ARTHUR M. HUDDELL
James River Reserve Fleet
Newport News vicinity
Virginia

HAER VA-132
HAER VA-132

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

REDUCED COPIES OF MEASURED DRAWINGS

FIELD RECORDS

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
U.S. Department of the Interior
1849 C Street NW
Washington, DC 20240-0001

HISTORIC AMERICAN ENGINEERING RECORD

Arthur M. Huddell

HAER No. VA-132

Location:	James River Reserve Fleet, Newport News vicinity, Virginia
Type of Craft:	EC2-S-C1/Auxiliary
Trade:	Cargo/ Converted - Pipe/Cable Carrier
Class:	*Liberty*
Principal Dimensions:	Length (oa): 441'-6" Beam (molded): 56'-10 ¾" Draft: 25'-3 ¼" Displacement: 14,257 (fl) tons Maximum continuous shaft horsepower: 2,500 Service speed: 11 knots (The listed dimensions are as built, but it should be noted that draft, displacement, and tonnages were subject to alteration over time as well as variations in measurement.)
Dates of Construction:	Keel laying: 25 October 1943 Launching: 7 December 1943 Commissioned: 16 December 1943
Designer:	U.S. Maritime Commission and Gibbs & Cox, New York
Builder:	St. Johns River Shipbuilding, Jacksonville, Florida
Disposition:	Maritime museum in Greece
Significance:	The *Arthur M. Huddell* is significant as an example of the *Liberty* class, which have been described as the workhorses of World War II. The mass production of the *Liberty* class was possible because of their standardized design and use of pre-fabricated parts. These general-purpose cargo ships performed a variety of missions for the Allied Forces. The *Arthur M. Huddell* carried fuel pipeline from the United States to England for use in Operation PLUTO (pipeline-under-the-sea). The *Huddell* was later instrumental in efforts to lay communication cables for American Telephone and Telegraph Company (AT&T) and the Cold War's Sound Surveillance System (SOSUS), later the Integrated Undersea Surveillance System (IUSS).

Historian: Brian Clayton, winter 2008; updated in 2011

Project Information: This project is part of the Historic American Engineering Record (HAER), a long-range program to document historically significant engineering and industrial works in the United States. The Heritage Documentation Programs of the National Park Service, U.S. Department of the Interior, administers the HAER program.

The project was prepared under the direction of Todd Croteau (HAER Maritime Program Coordinator). Ashley T. Walker and Jonathan Dowsett generated vessel drawings. David Haas produced the large-format photographs. Special thanks go to Erhard Koehler (U.S. Maritime Administration) whose help and assistance greatly benefited the project.

BACKGROUND

One of the first priorities of the United States upon entering World War II was the construction of ships. The global experience and ferocity of World War I taught the United States that World War II would be on a grander scale and in more places, involve more people, and require more equipment, in other words, total war.[1] During World War II, the U.S. Maritime Commission became a pivotal force in the development and construction of ships, much like the U.S. Shipping Board had been in World War I. Established in 1936, the Maritime Commission succeeded the Shipping Board, but generally followed the same directive: the promotion of U.S. shipping interests. After the United States entered World War II, the Maritime Commission established the "Emergency Program," a massive ship construction plan that utilized new and existing shipyards across the United States.[2]

The need for the Emergency Program stemmed from the decline of the maritime industry in the inter-war years. After 1918, a majority of the ships in the Merchant Marine originated from the mobilization endeavor authorized by the United States Shipping Board to support American troops in World War I. The board approved the construction of 470 ships to support the war effort. Between 1918 and 1922, however, the board added 1,300 ships to the Merchant Marine, giving the United States a more robust presence in international shipping than it had had in seventy years. The U.S. stock market crash in 1929 and the Great Depression were major setbacks to the maritime industry. Many steamship companies were unable to replace or update aging ships—over 90 percent of the fleet was over twenty years old and had an average speed of between 10 and 11 knots.[3]

In the mid-1930s, the U.S. government intervened with new legislation to aid the beleaguered maritime industry. President Franklin D. Roosevelt's New Deal economic policies eventually helped revive the Merchant Marine when Congress passed the Merchant Marine Act of 1936. The act created the U.S. Maritime Commission, superseding the U.S. Shipping Board, and it infused new capital and ideas for rebuilding the fleet. In 1937, the U.S. Maritime Commission developed a long-range program for building 500 ships that were both contemporary and economical over a ten-year period. By 1939, the Maritime Commission had determined that the production quota of fifty ships per year was too low and doubled it. There were mounting concerns about the war in Europe and the success of the German U-boat campaign against English shipping, particularly since U.S. steamship companies traded with England and France. The U.S. also feared that Germany might next turn its attention to

---

[1] Russell F. Weigley, *The American Way of War: A History of United States Military Strategy and Policy* (New York, NY: Macmillan Publishing Co., Inc., 1973), pp. xxi-xxiii.

