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

OMB Approval No. 1024-0018

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number _____ Page _____

SUPPLEMENTARY LISTING RECORD

NRIS Reference Number: 00001674 Date Listed: 1/30/2001

SS RED OAK VICTORY (Victory Ship) | Contra Costa | CA
Property Name | County | State

N/A
Multiple Name

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

Signature of the Keeper — Date of Action: 1/30/2001

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Amended Items in Nomination:

Significance:

***Maritime History* is added as an area of significance to reflect the historic contributions of the property under National Register Criterion A.**

These revisions were confirmed with Cynthia Howse, CA SHPO office.

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

NPS Form 10-900
(Oct.1990)

OMB No. 1024-0018

DEC 21 2000

1674

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 for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. 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. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name **S.S. Red Oak Victory**

other names/site number

2. Location

street & number **1500 Dornan Drive, Terminal One, Port of Richmond** **NA** not for publication

city or town **Richmond** **NA** vicinity

state **California** code **CA** county **Contra Costa** code **013** zip code **94802**

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1986, 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. I recommend that this property be considered significant ☒ nationally ☐ statewide ☐ locally. (☐ See continuation sheet for additional comments.)

Signature of certifying official/Title — Date 12/12/00

California Office of Historic Preservation
State or Federal agency and bureau

In my opinion, the property ☐ meets ☐ does not meet the National Register criteria. (☐ See continuation sheet for additional comments.)

Signature of commenting or other official — Date

State or Federal agency and bureau

4. 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

01/30/2001

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

Number of Resources within Property
(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
		buildings
		sites
1		structures
		objects
1		Total

Name of related multiple property listing
(Enter "N/A" if property is not part of a multiple property listing.)

N/A

Number of contributing resources previously listed in the National Register

0

6. Function or Use

Historic Functions
(Enter categories from instructions)

DEFENSE/naval facility
TRANSPORTATION/water-related

Current Functions
(Enter categories from instructions)

WORK IN PROGRESS

7. Description

Architectural Classification
(Enter categories from instructions)

NA

Materials
(Enter categories from instructions)

foundation **steel**
roof **steel**
walls **steel**
other

Narrative Description
(Describe the historic and current condition of the property on one or more continuation sheets.)

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.)

Property is:

- ☐ A owned by a religious institution or used for religious purposes.
- ☐ B removed from its original location.
- ☐ C a birthplace or a grave.
- ☐ D a cemetery.
- ☐ E a reconstructed building, object, or structure.
- ☐ F a commemorative property.
- ☐ G less than 50 years of age or achieved significance within the past 50 years.

Areas of Significance
(Enter categories from instructions)

MILITARY
TRANSPORTATION
ENGINEERING

Period of Significance
1944-1946

Significant Dates
1944

Significant Person
(Complete if Criterion B is marked above)

NA

Cultural Affiliation
NA

Architect/Builder
Richmond Shipyard No. One
Permanenta Metals Corportation

Narrative Statement of Significance
(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

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

Name of repository:

_____

10. Geographical Data

Acreage of Property **less than one acre**

UTM References
(Place additional UTM references on a continuation sheet)

	Zone	Easting	Northing		Zone	Easting	Northing
1	10	554000	4195620	3			
2				4			

☐ See continuation sheet.

Verbal Boundary Description
(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification
(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title **Shelby Sampson, Assistant Curator**

organization **Richmond Museum of History** date **June 30, 2000**

street & number **400 Nevin Avenue** telephone **510-235-7387**

city or town **Richmond** state **CA** zip code **94801**

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

A **USGS map** (7.5 or 15 minute series) indicating the property's location.

A **Sketch map** for historic districts and properties having large acreage or numerous resources.

Photographs

Representative **black and white photographs** of the property.

Additional items
(Check with the SHPO or FPO for any additional items)

Property Owner

(Complete this item at the request of the SHPO or FPO.)

name **Richmond Museum Association**

street & number **400 Nevin Avenue** telephone **510-235-7387**

city or town **Richmond** state **CA** zip code **94801**

7. DESCRIPTION

SUMMARY PARAGRAPH

The 1944 Victory Ship RED OAK VICTORY was built in Richmond, California, at Kaiser Shipyard #1 and launched on November 9, 1944. The ship's World War II, US Maritime Commission designation of VC2-S-AP2 indicates she is a "V" for "Victory", "C2" for medium capacity cargo carrier, "S" for "steam", and "AP2" for the 6,000 shaft horsepower type of Victory. Now moored at Terminal One at the Port of Richmond, she is currently undergoing rehabilitation.

The RED OAK VICTORY possesses all seven of the National Register's aspects of integrity. It will be home-berthed in an appropriate waterfront setting, within view of where it was built in Richmond, California, retaining its integrity of location, setting and association. Regarding integrity of design, modifications to the interior and exterior space have been minimal, consisting mainly of removal of wartime guns, conversion of crew quarters from metal pipe bunks of six per room to wooden berths of two per room, and updating of navigation and radio equipment over 22 years' post-war service as a merchant ship. From 1968 to 1998 he RED OAK VICTORY was preserved in the "mothball" fleet at Suisun Bay, thus its integrity of material is exceptionally high. The rehabilitation efforts primarily involve surface improvements and cleaning and overhauling of equipment, which also retains integrity of workmanship. The excellent condition of the RED OAK VICTORY insures that the vessel conveys a superb sense of the past and will provide an invaluable site for interpreting the period of significance.

