NPS Form 10-900
(Rev. 8-86)

OMB No. 1024-0018

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations of eligibility for individual properties or districts. See instructions in *Guidelines for Completing National Register Forms* (National Register Bulletin 16). Complete each item by marking "x" in the appropriate box or by entering the requested information. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, styles, materials, and areas of significance, enter only the categories and subcategories listed in the instructions. For additional space use continuation sheets (Form 10-900a). Type all entries.

1. Name of Property

historic name Lightship No. 116, "Fenwick," "Chesapeake," "Delaware"
other names/site number Chesapeake

2. Location

street & number Pier Four, Inner Harbor ☐ not for publication
city, town Baltimore ☐ vicinity
state Maryland code 24 county Baltimore code 510 zip code

3. Classification

Ownership of Property	Category of Property	Number of Resources within Property	
		Contributing	Noncontributing
☐ private	☐ building(s)		buildings
☐ public-local	☐ district		sites
☐ public-State	☐ site		structures
☒ public-Federal	☒ structure	1	objects
	☐ object		Total

Name of related multiple property listing:
N/A

Number of contributing resources previously listed in the National Register 1

4. State/Federal Agency Certification

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

Signature of certifying official — Date

State or Federal agency and bureau

In my opinion, the property ☐ meets ☐ does not meet the National Register criteria. ☐ See continuation sheet.

Signature of commenting or other official — Date

State or Federal agency and bureau

5. National Park Service Certification

I, hereby, certify that this property is:

☐ entered in the National Register.
☐ See continuation sheet.
☐ determined eligible for the National Register. ☐ See continuation sheet.
☐ determined not eligible for the National Register.
☐ removed from the National Register.
☐ other, (explain:) _____

Signature of the Keeper — Date of Action

6. Function or Use

Historic Functions (enter categories from instructions)	Current Functions (enter categories from instructions)
Government-Aid to Navigation	Museum

7. Description

Architectural Classification (enter categories from instructions)	Materials (enter categories from instructions)
N/A	foundation N/A walls N/A roof N/A other N/A

Describe present and historic physical appearance.

Formerly "Fenwick," "Chesapeake," and "Delaware," the 1930 lightship No. 116, once again known by her U.S. Coast Guard designation of "Chesapeake" (WLV 538), is a floating historic museum vessel moored at Pier 3 in Baltimore's inner harbor near the foot of Gay and Pratt Streets. Owned by the National Park Service, but on a 25-year loan to the City of Baltimore until 2006, No. 116 is operated by the Baltimore Maritime Museum, whose offices and exhibits are housed aboard the vessel.

NO. 116 AS BUILT AND MODIFIED DURING HER CAREER

As built in 1930, the lightship designated No. 116 is a welded steel-hulled vessel 133.3 feet in length with a 30-foot beam and a 13-foot draft. The vessel displaces 630 tons. [1] Built to the characteristic lines of a 20th century American lightship, No. 116's double-riveted hull was constructed to be strong and seaworthy. As a typical lightship hull, No. 116 shared many characteristics with her contemporary steel sisters:

> The American vessel generally...has her lighting elements divided into two, and two lamps are arranged, one each at the top of a pole mast. Cones, cages, and other day marks are arranged on the masts above or below the lanterns....There is usually a bar keel, big rise of floor, and large tumble home, the outline of midship section being somewhat reminiscent of that of an icebreaker. The

[X] See continuation sheet

8. Statement of Significance

Certifying official has considered the significance of this property in relation to other properties:

☐ nationally ☐ statewide ☐ locally

Applicable National Register Criteria ☐A ☐B ☐C ☐D NHL 1,4

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

Areas of Significance (enter categories from instructions)	Period of Significance	Significant Dates
Government	1930-1970	1933-1965
Humanitarian	1930-1970	1930-1970
Architecture (Naval)	1930	1930

NHL XIV-B: Transportation: Ships, Boats, Lighthouses, and Other Structures

Cultural Affiliation: N/A

Significant Person: N/A

Architect/Builder: Charleston Drydock and Machine Co., Charleston, South Carolina

State significance of property, and justify criteria, criteria considerations, and areas and periods of significance noted above.