[2] René De La Pedraja, *A Historical Dictionary of the U.S. Merchant Marine and Shipping Industry since the Introduction of Steam* (Westport, CT: Greenwood Press, 1994), pp. 563-566, 629-631. During World War II, the Maritime Commission received 5,777 ships. The commission issued contracts for 5,601 vessels; private firms built the remaining 111 ships while foreign firms built sixty-five.

[3] Brian J. Cudahy, *Box Boats: How Container Ships Changed the World* (New York: Fordham University Press, 2006), pp. 2-3; L.A. Sawyer and W.H. Mitchell, *Victory Ships and Tankers: The History of the 'Victory' Type Cargo Ships and of the Tankers Built in the United States of American during World War II* (Cambridge, MD: Cornell Maritime Press, Inc., 1974), p. 15.

U.S. ships or U.S. trade routes. In response, the Maritime Commission raised its shipping quota once again in August 1940 to 200 ships per year.[4]

On 3 January 1942, President Franklin D. Roosevelt declared that the U.S. would begin building a standard 11-knot ship in mass quantity, later called the "Liberty" ship, as part of an Emergency Program guided by the Maritime Commission. The *Liberties* were not particularly aesthetically pleasing, nor were they fast, but their production in great numbers helped offset the German U-boat successes in the Atlantic campaign. There were five waves of *Liberty* ship construction, and by the end of the war, the Maritime Commission had produced over 2,700 of the ships.[5]

Working under a limited timeframe, the Maritime Commission based the design of the *Liberty* on a British freighter designed in 1879 by the firm of Joseph L. Thompson and Sons in Sunderland, United Kingdom. Thompson based the design on a basic freighter with a displacement around 10,000 tons and service speed of 10 knots. British shipping companies utilized this design, because it operated inexpensively, had a large carrying capacity, and was cheap to build. The British referred to ships built on this design as "powered scows." The Maritime Commission chose the design because it could be easily modified and had a proven track record of service in the Atlantic Ocean. During the first wave of construction, the British ordered sixty vessels, which the Maritime Commission called the *Ocean* class, and 200 corresponding *Liberty* ships.[6]

From the onset, the Maritime Commission was skeptical about the idea of the *Liberty* class. Adm. Emory S. Land (chairman) noted in 1940 that the *Liberty* class was "conceived of as an evil, perhaps a necessary evil, but an evil to be avoided if possible." Originally, the Maritime Commission thought of the emergency construction as a British need because the commission was already building fast and economical ships called the "standard types" (C1, C2, and C3).[7]

The impetus for building the C-types stemmed from the experience of World War I and the decline of the U.S. Merchant Marine. The Maritime Commission did not want to repeat the Shipping Board's decision to authorize the construction of the "Hog Islanders" (mass-produced cargo and transport ships) during World War I since they ended up being slow and non-competitive for use in the Merchant Marine. In contrast, the C-types were fast and economical, which allowed the U.S. Navy to utilize them in time of war as auxiliaries. Shipping firms also found them to be efficient. Another asset was their longevity. As Admiral Land stated on 18 November 1940, "If it is decided to augment our own program,

---

[4] Cudahy, *Box Boats*, p. 3; Sawyer and Mitchell, *Victory Ships and Tankers*, p. 15.
[5] Sawyer and Mitchell, *Victory Ships and Tankers*, p. 16; Frederic C. Lane, *Ships for Victory: A History of Shipbuilding under the U.S. Maritime Commission in World War II* (Baltimore: Johns Hopkins Press, 1951), pp. 42-43; John Gorley Bunker, *Liberty Ships: The Ugly Ducklings of World War II* (Annapolis: Naval Institute Press, 1927), p. 6. The first three waves of construction occurred before the attack on Pearl Harbor and two successive waves followed thereafter.
[6] Bunker, *Liberty Ships*, p. 6; Lane, *Ships for Victory*, pp. 76-81.
[7] Lane, *Ships for Victory*, pp. 27-29.

we should build ships for 20-years service life and have an eye on the future. Therefore build ships to our standard design."[8]

