

A STRATEGY

TO PRESERVE THE

SS UNITED STATES

T. E. Rinaldi / Submitted in Partial Fulfillment for the Degree Master of Science in Historic Preservation

Columbia University Graduate School of Architecture, Planning & Historic Preservation / May 2010

A STRATEGY TO PRESERVE THE *ss UNITED STATES*



Thomas E. Rinaldi

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Architecture, Planning & Preservation
May, 2010

A Strategy to Preserve the ss United States
is a Masters Thesis completed by Thomas E. Rinaldi
in partial fulfillment for the degree Master of Science
in Historic Preservation, Columbia University Graduate
School of Architecture, Planning & Preservation
New York, New York, USA

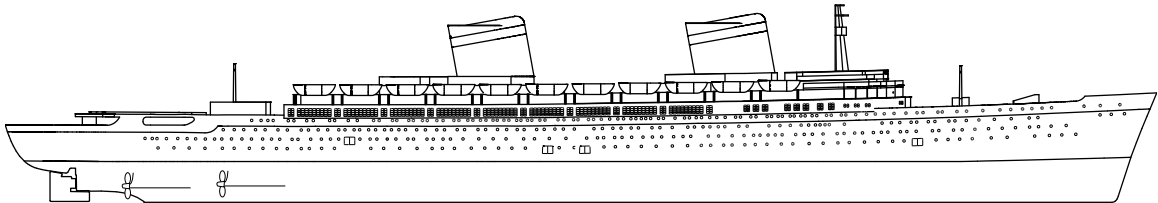
May, 2010

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ss *United States*



AT A GLANCE

Built:	1952
Purpose:	Transatlantic Ferry New York - Europe
Length:	990'
Beam:	101'-6"
Decks:	12
Gross Tonnage:	53,330
Propulsion:	Steam Turbine, Quadruple Screw
Horsepower:	Approx. 250,000
Max. Speed:	Approx. 38 Knots
Capacity:	Approx. 2,000 Passengers, 900 Crew
Significance:	Fastest large merchant ship in history; Largest ever built in USA; Now among very last surviving ocean liners
Designers:	William Francis Gibbs, Naval Architect; Eggers & Higgins, Architects; Smyth, Urquhart & Marckwald, Interior Designers
Total Voyages:	400
Total Miles Steamed:	2,722,840
Total Passengers Carried:	1,025,691
Historic Listings:	National Register of Historic Places, 1999

"All the News
That's Fit to Print"

The New York

Copyright, 1952, by The New York Times Company

L. C. I...No. 34,485.

Entered as Second-Class Matter.
Post Office, New York, N. Y.

NEW YORK, TUESDAY, JUNE 24,

OUR WELCOME S NEW LINER ST TRIP HERE

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DS VIEW ARRIVAL

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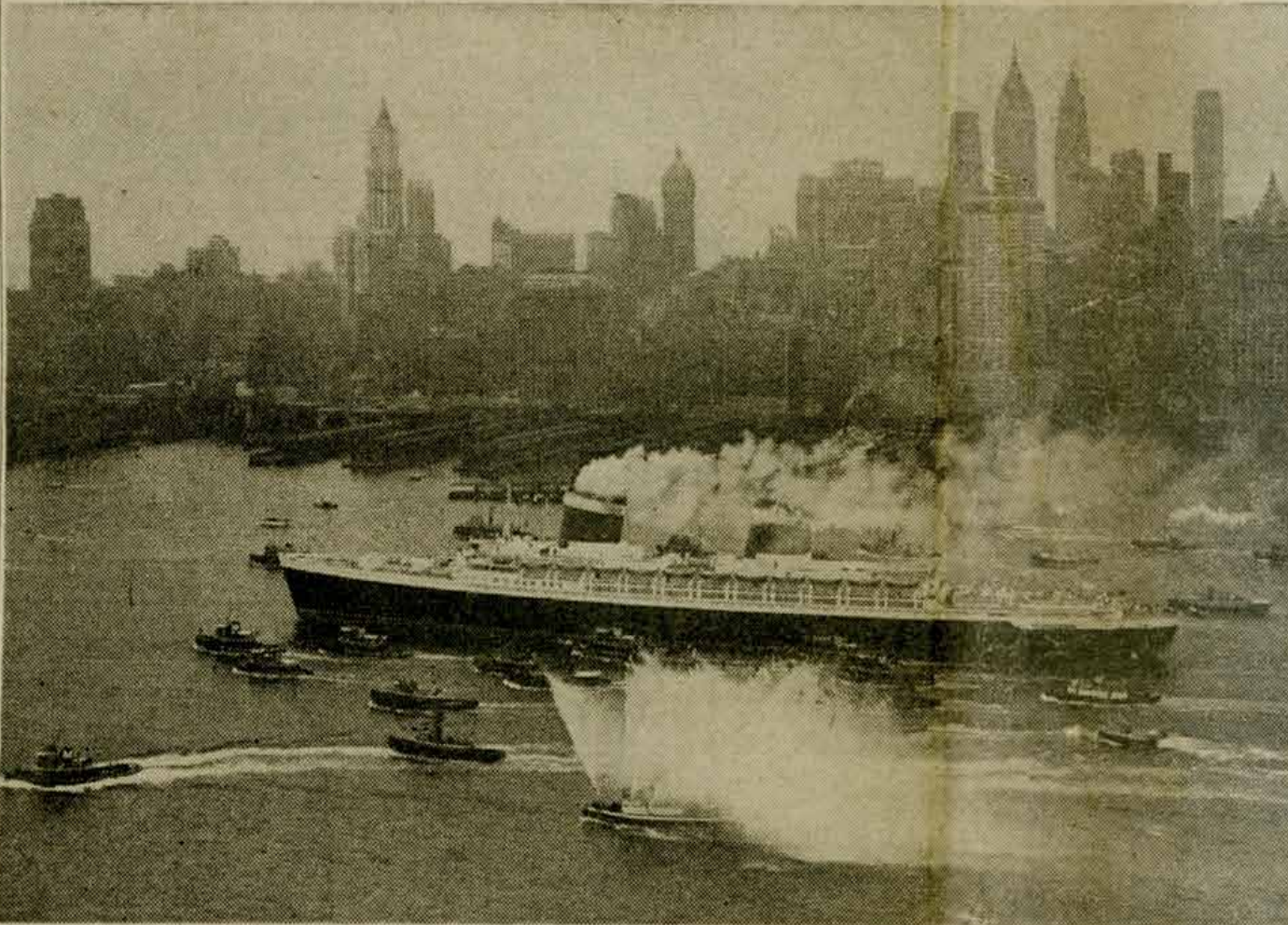
MEYER BERGER

Harbor pulled out all
esterday in greeting to
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States.
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ix hours, the harbor
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he vocal and tick-
rom skyscrapers and
artment houses; sur-
nd onshore factories
at chorus from open
gh-pitched shrillness.
o port and to star-
great white water
inst the gray, lower-
he superliner moved
of Gravesend Bay,
Narrows and into the

Like Lilliputians

THE UNITED STATES IS WELCOMED TO HER HOME PORT



Fireboats spraying streams of water as the superliner sails up the North River

The New York Times (by George

BUS STRIKE BACKING IS VOTED BY T. W. U.

Entire Union Ready to Support 40-Hour-Week Demands of Men on 9 Private Lines

Full union support of a strike to
achieve a forty-hour week by July
1 on nine privately owned bus
lines operating in three boroughs
was voted last night by 600 stew-
ards and section officers of the

A Crisis in Raw Materials Found Imperiling Security

By FELIX BELAIR Jr.
Special to THE NEW YORK TIMES.

WASHINGTON, June 23—The President's Materials Policy
Commission reported today that developing shortages and mount-
ing costs of raw materials had raised grave questions for the
nation's security and living
standards and called for co-
ordinated development and use
of resources by all free nations.

INFLUENCE ON U. S. LAID TO DISTILLERS

After an eighteen-month study
of American material needs and
supplies over the next twenty-five
years, the commission found that

TAFT SAYS HE 9 TO 16 IN MAR

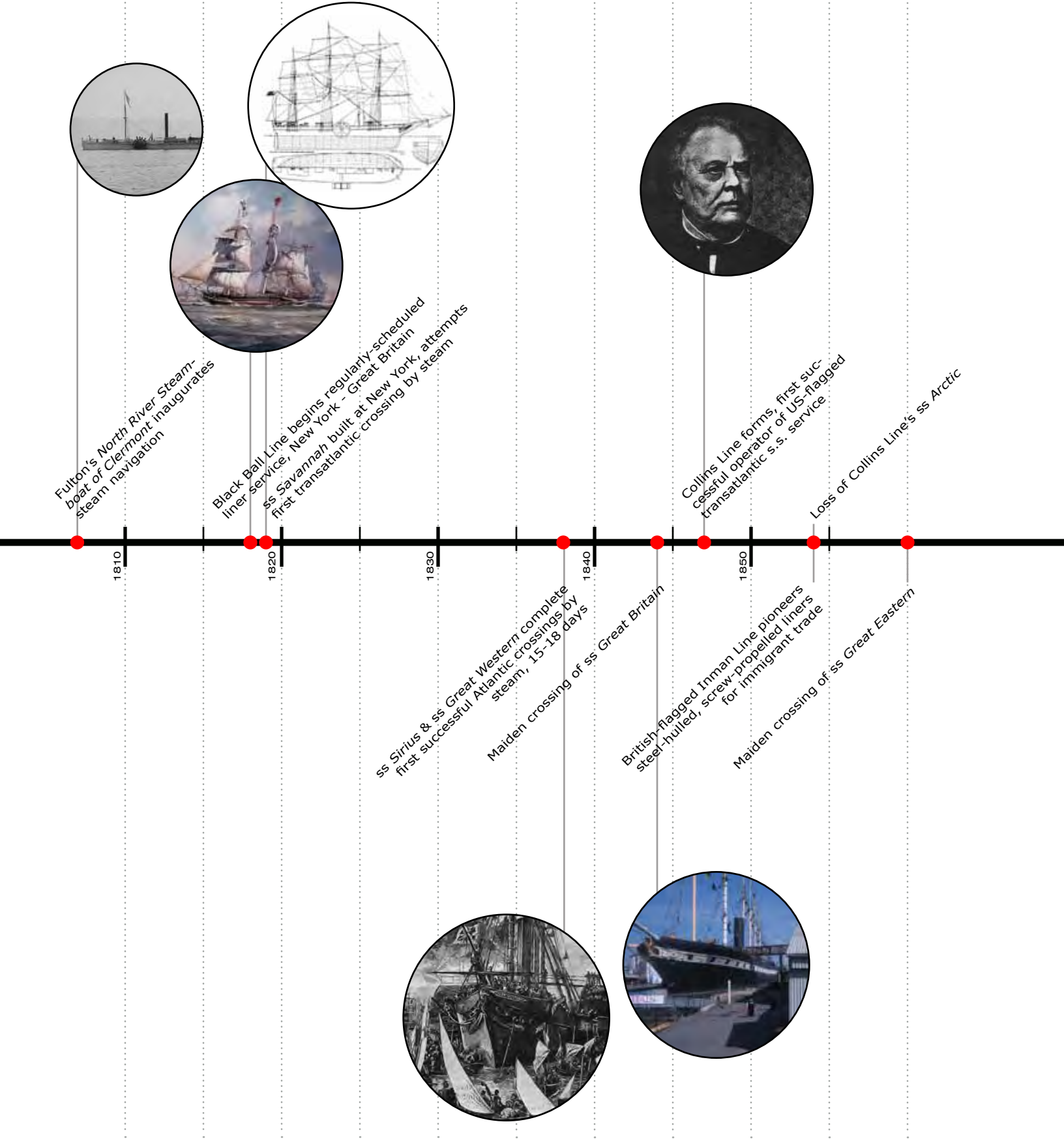
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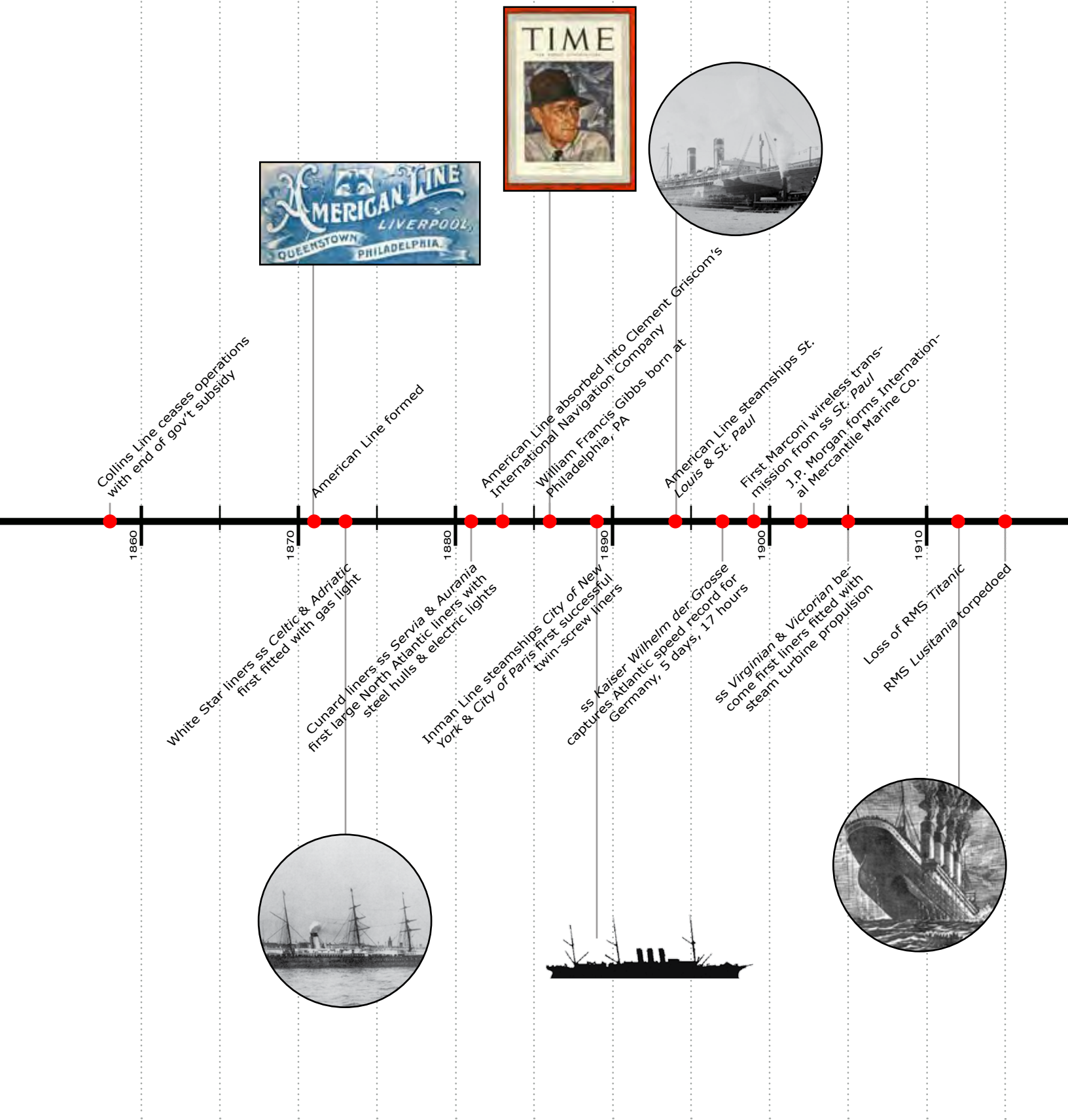
By CLAYTON KN
Special to THE NEW YORK
BALTIMORE, June
Robert A. Taft of O
tonight that he woul
votes of nine to six

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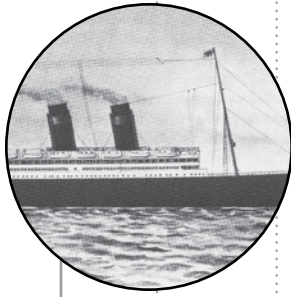
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A Strategy to Preserve the ss *United States*





A Strategy to Preserve the ss *United States*



IMM hires Gibbs to design US-flagged superliners; unbuilt

Emergency Quota Act eliminates steerage immigrant trade; advent of "Tourist Class" fleet after WWI; American Line dissolves

P.W. Chapman buys US Lines, proposes US-flagged superliners; unbuilt

US Merchant Marine Act of 1936 introduces increased gov't subsidies for construction & operation of US-flagged merchant ships

ss America enters service
Gibbs & Cox begin informal design for ss United States Lines formally commissions Gibbs & Cox to prepare designs for ss United States

ss United States enters service, breaks Atlantic speed record, cuts crossing time to 3.5 days

United States Lines contemplates building

1920

1930

1940

1950

1960

Le Corbusier's *Towards an Architecture* praises liners as models for the "new spirit" in architecture

ss Bremen & Europa inaugurate new generation of liners

ss Normandie sets new speed record
RMS Queen Mary breaks speed record, crosses in 4 days

Liners demonstrate value as troop transports during WWII

ss Andrea Doria sinks after collision on approach to NY Harbor
First commercial transatlantic jet flight by B.O.A.C. de Havilland Comet IV

ss France enters service
Queen Mary retired
RMS Queen Elizabeth 2 enters service, last ship partly built for transit. svc.

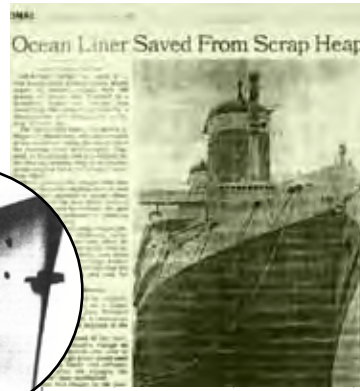


Liner United States Laid Up; Competition From Jets a Factor
 By BERNARD WEINBAUM

Three voyages of the United States, the fastest passenger ship on the high seas, were canceled yesterday and her owners said "this could mean the end of transoceanic" for the superliner.

The United States Lines said the sleek 900-foot vessel, which was launched as the pride of the American passenger fleet on July 3, 1952, "will remain in dry-dock status indefinitely."

The threatened end of six-



ss United States diverted for pleasure cruises in off season

ss America sold to Greek interests

United States Lines sold to Walter Kidde Co.

ss United States laid-up

US MarAd takes title to ship

MarAd cuts price to \$7.6m

MarAd sells ship to R. Hadley for conversion to cruise ship

Navy contemplates using vessel for hospital ship

Artwork & furnishings auctioned

Ship seized by federal marshals, sold at auction to Marmara Marine for cruise ship conversion

Towed to Ukraine for hazmat removal

Towed to Philadelphia, PA

Sold to Edward Cantor

Listed on Nat. Reg. of Historic Places

Sold to Norwegian Cruise Line for cruise ship conversion

Norwegian Cruise Line offers ship for sale

ss France withdrawn from service

ss France converted to cruise ship, renamed ss Norway

Queen Elizabeth 2 becomes only ship making scheduled transat. crossings

Queen Mary 2 replaces Queen Elizabeth 2

Former ocean liners scrapped in droves

Queen Elizabeth 2 retired, slated for hotel ship conversion





Acknowledgements

I am indebted to many people from a wide range of backgrounds who offered their time, expertise and support toward the development of this thesis. In soliciting critical advice and commentary, I consciously sought counsel both from persons familiar with the ss *United States* and maritime heritage conservation and from individuals and organizations with expertise in waterfront planning issues and heritage conservation initiatives generally but with no specific background or familiarity with preserving large ships. First and foremost, a huge debt of gratitude is owed to Carol Clark, Adjunct Associate Professor of Historic Preservation at Columbia University and Assistant Commissioner for Planning & Intergovernmental Affairs at the New York City Department of Housing Preservation & Development, who advised me throughout this process. Special thanks is also in order for Kirsten Reoch, Senior Project Director at the Park Avenue Armory, and Jessica Williams, Curator of History at the Intrepid Sea, Air & Space Museum, who each read a draft of the thesis and offered advice and suggestions that were invaluable toward the development of this strategy to preserve the ss *United States*.

One of the first steps in researching the world of maritime heritage conservation was to survey as many large preserved ships as possible. My thanks to all those who helped in compiling this information, including Tom Bottomley of the Richmond Museum Association; David A. Clark, Senior Curator at the Patriots Point Navan & Maritime Museum; Thomas Dandes and Gordon Calhoun of the Hampton Roads Naval Museum; Diane Jerbi with the ss *John W. Brown*; Paul C. LaMarre III, Executive Director of the S.S. *Willis B. Boyer* Museum Ship; Scott McGaugh with the USS *Midway*; Steve Rankila with the *William A. Irvin* at Duluth, Minnesota; Rusty Reustle of the USS *Lexington*; Andy Smith with the USS *Texas*; Jon Stouky, Chairman of the N/S SAVANNAH Association; Alessandro Trivoli with Woonbron / ss *Rotterdam*; Bill Tunnell with the USS *Alabama*; Jens Weber, Managing Director with the *Cap San Diego* Betriebsgesellschaft mbH at Hamburg, Germany; and Jim Yuschenkoff, Collections Manager with the USS *Hornet*.

The thesis benefitted immeasurably from critical insights and observations conveyed in long and short interviews and informal conversations with experts from varied fields, who generously offered their time and expertise. My most humble thanks to Ann Buttenwieser, author and scholar of the New York

OPPOSITE: Ocean liners were celebrated features of the New York skyline for much of the 20th century.

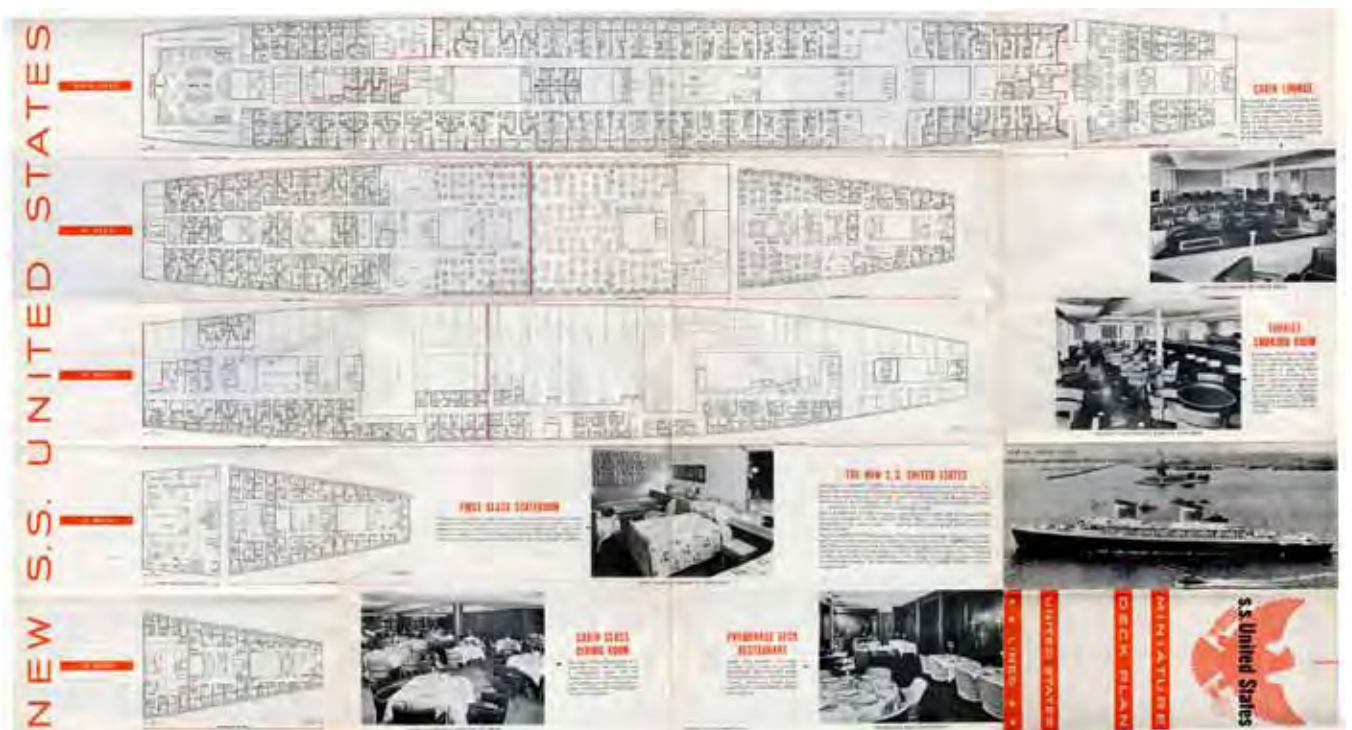


ABOVE: The ss *United States* is a New York landmark dispossessed of its place in the cultural landscape of the city.

OPPOSITE: Deck plans showing public rooms and passenger accommodation of the ss *United States*.

waterfront and Adjunct Associate Professor at the Columbia University Graduate School of Architecture, Planning and Preservation; to Albert Butzel, veteran of the campaign to build the Hudson River Park; to Connie Fishman, President, Hudson River Park Trust; John Krawchuk of the New York City Department of Parks & Recreation; to Michael Kramer, real estate consultant to the SS United States Conservancy; Klaas Krijnen, Chairman, SS Rotterdam Foundation; to Dan McSweeney, Executive Director of the SS United States Conservancy; Erika Testo, Marketing Manager with the RMS *Queen Mary*; to Dan Trachtenberg of the SS United States Foundation; Ellen Ryan of the Brooklyn Bridge Park Development Corporation; Bruce Vancil, Western Regional Vice President of the Steamship Historical Society of America, expert on the operations of the RMS *Queen Mary*; and to Wilbur Woods, Director of the Waterfront & Open Space Division of the New York City Department of City Planning. Thanks also to Charles Anderson, Sue Caccavale & Steve Perry with the SS United States Conservancy; Christopher Arslanian & Diane Lowy with Google, Inc.; Randal Baron with the Philadelphia Historical Commission; Mary Beth Betts with the New York City Landmarks Preservation Commission; Josh David of the Friends of the High Line; Professors Paul Bentel, Andrew Dolkart, and Kenneth Frampton at the Graduate School of Architecture, Planning & Preservation at Columbia University; Amy Freitag with the World Monuments Fund; John Fox of PKF Consulting; Karen Kahn with the Port Authority of New York & New Jersey; Bill Miller, maritime historian and Adjunct Curator of Ocean Liner Studies at South Street Seaport Museum; Michael Miscione, Manhattan Borough Historian; and Elizabeth Pidgeon, Architect with the with the National Park Service, Pacific West Region.

Thanks finally to friends and colleagues who offered their guidance, thoughts and support along the way, especially Peter Knego, Allison Lyons, Mike Marsh, Kett Murphy, Aaron Schump, Ted Scull and Catherine L. Smith. To all of those above and all of those I have inevitably left out, I offer my heartfelt gratitude for your contributions to this work.



... HARRY MANNING, CHIEF ENGINEER
FOR SETTING A NEW TRANS-ATLANTIC
... WILLIAM KAISER, AND CREW OF THE S.S. UNITED STATES
... ATLANTIC SPEED RECORD

Executive Summary

There is no consensus on how the waterfront should be used – whether for urban or natural uses, or a combination thereof – and power struggles for leadership have crippled even the most modest proposals.

Michael Z. Wise, Wilbur Woods, & Eugenia Bone, *Evolving Purposes: The Case of the Hudson River Waterfront*, 1997.¹

The ss *United States* is among the most egregious examples of endangered cultural heritage in its namesake nation today. Built in 1952 to ferry passengers and cargo between New York and Europe, she remains the fastest ocean liner ever constructed and the largest built in the United States. The arrival of commercial jet aircraft shortly after her completion ended the evolutionary trajectory for ships of this kind, and the *United States* was withdrawn from service in 1969. Though listed on the National Register of Historic Places in 1999, today the ship lies dormant at Philadelphia, Pennsylvania. One of the most significant ocean liners ever constructed, today she is also one of the very last to have escaped the scrap heap.

This thesis puts forth a strategy to preserve the historic ss *United States*. It establishes guidelines for a public-private partnership that can protect the cultural heritage value of this historic structure and capitalize on its potential as a quality of life enhancement for a revitalized post-industrial waterfront ideally in New York, where she existed as part of the city's cultural landscape. If arrangements ultimately cannot be made to bring the ship to New York, many of these guidelines are applicable towards her preservation in another port city. The thesis begins with an explanation of the vessel's eminent historical significance, and moves on to explore case studies of large-scale maritime heritage conservation initiatives around the world to take stock of what has led to the success or failure of these projects in terms of planning, funding and design.

Based on these considerations, private sector non-profit leadership can galvanize a public-private partnership that will set the stage for the vessel's refurbishment to serve an appropriate new program that will be sensitively conceived to enjoy the support of the community it will serve. The result will be the safeguarding of cultural heritage in a way that provides financial support for its long-term stewardship, and constitutes a significant waterfront enhancement that honors America's industrial and maritime heritage.

OPPOSITE: Sidewalk tablet at Broadway & Wall Street on New York's "Canyon of Heroes" recalls the ticker-tape parade to honor the crew of the ss *United States* upon the completion of her record-breaking maiden voyage in 1952.

A Strategy to Preserve the ss *United States*

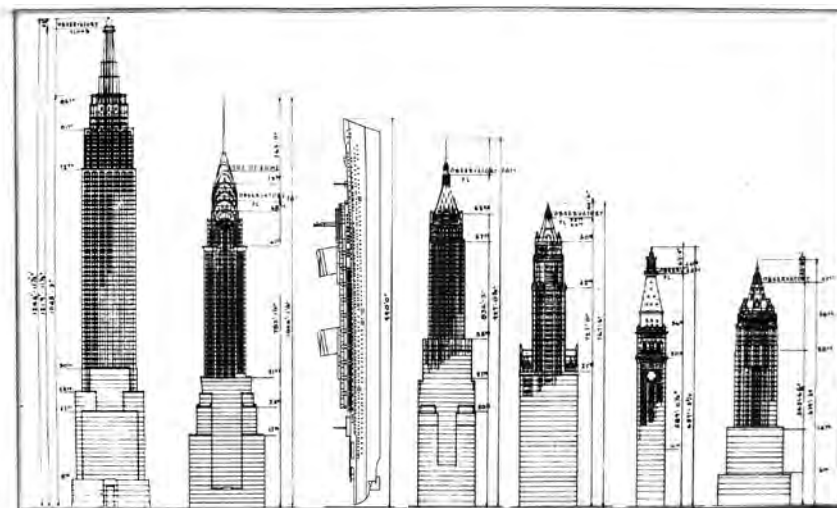
Acknowledging the unique cultural and historical value of the ss *United States*, this thesis explores a multiplicity of issues relevant to developing a secure future for the ship. Appropriate guidelines can steer the development of a reuse program for the vessel, the specification of a suitable permanent home for her, and the architectural treatment of her interior and exterior restoration in a way that will honor the ship's heritage value. Although the ship's public rooms and passenger accommodation have been stripped of their fittings, the artworks and furnishings from these spaces survive in museums and private collections, and the *United States* remains otherwise essentially unchanged from the time of her construction, with the great bulk of her historic fabric intact. The gutting of her interiors ultimately helps the feasibility of preserving the ship as a whole by having removed vast quantities of asbestos-laden materials and making the spaces onboard more flexible for a wider range of adaptive reuse proposals.

While the guidelines put forth in this thesis allow for the implementation of various solutions for the ship, they add up to a specific "best-case" scenario that this thesis strongly advocates as the best vision for the future of this uniquely valuable historic resource:

The ship can and should be brought back to its historic home of New York. In a city that owes its very existence to merchant shipping, the ss *United States* would serve as a monument to the ships that facilitated the city's founding and development from the seventeenth century onwards. As the birthplace of commercial steam navigation, New York is a uniquely appropriate home for the most technologically advanced merchant steamship in history. New York is the city with which the *United States* shares the strongest historical associations. New York marked the terminus of the ship's transatlantic route; the ship figured as a regular fixture on the city's skyline; New York was her official port of registry. She was designed by New York firms, managed by a New York-based steamship company, and largely staffed by New York crew.

The ship should be permanently moored on the Hudson River waterfront where vessels of its kind historically existed as features of the skyline, at one of four possible locations described herein. For its close historical and cultural ties to the city, the *United States* is in a sense a New York landmark dispossessed of its place in the cultural landscape of the city. The ideal scenario will return

BELOW: The ss *United States* ranks with the great 20th century landmarks of New York.



the ship to a location close to its historic home on Manhattan's west side. As a cultural resource with public access requisite for its reuse, the ship will be compatible with the waterfront's new role as a public park.

The ship should be programmed with both commercial and cultural uses to help generate revenue for its stewardship and enable the public to experience its heritage value. The reinvention of Manhattan's Hudson River waterfront as a public park has proven hugely successful in

helping the public to connect with the harbor and capitalize on its potential as a recreational resource. The *ss United States* can further enhance the waterfront by strengthening a sense of its heritage and cultural identity. The ship's new program should be carefully planned to capitalize on its value as a cultural destination and to generate revenue to support its continued care and maintenance.

The most apparent program solution is for a hotel/event space and museum, but other possibilities should be explored with the participation of the neighboring community, including residents, businesses and cultural institutions. Various proposals have been made to adaptively reuse the *ss United States* as a stationary hotel since as early as 1969. This thesis finds that such a reuse proposal can be executed in a way that is consistent with the ship's historic integrity. Even so, the exploration of alternate reuse programs could be an effective means of generating interest in the ship's preservation among a wider constituency. The thesis sets guidelines against which the appropriateness of alternate proposals can be gauged with respect to their potential impact on the ship's heritage value.

The *ss United States* is an opportunity to solve the problem of what to do with one of several city-owned waterfront sites whose reuse has proven difficult to resolve. Despite the success of the Hudson River Park, a number of problematic sites on Manhattan's Hudson River waterfront have proven difficult to re-activate even as the park has taken shape around them. These include Pier 76, currently home to a tow pound; Pier 92, a marginally-used docking facility for the city's Passenger Ship Terminal often made to double as a convention center; and Pier 40, a former ocean liner terminal for which several redevelopment proposals have failed.

This solution will serve the public good by preserving this historic ship, returning a "lost landmark" to the New York waterfront, enhancing the character, aesthetic, and quality of life of Manhattan's West Side for residents and visitors, and thereby helping to stimulate the area's economic vitality. As an unused historic structure associated with New York's working waterfront, the *ss United States* could well be described as a kind of "floating High Line" that, like the elevated railway viaduct-turned-public park, could be imaginatively reused in a way that stimulates economic development both directly and indirectly by creating jobs and a unique new destination on the waterfront.

Despite her forlorn state, the *ss United States* embodies a huge potential. She presents an opportunity to make good use of a currently underutilized waterfront property, to improve public access to the shoreline, and to celebrate New York's rich heritage of maritime commerce. The object of this thesis is to identify precedents that have accomplished similar goals, and to establish a best case scenario for the location, programming and design treatment of the ship that will capitalize on the unrealized potential of this important historic and cultural resource.

ENDNOTES

1 Bone, 193.



History & Significance

I now hold in my hand Lang & Turner's New-York Gazette of January 5th, 1818, in which the editor remarks, "This day will witness the commencement of the line of American packets between New-York and Liverpool. . . ." From the sailing of this packet we may date the day from whence the commerce of New-York began to increase seven-fold.

Grant Thorburn, *Fifty Years' Reminiscences of New-York*, 1845.