The 1930 lightship No. 116, now known by her former designation of "Chesapeake," is one of a small number of preserved historic American lightships. Essential partners with lighthouses as aids to navigation along the coast of the United States, lightships date to 1820 when the first vessel to serve as an aid to navigation was commissioned. Surviving lightships in the United States date from 1902 to 1952, when the last was built and launched. The years 1929 and 1930 saw the construction of several of these vessels and the construction of the first lightships to be powered by Diesel-electric plants. This significant change in lightship power plants and propulsion marked the third generation of lightship design, of which No. 116 is the best preserved example. Only four other third generation lightships, No. 111, No. 114, 115, and No. 118, survive. No. 111 is a hulk in a shipbreaker's yard; No. 114, at New Bedford, Massachusetts, has a diminshed level of integrity and is not in good condition. No. 115, grounded at Whitehaven, Maryland, is missing most of her equipment, one mast, and has suffered two sinkings and an engineroom fire. No. 118, a direct-diesel

☒ See continuation sheet

9. Major Bibliographical References

PLEASE SEE FOOTNOTES IN TEXT.

☐ See continuation sheet

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 # _____

Primary location of additional data:

- ☐ State historic preservation office
- ☐ Other State agency
- ☐ Federal agency
- ☐ Local government
- ☐ University
- ☒ Other

Specify repository: Baltimore Maritime Museum

10. Geographical Data

Acreage of property .1

UTM References

	Zone	Easting	Northing
A	18	361180	4349500
B			
C			
D			

☐ See continuation sheet

Verbal Boundary Description

All that area encompassed within the extreme length, beam, and depth of the vessel.

☐ See continuation sheet

Boundary Justification

The boundary encompasses the entire area of the vessel as she floats at her berth.

☐ See continuation sheet

11. Form Prepared By

name/title James P. Delgado, Maritime Historian
organization National Park Service (418) date June 30, 1989
street & number P.O. Box 37127 telephone (202) 343-9528
city or town Washington state D.C. zip code 20013-7127

> sheer is severe, rising rapidly both to the bow and to the stern. The bow is a strong forging and sharply raked, containing the hawse pipe for the mushroom mooring anchor. There is also the hawse pipe for the standby anchor. The stern is of stereotypical single knuckle type and contains the rudder, sternpost of usual construction, and the propelling wheel....The ships generally have two complete decks and a third part deck forward and aft of the machinery space. Side doors in the hull give access to the second deck and tend to follow...characteristic side loading.... [2]

No. 116 is painted in the colors used by the Coast Guard on American lightships after 1945. Her hull is bright red, with buff or spar colored masts and superstructure, and the name of her station painted in bold white block letters on the hull. Originally painted as "Fenwick," she was repainted "Chesapeake" in 1933 and "Delaware" in 1965. In 1971 she was repainted "Chesapeake" when decommissioned and turned over to the National Park Service.

The design of No. 116 reflected improvements made in lightship design by the United States Lighthouse Service to create a third generation of American lightships. Among those improvements, as embodied in No. 116, were the placement of the hawse pipe in the bow as opposed to immediately abaft the stem, the installation of bilge keels to reduce rolling, a reduced metacentric height, an increased bow height and sheer, and most importantly a shift from wood to metal hulls and unpowered to powered vessels. An improved version of the first generation "modern" lightships, No. 116 was a drier, roomier vessel with greater ability to stay on station in the roughest seas. [3] Below decks the lightship was divided into two decks. The lower deck is occupied by the engineroom, motor room, work shops, and storage.

The berth deck was divided into several cabins and staterooms. Aft is the wardroom, which is flanked by the staterooms for the

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mates and engineering officers. Forward are the crew's quarters, cook's cabin, recreation room, radar room, crew's head, and the anchor windlass. The windlass, driven by an General Electric-manufactured electric motor, was manufactured by the Hyde Windlass Co. in 1929. Midships, surrounded by steel bulkheads, is the upper generator and motor rooms; the galley is in the center of the ship. It is flanked by the crew's mess to port and the cook's prep area to starboard. Above decks, and reached by ladders from the berth deck, are the pilothouse, with the captain's cabin aft of and connected to it, and the radio and weather rooms. Between the cabins is the engineroom trunk and the single funnel.