The Maritime Commission had previously used standardized designs, but nothing compared to the building program of the *Liberty* ships. Shipyards under Henry J. Kaiser began using production line methods (prefabricated parts, assembly, construction of sections, and welding everything together) and one standardized design, which significantly increased ship production. Kaiser's systematic approach to construction was replicated across the United States, and the standardized plan allowed different companies to provide the machinery onboard, increasing the base of suppliers.[9]

CONSTRUCTION

During the fifth wave of shipbuilding expansion for the Emergency Program, Merrill-Stevens opened the St. Johns River Shipbuilding on the south side of Jacksonville, Florida, in April 1942. The shipyard was equipped with six ways to construct *Liberty* ships and could build vessels up to 450' long. The yard originally opened with 258 employees, but by August 1942, the labor force had grown to 7,000 people. During the height of production, the shipyard employed 20,000 men and women and produced eighty-two *Liberty* ships and twelve tankers (T1) for the war. In November 1945, the shipyard was put for sale, the first of the federally-built shipyards to be sold.[10]

The keel of the *Arthur M. Huddell*, St. Johns River Shipbuilding's twenty-third *Liberty* ship, was laid on 25 October 1943. The builders worked overtime to complete the vessel in time for its launching on 7 December 1943, the one-year anniversary of Pearl Harbor (the ship was originally scheduled for launching on 10 December 1943). The shipyard completed outfitting the *Huddell* nine days later.

Liberty ships were named for significant deceased Americans; in this case, the ship was named for union leader Arthur M. Huddell (1869-1931). Originally from Massachusetts, Huddell held a number of positions within various unions, including president of the Boston Central Labor Union and vice president of the International Engineers' Union. Prior to his untimely death in 1931, he was president of the International Union of Operating Engineers (IUOE), which represented operators of heavy construction equipment and was a member organization of the American Federation of Labor. On 22 May 1931, Huddell and two other union officials had been eating lunch in Washington, D.C. outside the IUOE's headquarters when an unknown gunman attacked them. Huddell was apparently unhurt as the bullet had been absorbed by a notebook that he carried on his person, but he died 1 June 1931 of

---

[8] Lane, *Ships for Victory*, pp. 21, 27-28, 43-44. Quote from p. 44.
[9] Lane, *Ships for Victory*, pp. 212-213; Sawyer and Mitchell, *Victory Ships and Tankers*, p. 32.
[10] Lane, *Ships for Victory*, pp. 40-41; http://shipbuildinghistory.com/history/shipyards/4emergencylarge/wwtwo/stjohnsriver.htm, accessed September 19, 2011; http://www.museumoffloridahistory.com/exhibits/permanent/wwii/sites.cfm?PR_ID=199, accessed September 19, 2011; "U.S. Shipyard for Sale," *New York Times*, November 4, 1945, p. 45; "U.S. Starts First Sale of Wartime Shipyard," *The Baltimore Sun*, November 1, 1945, p. 15.

pneumonia caused by a cerebral hemorrhage.[11] William Green, president of the American Federation of Labor, put forth Huddell's name as a possibility for a *Liberty* ship. At the launching on 7 December 1943, Huddell's widow and daughter (Mrs. Ina Huddell Raiche of Springfield, Massachusetts) were in attendance.[12]

DESCRIPTION

The modified *Liberty* ship design incorporated many of the British features. *Liberty* ships measured 441'-6" long and 56'-10 ¾" abeam and had drafts of 25'-3 ¼". There were two key requirements for the new class: the deadweight had to equal 10,000 tons, and the minimum speed had to be 11 knots. The design included five holds, three forward and two aft, with fuel oil and ballast tanks underneath.

The *Arthur M. Huddell*'s propulsion plant consisted of a Filer and Stowell triple expansion, reciprocating engine rated at 2,500-shaft horsepower (shp). It turned an 18'-6" propeller 76 revolutions per minute (rpm) for a top speed of 11 knots. The tanks carried 12,240 barrels of fuel oil. The ship had a cruising distance of 19,000 nautical miles. Two oil-fired boilers manufactured by Combustion Engineering used forced draft air to create 450-degree Fahrenheit steam at 220 pounds per square inch (psi).[13]

The machinery space also included ancillary equipment required for the ship's operation. Three reciprocating steam generators were located above the generator room on the starboard flat. The D.C. generators delivered 20 kilowatts apiece and were individually rated at 120 volts. A small storeroom and machine shop for making minor repairs were on the opposite flat. An evaporator (located on the port side of the bottom deck) provided drinking water for the crew and fresh water for the boiler at a rate of 30 tons/day. A fire pump on the starboard side could handle onboard fires while the cargo holds had a steam smothering system.[14]