The ss *United States* is one of a very small number of ships that can be described as the most advanced ocean liners ever built, a typology that helped to facilitate world trade for 150 years. Specifically, she is among the most significant surviving examples of the ships that helped make New York the commercial capital of the United States. For her eminent significance as the fastest ocean liner ever built and the largest built in the United States, the US Department of the Interior listed the ship on the National Register of Historic Places in 1999. As works of design and technology, ships of this type rank with skyscrapers and suspension bridges in terms of physical scale and significance. Yet unlike these land-side structures, almost no historic large scale merchant ships have been preserved for their heritage value. Thus the *United States* represents not only one of the most significant examples of its typology ever constructed, but also one of the very last to survive today.¹

The First Atlantic Liners

The origins of the ss *United States* can be traced back to the advent of regularly scheduled overseas transport at the beginning of the nineteenth century. In 1818, a company called the Black Ball Line finally inaugurated a service of regularly scheduled Atlantic crossings by sail packet, with New York at its western terminus. Whereas transoceanic voyages previously began only when a ship reached sufficient capacity to make the trip pay, these vessels made "line voyages" to provide basic transportation between fixed ports according to an advertised schedule, and became known as "liners" or "ocean liners." Thus the concept of scheduled overseas transport was born on the North Atlantic sea lanes between New York and Europe. Although commercially viable steam navigation had its birth at New York with the advent of Robert Fulton's *North River Steam Boat* (known as the *Clermont*) in 1807, a decade later the technology had not yet advanced to a point where engine-propelled craft could practically undertake overseas voyages. Built at one of Manhattan's East River shipyards, the ss *Savannah* made the first recorded attempt to cross the Atlantic by steam in 1819. But the *Savannah's* speculative voyage

OPPOSITE: New York's "Ocean Liner Row" stretched from West 44th to West 52nd Streets on the Hudson River. Seen here on a busy day in the mid-1960s are, from top: the ss *Constitution*; ss *United States*; ss *France*; ss *Raffaello*; and RMS *Queen Elizabeth*.

BELOW: The Black Ball Line's *James Monroe* inaugurated regularly-scheduled transport between New York & Europe in 1818.

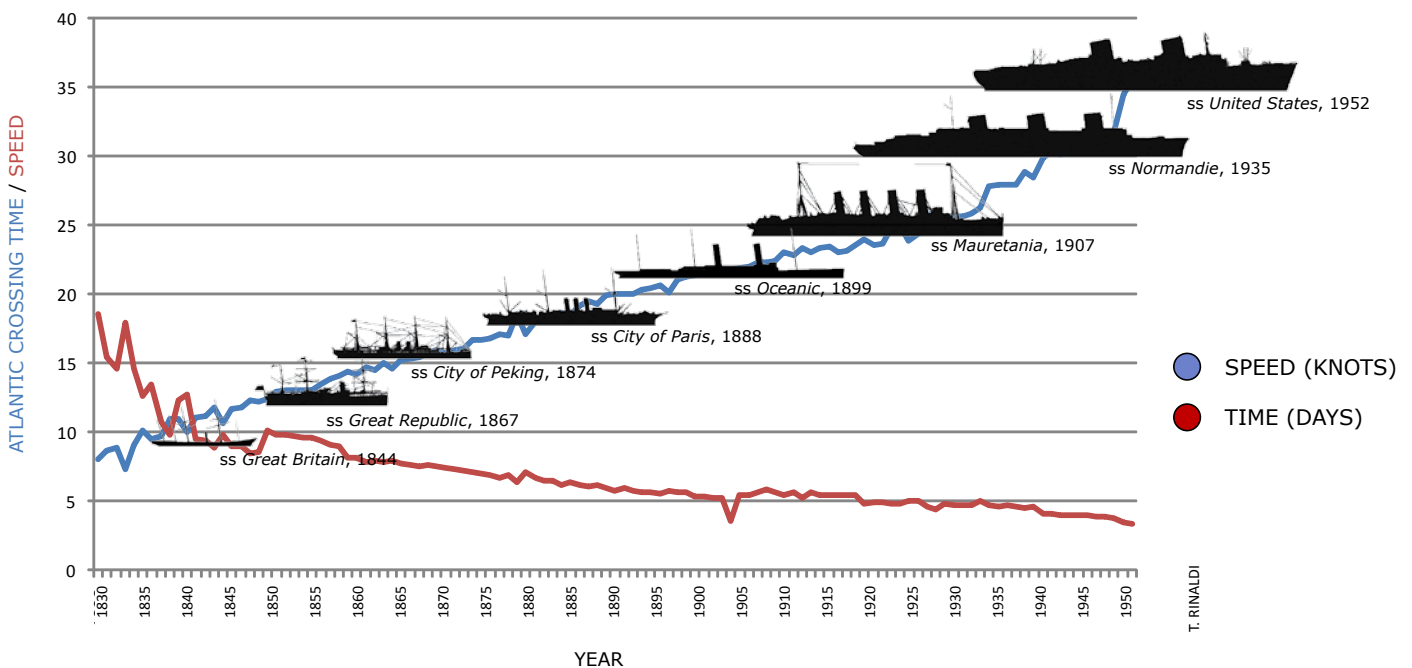


proved a financial failure, and the ship's engine was subsequently removed.² The watershed moment finally came in April 1838, when two British-built steamships, the *Sirius* and the *Great Western*, set out from England in a race to reach New York under steam. For the next 150 years the rush was on to build faster, larger and more advanced ships, a trajectory that ultimately culminated in 1952 with the crossing of the ss *United States* in three and a half days, before the beginning of transatlantic flight by commercial jet aircraft in 1958 rendered the competition redundant.

Following the successful crossings of the *Sirius* and *Great Western* in 1838, steamships began to take business away from sail powered ships through the middle decades of the nineteenth century. By this time, the Erie Canal (opened in 1825) had helped to establish New York as the preeminent American port city. Like the steam packets before them, the Atlantic steamships favored the port of New York for the western terminus of their routes, helping to fuel the city's development over the course of the century. The demand for greater speed and capacity on the routes linking North America with Western Europe meanwhile drove technological innovations that were echoed on sea-lanes elsewhere in both merchant and armored navies around the world. But such innovation did not come cheap. From the very beginning, the development of the steamship relied heavily on large-scale government subsidies, usually by way of contracts to carry mail and provisions for the ships to be made available as naval auxiliary vessels in the event of war.

Beginning in 1840, the British government sponsored the development of British-flagged steamship companies through generous mail contracts. In response, the United States Congress passed a bill authorizing a similar mail subsidy for an American rival to the British in 1845. After a number of false starts, the government eventually awarded the contract to the New York & Liverpool United States Mail Steamship Company (known as the Collins Line) in 1847. The company prospered until the government abruptly discontinued its

CHART: Development of Transatlantic Steamships



subsidy in 1858. Unable to operate without the subsidy, the line immediately ceased operations. The potential of merchant steamships as naval auxiliaries meanwhile was tested with the Crimean War in the 1850s. With the outbreak of hostilities, the British Navy conscripted nearly the entire fleet of the Cunard Line to transport troops and supplies to the front. Thus by 1860 was demonstrated the significance of government underwriting in evolution of transatlantic steamships. Supported extensively by government money in a period of rising nation states, the intense drive to build larger and faster ships became as much if not more a matter of national prestige as of free market competition.

The Race for Innovation

The nineteenth century history of transatlantic steamships reads like a parade of technological milestones that saw the liners develop from wood-hulled sailing vessels fitted with steam-powered paddlewheels to large, riveted steel superliners capable of ferrying various diasporas from Europe to the Americas and elsewhere by the end of the 1890s. The progress is charted in the story of the so-called "blue riband," the title awarded for the fastest Atlantic crossing. The prize went back and forth between the Cunard and Collins lines through the 1850s, with the crossing time between England and New York edging down from about ten days in 1850 to nine in 1860 to seven a decade later. Following the dissolution of the Collins Line in 1858, supremacy on the North Atlantic went back to England, and the blue riband passed among a number of competing British firms including the Cunard, Inman, Guion and White Star lines, all of which enjoyed government mail subsidies. No American ship would compete for distinction in size and speed until the ss *United States* nearly a century later.

In the absence of American competition, a frenzied race for dominance on the North Atlantic played out between England and Germany in the years leading to the First World War. This manifested itself in rapid technological innovation for the construction of steadily larger and faster liners – by this time heralded as "superliners" – for the North Atlantic ferry. Intense competition brought the advent of a generation of successively larger and faster ships, such as the *Kaiser Wilhelm der Grosse* of 1897, the *Lusitania* and *Mauretania* of 1907, the White Star Liners *Olympic* and *Titanic* of 1911-1912, and a projected trio of German liners to be called the *Imperator*, *Vaterland* and *Bismarck* in 1913-1914. The outbreak of War in 1914 put an immediate halt to the superliner contest, decimated the British and German merchant fleets and effectively halted the momentum of merchant ship development until the late 1920s. After the loss of the *Lusitania* on May 7, 1915, all available large merchant ships were requisitioned as naval auxiliaries. With the Treaty of Versailles, the Allies claimed virtually the entire surviving German merchant fleet as war prizes.

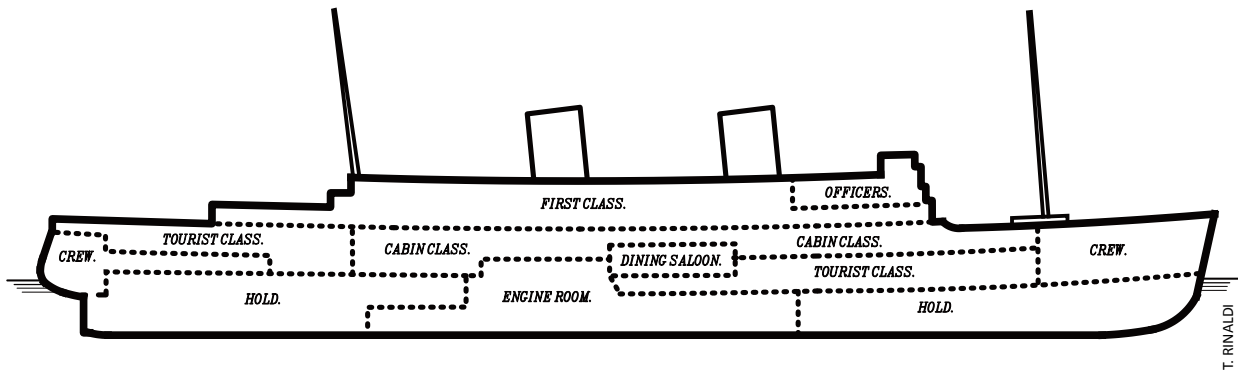
Adapting to Post War Realities

The industry had just begun to rebuild when the United States Congress passed legislation effectively reducing the North Atlantic immigrant traffic by as much as 98% from certain countries by 1924.³ Ships that had formerly counted on hoards of steerage passengers for their annual revenues had to find a new way to account for the lost business. By the mid-1920s, the companies upgraded the third class accommodation previously given over to steerage passengers,

BELOW: The ss *Great Britain* is preserved in the graving dock where she was built at Bristol, UK



A Strategy to Preserve the ss *United States*



ABOVE: Diagram showing the typical hierarchical allocation of space aboard oceanliners that prevailed from the 1890s until the 1960s.

BELOW: The industrial aesthetic of the ocean liner registered in art and architecture early in the 20th century. "Upper Deck," by Charles Sheeler, 1929 (top). *Vers une Architecture*, Le Corbusier, 1923 (bottom).



re-branded it "tourist class" and launched advertising campaigns targeting the American mass market. The strategy worked, and by the late 1920s, plans for newer, faster and larger liners began to be drawn again. The introduction of the North German Lloyd sister ships *Bremen* and *Europa* in 1929 and 1930 set off a renewed surge of technological advancement on the North Atlantic that saw a new generation of liners constructed over the following decade. These ships set a new paradigm for the design of large passenger liners that significantly influenced many vessels built thereafter, including the ss *United States*. Already, plans for new ships to compete were underway not only in England but in France, Italy and – after a long absence from the North Atlantic steamship rivalry – in the United States as well.

The Great Depression intervened. Only large-scale government intervention facilitated the eventual construction of the ships projected at the end of the 1920s. A new fleet of record breaking Atlantic superliners debuted with the introduction of ships such as the Italian *Rex* and *Conte di Savoia* (1932), the French liner *Normandie* of 1935 and the British flagships *Queen Mary* (1936) and *Queen Elizabeth* (1940). In the absence of government assistance, the proposed American superliners never left the drawing board.

By the 1920s, the ocean liners secured a prominent place in the popular imagination that would outlive the ships themselves. Like the skyscrapers that emerged contemporaneously as heroic expressions of technical achievement, these ships were celebrated in works of art, literature and film. Particularly in New York, which became the great gathering place of the world's largest merchant ships, the vessels figured prominently in picture books of the rising city alongside landmarks such as the Brooklyn Bridge, the Statue of Liberty and the new steel-framed skyscrapers. Well into the middle twentieth century, liners in the harbor remained favorite subjects for New York photographers such as Berenice Abbott (1898-1991) and Andreas Feininger (1906-1999). Other photographers and artists meanwhile sought to depict the industrial aesthetic of the ships themselves, resulting in notable works by Charles Sheeler (1883-1965), Ralston Crawford (1906-1978) and Walker Evans (1903-1975) among others. The triumphs and tragedies of the liners appeared in dozens of popular films, such as *The Big Broadcast of 1938*, *Now Voyager* (1942) and *An Affair to Remember* (1957), and numerous cinematic depictions of the loss of the ill-fated White Star liner *Titanic* of 1912.

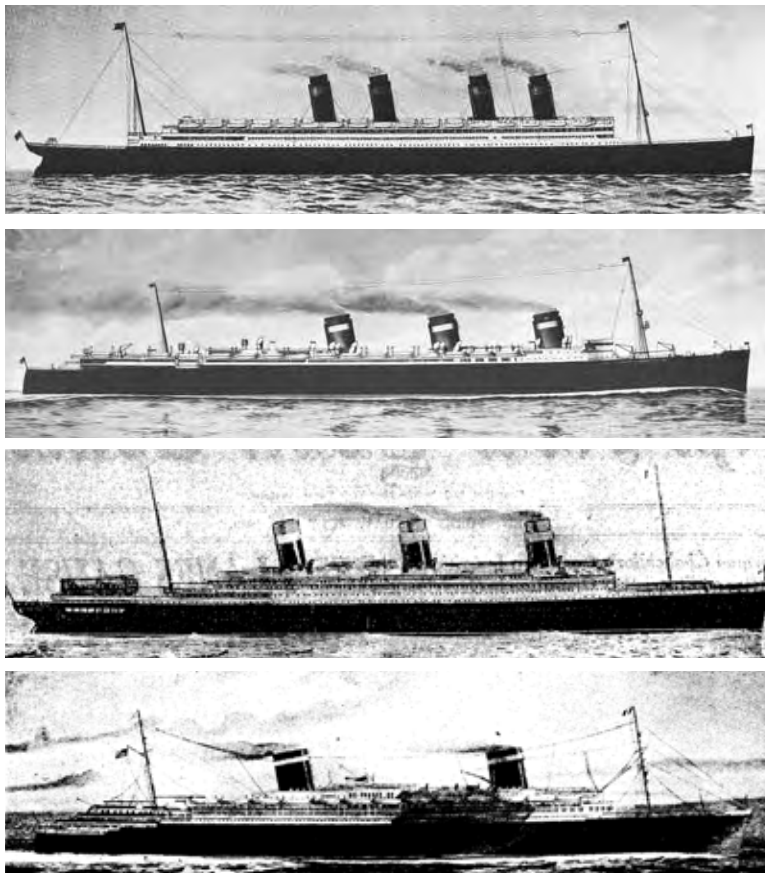
The ships made their most tangible impact in architecture. As possibly the most architectural form of industrial design, their aesthetic registered with architects in ways that visibly influenced the principles of the modern movement. They

appeared in the Deutsche Werkbund's *Jahrbuch* of 1914 as manifestations of an engineered aesthetic for architects and other designers to emulate. Le Corbusier (1887-1965) took this idea a step further in *Vers une Architecture* a decade later, celebrating the ocean liners for their honest, engineered aesthetic and for their ability to function as almost self-sufficient cities unto themselves. The irony was that while the greatest of these ships were built to reach America and specifically New York, the United States had no superliner of its own until the advent of the ss *United States* after the Second World War.

The American Line

Following the demise of the Collins Line in 1858, no American merchant ship held title for size or speed until the advent of the ss *United States* nearly 100 years later. While government subsidies, market competition, colonial trade factors and steady emigrant traffic stimulated the development of large merchant fleets among Western European nations, the American merchant marine remained at a profound disadvantage.

In the wake of the Collins Line, a firm called the American Steamship Company emerged as the nation's leading competitor on the North Atlantic. Trading as the American Line, it organized in 1871 with the backing of the Pennsylvania Railroad. In 1884, the line was absorbed into Philadelphia shipping magnate Clement Griscom's International Navigation Company.⁴ In 1893 the US government awarded Griscom a new mail contract that required him to build two new express liners in the United States. All of the company's ships were to



LEFT: Four unrealized proposals for an American superliner, from top: initial study for Gibbs / IMM proposal c. 1917 showing four-stacked liner based on Harland & Wolff *Olympic / Titanic* model; Gibbs / IMM revised proposal, c. 1919; Ferris / P.W. Chapman initial proposal for three-stacked liner with profile similar to *Leviathan*, 1929; Revised Ferris / Chapman proposal, 1931, bearing influence of *Bremen & Europa*.

A Strategy to Preserve the ss *United States*



be made available as naval auxiliaries in the event of war. Thus the American Line commissioned the construction of the liners *St. Louis* and *St. Paul*, built at the Philadelphia shipyard of William Cramp & Sons and ready for service by 1895 and 1896, respectively. Though comparable in size and speed to the largest and fastest ships in the world, neither vessel was a record breaker. The United States Navy temporarily requisitioned both vessels as troop transports and auxiliary cruisers during the Spanish American War in 1898.

William Francis Gibbs and the First Proto-United States



In 1902, the International Navigation Company reorganized as the International Mercantile Marine Corporation (IMM) with the financial backing of J. Pierpont Morgan. While IMM focused investment in other subsidiaries such as the White Star Line, the American Line languished until 1916, when IMM hired a young naval architect called William Francis Gibbs to plan a pair of new superliners for the American flag. Born in Philadelphia, Gibbs (1886-1967) trained as an attorney but pursued a career as a naval architect instead. The new American liners, as proposed by Gibbs and his brother Frederic H. Gibbs, would set new records for size and speed, with a gross tonnage in the range of 55,000, a length of 1,001 feet and a speed of 30 knots, enabling them to make the Atlantic crossing in less than four days.⁵



World War I and its aftermath spelled the end for the Gibbs-IMM superliner proposal. After the war, the Allies claimed nearly the entire German merchant fleet as war reparations. The United States government assigned its reparations fleet, including the former German superliner *Vaterland* of 1914, to a newly-created government agency called the US Shipping Board. The government's acquisition of the *Vaterland* ended the momentum for the construction of a new American superliner. After the War, the Shipping Board renamed her *Leviathan* and slated the ship for transfer to the IMM-controlled American Line. But IMM had significant ownership by overseas investors, and a politically-charged smear campaign led by the Hearst newspapers accused the Shipping Board of handing over control of America's largest merchant ship to foreign interests.⁶ This forced the agency to lease the ships to a newly-formed corporation called the United States Mail Steamship Company in 1920. Hastily put together, the line declared bankruptcy the following year. In 1921, the Shipping Board oversaw the formation of a new company called the United States Lines to operate the reparation fleet. After ferrying American troops home from Europe, the *Leviathan* finally returned to service in 1923 under the flag of the United States Lines. She remained the backbone of the American transatlantic fleet through the 1920s.

Paul W. Chapman and the Second Proto-United States



By the late 1920s, the United States Lines remained far from profitable, and the Shipping Board put the company up for sale to the highest bidder. The Gibbs Brothers made an offer to purchase the organization in 1928, but were outbid by a Chicago businessman called Paul W. Chapman. Although Chapman had no substantial experience in merchant shipping, the Shipping Board accepted his bid and transferred ownership of the fleet to the newly-organized United States Lines, Inc. that year. The terms of sale required Champan to construct two superliners to run in service with the *Leviathan*. Probably owing to lingering bad blood from the bid competition, Chapman passed over Gibbs and hired naval architect Theodore E. Ferris (1873-1953) to prepare designs for the new

ships in February, 1929. The arrival of the record-breaking German superliners *Bremen* and *Europa* in 1929 and 1930 added momentum to the planning process and significantly influenced their design.⁷

Ferris designed the ships to be of 59,000 tons displacement and 970 feet in length, which would allow them to pass through the Panama Canal in the event that war service should require them to divert from the North Atlantic. For their public rooms, Chapman commissioned a design team comprised of Hood, Godley & Foulhoux, Vorhees, Gmelin & Walker, and Holabird & Root working as associated architects. Chapman's design consultants produced plans for a lavish suite of public rooms comparable in style and scale to those of New York's Rockefeller Center, taking shape at the same time with the involvement of some of the same designers (most notably Raymond Hood). They would have been some of the most remarkable liners ever built.

The Great Depression prevented the ships from ever leaving the drawing boards, and Chapman's liners joined the ranks of New York's great unrealized skyscrapers of the 1930s. To fulfill its obligations to the Shipping Board, the United States Lines contracted with the New York Shipbuilding Corporation of Camden, New Jersey for the construction of two much smaller liners, the *ss Manhattan* and *Washington* of 1932 and 1933, respectively. Suffering the effects of the Depression, Chapman declared bankruptcy before the new ships were completed. The Shipping Board oversaw their completion, reclaimed the company's fleet and quickly transferred the ships to IMM in 1932, which by this

OPPOSITE / TOP: The American Line steamers *St. Louis* (above) and *St. Paul* both served as naval auxiliaries during the Spanish American War in 1898. The acquisition of the *ss Leviathan* (below) ended the momentum for the construction of an American superliner after World War I.

OPPOSITE / BOTTOM: Renderings for public rooms aboard P.W. Chapman's proposed superliner by Raymond Hood and associated architects, 1929.

BELOW: The *ss America* of 1940 served as a prototype for the *ss United States*. Sold to Greek interests in 1964, she survived until being wrecked in the Canary Islands in 1994.



A Strategy to Preserve the ss *United States*

time had divested itself of most of its foreign assets and become sufficiently “Americanized” to avoid the blowback that prevented its acquisition of the reparation fleet ten years earlier.

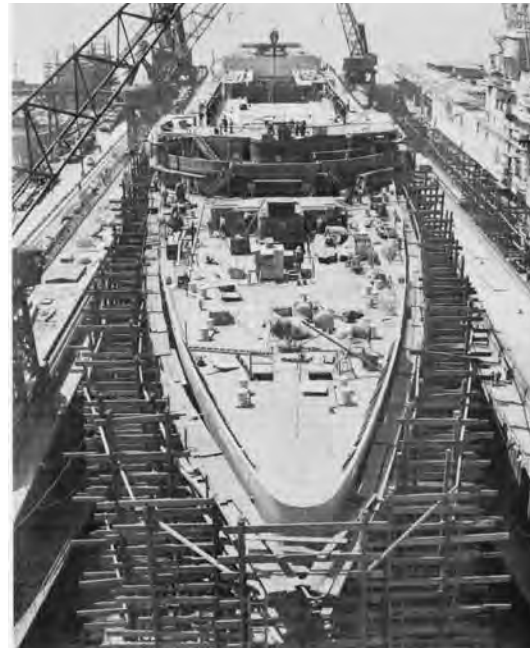
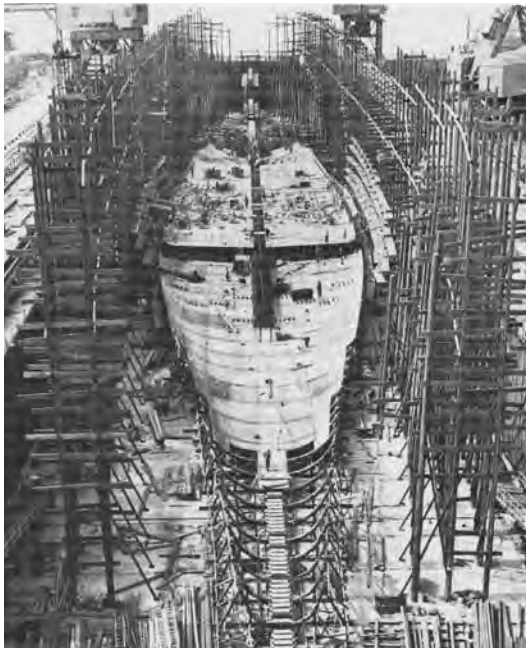
ss *America*: Prelude to the American Superliner

Denied control of the reparation fleet and with no promise of government subsidies for the construction of new Atlantic liners, IMM had quietly retired the ships of the American Line in the 1920s and the company became defunct. Rather than revive the dormant American Line, IMM continued to market its new assets under the United States Lines moniker after 1932. Struggling to make the fleet profitable in the midst of the Depression, the company laid-up the *Leviathan* at Hoboken in 1933 and began planning a more economical replacement.⁸ Formal designs for the new ship did not get underway until 1936 when the company hired William Francis Gibbs to prepare plans for a mid-sized liner of approximately 34,000 gross tons and an overall length of 720 feet. Construction began at the Newport News Shipbuilding and Drydock Company at Newport News, Virginia in August 1938, and the vessel was christened *America* by First Lady Eleanor Roosevelt at its launch one year later. The *America* entered service in September, 1940 only to be requisitioned by the US Navy as a troop transport a few months later. Produced by the same designers who later collaborated on the ss *United States*, the *America* in many ways amounted to a prototype of her eventual successor.

1943-1952: Planning & Building the ss *United States*

The impetus for the long-projected American superliner finally came with the Second World War. While all available merchant ships were requisitioned as Naval auxiliaries, the express North Atlantic liners proved invaluable for their ability to ferry troops from American ports to and from the fronts in Europe and Asia. The Cunard Line’s *Queen Mary* and *Queen Elizabeth*, then the largest ships in the world and twice the gross tonnage of the *America*, were converted to serve as transports each with capacity for upwards of 15,000 troops at any

BELOW: The liner’s hull took shape in an enormous graving dock from which she was floated out rather than launched. This approach later became standard.



one time. Built to cross the Atlantic in as little time as possible, their great speed enabled them to outmaneuver enemy sea craft before they could position themselves to attack.

In New York, the Gibbs brothers informally began schematic plans for the new American superliner as early as 1943. By this time, William Francis Gibbs had become established as the preeminent naval architect in the country. The firm's first large new ship came with a commission for the ss *Malolo*, a 582-foot, 17,226 gross ton ocean liner for the Matson Line's service between San Francisco, Los Angeles and Honolulu, completed in 1927. The Gibbs brothers partnered with noted yacht designer Daniel Cox in 1929, and the firm changed its name to Gibbs & Cox. Larger commissions followed, including four liners for the Grace Line (the *Santa Elena*-class) in the early 1930s. In addition to the ss *America*, other projects included three sludge boats for the New York City Department of Sanitation built in 1937, and the fireboat *Firefighter*, built in 1938 for the Fire Department of the City of New York.

In 1933, the firm received its first commission from the United States Navy, for the construction of sixteen destroyers known as the *Mahan* class. Dozens of Navy contracts followed. With the Second World War, the firm's workload increased to incredible proportions, eventually employing some 3,000 persons when demand peaked. In addition to dozens of destroyers and battleships, the firm produced plans for the so-called "Liberty Ships," a class of small cargo carriers designed to be built with the shortest possible lead time and intended to transport supplies during the war as naval auxiliaries. Shipyards around the country produced more than 2,700 of these vessels during the war. Gibbs & Cox also drew plans for the "Victory Ships," a somewhat enlarged and improved iteration of the Liberty Ship of which more than 500 were built, and for multiple classes of so-called LST landing craft that facilitated amphibious invasions such as the landing at Normandy in June 1944.

Realizing that the value of an American-flagged superliner for national security was sufficient to facilitate the large scale government subsidy necessary for



LEFT: One of the ship's stream-lined exhaust funnels before installation at the shipyard.



ABOVE: New York, June 23, 1952. A floatilla of tugs and other craft welcome the ss *United States* on her delivery from the shipyard.

its construction, the United States Lines began to formally pursue the project immediately following the War, hiring Gibbs & Cox to begin the design process in March 1946. Plans called for a liner 990 feet in length overall and 101 feet six inches in breadth, with a gross tonnage of approximately 53,500 - remarkably similar to the superliners planned in 1916 and 1929. After more than two years of design development, the United States Lines solicited bids for the ship in late 1948. Newport News Shipbuilding & Dry Dock submitted the low bid, and the Navy authorized construction in April of 1949.⁹ The ship's keel laying ceremony took place in February of the following year. She was christened by the wife of Texas Senator Tom Connally on June 23, 1951, delivered to her owners the following June, and made her maiden arrival at her home port of New York on June 23, 1952. Her construction cost fell just short of \$80 million, approximately 75 percent of which was financed by the United States government on account of the ship's national defense characteristics.

Whereas most builders eagerly published the design and performance specifications for their ships in marine engineering journals, Gibbs and the United States Navy insisted that details of the *United States*' performance characteristics be kept classified as a state secret on the grounds of her intended role as a naval auxiliary. (The Navy finally de-classified the ship in 1968, one year after Gibbs' death.) To this day, different sources report different statistics for the maximum speed achieved during the ship's trials in 1952. Probably the most reliable figure is 38.32 knots, as reported to historian Frank Braynard by William Kane, the shipyard's liason to Gibbs & Cox.¹⁰

Having championed the idea of an American-flagged superliner for more than thirty years, William Francis Gibbs very consciously designed the ss *United States* to be the ultimate expression of her typology. The basic format of her design in terms of livery, outboard profile and interior configuration epitomized

that developed for large, deep-sea passenger liners by the last decade of the nineteenth century. The principle distinction between the *United States* and other ocean liners was the division of her engine room into two separate units, the extreme degree of fireproofing manifested in the almost complete absence of any combustible materials on board, various measures incorporated to add strength to her hull, and most notably the capacity of her propulsion system to produce as much as 250,000 horsepower at a time when the most powerful merchant ships afloat scarcely exceeded 150,000.

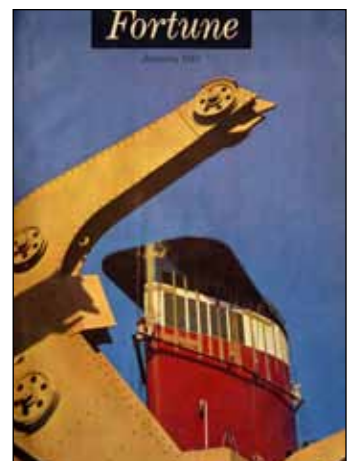
The ship's most innovative structural characteristic was the prolific use of aluminum for her superstructure, an approach that was adopted as standard practice in the years that followed. Her construction required more than 2,000 tons of aluminum, making her the single largest aluminum structure in the world at the time of her completion. Her builders used about 1,400 tons of this material for the ship's superstructure alone, with neoprene employed to prevent galvanic action where the superstructure was joined to the steel hull. The *Architectural Forum* described the complexities of the assembly:

No marine alloy suitable for welding heavy structural parts for ships was available when the *United States*' superstructure was built (such an alloy has since been developed), and consequently the superliner's aluminum joints had to be riveted. This could be done only with frozen aluminum rivets, which means that the rivets were heat-treated until they attained a satisfactory metallurgical plasticity, then quickly frozen to retain that plasticity and delay age hardening (which occurs at normal daily temperatures). Handed to riveting gangs in the frozen state, they were inserted and driven quickly to join the parts. When in place, age hardening commenced as the rivets reached normal temperature. This added strength to the connection.¹¹

To design the ship's interiors, Gibbs hired the same consultants he had worked with previously in the construction of the *Santa Elena*-class liners of 1932-33 and the ss *America* of 1940. This included the New York architectural firm of Eggers & Higgins and interior decorators Smyth, Urquhart and Marckwald. Eggers & Higgins specialized in institutional buildings and government contracts, such as schools, university buildings, and hospitals. Their projects during this period were characterized by well-executed but conservative designs, often employing Colonial Revival or rather staid Art Deco styles. The firm formed as successors to the practice of John Russell Pope upon Pope's death in 1937, and supervised the completion of some of Pope's most noteworthy projects, including the National Gallery of Art (1941) and the Jefferson Memorial (1943) in Washington, DC. Other projects included the pavilions of the Railroads Conference and Schaeffer Brewery at the 1939 New York World's Fair; Silliman College at Yale University (1940); the Triboro Hospital for Tuberculosis at Jamaica, Queens (1940); the Auditorium Building (1942) and other buildings at Indiana University's Bloomington, Indiana campus; Vanderbilt Hall at New York University Law School (1949); the Alfred E. Smith Houses on Manhattan's Lower East Side (1952); the US Embassy at Ankara, Turkey (1953) and the Dirksen Senate Office Building at Washington, DC (1958).

Smith, Urquhart & Marckwald was notable as an early woman-owned interior design firm that became established as successors to the New York office of Elsie Cobb Wilson in the 1930s. The firm is probably best known for its commissions to decorate several American passenger ships, most prominently the ss *United States*, but also including the ss *America* of 1940 and the Grace Line steamships *Santa Rosa* and *Santa Paula* of 1958. Other projects included corporate offices (such as those of W.R. Grace & Co. at Hanover Square in New

BELOW: The advent of the ss *United States* was greeted with widespread media attention.



York) and high end residential commissions, many of them in New York City, some examples of which are documented in the Gottscho-Schleisner Collection at the Library of Congress.¹²

Nearly all of the public rooms on board featured artwork specially commissioned for the ship by a host of American artists. The company hired Hildreth Meiere and Austin Purves, Jr. to serve as art consultants to coordinate the various commissions (both also contributed their own work). Purves (1900-1977) was noted for works including a mural at the Folger Shakespeare Library at Washington, DC (1932). Meiere (1892-1961) had contributed works to a number of prominent buildings in New York, including the Irving Trust tower at One Wall Street (Voorhees, Gmelin & Walker, 1931) and a triptych of enamel roundels at Radio City Music Hall entitled "Song," "Drama" and "Dance" (1932). She was the first woman appointed to serve on the Art Commission of the City of New York. Probably the most prominent work on board was a sculptural ensemble entitled "Expressions of Freedom" in the First Class Dining Saloon by the artist Gwen Lux (1908-2001), who gained notoriety in the early 1930s when a one of her pieces entitled "Eve," a heroic nude sculpture commissioned for Radio City Music Hall, was banned by Samuel "Roxy" Rothafel who reportedly had a distaste for nudes.¹³ The resulting controversy led Roxy to reverse his decision and Eve eventually found her rightful place at Radio City.

OPPOSITE: In keeping with other ships of her typology, the entire Promenade Deck of the ss *United States* was given over to a suite of public rooms flanked by glass-enclosed promenades.

BELOW: 24,000 people lined up by Pier 86 to tour the ss *United States* on her maiden arrival at New York.



Though handsome and sufficiently comfortable, critics generally panned the ship's clean and modern public rooms as bland and underwhelming, a cumulative result of Gibbs' insistence on extreme fireproofing, the Navy's requirement that the vessel be able to be converted for use as a troop transport within as little as 48 hours, and moreover to the conservative tastes of her builders. While the *Architectural Forum* offered unabridged praise for the "fluidity and grace" of Gibbs' rational design for the ship's outboard profile, its critique of the ship's interiors stopped just short of complete dismissal:

In their interior public spaces, architects Eggert & Higgins kept a good share of Gibbs' shipshape clarity but the interior treatment as a whole by the decorators failed to come as clear. It is evident now, after the event, that those strict standards of performance that ruled the job were fatal to the swank sea-going luxury by inherited standards. . . . Unprecedented fire precautions for everyone meant painted walls not fancy paneling, aluminum furniture not exotic veneers. . . . The decorators' limit of vision was perhaps best expressed in their use of contributed art, which created a wan version of Paris 1925, had little to teach good architects ashore, gave no echo to naval architect Gibbs' outdoor special thunder.¹⁴

The ship's mechanical performance meanwhile disappointed none. On her maiden voyage in July 1952 she set new records for both the east and westbound Atlantic crossings which have never been broken by any large merchant ship. She made the eastbound crossing in 3 days, 10 hours and 40 minutes at an average speed of 35.59 knots, and the westbound return crossing in 3 days, 12 hours and 12 minutes averaging 34.51 knots.

