. It created a new administrative group named the Lighthouse Board and gave it authority over the Lighthouse Establishment system. The U.S. Lighthouse Board soon initiated improvements in lighthouse construction and promoted adoption of state-of-the-art Fresnel lens illumination technology.

The port of Plymouth in Plymouth County was one of Massachusetts' important seaports during the seventeenth and eighteenth centuries. This led to the first lighthouse at Gurnet Point being built in 1769 to mark the approach to Plymouth Harbor. The Gurnet Point Light was later improved and designated the Plymouth Light Station. This property has been included in the National Register of Historic Places (Registration # 77000655).

Various channels and hazards to navigation in the Plymouth Bay vicinity were marked with a variety of unlighted beacons and buoys during the nineteenth century. One significant hazard was the Duxbury Pier shoal, situated in waters approximately midway between Saquish Head on the north and Pier Head on the south, alongside the principal channel leading from Plymouth Bay to the ports of Plymouth, Duxbury, and Kingston. This shoal was not prominently marked until the late 1850s when an unlighted masonry beacon was built there (see Historic View # 1).

Subsequent population and economic growth during the 1860s led to increased shipping traffic in the Plymouth Bay area, and sparked interest in establishing an additional lighthouse. On 15 July 1870, the U.S. Congress appropriated \$17,931 to establish a new light station in the Plymouth vicinity. Work to select an appropriate lighthouse site began soon after. This included examining the Duxbury Pier shoal and conducting test borings. The results led the Lighthouse Board to determine that the new lighthouse would be positioned offshore and directly atop the shoal.

The proposed Duxbury Pier site, however, was characterized by harsh environmental conditions that any structure built there needed to resist. The Lighthouse Board described the circumstances and its decision as follows: "the run of ice is very severe from Plymouth Harbor, and to resist it, and the heavy seas by which it will be assailed, the tower will be built in one solid mass to a height of 15 feet above the water."

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The Lighthouse Board decided that the proposed Duxbury Pier Light would be built using a cast iron caisson for the foundation. This innovative approach in U.S. lighthouse design was adapted from ideas of the 1840s English physician and inventor Lawrence Potts concerning caissons for constructing offshore structures. Caissons had been employed previously in the U.S. for underwater construction of bridge piers, but had not been used for building lighthouses. The Lighthouse Board's engineers prepared plans for an iron caisson pier foundation supporting a squat conical iron tower having living space for two keepers, work and storage space, and adequate fresh water storage. The proposed lighthouse's general concept was described in the Lighthouse Board's 1870 *Annual Report*. It was to be "a tower 25 feet in diameter at the base, with a height of 50 feet focal plane. It will be founded in two feet of water at low tide, and will be of concrete, faced with iron."

The lighthouse's caisson was a hollow, slightly tapering cone of cast iron plates. It was assembled onshore and then towed to the desired offshore location. A contemporary description written by William Burgess Jr., who worked on it, states that the caisson "was put together in North Dock and a cofferdam built inside of it, and one Sunday we towed it down with the government schooner and our sloop *Rose Wood*, placed it in position then broke the cofferdam and sunk it." The cofferdam was a temporary feature to keep the caisson from sinking while being towed to the lighthouse site.

After the caisson pier was sunk into position, it was leveled and stabilized, and a ring of protective riprap placed around its exterior. The caisson was then filled with concrete to a height of 15 feet above the water. The light tower superstructure was built by bolting additional cast iron plates in courses to extend the caisson pier's conical shape upwards. By June 1871, the structure had been erected to a height of 36 feet. A fifth order lantern was assembled atop the completed tower, and a fourth order Fresnel lens installed inside the lantern as the lighthouse's optic. This signal light was first officially exhibited on 15 September 1871. It was staffed with a Keeper and an Assistant Keeper.

Numerous maritime-related wrecks and deaths occurred in the vicinity of Plymouth Harbor during the middle and late nineteenth century. This led the U.S. Congress to appropriate funds in 1871 to establish a life-saving station in the area. Even though the U.S. Life-Saving Service subsequently maintained a watch over the Plymouth Bay vicinity, the lighthouse keepers of the Duxbury Pier Light saved many lives themselves over the years.

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Not all of the Duxbury Pier Light's keepers were valiant and hardworking. One exception was the subject of a letter written on 11 February 1892 by ex-keeper James H. Bagnall to a Lighthouse Board member. He complained about the lighthouse's then-current keeper, Michael J. Curran, who had taken over the Duxbury Pier Light on 21 April 1891. Bagnall reported that the light was often neglected due to Curran's frequent absences and drunkenness. The assistant keeper, Mr. Kingsley, reportedly brought a mainland man to the light to provide assistance and company when Curran was absent. Bagnall stated that "the light was never so badly run by any of the keepers since it was built as it has been since last April." Mr. Curran was subsequently transferred to another light station on 12 December 1892.

In 1910, the United States Congress enacted a law creating the Bureau of Lighthouses within the U.S. Department of Commerce and Labor. The Lighthouse Board was then disbanded and its U.S. Lighthouse Service workforce of civilian keepers became part of the Bureau. A remarkably heroic keeper of the Duxbury Pier Light was Fred Bohm, a U.S. Lighthouse Service employee stationed there in the 1930s. According to Edward Rowe Snow, a prominent regional historian, Mr. Bohm rescued 90 persons in a single year including 36 Girl Scouts. The Bureau of Lighthouses was responsible for Federal aids to navigation from 1910 to 1939 when it ceased to exist as a separate agency upon being merged with the U.S. Coast Guard, which subsumed its duties.

After the U.S. Coast Guard absorbed the Lighthouse Service in 1939, keepers assigned to the Duxbury Pier Light consisted of a three-man detachment of Coast Guard personnel. They rotated duty following a schedule of two weeks on followed by one week off, with two men always on station. One of these keepers during World War II was named Harry Salter. His account of service at the Duxbury Pier Light included experiences during a 1944 hurricane (Salter n.d.). As the storm pounded the lighthouse with 30-foot waves, Salter attempted to secure the station's boat which hung from davits on the main gallery. Suddenly, a wave opened the trapdoor in the gallery floor and Salter fell through. Luckily, another wave brought him against the ladder and he made his way back to safety. By the time the hurricane passed it had destroyed the station's boat, along with the outdoor privy and fog signal equipment room that were also on the main gallery.

The Duxbury Pier Light was automated in 1964 and no longer staffed by resident keepers afterwards. It deteriorated during the years that followed and was subject to vandalism. In 1983, the U.S. Coast Guard decided to replace the 1871 cast iron tower with a fiberglass tower similar to one built in 1982 to replace Boston Harbor's Deer Island Light. After news of this plan became known locally, several area residents responded by forming *Project Bug Light* and campaigning to preserve the lighthouse. They convinced the Coast Guard to grant them a five year lease in order that their organization could raise funds to help restore the lighthouse's superstructure.

Duxbury Pier Light
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The Coast Guard also undertook its own efforts from 1983 to 1985 to preserve the Duxbury Pier Light. This included sandblasting and painting the caisson pier foundation, making repairs to the superstructure, and solarizing the battery system that powers the optic and fog signal. From 1986 to 1993, however, vandals, seabirds, and harsh weather caused additional deterioration to the structure. This led the USCG to again consider removing the tower, or at least removing the lighthouse's lantern and replacing it with a fiberglass pole. These plans spawned a new effort by local preservationists to save the lighthouse. The Coast Guard decided on a second round of refurbishing work at the Duxbury Pier Light from 1996 to 2001. This renovation was conducted by Campbell Construction Group of Beverly, Massachusetts, and included repairing the caisson's joints, scraping over 1,200 pounds of rust from the structure, and applying three coats of paint.

Today, the Duxbury Pier Light continues to operate as a Federal aid to navigation owned by the U.S. Coast Guard. This property is now leased to *Project Gurnet and Bug Lights, Inc.*, a nonprofit corporation that continues the original *Project Bug Light* group's mission of preserving the lighthouse.

The Duxbury Pier Light remains intact and standing at its original location, visible from shore and widely recognized as a prominent offshore landmark in the Plymouth Bay vicinity. Its ongoing service as an aid to navigation is proof of the quality of its design, construction methods, materials, and workmanship. This property illustrates the spirit of innovation that characterized American lighthouse engineers during the late nineteenth century, as well as a focus on lasting results that has distinguished generations of U.S. lighthouse builders. The Duxbury Pier Light also evokes feelings that recall its historical character as an isolated offshore light manned by keepers dedicated to fulfilling their duty of promoting navigational safety along the Massachusetts coast.

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Duxbury Pier Light
Name of Property

Plymouth County, MA

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Name of Property

Plymouth County, MA

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_____. 1908. *List of lights and fog signals of the Atlantic and Gulf coasts of the United States, corrected to October 31, 1908*. Washington: Government Printing Office.