---

[11] This was not Huddell's first brush with death. In 1907, Huddell had been injured in an attack by John A. Steele, who had recently been released from an insane asylum, as he waited with some other labor leaders to meet with the Governor of Massachusetts. See: "Lunatic Wounds 3 Labor Leaders," December 6, 1907, p. 1; "Maniac, Hunting Guild, Shot Two," *The New York Times*, December 6, 1907, p. 1; "Boston Madman Indicted," *The Washington Post*, December 8, 1907, p. 8.

[12] "Huddell to Assume Snellings' Duties," *Boston Daily Globe*, June 10, 1921, p. 11; "Pneumonia is Fatal to Union President," *The Washington Post*, June 2, 1931, p. 1; "Frank Langdon, 72, is Hit by Two of Eight Bullets from Two Pistols," *The Washington Post*, May 21, 1931, p. 1; Westbrook Pegler, "Fair Enough," *Los Angeles Times*, October 5, 1943, p. A.

[13] "Liberty Ship, U.S. Maritime Commission Emergency Cargo Vessel EC2-S-C1," National Historic Mechanical Engineering Landmark, designated by the American Society of Mechanical Engineers, 17 September 1984, available online at http://files.asme.org/asmeorg/Communities/History/Landmarks/3126.pdf, accessed 28 February 2008.

[14] Description based on U.S. Maritime Commission (USMC), Emergency Ship Construction Division, Design No. EC2-S-C1, "Capacity Plan"; USMC, Emergency Ship Construction Division, "Inboard Profile and Holds"; USMC, Emergency Ship Construction Division, "Midship Section"; and USMC, Emergency Ship Construction Division, "Arrangement of Machinery Sections," all in The Maritime Administration Collection of Ship Plans (1939-1970), National Museum of American History, Washington, DC; also "Liberty Ship: U.S. Maritime Commission Emergency Cargo Vessel EC2-S-C1."

The bridge deck contained a number of spaces related to the navigation of the vessel and berthing arrangements. The bridge included a compass, helm, and an engine order telegraph. The helm sent electric signals to the steering room where an electric-hydraulic ram turned the rudder. A radio room was located off the wheelhouse and on the port side, while the chart room was on the starboard side. The captain's quarters were aft of the chartroom while opposite were the quarters for two cadets and a radio operator.

The remaining ship's crew and messes were in the amidships house while the safety equipment was housed outside. On the boat deck were the officer's quarters and below on the upper deck were the crew's quarters, as well as the crew's mess and officer's wardroom. Below, on the second deck, were the dry and refrigerated storerooms. The boat deck included four lifeboats, two per side, to accommodate everyone onboard. Four additional life rafts rested on the second and third mast in the event of a rapid sinking.

By late 1942 the Maritime Commission had begun arming the *Liberty* class. There was a single, 3" gun on the bow, and four 20-millimeter anti-aircraft guns on the weather deck (two forward and two aft). Another four were located above the bridge, while a 5"/38 dual-purpose gun was on the stern of the ship. Ammunition trunks below the main deck serviced the weapons. The armed guard unit, who operated the weapons, had living quarters in the amidships deckhouse and aft deckhouse to provide easy access to their positions on the ship.

Since *Liberty* ships were designed to have a high-carrying capacity of around 9,000 tons of cargo, the *Arthur M. Huddell* was outfitted with five cargo holds and sufficient cargo-handling equipment to independently load and off-load freight. Three masts supported ten booms able to lift between 5 and 30 tons of cargo. Three of these holds were located forward of the engine room and two were aft, with seven divisional bulkheads separating them. Steam winches topside provided the means to lift and lower the cargo, and the booms extending off each mast positioned it. The ship carried varying loads, often more than the 9,000 tons for which it was designed, so ballast water in the forepeak, deep, and after peak tanks balanced and trimmed the ship during its voyage.[15]

OPERATIONAL HISTORY

After commissioning on 16 December 1943, the *Arthur M. Huddell* made its first stop in Jacksonville, Florida, where the U.S. Navy loaded it with 2,100 pounds of explosives and general cargo. In February 1944, the ship sailed to New York and then continued across the Atlantic to London as part of a convoy. The ship returned to the United States the following month, landing at Norfolk, Virginia. It was then used to transport cargo from the East Coast and made one more voyage from Charleston, South Carolina, to Oran, Algeria, carrying high explosives at the end of April 1944. The ship returned to New York at the end of the following month.[16]

---

[15] The appendix to this report provides the dimensions and loads of each hold.
[16] U.S. Navy Armed Guard Reports, "Arthur M. Huddell," in Box 41, Record Group 38, National Archives and Records and Administration-College Park, Maryland.