1952-1969: The ss *United States* in Service

After the record-breaking crossings of her maiden voyage, the *United States* settled into her normal routine on the North Atlantic ferry making scheduled crossings in just over four days at a normal service speed of about 29 knots. The ship could carry slightly less than 2,000 passengers (the official number varied over the years) in three classes (first, cabin and tourist) and about 900 crew. Her passenger complement routinely included noted actors, writers



Enclosed Promenade



First Class Theatre



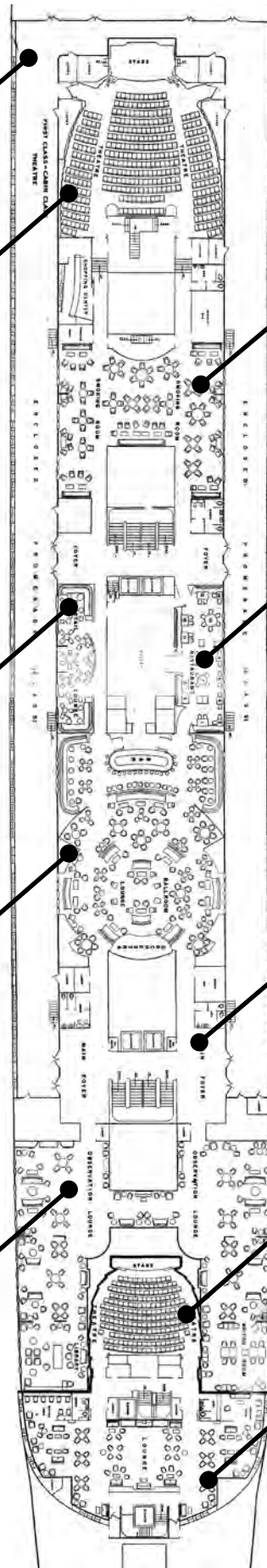
First Class Cocktail Lounge



First Class Ballroom



First Class Observation Lounge



First Class Smoking Room



First Class à-la-carte Restaurant



Main Foyer & Companionway



Tourist Class Theatre



Tourist Class Lounge

A Strategy to Preserve the ss *United States*



ABOVE: Artist Gwen Lux installing the work "Expressions of Freedom" in the First Class Dining Saloon.

BELOW: Artwork on the ship was coordinated by Hildreth Miere, whose prominent works include "Song," "Drama" and "Dance" at Radio City Music Hall.



and politicians, including Presidents Truman and Eisenhower. But the great majority of her passengers came from more ordinary walks of life, including many military dependents, American diplomats and members of the foreign service, and European immigrants (the United States Lines offered a special "immigrant fare" as late as 1967). Future US President Bill Clinton traveled as a student en route to Oxford in 1968.

On the basis of her service as a mail carrier and the higher operating costs resultant from various features intended to facilitate her use as a troop transport in the event of war, the US Government supported her operation with a \$12 million annual subsidy. Despite the advent of commercial jet air travel in 1958, the ship sailed at about 90 percent passenger capacity through to the end of her service life in 1969, though these numbers began to diminish in the early 1960s. But as

operating costs rose over the course of her career, the ship's subsidy remained unchanged and passenger lists began to decline. Even with her subsidy, the ss *United States* yielded only six profitable years after 1955, and by the end of the 1960s her operators blamed the ship for annual losses of about \$4 million.¹⁵

To help defray losses, in 1962 the company obtained permission from the US Maritime Administration to divert the ship from her North Atlantic schedule to make luxury cruises during the winter months when passenger lists normally reached their lowest point. Two years later the line secured the government's blessing to sell the ss *America* to Greek owners after debilitating labor disputes in 1963 forced the ship to cancel sailings and lay idle for several months.¹⁶ Further labor disputes forced the ss *United States* to cancel sailings through most of the peak season in 1965.¹⁷

In December 1967, a controlling interest in the United States Lines was acquired by the Walter Kidde Co., an industrial conglomerate known for the production of fire extinguishers. Under new management, the United States Lines immediately set about significant restructuring to offset losses. For the ss *United States*, this meant either securing an increase in the government's operating subsidy or withdrawing the ship from service altogether. With the government reluctant to increase the subsidy, the company announced the ship's indefinite withdrawal from service in November 1969, while the vessel was in the midst of her annual overhaul at Newport News, Virginia. The shipyard moved the vessel to an unused pier nearby. By this time she was the last US-flagged passenger ship operating on the Atlantic. She had steamed a total of 2,722,840 miles over the course of 400 voyages, and carried 1,025,691 passengers, nine of whom were born on board.¹⁸ Mayor John Lindsay blamed the disappearance of the ss *United States* and other American-flagged ships for the loss of \$25 million in annual revenue for the City of New York.¹⁹

The Last Atlantic Liners

The Second World War ended another chapter in the development of the ocean liner and took an enormous toll on the world's merchant fleet, particularly the Atlantic liners. The *Bremen*, *Rex*, *Conte di Savoia*, and *Normandie* counted among many ships lost. After the War, various European steamship companies

CHART: Transatlantic Passages 1952-1959 ²⁰

Year	By Sea	By Air	Percentage by Air
1952	842,000	433,000	34
1953	892,000	522,000	37
1954	938,000	578,000	38
1955	964,000	692,000	42
1956	1,018,000	796,000	44
1957	1,036,000	1,032,000	50
1958	937,000	1,193,000	55
1959	884,000	1,367,000	58

set about re-building. For about fifteen years beginning in the early 1950s, a new, final generation of passenger liners – including the ss *United States* – made their debut.

The advent of commercial jet aviation in the late 1950s ended the evolutionary trajectory of the ocean liner. Though significant long-distance passenger ships continued to appear through the late 1960s, none sought to meet or exceed the speed capability of the ss *United States*. On October 4, 1958, the British Overseas Airways Corporation inaugurated transatlantic service by commercial jet with the flight of a de Havilland Comet IV from New York to London. On the Atlantic and elsewhere, the ocean liners lost their passengers to jet competition almost overnight. In 1958 more passengers crossed by air than by sea for the first time, and the number going across by ship began a propitious decline.²¹ For their part, the steamship companies remained publicly bullish, predicting that enough passengers would prefer the comfort of sea travel to sustain their continued operation. New passenger ships already under construction before 1958 were completed more or less as planned. Like the ss *United States*, many of these were built and operated with significant government subsidy.

Especially during the winter months, it became increasingly common for the ships to be diverted from their assigned routes to make cruises for the American market. Unlike the point-to-point line voyages for which the ships were built, these trips were made at slow speed to tropical climes such as the Caribbean with no class divisions, and often returned passengers to their port of embarkation. Though ships built for warmer climates (such as those assigned to the South Atlantic) were somewhat more capable in this alternate role, ocean liners proved themselves generally ill-suited as cruise ships without substantial alterations. This was particularly true for the big North Atlantic express liners, many of which lacked air conditioning, found themselves with superfluous engine power, facilities inadequate for high temperature climates (no outdoor swimming pools), and redundant passenger accommodation designed to be divided into two or three classes.

Quickly, builders of passenger ships still in the planning stages made design alterations that would enable the vessels to function alternately as cruise ships. Britain's Cunard Line, then planning a replacement for the *Queen Mary* and *Queen Elizabeth*, canceled the project altogether and started a new design from



ABOVE: The ss *United States* in lay-up at Philadelphia.

OPPOSITE: Former ocean liners at scrap yards in India & Turkey in the early 2000s. These ships have vanished in droves upon reaching the end of their extended service lives as cruise ships.

scratch for an ultramodern vessel better suited to function as both an ocean liner and cruise ship. The project resulted in the *Queen Elizabeth 2*, which entered service in 1969 designed to function as a point-to-point liner in summer and a cruise ship in winter. She was the last ship built to serve even partly for trans-oceanic line voyages until the arrival of her replacement, the *Queen Mary 2*, in 2003.

One by one, from the late 1960s to the mid-1980s, the ships disappeared from oceans and ports around the world. Aging vessels were retired, sold for scrap and not replaced. Old steamship lines abandoned liner services and focused on cargo transport and containerships, which modernized and remained a viable trade.

A few companies attempted to re-invent themselves as cruise lines. Most, however, proved unable to do so, and those that did were eventually sold to companies that had formed specifically for the operation of cruise ships. By the early 1980s there remained only two ships engaged in regularly scheduled transatlantic passenger service on the North Atlantic. Since 1988 the Cunard Line has maintained the only such service on the North Atlantic, with one ship making crossings during summer months only.

The Big Sleep: The ss *United States* Since 1969

While nearly all other traditional point-to-point passenger liners were scrapped or converted for use as cruise ships after the 1960s, the ss *United States* managed to survive in a dormant state while proposals for her reuse have come and gone since 1969. In 1972 the Maritime Administration purchased the ship from the United States Lines for \$12.8 million.²² MarAd initially announced that it intended to keep the ship in mothballs as part of the national defense reserve fleet, but by February 1973 it listed the ship for sale with an asking price of \$12.1 million and a stipulation that she remain in American ownership. A parade of reuse proposals ensued to revive the ship for both stationary and active use. In 1968, even before the ship's retirement, a foundation called the New York City National Shrines Association held meetings to explore the notion of "a hopeful effort to ultimately secure the SS *United States* for use as a historic museum piece along the shoreline of Manhattan."²³ As early as December 1969, the Puerto Rican government announced an interest in using the ship as a floating hotel for tourists.²⁴

In April 1973 the Marriott and Hertz Corporations announced their interest in a joint plan to reactivate the ship as an ocean liner and cruise ship.²⁵ The following year government officials in Virginia explored the possibility of converting the ship to house "a 356-room hotel-tourist attraction filled with shops and restaurant."²⁶ In 1975 a Virginia-based entrepreneur announced a plan to revive the vessel as a travelling condominium.²⁷ In August of that year the Maritime Administration slashed the ship's sale price to \$7.6 million.²⁸ The next year, the Dunfey Hotel Group of Portland, Maine announced a plan to use the ship as a stationary hotel at Boston, Massachusetts. The group went so far as to obtain the necessary Congressional approval to allow the ship to be used in a stationary role in July 1976, but the plan never materialized.²⁹ The government's asking price dropped again, to \$5 million.³⁰



RMS Kenya Castle, 1952

LALIT KUMAR, © PETER KNEGO



mv Shota Rustaveli, 1968

PETER KNEGO



mv Tahitien, 1953

KAUSHAL TRIVEDI, © PETER KNEGO



ss Argentina, 1958 and RMS Ivernia, 1955

PETER KNEGO



mv Aureol, 1951

LALIT KUMAR, © PETER KNEGO



ss Empress of Canada, 1962

PETER KNEGO



ss Principe Perfeito, 1961

LALIT KUMAR, © PETER KNEGO



ss Provence, 1951

LALIT KUMAR, © PETER KNEGO

Not until 1980 did an offer come that met the government's conditions of sale. That year the Maritime Administration sold the ship to a Seattle, Washington-based developer called Richard H. Hadley, who proposed a major conversion to reuse the *United States* as a cruise ship. Hadley formed a company called United States Cruises, Inc. and hired engineers and consultants to draw plans for the ship's projected \$125 million adaptation. Unable to secure financing for the project to proceed, in October 1984 Hadley contracted the New York auction house Guernsey's to sell all of the ship's fittings. Artwork and furnishings from the ship were dispersed into museums and private collections across the country, including the Smithsonian National Museum of American History at Washington, DC and the Mariners Museum at Newport News, Virginia. The auction reportedly netted \$1.65 million,³¹ but by 1988 Hadley was in arrears on berthing fees and port officials threatened eviction.³² In the meantime, the US Navy had studied the possibility of refurbishing the vessel to serve as a hospital ship, but elected to purchase two former tankers instead.³³

In October 1991 Federal Marshals seized the ship and she was sold at a court-ordered auction the following April to a group of investors operating as Marmara Marine, who announced new plans for a \$145 million refit that would see the vessel returned to service as a cruise ship.³⁴ The new owner had her towed to Ukraine for the removal of all hazardous materials, including Marinite bulkhead surfaces throughout the ship, before funds ran out and the vessel was towed to Philadelphia, Pennsylvania in 1996. The following year she was sold again, this time to a New Jersey-based developer called Edward Cantor who began to explore various plans to revive the vessel either as a cruise ship or in a stationary role at New York.³⁵ In 1992 a friends group called the SS United States Preservation Society formed and dedicated itself to preventing the ship's sale for scrap. Its members included persons throughout the country with personal connections to the ship, including former crew members and passengers, descendants of its builders and of former passengers who had immigrated to America aboard the ship, as well as ocean liner enthusiasts at large. The group succeeded in spreading word of the ship's continued plight through various national media outlets, and helped to have her listed on the National Register of Historic Places in 1999, but the vessel remained dormant.

After Cantor's death in 2003, his heirs sold the ship for an unstated price to an American-based subsidiary of Norwegian Cruise Line, one of the world's largest cruise ship operators. One of several firms that began operations in the late 1960s as older, established shipping companies abandoned traditional point-to-point passenger services, Norwegian had weighed purchasing the *United States* for reuse as a cruise ship in the late 1970s but elected to pursue the conversion of the former ss *France* instead. In 2003 the company announced plans to revive the *United States* for mass-market cruise service in the Hawaiian Islands, where the operation of foreign-built passenger ships is restricted by legislation dating to the 1920s that sought to block foreign competition from operating between American ports. This proposal effectively split the organized advocacy effort for the ship's preservation. While some advocates favored a stationary reuse for the ship, others preferred reviving her in an operable role as a cruise ship, or at least felt compelled to work with her new owners toward that end. Those endorsing the Norwegian Cruise Line proposal formed a new friends group called the SS United States Conservancy in 2004.³⁶

In February 2009 Norwegian Cruise Line listed the *United States* for sale. In the midst of a global economic recession, no buyers emerged. In March, 2010

the SS United States Conservancy announced that the owners had solicited proposals from scrap merchants. The Conservancy established committees of members in New York and Philadelphia to pursue converting the ship for stationary use in those cities.

Just 17 years old at the time of her retirement in 1969, the *United States* aged to a point of being considered a historic resource during her more than four decades of layup. In the meantime, nearly all other ships of her ilk have disappeared. While many were withdrawn from service and scrapped when their owners found they could no longer operate profitably in the 1960s and 70s, dozens found new lives as cruise ships and continued to operate through the 1980s and 90s. A handful of others meanwhile managed to hang on in a variety of stationary uses. But by the turn of the twenty-first century nearly all of these had reached the end of their extended service lives and been recycled as scrap metal. With the survival of the ss *United States*, one of the very last remaining examples of this important typology also happens to be one of the most significant liners ever built. She is one of the few authentic relics that evoke the romance of the point-to-point liners that functioned as the interface between the United States and Europe for a century and a half. It remains to undertake the preservation of this unique historic resource before she too is lost to the scrapyards.

ENDNOTES

- 1 The story of the ss *United States* is chronicled in many books and articles. Some of the best primary and secondary sources include: "Steamship United States: World's Fastest & Safest Passenger Liner." *Marine Engineering & Shipping Review*, September, 1952, pp 70-152.; "S.S. United States." *Architectural Forum*, July, 1952.; Frank Braynard's book *The Big Ship* and William H. Miller's book *S.S. United States: The Story of America's Greatest Ocean Liner*. One of the best concise histories of the ship can be found in Crews, Edward R. "The Big Ship." *Invention & Technology*, Spring-Summer, 1990, pp 33-41.
- 2 The *Savannah* made coastal voyages between New York and her home port in Georgia until she was wrecked off Long Island in 1821. Her remains have never been positively identified.
- 3 Brinnon, *Sway of the Grand Saloon*, 431.
- 4 For a complete history of the American Line, see Flayhart, William Henry III, *The American Line 1871-1902*.
- 5 Braynard, *The Big Ship*, 17. Nearly all the ships of the IMM companies were built at the yard of Harland & Wolff in Belfast, Northern Ireland. Early renderings of the proposed liners showed designs very clearly based on the *Olympic / Titanic*-class ships of the IMM-controlled White Star Line, which had been produced by Harland & Wolff in the years just prior. The design proceeded in cooperation with the United States Navy and legislation was passed in Congress paving the way for a new mail subsidy that would help finance their construction. This in all certainty would require the new liners to be built at an American yard, and new renderings released in 1919 showed a largely redesigned outboard profile, though the ship's performance characteristics and general dimensions remained the same.
- 6 Braynard, *The Big Ship*, 26.
- 7 A detailed description of the proposed superliners can be found in Harding, Harold J. "Superliners." *The Marine News*, June 1931, pp 42-49.
- 8 As the design advanced, the *Leviathan* was finally sold for scrap in 1937.
- 9 Only two shipyards submitted bids – the Bethlehem Steel Corporation yard at Quincy, Massachusetts, and the Newport News Shipbuilding and Drydock Company at Newport News, Virginia.
- 10 Braynard, *The Big Ship*, 100.
- 11 "S.S. United States." *Architectural Forum*, July, 1952, p 124.
- 12 See "The ship interiors of Dorothy Marckwald." *Modernism*, Summer 2004, pp 68-77.
- 13 "Radio City Banishes 2 Statues of Nudes." *New York Times*, Dec 13, 1932.
- 14 Ibid, p 122.
- 15 Dallos, Robert E. "Luxury Liner a Castoff of the Jet Age." *The Los Angeles Times*, Jun 23, 1976.
- 16 The *America* subsequently operated under the Greek flag as the ss *Australis* for the Chandris Lines as an emigrant ship running between England and Australia. Later attempts to use the vessel as a cruise \ ship failed and the ship remained laid up for years. In 1994 she was sold for stationary use in Thailand, but was wrecked and abandoned in the Canary islands while under tow. Her remains were gradually destroyed by rough seas and the ship's hulk finally collapsed into the sea by 2008.
- 17 Braynard, *The Big Ship*, 250.
- 18 Ibid, 268.
- 19 Ibid, 268.
- 20 Potter & Frost, 19.
- 21 Ibid.
- 22 About two-thirds of this figure was accounted for by the ship's unpaid mortgage, and the government took title for just \$4.6 million.
- 23 Ibid, 262.
- 24 "Floating Hotels." *The Hartford Courant*, Dec 4, 1969. The government of Puerto Rico had made a similar proposal for the ss *Leviathan* in the 1930s.
- 25 "Ship Reactivation Sought." *The Washington Times Herald*, Apr 19, 1973.
- 26 Nunes, Donnel. "Va. To Study Ship-Hotel Conversion." *The Washington Post*, Aug 8, 1974.
- 27 Nunes, Donnel. "Liner to Be Sold for Floating Condominium." *The Washington Post*, Feb 6, 1975.
- 28 "S.S. United States Price Cut." *New York Times*, Aug 10, 1975.
- 29 "House Passes Bill to Allow Ship's Sale." *The Hartford Courant*, July

- 21, 1976.
- 30 Daugherty, Greg. "Can This Ship Be Saved?" *The Washington Post*, Aug 21, 1977.
- 31 Reif, Rita. "S.S. United States Fans Buy Pieces of History at Ship Auction." *New York Times*, Oct 15, 1984.
- 32 "Norfolk Threatenes to Evict Famed Liner." *The Washington Post*, Dec 28, 1988.
- 33 Miller, S.S. *United States: The Story of America's Greatest Ocean Liner*, 194-95.
- 34 "Ocean Liner Saved From Scrap Heap." *New York Times*, Apr 28, 1992.
- 35 Rinaldi, Thomas E. "Shape Up, Ship Out." *Preservation Magazine*, Mar-Apr 2001.
- 36 Interview with Dan McSweeney of the ss United States Conservancy, October 2009.

UNITED STATES
NEW YORK

Physical Description

A superliner is the equivalent of a large cantilever bridge covered with steel plates, containing a power plant that could light any of our larger cities, with a first class luxury hotel on top.

William Francis Gibbs¹

If successfully adapted for stationary use, the ss *United States* would be the second-largest preserved vessel in the world. The ship is 990 feet in length overall with a beam of 101.5 feet at her widest point and a height of 173 feet from the keel to the top of her forward funnel. Under normal load conditions the bottom 31 feet of her hull sits below water. Her structure encompasses twelve decks originally accommodating space for propulsion and other machinery, holds for mail, baggage and cargo, accommodation for crew and officers, and three classes of accommodation and public rooms for passengers. The ship is constructed of steel and aluminum, with steel used for the hull and aluminum for the superstructure and funnels. Her interiors were originally all paneled with an asbestos fiber wall board which has since been entirely removed along with all furnishings and artwork, leaving the steel and aluminum bulkheads exposed. The hull, superstructure and propulsion systems of the ship meanwhile remain intact, and the ship's external appearance is unchanged from the time of her construction.

The ss *United States* is the classic example of her typology in almost every respect. The ship's general exterior appearance is highly typical for large passenger-carrying merchant ships of the middle twentieth century, characterized by a black-painted hull carrying a white-painted superstructure with two large, streamlined funnels (smokestacks) above, painted red, white and blue in the markings of her owner. The underside of the hull is coated in red anti-fouling paint, with bilge keels (long fins) protruding from the port and starboard sides amidships, and four propeller shafts aft. The superstructure is set well back from the ship's bow and stern, leaving ample space for deck machinery, docking operations and cargo hatches, and overhangs slightly beyond the port and starboard sides of the hull. Two sets of kingposts, or derricks, stand over the cargo hatches at the bow and stern.

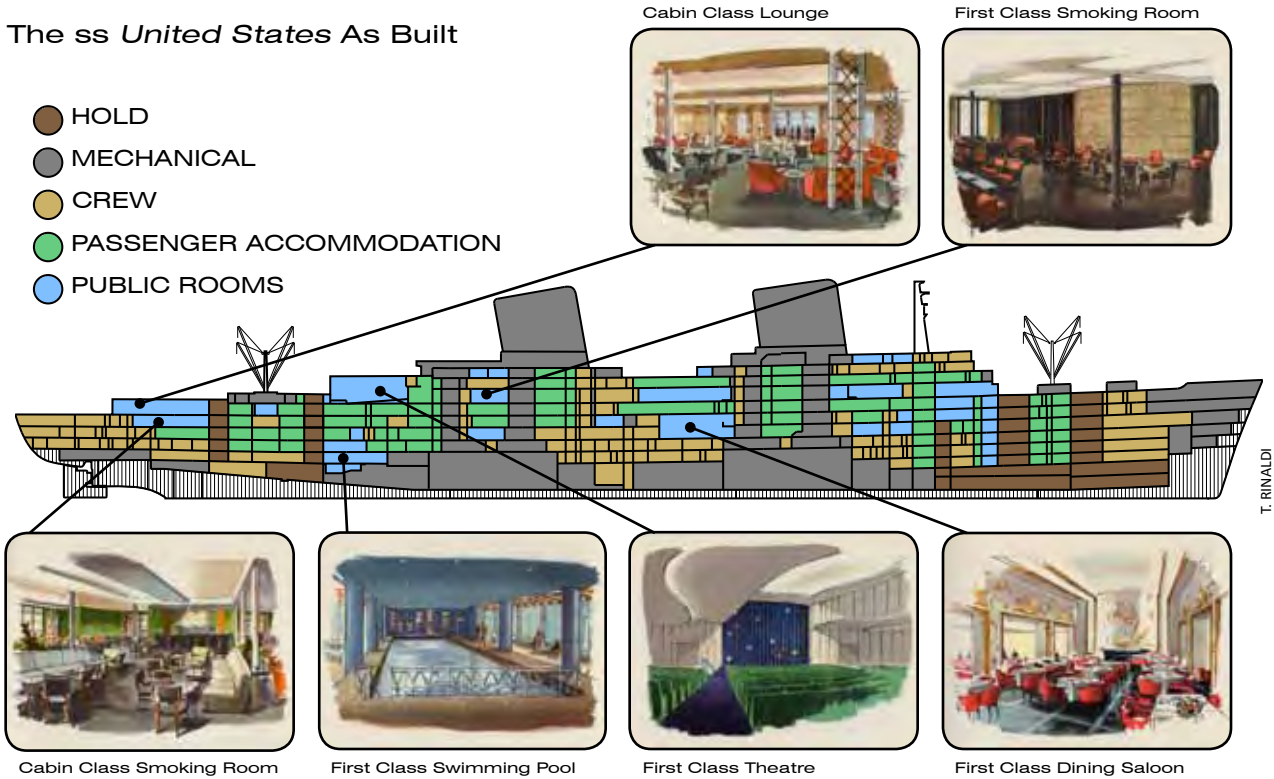
The form of the hull is generally curved and tapered to maximize the vessel's hydrodynamic potential and buoyancy. Naval architects developed its precise shape using wooden models in a testing tank. The lower portion of the hull is

OPPOSITE: The ss *United States* in her home port of New York.

BOTTOM: The ship has languished at Philadelphia since 1996.



The ss *United States As Built*



BELOW: Typical passenger accommodation in first class (top) and tourist class (bottom)



constructed as a double-layered structure, essentially a hull within a hull, with the space between divided into separate cells for the storage of fuel and water. The hull is constructed of steel plates welded and riveted lengthwise over a skeleton of some 365 transverse steel frames. Transverse bulkheads within the hull are fitted with watertight doors that can be closed to separate the ship in to a series of watertight cells or compartments. The *United States* was designed to remain afloat with any four of these flooded, double the required minimum for merchant ships established by international safety regulations at the time of her construction.

Her interior spaces are housed within the hull and superstructure on twelve decks identified from the bottom-up as the Hold, E Deck, D Deck, C Deck, B Deck, A Deck, Main Deck, Upper Deck, Promenade Deck, Sun Deck, Sports Deck and Bridge Deck. All decks are built with a sheer line, or longitudinal curve with the lowest point near the ship's center of gravity, and camber, or transverse crown whose highest point is aligned down the longitudinal centerline of the hull, to shed water and aid in buoyancy. The lowest decks housed cargo holds and propulsion machinery. The ship's accommodation and public rooms were divided with separate quarters for crew, officers and passengers. Passenger spaces were subdivided into tourist class, cabin class and first class. In keeping with general practice, the locations for each level of accommodation within the ship were dictated by a hierarchical arrangement in which preference was given to spaces nearest to the vessel's center of gravity. First class spaces therefore were situated nearest to the midships section of the hull; accommodation for tourist class and the crew was located towards the bow and stern. As was typical for these vessels, the dining rooms and indoor pool occupied the most stable spaces on the ship, on lower decks near the center of the hull.

Public rooms for tourist and cabin class passengers were distributed fore and aft on Main and Upper decks. Consistent with typical practice in the design of large passenger ships that evolved in the latter decades of the nineteenth century and remained standard through the 1960s, the Promenade Deck was given over completely to a suite of public rooms flanked by enclosed promenades running longitudinally down almost the entire length of the superstructure. On the *ss United States*, the Promenade Deck public rooms included the Tourist Class Lounge, Tourist Class Theatre, First Class Observation Lounge, First Class Ballroom, First Class à-la-carte Restaurant, First Class Cocktail Lounge (the "Navajo Room"), First Class Smoking Room, First Class Shopping Center, and the First & Cabin Class Theatre. Circulation between these spaces could flow by way of foyers and vestibules from one room to the next, or by way of the enclosed promenades to either side.

William Francis Gibbs' mandate that the ship be entirely fireproof required the specification of inflammable materials throughout the ship, eliminating the use of any wood except, as was widely publicized, for the ship's pianos and butcher blocks. Bulkhead (wall) and overhead (ceiling) surfaces throughout the ship were surfaced in an asbestos wallboard called Marinite, produced by the Johns Mansville Corporation and used prolifically on all kinds of ships throughout the middle decades of the twentieth century. The popularity of asbestos materials in shipbuilding can be traced back at least as far as 1905, an outgrowth of increased concerns for fireproofing in the wake of the disastrous fire aboard the paddle steamer *General Slocum* which killed 1,021 in 1904.² Johns Manville developed Marinite in the 1930s in the wake of a high profile, catastrophic fire aboard the liner *Morro Castle* in 1934. It was intended to have properties similar to conventional wallboard but better suited to sustain the physical demands of a shipboard environment.³ Indoor decks were surfaced in patterned linoleum tiles and rolled rubber sheeting. Outdoor decks were surfaced in a green-colored composite material called Neotex in substitution of the standard teak.

The ship's public rooms and furnishings were crisp and modern in character, with extensive use of indirect lighting and aluminum moldings and handrails and brightly colored fireproof textiles to accent the spaces throughout. Artwork on board was specially commissioned for the construction of the ship, featuring works by an array of respected if not particularly well known American artists including Hildreth Meiere, Austin Purves, Gwen Lux, Louis Ross, William King, Raymond Wendell, Peter Otsuni, Charles Gilbert, Michael Lantz, and Lewis E. York. Specifications mandated that all of the artists be citizens of the United States and required them to use lightweight materials. Probably the most prominent work aboard was a wall-mounted sculptural ensemble of foam glass by Gwen Lux called *Expressions of Freedom* which presided over the First Cass Dining Saloon on A Deck.

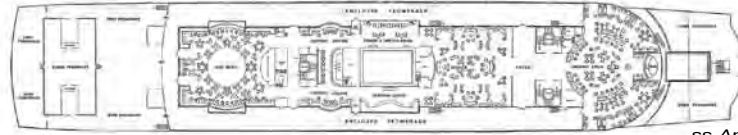


ABOVE: A winter departure bound for Europe in the 1950s.

A Strategy to Preserve the ss *United States*

RIGHT: Promenade Deck plans from 20th century ocean liners showing the conventional arrangement of public rooms flanked by long enclosed promenades.

OPPOSITE: Existing condition of interior spaces on the ss *United States*, from top: Tourist Class Smoking Room; Main Foyer & Companionway; First Class Dining Saloon; First Class Swimming Pool; steam turbine, engine room.



ss *America*, 1940



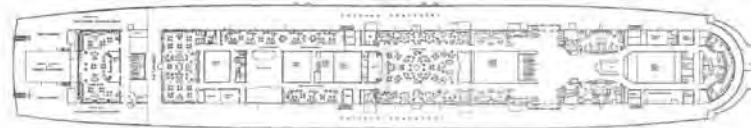
RMS *Mauretania*, 1939



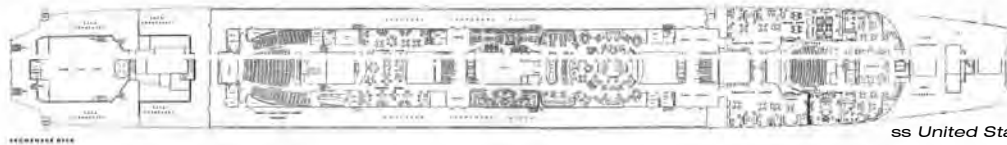
ss *Liberte*, 1929



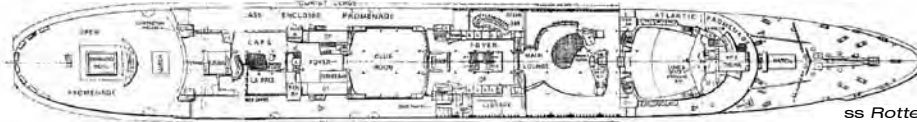
ss *Leonardo da Vinci*, 1960



RMS *Queen Mary*, 1936



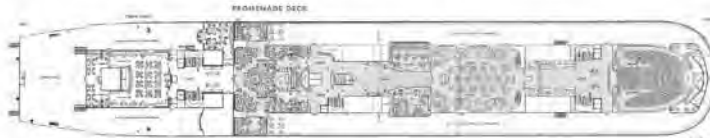
ss *United States*, 1952



ss *Rotterdam*, 1959



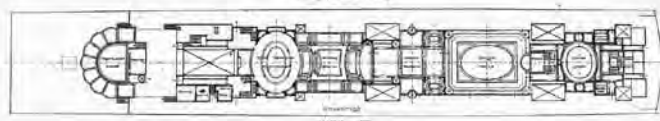
mv *Augustus*, 1951



ss *Nieuw Amsterdam*, 1938



ss *France*, 1962



ss *Leviathan*, 1913

While the ship's general construction and configuration epitomized the approach taken for passenger liners of the period, her propulsion system was far more powerful than that designed for any other merchant ship to that time. Gibbs divided the ship's propulsion system into two units that could function independently of one another in the event that one was disabled, with twin steam generation plants housed in separate engine rooms within the ship. Though typical for naval warships of the era, this system was considered cost prohibitive for merchant ships because it required redundant engine room staff. Each unit was comprised of four high-pressure boilers that generated steam that was in turn forced into a set of two turbines, each of which drove a screw by means of a long propeller shaft. The complete system was comprised of eight boilers powering four turbines to drive four screws.

Exhaust from the boilers vented up through the ship and out of two raked funnels over the superstructure. The funnels are teardrop-shaped in plan, reflecting a popular streamlined form invoked frequently by industrial designers for objects as small as pencil sharpeners and coffee creamers, and first significantly applied to steamship funnels with the construction of the French liner *Normandie* of 1935. Elongated "wings" projecting off the after end of the funnels were intended to deflect soot from the ship's open decks. Of many techniques developed by naval architects to solve this problem, the "wing" was Gibbs' preferred approach, appearing on a number of other vessels designed by his office including the *Santa Elena*-class ships of 1932-33, the *ss America* of 1940 and the *ss Santa Paula*-class vessels of 1958.

Engine room crew controlled the ship's speed based on orders received from officers on the bridge via the ship's telegraphs. Large, crank-operated valves stationed adjacent to the telegraphs at central control panels in each engine room allowed the crew to adjust the volume of steam that reached the turbines, thereby controlling the speed of the ship. While the most powerful merchant ships of the period could generate something in the neighborhood of 150,000 horsepower, the *ss United States* could generate as much as 250,000, a performance specification that was considered a state secret until 1968. Under normal conditions her machinery was operated at 150,000 horsepower which could drive the ship at about 32 knots.

The ship's general arrangement reflected a formulaic approach toward the design of large passenger vessels that crystallized by the end of the nineteenth century. This became especially true after the advent of twin screw ships in the late 1880s obviated the need for auxiliary masts and sails on deck, thus allowing naval architects to construct larger deckhouses which quickly evolved into superstructures with space for public rooms and passenger accommodation



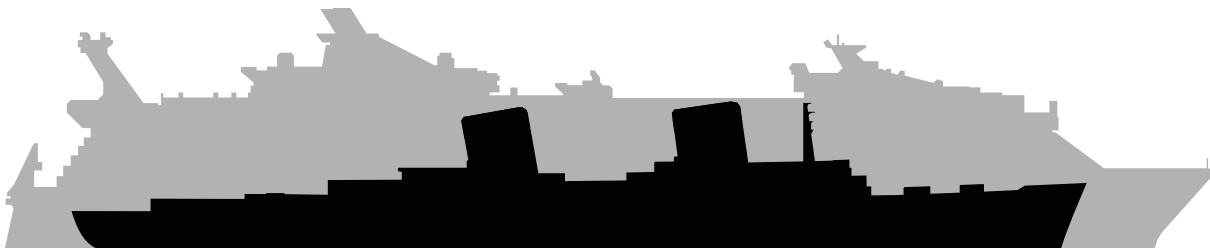
A Strategy to Preserve the ss *United States*

over the hull. As historian Frank Braynard has written, “with the development of the twin screw [in the 1880s], the shipowner became fully confident in his steam plant to bring the ship home and sails were abandoned. The dramatic change in the liner silhouette from 1890 to 1914 resulted.”⁴ Black-painted hulls helped to conceal stains from rust, scuff marks accrued during docking maneuvers and from handling coal during bunkering. Beginning by the middle of the nineteenth century, steamship companies painted the funnels of their ships in bold geometric color schemes similar to those used for lobster trap buoys to identify the operator. A black or dark colored band near the top was typically used to mask soot accumulation.