The principal feature of the vessel above decks are the two steel masts that mount the lights. The foremast is 52.9 feet above deck level, and the mainmast stands 53.2 feet high. The lights are 66 feet above the water and could be seen for 14 miles. The illuminating apparatus is a 375mm electric lens, 13,000-candlepower lantern on the foremast. When built the lightship was equipped with a submarine bell and an electric diaphragm horn fog signal; in 1935 the submarine bell and diaphragm horn were removed and an air diaphone F2T fog signal was installed. [4] The lightship additionally carries a hand-operated bell at the bow; mounted in a steel gallows, the bronze bell is inscribed "USLHS, 1930."

One of the first Diesel-electric lightships (her sister No. 100 was the first), No. 116 was built with a single 350-h.p. electric motor driven by twin GM 671, marine Diesel engines that developed 350-h.p. at 300 revolutions per minute. Ther electric motor drove her single 5-foot, 9-inch diameter screw. No. 116's maximum speed was 10 knots; the vessel averaged 9 knots. [5]

No. 116 underwent normal repair and maintenance throughout her career. The only modifications were the installation of a radio beacon in 1933, the change in horns, the 1945 installation of surface search radar, and the temporary armament of the lightship between 1942 and 1945. During the Second World War No. 116 carried two 20mm guns. The only major damage to the vessel was in 1936 when she dragged during a hurricane. The deck furniture was swept away and one mushroom anchor was lost.

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PRESENT APPEARANCE AND CONDITION OF NO. 116

No. 116 is maintained in good condition by the Baltimore Maritime Museum. Moored at Pier 3, the vessel is boarded by a gangway attached to the starboard side. The hull is painted bright red, with "Chesapeake" painted alongside in large white letters, reflecting the station most appropriate to No. 116's present location. The decks and superstructure are painted in a buff color. Equipment on deck includes a motor lifeboat, the manual fog bell, and a 7-1/2-ton mushroom anchor stowed on the port bow.

Below decks the lightship retains her original equipment and furnishings. This includes the leather couch, table, and chairs in the wardroom, bunks, complete with bedding, in the officers' cabins, dinnerware stowed in racks in the mess, and cooking utensils and comestibles in the galley, which remains in use as an operational feature of the ship. The radio room retains its equipment and is also a licensed, operational feature. The engineroom is in good condition and No. 116 is capable of navigating under her own power. The vessel retains a high level of integrity and in appearance is little changed from her years of operation from 1930 until 1970.

NOTES

1
... Annual List of Merchant Vessels of the United States (Washington, D.C.: Government Printing Office, 1931) and James P. Delgado, ed. Evaluative Inventory of Large Preserved Historic Vessels in the United States (Washington, D.C.: National Park Service, 1987), entry for "Chesapeake."

2
A.C. Hardy, American Ship Types: A Review of the Work, Characteristics, and Construction of Ship Types Peculiar to the Waters of the North American Continent (New York: D. Van Nostrand Co., Inc., 1927) pp. 254-256.

3
Ralph C. Shanks, Jr. and Janetta Thompson Shanks, Lighthouses and Lifeboats of the Redwood Coast (San Anselmo, California: Costano Books, 1978) p. 143.

SEE CONTINUATION SHEET

4
Willard Flint, Lightships of the United States Government (Washington, D.C.: U.S. Coast Guard, 1989), unpaginated, entry for Lightship No. 116.

5
Ibid.

propelled sister ship, is a museum vessel at Lewes, Delaware. She possesses a good level of integrity but not as high as No. 116; she also was associated with stations of lesser significance than Chesapeake, "Cornfield Point," "Cross Rip," and "Boston." Associated with and marking the safe entry into the nationally significant harbors of Chesapeake Bay, No. 116 is not only the best preserved example of the 1930s, 133-foot class lightship; her career represents the role of the lightship as a floating aid to navigation. Lightships also played significant roles in World War II. Many were armed and served as "examination vessels," helping guard important ports and harbors. No. 116 served as an examination vessel off Cape Cod and helped protect the important port of Boston.