During the summer of 1944, the Maritime Commission converted the *Huddell* to carry fuel pipeline within two of its holds as part of Operation PLUTO (pipeline-under-the-sea). After the Allied invasion of France in June 1944, the military needed a system of delivering fuel from England to France. The threat of German U-boats resulted in the British using an underwater pipeline linking the south coast of England with the Normandy landing site instead of using traditional tankers. The *Huddell*'s No. 4 and No. 5 holds carried the pipeline, manufactured by the Siemens Brothers, to England. Cable ships then deployed the pipe from England to France. On 22 September 1945, the *Huddell* left New York as part of convoy carrying 70 miles of pipeline and general cargo. The ship spent eighty-four days in port in London, discharging 17 miles of pipeline to a cable ship and unloading the remaining pipeline at the dock. The *Huddell*'s trial run carrying the PLUTO pipeline was the first and last of this type of mission.[17]

For the remainder of the war and after, the *Huddell* carried coal, general cargo, and personnel. In February 1945, the *Huddell* sailed from Hampton Roads, Virginia, in a convoy bound for Marseilles, France, carrying coal. The ship returned the following month to Philadelphia. In May 1945, the ship sailed to Naples, Italy, and Oran, Algeria, carrying general cargo before returning to New York. Even after the war in Europe ended on 8 May 1945, the *Huddell* continued bringing supplies to war-torn Europe. In June 1945, the *Huddell* returned to Marseilles, France, carrying a supply of coal and then continued to the Port de Bouc where it loaded 619 French and Moroccan troops. The ship next sailed to Oran, Algeria, where the troops disembarked. In July, the *Huddell* sailed back to the United States and moored in Baltimore, Maryland. The ship made one final voyage up the East Coast to New York before the Maritime Commission laid up the ship in the National Defense Reserve Fleet in Suisun Bay, California.[18]

In 1956, American Telephone and Telegraph Company (AT&T) chartered the *Huddell* to lay cable from the West Coast, via Hawaii, to the Arctic where the United States was building radar stations for the Distant Early Warning (DEW) line. The United States developed a system, the DEW line, using linked radar stations across Canada to detect Soviet bombers crossing over the Arctic. With the advent of the intercontinental ballistic missile (ICBM) and the ballistic missile submarine (SSBN), the DEW line lost its strategic significance, but the U.S. Navy found the *Huddell* to be an excellent platform for another Cold War application. To combat the Soviet submarine threat, the navy developed the Sound Surveillance System (SOSUS), a system of underwater hydrophones used to detect the presence of submarines. The *Huddell* laid cable for the operation and continued in this capacity until 1984, when the U.S. Navy decommissioned the vessel.[19]

---

[17] U.S. Navy Armed Guard Reports. The Maritime Commission converted a second *Liberty* ship, the *Joseph Henry*, to carry pipeline in World War II to supplement the *Huddell*.
[18] U.S. Navy Armed Guard Reports.
[19] "Huddell: The Man, The Ship, The Story," available at http://www.btconline.us/mt/2005/05/huddell_the_man.html, accessed 20 February 2008.

CONCLUSION

Critical to the Allied success in World War II was the U.S. Maritime Commission and the ships it produced. The Maritime Commission helped develop and construct a variety of military and civilian ships for use during the war, and the Liberty class was one example. The *Liberties* were primarily point-to-point cargo vessels, and their design allowed the commission to utilize the ship in different configurations, such as a hospital ship or for troop transport. The *Liberty* cargo vessel was a small component of the overall war effort, but it was critical in moving personnel, supplies, and equipment, both in times of war and peace. The *Huddell* carried a variety of cargo during World War II, including coal, explosives, general cargo, pipeline, and troops, and sailed the entire East Coast of the United States to ports in England, France, and the Mediterranean. The *Huddell*'s service continued post-World War II and into the Cold War. As technologies advanced, the antiquated ship served as a useful platform linking emerging defenses used to combat Soviet offensive weapons, including the DEW line and SOSUS listening devices.