Today the ss *United States* appears essentially unchanged externally from her construction in 1952, apart from the absence of her lifeboats which were removed in the 1990s. The ship’s interior public rooms and accommodation spaces have been stripped down to the metal bulkheads with the removal of artworks and furnishings in 1984 and of asbestos bulkhead and overhead paneling in the 1990s. Some original features survive in these spaces, such as floor surfaces and aluminum moldings (this subject is discussed in the section on Preservation Design Guidelines). Her engines meanwhile survive intact as they were completed in 1952. Despite the loss of her furnishings, the ship survives with sufficient integrity to have gained listing on the National Register of Historic Places in 1999.

Advances in shipbuilding technology and changes in the demand and use of passenger ships rendered the characteristic features of ships like the ss *United States* obsolete by the late 1960s. Since this period, everything from propulsion systems to the arrangement of passenger accommodation to the colors used for the ships’ hull and funnels has changed dramatically. Most notably, steam propulsion succumbed to advances in marine diesel engines by the end of the 1960s. One of the last surviving examples of her typology, the ss *United States* embodies construction techniques and design characteristics employed for many thousands of point-to-point passenger ships that no longer exist. Her loss would leave not a single American-built ship of this typology in existence, and leave ocean liners as a world-wide phenomenon dangerously close to complete extinction.

BELOW: Scale silhouettes of the ss *United States* and mv *Oasis of the Seas*, showing the difference in size and profile between traditional ocean liners and modern cruise ships.



ENDNOTES

- 1 Gibbs, William Francis, quoted in Brinnon, 474.
- 2 DuBosque, Francis L., "A Fire-Proof Ferry-Boat," referenced in Thomas, William DuBarry, "The Magnificent Obsession of William Francis Gibbs," Marine Technology and SNAME News, Oct 2005, p 40.
- 3 "Marinite: An Anglo-American Development." The Marine Engineer and Naval Architect, July, 1951.
- 4 Braynard, The Big Ship, 61.

The World's Preserved Fleet, 2010 ¹

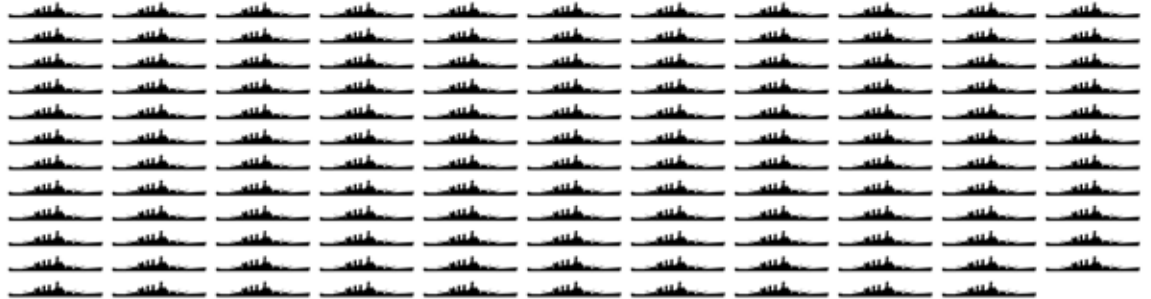
Inland / Coastal 198



Harbor Craft 161



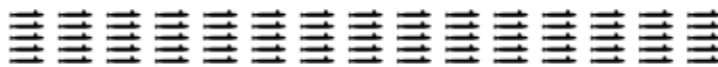
Warships 131



Sail 96



Submarines 75



Large Merchant 27



T. RINALDI

Reusing Historic Ships

Architects live and move . . . in ignorance of new ways of building, and they are quite willing that their conceptions should remain as doves kissing one another. But our daring and masterly constructors of steamships produce palaces in comparison with which cathedrals are tiny things, and they throw them on the sea!

Le Corbusier, *Eyes Which Do Not See*, 1923

An overview of conserved maritime heritage resources in the world today reveals that the ss *United States* belongs to a category of vessels that are tremendously under-represented in the realm of what has been preserved. The reasons for this are multi-fold: modern merchant ships like the *United States* outlive their intended service lives at the age of 25-35 years, significantly younger than structures generally acknowledged as possessing historic value. They do not typically lend themselves to alternate stationary uses. Their high scrap value means that they are very seldom left to linger after being withdrawn from service. As a result, the ss *United States* represents an exceedingly rare surviving example of her class.

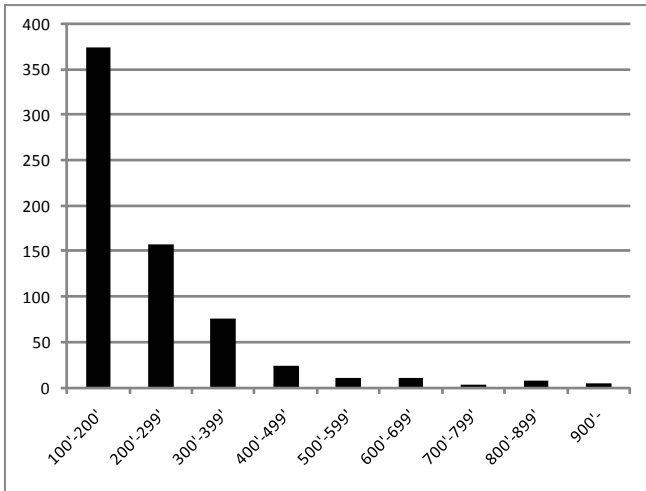
Overview

A survey of ships and boats greater than 100 feet in length overall (l.o.a) identifies some 700 vessels throughout the world that are maintained either in operable or stationary capacities at least partly on the basis of some acknowledged heritage value.² For the purposes of this study, vessels less than 100' (30.48 meters) l.o.a. were not considered, primarily because the logistical challenges of preserving smaller vessels are fundamentally different than those faced by larger ones: they can be preserved in indoor environments, conserved and interpreted as museum objects, or protected and sometimes kept like early airplanes or automobiles in operable condition by individuals, which also makes a worldwide inventory of them much more difficult to compile.³

The vast majority of preserved ships are smaller in size: only ten percent of preserved vessels are greater than 400 feet in overall length. While most of the 700 vessels are merchant ships, naval warships constitute a disproportionately high percentage of the whole. Warships make up approximately 2.3 percent of the current active world fleet, but make up thirty percent of the world's preserved fleet,⁴ and 65 percent of preserved ships over 400 feet l.o.a. This confirms that merchant ships are vastly underrepresented among the vessels that have been preserved. Both of these statistics are further skewed in the

OPPOSITE: An analysis of the world's preserved fleet reveals that large merchant ships are profoundly under-represented.

CHART: Size Distribution of the World's Preserved Fleet



United States, where warships make up 42 percent of the total preserved fleet, and a remarkable 79 percent of preserved vessels greater than 400 feet l.o.a. The study identified only 57 vessels greater than 400 feet in length that have been preserved worldwide. Of these, a paltry fifteen are merchant ships.

An analysis of the geographical distribution of the world's preserved fleet yields further noteworthy statistics. While the United States has preserved far more vessels than any other country in the world (with nearly 40 percent of the world's preserved fleet), merchant vessels are at an even greater disadvantage here. The total preserved fleet is generally concentrated in Northern Europe and North America. Yet the geographic distribution of vessels larger than 400 feet is much more evenly spread around the world, including historic ships in China,

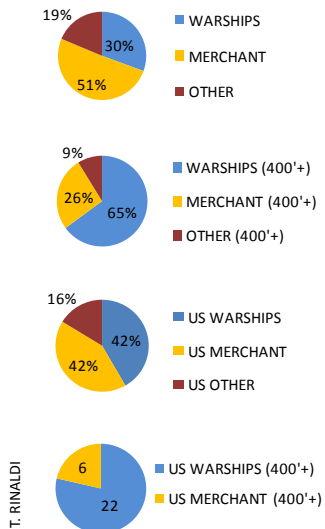
India, Japan and Russia. This notable incongruity ostensibly indicates that the preservation of larger vessels happens in countries that do not otherwise generally promote maritime preservation and that such initiatives occur as anomalies out of keeping with the general trend.

The average age of the vessels at the time of their preservation is approximately 49 years. This statistic drops to 42 years of age for vessels greater than 400 feet l.o.a.⁵ In both cases, the average is significantly below the age conventional land-side structures must reach before generally being considered "historic," i.e. embraced by the preservation community, designated on governmental landmarks registries, made the subject of historic preservation initiatives, etc. Indeed, the language of the U.S. National Historic Preservation Act of 1966 specifically precludes the designation of structures less than fifty years of age on the National Register of Historic Places except for structures of unique significance. (The average age of the more than 100 NR-listed vessels in the database is 56 years at the time of listing.) This is symptomatic of the limited service life of all ships, which is generally not more than 25-35 years, and highly illustrative of another problem facing maritime heritage conservation: "historic" vessels often become threatened (and most in fact actually disappear) well before they are old enough to be accepted as "historically significant" by preservationists at large. This issue as much as any other may explain the general disengagement of the preservation community and the public from issues of maritime heritage conservation, and why so few ships of any kind have been protected for their value as objects of cultural heritage.

The compilation and analysis of this data leads to the following conclusions about the world's preserved fleet:

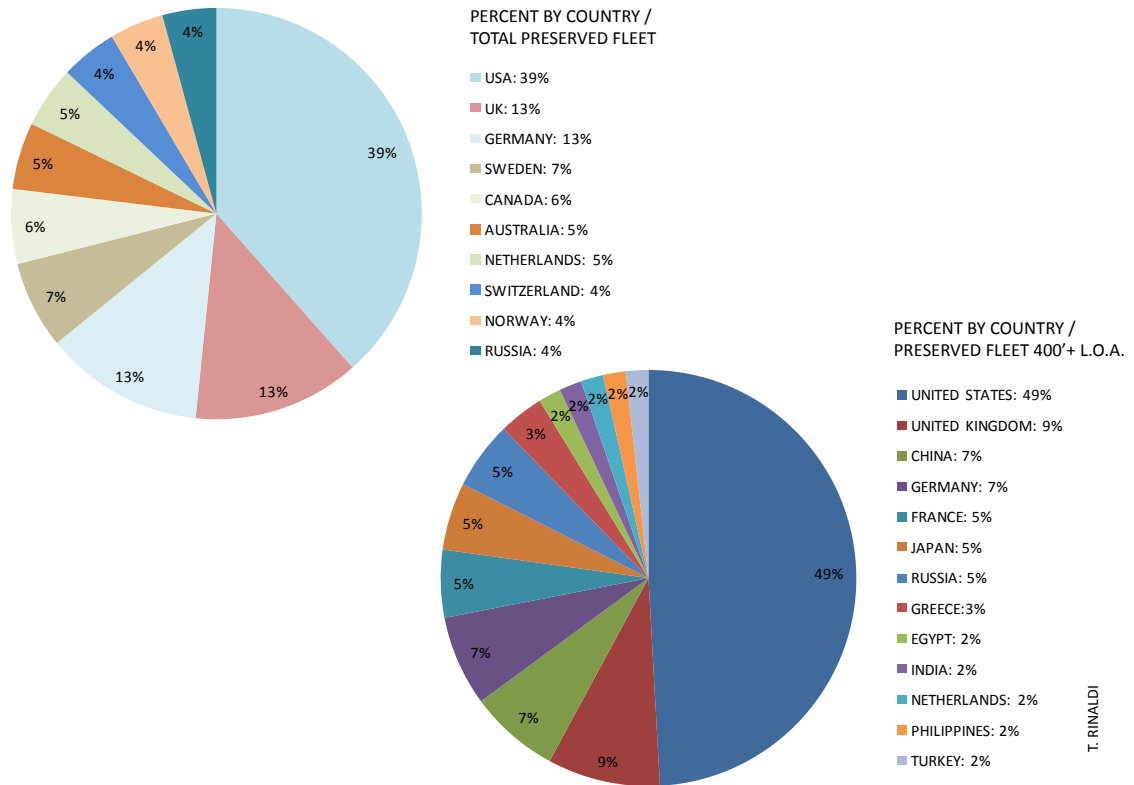
- Merchant ships are vastly underrepresented / disadvantaged among what has been preserved
- Successful preservation initiatives favor warships over merchant ships
- Large vessels face obstacles that have made their preservation very difficult, especially for merchant ships

BELOW: Statistical analysis of preserved vessels by typology, showing world totals versus US totals.



T. RINALDI

CHART: Geographic Distribution of the World's Preserved Fleet



T. RINALDI

While the significance of historic vessels is readily acknowledged with the designation of many ships on the US government’s National Register of Historic Places and as National Historic Landmarks, the unique challenges of their preservation and their transitory place in the built environment have profoundly limited the number of ships that survive beyond their useful lives. The *ss United States* exists as a testament to the challenges facing maritime heritage conservation across the board. Though her status as one of the most significant examples of an important and now very rare typology is undisputed, her preservation remains an unrealized objective today.

Historical Development

The practice of maritime heritage conservation emerged as a global phenomena in the early part of the twentieth century in response to the disappearance of sailing vessels after the advent of engine-powered craft. From the very beginning, maritime heritage preservation initiatives favored vessels associated with historic sea battles or with long military careers (this indeed is analogous to the origins of conventional architectural conservation which, at least in the United States, tended to assign value to sites associated with the Revolutionary War). In modern history, the USS *Constitution* of 1797 became probably the world’s first significant maritime heritage conservation initiative when the US Navy declared her a museum ship in 1907. The HMS *Victory* of 1765, famous as Lord Nelson’s flagship at the Battle of Trafalgar in 1805, was preserved as a museum ship in 1922.

In 1939, the barquentine *Sigyn* (built 1887, 139 feet l.o.a., 359 gross tons) became probably the world’s first large preserved merchant ship when she was acquired for conservation as a museum ship at Turku, Sweden. Two years

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later, the Museum of America & the Sea at Mystic, Connecticut acquired the 1841-built whaler *Charles W. Morgan* (113 feet l.o.a.) to be preserved as a testament to New England's rich maritime heritage. Similar initiatives around the world secured the future of a handful of other sailing vessels in both operable and stationary roles after World War II, such as the clipper ship *Cutty Sark* which was preserved at Greenwich, UK in 1954. In the United States, a number of maritime museums formed to restore and preserve other out-of-work sailing vessels, such as the San Francisco Maritime Museum (today the San Francisco Maritime National Historic Park), founded in 1951, and the South Street Seaport Museum in New York, created in 1967. The success of these initiatives was marked with the World's Fair Parade of Ships at New York in 1964, known also as "Operation Sail," the first of a series of gatherings of active large sail powered vessels from throughout the world.

The preservation of large engine-powered vessels similarly began with a focus on warships, the first notable example probably being the 1902-built battleship *Mikasa* of the Imperial Japanese Navy, which was preserved at Yokosuka, Japan in 1925. The *Mikasa* remained the world's only large preserved engine-powered vessel until various initiatives in the United States set out to conserve large, modern warships in the decades after the Second World War. This began with the preservation of the World War I-era battleship USS *Texas*, which was acquired for conservation by the state of Texas in 1948, and blossomed in the 1960s and 70s when the US Navy began to decommission units of the enormous fleet it had amassed during World War II. Beginning with the preservation of the battleship USS *North Carolina* in 1962, three more large retired naval vessels associated with the Second World War were preserved

BELOW: New York's South Street Seaport Museum opened in 1969.





over the course of the 1960s. That number grew to 23 by 1980, to more than forty by 1990, and has grown to nearly eighty by 2010, 47 of which have been made available for preservation by the Navy's Ship Donation Program, making the United States far and away the world leader in the conservation of modern naval warships.

ABOVE: Preserved vessels are popular waterfront attractions in Copenhagen.

Yet during the same period, US-based initiatives have preserved only six merchant vessels greater than 400 feet l.o.a. These include four Great Lakes bulk carriers, the nuclear ship *Savannah* and the RMS *Queen Mary*. The *Savannah* is the only American-built deep-sea merchant ship preserved, but its survival is owed largely to its unique status as a government-owned vessel whose disposal is significantly complicated by the presence of radioactive materials onboard. It is not open to the public at the time of this writing. An analysis of the preserved fleet suggests at least two probable causes for the advantage of warships in the preserved fleet, at least in the United States: first, in nearly all cases, the United States Navy makes the ships available to qualified non-profit entities at no cost; second, most of these vessels enjoy support from an enthusiastic constituency of veterans who served aboard in wartime.

Around the world, the number of preserved vessels has grown almost exponentially since the 1960s. Historic harborcraft and inland and coastal vessels meanwhile have been preserved by the score, especially in Western Europe, their smaller size having helped to facilitate their conservation. In many port cities, these vessels have become popular tourist attractions serving in both active and stationary roles, and as such have become fixtures in the urban character of places such as London and Stockholm.⁶ The successful preservation of US naval warships meanwhile has been echoed at a much smaller scale in many countries, with the conservation of the Russian cruiser *Aurora* at St. Petersburg in the 1950s and the HMS *Belfast* at London in 1971. Beginning with the preservation of the mv *Hikawa Maru* at Yokohama, Japan in 1960, there have been numerous initiatives to preserve large engine-powered

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ABOVE: The Liverpool department store Lewis's used the ss *Great Eastern* as a floating billboard and exhibit at the Liverpool Industrial and Maritime Exhibition of 1886.

merchant ships, though these have typically involved significant commercial components and can seldom be characterized primarily as cultural heritage projects (this subject is explored in greater depth below).

Where they have succeeded, initiatives to preserve historic vessels have provided unique destinations that enhance the character and aesthetic of their surroundings. If executed intelligently, the preservation of the ss *United States* presents a tremendous opportunity not only to conserve a rare surviving example of a significant typology that in its day was considered one of the great works of human ingenuity and a triumph of American industrial might, but also to evoke a

strengthened spirit of pride in place and cultural identity, forces that time and again have proven their ability to stimulate the growth of healthy communities by making them desirable places to live and do business.

Stationary Reuse Precedents for Large Merchant Ships

An analysis of adaptive reuse precedents for large merchant ships reveals that there is little precedent for the preservation of these vessels as objects of cultural heritage and underscores the need for careful planning to make the venture successful. Most such undertakings have involved “shoe-horning” vessels into makeshift roles for which they have proven generally ill-suited: nearly all of these efforts have been short-lived. Any reuse proposal for the ss *United States* will require a study of “lessons learned” from the precedents that do exist. Unlike many of the precedents described here, the re-purposing of the ss *United States* will need to acknowledge the ship’s inherent strengths, weaknesses and practical limitations at the outset. Moreover, the initiative must be predicated on her value as a unique historic structure rather than cheap real estate, a serious cultural artifact and not a sideshow novelty.

The adaptive reuse of large, engine-powered merchant ships can be traced at least as far back as the first large (in modern terms) ship, the ss *Great Eastern* of 1859 (32,160 tons displacement, 692 feet l.o.a.). Upon reaching the end of her service life, there came proposals to reuse her as a sludge boat, a model housing community on the Thames, even a smallpox hospital. In 1885 the ship was leased to serve as a floating exhibit at the Liverpool Industrial and Maritime Exhibition of 1886. Her treatment there had more the character of a carnival sideshow than a legitimate commemoration of Britain’s industrial achievement. “The effect upon me was most saddening,” wrote one visitor: “Anything I should think would be better than the life she is leading. If she cannot pay a breaking-up price, let her be decently buried beneath the wild billows of the great Atlantic.”⁷ Though she attracted as many as 500,000 visitors in one year, her owners finally sold her for scrap when the crowds began to thin, and she was broken up at Liverpool in 1889-90.

The practice of reusing large merchant ships in stationary roles remained largely un-pursued for decades afterward. In the 1930s, a number of large ships built in the years leading to World War I suddenly found themselves forced into early retirement owing to the Great Depression and the advent of newer more modern vessels. Though virtually all of these ships wound up at the scrap yard, their availability *en masse* prompted a number of proposals to

reuse them in stationary roles. Almost none of these schemes reached any degree of materialization until the 1960s. An examination of these proposals, both realized and unrealized, emphasizes the need for careful planning in order to make such a reuse succeed as a strategy for preserving the ss *United States*.

Hotel Conversions

The most frequently-advanced proposal for the stationary reuse of the ss *United States* has been to adapt the ship to serve as a floating hotel. Indeed, since the 1930s this solution has been proposed for dozens of retired merchant ships and particularly passenger ships, though only a relatively small handful of these conversions have materialized. While such a reuse program can be implemented in a way that is compatible with the ship's historic significance (this is discussed further in the section on Guidelines for Preservation), an examination of precedent illustrates that these initiatives have seldom proceeded with a regard for any historic significance of the vessels involved. The case studies further indicate that such a proposal for the *United States* would require a business plan that makes the project work for its proximity to a greater potential market in a large city such as New York, the incorporation of a diversity of commercial programs beyond just a hotel, the support of a non-profit friends group that can fundraise for an endowment to support for the ship's care based on its cultural heritage value, or some combination thereof.

Adaptive reuse for old merchant ships emerged as a phenomena in the 1960s, as the advent of containerization and economically-viable travel by jet aircraft forced entire fleets of cargo ships and passenger liners into early retirement. After years of proposals for different vessels, the first significant hotel-ship conversion came in 1964, when a hotel operator called the Canaveral International Corporation purchased the retired Home Lines passenger liner *Italia* (built 1928, 21,250 tons displacement, 594 feet l.o.a.) and brought her to Freeport, Bahamas for use a permanently-installed, stationary hotel.



ABOVE: The m.v. *Italia* was converted to serve as a permanently-moored floating hotel in 1965.

BELOW: The RMS *Queen Mary* receives some 1.3 million visitors per year in her role as a stationary hotel and tourist attraction at Long Beach, California.





Marketed as the “Imperial Bahama Hotel,” the company secured a ten-year lease with the Grand Bahama Port Authority and outfitted the ship with accommodation for 1,400 guests in 500 cabins (up from her regular accommodation for about 1,300 passengers). With relatively minor alterations carried out at shipyards in Hoboken and Florida, the ship began her new life as a hotel in the summer of 1964. But the venture quickly failed: amid allegations of mismanagement and corruption, Canaveral International announced it would close the hotel in January, 1965 and the vessel was sold for scrap shortly thereafter.⁸



The announcement in May 1967 that the Cunard liners *Queen Mary* and *Queen Elizabeth* would soon be retired elicited numerous proposals to preserve both ships in various roles. Many of these sought to capitalize on the unique fame of these particular ships for their size and opulence. The Cunard Line sold the *Queen Mary* (built 1936, 81,961 tons displacement, 1019 feet l.o.a.) to the City of Long Beach, California for use as a permanently-moored floating hotel, maritime museum and “attraction” later that year. Using its share of tideland oil funds generated by offshore oil rigs, the city government projected the conversion would cost \$8.5 million and issued an RFP to solicit private sector operators for hotel, food & beverage and museum programs aboard the ship. After prolonged delays resulting in large part to a turf-war waged between labor unions representing shipyard workers and

ABOVE / TOP: The ss *Rotterdam* opened in 2010 as a permanently-moored hotel and museum at her former home port of Rotterdam in 2010.

ABOVE / BOTTOM: The *Queen Elizabeth 2* departing New York for the last time on October 16, 2008. A proposal to convert her to a stationary hotel at Dubai would make drastic changes to her appearance.

those representing shore-side construction workers, the ship did not fully open until November 1972 – three years behind schedule and more than \$70 million over budget.⁹

Although the initiative succeeded in preserving the ship, a series of operators have struggled to make the venture profitable over the past forty years. While city officials described the project as an initiative to “preserve” the ship’s “dignity and tradition to the greatest extent possible,” the *Queen Mary* was scarcely thirty years old at the time of her arrival at Long Beach, and the project as initially conceived could hardly be characterized as heritage conservation in the curatorial sense.¹⁰ A *New York Times* reporter visiting the ship in 1973 compared the *Queen Mary*’s stationary role at Long Beach to the installation of London Bridge in Arizona: “The *Queen Mary* experience begins as one boards her – via, alas, not a gangplank but an escalator – to be greeted by the taped sound of bagpipes,” she wrote:

Some of the guides, who are mostly junior college students from the Long Beach area, have even affected British accents and invented life histories to go with them. . . . It is easy enough to be put off by all this ersatz English atmosphere, but a somewhat closer look at the *Queen Mary* leaves the impression that this is actually the least of her problems. . . . the Verandah Grille, once an elegant supper club, has been turned into a hamburger joint, the once-handsome wooden pillars and paneling hideously obliterated by plastic wallpaper. Other parts of the ship are dotted with Union Jack-decorated kiosks

selling sandwiches and souvenirs. The food is uniformly mediocre. . . . The greatest danger in the present piecemeal development of the Queen Mary is that short-term monetary considerations will lead to innovations in one part of the ship that will seriously damage her overall attractiveness. For, despite all the hokum, she is a beautiful and impressive sight, and one can only be glad that she was not reduced to scrap iron.¹¹

In 1979, the city government transferred ownership of the vessel to the Long Beach Harbor Commission. Amid continued management problems, the Harbor Commission contemplated selling the ship to foreign interests in the early 1990s, prompting the City Council to step in and reclaim its ownership role in 1993. Since then her management has grown increasingly mindful of the ship's heritage value: the Verandah Grill was subsequently restored to its original appearance, and the vessel was listed on the National Register of Historic Places in 1993. More aggressive marketing meanwhile has helped the ship achieve financial stability. At the time of writing she receives more 1.3 million visitors per year – more than any other preserved vessel in the world, despite a the ship's out-of-the-way location and limited access by public transport.¹²

Similar proposals came forth to preserve the *Queen Elizabeth* (built 1940, 83,673 gross tons, 1,031 feet l.o.a.) when that ship was retired in 1968. A group of Philadelphia businessmen purchased the vessel in April of that year for nearly \$8 million and announced plans to bring her to Philadelphia for use as a permanently-moored hotel and convention center much along the lines of what was then slated for the *Queen Mary*. After encountering difficulties in finding a suitable mooring site at Philadelphia, the investors brought the ship instead to Fort Lauderdale, Florida upon her retirement that November.¹³ With no significant alterations, the *Queen Elizabeth* opened for tours at Fort Lauderdale in February of the following year. Despite a promising initial response with reports of as many as 20,000 visitors a week, the venture went no further, and the planned hotel component never opened.¹⁴ In 1970, her operators filed for bankruptcy and the ship was sold for active reuse elsewhere.¹⁵

Despite the demonstrated difficulties of such conversions, proposals continued to emerge to repurpose other large ships as floating hotels as the ships continued to be laid-up in the late 1960s and early 1970s. Though few were realized, some managed to meet with a greater degree of success, and have remained viable for decades or failed only under extraordinary circumstances. The relatively small Swedish cruise ship *Stella Polaris* (built 1928, 5,208 tons displacement, 416 feet l.o.a.) opened as a hotel and restaurant at Kisho Nishiura, Japan in 1969. She continued in that role for 35 years until she sank while under tow to back to her historic home port of Stockholm in 2006, where new owners intended to use her in a similar function. In 1976 the former US-flagged ocean liner *Santa Paula* (built 1958, 15,371 tons displacement, 583 feet l.o.a.) was brought to Kuwait City and opened as the Kuwait Marriott Hotel. With only minor alterations to her external appearance, the ship offered 190 staterooms and thirty "garden chalets," five restaurants and lounges, a conference center, health club, sauna, swimming pool and four tennis courts. Later operated as the Ramada Al Salaam Hotel, the ship survived in this role for fifteen years before she was destroyed during the first Gulf War in 1990-91 and subsequently scrapped. The passenger-cargo vessel *Georg Buchner* (built 1951, 10,901 tons displacement, 504 feet l.o.a.), has served since 1977 as a youth hostel and educational center at Rostock, Germany. Since 1986 the mv *Ming Hua* (ex-*Ancerville*, built 1962, 14,224 gross tons, 512 feet l.o.a.) has operated as a stationary hotel and attraction at Shenzhen, China.



ABOVE: (From top): The former mv *Stella Polaris* served as a stationary hotel and restaurant in Japan for forty years; The former ss *Santa Paula* housed the Kuwait City Marriott for fifteen years before being destroyed during the First Gulf War in 1991; the mv *Georg Buchner* continues to serve as a floating youth hostel at Rostock, Germany; the mv *Ming Hua* in her adapted role as a hotel and attraction at Shenzhen, China.

One of the few proposals in some way grounded in a mindfulness of the historic value of the vessel involved came in the late 1990s, when a California-based development partnership proposed reusing the former ss *Monterey* of 1932 (18,017 gross tons; 632 feet l.o.a.) as a hotel on the San Francisco waterfront. (Built as a point-to-point liner and later adapted as a cruise ship, the vessel had previously been briefly chartered as an accommodation ship for the US military at Guantanamo Bay, Cuba.) In 1999, the developers proposed permanently mooring the ship to house a 280-room deluxe hotel and conference center, for a projected conversion cost of \$45 million. Although a 1970 law prohibited hotel construction on the city's waterfront, the developers successfully argued that the law would not apply to a permanently-moored vessel.¹⁶ They projected that the initiative would create 300 union jobs and contribute \$2 million in annual rent to the port, winning the support of union leaders, city officials and the local media. They could not however raise initial funding to purchase the ship, and the vessel was sold for scrap in 2000. It sank en-route to Indian shipbreakers that October.

In 2001, a similar project was launched to preserve the former ss *Rotterdam* of 1959 (31,530 gross tons, 748 feet l.o.a.) at her birthplace and former home-port of Rotterdam in the Netherlands. The project was initiated by the Rotterdam Dry Dock Company with significant government loans from the city of Rotterdam. But the company entered financial restructuring before the project got underway, forcing them to abandon the ship's conversion. The vessel lay idle for some time at Gibraltar before a quasi-governmental Rotterdam-based real estate development company called Woonbron stepped in to carry the project forward and had the ship towed to a shipyard in Cádiz, Spain for initial conversion work. From there she was towed to Gdansk, Poland for hazardous materials abatement, but politically-charged opposition there forced the owners to tow the ship to a yard at Wilhelmshaven, Germany and the work took place there instead. The restored ship finally arrived at Rotterdam in the summer of 2008, but did not open to the public until February 2010 after some €250 million had been spent on her conversion.¹⁷ A similar proposal has been advanced by Swedish entrepreneur Lars Hallgren for the former Swedish liner *Kungsholm* of 1966 (26,677 gross tons, 660 feet l.o.a.) to be permanently moored at Gothenburg, Sweden as a hotel, restaurant and maritime museum, upon her retirement in 2010. Alterations made when the vessel was adapted to serve as a year-round cruise ship would be reversed to return the ship to her original appearance. In 2009 the proposal won the unanimous endorsement of the Gothenburg City Board, which cooperated in the selection of an appropriate permanent mooring location at a former banana pier adjacent to the Gothenburg Opera House.¹⁸

A current proposal for the retired Cunard cruise-liner *Queen Elizabeth 2* however demonstrates the propensity of such conversions to make insensitive alterations without regard for the historic character of the vessel in play. With the vessel due for retirement by 2010, the Cunard Line announced that it had sold the ship to a subsidiary of Dubai World investments for \$100 million, far in excess of the liner's estimated \$5 million scrap value, for stationary reuse. Her new owners unveiled plans to permanently moor the ship at the artificial island of Palm Jumeirah for use as a "first-class floating hotel, retail and entertainment destination."¹⁹ They subsequently developed plans for substantial alterations to adapt the ship for her new role: "The QE2's red funnel will be cut off, her decks stripped away and hundreds of cabins demolished when she retires to Dubai to become a floating hotel," reported *The Times* of London in November 2008:



MS KUNGSBOLM.
 Byggt 1965 av John Brown & Co Ltd,
 Clydebank, Skottland.
 Varusnummer: 728.
 Dimensioner: 207,33 x 26,57 x 8,56 m.
 Br/ Nv/ Dwt: 26677/ 12820/ 4984.
 Efter ombyggnad: Br: 27670.
 Maskiner: Tui Göteborgen V6-9V diesel.
 Effekt: 18536 kW.
 Knop: 21,0.
 Passagerare: 712.
 Hypplöstar: 712.



M/S Kungsholm vid Packhuset
 Förslag 09.06.26

ab arkitekter

Little of the interior of the QE2 will be preserved and her famous silhouette will be altered by the removal of the funnel. In its place will be a tall glass funnel-shaped structure containing luxury suites. The old funnel is likely to be taken ashore to become part of a grand entrance to the ship. The nine engines will be removed through the hole left by the removal of the funnel. The giant engine room, which many QE2 enthusiasts had hoped would be preserved and open to the public, will become an entertainment complex. . . . Robert Lightbody from Glasgow, whose father maintained the ship's engines, said: "I'm now thinking it would have been better had she been scrapped."²⁰

ABOVE: A 2009 proposal would preserve the former mv *Kungsholm* at her former home port of Göteborg, Sweden upon her withdrawal from service in 2010.

Later reports announced plans to cut the ship in half for the insertion of a 100-foot extension.²¹ But by June 2009 the ship's owners put the project on hold as Dubai weathered the brunt of the global economic recession.²²

These precedents illustrate that floating hotel conversions satisfying both the curatorial standards of preservationists and the financial interests of the private sector are easier said than done. It is important to note that none of these conversions had the advantage of being situated on the New York waterfront, which could improve the financial viability of such a program for the ship and give the project a competitive edge over each of the precedents described above. Nonetheless, these examples suggest that a simple hotel conversion may not be sufficient to support the ship's perpetual stewardship, and that such a scenario could require the inclusion of another revenue generating program or the involvement of a non-profit friends group to support the ship's care with continuous fundraising for a philanthropic endowment. They also indicate that the leadership or guidance of an entity such as a non-profit friends group would help ensure that such a proposal for the *ss United States* would be executed in a way that honors and capitalizes on the ship's heritage value.

Accommodation Vessels

Another possible scenario is one in which the *ss United States* would be reused as an accommodation vessel for student or other temporary housing. Along with hotel-ship conversions, this is another proposal for which there exists noteworthy precedent, mostly involving former passenger ships adapted for workers housing. Especially for large industrial facilities located near deep-water ports, these ships provided short-order, rough-and-ready accommodation

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ABOVE: The former ss *Exchorda* (top) and Liberty Ship *John W. Brown* (bottom) served educational institutions in New York harbor for many years.

on an as-needed basis. Most of the ships conscribed for this alternate role were operated on a charter basis. Typically they served for just a few years during which time they were poorly maintained and subsequently sold for scrap. Although such a reuse program could be implemented in a way that effectively preserves the ss *United States* as a historic structure, here again precedent illustrates the need for careful planning in order to make such a plan viable.