Plans are to restore the RED OAK VICTORY to fully operational condition. The exterior will reflect the period of significance, 1944 - 1946. The interior space will reflect its last date of use, 1968. The ship will be a primary center of interpretation for the Rosie the Riveter/WWII Home Front Naticnal Historic Park. As such, it will feature fully-restored elements from the period of significance as well as museum space and event facilities for public use where the public can experience as well as see this historic artifact.

RED OAK VICTORY AS BUILT

The RED OAK VICTORY was built in the Permanente Metals Corporation Shipyard #1, one of four shipyards in Richmond,California, built and operated by Kaiser Corporation during WWII. It was launched on November 9, 1944 and commissioned as the USS RED OAK VICTORY, AK235, on December 5, 1944.

RED OAK VICTORY, official number 249410, is a welded steel, full-scantling, screw-propelled, steam-powered vessel 455 feet, 3 inches long overall with a 62-foot beam, a 38-foot depth of hold, and 28-foot draft. The ship is registered at 7,612 tons gross and 4,555 tons net, and displaces 15,200 tons. Designed with a straight, raked stem with a paravane skeg fitted on the forefoot, and a cruiser stern, the ship's lines were radically different from her Liberty predecessors, with a semi-V-shaped bow, and a parallel, 70-foot midbody section.

Transversely framed on 36-inch centers, the ship has a double bottom that carried fuel oil, salt water ballast, and reserve feed water. RED OAK VICTORY has two complete decks, a forecastle deck that extends over the number one hold, and a first platform deck in two of her holds. The ship is subdivided by seven full watertight bulkheads that extend to the main deck with the sole exception of the fore peak bulkhead, which extends to the forecastle deck. The VC2-S-AP2 ships were arranged to carry general cargo in five holds, three forward and two abaft the midships machinery space. Hold No. 1 has a 22-foot, 4-inch by 25-foot hatch; Hold No. 2 has a 22-foot, 4-inch by 24-foot hatch; Hold No. 3 has a 22-foot, 4-inch by 36-foot hatch; Hold No. 4 has a 22-foot, 4-inch by 36-foot hatch; and Hold No. 5 has a 22-foot, 4-inch by 24-foot hatch. The flush main deck is also interrupted by the forecastle deck, the midships house, and a small poop deck house.

RED OAK VICTORY has three masts, each with a masthouse. The ship is cargo rigged to serve every hatchway. The 100-foot, 8-inch high foremast, located at the forecastle bulkhead, serves Hold No. 1. The 109-foot, 4-inch mainmast, located at frame 52 and supported by standing rigging, serves Holds No. 2 and 3. Kingposts at the forward end of the midships house also serve Hold No. 3, while kingposts at the after end of the superstructure serve Hold No. 4. The 104-foot, 11-inch mizzenmast, at frame 122 and supported by standing rigging, serves Holds No. 4 and 5. Cargo was discharged from the five hatchways by means of 14 five-ton booms, the latter two located to serve hatchways fore and aft of the super-structure. The masts and kingposts support 14 five-time

booms equipped with single-part topping lifts. The ship also carries two large heavy-lift booms, rated at 30-ton and 50-ton lifting capacity, on the main- and mizzenmasts. The booms serve Holds No. 3 and 4.

RED OAK VICTORY has 12 electric motor-driven cargo winches, clustered in two groups of four around the main-and mizzenmasts and with two located forward and two aft of the superstructure. Ten single-drum, single-speed winches serve the five-ton booms; four single-drum, two-speed winches serve the 30- and 50-ton booms. Each winch is driven by a 50 horsepower, watertight, enclosed motor. The winches have control equipment, resistors and brake arranged on a common bedplate under waterproof enclosures. The single-speed winches have a capacity of 7,450 pounds at 220 feet per minute. The 2-speed winches have a capacity of 7,450 pounds at 220 feet per minute in high gear and 19,000 pounds at 85 feet per minute in low gear. All winches are operated through pedestal controllers conveniently located near the hatchways. The one-speed, double reduction herringbone gear winches have 18- by 20-inch drums and were manufactured by Pacific Iron & Steel Works at Hoisting Machinery, Tacoma, Washington. They are driven by 50-hp, 230-volt, 180-amp, 600-rpm motors manufactured by General Electric Co., Schenectady, NY. The double-speed, reduction herringbone gear winches with 20- by 20-inch drums are also manufactured by Pacific Iron & Steel with motors by General Electric.

RED OAK VICTORY has an electric-motor-driven, horizontal-shaft type anchor windlass on the forecastle deck. Manufactured by the Hesse-Ersted Iron Works of Portland, OR, the windlass is capable of raising two anchors simultaneously from a 30-fathom depth of water at a chain speed of 30 feet per minute. The windlass motor, a General Electric compound wound type, is rated at 60-hp, 230-volts, 226-amps, and 600-rpm. Warping heads on the wildcat shaft of the windlass provide the facilities for handling mooring lines.

RED OAK VICTORY's ground tackle includes two 9,500 lb. cast-steel best bowers, stowed in the hawsepipes, and one 3,420 lb. stream anchor stowed on the main deck aft. The anchors were manufactured by Baldt. The anchor chain is 300 fathoms of 2 1/8-inch diameter stud-link cast steel chain, manufactured by Baldt, in two lengths; other lines include a 90-fathom, 1 1/2-inch diameter wire rope stream line; a 130-fathom, 1 3/4-inch diameter wire rope towline; two 73-fathom 1-inch diameter wire rope hawsers; two 73-fathom wire rope warps; and two 73-fathom lengths of 8-inch sisal rope. All of the wire ropes are mounted on reels located on the weather deck.