The preceding statement of significance is based on the more detailed discussion which follows.

THE DEVELOPMENT OF THE AMERICAN LIGHTSHIP

While the first American lighthouse dates to the colonial era, the use of lightships is a more recent and 19th century phenomenon in the United States, though employed earlier in Europe. Moored on treacherous reefs, or marking the narrow approaches to a channel or harbor entrance too far offshore for a shoreside lighthouse's lens to reach, lightships were fewer in number than the hundreds of lighthouses -- 179 lightships were built between 1820 and the 1950s, and in 1909, the heyday of the United States Lighthouse Establishment, there were 51 lightships (46 on the eastern seaboard and 5 on the Pacific Coast) on station in the United States.

Among the more famous and significant lightship stations were "Ambrose," marking the southern entrance into New York harbor along the New Jersey coast; "Nantucket," marking not only the entrance to Boston harbor but also the American end of the transatlantic route; "Diamond Shoals" off the Outer Banks of North Carolina, which marked a dangerous spot along the coastal ocean highway by way of the Gulf Stream; and "San Francisco" on the bar 3 miles out from the Golden Gate.

The first lightship was a small wooden schooner moored on Chesapeake Bay. From this pioneer, the lightship type developed

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through the 19th century from sail to steam, from wood to iron to steel hulls, and to more powerful optics. Usually sequentially numbered as they entered service under the United States Lighthouse Board, the United States Lighthouse Service, and later the U.S. Coast Guard, lightships, like lighthouses remained constant in their location, with new vessels replacing the old. Thus there were more than one "Nantucket," "Ambrose," "Columbia," "Diamond Shoals," and "San Francisco," as well as others, on the various stations through the years. [1]

By the end of the 19th century, hard-learned lessons resulted in a standardization of lightship form and design. Heavily constructed steel hulls moored with massive mushroom anchors and huge strongly forged huge, built to ride out storms and rough seas, with decks designed to let the water run off and a dual mast system enabling a light to always be kept lit defined the basic "modern" characteristics for lightships in the United States. Technological advances--the introduction of electrical lighting, welded hulls, and the switch from steam to diesel to diesel-electric engines -- brought modifications to the lightship without necessarily changing the basic form. While older lightships were modified to accept the technological changes, new classes of ships were built to embody the "new" technology. Thus the first class of lightships built in the 20th century with riveted steel hulls and massive steam engines -- numbers 78 through 84 -- were replaced at some stations by welded steel lightships such as the Pacific Coast's No. 100 with diesel-electric propulsion, diaphone air horns, 1,000-watt electric lights in 375-mm lenses, and a reduced tonnage (with the installation of a less heavy diesel- electric system) meaning less resistance to the sea and hence less battering. [2]

Between 1946 and 1952, a new (and the last) class of six lightships, built under the auspices of the United States Coast Guard, which had absorbed the U.S. Lighthouse Establishment in 1939, were introduced and built. The first lightships with all-welded hulls, they were also the first and only lightships to employ an alternating current electrical system. Reflecting the improvement in diesel technology, they were high-speed direct diesel propelled. Their internal arrangements were roomy and modern, offering more amenities of life for their crews. While

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these vessels closely resembled in external appearance the earlier lightships of the early 20th century and the 1930s, a number of which were still in commission, they were different vessels.

Technology finally brought an end to manned lightships at the same time manned lighthouses were being considered for automation. Large navigational buoys 40 feet in diameter and 42 feet high, painted lightship red and equipped with automatic lights, fog signals, and radio beacons began to replace lightships in 1967. In 1983, the last lightship had been retired, ending a 150-year lightship tradition in the United States.

CONSTRUCTION AND CAREER OF NO. 116

After 1926, as part of the modernization of the lightship fleet, the United States Lighthouse Service sought funds to build several welded and riveted steel lightships with direct-diesel and diesel-electric power plants. Known as the 133-foot class, these were the last lightships built by the Lighthouse Service. The first of these vessels, No. 100, was laid down and built in 1929, and after her four identical "sisters" were built at different yards to the same plan. No. 116 was built at Charleston, South Carolina, by the Charleston Drydock and Machine Co. at a cost of $274,434. Launched on October 22, 1929, the vessel was completed on August 14, 1930. [3] Sent to the Fenwick Island Shoal station off Delaware, No. 116, designated "Fenwick," served there until the station was discontinued on June 30, 1933. The lightship was then moved farther south to the Chesapeake station, where she would remain for most of her career as "Chesapeake."