Previous documentation on file (NPS):

- preliminary determination of individual listing (36 CFR 67) has been requested
- 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 # _____
- recorded by Historic American Landscape Survey # _____

Primary location of additional data:

- State Historic Preservation Office
 - Other State agency
 - Federal agency
 - Local government
 - University
 - Other
- Name of repository: U.S. National Archives

Historic Resources Survey Number (if assigned):

10. Geographical Data

Acreeage of Property Less than one acre.

Use either the UTM system or latitude/longitude coordinates

Latitude/Longitude Coordinates

Datum if other than WGS84: _____ (enter coordinates to 6 decimal places)

1. Latitude: 41-59-14.732000 North Longitude: 070-38-54.773000 West

Or UTM References Datum (indicated on USGS map):

NAD 1927 or NAD 1983

1. Zone: 19

Easting: 363370

Northing: 4649470

Duxbury Pier Light
Name of Property

Plymouth County, MA

Verbal Boundary Description: The property's boundary is the perimeter of the cast iron caisson which is the structure's foundation.

Boundary Justification: This boundary encompasses the entirety of the Duxbury Pier Light.

11. Form Prepared By

name/title: Daniel Koski-Karell, Ph.D.
organization: Office of Environmental Management (COMDT CG-47), USCG Headquarters
street & number: US Coast Guard Stop 7714, 2703 Martin Luther King Jr Avenue SE
city or town: Washington state: DC zip code: 20593-7714
e-mail: Daniel.A.Koski-Karell@uscg.mil
telephone: 202-475-5683
date: 20 March 2014

Additional Documentation

- **Map: Figure 1. Location of the Duxbury Pier Light** (USGS 7.5 minute series topographic map).
- **Map: Figure 2. Location of the Duxbury Pier Light, illustrated on 1875 nautical chart.**
- **Photographs:** Name of Property: Duxbury Pier Light
City or Vicinity: Plymouth
County: Plymouth State: Massachusetts

Historic View Photographs (# 1 and # 2)

1. Original configuration of the Duxbury Pier Light, photo taken circa 1891, camera facing northwest.

Photographer: N. L. Stebbins.
Date photographed: 1896.
Location of original negative: Unknown.

2. View of the Duxbury Pier Light, 1951, camera facing northwest.

Photographer: Unknown.
Date photographed: 1951.
Location of original negative: U.S. Coast Guard Historian's Office, USCG Headquarters, Washington, DC.

Duxbury Pier Light
Name of Property

Plymouth County, MA

Contemporary Photographs (# 1 to # 6)

Photographer: Karmen Bisher.

Date photographed: 2005.

Location of original negatives: Maritime Heritage Program, National Park Service,
Washington, DC.

1. Exterior view, camera facing north.
2. Exterior view, camera facing northwest.
3. Second story exterior, main gallery, camera facing west.
4. First story interior, segmental-arch storage spaces.
5. First story interior, wooden double-doors.
6. Lantern parapet wall door and gallery.

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C.460 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 100 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Office of Planning and Performance Management, U.S. Dept. of the Interior, 1849 C. Street, NW, Washington, DC.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

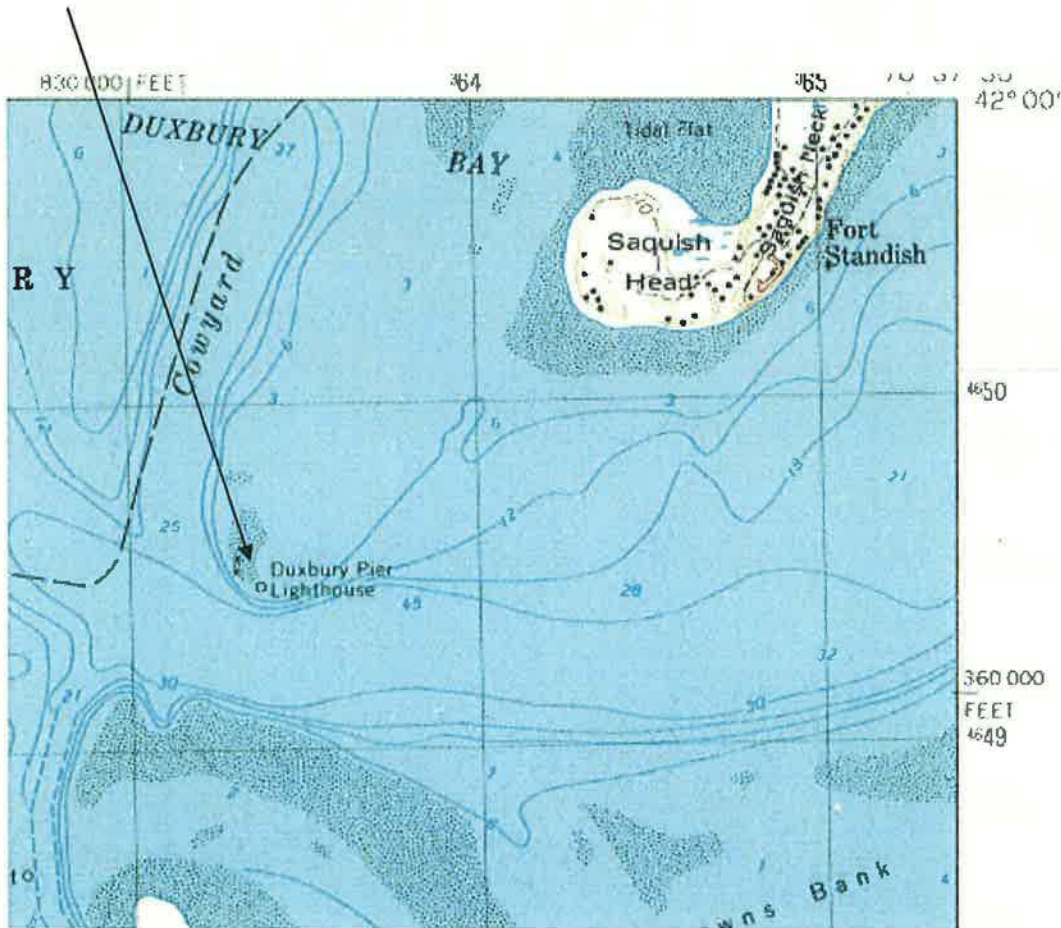
Duxbury Pier Light
Name of Property
Plymouth County, Massachusetts
County and State
Light Stations of the United States
Name of multiple listing (if applicable)

Section number 7 Page 1

Figure 1. Location of the Duxbury Pier Light. This is a portion of the "Plymouth, Mass." 7.5 minute quadrangle topographic map, scale 1:25,000 (United States Geological Survey 1974, photoinspected 1977).