Other deck machinery includes an electric warping capstan on the main deck aft, with its machinery below. The smooth-barrel, reversible, vertical-motor driven capstan was manufactured by Sellers. It produces a line pull of 20,000 lbs. at a rope speed of 30 feet per minute. The capstan motor is a 35 hp, 230-volt, 138-amp, 600-rpm Westinghouse. RED OAK VICTORY has four 24-foot steel lifeboats, two motor-propelled, with a combined capacity of 124 persons, stowed in gravity-type davits manufactured by the Welin Davit & Boat Corp. of Perth Amboy, New Jersey. An electrical winch, also manufactured by Welin, is provided for each davit, driven by motors manufactured by General Electric. In addition to the lifeboats, four 20-person life rafts, mounted on skids fore and aft of the midships house, and two 15-person life floats, mounted aft on the deckhouse, are available for lifesaving.

RED OAK VICTORY was armed with six single 20mm Oerlikon guns, a 3-inch/50-caliber gun forward, and a 5-inch/3-caliber gun aft. These weapons were removed after World War II. The ship retains the mounts for each weapon, including the circular steel splinter shields for the bow and stern guns. Original weapons have been located to replace those removed. The majority of the space in the poop deckhouse was for the ship's 28-member Armed Guard, which manned the guns. Their quarters and mess were at the main deck level, while below, accessible by trunk, is the magazine, with shell hoist.

Accommodations are provided for 62 officers and crew in the midships house. In an article in the April,1944, issue of *Marine Engineering and Shipping Review*, Victory ship accommodations were described:

> The captain's stateroom and office are on the cabin deck, starboard side. The quarters for deck officers, engineers and radio operators are on the cabin and boat decks. The quarters for the crew are on the main deck. The officers' mess and pantry are located at the after end of the deckhouse on the starboard side of the boat deck. The crew's mess and pantry are located on the deck below the officers' mess. The galley is located at the after end of the deckhouse on the main deck. The hospital is on the portside on the main deck. The quarters for both the officers and crew are comfortably and conveniently arranged. Built-in berths are provided for the officers' staterooms and pipe berths for the hospital and crew's quarters.

The galley is equipped with oil-burning ranges manufactured by the Washington Stove Works of Everett, Washington, two steam-jacketed kettles, a Hobart mixer, manufactured by that Troy, New York, company, a vegetable peeler manufactured by the Anstice Co. of Rochester, New York, and a refrigerator manufactured by Bailey. There are also refrigerators in the officers' pantry and aft pantry. Steward's stores, dry stores, and refrigerated stores are located on the second deck, admidships.

RED OAK VICTORY retains all of her wartime issue equipment, including the radio equipment -- the high frequency, low frequency, emergency frequency transmitters, high receiver, low receiver, alarm signal keyer, auto alarm, and crystal receiver, all manufactured by Federal Tel. & Radio Corp. of Newark, New Jersey, and the radio receiver and radio direction finder in the chart room. The gyrocompass, bearing stands, and repeater compasses, all manufactured by the Dodge Division of the Chrysler Corporation of Detroit are aboard.

The bridge is completely outfitted and conforms to the standard 1944 description of a Victory, with magnetic compass in a compensating binnacle, engineroom telegraphs, bells, fog horn, rudder angle indicator, echo depth sounder, and clinometer. Telephones for shipboard communication, manufactured by Hose McCann remain in working condition. The ship's wartime issue Maytag washers, in working condition, and the machine shop in the engineering spaces, with a lathe, drill press, and grinder and all spare parts, complete the fully functional, operational appearance of RED OAK VICTORY.

Ventilation below decks is naturally supplied through four 36-inch cowls, two 24-inch cowls, and two 18-inch cowls, with each kingpost also serving as an exhaust trunk from the holds with 30-inch diameter Breidert exhaust heads installed at the top of each kingpost. Two 20,000 axial flow supply fans with ducts lead to several terminals in the machinery spaces, with a single 12,000 axial flow fan with ducts leading from the heated space.

The original main propulsion unit is housed midships, with a cross-compound, double-reduction geared, impulse-reaction type marine steam turbine unit rated at 6000 shaft horsepower, manufactured by Westinghouse, driving a single screw at a speed of 100 rpm. The shafting, forged steel and 16 inches in diameter, runs aft to the manganese bronze, four blade, right hand screw. Manufactured by Dorance on August 31, 1944, the 18-foot, 3-inch diameter screw weighs 29,765

lbs., has a pitch of 17' 6" and drives RED OAK VICTORY at a maximum speed of 15 knots.

Steam is provided by two sectional-header, single-pass design boilers manufactured by Babcock & Wilcox. Rated at 525 psi, with an operating pressure of 465 psi, the boilers produce 27,500 pounds of steam per hour at 750 degrees, with a furnace volume of 450 cubic feet. The boilers are 12 sections wide and are 39-feet, 6-inches athwartship by 11-feet, 8-inches fore and aft, and 21-feet, 3-inches overall height to the top of the economizers. Fitted with interdeck superheaters and economizers, each boiler is fired with water-cooled side walls and refractory in the front and rear walls and floors.

Electrical power is provided by an inboard and outboard turbo-generators, the turbines manufactured by the Joshua Hendy Iron Works of San Francisco, California, and the generators manufactured by the Allis-Chalmers Company, Milwarkee, Wisconsin. The three-wire marine direct current generators produce 300-kilowatts, with 120 and 2140 volts and 1250 amps and 1200-rpm. The ship also has emergency diesel generators in the engine room and in the emergency diesel room. The steering gear, a slide electro-hydraulic, double-ram type, was manufactured by the Baldwin Locomotive Company, and is located aft.