The Chesapeake station, established on February 17, 1888, originally was at Lat. 37 05.5 - Long. 75 43.0, 9.3 miles offshore in 39 feet of water, 102 degrees from the Cape Charles Light. Cape Charles light was the first lighthouse built by the United States Government (and a National Historic Landmark). Augmenting the lighthouse, the lightships at the station, then known as "Cape Charles," marked the north side of the Chesapeake Bay entrance. The station was shifted to 37 05.0 - 75 40.3, a

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change of some 2.2 miles at 103 degrees in 56 feet of water in 1922 to assist deeper draft vessels. In 1928 the station was moved an additional 6.5 miles to 36 58.7 - 75 42.2 at 194 degrees off the Cape Charles Light, in 63 feet of water to better conform with other aids to navigation marking the bay entrance. The station was renamed "Chesapeake" at that time. [4]

The first lightship assigned to the station was No. 46 (1888-1891), followed by No. 49 (1891-1916), No. 101 (1916-1924), No. 80 (1924-1927), No. 72 (1927-1933), and finally No. 116, the sixth and last, from 1933 to 1965, excepting the period between 1942 and 1945 when No. 116 was sent north for war duty and the station was marked by a buoy. The station was busy; in 1898 Lightship No. 49 logged 11,281 passing vessels. The station was important, in that it marked the entrance to the great Chesapeake Bay port of Baltimore and also guarded the approach to the shipbuilding center of Newport News and the Navy base at Norfolk, Virginia. The station was occasionally rough; according to lightship historian Willard Flint, "lightships marking the station were blown or dragged off station 9 times in severe weather" and No. 49 was rammed by the steamer Grayson on December 18, 1912. [5]

No. 116 was caught by a hurricane on September 17 and 18, 1936. In the heavy swell the anchor chain parted and the lightship drifted. The spare anchor was dropped and the lightship ran full ahead for 10 hours to relieve the strain on the cable. Sweeping seas boarded the lightship, smashed the whaleboat and motor launch, and carried off the dory. A relief vessel replaced No. 116 for six days while the damage was repaired. [6]

With the entry of the United States into World War II in 1941, many lightships were taken off station, armed, and then served as "examination vessels." These floating pickets guarded port and harbor approaches. No. 116 was sent to Sandwich, Massachusetts, in 1942. There she served off the eastern entrance to the Cape Cod Canal until 1945, when the lightship was sent back to Chesapeake station, where she remained until 1965. From 1966 until 1970 the lightship served at the mouth of Delaware Bay as "Delaware." Laid up, the lightship was decommissioned on August 25, 1970, and transferred to the National Park Service's National

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Capital Region on January 6, 1971. Refurbished at the Washington Navy Yard in 1972 and displayed at Hains Point in East Potomac Park, No. 116 was used as a floating environmental living center until 1980. In June 1981, the lightship was placed on 25-year loan to the City of Baltimore and moored in that city's Inner Harbor as part of the Baltimore Maritime Museum, where she remains today.

NOTES

1
See George R. Putnam, Lighthouses and Lightships of the United States (New York: The Houghton-Mifflin Co., 1917).

2
A.C. Hardy, American Ship Types: A Review of the Work, Characteristics, and Construction of Ship Types Peculiar to the Waters of the North American Continent (New York: D. Van Nostrand Co., Inc., 1927) pp. 254-257, passim.

3
Willard Flint, Lightships of the United States Government (Washington, D.C.: U.S. Coast Guard, 1989), unpaginated, entry for Lightship No. 116, and "Lightship No. 116," U.S. Lighthouse Service Bulletin, III (71) November 1, 1929, p. 313.

4
Flint, Op.cit, entry for Chesapeake Lightship Station.

5
Ibid.

6
"Lightships in September Hurricane," U.S. Lighthouse Service Bulletin, V (10) October 1936, p. 35.