Duxbury Pier Light
Plymouth County, MA
UTM: 19 / 363370 / 4649470



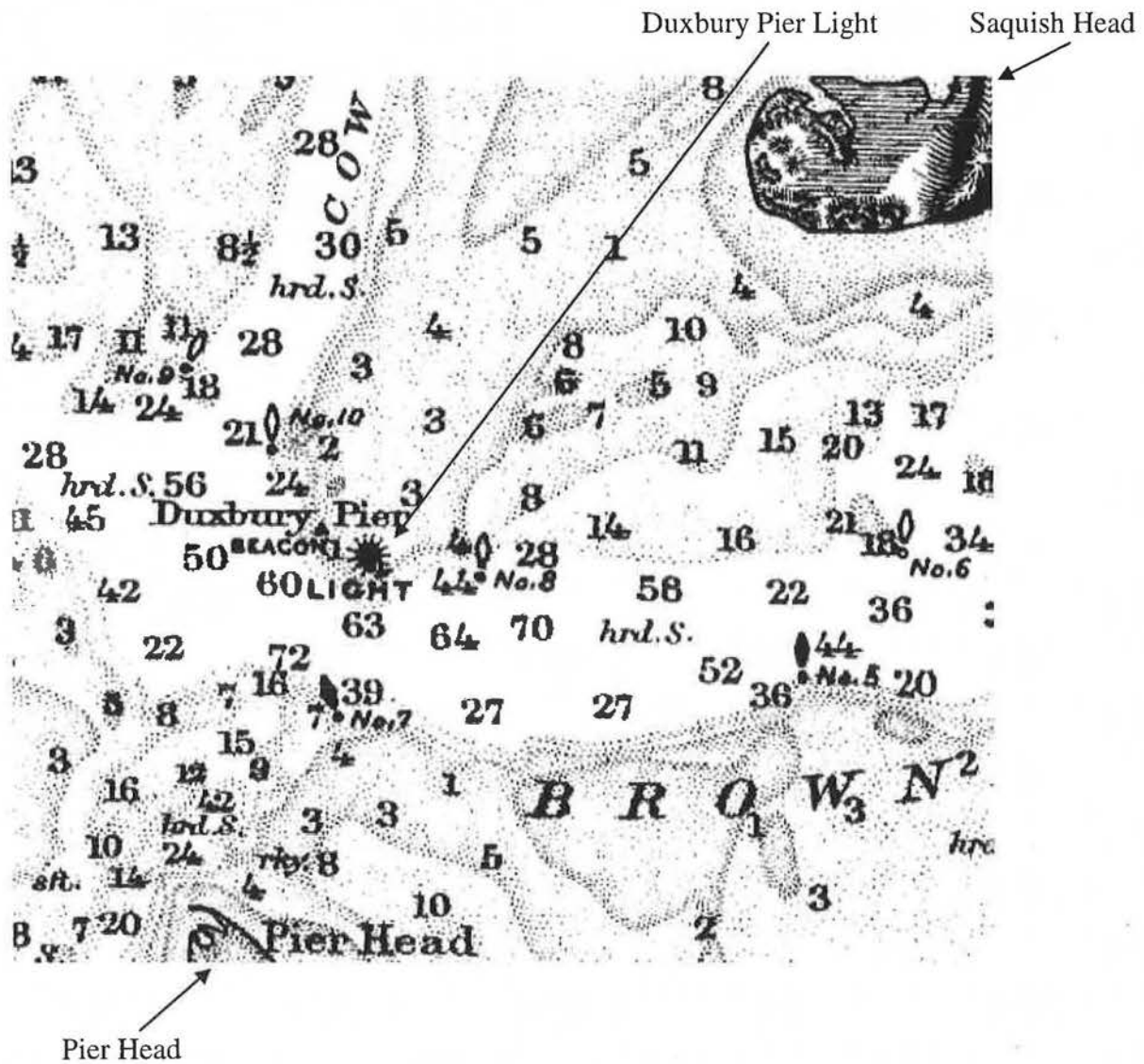
United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Duxbury Pier Light
Name of Property
Plymouth County, Massachusetts
County and State
Light Stations of the United States
Name of multiple listing (if applicable)

Section number 7 Page 1

Figure 2. Location of the Duxbury Pier Light, illustrated on 1875 nautical chart (U.S. Coast Survey 1876).



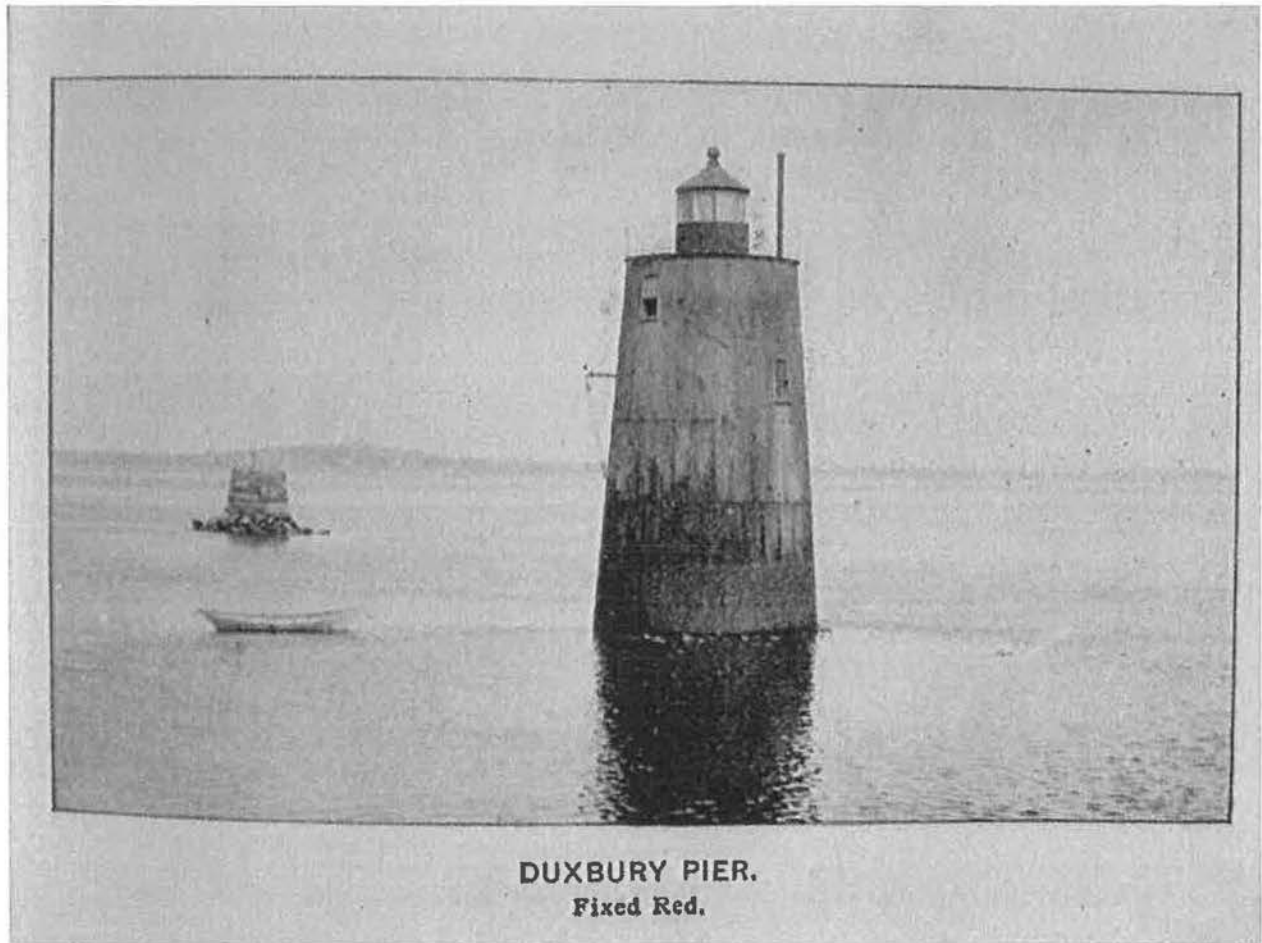
United States Department of the Interior
National Park Service

**National Register of Historic Places
Continuation Sheet**

Duxbury Pier Light
Name of Property
Plymouth County, Massachusetts
County and State
Light Stations of the United States
Name of multiple listing (if applicable)

Section number 7 Page 1

Historic View # 1. Original configuration of the Duxbury Pier Light, photo taken circa 1891, masonry beacon on the left, camera facing northwest (Stebbins, 1896).



United States Department of the Interior
National Park Service

**National Register of Historic Places
Continuation Sheet**

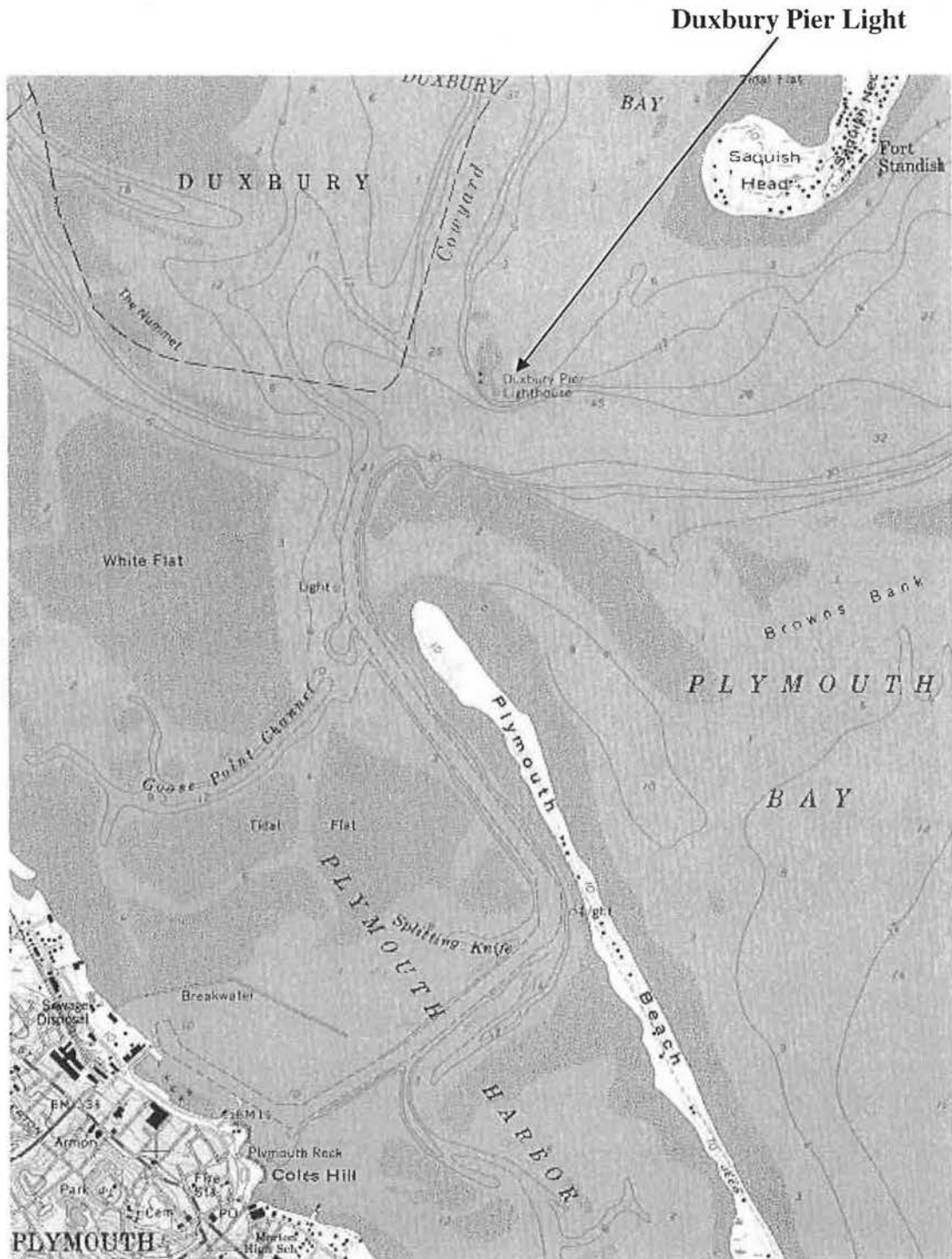
Duxbury Pier Light
Name of Property
Plymouth County, Massachusetts
County and State
Light Stations of the United States
Name of multiple listing (if applicable)