As with hotel-ship conversions, accommodation vessels began to emerge in the 1930s, when the Great Depression and the appearance of newer, larger ships conspired to force large numbers of older vessels out of work. In 1936, the enormous former Atlantic liner *Majestic* (built 1914-1922, 56,551 gross tons, 956 feet l.o.a.), was purchased by the British Admiralty for use as a floating naval training ship for orphans at Rosyth, Scotland. Renamed HMS *Caledonia*, she could accommodate 1,500 cadets and 500 officers and apprentices, and her public rooms were converted to house gymnasiums and classrooms. The ship served in this capacity for just two years before an accidental fire in September 1939 left her a gutted, partially-submerged hulk. Unfit for salvage intact, the ship was scrapped during the Second World War.²³

A more successful, though still short-lived student accommodation conversion existed for seven years in New York Harbor, on the Hoboken waterfront. From 1968 to 1975, the former passenger-cargo liner *Exchorda* (14,893 tons, 473 feet l.o.a.) served as a floating student dormitory at the Stevens Institute of Technology at Hoboken, New Jersey. Withdrawn from service in 1959, the vessel had languished for several years in the Maritime Administration's reserve fleet before being offered for sale in 1967. In need of additional space for student housing, the Stevens Institute purchased the ship and permanently moored her at a waterfront site already under its ownership, immediately adjacent to its main campus on the Hudson River opposite Manhattan. Renamed ss *Stevens*, the ship underwent minor alterations to provide accommodations for 150 students in 97 cabins. Though the vessel proved popular with many students, rising maintenance costs and a declining need for extra student housing led the Institute to sell the ship for scrap in 1975.²⁴

Perhaps the greatest demand for accommodation ships came from oil refineries. The glut of laid-up passenger ships together with rising demand for oil later saw more former ocean liners chartered to refineries mostly in Saudi Arabia. These included the former German liner *Bremen* of 1939 (ex-*Pasteur*, 29,253 gross tons, 696 feet l.o.a.), which operated as an accommodation ship at Jeddah under the management of the Philippine Singapore Ports Corporation from 1977 to 1980. A number of ships owned by the Lastis family of Greece found similar service during the same period, including the *Margarita L* (ex-*Windsor Castle*, 38,000 gross tons, 783 feet l.o.a.) of 1959, which served as a "leisure center and static accommodation facility" for Petrola International at Jeddah from 1977 to 1991; the *Marianna VI* (ex-*Aureol*, built 1951, 14,000 tons, 537 feet l.o.a.) from 1974 to as late as 1989; and the *Marianna 9* (ex-*Principe Perfeito*) of 1962 (19,393 tons displacement, 625 feet l.o.a.), which served in the same capacity from 1982 to 1986.

Other industrial facilities found similar uses for these ships as well. In 1960, the liner *Arosa Sun* (ex-*Louis Lammier*) of 1931 (16,231 tons, 600 feet l.o.a.) was purchased by a Dutch steel mill to house 800 workers at IJmuiden in the Netherlands.²⁵ She served in this role for nearly fifteen years before being sold for scrap in 1974.²⁶ The Italian Line's ss *Cristoforo Colombo* of 1954 (sister

ship of the ill-fated *Andrea Doria*; 29,429 tons displacement, 700 feet l.o.a.) served from 1977 to 1980 as a workers' accommodation ship at a steel mill at Puerto Ordaz, Venezuela, before being sold for scrap in 1981.²⁷ In 1975, the Portuguese Government spent \$10 million refitting the out-of-work liner *Infante Dom Henrique* (built 1961, 23,306 tons displacement, 640 feet l.o.a.) to serve as temporary housing for workers at a large construction project at Sines, on the Portuguese coast south of Lisbon. The ship was permanently moored and protected by a specially-built dyke. When the construction project was abandoned, the vessel remained in place to serve as a floating hotel, though this ultimately proved unsuccessful.²⁸ The ship was subsequently sold and reactivated for use as a cruise ship in 1986, only to be withdrawn and sold for scrap in 2004.

In the mid-1970s, a number of reuse proposals came for the laid-up Italian superliners *Michelangelo* and *Raffaello* (45,911 tons displacement, 905 feet l.o.a.), which had entered service less than ten years before, in 1965. In 1975, the Italian Line announced the sale of both ships to a Liechtenstein-based firm for use as "seaborne cancer clinics."²⁹ This failed to materialize, and in 1977 the ships were sold instead to the government of Iran for use as accommodation vessels at Iranian naval bases at Bandar Abbas and Bushire. The *Raffaello* was attacked and sunk in 1983 during the Iran-Iraq war. The *Michelangelo* continued in her adapted role for several years more, before being sold for scrap in 1991.

From these case studies, one can conclude that the potential for the ss *United States* to serve profitably as an accommodation vessel is limited. As is illustrated by a review of hotel-ship conversions, such a reuse proposal would likely require a level of programmatic diversity to be a success, or the support of continuous fundraising from a non-profit foundation dedicated to the ship's preservation.

Museum Ships

While dozens of large naval warships around the world have been reused as stationary museums with heritage conservation a driving force behind their adaptation, there has been no serious proposal to preserve the ss *United States* as a dedicated museum ship without some significant commercial program incorporated as part of the project. This thesis recommends that any reuse proposal for the ss *United States* include a museum related to the ship and her history in order to facilitate public access to her (this subject is further explored in the section on Preservation Design). Although the costs of restoring the ss *United States* and the enormous size of the vessel warrant the inclusion of a revenue generating program to help finance her preservation, the small number of merchant ships preserved as floating museums demonstrate the potential for such a proposal to succeed as an appropriate use of an urban waterfront site and a viable means of galvanizing public and philanthropic resources to help support the ship's ongoing care.

In 1960, the Japanese passenger-cargo liner *Hikawa Maru* (11,662 long tons, 536 feet l.o.a.) became the first notable engine-powered merchant ship preserved for posterity. Built in 1931, she held the distinction of being the only large Japanese merchant ship to survive the Second World War. Withdrawn from service at the age of 29, she was permanently moored at Yokohama and adapted for stationary use as a museum and youth hostel. The hostel closed in

BELOW: The mv *Hikawa Maru* has been preserved in a stationary role at Yokohama, Japan since 1961.



CHART: Managing the World’s Preserved Fleet

Vessel		Built	Type	Size		Location		Year	Mgt.		Personnel			Operating Costs		Visitors	Notes
PREFIX	NAME OF VESSEL	YEAR BUILT	TYPE	LENGTH / FT	TONNAGE	CITY	COUNTRY	YEAR OF CONVERSION	OWNERSHIP	ADMIN	F/T EMPLOYEES	MAINT. STAFF	VOLUNTEERS	BUDGET	MAINT. BUDGET	VISITORS PER ANNUM	
RMS	Queen Mary	1936	Merch.	1,019	81,237	Long Beach, CA	USA	1967	G	P	500	30	0	25-35,000,000	-	1,300,000	Major reconstruction during conversion 1967-1972, \$80m
USS	Midway	1945	War.	972	45,000	San Diego, CA	USA	2004	G	NP	100	40	700	14,000,000	500,000	900,000	Funding almost 100% from non-profit sources
USS	Wisconsin	1944	War.	887	45,000	Norfolk, VA	USA	1991	G	G	6	-	42	140,000	-	210,461	Operated by US Navy (2010); admin to be transferred to City of Norfolk.
USS	Intrepid	1943	War.	872	27,100	New York, NY	USA	1982	G	NP	165	17	111	18,800,000	-	900,000	Underwent 2 month, \$55m restoration in 2007
USS	Lexington	1943	War.	872	27,100	Corpus Christi, TX	USA	1991	G	NP	37-45	15	10	4,000,000	1,000,000	375,000	
USS	Yorktown	1943	War.	872	27,100	Charleston, SC	USA	1975	G	G	80	40	25	7,500,000	4,000,000	275,000	Original restoration 100% government funded.
ss	Rotterdam	1959	Merch.	748	38,650	Rotterdam	NL	2010	P	P	60	-	220	-	-	-	Opened March 2010, data pending.
USS	Alabama	1942	War.	680	35,000	Mobile, AL	USA	1964	G	G	38	12	20	4,000,000	1,000,000	250,000	Underwent 2 year, \$15m restoration 2002-2003 with non-profit funding.
ss	Willis B. Boyer	1911	Merch.	613	15,500	Toledo, OH	USA	1986	G	NP	2	4	24	135,000	15,000	6,000	Original restoration approx. 70/30% gov't/non-profit funded.
ss	William A. Irvin	1938	Merch.	613	8,000	Duluth, MN	USA	1986	G	-	1	3	0	460,000	20,000	55,000	Underwent 2 month, \$200,000 restoration 1985, 100% gov't funded
HMS	Belfast	1938	War.	613	11,553	London	UK	1971	NP	-	30	9	30	£1,900,000	£250,000	250,000	Underwent 2 month, \$200,000 restoration 1985, 100% gov't funded
ns	Savannah*	1962	Merch.	596	13,599	Baltimore, MD	USA	Ongoing	G	n/a	12	4	0	3,000,000	1,000,000	n/a	Underwent 3-month, \$4m restoration 2008, 100% gov't funded
USS	Texas	1914	War.	573	27,000	La Porte, TX	USA	1948	G	G	25	7	50	1,000,000	250,000	100,000	Underwent 18-month, \$15m restoration, 1988-90, 100% gov't funded
mv	Cap San Diego	1961	Merch.	521	9,998	Hamburg	DE	1986	NP	P	24	50	45	€ 1,000,000	€ 400,000	105,000	Operational; Underwent 17-day, €2.25m restoration, 2006
ss	Lane Victory	1945	Nav.Aux.	455	10,750	San Pedro, CA	USA	1989	NP	-	0	30*	50	200,000	149,000	7,000	Underwent 12-day, \$700,000 restoration work, 2009, 100% non-profit funded
ss	John W. Brown	1942	Nav.Aux.	441	14,245	Baltimore, MD	USA	1988	NP	NP	0	110*	160	375,000	74,000	1,800-10,000	Maintained in operable condition; run entirely by volunteers

the early 1970s and the ship has operated as a museum since then. The vessel closed to the public amid the financial restructuring of its operator in 2007, but reopened the following year with significant upgrades to its facilities made possible by funding from the Japanese containership company NYK, its former owner and one of the world’s largest merchant shipping concerns.

The greatest concentration of preserved large merchant vessels is in United States port cities on the Great Lakes, where a variety of factors have allowed cargo and some passenger ships to remain in active service far longer than the world average, in many cases more than eighty years. The preponderance of preserved vessels in the Great Lakes may owe largely to the more widely recognized historic merit of the vessels being retired, and a greater appreciation for the place of these ships in the cultural identity of the region. In the 1980s, advocates for maritime heritage conservation managed to secure the preservation of four large Great Lakes bulk carriers, largely with government leadership. These include the *Willis B. Boyer* (built 1911, 613 feet l.o.a.) at Toledo, Ohio; the *William A. Irvin* (built 1938, 613 feet l.o.a.) at Duluth, Minnesota; the *William G. Mather* (built 1925, 618 feet l.o.a.) at Cleveland, Ohio; and the *Valley Camp* (built 1917, 550 feet l.o.a.) at Sault Ste. Marie, Michigan. A number of slightly smaller retired Great Lakes passenger vessels have also been preserved as museums.

BELOW: The bulk carriers *Willis B. Boyer* (top) and *William A. Irvin* (bottom) are among several large merchant ships as public-private partnerships on the Great Lakes.



In 1981, the retired US-flagged nuclear ship *Savannah* (built 1962, 13,599 gross tons, 596 feet l.o.a.) opened to the public as part of the Patriot’s Point Naval and Maritime Museum near Charleston, South Carolina. The vessel remained on display there until 1993, when she was closed and laid-up owing to mounting maintenance costs. The ship remains under the ownership of the United States Maritime Administration (MarAd), which maintains the vessel. In recent years MarAd has contributed as much as \$4 million toward her restoration while a non-profit friends group has formed to pursue re-opening her as a museum.

Upon her retirement in the mid-1980s, the freighter *Cap San Diego* of 1962 (521 feet l.o.a.) was purchased by the City of Hamburg, Germany in 1986 for preservation on that city's waterfront. Her ownership was subsequently transferred to a nonprofit organization, which leases the ship's operation to a for-profit entity that maintains the ship in operable condition as a museum with space reserved for a restaurant and small hotel. The former cargo holds are used as exhibition halls. All profits are donated back to the vessel's non-profit ownership entity.³⁰ Now adaptively reused in perpetuity with no significant alterations from the time of her original construction, the *Cap San Diego* represents the "best case scenario" for a preserved large merchant ship. Other examples include the Japanese cargo-passenger ship *Brazil Maru* (built 1954, 10,100 tons, 552 feet l.o.a.), adapted for use as a museum ship at Toba, Japan in 1974 (subsequently sold and moved to Zhanjiang, China in 1997); the former Japanese rail ferry *Yotei Maru* of 1966 (5,375 tons, 459 feet l.o.a.), preserved as a floating exhibit at the Museum of Maritime Science in Tokyo; and the former British royal yacht *Britannia* (built 1954, 5,769 tons, 412 feet l.o.a.), brought to Leith, Scotland in 1998 to serve as a museum as part of a major waterfront redevelopment project.

These case studies demonstrate the potential for large merchant ships to be preserved with their own heritage value as the driving force behind the effort. Yet none of the case studies described above required the kind of extensive and costly preparation work that would be necessary for the ss *United States*. Therefore, while a museum is an appropriate and viable use for part of the space aboard the *United States*, such a program could likely function only as a component of a system that also involves one or more commercial uses that can justify a private sector investment to help fund the vessel's restoration and continued maintenance.

Other Stationary Uses

In addition to the programs described above, various other adaptive reuse proposals have been made for the *United States* since the ship was taken out of service in 1969, with ideas ranging from using the ship for floating classrooms to a current scheme that would see her reused as a casino. These and other ideas have been tried before and, absent any commitment to preserve the respective vessel for its cultural value as a historic structure, these too have not succeeded as preservation initiatives. At least from a curatorial point of view, it is conceivable that such a program could be made to work as part of a balanced scheme to preserve the ship (see the section on Location & Use), though here again the case studies suggest that this would require a diversity of programs, an innovative business plan and/or the support of an endowment raised by a non-profit friends group in order to succeed.

From 1946 until 1986 the New York City Board of Education housed its Maritime Trades High School aboard the freighter *John W. Brown* (built 1942, 10,920 tons, 441 feet l.o.a.), a World War II-era "Liberty Ship" berthed for much of that time at Pier 42, North River. When the Board of Education began planning to relinquish the ship in the 1970s, a friends group formed to preserve the vessel at New York but was unable to do so and the ship was laid up in the US Maritime Administration's national defense reserve fleet.³¹

In 1993, the former Holland America liner *Ryndam* of 1951 (9,114 gross tons, 503 feet l.o.a.) opened as the "Copa Casino," a floating casino moored

BELOW: The former ss *Delorleans* served briefly as an artists colony at Oakland, California under the auspices of the Artship Foundation.



A Strategy to Preserve the ss *United States*



ABOVE: The mv *Loujaine* serves as a stationary storage vessel for bulk materials on the Brooklyn Waterfront.

at Gulfport, Mississippi. The ship had already been heavily altered during a previous conversion for cruise service in the 1970s. The adaptation for her new role as a casino ship saw further significant alterations made to the vessel. She served in this role for eight years until being sold for scrap in 2002. The ship sank en-route to the breakers shortly afterward.³²

Under the auspices of a non-profit group called the Artship Foundation, the retired merchant marine training vessel *Golden Bear* (built as the passenger-cargo vessel *Delorleans* in 1940; 8,409 tons, 491 feet l.o.a.) briefly found new life as a floating artists' community at Oakland, California beginning in 1999. While the foundation sought to raise \$5 million to be put toward the ship's conversion, a number of artists moved their studios onto the ship that year. Cargo holds and outdoor decks were converted to house large galleries and live performance spaces. In 2004 the foundation was forced to relinquish control of the vessel after failing to raise funds necessary for her continued upkeep. The ship has remained laid-up since then amid reports of its sale for scrap.

Unused bulk carrying ships have found alternate service as stationary storage vessels for bulk materials such as coal, grain and cement. This has proved one of the most viable adaptive reuse scenarios for large merchant ships, with some vessels able to serve in this role for decades with little maintenance. Among these are the ss *S.T. Crapo* of 1927 (402 feet l.o.a.), which has served as a stationary cement storage barge at Green Bay, Wisconsin since 1996. In New York Harbor, the mv *Loujaine* (built 1966, 505 feet l.o.a., 11,691 gross tons) has been moored on the Brooklyn waterfront by the mouth of the Gowanus Canal as a cement storage vessel since the 1990s. While the structural configuration of the ss *United States* as a passenger ship does not readily lend the ship for reuse as a floating storage facility for bulk materials, the success of these reuse scenarios justifies exploring ways in which appropriate structural modifications could be made that would allow parts of the ship to accommodate similar revenue generating programs that do not require public access (this idea is explored in greater depth in the section on Location & Use).

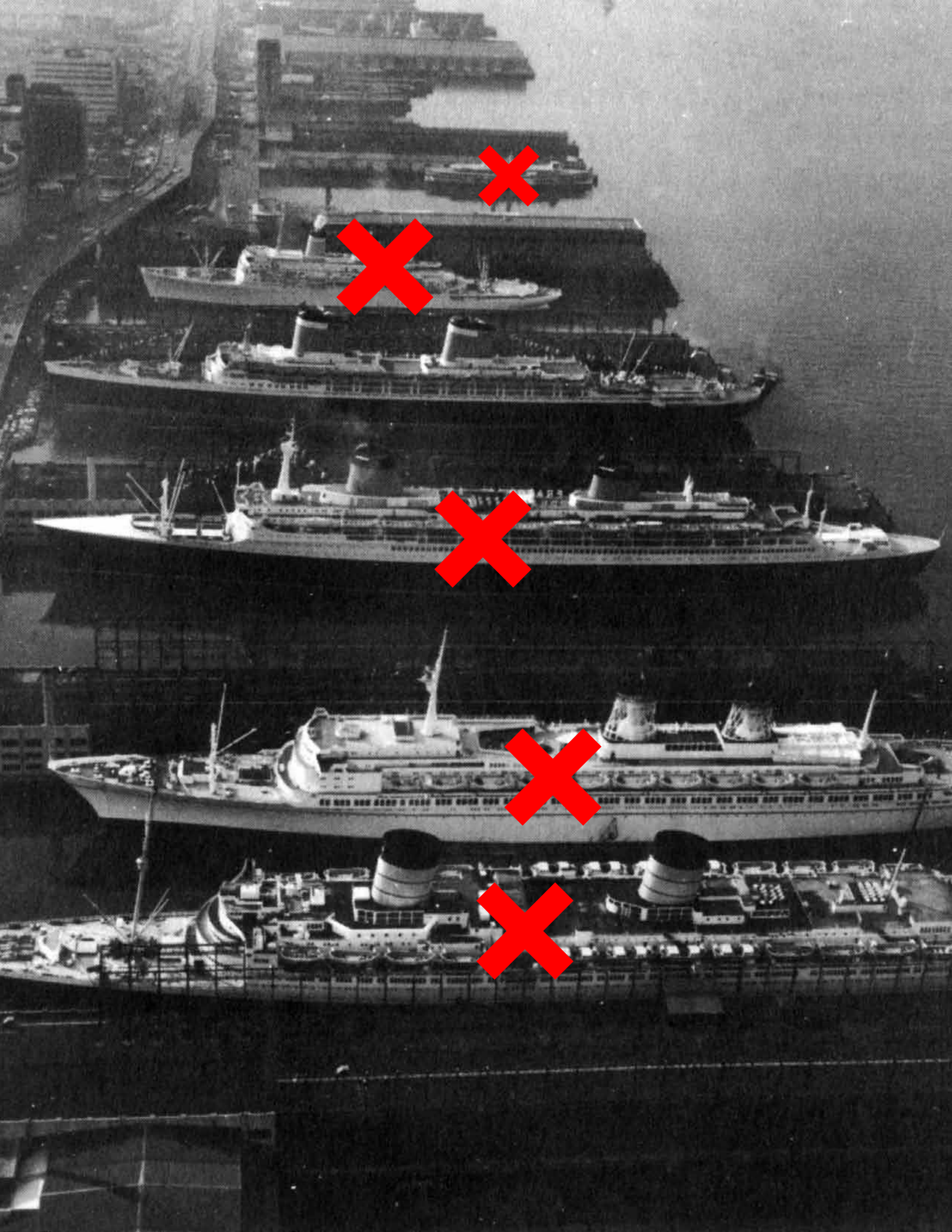
Implications for the ss *United States*

These case studies demonstrate that a preservation strategy for the ss *United States* will in all likelihood require an innovative business plan possibly involving the support of an ongoing philanthropic non-profit organization or predicated on its proximity to New York's population density and tourist center to make the undertaking a success. Such a plan could be crafted in a number of ways to galvanize resources and support from both the public and private sectors to protect the ss *United States* as the unique historic structure she truly is. While there is no real precedent for the implementation of such a strategy for the preservation of a large historic merchant ship, other preservation initiatives have demonstrated that this model could succeed to make the preservation of the ss *United States* a viable proposition.

ENDNOTES

- 1 Chart does not include "other" vessels, such as yachts, which represent a very small number relative to the total.
- 2 The survey was made with information from two principal sources: *The International Register of Historic Ships* by Norman Brouwer, and the *Directory of the World's Steamships* by Alistair Deayton, and from various databases of historic vessels found online.
- 3 The very difficulty of compiling this database speaks for the less-than-ideal state of maritime conservation broadly. No current, complete database of preserved vessels could be found. The closest thing to such a database is the International Register of Historic Ships, published in book form by a nonprofit advocacy group called the World Ship Trust, but this compilation is out of date, hard to find, and does not include a significant number of vessels listed elsewhere. Various fragmentary lists are available online: Wikipedia.org provides a database of more than 377 vessels, many of which are less than 100' in length. Other sources, both published and online, offer listings of specific categories of ships – sailing vessels, steam powered vessels, lightships, paddle wheelers, etc. For this study, it was necessary to cull through all of these sources and verify outdated information to create a single, complete, current list. For want of consistent tonnage figures, the size of the vessels is factored by length overall.
- 4 Based on an analysis of data provided only by the International Chamber of Shipping and the "List of Naval Ship Classes In Service" compiled at Wikipedia.org.
- 5 Age at time of preservation is difficult to assess. The figure included here is an average for 340 vessels for which a figure could be obtained.
- 6 Lightships have proven especially popular in this capacity, with more than fifty preserved around the world at the time of writing. A noteworthy concentration of historic paddle steamers survives in active service particularly on inland lakes and rivers of Germany and Switzerland, with as many as 100 such vessels preserved world-wide.
- 7 "What astounded the port was not so much the ship as what had been done to her," wrote James Dugan in his history of the *Great Eastern*: "Birkenhead, on her port side, was faced with a 21,000-square-foot iron poster with thirty-foot letters, proclaiming that 'LADIES SHOULD VISIT LEWIS'S BON MARCHÈ CHURCH STREET.' On the other side Liverpool was advised that 'LEWIS'S ARE THE FRIENDS OF THE PEOPLE.' Advertisements circled the funnels, arched across the paddle boxes and blazed from the cabooses. . . . Queen Victoria was to open the Liverpool Exhibition in May and was expected once more to inspect the mammoth she had last seen a quarter of a century before. . . . The weather, or perhaps distaste for the state of the ship, caused 'a last-minute change in Her Majesty's plans.' Lewis's offered printed guidebooks for visitors and outfitted the ship with buffet restaurants, a music hall for a thousand people, "an American drinking bar," a shooting gallery, toffee stalls, a camera obscura, souvenir shops, and various actual sideshows including "Bob, the Missing Link" and another called the "African Mystery." There were trapeze acts and tours of the engine room. Dugan, 252.
- 8 "Grand Bahama Island's Liner-Turned-Hotel Pulls Up Gangplank." *The Wall Street Journal*, Jan 27, 1965.
- 9 A full synopsis of the ship's adaptive reuse history can be found in Simon, Renee B., *Destination Long Beach: The Queen Mary Story*. Simon, 53.
- 10 Johnson, Sheila K. "Problems of a Lady in Retirement." *New York Times*, Jan 21, 1973.
- 12 Interview with Erika Tobin, RMS *Queen Mary*, November 2009.
- 13 "Philadelphia Loses The Liner Elizabeth To Fort Lauderdale." *New York Times*, June 6, 1968.
- 14 "U.S. Group Buys Queen Elizabeth." *New York Times*, July 20, 1969.
- 15 In September 1970 the ship was seized and sold at auction to for use as an operational floating university. She burned and sank at Hong Kong in January 1972 as the conversion neared completion, with arson the suspected cause.
- 16 "Bring Back the Lurline." *San Francisco Examiner*, June 7, 1999. The venture ultimately did not proceed due to lack of private sector financing and the ship sank en-route to scrappers in 2000.
- 17 Interview with Klaas Krijnen, Chairman, ss *Rotterdam* Foundation, March, 2010.
- 18 "Kungsholm Hotel Plans." *A Tribute to the Swedish American Line*.

- Retrieved March 5, 2010.
- 19 "Queen Elizabeth 2 Sold to Dubai-Owned Company." *New York Times*, Jun 19, 2007.
- 20 Webster, Ben. "QE2 to be ripped up for new life as Dubai floating hotel." *The Times*, Nov 12, 2008.
- 21 "QE2 Owners Plan to Cut Ship in Two for Future Role as Dubai Hotel." *The Daily Record*, Jan 12, 2009.
- 22 Spencer, Richard. "QE2 Refurbishment Stalled in Dubai." *Telegraph*, June 28, 2009.
- 23 Braynard, *Classic Ocean Liners Vol. I*, 173.
- 24 Cook, Joan. "Floating Dormitory About to Be Scuttled." *New York Times*, May 12, 1975, p 59.
- 25 "Ship to Become Floating Hotel." *Los Angeles Times*, Sept 29, 1960.
- 26 Miller, *The Last Atlantic Liners*, 146.
- 27 Ibid, 85.
- 28 Miller, *The Last Blue-Water Liners*, 81. William H. Miller described a visit to the ship in 1983: "The ship is now only partially used, providing basic accommodation (\$6 a night for three, including breakfast) . . . for anyone who just happens to drive along the ocean-side road. The surrounding landscape, greatly disturbed by heavy-duty machinery, resembles the surface of the moon. In unappealing greys, browns and blacks, the small mountains of soil created an even more solitary setting for this lonely liner. The ship itself had slipped into a very neglected state – great streaks of rust and peeling exterior paint, badly faded funnel colours – an overall sense of lifelessness. . . . On board, the *Infante* was rather gloomy. A stale smell prevailed. Much of her furniture and artwork had been removed . . . From shore, a swift Atlantic breeze rattled the remaining lines and blocks aboard the *Infante* – otherwise, there was a deep silence."
- 29 "Twin Liners Proposed as Ship Hotels," *The Washington Post*, Oct 8, 1975.
- 30 Interview with Jens Weber, Cap San Diego Betriebsgesellschaft mbH, June 2010.
- 31 Buder, Leonard. "City's School Ship Will Be Retired Soon." *New York Times*, Apr 23, 1970, and "Where to Put a Ship?" *New York Times*, July 15, 1983. The friends group later succeeded in preserving the ship as an active museum vessel based at Baltimore, Maryland in honor of her military service; for the purposes of this thesis she is considered a preserved naval warship. The Board of Education maintained a maritime high school using a permanently moored vessel in the harbor on-and-off from 1875 until it finally relinquished the *John W. Brown* in 1983. From 1875 to 1898 it used a three-masted sailing vessel called the *St. Mary's*, with the cooperation of the US Navy. After 1908 the school was revived using a vessel called the *Newport*. From 1938 until c.1947 it used a former ferryboat called the *Brooklyn*. The city acquired the *John W. Brown* in 1946 and assigned her first to the Metropolitan Vocational High School, which had her berthed at Pier Four, East River. In 1961 she was transferred to the Food and Maritime Trades High School and in 1966 relocated to Pier 42, North River. In 1970 the Board of Education announced plans to replace the *Brown* with a vessel called the *Mountrail*, which featured more up-to-date equipment. With the port in decline, the City ultimately never opted to replace the *John W. Brown*.
- 32 "T/S Ryndam." Online: http://faktaomfartyg.se/ryndam_1951.html, retrieved March 2010.



A Model for Management & Stewardship

From now on, she will be a familiar and cherished sight in the Hudson. . . . all New Yorkers join in twin salutes of welcome and 'well done.'

New York Herald Tribune, June 24, 1952

While the preservation of the ss *United States* can begin with a non-profit advocacy effort, the scale of the undertaking and the political and practical complexities of any large proposal for the New York waterfront will require both government and private sector involvement to see it through. Spearheaded by a grassroots, non-profit advocacy campaign, similar initiatives have succeeded in accomplishing goals comparable in scale and character. By advancing a well-developed, thoroughly vetted plan for a financially viable reuse program that will capitalize on the ship's potential as a quality of life enhancement, such a campaign can win the productive cooperation of public and private entities to secure a safe future for this unique historic resource.

The Question of Ownership

Beyond basic financing, the greatest single obstacle facing the ship's preservation is her ownership situation, which at the time of writing rests in the hands of Norwegian Cruise Line and its parent company, Genting Hong Kong, Ltd. The ship's owners are private sector, for-profit entities with no financial stake in her preservation. Currently they are seeking to divest themselves of its care. The first real step toward preserving the ship will be for its ownership to pass to an entity that will promote its reuse. This entity can be a non-profit friends group (as in the case of the preserved freighter *Cap San Diego* at Hamburg, Germany), a government agency (as in the case of most large preserved vessels, including the RMS *Queen Mary*, the preserved Great Lakes bulk carrier *William A. Irvin* and nearly all preserved American naval warships), or a private-sector, for-profit developer (as in the case of the ss *Rotterdam* in the Netherlands).

The best ownership scenario for the vessel's preservation would be for a government agency to take title based on her cultural heritage value and potential to serve a public purpose. However, this could only happen if advocates for the ship's preservation are able to present a plan demonstrating

OPPOSITE: Of the ships pictured, the ss *United States* is now the sole survivor.

that the government could embark on such an undertaking without being left liable for the various financial burdens of the vessel's restoration and ongoing care. Government ownership is indeed the reality for the great majority of large preserved ships, especially preserved naval warships for which the US navy retains control.¹ The problem for the ss *United States* is that the government relinquished control of the ship in 1979. While there are many precedents for historic resources owned by government agencies and administered under contract to private sector non-profit friends groups and for-profit entities, the vast majority of these were already under government ownership when the organized advocacy effort for their preservation was initiated.

A handful of precedents exist wherein government agencies have stepped forward to take title to historic sites in extraordinary circumstances. But this has happened only after non-profit friends groups initiated the process by raising significant funding for the project in some cases to the tune of many millions of dollars, preparing a balanced business plan to guarantee that the government will not be left with the project's financial burden, and by demonstrating its potential to serve a public purpose. Such examples include the former elevated rail viaduct in Manhattan known as the High Line; a group of historic theaters on 42nd Street in Manhattan, and the Poughkeepsie Railroad Bridge spanning the Hudson River in New York State (each of these is discussed in greater detail below). If the ship is to be preserved in a stationary capacity at New York, government ownership would be particularly advantageous as the waterfront parcels best suited to host the ship are all in government hands.

BELOW: Completed in 1889, the Poughkeepsie Railroad Bridge lay unused for more than 35 years after a fire in 1974 damaged a section of track. A nonprofit friends group gained ownership of the structure and raised public and private funds to convert the structure into a public walkway crossing the Hudson River.



A suitable (and perhaps more likely) alternative would be for the vessel's ownership to rest in perpetuity with a non-profit friends group dedicated to her preservation. At the time of writing, the owners of the ss *United States* have indicated a desire to sell the ship for its scrap value, which is estimated to be in the range of \$1-5 million.² The ship's current owners could be pressured to sell the vessel for a nominal fee to relieve themselves of the burden of ownership, obtain a handsome tax write-off for the ship's market value and collect whatever positive publicity would likely reward such a gesture. This would allow the friends group to dedicate its resources toward the development of a master plan (as discussed in the section Guidelines for Advocacy). Non-profit ownership meanwhile could prove more politically palatable to public concerns over the New York waterfront.

Private sector ownership could also be a workable alternative. The drawbacks here are that a private sector owner might be less inclined to treat the *United States* as a serious historic structure worthy of curatorial stewardship (as precedent suggests – see the section on Stationary Reuse Precedents for Large Merchant Ships). Depending on the proposed reuse program, private sector ownership may also make the initiative less appealing to critics of waterfront redevelopment proposals, as has been demonstrated repeatedly on Manhattan's Hudson River shoreline.

A Non-Profit Advocate

Unique cultural heritage conservation initiatives such as that proposed here for the ss *United States* often begin with qualified non-profit advocacy organizations. These organizations may start out as a band of concerned citizens who share a common interest in the preservation or restoration of a

given historic resource. Such friends groups can play several important roles beyond fund raising and advocacy. In some special cases, these organizations can grow to such a point that they either take ownership of the resource or serve as an appointed administrative entity acting on behalf of a governmental ownership agency. In the case of the *ss United States*, a non-profit organization could take ownership of the vessel and partner with a government agency to seek out a private sector developer that would implement an appropriate program for the ship's reuse that is consistent with a realistic master plan. Part of the ship could be allocated for the private sector developer to renovate to suit an approved use, and part retained by the non-profit for a cultural program, such as a maritime museum. Formal ownership could remain with the non-profit or be transferred to an appropriate government agency.

Alternatively, the non-profit organization could oversee the ship's preservation by raising the funds for its adaptive reuse itself, then managing both revenue generating and cultural programs aboard the restored vessel thereafter. In yet another scenario, such an organization could partner with a private sector developer in acquiring the ship and crafting a proposal for its reuse. The partnership thus formed could then approach the appropriate governmental entities to find a permanent mooring site for the ship. However, the viability of any private sector reuse proposal for the ship will depend to a large degree on where the ship is to be permanently moored. This means that the friends group would likely have to select a permanent home for the ship and have secured some commitment from the site's owner in order to gain a real commitment from potential private sector partners.

Two non-profit advocacy organizations already exist with the general objective of preventing the *ss United States* from being scrapped. As discussed in the section on advocacy, it remains for one of these organizations to formulate a specific master plan based on a thorough exploration of what possibilities exist. By providing a balanced financial plan forecasting its potential to generate revenue to support itself and clearly articulating the public purpose and public good of the undertaking, such a document can help create the impetus for both government and private sector action to provide a permanent home for the ship.

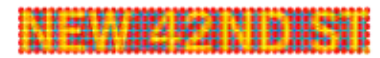
The Role of the Public Sector

A compelling plan put forth by the friends group articulating a clear vision for the ship's adaptive reuse can serve to engender financial support and other cooperation from the public sector to help preserve the ship. If the *ss United States* is to be permanently moored at New York, government cooperation is essential at the very least because all of the ideal sites for the ship are government owned, thus requiring the consent and cooperation of the agencies that own and control the respective sites. Further cooperation is essential in the issuance of various permits required from agencies such as the New York State Department of Environmental Conservation, the US Army Corps of Engineers, and the US Fish & Wildlife Service for the project to move forward.³

An overview of large scale maritime heritage initiatives involving both merchant and naval warships shows that government involvement has consistently played a role in the success of these initiatives. In some cases this involvement comes in the form of tacit support to facilitate the initiative of a non-profit advocacy campaign at little or no cost to the government, and in other cases it entails



Park Avenue Armory



ABOVE: Nonprofit advocacy campaigns have successfully galvanized public and private sector support to accomplish hugely daunting tasks.

A Strategy to Preserve the ss *United States*

the proactive leadership of a government agency that takes on and provides funding for the project as a cultural heritage initiative with real potential to stimulate economic development and tax revenues. Of the 22 preserved large warships in the United States, nearly all have enjoyed significant support from the US Navy, if only in that the Navy works with non-profit organizations and other government agencies to transfer control of the historic vessel in question (thereby mitigating the problem of acquisition costs).⁴ This arrangement serves to preserve the vessels at little or no cost to the government by facilitating the initiative of the non-profit advocacy effort.