RED OAK VICTORY'S PRESENT APPEARANCE

RED OAK VICTORY retains a high degree of integrity and is readily recognizable as a World War Victory ship. Rehabilitation is now in progress with all volunteer labor under the direction of an executive committee which coordinates operations aboard ship.

The gray exterior paint is peeling after years of mothballing, and removing old paint, cleaning, preparing and repainting surfaces is a major activity of volunteers. The anchor windlass, still fully functional, was cleaned of old paint, acided and primed. The exposed area of the after (gunner's) house has been primed and finish-painted, and many holes in the decking compound have been filled. All of the original winches and other cargo apparatus are being restored to working condition. Winches at cargo hatches #3 and #4 along with their related booms and rigging are now fully operational.

Following the period of significance, the ship was leased by the government for commercial use. As such, the original guns were removed

and disposed of. To restore this vessel to an exterior appearance consistent with the period of significance, appropriate weapons have been obtained and will be mounted in original locations.

Interior work includes cleaning and painting of the operational galley. The main exhaust fan to the galley has been overhauled and reinstalled. Restoration of the Captain's stateroom and office, and refinishing of the hailing boards has been completed. The metal pole bunks, six or seven to a room, of the wartime crew quarters were replaced after 1946 with two wooden berths per room. Quarters in the after deckhouse for the Navy gunners aboard the RED OAK VICTORY during WWII were removed after the war and are now used for storage. The telemotor for the wheelhouse has been rebuilt, and a new base prepared for the wheel. In the Engine Room two air compressors have been restored to full function and a DC welding machine, salvaged from the Reserve Fleet, has been installed.

A "shipyard/ drydock" package identifying engine and deck department needs is has been developed which includes removing sea chest plates, painting the ship's exterior and getting the engines operating. All work is to meet the Coast Guard and American Bureau of Shipping standards. Funds are being sought for this phase of work which cannot be completed by volunteer effort along. Salvaging visits to the Suisun Bay Reserve Fleet continue, acquiring equipment from the remaining victory ships for installation on the RED OAK VICTORY.
As a major interpretive site for the Rosie the Riveter/WWII Home Front National Historic Park, the RED OAK VICTORY will be developed into a maritime museum focusing on the wartime contributions of the residents and workers of Richmond, providing a unique perspective on their history-making achievements. It will be used as a site for local events and offer educational programs and family recreation opportunities and for ceremonies honoring those, merchant marine, military and civilian, who served in WWII.

8. STATEMENT OF SIGNIFICANCE

SUMMARY PARAGRAPH

The RED OAK VICTORY retains all major distinctive characteristics of the Victory class vessel constructed to serve in WWII (see Section 7). Under Criterion A, association with events that have made a significant contribution to the broad patterns of history, the vessel has Military, Transportation and Engineering significance for its service as an ammunition vessel during WWII, designed to improve on the workhorse Liberty ship. The vessel also holds significance under Criterion C, embodying distinctive characteristics of a type, period, or method of construction...," in the category of Engineering as a product of Kaiser Corporation's revolutionary innovations in shipbuilding techniques.

The 1944 Victory Ship RED OAK VICTORY is one of 414 Victories built during World War II, and, at this time is the only remaining Victory ship built in Richmond outside the Reserve Fleets. Two other Victory ships are afloat outside Reserve Fleets, the SS Lane Victory in San Pedro, California, and the SS American Victory, in Tampa, Florida. The Lane Victory is a National Historic Landmark.

As war raged in Europe, the United States faced the need to supply its allies by sea and the increased possibility of American entry into the conflict while confronted with a critical shortage of cargo ships. The result was the emergency fleet program, which introduced the assembly-line production of standardized ships -- the so-called "Liberty Ships" -- in 1941. In all, 2,571 Liberty Ships were constructed between 1941 and 1945, making them the largest class of ships built worldwide. The two unaltered survivors of the class, SS Jeremiah O'Brien and SS John Brown have been designated National Historic Landmarks.

At the time O'Brien was launched in 1943, the design for a class of emergency vessels to replace the Liberty ships was on the boards. It was to be faster, with more modern steam plants, better trim and stability, stronger hulls, and more efficient, electrically driven winches and windlasses. In April 1943, the type was introduced as the "Victory Ship," and production commenced. The first launched, United Victory, was built by Kaiser's Oregon Shipbuilding Corporation, near Portland, and delivered on February 28, 1944. From then until the end of the war, the

United States Maritime Commission constructed 414 Victory ships, and 117 Victory ship attack transports -- a total of 531 ships.

The Victory ships entered the war at an important juncture, ferrying supplies and troops to the European and Pacific theaters, including the climactic actions in the Pacific at Okinawa and Iwo Jima. Three Victory ships were lost to kamikaze attack during the Okinawa campaign, the only ships of the type lost to direct enemy action. Vital partners of the Liberty ships, the Victory ships were indispensable participants in the war effort.

After the war, many of the ships remained in service, ferrying troops home and helping rebuild ravaged Europe, the South Pacific, and Asia. Victory ships were recalled to war service during the Korean and Vietnam conflicts, and some were modified as support ships for the burgeoning American space program in the 1960s.
The RED OAK VICTORY, as one of the last remaining ships built in Kaiser's WWII Richmond shipyards, holds significance in three other areas. It is a tangible artifact of the immense changes that Hanry J. Kaiser's innovations in shipbuilding techniques made in that industry, the same man's contributions to modern labor and health care standards, and can interpret and represent the profound changes affecting the city of Richmond as a result of its contributions and sacrifices on the WWII homefront.