Section number 7 Page 1

Historic View # 2. Duxbury Pier Light, 1951, camera facing northwest (U.S. Coast Guard Photo).



Location Map

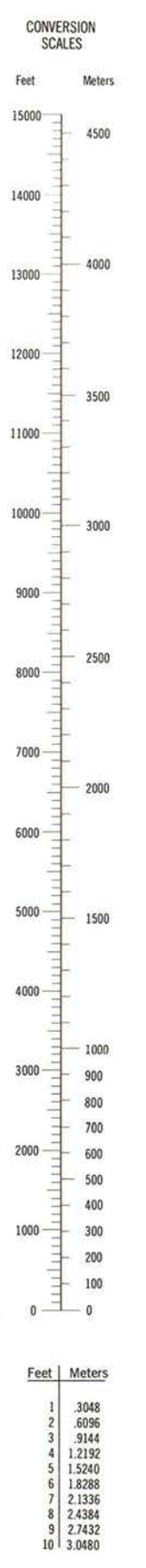


Part of the "Plymouth, Mass." 7.5-minute series topographic map, Scale 1:24,000 (U.S. Geological Survey, 1977).

View of the Duxbury Pier Light, looking northwest



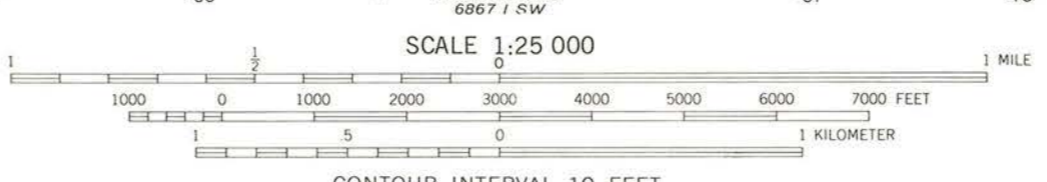
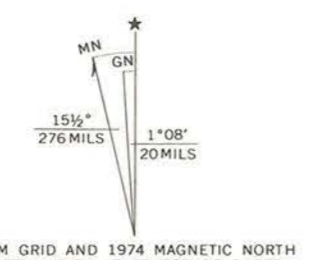
Duxbury Pier
Light Station
Plymouth County,
Massachusetts
UTM:
19/363370/4649470



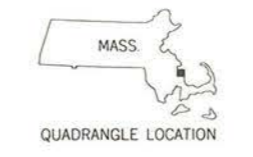
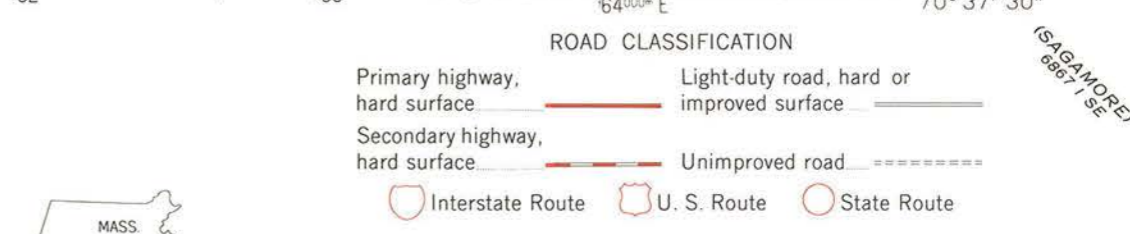
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8	24384
9	27432
10	30480

To convert feet to meters multiply by 3.048
To convert meters to feet multiply by 3.2808

Mapped, edited, and published by the Geological Survey
Control by USGS, NOS/NOAA, and Massachusetts Geodetic Survey
Topography by planetable surveys 1934. Revised from aerial
photographs taken 1974. Field checked 1974
Selected hydrographic data compiled from NOS 245 (1972)
This information is not intended for navigational purposes
Polyconic projection. North American datum
10,000-foot grid ticks, based on Massachusetts coordinate system,
mainland zone
1000-meter Universal Transverse Mercator grid,
zone 19
Red tint indicates area in which only landmark buildings are shown
Map photoinspected 1977
No major culture or drainage changes observed



CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
DEPTH CURVES AND SOUNDINGS IN FEET-DATUM IS MEAN LOW WATER
SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE MEAN RANGE OF TIDE IS APPROXIMATELY 9.5 FEET



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A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