In a number of examples, other government agencies also provide direct funding and stewardship for these vessels, as in the case of the USS *Texas*, which is administered by the Parks and Wildlife Department of the State of Texas; the USS *Yorktown* and the USS *Alabama*, both maintained by specially-formed state agencies in North Carolina and Alabama, respectively; and the USS *Wisconsin*, whose management is slated to be transferred to the City of Norfolk, Virginia. The costs of acquiring and converting the RMS *Queen Mary* were borne almost entirely by the City of Long Beach, California. The ship is still owned by the city government in 2010, with its management administered by contract to a private sector entity which largely eliminates the city's financial commitment for the ship's routine maintenance. The ongoing restoration of the ns *Savannah* has been funded entirely by the United States Maritime Administration, which also owns the vessel. On the Great Lakes, the preserved bulk carriers *William A. Irvin* and *Willis B. Boyer* are both owned by government agencies.

BELOW: The High Line stood abandoned for thirty years (top) before a nonprofit friends group successfully raised funds and secured governmental support to preserve the structure as a public promenade (middle & bottom).



Government involvement has played a similarly prominent role in a number of noteworthy large-scale preservation initiatives on land. In New York City, the preservation of the former elevated rail viaduct known as the High Line only happened once a non-profit advocacy group succeeded in enlisting support from the City of New York, which committed \$50 million to the project in 2004 and ultimately took ownership of the structure. With the former rail viaduct slated for demolition in the 1990s, a non-profit advocacy group called Friends of the High Line formed in 1999 to advocate for its preservation. In 2001 the Friends gained the support of other non-profit organizations, including the Design Trust for Public Space, to aid in their efforts. The following year they released a report finding that the High Line's restoration would help stimulate economic development on Manhattan's far west side. The New York City Council passed a resolution endorsing the structure's reuse that same year.

In 2003, the Friends staged an "ideas competition" that elicited some 720 theoretical design proposals for re-purposing the High Line, which were exhibited in a show at Grand Central Terminal. The following year the group hired a design team to plan the High Line's conversion to a public promenade. CSX Transportation, Inc., which owned the structure, donated the High Line to the City of New York in November 2005. The southern portion opened to the public in the summer of 2009, with work continuing on the northern part of the structure. The first two phases of construction cost \$125 million, \$44 million of which was raised directly by the Friends of the High Line.⁵

In Poughkeepsie, New York, a non-profit friends group struggled for more than twenty years to build a public walkway across a historic 6,767-foot long, 212-foot high unused former railroad bridge spanning the Hudson River. The friends group managed to acquire ownership of the structure for a negligible sale price,

but could not raise the funds to open it to the public. The group did however secure funding, largely through government grants, to commission feasibility studies exploring what could be done with the structure. The walkway finally opened in 2009 after the New York State Office of Parks, Recreation & Historic Preservation stepped in to fund and manage the project, operating the bridge as a public park and historic site. Ownership of the structure is slated to be transferred to the New York State Bridge Authority, a government agency not normally engaged in heritage conservation initiatives.⁶ The project has cost upwards of \$38 million, about two thirds of which came directly from state and federal government agencies, the remainder from private philanthropic sources raised by the friends group.⁷

Ideally, the government agency that owns the proposed permanent mooring site for the ss *United States* could take ownership of the vessel outright, making the ship part and parcel of the mooring site. If the friends group can provide real assurance for the viability of the project by way of a sound financial plan, this could be justified based on the ship's unique heritage value and her potential to facilitate improved public use of the site and to stimulate economic development, as articulated in a well crafted master plan prepared by the non-profit advocacy group. By establishing a permanent home for the ship and securing a stable ownership situation, an appropriate government agency could create a framework whereby a private sector, for-profit entity could be recruited by way of an RFP process to convert the ship to an appropriate new use (or uses). This process could be administered either by a governmental or non-profit owner of the ship, but is probably much less likely to succeed until some arrangement has been made to secure a permanent home for the ship.

Short of taking ownership outright, government financial support is available in the form of grants to help finance the efforts of the friends groups to draft a master plan and safeguard the vessel. The New York State Historic Preservation Office can issue grants to non-profit advocacy groups registered in the State of New York, even though the ship is not herself in New York State.⁸ Once a specific location is identified, other grants may be available from government agencies chartered to promote economic development in certain areas, such as the Lower Manhattan Development Corporation or the Hudson Yards Development Corporation, both offices of the New York State Economic Development Corporation. At the least, government grants could be pursued to help finance the preparation of the mooring facility, which in New York would involve an investment of public funds in a government-owned property.

The Role of the Private Sector

Once a clear future has been established for the ship with a secure ownership situation, the identification of a permanent mooring site and a management entity, an RFP can be issued to solicit private sector proposals for the ship's restoration and re-purposing. This process can be administered by a governmental or non-profit ownership entity. Whereas previous reuse proposals for the ship have spanned the gamut from rational to absurd, the RFP can set parameters for acceptable proposals based on what is deemed appropriate and viable given the concerns of the adjacent community, any restrictions that may apply to the specified mooring location, and the findings of a balanced financial plan. Proposals can be required to include the vessel's restoration, and stipulate that the restoration work be performed to meet the Secretary of the Interior's Standards for Historic Vessel Preservation Projects.

A Strategy to Preserve the ss *United States*

The RFP can establish terms for a lease agreement whereby a private sector entity will operate a new program, per its proposal and the parameters established in the RFP. The lease can be handled as a single, “master lease” for the entire vessel, or it can be divided such that multiple lease agreements are made for the operation of various components of the new program, though this latter arrangement proved problematic as implemented with the RMS *Queen Mary* at Long Beach, California. The *Queen Mary* has been operated according to several different variations of this basic format since it opened to the public in 1971. Initially, separate lease agreements were made between the City of Long Beach and three other entities charged with the operation of a hotel component, a food and beverage component, and a museum component aboard the ship. When this model proved unsuccessful, the city altered the ship’s management structure such that it holds a contract with a single master lessee who in turn subleases the management of other functions on the ship.⁹ For about 15 years the ship’s management was supported by a non-profit organization called the RMS Foundation that was formed by the for-profit holder of the master lease, but this organization was disbanded with the transfer of the lease to a new company in 2008.¹⁰

The duration of the lease will need to strike a balance between the interests of the private sector lease holder and any regulations that may apply to the specified mooring location. A longer lease will be more attractive to private sector entities willing to fund the costs associated with the vessel’s restoration, but may conflict with laws governing public waterfront properties. In New York, the Hudson River Park Act of 1998 restricts the Hudson River Park Trust, as the Park’s administrative agency, to a limit of thirty years on any lease, concession, license or other agreement with private sector entities.¹¹ In 2005, a special act of the New York State Legislature enabled the Hudson River Park Trust to offer lease agreements of up to 49 years for private sector reuse proposals for Pier 57, which was previously listed on the National Register of Historic Places, “in order to allow rehabilitation expenditures of a lessee of Pier 57 to qualify for federal rehabilitation [tax credits] and to obtain financing that is more favorable for the lessee and the Hudson River Park Trust,” on the grounds of the pier’s “historic status.”¹²

BELOW: Pier 57’s listing on the National Register of Historic Places justified the issuance of an extended lease to allow the developer to benefit from federal rehabilitation tax incentives for the structure’s restoration.



In an alternate scenario, a private sector entity could partner with the non-profit advocacy group spearheading the vessel’s preservation to develop a specific reuse proposal that drives the project forward at an early stage. With the non-profit friends group in secure possession of the ship and having crafted a master plan with guidelines for what it considers to be appropriate reuse programs, the friends group could seek a private sector partner that would propose a revenue-generating component to support the ship’s long-term upkeep. With an advanced reuse plan developed, this partnership could then pursue gaining access to an appropriate docking facility, which in New York would require the blessing and cooperation of a governmental ownership agency. However, the difficulty of finding a developer to partner with the non-profit for the development of a reuse program before a permanent site for the ship is specified renders this scenario somewhat less likely. And, as noted above, a model predicated on private sector leadership may prove less able to win the enthusiasm of the neighboring community, whose support has been demonstrated as a decisive factor for previous redevelopment proposals advanced for Manhattan’s Hudson River waterfront.



Other Successful Models

The public-private strategy outlined above for the *ss United States* can benefit from a study of similar models that have proved successful means of protecting cultural heritage around the world. These models demonstrate that such a plan is practical and feasible.

Preserved US Naval Warships: As described above, nearly all preserved naval warships in the United States constitute some form of public-private partnership between the US Navy and a non-profit organization that provides stewardship and management for the preserved vessel, in that the Navy Department retains formal control of the ships and makes them available to qualified non-profit or other governmental partners without the obstacle of high acquisition costs.

USS Intrepid: A case study worthy of examination is the one example of a large preserved vessel in New York Harbor: the aircraft carrier *USS Intrepid* (built 1943, 36,380 tons, 872 feet l.o.a.), built in 1943 at the same shipyard that produced the *ss United States* and operated since 1982 as a museum at the pier used historically by the *ss United States* before 1969. A Long Island-based non-profit friends group called *Odysseys in Flight* proposed bringing the ship to New York to be permanently moored as a museum as early as 1978.¹³ A distinguished veteran of the Second World War, the *Intrepid* had been inactive for some time and was slated to be scrapped. The friends group announced plans to raise \$3 million to fund the ship's conversion, but the effort stalled when the group had difficulty securing donations. The group did succeed in raising awareness for the vessel's plight, and the project was taken on by another friends group called the *Intrepid Museum Foundation*, backed primarily by New York real estate developer Zachary Fisher.¹⁴

With Fisher's backing, the Foundation managed to secure control of the ship with the blessing of the US Navy in 1981. By April of that year the City of New York agreed to allow the ship to be permanently moored at Pier 86 and pledged \$2.6 million towards the pier's reconstruction. (The foundation declined an offer to moor the ship at North Bergen, NJ because "the site could not realistically compare with the vast population density and tourist potential of the Manhattan waterfront."¹⁵) The Foundation projected the ship would

ABOVE: The *USS Intrepid* attracts nearly one million visitors annually in her role as a stationary museum at New York.

draw 1.4 million visitors annually, and announced plans for a two-phase project implementation. The first would involve cleaning and restoring parts of the ship slated to be visible to the public and installing a museum housed on the ship's upper decks for a cost of \$22 million, to be financed largely through a \$15.2 million tax-exempt revenue bond and a \$4.5 million Urban Development grant from the Federal Department of Housing & Urban Renewal.¹⁶ The second phase would outfit other parts of the ship to house two maritime and aviation schools at an additional projected cost of \$22 million, to be implemented later (this phase was never executed).¹⁷

The ship formally opened as a museum in August, 1982 after a year-long overhaul. The *Intrepid* is managed by the non-profit Foundation under an agreement with the US Navy. After struggling financially in its first years, the museum improved its marketing and fundraising strategies and has operated successfully in recent years.¹⁸ It is programmed almost entirely as a museum, with one exhibit hall able to be rented as a 17,000 square-foot event space when the museum is closed, and an education center / smaller event space housed at the ship's stern. A small space aboard the ship is given over to a restaurant available to museum visitors and managed under a lease agreement with an Au Bon Pain restaurant franchise. Other space on board houses the museum's administrative staff and storage space for its collections.

Much of the ship, including the engine rooms and lower decks, remains closed to the public in an un-restored state. The adjacent pier accommodates an approximately 10,000 square-foot welcome center housing a gift shop and reception center, gangway towers that provide access to the ship, and additional outdoor exhibits. Open space on the pier is also rented for private events. The museum has used the north side of the pier to exhibit the submarine USS *Growler* (built 1958, 3,550 tons, 316 feet l.o.a.) and the retired US Navy destroyer USS *Edson* (built 1958, 2,800 tons, 418 feet l.o.a.; the museum de-accessioned the *Edson* and the vessel was returned to the Navy's inactive fleet in 2004). In 2008-09, the museum closed to allow the concurrent reconstruction of Pier 86 and restoration work on the ship. The pier reconstruction was completed at a cost of \$65 million funded by various government sources; the ship meanwhile underwent a \$55 million comprehensive restoration, which included eight weeks in dry dock.

BELOW: The Central Park Conservancy has raised hundreds of millions of dollars to restore lawns and other landscape features in Central Park, and provides 85% of the park's operating budget annually.



Public Parks: In New York and other cities, non-profit friends groups have assumed management of many prominent public parks. Initially created purely as public sector initiatives, government agencies struggled to provide effective management and stewardship for these parks especially in the latter decades of the twentieth century owing to municipal budget shortages resulting from more general problems of urban decay. In a number of prominent cases, government parks and recreation agencies have retained ownership of the parks while entering into formal agreements with qualified friends groups to cede responsibility for maintenance and management of these spaces to community-based non-profit organizations. Leases and contracts for concessions within the parks, such as food and

beverage services and recreation facilities, can be made with the city agency that retains ownership or with the non-profit organization that has assumed management responsibility.

Probably the single best example of this type of arrangement is in New York's Central Park, which since 1998 has been managed by a non-profit organization called the Central Park Conservancy operating under a renewable 10-year contract with the city's Department of Parks & Recreation. While the Department of Parks & Recreation retains ownership and legal responsibility for the park, the Conservancy provides 85 percent of the park's annual budget and employs nearly all employees responsible for general maintenance and capital improvements within the park, as well as its own management and development staff.

National Park Lodges: The historic lodge hotels operated in National Parks in the United States and Canada provide another analogous precedent for a public-private partnership of the kind proposed here. The largest of these structures approach the scale of the *ss United States*. Like the *United States*, their historic merit is acknowledged by listing on the National Register of Historic Places. Most of these structures date to the early part of the twentieth century; some were built in existing National Parks, others were built by railroads on private land and subsequently annexed by the National Park Service with the expansion of a park's boundaries. Today these hotels provide highly relevant models for a workable solution for the *ss United States* in that they are publicly owned and administered under contract to private sector hoteliers. In recent years, many of these historic structures have undergone multi-million dollar capital upgrades for seismic, fire code and structural retrofits that in some cases have required them to close for several years at a time. Some examples include:

- The Ahwahnee Hotel, Yosemite National Park, California; built 1927. Underwent a \$4 million roof replacement project in 2003-2004.
- The Old Faithful Inn, Yellowstone National Park, Wyoming; built 1903. Received a multi-million dollar renovation project in 2004.
- Paradise Inn, Mount Ranier National Park, Washington; built 1916. Closed for two years beginning in 2006 for \$30 million structural restoration and seismic upgrades.
- Crater Lake Lodge, Crater Lake National Park, Oregon; built 1914. Underwent a three-year, \$15 million structural rehabilitation from 1991-1993.

It is worth noting that a number of these lodges are operated Delaware North Companies, which also operates the hotel component aboard the *RMS Queen Mary* at Long Beach, California.

42nd Street: By the 1980s, the area around New York's Times Square stood as one most graphic illustrations of urban decay in the United States. To improve the city's quality of life, a non-profit advocacy organization was formed under the auspices of the Empire State Development Corporation (ESDC) to clean-up and revitalize the area. Toward that end, the organization prepared a report that specifically identified the public good of such an initiative and created a master plan for how to implement it. In 1990, the ESDC (acting on behalf of the state government) took ownership of seven historic cinemas on 42nd Street



ABOVE: Built in 1903, the Old Faithful Inn at Yellowstone National Park has been listed as a National Historic Landmark since 1987.

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ABOVE: The Eltinge (top) and New Victory (bottom) theaters were restored under the auspices of the Empire State Development Corporation.

that had degenerated into adult entertainment venues, and in 1992 leased the buildings to The New 42nd Street (the non-profit organization it had fostered), and charged them with the implementation of the master plan. The non-profit subsequently oversaw the redevelopment of the sites under its control with public and private funds. Today it directly administers three theaters and holds lease agreements with private sector entities for the management of four other theaters. The buildings remain in the ownership of the state government.

The Armories: In recent years, a number of public-private partnerships have formed to spearhead the adaptive reuse of historic armories that had fallen into disuse. Among the more notable examples is the Seventh Regiment Armory, which occupies an entire city block on Park Avenue in Manhattan. Designated a National Historic Landmark in 1986, by 2000 the building had deteriorated to such a point that it was listed on the World Monuments Fund's list of the world's most endangered historic sites. A non-profit friends group called the Seventh Regiment Armory Conservancy formed with the mission of raising funds for the building's restoration and the development of a new program for its use.

In 2000, the Empire State Development Corporation stepped in on behalf of the Division of Military and Naval Affairs (DMNA), the agency that owns the building, and initiated an RFP process for the structure's restoration and re-programming. The friends group used the proceeds of an aggressive fund raising campaign to commission various consultants to produce a detailed proposal which it submitted to the ESDC. In 2001 the ESDC chose the Conservancy to lead the building's restoration, but five years passed before the state finally entered into a contract with the non-profit group to formalize the arrangement. (During that time, the Conservancy's proposal was challenged by another non-profit that had its own proposal for the building.) In 2006 the ESDC (on the DMNA's behalf) transferred the building's management to the Conservancy by way of a 99-year lease. The Conservancy has since begun letting contracts to execute a \$200 million restoration of the structure with both government grants and philanthropic contributions.¹⁹

Conclusion

A strategy to preserve the ss *United States* can succeed by pooling resources from different entities toward the achievement of this important goal. With the right balance of commercial and cultural programming facilitated by government cooperation, the daunting financial challenges of the ship's preservation can be addressed and the heritage value of this structure capitalized on to serve a public good. A dynamic and aggressive advocacy campaign is the key to making this goal a reality.

ENDNOTES

- 1 The Navy makes historic vessels available to qualified non-profit organizations or other government agencies free of charge but sets limits for the use of the vessels, inspects them on a regular basis, has power of approval for proposed alterations, and can take the vessels back if needed or if it finds the conditions of the transfer of control have not been met.
- 2 Interview with Dan McSweeney, ss United States Conservancy; other large ships have sold to Indian scrap merchants for figures in this \ range in recent years.
- 3 Interview with Wilbur Woods, New York City Department of City Planning, April 2010.
- 4 For the purposes of this thesis, "large" means 400' or greater in length overall.
- 5 Pogrebin, Robin. "First Phase of High Line Is Ready for Strolling." *New York Times*, Jun 8, 2009.
- 6 Davis, John. "Walkway Organization Names New Executive Director." *Poughkeepsie Journal*, April 8, 2010.
- 7 "Government Funding Keeps Walkway On Course." Online: <http://www.walkway.org/dynamic.php?id=pressgovfunding>, retrieved April, 2010.
- 8 The New York SHPO has issued at least one grant to a New York State-based non-profit group pursuing the restoration of a small inland waterways steamboat called the Columbia, though the boat is presently in the State of Michigan.
- 9 Simon, 81.
- 10 Interview with Bruce Vancil, Steamship Historical Society of America, November 2009.
- 11 Hudson River Park Act, §7(11).
- 12 "Parks-Leases-Pier 57," in "Laws of New York."
- 13 "Efforts to Bring Intrepid to City Prompt Exhibit." *New York Times*, Dec 31, 1978.
- 14 "Aircraft Carrier to Be Floating Museum." *Los Angeles Times*, Jun 12, 1981.
- 15 Rondinaro, Gene. "A New Role for an Old Veteran." *New York Times*, Mar 21, 1982.
- 16 "Sea Museum Bonds Offered." *New York Times*, Jul 8, 1981, and "A War Hero, Intrepid, Joins City Museums." *New York Times*, Aug 2, 1982.
- 17 Rondinaro, Gene. "A New Role for an Old Veteran." *New York Times*, Mar 21, 1982.
- 18 A detailed description of the effort to preserve the USS *Intrepid* can be found in White, Bill & Gandt, Robert. *Intrepid: The Epic Story of America's Most Legendary Warship*. New York: Broadway Books, 2008.
- 19 Interviews with Kirsten Reoch, Senior Project Director, Seventh Regiment Armory Conservancy, April-May 2010.



Guidelines for Advocacy

*I like to go to Battery Park and watch those liners booming in.
I often ask myself, why should it be that they come so far across the sea.
I suppose it's because they all agree with me. They happen to like New York.*

Cole Porter, "I Happen To Like New York," 1930.

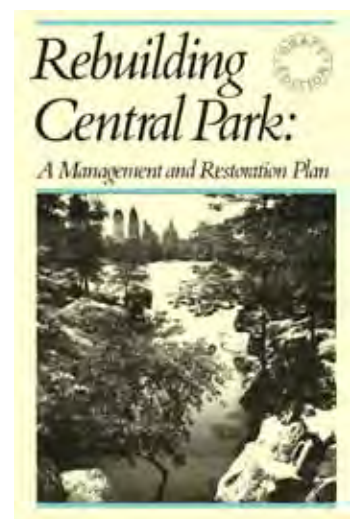
As a heritage conservation initiative, the *ss United States* is analogous to any number of large-scale undertakings that have been initiated or sustained as grassroots movements. This section explores a number of relevant precedents for such undertakings, and identifies ways in which these efforts can inform the ongoing movement to preserve the *ss United States*. It is worth noting that some of the recommendations put forth here have already been undertaken by the friends groups that have formed to promote the ship's preservation. Since the first advocacy campaign began in 1992, these organizations have been especially successful in gaining press coverage of the ship and its plight, with articles appearing regularly in widely-circulated media outlets including the *New York Times* and *Wall Street Journal*.

Master Plan

The lack of a specific, stated goal has been one of the greatest problems for the organized effort to preserve the *ss United States*. As a first step, advocates for the ship's conservation should pool available resources to commission appropriate professional consultants to help produce a specific master plan for the vessel's adaptive reuse. This document should address questions such as funding, significance, location, program, design, management, stewardship and economic impact. It could articulate a carefully vetted goal (for example earmarking certain parts of the ship for reuse as a hotel and other parts for reuse as a data center, while reserving one part of the ship for a museum to be run by the non-profit), and identify a specific location – such as Pier 76 in Manhattan – as the best location for the ship. A viable business plan accounting for the financing of the vessel's preservation and long-term management would be an important part of this plan. Such a plan can be used to engage financial and other support from a grassroots constituency, and crucial commitments from public and private sector sponsors. It should establish clear guiding principles that could be applied to alternate "Plan B" preservation scenarios should the specific primary goals (such as location) prove unfeasible. By resolving as many variables concerning the ship's future as possible, this master plan will set the stage for other advocacy initiatives

OPPOSITE: Rendering showing the *ss United States* preserved as part of a redevelopment proposal for Pier 76, North River, Manhattan.

BELOW: As one of its first steps, the nonprofit Central Park Conservancy prepared a master plan to guide the park's ongoing restoration and management.



outlined below. Issues such as use, location and architectural treatment are discussed at greater length in the following sections.

A United Constituency

Over the years, the groundswell of enthusiasm to protect the ss *United States* from destruction has given rise to numerous friends groups that have dedicated themselves to the ship's preservation. Unifying toward this common objective should be a top priority for these organizations. With two friends groups working independently toward very similar stated goals, the drawbacks of dividing the ship's support constituency are obvious. Both groups are made up variously of persons with personal ties to the ship (former passengers and crew members, descendants of persons involved in the ship's planning and construction and persons who immigrated to the United States aboard the vessel), ship enthusiasts and preservationists at large. It is of prime importance to the ultimate success of the ship's preservation that these organizations find an amicable means of uniting their resources toward their common cause.

Meet the Neighbors

Once possible mooring locations are identified in the master plan, the leadership of any organized effort to preserve the *United States* can begin an outreach program to make allies in the adjacent communities. Depending on the character of the area, appropriate community groups and business interests should be engaged in a dialogue to help identify the best possible specific location for the ship and in the development of a program for its reuse. Particularly in the various neighborhoods adjacent to the Hudson River Park, local community groups have consistently demonstrated strong feelings about any reuse proposal affecting the waterfront. The benefits of collaboratively engaging these groups are multi-fold: it could help to craft the most viable possible preservation plan for the ship; it could help design the new program so that it addresses the needs of the adjacent community as much as possible; it could help to broaden the effort's support network by generating interest among members of the community; it could build momentum and enhance legitimacy for the plan by introducing an important element of community-based effort; and it could prevent opposition from would-be adversaries by addressing their concerns at the outset and keeping them informed and productively engaged.

To the greatest extent possible, it is important that any proposal for the ship avoid approaching its neighbors as an outside initiative that regards the community as a necessary evil. Since the restored ship's potential as a quality of life enhancement and generator of economic development is one of the key justifications for her preservation, this matter is of key importance.¹

Precedent

Careful study of relevant precedent should inform not only the design and program development for the ship's repurposing but also the advocacy effort. A number of highly ambitious, "David-versus-Goliath" undertakings have succeeded by using a range of tactics that could be of great use in any effort to raise awareness, interest and funds to help secure an appropriate future for the ss *United States*. In addition to the various maritime heritage initiatives

OPPOSITE: Various cultural heritage agencies and organizations provide opportunities to raise awareness for the historic significance of the ss *United States* and the obstacles facing her preservation.

described in the section on Reusing Historic Ships, these include projects such as the adaptive reuse of the High Line, the restoration of public parks, the repurposing of historic armories, and many others.

Make it Official

One of the first important steps accomplished in early advocacy efforts for the ship was the successful push to have the vessel listed on the National Register of Historic Places by the US Department of the Interior in 1999. At that time, an effort was also made to have the vessel recognized as a National Historic Landmark, a more prestigious federal designation with higher criteria for listing, but opposition from the ship’s then-owner prevented this initiative from moving forward. While all indications are that the vessel’s current owner would be similarly opposed to such a designation, the issue should be revived for renewed pursuit. The great majority of historic vessels listed on the National Register of Historic Places are also listed as National Historic Landmarks, including many vessels of lesser distinction and typological rarity than the *ss United States*. This designation, which is extended only to the nation’s most significant historic sites, would officially put the *United States* in league with landmarks such as the Statue of Liberty and the Brooklyn Bridge in terms of governmental listings. It would aid the advocacy effort by lending additional institutionalized recognition of the ship’s historic significance.

The New York City Landmarks Preservation Commission considers floating structures outside of its legal purview, and would not extend legal protection to the *United States* if the ship were brought to Manhattan.² But other official designations may be applicable. In addition to National Historic Landmark listing, the *ss United States* is almost certainly eligible for various honorary designations, including recognition by the landmarks designation programs of the American Society of Mechanical Engineers and the American Society of Civil Engineers (the *USS Olympia* has been recognized on the former).

Listing on the New York State Preservation League’s annual “Seven to Save” roster, the National Trust for Historic Preservation’s list of the nation’s “Eleven Most Endangered” historic sites and on the World Monuments Fund’s semi-annual list of threatened historic resources worldwide should also be pursued. The ship should be named on the list of threatened modern structures maintained by the International Working Party for Documentation & Conservation of Building Sites & Neighborhoods of the Modern Movement (DOCOMOMO). A number of “recent past” and industrial heritage resources have also been designated as UNESCO World Heritage Sites, such as the Brazilian capital city of Brasilia, the Maritime Mercantile resources of Liverpool, United Kingdom, and Victoria Station at Mumbai, India. The nomination of the *ss United States* for this highly prestigious recognition would raise awareness for her situation even if the ship is ultimately not listed.

Other avenues of establishing an increased awareness of the ship’s historic and cultural significance include the possibility of nominating her for depiction on a US Postage Stamp, a particularly appropriate honor given the ship’s intended role as a mail carrier. The advocacy group can explore ways to tie its effort with National Maritime Day, which comes each year on May 22, and work to create partnerships with appropriate advocacy organizations for cultural heritage and maritime interest issues identified below.





ABOVE: A postage stamp depicting the ss *United States* could honor the ship's function as a mail carrier.

Making Partnerships

The lack of a fixed, established site has presented a major handicap to the advocacy campaign for the ship, effectively removing the element of "pride of place" that is such an important element of more conventional grassroots preservation efforts. Once a specified, permanent home for the ship is identified, the movement will be able to seek friends among interested members of the local community as well as area business leaders, property owners and other entities. Using New York as an example, this section suggests

a process for identifying a home audience. With its rich maritime heritage, New York is home to a number of somewhat scattered organizations whose respective memberships may constitute a great potential resource in advocating for the ss *United States*. Indeed, as discussed below, the existence of this yet untapped constituency should be recognized as one reason why New York is the ideal place for the ship's long-term future.

Some New York-based maritime and maritime history-related organizations whose activities suggest overlapping interest with the effort to preserve the ss *United States* include:

- Fort Schuyler Maritime College (and Fort Schuyler Alumni Association)
- Historic Naval Ships Association
- International Propeller Club / Port of New York Chapter
- Intrepid Sea, Air & Space Museum
- Marine Society of the City of New York
- Metropolitan Waterfront Alliance
- National Maritime Historical Society
- Noble Maritime Collection
- North River Historic Ship Society
- Portside New York
- Seamen's Church Institute
- South Street Seaport Museum
- Steamship Historical Society
- United States Merchant Marine Academy at Kings Point (and Alumni Assoc.)
- Working Harbor Committee
- World Ship Society / Port of New York Chapter

Other organizations dedicated to the promotion of historic preservation and urban planning initiatives in the New York area include:

- Documentation & Conservation of the Modern Movement / US
- Friends of the High Line
- Greenwich Village Society for Historic Preservation
- Historic Districts Council
- Municipal Art Society
- The Design Trust for Public Space
- New York Landmarks Conservancy
- Society for Industrial Archeology / Roebling Chapter
- The Art Deco Society of New York
- The Preservation League of New York State
- The Skyscraper Museum

Depending on the exact location specified for the ship's permanent mooring place, the advocates can work to identify local business leaders, real estate developers and property owners who stand to benefit indirectly from the ship's restoration and repurposing. These organizations can be engaged by enlisting their formal support in the form of letters of endorsement and by helping the friends group to raise funding. They can be polled for their input in the development of a program for the repurposed ship, and their membership can be appealed to by mailings or by making presentations at regularly scheduled meetings.

Ideas Competition

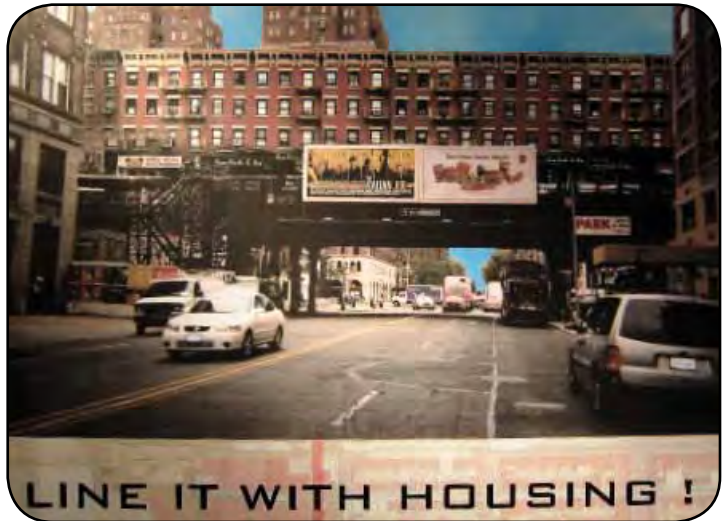
The great range of possibilities for the re-programming of the ss *United States* in terms of design and program make this project ripe for an "ideas competition" held by the friends group. Such competitions have been hugely successful in raising awareness and developing a constituency for similar kinds of projects, notably the successful movement to preserve and repurpose the High Line, a former elevated rail viaduct on the west side of Manhattan. In the case of the High Line, a non-profit advocacy organization called the Friends of the High Line formed to preserve the structure with an unspecified new use at the outset. Early in their advocacy effort, the friends launched a highly-publicized request for theoretical proposals of what could be done with the structure. Hundreds of architects and designers from around the world submitted proposals, some pragmatic, others more hypothetical. Although the design and program for the High Line as executed is far more practical than most of these proposals, the competition engaged the design community as an active supporter of the project, broadening the constituency beyond a group of industrial archeologists and rail enthusiasts and crystallizing an important relationship that has endured as the project continues to progress.

Get It in Writing

As outlined earlier in this section, once a specific proposal for the ship's future addressing issues of location and use has been developed, letters of support can be solicited from government officials at the local, state and federal level within whose jurisdiction the proposed mooring location falls. In New York, these officials would include local Community Boards and City Council members; the Office of the Mayor; State Assembly Representatives and State Senators; and representatives in the United States House of Representatives and United States Senate. Letters of support from government agencies and nonprofit advocacy groups could help promote the cause.

Goals, Fundraising & Outreach

The costs of acquiring, restoring and maintaining a vessel the size of the ss *United States* have been estimated to range from tens of millions to upwards of one hundred million dollars.³ If this proves beyond the reach of the friends



ABOVE: The Friends of the High Line engaged the interest of the design community by staging an "ideas competition" for the structure's reuse.

groups' ability to fundraise, there are important first steps that are well within reach of aggressive fundraising campaigns. Such goals must be clearly identified before passing the hat. They may include, among others:

Strategic, Policy & Real Estate Consulting: As outlined above, an important first step in the advocacy for the High Line was the commissioning of a study to assess the potential impact of the structure's restoration versus that of its demolition. The findings of such a study helped advocates for the preservation and adaptive reuse of the High Line and the Park Avenue Armory convince public officials that their initiatives were of real value as a stimulus of economic development by way of their potential to improve quality of life.⁴

Engineering Consulting: Although studies have been commissioned over the years to assess the structural condition of the vessel and to estimate the costs of various conversion schemes, these reports are proprietary, not necessarily available for the use of advocates for the ship or relevant to their agenda for her, and in any case are now out of date. The issuance of an updated report by a qualified engineer hired by the non-profit effort to preserve the ship will add legitimacy to the movement by allowing the advocates to speak authoritatively about the vessel's condition and the projected costs of any proposed restoration and re-purposing.

Architectural & Landscape Design Consulting: Any clear proposal for the ss *United States* will need to include a thorough assessment of the space on board the vessel and its potential reuse, even if such a proposal puts forth more than one possible scheme, prepared by architects. Other architectural services would include the development of schematic designs and convincing renderings to illustrate the vision being advanced as part of the advocacy effort. As most of the possible locations for the ship in New York Harbor will involve the redevelopment of the adjacent shoreline and will need to tie into existing park land, landscape design services will also be an essential component of any proposal. Such services should be provided by designers with experience working with waterfront parks in New York Harbor.

Legal Injunctions

Perhaps the most effective role of advocates for the ship's preservation would be to engage legal services to explore all means of preventing the vessel's sale for scrap or to delay any such sale as a means of buying time to secure public and/or private sector commitments to re-purpose and restore the ship. Because the vessel is listed on the National Register of Historic Places, no federal moneys may be expended for any action that would result in an adverse impact on the ship's historic integrity without an administrative review process. Although the ship is privately owned, government permits and funding could be involved if moving the ship requires dredging, and such action could be challenged by legal means. Further government permits could restrict the ship's removal from US waters based on the possible presence of any hazardous materials that may remain on the ship even though all asbestos is thought to have been removed in the 1990s. Good legal counsel should be engaged to identify other ways that the ship's sale for scrap could be prevented or delayed.

Conclusion

Well-executed advocacy campaigns have been the driving force behind many heritage conservation initiatives of herculean scale. Such campaigns have taken on enormous, multi-million dollar projects to channel available resources from various sources to accomplish what the neither the public sector nor basic market forces can or will of their own volition. For all her merits as a handsome structure with unique historic provenance, the *ss United States* presents complicated logistical and operational challenges that require a dynamic effort to secure the ship's future. The key to the success of a campaign to save the ship is to develop a master plan with specific proposals to capitalize on her potential as a civic amenity while at the same time honoring her great historic significance. These proposals can articulate a "best case scenario" for the ship's reuse without disavowing alternate preservation proposals by establishing firm, sensible guidelines that can be applied universally. The next sections explore how such a master plan can be developed.