The preceding statement of significance is based on the more detailed statements that follow.

EMERGENCY FLEET SHIPS, THE VICTORY SHIP PROGRAM, AND THEIR ROLE IN WORLD WAR II

As war spread through Europe in 1939-1940, the need for a strong naval force to meet any threat was matched by the need for a modern merchant marine capable of sending material, ordnance, supplies, and troops abroad. The United States Merchant Marine was for the most part more than 20 years old, with the majority of ships capable of no better than 11 knots. Realizing the problem as early as 1936, Congress passed the Merchant Marine Act, which created the United States Maritime Commission. The Act introduced a policy featuring development of overseas commerce served by a new, modern and efficient merchant marine as one of several government programs to create a resurgent economy and industry.

Subsidies for merchant vessel construction followed, as well as the design of three standard designs for high-speed cargo vessels, known as the "C" (for cargo) ships -- the C1, C2, and C3 types. The new design and increased production of these types of ship was soon overtaken by the need to supply trade routes in wartime, as it became clear that the threat of a spreading conflict would soon affect America's shores and ships. By early 1941, the "quality" production of the C ships was being replaced by the "quantity" production of emergency fleet vessels, the so-called EC-2 (for emergency cargo) "Liberty Ships" of World War II.

Authorized as a defense measure, the emergency fleet ships were built to the order of the Maritime Commission by 18 shipyards across the United States between 1941 and 1945. In all, 2,751 Liberty ships were built, the first being SS Patrick Henry, launched on September 27, 1941, and the last being SS Albert H. Boe, which was delivered on October 30, 1945. Based on the design of British tramp steamers, the Liberty ships were designed by New York naval architects Gibbs and Cox and the Marititme Commission. Approved by President Franklin D. Roosevelt in early 1941, who termed the proposed ship "a real ugly duckling," the Liberty program was underway just in time for the United States' entry into World War II.

Early in 1942, the Maritime Commission called for 2,000 ships to be built by the end of 1943 in order to win the war. This colossal shipbuilding task undertaken in such short a time had never been faced by any nation. Tentative schedules extended into 1945. Throughout the war, emergency fleet production struggled to keep pace with losses to German U-boats, finally catching up, as anticipated, in 1943. Manned by merchant seamen and protected by small caliber deck guns manned by naval armed guards, the Liberty ships carried fuel, ammunition, food, weapons, and troops across the Atlantic and Pacific, the Mediterranean, and the Baltic. They were the largest standardized fleet in world history.

VICTORY SHIPS

With production finally outpacing sinking losses in 1943 the Maritime Commission embarked on a program to design new types of emergency fleet ships, most importantly fast cargo ships to replace the slower Liberty ships. The engines of choice were steam turbines, which were being produced in larger numbers by Maritime Commission-subsidized factories. The standardized design adopted by the Commission called for a 445-foot by 63-foot steel vessel. Initially designated EC2-S-AP1, the design was

redesignated VC2-S-AP1 on April 28, 1943, when the ships were given the "Victory" appellation by which they were henceforth known. The chairman of the Maritime Commission, in an early 1943 speech, noted "We have developed a new emergency ship -- the Victory ship -- to replace the Liberties. The new ship is designed to permit use of the Lentz engine, turbines, or diesels. Its expected speed is 15 - 17 knots as against the Liberties' 11 knots, and it will be a good competition ship in post-war -- which we cannot claim for the Liberty ship."

The Victory ships were different from the Liberty ships primarily in propulsion, the triple-expansion marine steam engine of the latter giving way to more modern, faster turbines or diesels.
The AP1 Victory ship was powered by a 5,500-hp steam engine; the AP2 Victory by a 6,000-hp steam engine; the AP3 by a 8,500-hp steam engine; and the AP4 by a diesel engine. The lines were different, as was the construction of the ships. Hull fractures claimed some Liberties. In order to resolve the problem, Victory ship hulls were built with frames on 36-inch centers as opposed to stiffer 30-inch centers on the Liberties. Better stability and two enlarged tanks aft of the machinery space that carried fuel, dry cargo, or salt water ballast did away with the need for fixed ballast. The resultant flexibility of draft meant that an inherent problem of the Liberty ships, a stiffness after removal of wartime equipment, was done away with. Additionally, the Victory ship design included a 'tween deck in three cargo holds, and electric handling of cargo and anchors, as opposed to the steam-driven winches and capstans of the Liberty ships.

The first ship completed was United Victory, launched on January 12, 1944, and delivered on February 28. The next 33 ships were named after member countries of the United Nations; others that followed were named for cities and towns in the United States and for American colleges and universities. All vessel names ended in the suffix "Victory". In all, during the war years, the Maritime Commission built 414 Victory cargo ships and 117 Victory attack transports, designated as VC2-S-AP5 ships, for a total of 531 vessels. The majority of the 531 built, 272 vessels, were VC2-S-AP2, with 6,000-hp., followed by 141 VC-S-AP3, 8,500-hp vessels and one of the VC2-M-AP4, diesel-powered type. As the war ended in August 1945, the Commission canceled contracts for an additional 132 vessels. Three Victory ships, two AP3s and one AP5, were completed in 1946 as VC2-S1-AP7 ships, modified as post-war passenger and cargo carriers by the Alcoa Steamship Co. of New York. The total number of Victory hulls built in the United States was 534 ships.