After forty years of service, the ship was retired to the National Defense Reserve Fleet in James River, Virginia. In 2008, the ship was one of three remaining *Liberty* ships afloat in the United States. The other two, the *John W. Brown* (Baltimore) and *Jeremiah O'Brien* (San Francisco), have been fully restored and operate as museum ships. In January 2009, after several years of negotiations and mitigating hazardous substances still onboard, the ship was transferred to Greece. After extensive renovations, the ship (now known as the *Hellas Liberty*) is a maritime museum in Piraeus Harbor, Greece.[20]

---

[20] Ernest M. Imhoff, "SS HUDDELL: The Very Last Liberty Ship Becomes a Floating Museum in Greece," *Sea Classics* (January 2009), at http://findarticles.com/p/articles/mi_qa4442/is_200901/ai_n31170107/pg_2, accessed February 2011 and Scott Harper, "WWII Liberty Ship May Go from the Ghost Fleet to Greece," *The Virginian-Pilot*, June 7, 2008, available at http://hamptonroads.com/2008/06/wwii-liberty-ship-may-go-ghost-fleet-greece, accessed February 2011.

Appendix: Dimensions of Cargo Spaces

Hold #	Hatch Size (w x l)	Cargo Capacity (cu.ft.)
1	19'-10" x 33'-10"	77,077
2	19'-10" x 34'-10"	134,638
3	19'-10" x 19'-10"	83,697
4	19'-10" x 34'-10"	82,263
5	19'-10" x 34'-10"	82,435

BIBLIOGRAPHY

Bunker, John Gorley. *Liberty Ships: The Ugly Ducklings of World War II*. Annapolis: Naval Institute Press, 1972.

De La Pedraja, René. *A Historical Dictionary of the U.S. Merchant Marine and Shipping Industry since the Introduction of Steam*. Westport, CT: Greenwood Press, 1994.

"Frank Langdon, 72, Is Hit by Two of Eight Bullets from Two Pistols." *The Washington Post*, May 21, 1931, p. 1.

Harper, Scott. "WWII Liberty Ship May Go from the Ghost Fleet to Greece." *The Virginian Pilot*, June 7, 2008. Available at http://hamptonroads.com/2008/06/wwii-liberty-ship-may-go-ghost-fleet-greece.

"Huddell to Assume Snellings' Duties." *Boston Daily Globe*, June 10, 1921, p. 11.

Imhoff, Ernest M. "SS HUDDELL: The Very Last Liberty Ship Becomes a Floating Museum in Greece." *Sea Classics* (January 2009). Available at http://findarticles.com/p/articles/mi_qa4442/is_200901/ai_n31170107/pg_2.

Lane, Frederic C. *Ships for Victory: A History of Shipbuilding under the U.S. Maritime Commission in World War II*. Baltimore: Johns Hopkins Press, 1951.

"Liberty Ship: U.S. Maritime Commission Emergency Cargo Vessel EC2-S-C1." National Historic Mechanical Engineering Landmark, designated by the American Society of Mechanical Engineers, 18 September 1984. Available at http://files.asme.org/asmeorg/Communities/History/Landmarks/3126.pdf.

Pegler, Westbrook. "Fair Enough." *Los Angeles Times*, October 5, 1943, p. A.

"Pneumonia is Fatal to Union President." *The Washington Post*, June 2, 1931, p. 1.

Sawyer, L.A. and W.H. Mitchell. *From America to United States: The History of the Merchant Ship Types Built in the United States of America during the Long-Range Programme of the Maritime Commission*. Kendal, UK: World Ship Society, 1979.

U.S. Maritime Commission, Emergency Ship Construction Division, Design No. EC2-S-C1. The Maritime Administration Collection of Ship Plans (1939-1970), National Museum of American History, Washington, DC.

U.S. Navy Armed Guard Reports. "Arthur M. Huddell." Box 41, Record Group 38, National Archives and Records Administration-College Park, Maryland.

U.S. Navy. *Dictionary of American Naval Fighting Ships*. Vol. 1. Washington, DC: Naval Historical Center, 1991.

_____. *Ships' Data U.S. Naval Vessels: Auxiliary, District Craft, and Unclassified Vessels*. Washington, DC: Government Printing Office, 1946.

"U.S. Shipyard for Sale." *New York Times*, November 4, 1945, p. 45.

"U.S. Starts First Sale of Wartime Shipyard." *The Baltimore Sun*¸ November 1, 1945, p. 15.

Weigley, Russell F. *The American Way of War: A History of United States Military Strategy and Policy*. New York: Macmillan Publishing Co., Inc., 1973.