ENDNOTES

- 1 The *ss United States* Conservancy took an important first step in this process by meeting in a public forum with representatives of Community Board Four in Manhattan, whose boundaries include several possible permanent mooring sites for the ship.
- 2 Interview and correspondence with Mary Beth Betts, Director of Research, New York City Landmarks Preservation Commission.
- 3 Interview with Dan McSweeney, Executive Director of the *ss United States* Conservancy. The Conversion of the *ss Rotterdam* in 2005-2010 cost upwards of €200 million.
- 4 The *ss United States* Conservancy has already hired a real estate consultant to help plan their advocacy effort.



Preservation Design Guidelines

Restoring the *ss United States* will require important design decisions regarding conditions on the ship herself, on the adjacent pier, and how to tie the vessel to her surrounding environs. These decisions might range from the specification of door knobs onboard the ship to architectural and landscape designs for new shore-side facilities. These design problems should be made in accordance with the Secretary of the Interior's Standards for Historic Vessel Preservation Projects to promote rather than compromise the ship's historic significance and to tie into the adjacent fabric in the most appropriate way possible. It should be noted that adherence to the Secretary's standards will make the redevelopment eligible for federal rehabilitation tax incentives.

INBOARD SPACES

As noted above, most of the ship's interior spaces have been stripped of virtually all fixtures, furnishings and finishes following an auction in 1984 and the removal of hazardous materials in Ukraine in the mid-1990s. Conditions throughout former accommodation spaces aboard the ship are typified by exposed metal bulkheads and overheads, though some original floor finishes remain in place. Many mechanical areas including the engine rooms remain largely intact as they existed when the ship completed her last voyage in 1969. Nearly all of the furnishings and fittings sold at auction in 1984 survive in the hands of museums and private collections around the country.

While the loss of these fittings is not complementary to the vessel's historic integrity, it is an enormous net plus for the ship's repurposing for several reasons. First, the ship's interior spaces are generally considered to be of secondary importance to her overall historic significance (her listing on the National Register of Historic Places came after their removal). Second, the absence of asbestos and other hazardous materials makes her restoration much less costly than it would be otherwise and eliminates the potential for public relations problems over their remediation. All of the ship's asbestos-laden finishes would in all certainty have had to have been removed anyway from any spaces slated for public access. Finally, by freeing-up space it makes the vessel much more adaptable for a wider variety of reuse programs.

OPPOSITE: Rendering showing the *ss United States* preserved as part of a redevelopment proposal for Pier 76, North River, Manhattan.

Although many design decisions for the spaces onboard the ship are essentially dependent on the use or uses that are ultimately programmed, a number of general and specific recommendations are applicable regardless of how the ship is ultimately re-purposed.

Preserving Significant Existing Features

Despite the loss of original interior fittings and finishes, some historic interior details survive on board the ship and should be protected and incorporated into the vessel's new program. A thorough inventory and documentation of these features is an important first step that should precede any restoration work. Some important features that should be preserved include:

Engine Rooms: Probably the greatest single factor in the historic significance of the ss *United States* is the power plant that enabled her to secure the record for the fastest ever commercial crossing of the North Atlantic in 1952.¹ Fortunately, these spaces survive today largely as they were built. With the loss of nearly all comparable marine steam engines in recent years, the engine rooms of the ss *United States* not only represent arguably the most significant works of their kind ever created, but also among the last to survive at all. At least one of the ship's two engine rooms should be preserved, restored, opened to the public and interpreted as a museum space. While an ideal scenario would preserve both engine rooms, an acceptable compromise might allow one to be removed and given over to a revenue-producing space to support the vessel's ongoing stewardship. The appropriateness of such action could ultimately be decided in a preservation tax credit process.



Promenade Deck Bulkheads & Plan: Nearly all of the ship's public rooms were concentrated on Promenade Deck. Although these spaces have been stripped, the metal bulkheads that delineated them remain in place and should be preserved to facilitate the restoration of these rooms. The enclosed promenades that flanked these public rooms along the length of the ship's superstructure also remain intact. As semi-enclosed spaces, only very minimal finishes were installed in the promenades, and as a result little was removed from them during the hazardous materials abatement process and they remain today much as they appeared in 1952. Highly characteristic features of passenger ships built from the late nineteenth century through the 1960s, these spaces are of great relevance to the vessel's historic significance and should be preserved and incorporated aboard the re-purposed ship.



ABOVE: Artwork and furnishings from the ss *United States* displayed at the National Museum of American History of the Smithsonian Institution in Washington, DC.

Other Important Public Rooms: The spaces once occupied by the First Class Dining Saloon on A Deck, the Tourist Class Smoking Room on Main Deck, and the Indoor Swimming Pool on C and D Decks should be preserved to facilitate the restoration of these rooms. Surviving interior details in these spaces, such as original bulkhead finish surfaces, aluminum moldings, the Monel metal swimming pool basin and the original bar in the Tourist Class Smoking Room should be inventoried, documented and preserved wherever possible in these spaces and throughout the ship.



Companionways: At least one of the ship's two main companionways should be preserved to facilitate its restoration.

Floor Finishes: Patterned rubber floor finishes are among the only historic surface fittings that remain aboard the ship today. Assuming that these finishes do not contain hazardous materials, they should be conserved if possible and kept in place. If hazardous materials content or their poor condition precludes conservation, they should be documented and replaced in-kind wherever possible.

Crew Spaces: The ship's crew spaces should be assessed to identify a representative area to be conserved for curatorial and interpretive purposes.

Restoration of Lost Features

While the replication of lost historic resources is a controversial practice among professionals, in some cases the approach is justified. This thesis recommends the restoration of certain significant interior spaces onboard the *ss United States* by replacing bulkhead and overhead paneling removed due to asbestos content. In all likelihood this paneling would have been removed and replaced anyway in order to open the ship to the public; in a sense, replacing this material some years after its removal represents only a prolonged lag time in this inevitable intervention. Care should be taken to locate historic architectural drawings and sample materials to match the historic installation and surface texture of these materials as nearly as possible. Additionally, the *ss United States* Conservancy has begun to inventory furnishings, artwork and fittings auctioned from the ship in 1984 that survive in museums and private collections. Wherever possible, these items should be acquired by purchase or long-term loan for reinstallation on the ship. Important interior spaces that should be restored include:

ABOVE: Enclosed promenades such as those aboard the *ss United States* were highly characteristic features of passenger ships built from the late nineteenth century through the 1960s. These are now among the last spaces of this type in existence.

- HISTORIC
- FLEXIBLE

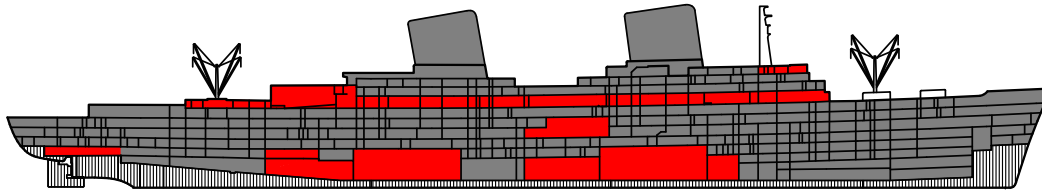


DIAGRAM
HISTORICALLY SIGNIFICANT
SPACES TO BE RESTORED

T. RINALDI

ABOVE: Under ideal conditions, the ship's important public rooms and engine rooms should be preserved, restored or re-created as part of her adaptive reuse.

All Promenade Deck Public Rooms: Nearly all of the important public rooms aboard the ss *United States* are concentrated on the ship's Promenade Deck. Named for the long, semi-enclosed spaces flanking these rooms to either side, the Promenade Deck became a character-defining feature of virtually all large passenger ships by the end of the nineteenth century. Typically these decks were given over entirely for the ship's public rooms. On the *United States*, the Promenade Deck featured nine public rooms, seven for first class passengers and two for those in tourist class. In addition to the enclosed promenades, these included, from bow to stern:

- Tourist Class Lounge
- Tourist Class Theatre
- First Class Observation Lounge
- First Class Ballroom
- First Class à-la-carte Restaurant (the "Navajo Room")
- First Class Cocktail Lounge
- First Class Smoking Room
- First Class Shopping Center
- First & Cabin Class Theatre

All of these rooms were designed by Eggers & Higgins and decorated by Smyth, Urquhart and Marckwald. Their importance to the ship's identity as belonging to a typology, their value for the purposes of interpreting the vessel's history and their reuse potential justify their restoration. All of the steel and aluminum structural bulkheads delineating these spaces remain in place. Restoring these rooms would require re-fabricating the removed paneling and joinery, originally composed of Marinite wall board, using a similar material, and the acquisition or long-term loan of original artwork and furnishings or replicas thereof. Great care should be taken to ensure that the new finish materials match the appearance of the originals to the greatest extent possible. Once restored, these rooms could be programmed in a number of different ways. Some could be given over to exhibit space; some could serve as event spaces or as public rooms for a hotel component accommodated elsewhere aboard the ship, thus returning them to a role very similar to that originally intended for them.

Other Important Public Rooms: The spaces once occupied by the First Class Dining Saloon on A Deck, the Tourist Class Smoking Room on Main Deck, and

the Indoor Swimming Pool on C and D Decks should also be restored to their historic appearance for purposes of interpretation and adaptive reuse.

Other Significant Spaces: A particularly unfortunate consequence of the 1984 auction was the loss of all original navigational equipment from the ship's bridge. Highly valued by collectors, this equipment still exists and should be returned to its original location on the restored ship when possible. In the meantime, the navigation bridge should be restored by conserving any surviving original moldings or finishes and re-fabricating lost surfaces to return this space to its original appearance for interpretation as a museum space. The former captain's and officers' quarters adjacent to the bridge should be treated similarly.

General Guidelines for Architectural Treatment of Other Interior Spaces

Apart from the areas identified above, vast parts of the ship remain available for reuse. Most of this space, such as the areas formerly given over to passenger accommodation, has been stripped down to bare steel and aluminum structural bulkheads. How these spaces should be treated is dependent to a large degree on the nature of the reuse program that is specified for them. Certain general guidelines however can be applied whatever new use or uses are ultimately decided upon.

Regardless of how these spaces are reused, the design of their new finishes can be developed according to one of three basic principles: wherever possible, it may be desirable for bare structural members exposed by the removal of joinery or those that were exposed originally be left visible; alternatively, these spaces can be designed to match the details (surface texture, etc.) employed for them historically, or they can be planned in a way that is directly responsive to the new program and expressive of its own time. For example, if certain areas are designated for reuse as hotel spaces, the new hotel rooms could be designed to faithfully evoke the character (if not the dimensions) of the ship's cabins as they existed historically; alternatively, they can be designed simply as modern hotel rooms with a character of their own – or some combination thereof.

Despite the many variables at play, whatever strategy or approaches are taken will be successful if they pass the following litmus test:

- 1) The new spaces should not seek to create a false sense of history by introducing a historical style that never existed on the ship
- 2) The new spaces should not compromise the ship's heritage value
- 3) To the greatest degree possible, the new spaces should acknowledge the special character of the structure that encloses them as a ship, without "going overboard" by inappropriately overemphasizing nautical themes

EXTERIOR TREATMENT

Fortunately, the ship's exterior has undergone almost no alteration since the vessel entered service in 1952. Indeed, years of neglect have left in place layers of paint that were on the ship when it made its last Atlantic crossing

in 1969. While the appropriate treatment for the ship's exterior may seem obvious, this section sets forth guidelines that can be adhered to regardless of how the vessel is repurposed.

Restoration of Lost Features

Lifeboats & Lifeboat Davits: The removal of the ship's lifeboats and lifeboat davits constitutes the only significant alteration to the vessel's exterior appearance. (These features were presumably removed for their scrap value when the ship was undergoing hazardous materials abatement in Ukraine in the mid-1990s.) While their loss is of minimal impact to the ship's overall historic value, their importance to the vessel's appearance warrants their replication. Although it is not necessary that the re-fabricated boats and davits be functional, ideally they should be constructed using the exact materials and methods used for the originals. Alternatively, less expensive materials, such as glass fiber reinforced polymer (GFRP) could be used as a substitute. If less costly alternate materials are used, care should be taken to replicate the detailing of the originals, such as the placement of rivet heads, seams between component parts, etc.

New Protruding Structures

The construction of new protruding structures has proven to be a persistent problem for vessels adapted to new uses and should be kept to an extreme minimum in the case of the ss *United States*. This is particularly true for merchant ships converted to serve as cruise ships, many of which have emerged from shipyards in an unrecognizable state following their conversion. In New York, the city's Landmarks Commission routinely approves rooftop additions to designated landmarks provided they have a minimal impact on structure's acknowledged historic significance or allow the exterior elevations of the structure to survive intact (the Hearst Tower on West 57th Street being perhaps the most notable recent example). Much of the significance and aesthetic appeal of the ss *United States* is derived from her largely unaltered historic profile; any new structures that would alter her outboard appearance therefore should be designed with great care to be as inconspicuous as possible.

Color Scheme & Surfaces

The historic livery of the ss *United States* should be restored with new coats of paint to match its original appearance. While historic color schemes are not always of primary relevance in the case of conventional historic structures on land, color is of great importance to the historic significance and aesthetic appeal of the *United States* and there is almost no room for alteration in this regard. Drastic, insensitive alterations to the livery treatment of merchant vessels adapted for service as cruise ships or floating casinos demonstrate the profound effect of such changes to a ship's aesthetic impact. The historic color scheme of the ss *United States* is further significant for its consistency with traditional livery of similar merchant ships, which developed in the nineteenth century with a distinct causal relationship to the historic function of these vessels.

The green "neotex" composite deck surface material used on the *United States* was a departure from the conventional teak surface used on most ships of the

period, but is significant as a response to the performance specification for the ship to be entirely fireproof. This material should be restored in-kind to match the color and texture of the original.

As noted earlier, the existing painted surfaces on the ship remain from the vessel's period of activity. For their deteriorated condition and possible lead content, existing layers of paint will naturally have to be removed and the substrate prepared for the application of new painted finishes to match the color of the originals. However, due to their significance as visible historic fabric and authenticity value, very small representative areas of the historic painted surfaces should be preserved in their existing condition as "soil patches" to attest to the ship's history and prolonged period of neglect. This is consistent with the treatment of other restored landmarks in New York and elsewhere, such as Grand Central Terminal.

URBAN DESIGN

The adaptive reuse of the ss *United States* as a permanently-moored, stationary vessel will almost certainly require shore-side facilities to support whatever new programs are specified on board the vessel and to tie the ship to its immediate context. The design of such facilities should be sensitive to the heritage value of the ship and responsive to the aesthetic and practical priorities of the adjacent community. In New York, the ship would in all likelihood be situated adjacent to parkland in a formerly industrial waterfront context. The design of public space and any new structures, such as a visitors center or permanent gangways, should therefore be responsive both to the existing park and the area's heritage as a working waterfront. The design process should explore ways in which high quality, contemporary landscape and architectural design can incorporate details typical for the kind of architectural structures with which the *United States* and other merchant ships historically interacted in New York Harbor. Historic materials and design details, such as riveted steel trusses and corrugated steel cladding, could be incorporated to evoke the character of the largely vanished structures that once typified New York's working waterfront, and used in such a way to weave comfortably with the adjacent park. This process should develop with the input of the adjacent community.

Conclusion

In being adapted to serve a new stationary role, the ss *United States* should be treated with care to protect the features that make her preservation worthwhile in the first place. Precedent shows that adaptive reuse projects for ships have a tendency to make substantial alterations to both their internal and external appearance. Though her interiors have been gutted and important fittings dispersed, some important interior features have survived, and her outboard appearance remains almost unchanged from the time of her construction in 1952. Grounded with an acknowledgement of the ship's value as an object of cultural patrimony, any reuse scenario for the ss *United States* should involve a careful process of identifying features that should be preserved and earmarking other parts of the ship where significant changes can be made without compromising her historic significance.



Location & Use

... if we think, after all, that the boat is a floating piece of space, a place without a place, that exists by itself, that is closed in on itself and at the same time is given over to the infinity of the sea and that, from port to port, from tack to tack, from brothel to brothel, it goes as far as the colonies in search of the most precious treasures they conceal in their gardens, you will understand why the boat has not only been for our civilization, from the sixteenth century until the present, the great instrument of economic development ... but has been simultaneously the greatest reserve of the imagination. The ship is the heterotopia par excellence. In civilizations without boats, dreams dry up, espionage takes the place of adventure, and the police take the place of pirates.

Michel Foucault, *Of Other Spaces*, 1967

As a moveable structure, part of what makes the ss *United States* significant also tremendously complicates any attempt to formulate a strategy for her preservation. The very fact of her being a ship introduces questions that do not apply to most preservation initiatives on land, chief among them that of location. While master plans for the conservation of conventional structures generally endorse the continuation of intended use at the place of construction, these fundamental principles are neither feasible nor applicable in the case of the ss *United States*. For this and other maritime heritage initiatives, the development of a unified advocacy campaign is thus vulnerable to discord that can stifle a productive dialogue before it starts.

The ideas in this section are intended to help formulate a realistic, best-case-scenario preservation plan for the ship that can be expressed in a master plan and promoted by a unified constituency. The plan is based on fundamental principles for the conservation of conventional structures and interprets them for this unconventional structure. It builds on lessons learned from the few case studies that exist for maritime heritage conservation at this scale (as discussed in the section on Stationary Reuse Precedents for Large Merchant Ships).

Reconciling Adaptive Reuse

The ss *United States* outlived her intended purpose in 1969, at the young age of 17 years old. This fact does not invalidate the significance of the ship as one of the greatest achievements in the history of naval architecture or American engineering and industrial design. It does, however, significantly complicate the formulation of a plan for her future. From the strictest standpoint of preservation theory, the best scenario would be one that allows the ship to continue in her intended role as an active vessel. However, despite numerous

OPPOSITE: Rendering showing the ss *United States* preserved as part of a redevelopment proposal for Pier 40, North River, Manhattan.

BELOW: The battle to preserve Grand Central Terminal benefitted from the structure's ability to inspire a sense of "pride of place."



A Strategy to Preserve the ss *United States*



ABOVE: The former ss *Santa Rosa* before (top) and after (bottom) cruise ship conversion. An extreme example of the significant alterations typical for such adaptive reuse schemes.

proposals to return the ship to some alternate form of active service, this has proven unfeasible; the nearest precedents for such adaptive reuse suggest that returning the ship to service would require significant changes to her intact outboard profile and propulsion systems that would compromise her historic integrity. And in any event, the free market has had more than four decades to reactivate the ship and has not done so.

Since the ss *United States* was withdrawn from service, there have been three serious attempts to adapt the vessel for use as a cruise ship. Each of these proposed extensive unsympathetic alterations to the interior and exterior of the ship, and the first two of them actually brought about the removal of all interior fittings and furnishings. Cruise ship-conversions were the single most common fate for dozens of smaller ocean liners withdrawn from service in the 1960s and 70s. In nearly every case, such conversions resulted in significant alterations to the interior and exterior features of the vessels involved. When these adapted vessels reached the end of their extended service lives, the compromising effect of such alterations on their historic integrity proved sufficient to undermine any movement to preserve them for their heritage value.

Other active-service reuse scenarios have been proposed for the ss *United States* but none has come close to reality. In 1983, the US Navy studied the possibility of reactivating the vessel as a hospital ship, issuing a report entitled “USNS *United States*.”¹ But the Navy opted instead for the conversion of two oil tankers originally built at San Diego, California in the mid-1970s, which entered service as the USNS *Mercy* and USNS *Comfort* in 1986-87. More recently, advocates for the ship’s preservation have advanced the notion of re-activating the *United States* as a “goodwill” vessel to be deployed under the auspices of a non-profit or quasi-governmental agency such as the United Nations or United States Agency for International Development.² While there is little precedent for a conversion of this type, it is entirely plausible that such a plan could be enacted in a way that does not compromise the ship’s integrity as a historic structure, and in fact honors the vessel’s intended function as a living, breathing ship.³ However, for want of interest from a would-be operator of the vessel, the likelihood of such a proposal being enacted seems extremely slim.

In theory, one could argue that the best scenario for the *United States* would be to restore her operating subsidy on the grounds of her heritage value, to return the ship to her intended role as a transatlantic liner. An interesting theoretical proposal could be for the ship to be revived in her historic purpose as a kind of moving National Historic Site, jointly owned by the US National Park Service and the British National Trust. The United States Lines no longer exists, but (hypothetically) her operation could be contracted out to a private sector entity such as a cruise ship operator. Yet even this ideal vision is not without its limitations. Ultimately, any active service role for the *United States* would hasten the aging process of machinery and materials, thus forcing their eventual replacement – an antithetical outcome from a curatorial standpoint. Indeed, the trade-off in heritage value incumbent of any plan to maintain a historic vessel for active service at the expense of original fabric is an issue of perennial debate for maritime heritage conservators.⁴ Regardless, this and other strategies to maintain the *United States* in an active role remain effectively impractical and thus too implausible to warrant continued exploration for the purposes of this project. This thesis therefore endorses the preservation of the vessel in a stationary role as the first guiding principle for her preservation.

LOCATION

As a floating structure, the mobility of the *ss United States* functions as a double-edged sword for advocates of the vessel's preservation. On the one hand, her ability to move is central to her historic significance. In theory, she can be taken to any deep-water port in the world with the resources and the will to preserve her, and within any given port she can be transferred from one location to another should she get in the way of some large redevelopment project, as historic buildings sometimes do. The contract for her reconstruction can be awarded to any qualified shipyard that submits a low bid.⁵ On the other hand, in what might be called the "London Bridge effect," divorcing the ship from her historic spatial context mitigates her heritage value.⁶ More problematically, the lack of a permanent home undermines the ability to galvanize a local, community-based constituency to advocate for the ship's preservation. While the site selection process is linked to the development of a new program for the space on board the ship, a number of guiding principles are applicable regardless of how the ship is reused:

- The site should be chosen based on its likelihood to make viable whatever appropriate commercial, non-profit or other uses are specified for the re-programmed ship to ensure that these uses will succeed in commemorating the vessel's heritage value and supporting her ongoing stewardship.
- The site should complement the ship's heritage value by having some contextual relevance to the ship's history.
- The site should make the best use of the ship's potential to enhance the character of her surroundings and use the ship as a tool to improve public access to the waterfront.

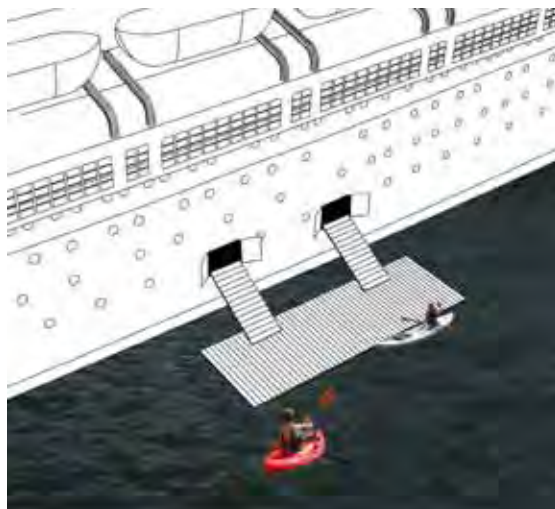
New York

In a very real sense, the *ss United States* is a New York landmark. Though many great merchant ships have counted as fixtures in New York Harbor since the city's European settlement in the seventeenth century, the *ss United States* is the most remarkable ever to have made New York her home port,



ABOVE: The reconstruction of London Bridge at Lake Havasu City, Arizona illustrates the importance of preserving a structure in its appropriate historic context.

BELOW: The *ss United States* can be reused in a way capitalizes on her potential to enhance the public's enjoyment of the waterfront in imaginative ways.



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A Strategy to Preserve the ss *United States*



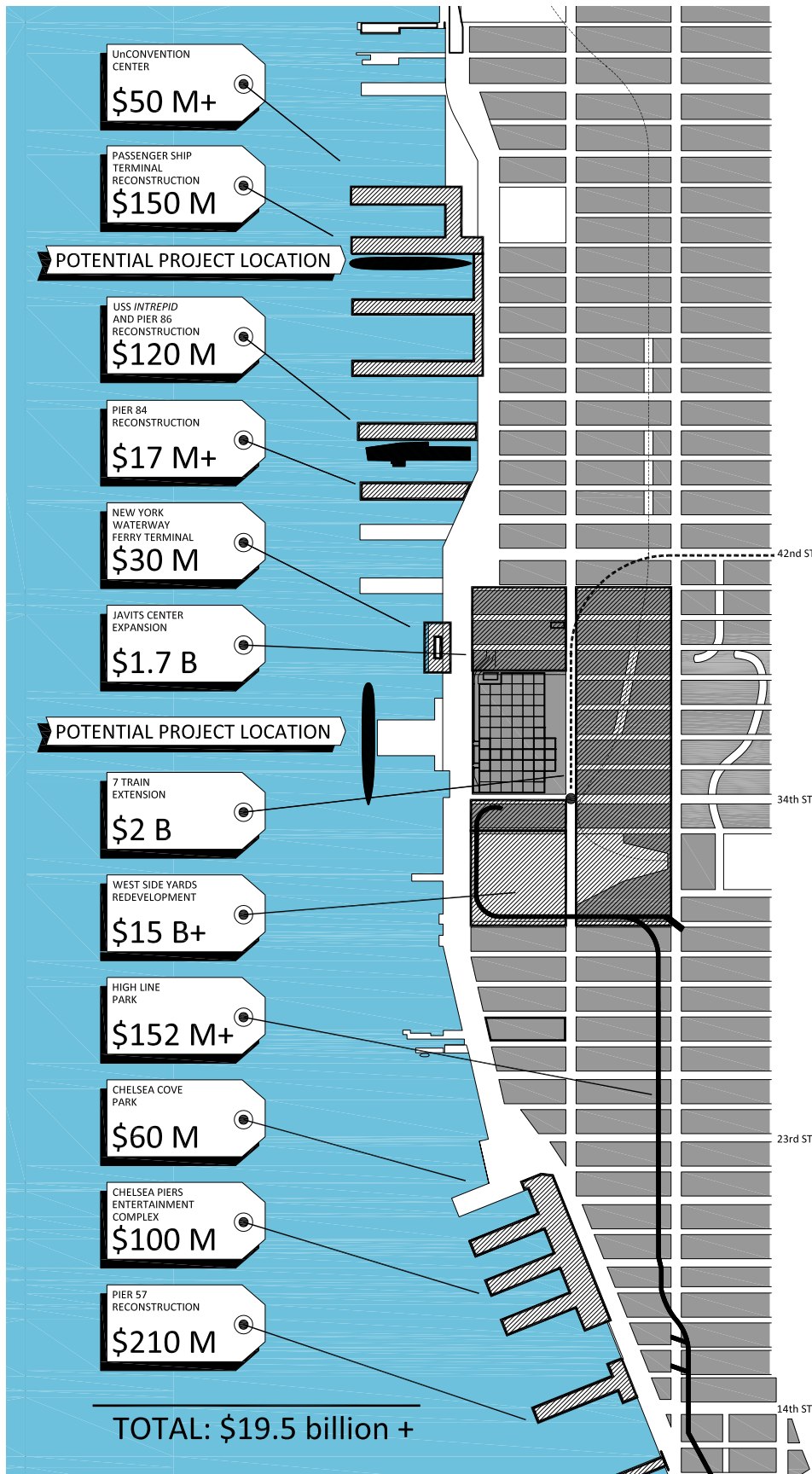
ABOVE: The ss *United States* is the most remarkable merchant ship ever to have called New York its home port.

her official port of registry. Apart from Hudson's *Half Moon* or Robert Fulton's *Clermont* (both of which have long vanished and actually been replicated), there is perhaps no ship in history more worthy of preservation on the New York waterfront than the ss *United States*. New York marked the western terminus of her route; her operators paid port duties to the city, and its name is painted in large letters across her stern. She was designed by three New York firms, operated by a New York-headquartered steamship company, captained by New York-trained masters, staffed largely by New York crews, and remained a regular presence on the city's waterfront throughout her service life. Perhaps even more significantly, she represents the apogee of the regularly-scheduled liner service that facilitated the development of the Port of New York in the nineteenth century. From a curatorial standpoint, the best case scenario is one that preserves this vessel in New York Harbor. She is a part of the city's cultural landscape.

Bringing the ship back to the city with which she has the strongest historic associations may also have the greatest potential to galvanize a local constituency to help advocate for the vessel's restoration and long-term stewardship. In heightening the ship's heritage value, her presence at New York could add further momentum to the effort preserve her. From a more pragmatic standpoint, a financial plan for any commercial program could confirm that New York's population density and existing draw for tourists promise the greatest possible viability for any publically programmed reuse that may be installed onboard the ship. Research conducted for this thesis suggests that the USS *Intrepid* attracts the greatest patronage of any preserved warship in the United States, with almost one million visitors annually in recent years, and that the RMS *Queen Mary* attracts even more visitors (1.3 million annually) with a diversity of commercial programs aboard despite the relative handicap of her location. This suggests that a business plan for similar commercial programs aboard the ss *United States* at New York could forecast an even greater patronage than that enjoyed by the *Intrepid* or the *Queen Mary*.

For all of these incentives, the New York scenario poses a number of problems that warrant consideration. Especially in Manhattan, land use along the city's waterfront is heavily regulated. Intended to protect public access to the city's formerly industrial waterfront, these regulations limit potential reuse proposals for the space onboard the ship. To further complicate matters, several waterfront sites have accrued long histories of ill-fated redevelopment proposals that have been lightning rods for public opposition, leaving some communities with a sense of general skepticism toward large-scale waterfront revitalization initiatives.

Potentially more challenging for any proposal to permanently moor the ss *United States* in New York Harbor is the recent interpretation of environmental law as applied to use of the harbor by the New York State Department of Environmental Conservation (DEC). In the 1980s, advocates successfully defeated a proposal to completely redevelop Manhattan's Hudson River shoreline with an underground interstate highway known as "Westway" based on the project's potential impact on underwater wildlife habitat. In the wake of Westway, the Hudson River Park Act of 1998 prohibited the installation of permanent floating structures greater than eight acres in total.⁷ (The ss *United States* occupies an area of approximately 1.5 acres.)



LEFT: Map showing selected recent, ongoing and proposed improvements for a section of Manhattan's Hudson River waterfront.

A Strategy to Preserve the ss *United States*



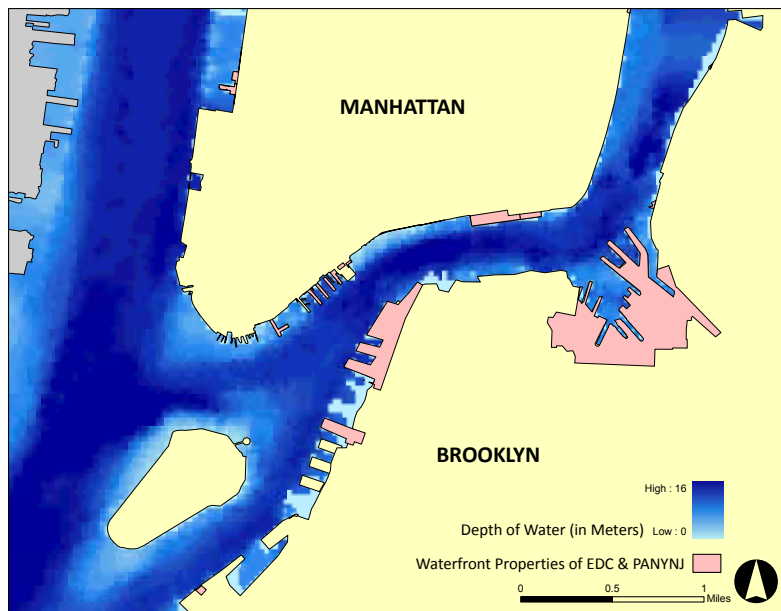
This language notwithstanding, DEC's policies under its current appointed administration have essentially prohibited almost any permanent floating structure or platform from extending over the water in the Hudson River Park and elsewhere. A case in point of the effect of this policy is its impact on the *Floating Pool Lady*, a project of the non-profit Neptune Foundation and the New York City Department of Parks and Recreation to accommodate a public pool aboard a 260-foot l.o.a. steel barge. The DEC approved the project only on the condition that the barge be moved periodically from one location to the next.⁸ Clearly, a proposal to permanently moor the ss *United States* in New York Harbor would require either a change in the agency's policy or special exemption for the ship based on her unique historic value and potential to improve the public's access to and enjoyment of the waterfront. In any case, the real environmental impact of the ship's presence on the Hudson River waterfront should be explored as part of any serious proposal to preserve her there. It is important to note that other maritime heritage initiatives, such as the replicated Hudson River sloop *Clearwater*, have served as highly effective tools for improving environmental quality by helping to engage the public with the waterfront. And, as international environmental and labor rights advocates continue to lobby for improved regulation of the world's shipbreaking industry, the adaptive reuse of the *United States* could serve as a model for a more responsible means of dealing with superannuated vessels.

Identifying Potential Sites in New York Harbor

A permanent home for the ss *United States* in New York Harbor requires a location where adequate shoreline features (i.e., ownership, current use and a large enough docking facility) exist adjacent to water of adequate depth (a minimum of 30 feet). Even in a harbor as commodious as New York's, these requirements limit the list of possible locations to a small handful. As part of this thesis, a GIS survey of shoreline and harbor depth conditions in Brooklyn and Manhattan identified a shortlist of suitable locations. Considering factors such as ownership, current use, land use regulations, potential impact on existing maritime heritage resources in the region such as the USS *Intrepid*, proximity to transit connections and other tourist attractions and the curatorial value of proximity to the ship's historic home at Pier 86 North River, these

ABOVE: The proposed covered expressway known as Westway elicited strong public opposition leading to the project's abandonment in the 1980s.