The Victory ships formed a needed maritime link to the theaters of war. These fast, large capacity carriers crossed the Atlantic and served well in the Pacific. Ninety-seven of the Victories were converted to troop carriers; the others, like the Liberties, carried food, fuel, ammunitions, material, and supplies. Three of the ships -- Logan Victory, Hobbs Victory, and Canada Victory -- were lost to kamikaze attack at Keram Retto and Okinawa in April 1945; the loss of these three ships, with their cargoes of 24,000 tons of munitions, including nearly all of the United States' supply of 81mm mortar ammunition, was a serious blow to the Okinawa invasions, demonstrating the importance of the ships and their cargoes.

At the war's end, the Victory ships were offered for sale by the Maritime Commission by authority of the Merchant Ship Sales Act of 1946; 31 AP2 ships and 41 AP3 ships were sold to US firms, while 65 AP2s and 33 AP3s were sold abroad, most to Netherlands, Argentina, and Great Britain. Twenty ships were loaned to the Army, while the remainder were placed in mothballs as part of the National Defense Reserve Fleet, laid up at eight different sites on the East, West and Gulf coasts. Some vessels were reactivated to serve during times of national crisis. The Korean and Vietnam conflicts and the closure of the Suez Canal in 1956 being three such instances. Other vessels were retained as logistic support ships as part of the Military Sealift Command. Beginning in 1959, a total of eight Victory ships were reclassified and refitted as instrumentation, telemetry, and recovery ships for the National Aeronautic and Space Administration. On August 11, 1960, for example, the former Haiti Victory recovered the nose cone of Discoverer XIII, the first man-made object recovered from space.

CAREER OF SS RED OAK VICTORY

RED OAK VICTORY was built in Kaiser's Richmond Shipyard Number One, and lauched on November 9, 1944. She was named for the town of Red Oak, Iowa, which suffered the highest per capita casualty rate of any American community during World War II. RED OAK VICTORY is unique in having served as a navy ship as well as a merchant ship. She is the last remaining of only ten ships ordered by the US Maritime Commission to be built for use of the US Navy as an ammunition ship. She was commissioned as the USS RED OAK VICTORY, AK235, on December 5, 1944.

Following a fitting out period she was loaded with cargo and departed San Francisco for Pearl Harbor on January 10, 1945. She then began her career as an ammunition ship and departed Hawaii on February 10 loaded

with munitions needed in the Marshall and Caroline Islands. Sent onward from Eniwetoc, she arrived in Ulithi on February 28, 1945 and then began operating under Commander Service Squadron Ten. Operating out of the Philippines, she issued cargo and ammunition to various ships in the fleet through the end of the war in August 1945. During her hazardous tour of duty in the Pacific, USS RED OAK VICTORY handled many tons of ammunition, supplying the fleet without a single casualty. She was decommissioned on May 21, 1946 and returned to the US Maritime Commission.

SS RED OAK VICTORY operated in 1947, and again between 1950 and 1953, for the Luckenback Steamship Company. She made two 1947 voyages, one from Portland, Oregon, to Anchorage, Alaska, early in the year, and another voyage that began on September 1. In 1951 the ship made one trip to Japan and Korea. In 1952, she departed San Francisco for several trips to the Gulf ports of Havana, Cuba, Tampa, Mobile, and New Orleans. The last of these voyages was in November 1953.

The ship's official log shows a 1957 voyage to Pakistan, India, Singapore and Japan. According to cargo records, RED OAK VICTORY was operated by American Mail Lines for the Military Sea Transport Service from 1966 to 1968. She made a dozen voyages to Vietnam, Japan and the Philippines carrying military supplies loaded at West Coast ports. From 1968 until 1998, she was laid up in the Maritime Administration Reserve Fleet in Suisun Bay, California.

Doomed to be scrapped, the RED OAK VICTORY came to the attention of the Richmond Museum Association in 1993. They recognized that the vessel provided a unique opportunity to return a potent symbol of Richmond's past to the waterfront. Congressman George Miller was approached, and in 1996 Congress passed legislation authorizing the conveyance of the ship to the Museum Association. It has been designated a National Memorial Ship by the Maritime Commission. She was turned over to the Richmond Museum of History and returned to her new home in Richmond on September 20, 1998.

The City of Richmond granted the RED OAK VICTORY a temporary berth at Terminal One in the Port of Richmond, where restoration efforts are proceding. The Museum Board of Directors is working with the City toward establishing a permanent home for the ship on the City's shoreline.

KAISER SHIPBUILDING

Before 1940, the Six Companies organization, with Henry J. Kaiser as a key leader, were involved in major civil engineering feats, notably in building roads and dams, including Grand Coulee. As World War II approached, Kaiser began to think about turning his team of veteran construction people to shipbuilding, especially since the US Maritime Commission announced its plans to renovate the merchant marine, 90% of which ws World War I vintage or older.

In 1940, joining forces with already-established Todd Shipyards, Kaiser secured a contract from the US Maritime Commission to build five C-1 cargo ships in Tacoma. At the same time, the Todd-Kaiser partnership got an order from the British government to build 60 ships, based on an old tramp steamer design, that became known as Liberty ships. Thirty of these were to be built in Richmond, California, a site with the unequalled resources of deep water and unoccupied land. Construction of Kaiser's first Richmond shipyard began in December 1940, and by April, 1941, the keel of the first ship for the British, the Ocean Vanguard, was laid.