PLYMOUTH, MASS.
N4152.5-W7037.5/7.5
1974
PHOTOINSPECTED 1977
AMS 6867 1 NW-SERIES V814



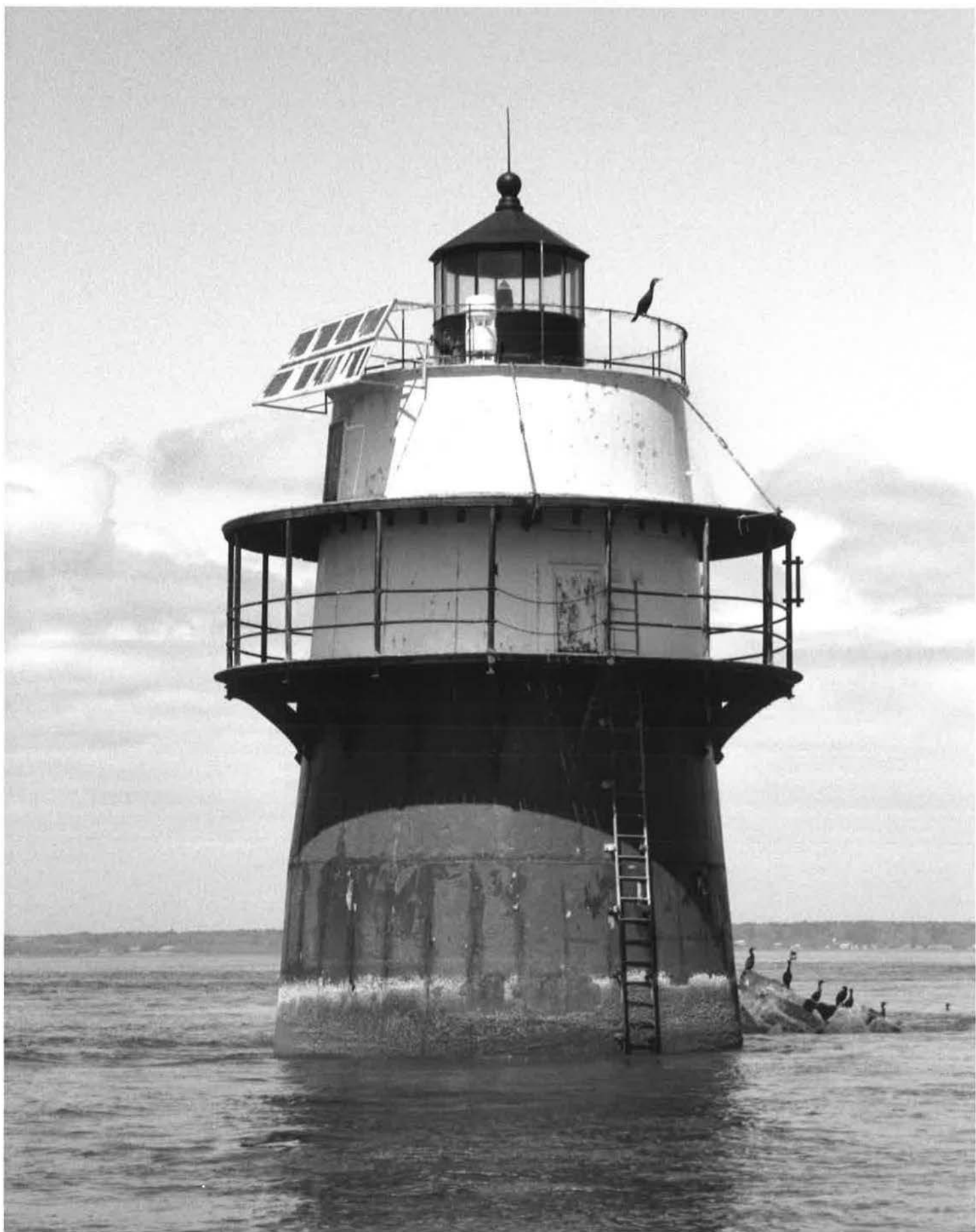
1-97901/4

Duxbury Pier Light Station
Plymouth County, Massachusetts
Photo # 1

DUXBURY PIER LIGHT
PLYMOUTH COUNTY, MA

PHOTOGRAPHER: KARMEN BISHER
DATE: 2005
NEGATIVE AT: MARITIME HERITAGE PROGRAM
NATIONAL PARK SERVICE
WASHINGTON, DC

EXTERIOR VIEW, LOOKING NORTH
PHOTO # 1



12-867/5

Duxbury Pier Light Station
Plymouth County, Massachusetts
Photo # 2

DUXBURY PIER LIGHT

PLYMOUTH COUNTY, MA

PHOTOGRAPHER: KARMEN BISHER

DATE: 2005

NEGATIVE AT: MARITIME HERITAGE PROGRAM
NATIONAL PARK SERVICE
WASHINGTON, DC

EXTERIOR VIEW, LOOKING NORTHWEST

PHOTO # 2



10/26/14

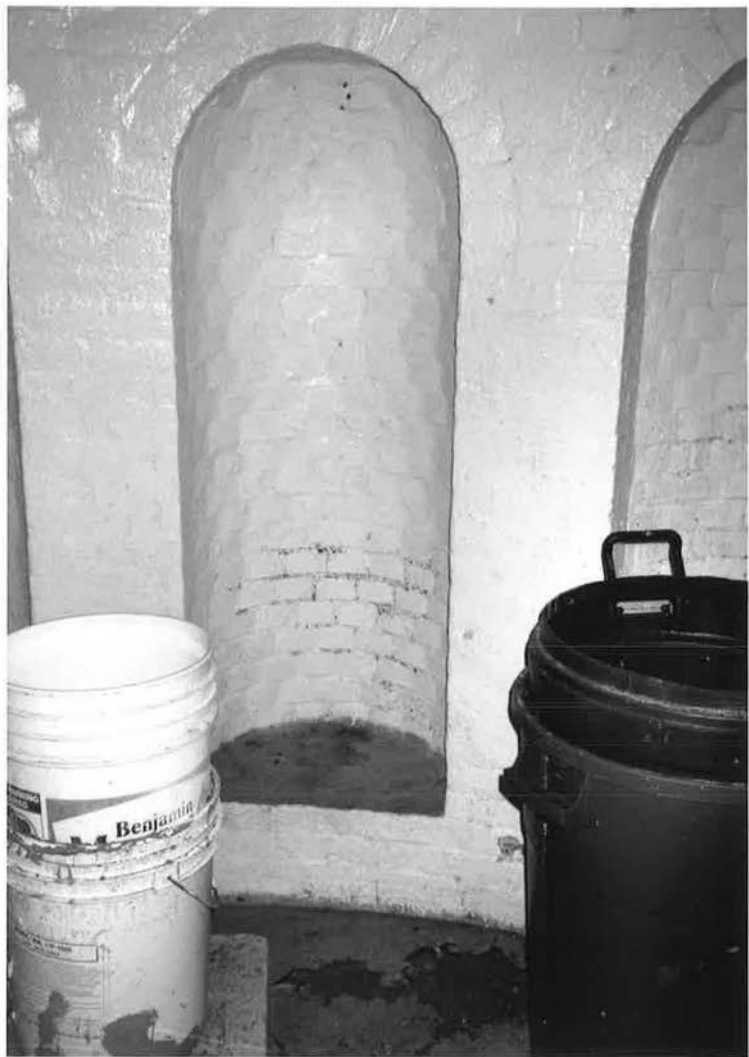
Duxbury Pier Light Station
Plymouth County, Massachusetts
Photo # 3

DUXBURY PIER LIGHT
PLYMOUTH COUNTY, MA
PHOTOGRAPHER: KARMEN BISNER
DATE: 2005

NEGATIVE AT: MARITIME HERITAGE PROGRAM
NATIONAL PARK SERVICE
WASHINGTON, DC

SECOND STORY EXTERIOR, MAIN
GALLERY, LOOKING WEST.

PHOTO # 3



10/11/05
Duxbury Pier Light Station
Plymouth County, Massachusetts
Photo # 4

DUXBURY PIER LIGHT
PLYMOUTH COUNTY, MA
PHOTOGRAPHER: KARMEN BISHER
DATE: 2005
NEGATIVE AT: MARITIME HERITAGE PROGRAM
NATIONAL PARK SERVICE
WASHINGTON, DC
FIRST STORY INTERIOR, SEGMENTAL-ARCH
STORAGE SPACES.
PHOTO # 4



26
Duxbury Pier Light Station
Plymouth County, Massachusetts
Photo # 5

DUXBURY PIER LIGHT
PLYMOUTH COUNTY, MA
PHOTOGRAPHER: KARMEN BISHER
DATE: 2005

NEGATIVE AT: MARITIME HERITAGE PROGRAM
NATIONAL PARK SERVICE
WASHINGTON, DC

FIRST STORY INTERIOR, WOODEN
DOUBLE-DOORS.

PHOTO # 5



10-26-05/33
Duxbury Pier Light Station
Plymouth County, Massachusetts
Photo # 6

DUXBURY PIER LIGHT
PLYMOUTH COUNTY, MA
PHOTOGRAPHER: KARMEN BISHER
DATE: 2005
NEGATIVE AT: MARITIME HERITAGE PROGRAM
NATIONAL PARK SERVICE
WASHINGTON, DC
LANTERN PARAPET WALL DOOR
AND GALLERY,
PHOTO # 6



Duxbury Pier Light Station
Plymouth County, Massachusetts
Photo # 7

DUXBURY PIER LIGHT
PLYMOUTH COUNTY, MA
PHOTOGRAPHER: UNKNOWN
DATE: 1951

NEGATIVE AT: U.S. COAST GUARD HISTORIAN'S OFFICE
U.S. COAST GUARD HEADQUARTERS
WASHINGTON, DC

EXTERIOR VIEW, LOOKING NORTH
PHOTO # 7

OFFICIAL U. S. COAST GUARD PHOTO

AIR STATION, S. O. W. M. E. S. S.

NO. 13-3 DATE MAY 1951

UNIT Duxbury Pier Light

MADE FOR

SUBJECT

National Register of Historic Places
Memo to File

Correspondence

The Correspondence consists of communications from (and possibly to) the nominating authority, notes from the staff of the National Register of Historic Places, and/or other material the National Register of Historic Places received associated with the property.

Correspondence may also include information from other sources, drafts of the nomination, letters of support or objection, memorandums, and ephemera which document the efforts to recognize the property.

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: NOMINATION

PROPERTY Duxbury Pier Light
NAME:

MULTIPLE Light Stations of the United States MPS
NAME:

STATE & COUNTY: MASSACHUSETTS, Plymouth

DATE RECEIVED: 4/25/14 DATE OF PENDING LIST: 5/20/14
DATE OF 16TH DAY: 6/04/14 DATE OF 45TH DAY: 6/11/14
DATE OF WEEKLY LIST:

REFERENCE NUMBER: 14000287

REASONS FOR REVIEW:

APPEAL: N DATA PROBLEM: N LANDSCAPE: N LESS THAN 50 YEARS: N
OTHER: N PDIL: N PERIOD: N PROGRAM UNAPPROVED: N
REQUEST: Y SAMPLE: N SLR DRAFT: N NATIONAL: Y

COMMENT WAIVER: N

ACCEPT RETURN REJECT 6.4.2014 DATE

ABSTRACT/SUMMARY COMMENTS:

*Meets the Requirements of MPS.
The Duxbury Light was an advance in off-shore construction technology. It served as the prototype for other Iron, caisson type lights (Sparkplug lights) constructed over the next 4 decades*

RECOM./CRITERIA Accept Atc

REVIEWER J. Crabtree DISCIPLINE _____

TELEPHONE _____ DATE _____

DOCUMENTATION see attached comments Y/N Y see attached SLR Y/N

If a nomination is returned to the nominating authority, the nomination is no longer under consideration by the NPS.



TOWN OF PLYMOUTH

11 Lincoln Street
Plymouth, Massachusetts 02360

FAX: (508) 830-4140

Board of Selectmen
Town Manager
(508) 747-1620 ext. 100

Human Resources
(508) 747-1620 ext. 101

Don _____

March 11, 2014

E.F. Wandelt, Chief
Office of Environmental Management
U.S. Coast Guard
2703 Martin Luther King Jr. Ave SE
Washington DC 20593-7714

Dear Mr. Wandelt:

On behalf of the Board of Selectmen of the Town of Plymouth, I would like to offer our enthusiastic support for the nomination of Duxbury Pier Light—also known to locals as “Bug Light”—to the National Register of Historic Places.

As the first U.S. lighthouse of its kind to be built on submerged land, Duxbury Pier Light has faithfully served those navigating the waters of Plymouth Harbor and Cape Cod Bay since 1871. In addition to its importance as a navigational aid and its design/engineering significance, Duxbury Pier Light is a beloved and symbolic landmark to the people of Plymouth and the South Shore. The value of “Bug Light” to the community has inspired local citizens to volunteer their service to the restoration and maintenance of the lighthouse, to preserve the historic structure for future generations.

Considering both the maritime and historical significance of this landmark, the Plymouth Board of Selectmen unanimously voted to recommend and support the nomination of Duxbury Pier Light to the National Register of Historic Places. On behalf of the Board, I would like to thank you and your colleagues, most sincerely, for your efforts to acquire this much-deserved recognition for Plymouth’s “Bug Light.” If you should need any further assistance from the Town of Plymouth towards this endeavor, please do not hesitate to contact the Selectmen’s Office at (508) 747-1620, ext. 106.

With Thanks and Regards,

Mathew J. Muratore, Chairman
Plymouth Board of Selectmen



Town of Duxbury, Massachusetts

OFFICE OF THE BOARD OF SELECTMEN AND TOWN MANAGER

March 3, 2014



Dan

Chief E.F. Wandelt
Office of Environmental Management
2703 Martin Luther King Jr. Ave SE
US Coast Guard –STOP 7714
Washington DC 20593-7714

RE: Duxbury Pier Light in Plymouth County, Massachusetts / Light List No. 12580
National Register of Historic Places

Dear Chief Wandelt:

Upon receipt of your letter of January 16, 2014 the Duxbury Board of Selectmen referred this matter to the Duxbury Historical Commission for its consideration and feedback. Having received the enthusiastic support of the Duxbury Historical Commission, the Duxbury Board of Selectmen is pleased to add their endorsement for all the reasons stated in the accompanying letter.

Recognition of the Duxbury Pier Light (also known as “Bug Light”) given its role in maritime history and its architectural and engineering significance would be most worthy. Accordingly, we wholeheartedly support the U.S. Coast Guard’s nomination of this property to the National Register of Historic Places.

Should you require anything further, please do not hesitate to let us know.

Sincerely,

Duxbury Board of Selectmen



David J. Madigan, Chair

Theodore J. Flynn

Shawn Dahlen

cc: Massachusetts Historical Commission



Town of Duxbury Historical Commission



Dan

March 3, 2014

Chief E.F. Wandelt
Office of Environmental Management
2703 Martin Luther King Jr. Ave SE
US Coast Guard –STOP 7714
Washington DC 20593-7714

RE: Duxbury Pier Light in Plymouth County, Massachusetts / Light List No. 12580
National Register of Historic Places

Dear Chief Wandelt:

As Chairman of the Duxbury Historical Commission I am pleased to express our enthusiastic endorsement of the United States Coast Guard's application to the Interior Department for nomination of **Duxbury Pier Lighthouse** (which we know as "Bug Light") to the National Register of Historic Places. Your letter was passed along to us from the Duxbury Board of Selectmen's office requesting comments for the National Register Nomination for the Duxbury Pier Light.

As you know, Bug Light was built in 1871 and is the first of the "sparkplug" lighthouses built in this country. This innovative on-site construction technique exists as a primary exemplar of a unique phase in American history. The brief Reconstruction Era in the North left a permanent imprint on the community which can still be read today. Somewhat coincidentally to this USCG application, the Duxbury Historical Commission also recently nominated and was pleased to see the acceptance by the Department of the Interior another Nationally Registered Historic Place, the Tarkiln Schoolhouse. The Tarkiln School was also constructed on-site, in the western district of Duxbury in same the year of 1871. Both of these unique properties represent a critical post-Reconstruction juncture in U.S. History. We are very pleased that your office has undertaken the initiative to take the Bug Light application forward.

Duxbury's "Bug light" has been a visual icon and safety beacon for nearly 150 years for the residents and boaters around the treacherous horn of Saquish Head to the north, and Plymouth's Long Beach to the south, leading into the protected bays of Plymouth, Kingston and Duxbury. Due to the large bay area and narrow navigable channel, Bug Light is an essential navigational aide to mariners unfamiliar with the local waters.

It is our hope that the designation of Bug Light as a National Historic Place will provide a vital connection to those discovering Plymouth, Kingston, and Duxbury for the first time, with the mariners of days past. Duxbury Historical Commission members can attest to the many inquiries of visiting tourists who ask questions about our beloved Bug Light, what it is, and why it is there.



Town of Duxbury Historical Commission



RE: Duxbury Pier Light - National Register of Historic Places (Continued)

As evidence of the level of community support for the unique value of the Duxbury Pier Light, the Historical Commission would like to ensure that the United States Coast Guard and the U.S. Department of the Interior are aware that a non-profit corporation called **Plymouth Gurnet and Bug Light** was formed in 1983 to raise funds for future maintenance of both lighthouses, as well as to provide for long-term improvements of the Keeper's Cottage. The corporation's Mission Statement is:

"The purpose of PG&BL shall be to operate a non-profit organization, which shall be actively engaged in the restoration, preservation, and maintenance of Duxbury Pier Light (Bug Light) and the Plymouth Light Station (Gurnet Light and the Keeper's Cottage), and to encourage public awareness and support of these unique historic monuments to our nautical past".

Members of the local community self-organized to preserve these unique and vital historic maritime resources. Due to these efforts, in 2011 Duxbury Pier Light was scraped, primed and painted at a cost of over \$200,000. This investment was made possible through generous donations from members of the community.

The Duxbury Historical Commission enthusiastically endorse the application for inclusion of the Duxbury Pier Lighthouse into the National Register of Historic Places, and stand ready to support this initiative in any way we can.

Sincerely,

A handwritten signature in cursive script, appearing to read "Robert C. Vose, III".

Robert C. Vose, III
Chairman - Duxbury Historical Commission

RCV:cam

cc: Secretary of the Commonwealth
Massachusetts Historical Commission
220 Morrissey Boulevard
Boston, MA 02125-3314



DUXBURY RURAL AND HISTORICAL SOCIETY

Box 2865, Duxbury, MA 02331
phone: 781-934-6106
fax: 781-934-5730
www.duxburyhistory.org

March 14, 2014

Daniel Koski-Karell, Ph.D.
Office of Environmental Management
COMDT CG-47
U.S. Coast Guard Headquarters
U.S. Department of Homeland Security

Dear Dr. Koski-Karell,

The Director and Trustees of the Duxbury Rural & Historical Society are pleased to support the nomination of Duxbury Pier Light for the National Register of Historic Places.

This iconic lighthouse, known to locals as Bug Light, has welcomed mariners to Duxbury Bay for nearly 150 years. As you know, Duxbury and Plymouth Bays are very shallow. Clear markings of the narrow channels are essential for safe navigation. Indeed, an early chart of the Bay (*An actual Survey of The Sea Coast from NEW YORK to the I. CAPE BRITON* by Capt. Cyprian Southack, 1729) noted that "Plymouth Bay is very Shoal and full of Flatts within and on the Sea board very dangerous for Brown Bank and the Monument Land..." Thus the construction of Bug Light in 1871—after 250 years of dangerous navigation in the home waters of the Pilgrims—made the entrance to the main northerly channel into Duxbury Bay considerably safer. Bug Light saved lives over the next hundred years not only through its service as a beacon, but through the individual efforts of the many lighthouse keepers who served the light until it was automated.