During 1941, with the nation's declaration of war, three emergency programs for building Liberty ships were begun, initiating an era of shipbuilding of historic dimensions. Seven Kaiser-managed shipyards containing 58 shipways rose on the West Coast. Four of those yards, with 27 shipways, emerged from the mudflats on Richmond's south shoreline in 1941-'42.

As recounted in "The Kaiser Story",

> Here, in the shipyards, come into play all the dynamics of materials flow, the rhythm of operations and the management of masses of workers, that the company had learned in a quarter century of building roads and dams. New ships had to be produced much faster than ever before and traditional methods simply wouldn't get the job done. Shipyards had previously been thought of in terms of acres; Kaiser yards covered miles so that the mountains of materials could be handled efficiently. Fast welding techniques just about eliminated laborious riveting; the traditional piece-by-piece way of putting ships together was scrapped in favor of prefabrication. Finally, yards were laid out like assembly

lines, with the steel and parts flowing smoothly from flat cars to completed vessels.

Competition between shipyards made record-setting commonplace. Keel-to-launching time was progressively cut to 27 days. The pace and efficiency of the mass production were dramatically demonstrated when the Liberty ship Robert E. Peary was constructed in 4 days, 15 hours and 26 minutes. In addition to innovative time-cutting techniques already developed, construction of the Peary utilized new ones which were incorporated into future construction. These included using seventeen banks of welding machines on each side of the hull, pre-assembly of the deck in seven sections instead of 23, and complete outfitting of the deckhouses, down to bunks, fans and flooring, before assembly.

Kaiser's four Richmond shipyards produced 747 ships. The total production of all Kaiser's shipyards produced 1,490 ships, 27% of the total US Maritime Commission construction, in 2/3 the time and at 25% less cost, than the average of all other shipyards.

KAISER'S CONTRIBUTIONS TO EMPLOYEE WELFARE

To provide the labor for this massive undertaking in a time of scarce manpower, a drive to recruit workers began in June, 1942. Recruiters operated first in Southern California, then moved east. "Help wanted" ads and employment services around the country referred workers to Kaiser's west coast shipyards. Transportation west could be advanced against worker's salaries on the "Kaiser Special Train". At peak, there were 197,000 workers in Kaiser yards; eventually more than one million names were listed in shipyard personnel files. By mid-1944, one fourth of the workers were women.

Kaiser advocated the rights of African Americans to work union jobs and, due to the war emergency and Kaiser's support, the ban by unions on allowing membership to blacks was lifted. Kaiser made provisions for home-to-work transportation and 24-hour child care for its workers. To enable this largely unskilled work force to be immediately productive, Kaiser provided "10-day training" in skills focused on a single operation. Fabrication was divided into components, and workers became experts, not in shipbuilding, but in mastering one small job out of the total.

Perhaps the longest lasting contributions of Kaiser's care of its shipyard work force was in health care. This had been demonstrated at

Grand Coulee dam where a pre-paid medical care plan was developed for the 5000 workers and their families. By the end of 1941, 30,000 shipyard workers had inundated the San Francisco area's overtaxed medical facilities. Doctors from the Grand Coulee program were called in to organize a medical plan for these workers based in Oakland, California. A hospital was built in Richmond, and a non-profit foundation, Permanente, was created to manage finances and improvements. Starting in April, 1942, the plan took care of 200,000 wartime workers.

The main components of the Kaiser Foundation Medical Care Program, precursor of today's HMOs, were: prepayment, which allowed families to budget for health at a lower cost by spreading the total bill among many families; group practice, where medical specialists operating under one roof could call on the specialized skills of colleagues; integrated facilities with hospital, doctors' offices, labs, and x-ray departments under one roof eliminated duplication of facilities; and preventative medical care, eliminating the economic barriers between doctor and patient and encouraging early detection and treatment. An added benefit to the plan was raised morale. The workers did not have worries about their or their families' health to dampen their spirit or enthusiasm for their jobs.

EFFECTS OF WARTIME SHIPBUILDING ON RICHMOND

Richmond, California, incorporated in 1905, has always been an industrial town. It's location, on the northeast portion of San Francisco Bay, provided the deepest water port of any city on the Bay. In 1939 Richmond's population was 23,692, a stable, conservative population of blue-collar workers, less than 1% non-white and the majority long-established. By 1942, the population had increased dramatically to over 93,700 as tens of thousands of new residents, white and black, migrated from the economically depressed South and Southwest to work in the shipyards.

The city was ill-prepared for the throng of workers and their families. There was not enough of anything -- homes, schools, health care, police and fire protection, or recreation. The high wages paid by war industry drew much-needed applicants away from police and other community service jobs.

The shipyards worked on a non-stop three-shifts-a-day schedule, and so did restaurants, movie theatres, schools and day care centers, and lodging places, where two or three persons might successively share a

bed. More than 60,000 people lived in public housing, as 24,000 units of temporary war housing were hastily built on former cow pastures. Richmond at that time was the largest wartime housing center in the world. Many "temporary" housing units remain today.

The shipyards were closed down almost immediately at the end of the war. This created another state of chaos in Richmond, now facing the problems of a large, unassimilated, and unemployed population housed in hastily-built shelters already approaching slums. Many in the pre-war population hoped that the shipyard workers would just pack up and go home, leaving them with their quiet and familiar pre-war life style. This, of course, did not happen. In fact, as other cities eliminated their temporary war housing, pecple moved to Richmond where there were rentals. In addition to these displaced war workers, Richmond became a port of entry for the great post-war migration from east to west,with people following family or friends who had made the transition during the war years.