Because of both its history and its value as a navigational aid, Bug Light is much beloved by the residents of Duxbury and Plymouth. When the Coast Guard announced plans in 1983 to demolish the structure and replace it with a fiberglass beacon, local citizens organized a drive to restore the structure. In partnership with the Coast Guard, this group has worked hard to maintain it for the past 30 years, raising over \$100,000 for this effort.

We feel that Bug Light is eminently qualified for inclusion in the National Register of Historic Places, based on its maritime history and on its novel engineering, and urge the National Park Service to grant this designation.

Sincerely,

David P. Corey, President
Board of Trustees

U.S. Department of
Homeland Security

United States
Coast Guard



Commandant
United States Coast Guard

2703 Martin Luther King Jr. Ave SE
U.S. Coast Guard STOP 7714
Washington DC 20593-7714
Staff Symbol: CG-47
Phone: (202) 475-5687
Fax: (202) 372-8419
Email: edward.f.wandelt@uscg.mil



16475

APR 23 2014

MEMORANDUM

From: *E. F. Wandelt*
E. F. Wandelt, Chief
COMDT (CG-47)

Reply to: Dr. Daniel Koski-Karell
Attn of: (202) 475-5683

To: Mr. J. Paul Loether, Chief
National Register of Historic Places and National Historic Landmarks Program
National Park Service
1849 C Street NW (Stop 2280)
Washington, DC 20240

Subj: DUXBURY PIER LIGHT, PLYMOUTH COUNTY, MASSACHUSETTS

Ref: (a) National Historic Preservation Act Section 110, 16 U.S.C. 470h-2
(b) Programmatic Agreement Regarding Outgranting of Historic Lighthouse Properties

1. The Coast Guard nominates the Duxbury Pier Light in Plymouth County, MA, for listing on the National Register of Historic Places (NRHP). The nomination package is enclosed (Enclosure (1)).
2. The Massachusetts State Historic Preservation Officer's comments on this NRHP nomination were requested and received. They have been incorporated into this property's NRHP registration form where deemed appropriate.
3. Comments from appropriate local officials were solicited and four responses were received. Copies of this correspondence are included in the enclosure.

#

Enclosure: (1) NRHP nomination package for the Duxbury Pier Light

Copy: CG SILC (with encl)
CG CEU Providence (with encl)
CG D1(dpw) (with encl)

U.S. Department of
Homeland Security

United States
Coast Guard



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United States Coast Guard

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Email: edward.f.wandelt@uscg.mil

16475

JAN 16 2014

Honorable Daniel A. Pallotta, Chairman
Plymouth County Commissioners
11 South Russell Street
Plymouth, MA 02360

SUBJECT: NATIONAL REGISTER NOMINATION FOR DUXBURY PIER LIGHT

Dear Mr. Pallotta:

The U. S. Coast Guard (USCG) has determined that the Duxbury Pier Light in Plymouth County, Massachusetts, is a historic property eligible for listing in the National Register of Historic Places (NRHP). We are proposing to nominate this lighthouse for official inclusion in the NRHP. A summary of the NRHP nomination is enclosed for your information (enclosure (1)). This action is being performed pursuant to the authorities contained in Section 110 of the National Historic Preservation Act, the National Historic Lighthouse Preservation Act, and the National Park Service regulations at 36 Code of Federal Regulations Part 60.9.

As part of the nomination process, the USCG is seeking your comments. Please provide any comments within 45 days from the date your office receives this letter. If we receive no response from your office within 45 days, we will assume you have no comments. We have also submitted the NRHP nomination form for the Duxbury Pier Light to the Massachusetts State Historic Preservation Officer for review and comment.

Thank you in advance for your assistance in this matter. If you have any questions or desire additional information, please feel free to contact Dr. Daniel Koski-Karell at (202) 475-5683.

Sincerely,

A handwritten signature in black ink, appearing to read "Edward F. Wandelt".

E. F. WANDELT

Chief

Office of Environmental Management
U. S. Coast Guard

Enclosure: (1) Summary of NRHP nomination for the Duxbury Pier Light

Copy (w/o enclosure): J. Paul Loether, National Park Service
COMDT (CG-0942)
CG SILC
CG CEU Providence
CG D1 (dpw)

U.S. Department of
Homeland Security

United States
Coast Guard



Commandant
United States Coast Guard

2703 Martin Luther King Jr. Ave SE
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16475

JAN 16 2014

Honorable Mathew J. Muratore, Chairman
Board of Selectmen, Town of Plymouth
11 Lincoln Street
Plymouth, MA 02360

SUBJECT: NATIONAL REGISTER NOMINATION FOR DUXBURY PIER LIGHT

Dear Mr. Muratore:

The U. S. Coast Guard (USCG) has determined that the Duxbury Pier Light in Plymouth County, Massachusetts, is a historic property eligible for listing in the National Register of Historic Places (NRHP). We are proposing to nominate this lighthouse for official inclusion in the NRHP. A summary of the NRHP nomination is enclosed for your information (enclosure (1)). This action is being performed pursuant to the authorities contained in Section 110 of the National Historic Preservation Act, the National Historic Lighthouse Preservation Act, and the National Park Service regulations at 36 Code of Federal Regulations Part 60.9.

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Thank you in advance for your assistance in this matter. If you have any questions or desire additional information, please feel free to contact Dr. Daniel Koski-Karell at (202) 475-5683.

Sincerely,



E. F. WANDELT

Chief

Office of Environmental Management

U. S. Coast Guard

Enclosure: (1) Summary of NRHP nomination for the Duxbury Pier Light

Copy (w/o enclosure): J. Paul Loether, National Park Service
COMDT (CG-0942)
CG SILC
CG CEU Providence
CG D1 (dpw)

U.S. Department of
Homeland Security

United States
Coast Guard



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16475

JAN 16 2014

Honorable David J. Madigan, Chairman
Board of Selectmen, Town of Duxbury
878 Tremont Street
Duxbury, MA 02332

SUBJECT: NATIONAL REGISTER NOMINATION FOR DUXBURY PIER LIGHT

Dear Mr. Madigan:

The U. S. Coast Guard (USCG) has determined that the Duxbury Pier Light in Plymouth County, Massachusetts, is a historic property eligible for listing in the National Register of Historic Places (NRHP). We are proposing to nominate this lighthouse for official inclusion in the NRHP. A summary of the NRHP nomination is enclosed for your information (enclosure (1)). This action is being performed pursuant to the authorities contained in Section 110 of the National Historic Preservation Act, the National Historic Lighthouse Preservation Act, and the National Park Service regulations at 36 Code of Federal Regulations Part 60.9.

As part of the nomination process, the USCG is seeking your comments. Please provide any comments within 45 days from the date your office receives this letter. If we receive no response from your office within 45 days, we will assume you have no comments. We have also submitted the NRHP nomination form for the Duxbury Pier Light to the Massachusetts State Historic Preservation Officer for review and comment.

Thank you in advance for your assistance in this matter. If you have any questions or desire additional information, please feel free to contact Dr. Daniel Koski-Karell at (202) 475-5683.

Sincerely,



E. F. WANDELT

Chief

Office of Environmental Management

U. S. Coast Guard

Enclosure: (1) Summary of NRHP nomination for the Duxbury Pier Light

Copy (w/o enclosure): J. Paul Loether, National Park Service
COMDT (CG-0942)
CG SILC
CG CEU Providence
CG D1 (dpw)

U.S. Department of
Homeland Security

United States
Coast Guard



Commandant
United States Coast Guard

2703 Martin Luther King Jr. Ave SE
U.S. Coast Guard STOP 7714
Washington DC 20593-7714
Staff Symbol: CG-47
Phone: (202) 475-5687
Fax: (202) 372-8419
Email: edward.f.wandelt@uscg.mil

16475

JAN 16 2014

Honorable Elaine A. Fiore, Chairman
Board of Selectmen, Town of Kingston
26 Evergreen Street
Kingston, MA 02364

SUBJECT: NATIONAL REGISTER NOMINATION FOR DUXBURY PIER LIGHT

Dear Ms. Fiore:

The U. S. Coast Guard (USCG) has determined that the Duxbury Pier Light in Plymouth County, Massachusetts, is a historic property eligible for listing in the National Register of Historic Places (NRHP). We are proposing to nominate this lighthouse for official inclusion in the NRHP. A summary of the NRHP nomination is enclosed for your information (enclosure (1)). This action is being performed pursuant to the authorities contained in Section 110 of the National Historic Preservation Act, the National Historic Lighthouse Preservation Act, and the National Park Service regulations at 36 Code of Federal Regulations Part 60.9.

As part of the nomination process, the USCG is seeking your comments. Please provide any comments within 45 days from the date your office receives this letter. If we receive no response from your office within 45 days, we will assume you have no comments. We have also submitted the NRHP nomination form for the Duxbury Pier Light to the Massachusetts State Historic Preservation Officer for review and comment.