Faced with urgent needs for homes, transport, schools, and city facilities and services, Richmond officials hoped that the Federal government would come to the aid of the war-stricken community much as they were willing to help veterans. Much publicity was generated about its wartime and post-war problems, and efforts to reestablish an equilibrium badly off-centered by its traumatic World War II experience.

In the immediate post-war years, great strides were made in reconstruction, culminating in an "All-American City" award in 1952. However, as with many other communities around the country, the shifting demographics and economics of "white flight" and the accompanying social unrest of the 1950s and 1960s seriously hampered efforts and redevelopment and revitalization of the downtown business and residential center and potential industrial lands. During the '60s and '70s Richmond became a testing ground for many social experiments, some failing and some successfully incorporated into the life of the city. Richmond has grown in diversity, and the gap between haves and have nots has widened.

As Richmond was distracted by multitudinous post-war adjustments, the deserted waterfront land where the shipyards had flourished fell into a state of neglect and under-utilization, its superb potential hidden by weeds and dumping. However, because the waterfront land was deserted, unappealing and off limits to the general public, it was inadvertently preserved for later "discovery" and use.

The shoreline has been belatedly recognized as a priceless economic asset, and, from the mid-'70s, shoreline development has begun, including parks and marinas, light industry and residential housing. In the rapidly growing San Francisco Bay Area, Richmond is in the fortunate anomalous position of having vacant land at a time when other cities in the area no longer have empty space. There is a growing recognition that the vestiges of Richmond's past are well worth preserving. The RED OAK VICTORY ship can play a key role in preservation and interpretation of significant portions of its history, instill a sense of pride in the past and stewardship in the present among its residents.

10. GEOGRAPHICAL DATA

VERBAL BOUNDARY DESCRIPTION

The RED OAK VICTORY is currently berthed in the San Francisco Bay, at Richmond, California. It is immediately adjacent and south of the Port of Richmond's Terminal One warehouse. This water-bounded site lies east of Point Richmond (also known as Ferry Point) and north west of Point San Pablo. These points are at the southern end of the line of hills known as Potrero San Pablo which runs northwest to southeast in the western side of town known as Point Richmond. The ship's address is 1500 Dornan Drive, Richmond, CA 94801. Dornan Drive is shown on the USGS map as Garrard Blvd.

BOUNDARY JUSTIFICATION

The RED OAK VICTORY ship is a floating structure bounded by water. Its current location is described above and is indicated on the USGS map by an "X".

PHOTOGRAPHS (two sets)

Photo #1. Red Oak Victory ship being towed from Mare Island (Vallejo, CA) to Richmond, CA. By Jos. Rychetnik, September, 1988. Starboard (right) side in sillhouette.

Photo #2. Red Oak Victory ship seen from port side at temporary berth at Mare Island. Jos. Rychetnic, September, 1988.

Photo #3.Red Oak Victory ship viewed from front starboard side at temporary berth at Mare Island. Jos. Rychetnik, Septembe ɪ 1988.

Photo #4. Fore deck of Red Oak Victory with winches 3 and 4 in foreground. Earle Brown, May, 2000.

Photo #5. Engine room of Red Oak Victory. Earle Brown, May, 2000.

Photo #6. Control board in engine room of Red Oak Victory. Earle Brown, May, 2000

Photo #7. Machine Shop in engine room of Red Oak Victory. Earle Brown, May, 2000

ALL NEGATIVES ARE AT THE RICHMOND MUSEUM OF HISTORY

SLIDES (one set)

Slides #1, 2, 3, 4, 6, and 7 are by the same photographer and cover the same subject matter as the photos of the same number. Note: there is no Slide #5

9. MAJOR BIBLIOGRAPHICAL REFERENCES

Bottomley, Tom. "Brief Red Oak History" in *SS Red Oak Victory*. Volume 1, First Edition. April, 2000

City of Richmond Planning Department. "History of the City of Richmond". December, 1996

Delgado, James P. *National Register of Historic Places Registration Form for Lane Victory*. April, 1990

Eakins, Louis S. "MCV Hill 544, Builder's Hull 544, SS RED OAK VICTORY Name Plate Data. November, 1944

Edwards, Lucretia. "The History of Richmond". Draft article for the Richmond Museum of History. Ca 1995

Historic Naval Ships Association. "Historic Naval Ships Association Members", p. 66, *Historic Naval Ships: A Guide to More than 100 Classic Warships on Public Display*. No date.

Huntsinger, Mike. "Action on the S.S. Red Oak Victory" in *The Mirror: The Richmond Museum Association Newsletter*. Volume 44, Number 1. January, 2000

_____ "Restoration Manager's Report" in *SS Red Oak Victory*. Volume 1, First Edition. April, 2000

Jones, Debbie. "The History of the Kaiser Shipyards in Richmond". Bjork, Lawrence, Preschl & Delong, Attorneys-at-Law. 1992

Kaiser Industries Corporation. *The Kaiser Story*. 1998

McVittie, J.A."Richmond California A City Earns the Purple Heart", Pamphlet No. 2, California State Reconstruction and Reemployment Commission. August, 1944

Richmond Museum Association. *SS Red Oak Victory Museum*. October, 1999

Shen, Tony & Hal Hughes. "Legacy of the Second Gold Rush". *Coast and Ocean*, Vol. 14, No. 1. Spring 1998