Thank you in advance for your assistance in this matter. If you have any questions or desire additional information, please feel free to contact Dr. Daniel Koski-Karell at (202) 475-5683.

Sincerely,

A handwritten signature in black ink, appearing to read "Edward F. Wandelt".

E. F. WANDEL

Chief

Office of Environmental Management

U. S. Coast Guard

Enclosure: (1) Summary of NRHP nomination for the Duxbury Pier Light

Copy (w/o enclosure): J. Paul Loether, National Park Service
COMDT (CG-0942)
CG SILC
CG CEU Providence
CG D1 (dpw)

U.S. Department of
Homeland Security

United States
Coast Guard



Commandant
United States Coast Guard

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16475

JAN 16 2014

Honorable Cheryl Andrews-Maltais, Chairwoman
Wampanoag Indian Tribe of Gay Head (Aquinnah) of Massachusetts
20 Black Brook Road
Aquinnah, MA 02535-1546

SUBJECT: NATIONAL REGISTER NOMINATION FOR DUXBURY PIER LIGHT

Dear Ms. Andrews-Maltais:

The U. S. Coast Guard (USCG) has determined that the Duxbury Pier Light in Plymouth County, Massachusetts, is a historic property eligible for listing in the National Register of Historic Places (NRHP). We are proposing to nominate this lighthouse for official inclusion in the NRHP. A summary of the NRHP nomination is enclosed for your information (enclosure (1)). This action is being performed pursuant to the authorities contained in Section 110 of the National Historic Preservation Act, the National Historic Lighthouse Preservation Act, and the National Park Service regulations at 36 Code of Federal Regulations Part 60.9.

As part of the nomination process, the USCG is seeking your comments. Please provide any comments within 45 days from the date your office receives this letter. If we receive no response from your office within 45 days, we will assume you have no comments. We have also submitted the NRHP nomination form for the Duxbury Pier Light to the Massachusetts State Historic Preservation Officer for review and comment.

Thank you in advance for your assistance in this matter. If you have any questions or desire additional information, please feel free to contact Dr. Daniel Koski-Karell at (202) 475-5683.

Sincerely,

A handwritten signature in black ink, appearing to read "Edward F. Wandelt".

E. F. WANDELT

Chief

Office of Environmental Management

U. S. Coast Guard

Enclosure: (1) Summary of NRHP nomination for the Duxbury Pier Light

Copy (w/o enclosure): J. Paul Loether, National Park Service
COMDT (CG-0942)
CG SILC
CG CEU Providence
CG D1 (dpw)

U.S. Department of
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16475

JAN 16 2014

Honorable Matthew Thomas, Chief Sachem
Narragansett Indian Tribe of Rhode Island
P.O. Box 268
Charlestown, RI 02813

SUBJECT: NATIONAL REGISTER NOMINATION FOR DUXBURY PIER LIGHT

Dear Chief Thomas:

The U. S. Coast Guard (USCG) has determined that the Duxbury Pier Light in Plymouth County, Massachusetts, is a historic property eligible for listing in the National Register of Historic Places (NRHP). We are proposing to nominate this lighthouse for official inclusion in the NRHP. A summary of the NRHP nomination is enclosed for your information (enclosure (1)). This action is being performed pursuant to the authorities contained in Section 110 of the National Historic Preservation Act, the National Historic Lighthouse Preservation Act, and the National Park Service regulations at 36 Code of Federal Regulations Part 60.9.

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Thank you in advance for your assistance in this matter. If you have any questions or desire additional information, please feel free to contact Dr. Daniel Koski-Karell at (202) 475-5683.

Sincerely,

A handwritten signature in black ink, appearing to read "E. F. Wandelt".

E. F. WANDELT

Chief

Office of Environmental Management

U. S. Coast Guard

Enclosure: (1) Summary of NRHP nomination for the Duxbury Pier Light

Copy (w/o enclosure): J. Paul Loether, National Park Service
COMDT (CG-0942)
CG SILC
CG CEU Providence
CG D1 (dpw)

NATIONAL REGISTER OF HISTORIC PLACES NOMINATION
DUXBURY PIER LIGHT
PLYMOUTH COUNTY, MASSACHUSETTS

The Duxbury Pier Light, also known as Bug Light, is an offshore lighthouse located approximately 0.7 mile southwest of Saquish Head in Plymouth County, Massachusetts. It marks a rocky hazard to navigation at the entry to Duxbury Bay from Plymouth Bay, approximately five miles northeast of the Town of Plymouth. This property is an operating aid to navigation owned by the U.S. Coast Guard (USCG) and is identified as number 12580 on the regional Light List. It is accessible by water.

The Duxbury Pier Light was officially established as a Federal aid to navigation in 1871. Based on its historic character, the USCG intends to nominate this property for listing in the National Register of Historic Places (NRHP).

The National Historic Preservation Act of 1966, as amended (NHPA) (16 United States Code 470 *et seq.*) authorizes the Secretary of the Interior to expand and maintain a national register of districts, sites, buildings, structures, and objects significant in American history, architecture, archaeology, engineering, and culture. Federal agencies are charged with identifying, evaluating, and nominating such properties under their control to the NRHP. The National Historic Lighthouse Preservation Act of 2000 (Public Law 106-355) amended the NHPA for the purpose of establishing a National Historic Lighthouse Preservation Program.

The USCG has prepared a NRHP registration form for the Duxbury Pier Light. It has been sent to the Massachusetts State Historic Preservation Officer for review and comment concerning the USCG position that the property is eligible for listing in the NRHP. Pursuant to implementing regulation 36 Code of Federal Regulations 60.9, we are notifying local elected officials who may have an interest in the property and inviting them to comment on the nomination during the 45-day comment period. The property is described below.

Site Name and Location:

- Duxbury Pier Light
- Located offshore in Plymouth Bay, approximately 0.7 mile southwest of Saquish Head in Plymouth County, MA
- Light List Number 12580

Owner:

- U.S. Coast Guard COMDT (CG-47)
ATTN: Dr. Daniel Koski-Karell
US Coast Guard – STOP 7714
2703 Martin Luther King Jr. Avenue SE
Washington, DC 20593-7714

Summary Description:

The Duxbury Pier Light includes a conical cast iron caisson foundation and conical cast iron superstructure topped with a lighthouse lantern. It is surrounded by a circular gallery on the superstructure's second story level. This lighthouse is 47 feet tall and includes three stories in its conical tower. The caisson is 15 feet tall, filled with concrete, and surrounded by riprap. The structure's caisson

and first story are painted reddish-brown. The tower's second and third stories are painted white. The lantern, lantern gallery railing, and second story gallery are painted black. This lighthouse's optic is a modern automated beacon mounted in the lantern atop the light tower. It has a focal plane 35 feet above water level, signals a flashing red light, and is visible for six miles in clear weather. This property is also equipped with a fog signal that sounds a two-second blast every 15 seconds. The lighthouse's aid to navigation equipment is powered by batteries recharged using a solar array mounted on the lantern gallery railing.

The Duxbury Pier Light has two exterior access ladders that extend to water level. One leads to a door on the outside of the first story. The other provides access to the second story gallery. Ladders inside the superstructure provide access from one story to another and to the interior of the lighthouse's lantern. Access to the light tower's roof is by way of a 3-foot tall doorway in the lantern.

Summary Statement of Historical Significance:

This lighthouse was constructed in 1871 and was the first one built in the United States on submerged land using a cylindrical iron caisson. The use of caissons for underwater construction had been used previously for projects such as bridges. Its success at the Duxbury Pier Light was followed by the construction of a number of other U.S. lighthouses following the same engineering approach. The Duxbury Pier Light was staffed by resident keepers from its establishment in 1871 to 1964, when it was automated.

The Duxbury Pier Light is significant in the history of Plymouth County and the Commonwealth of Massachusetts. It is eligible for National Register of Historic Places listing under Criterion A for its association with the historic Federal government program to establish a nationwide system of aids to navigation in order to promote maritime safety and commerce. The Duxbury Pier Light exemplifies how this program was manifested in Massachusetts. This property is also eligible of NRHP listing under Criterion C for its architectural and engineering significance. It exemplifies how characteristics of late-nineteenth century lighthouse architecture and engineering were applied to the need to mark a submerged hazard to navigation at the entry to Duxbury Bay. The qualities of this structure's design, materials, and construction methods were applied to overcome difficulties relating to building an offshore lighthouse in a setting subject to adverse environmental conditions. The Duxbury Pier Light retains substantial integrity in terms of its design, setting, materials, workmanship, feeling, and association. It is a well-known landmark in the Plymouth County area.

Map and Photograph:

- Location map
- View of the Duxbury Pier Light, looking northwest