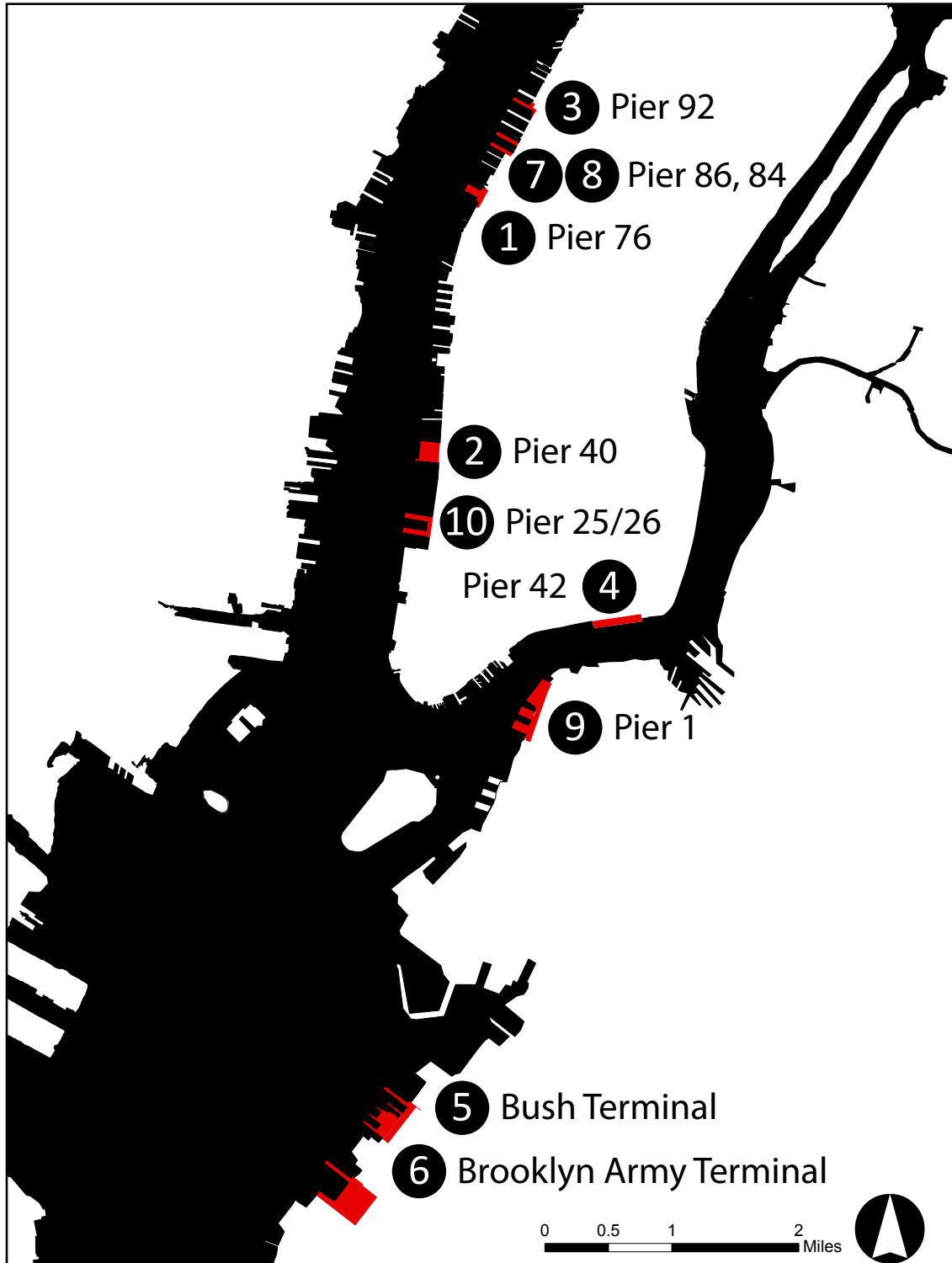
BELOW: GIS survey identifying potential sites in New York Harbor.



sites are described here in order of preferential hierarchy.

Several of these sites are large, government-owned, post-industrial waterfront facilities with limited or no public access that have been underutilized for decades as reuse proposals for them have proven problematic. Some, such as Pier 40 North River, have fraught histories of failed reuse proposals that have made them targets for intense public scrutiny. In this context, the ss *United States* constitutes a solution to the problem of how to reuse these troubled sites as much the sites offer a solution for where to put the *United States*. Bringing together the ship and the site solves two problems at once.

BELOW: Potential sites for the preservation of the ss *United States* in New York Harbor.



1 Pier 76

PRO

- Improved public access to waterfront
- Adequate depth of harbor
- Historic link to United States Lines
- Close Proximity to pier used by ss *United States* historically
- Putting ship here would not block existing river views
- Adjacent to Javits Convention Center
- Good view of ship

CON

- Displacement of tow pound
- Potential opposition from NYPD
- Army Corps of Engineers pier line restriction may require removal of westernmost part of pier to locate the ship here and would require ship to be moored parallel to shoreline
- Commercial tenants restricted to 30 year lease; ss *United States* could be exempt because of National Register listing

1) Pier 76 North River / Hudson River Park (Map p. 95)

Owner: New York City Economic Development Corporation

Status: NYPD Impound Lot & Stable for Mounted Unit; HR Park Act requires City to make “best efforts” to relocate tow pound and convey the pier to HR Park Trust for 50% open space.

Community Board: 4 / Manhattan

Pier 76 tops the list of potential mooring locations for the ss *United States* for a variety of reasons. It is within sight of the pier used historically by the *United States*, and was itself used by the United States Lines, making it part of the landscape to which these ships once belonged. On a practical level, it has the advantage of being immediately adjacent to the Jacob Javits Convention Center, which provides an opportunity for the ship to tie programmatically to its neighbor. The proximity of the Javits Center ostensibly increases the viability of a hotel or event space program aboard the ship. As waterfront sites go, it is relatively close to the city’s established center of tourism, and the MTA’s forthcoming extension of the no. 7 subway line will improve the site’s proximity to transit infrastructure. The presence of the Javits Center, which stretches some 1,000 feet across five blocks from 34th to 39th Streets, means that bringing the ship here would not block existing view corridors – a mandate of the Hudson River Park Act.

Most importantly, bringing the ship here would improve one of the last undeveloped reaches of the Hudson River Park, presently a “dead zone” in the Park’s mission to revitalize the Hudson River waterfront. The ship could be the centerpiece of an initiative to redevelop Pier 76, which is presently occupied by an impound lot for towed vehicles. Though the tow pound brings significant revenue to the city, the Hudson River Park Act of 1998 requires its removal from the waterfront.⁹ The Act calls for the pier to be redeveloped such that half of the space is reserved for a public park, and the other half made available for commercial redevelopment to support the park’s stewardship. Various options for relocating the tow pound include incorporating it into the proposed new construction atop the adjacent West Side Rail Yard, or dispersing it among several smaller lots throughout the city.¹⁰

BELOW: Existing conditions (left) and proposed plan (right) for Pier 76. The pier could accommodate a boathouse, kayak launch, marina, comfort station, space for active and passive recreation and a welcome center with commercial programs housed aboard the ss *United States*.

OPPOSITE: Plan and section showing possible mooring arrangement at Pier 76, North River.

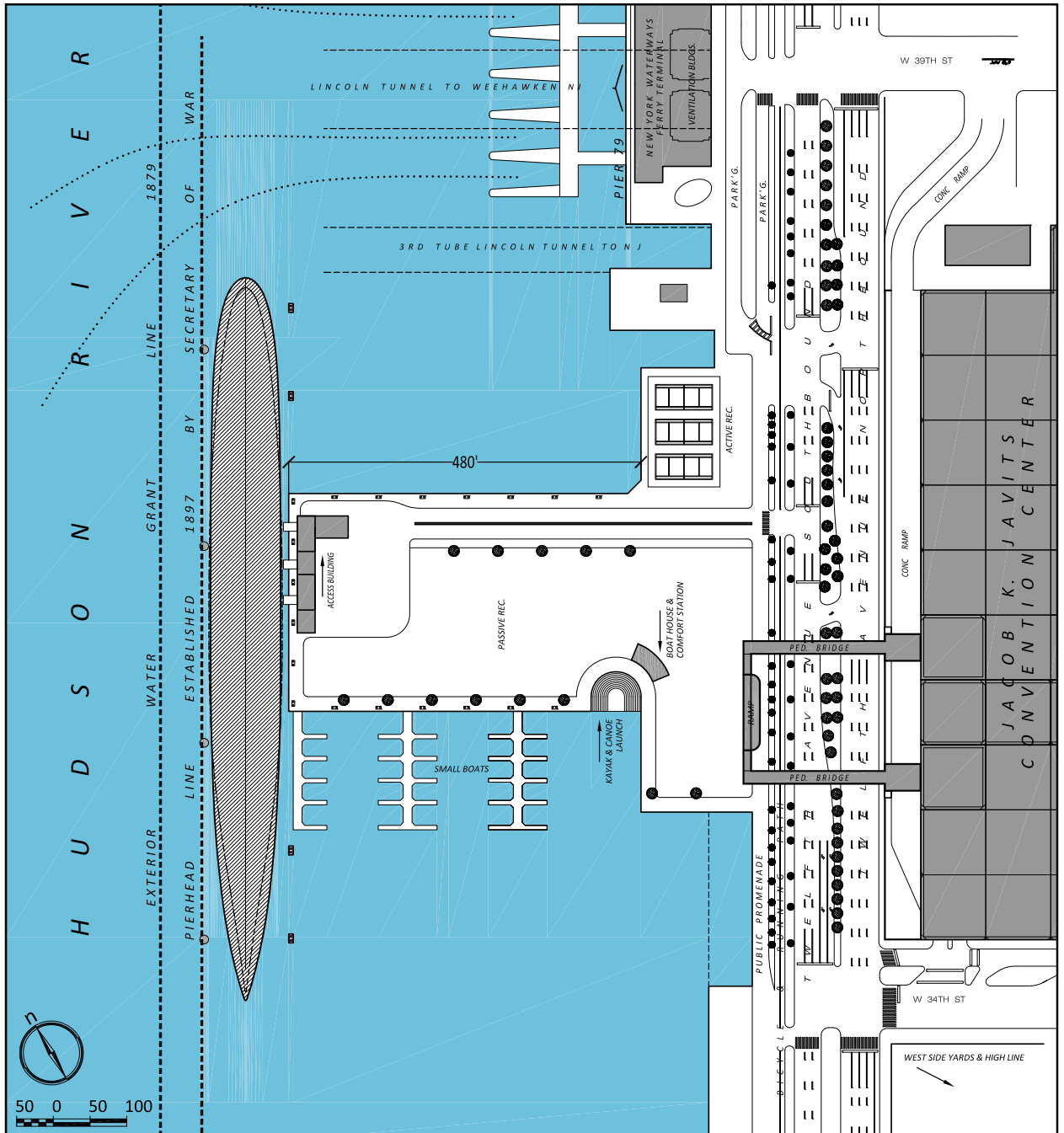


HUDSON RIVER

PIER 76 / HUDSON RIVER PARK

12th AVENUE

JACOB K. JAVITS CONVENTION CENTER



T. RINALDI



ABOVE / TOP: Existing conditions at Pier 76 allow public access only to retrieve towed vehicles.

ABOVE / BOTTOM: Friends of Hudson River Park proposal for combined waste transfer station at Pier 76 with rooftop public park.

OPPOSITE: Pier 40, North River, in its initial role as a terminal for transatlantic steamships (above left); Possible mooring arrangement for the ss *United States* at Pier 40, North River (above right & below).

The area adjacent to Pier 76 has experienced a recent influx of new residents as high-rise apartment towers have appeared in the vicinity of Eleventh Avenue and West 42nd Street. To the south of the Javits Center, an enormous redevelopment proposal is slated for the space above the West Side Rail Yard. Advocates for the preservation of the ss *United States* at this location could work to make partnerships with the forces driving the development of this area – both public and private sector. The ship and the pier could serve as a civic amenity for the influx of new residents in the adjacent neighborhood.

Chief among the drawbacks to bringing the ship to Pier 76 are the physical limitations of the site. The Army Corps Pierhead Line, a hard-and-fast theoretical boundary beyond which no permanent structures may protrude into the navigable waters of the Hudson River, would require the ship to be moored parallel rather than perpendicular to the shoreline at this location as the existing pier is only 600 feet in length. However, owing to the adjacent Javits Center, this is one of perhaps only two locations along the Hudson River shoreline below 59th Street where such an arrangement would not block crosstown view corridors toward the river. The ship can be positioned at the end of the pier such that its steel hull is not brought up against the running and bicycle path along Twelfth Avenue, allowing moments of visual interest from the Route 9A corridor. This arrangement may require the removal of the outermost 100 feet of the pier, but the reduced footprint of the pier’s existing platform could be seen as a mitigating factor for any potential effect on fish habitat. The ship can even be used to form a breakwater for the installation of a small marina off the pier.

A 2006 scheme for Pier 76 proposed consolidating the Sanitation Department’s West 59th Street and Gansevoort Street into a central facility here, with an elevated rooftop park along the lines of Riverbank State Park further upriver, at a projected cost of as much as \$436 million.¹¹ This proposal has been advanced by the Friends of the Hudson River Park and endorsed by New York State Senator Tom Duane, but has been opposed by the Department of Sanitation.¹² An alternative proposal to moor the ss *United States* at this location could be developed along with a design for new grade-level public space on the pier that could utilize the ship to create a new public amenity on this forlorn stretch of the waterfront without the encumbrance of a waste transfer facility.

2 Pier 40

PRO

- Ship’s NR listing could enable HR Park to grant extended lease for redevelopment of pier
- Adequate depth of harbor
- Historic link to ships
- Putting ship here would not block existing river views
- Proximity to tourist & residential center

CON

- Commercial tenants currently restricted to 35 year lease
- History of controversial redevelopment proposals that have divided sentiment in the community
- Pier may require extensive structural improvements before vessel can be moored here

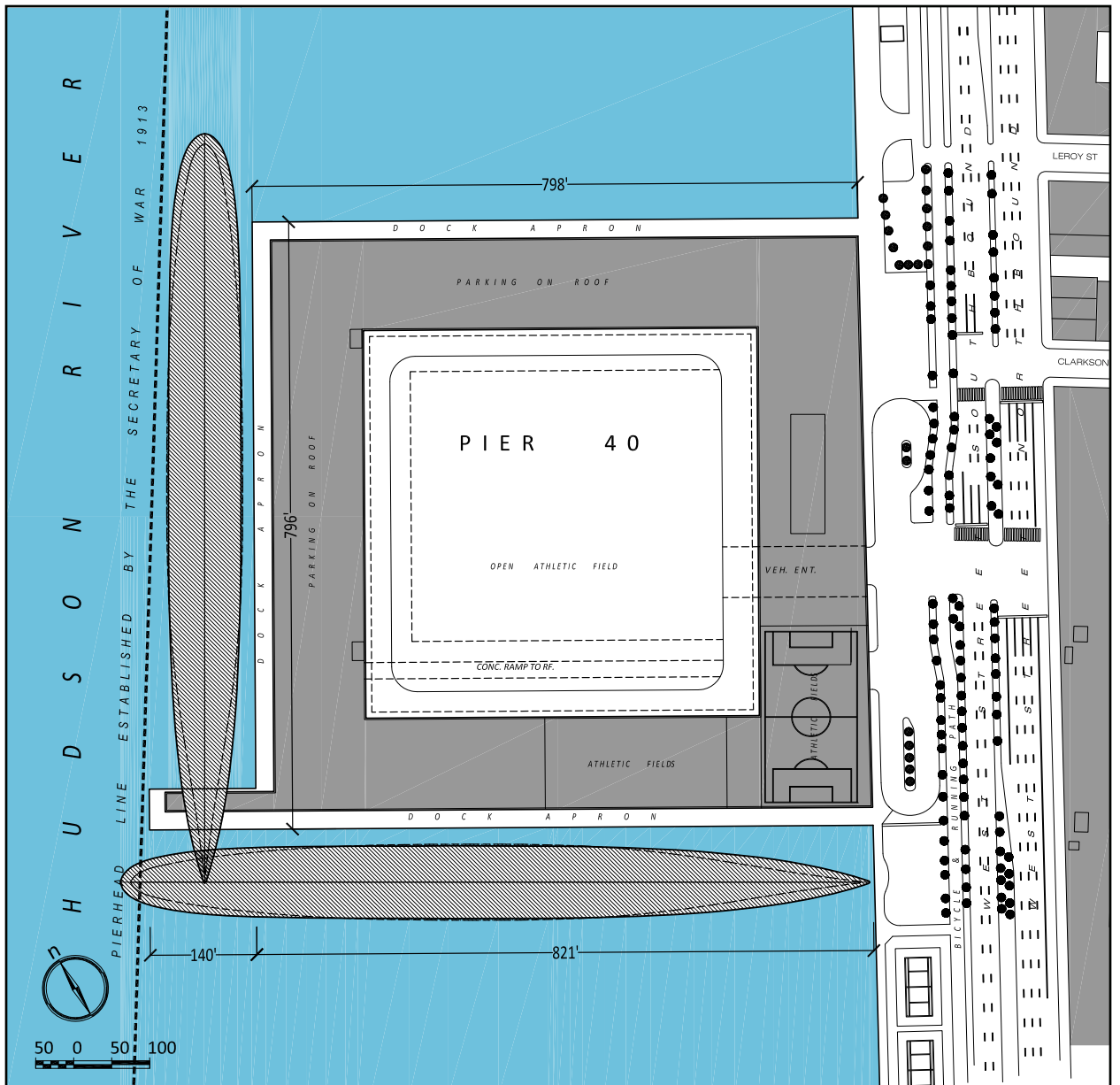
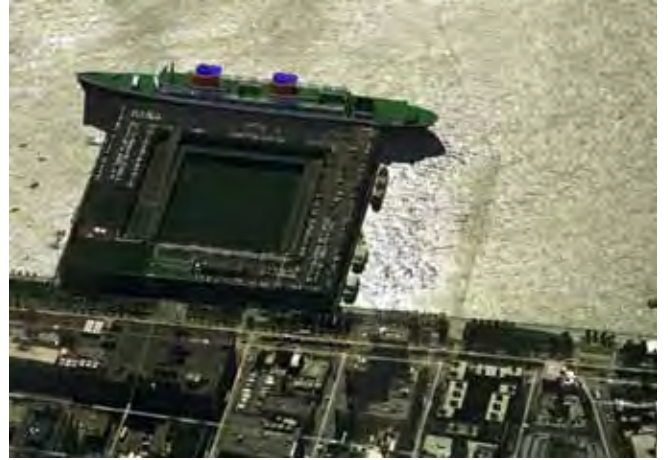
2) Pier 40 North River / Hudson River Park (Map p. 97)

Owner: Port Authority of New York & New Jersey / Hudson River Park

Status: Athletic fields, HR Park Admin, Long Term Parking; Slated for redevelopment with 50% of site available for commercial uses to support HR Park, but lack of consensus on what this should be. HR Park and Community both strongly favor keeping long-term parking in any reuse program.

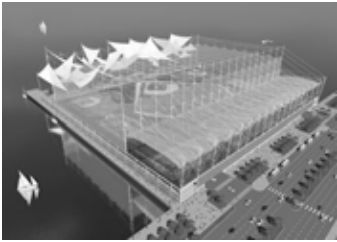
Community Board: 2 / Manhattan

The problem of what to do with Pier 40 has plagued planners of the Hudson River Park since the park’s inception more than ten years ago. Like Pier 76, the Hudson River Park Act has slated this facility to be redeveloped with half of its area given over to park uses and the other half for commercial development. Yet perhaps more than any other location in the park, developers, neighbors and planners have not been able to come to a consensus for what should be done with this facility. Though appropriated for public access with the installation of athletic fields on a provisional basis, in recent years parts of the Pier have been closed to the public as the structure has begun to decay



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A Strategy to Preserve the ss *United States*



ABOVE: Various failed proposals for the redevelopment of Pier 40.

precipitously. The Pier's main program has been a long term parking garage, in which capacity it generates as much as \$7.5 million annually – about half the operating budget for the Hudson River Park, making this use very popular with both the community and the Hudson River Park Trust.¹³

With strong links to the area's historic cultural landscape, the ss *United States* could resolve the question of what to do with Pier 40. Because of the existing bulk of the pier, bringing the ship here would have a minimal impact on views toward the river at this location. The Army Corps Pierhead Line is offset approximately 120 feet from the western edge of the pier, leaving ample room for the ship to be moored here with minimal alterations to the existing 14-acre platform of the structure. (A perpendicular mooring arrangement along the south side of the pier would leave the ship projecting about thirty feet beyond the Pierhead Line.) The pier has a direct historic connection to transatlantic ocean liners, having been built in 1962 as a terminal for both freight and transatlantic passenger ships of the Holland America Line (tile mosaics in its lobby still attest to this). Using the *United States* to accommodate the commercial program allocated for the pier could free up additional space on the pier itself for park uses. As at Pier 76, the ship could be moored here to serve as a breakwater for a small marina.

While the Hudson River Park Act currently limits commercial leases at this facility to 30 years, the ship's listing on the National Register of Historic Places could justify allowing a longer lease to enable a developer to take advantage of tax credits, as was provided for by a special act of the State Legislature for the redevelopment of Pier 57, also a National Register-listed property (Pier 40 is not listed and has not been determined an eligible structure).¹⁴ The 30 year cap on leases proved a major sticking point in at least one of several redevelopment proposals for Pier 40, when the Related Companies, L.P. dropped a plan to build a \$625 million dollar cultural center on the pier. The proposal, submitted in response to a 2006 RFP issued by the Hudson River Park Trust, was dubbed "Vegas-on-Hudson" by opponents, and galvanized significant antipathy in the neighboring residential community, which helped stifle the possibility of legislation to offer an extended lease.¹⁵ In opposition to the Related proposal, a friends group called the Pier 40 Partnership formed to work with the Friends of the Hudson River Park to develop a alternate \$430 million proposal that would redevelop the pier for a day camp, athletic fields and school, but this plan was dropped in 2008 after failing to convince the Trust that the proposal was financially viable.¹⁶ The Trust reportedly resolved at that time to lobby for legislation allowing it to offer longer leases on the structure.¹⁷

In the meantime, the Hudson River Park Trust has reportedly considered or been approached with proposals to use the pier for warehousing facilities, a FedEx distribution center, a datacenter for digital data storage, retail development including a Fairway supermarket, public schools, an aquarium, residential development, and an enormous Ferris wheel styled after the London Eye.¹⁸ Some of these proposals would require changes to allowable land uses under the Hudson River Park Act, but the Trust has reportedly not ruled out pursuing changes to the Act if necessary to achieve a workable redevelopment plan for the pier.¹⁹ While the pier's deteriorating condition and fraught history are both challenges to a proposal to bring the ss *United States* here, by the same token the ship could solve the park's dilemma over what to do with this problematic site, and serve as the keystone of a proposal that would also address the pier's ailing structural condition.

3) Pier 92 North River / NY Passenger Ship Terminal (Map p. 100)

Owner: New York City Economic Development Corporation

Status: In April 2008, EDC chose Vornado Realty to redevelop Piers 92 & 94 for 355,000 sq. ft. convention center. EDC, CB4 & the local Longshoremen’s Union have expressed a desire to keep Pier 92 open for cruise ship berthing, but a study could determine that doing so is neither likely nor feasible.

Community Board: 4 / Manhattan

Pier 92 presents another opportunity to use the *United States* to improve the character and use of the waterfront by creating a new public amenity there. This pier is within site of the ship’s historic mooring place at Pier 86. It has a direct link with the history of passenger shipping in New York harbor, having been constructed along with Piers 88 and 90 in 1935-36 as part of the city’s transatlantic steamship terminal and redeveloped as part of the city’s Passenger Ship Terminal in the early 1970s. Since modern cruise ships have grown even larger than the transatlantic liners for which this facility was built, the city’s Economic Development Corporation recently upgraded Piers 88 and 90 to better accommodate newer vessels. Pier 92 meanwhile has been dedicated along with Pier 94 as part of a tradeshow facility known as the UnConvention Center, but remains available as a reserve berth to accommodate overflow from the adjacent Passenger Ship Terminal.

While the Passenger Ship Terminal and UnConvention Center are vibrant places when ships are in port or when tradeshow are in progress, this area remains a “vacuous stretch” of the waterfront at other times, with no accommodation for public use apart from the narrow recreation path that parallels Route 9A.²⁰ Bringing the ss *United States* here could make improved use of this part of the shoreline. Pier 92 is not considered part of the Hudson River Park, freeing it of the land use restrictions that could prevent programming the ship with a hotel at other locations. The proximity of the UnConvention Center and the Passenger Ship Terminal could help support a hotel or other program aboard the ss *United States* when those facilities are active, and create an attraction to an otherwise lifeless part of the waterfront when they are not.

The downside of bringing the ship to this location is that the local longshoremen’s union has expressed a strong preference for Pier 92 to remain in use as part of the Passenger Ship Terminal.²¹ Taking the facility offline in order to serve as permanent home for the ss *United States* could thus alienate a potential ally in the effort to preserve the ship. Further consideration could shed more light on the likelihood of this facility to remain an active part of the Passenger Ship Terminal. Another less than ideal condition at this location is the lack of visibility of the ship were she to be moored here. An elevated vehicular ramp structure and the pier itself mean that the ship would not block existing river views, but they would also mitigate its potential to serve as an aesthetic enhancement of the waterfront.

3 Pier 92

PRO

- Ship could improve character of waterfront with year-round destination
- Adequate depth of harbor
- Historic link to transatlantic liners
- Putting ship here would not block existing river views
- Proximity to tourist center, Passenger Ship Terminal & convention facility

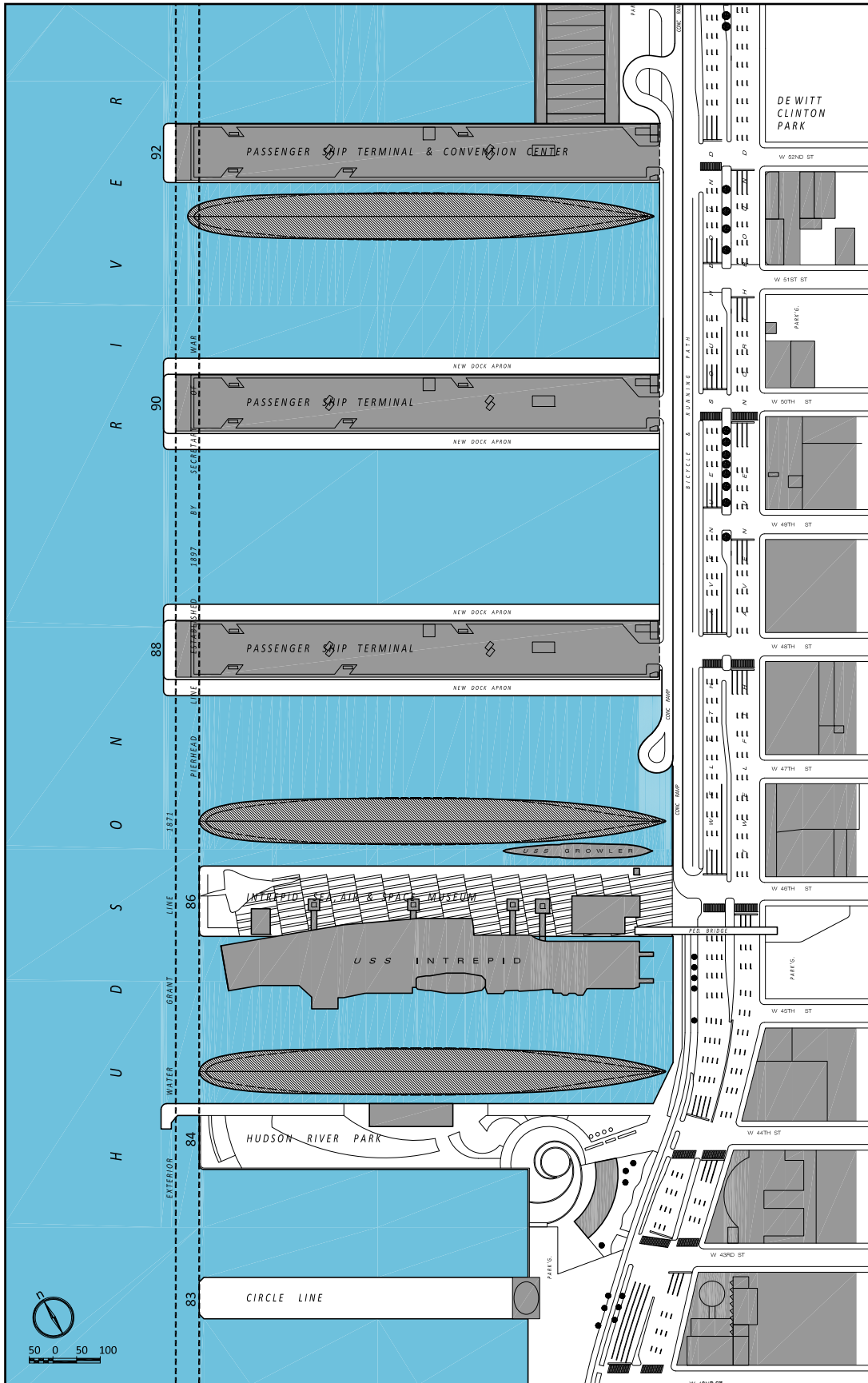
CON

- EDC, Community Board 4 and Longshoremen’s Union have expressed preference to keep this pier available for passenger ships at times of peak demand on the Passenger Ship Terminal
- Adjacent piers would block view of the ship

BELOW: Possible mooring arrangement for the ss *United States* at Pier 92, East River.



A Strategy to Preserve the ss *United States*



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4) Pier 42 East River (Map p. 101)

Owner: New York City Economic Development Corporation

Status: Inactive; Slated for park use as part of \$138 million Lower Manhattan Development Corporation East River Waterfront Plan; Recent PANYNJ proposal for temporary WTC construction staging area halted after community opposition. Proximity to dense residential neighborhood provides opportunity for alternate programming of ship to serve needs of community.

Community Board: 3 / Manhattan

Known also at the “banana pier,” Pier 42 in the East River offers another opportunity for the *ss United States* to serve as a means of improving public access to a currently inaccessible waterfront site. The ship is too high to fit beneath the East River bridges, but could be moved into place with its funnels and mast delivered separately (these may have to be removed during the ship’s restoration in any event). Opened as a newsprint terminal in 1963 and used until the late 1980s to handle banana shipments, the pier stands on a narrow projection of the Manhattan shoreline that also makes up Piers 35 and 36 to the south. Redevelopment proposals are in the works for Piers 35 and 36, but Pier 42 remains underutilized with long range plans to be given over to open space. The *United States* could be moored parallel to the shoreline near the northern extent of the facility, but may project slightly into the Army Corps Pierhead Line.

The New York City Economic Development Corporation has pledged Pier 35 as a new home for “Basketball City,” a “private concern for up-market leagues and special events.”²² In 2005, the Lower Manhattan Development Corporation promised \$138 million to develop a public park at Pier 42, but the proposal has not been advanced. To establish a foothold for improved public access to the waterfront, a coalition of area community groups banded together to form Organizing and Uniting Residents (OUR), and in 2009 held neighborhood workshops to develop a public access redevelopment plan for Piers 35, 36 and 42. Earlier that year the community successfully opposed a proposal by the Port Authority to use the pier as a staging area for construction materials bound for the World Trade Center reconstruction.

Drawbacks of this site include its distance from transit infrastructure and from the city’s tourist center. Depending on how the ship is re-programmed, this

4 Pier 42

PRO

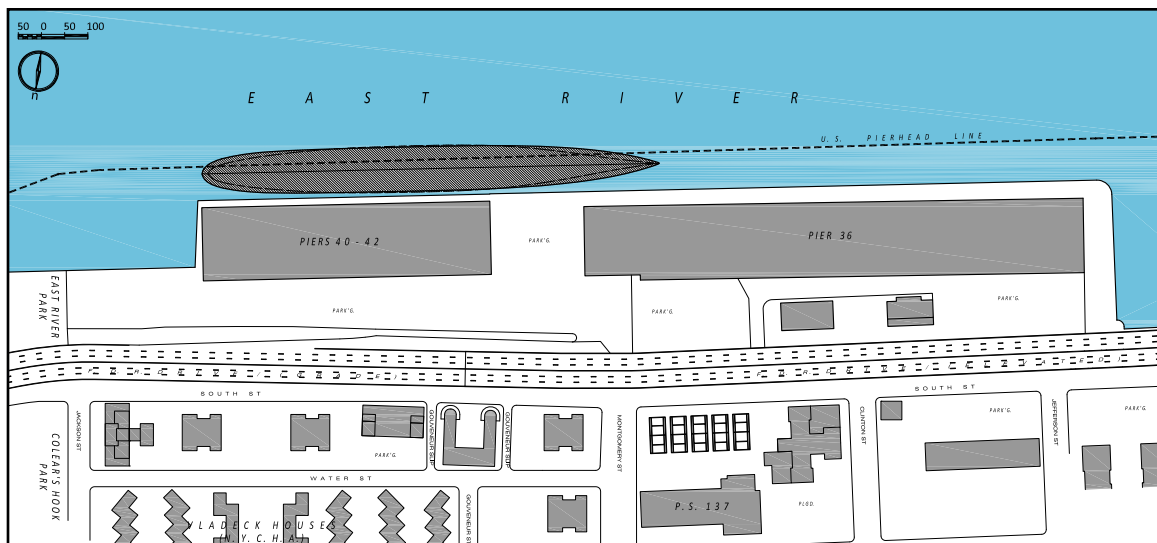
- Improved public access to waterfront
- Adequate depth of harbor
- Putting ship here would not block existing river views
- Less complicated land use restrictions for commercial re-use

CON

- Poor transit connections
- Greater distance from tourist center
- Getting ship under East River bridges would require temporary removal of funnels and radar mast

OPPOSITE: Possible mooring arrangements at Piers 84, 86 or 92, North River.

BELOW: Possible mooring arrangement for the *ss United States* at Pier 42, East River.



BELOW: Possible mooring arrangements at Bush Terminal or Brooklyn Army Terminal.

could significantly challenge the financial viability of its potential to generate revenue to help support its stewardship. While this location has the benefit of being unencumbered by the restrictive legislation of the Hudson River Park, it is also farther removed from the ship's historic context, and the parallel mooring arrangement in relative close proximity to the shoreline bulkhead could elicit community opposition for blocking views toward the river (though views are currently obstructed by the existing piershed). Still, bringing the ship to this location would be a means of improving public access to this stretch of the East River waterfront.

5 6 Bush Terminal & Brooklyn Army Terminal

PRO

- Improved public access to waterfront
- Putting ship here would not block existing river views
- Less complicated land use restrictions for commercial re-use
- Historic link with merchant shipping; used as terminus for Transatlantic ocean liners, early 1930s

CON

- Fewer transit connections
- Isolated location poses challenge to public access and viability of some re-use scenarios (hotel / event space)

5, 6) Bush Terminal & Brooklyn Army Terminal / Brooklyn (Map p. 102)

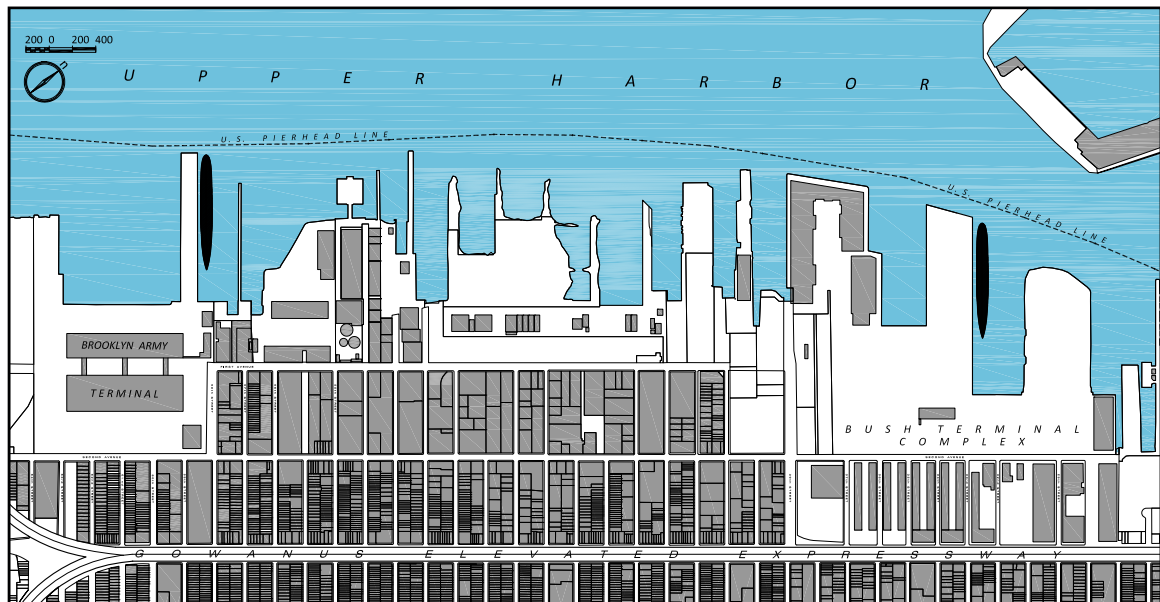
Owner: New York City Economic Development Corporation

Status: Marginally used; Sunset Park Waterfront Vision Plan calls for \$270 million area revitalization "to strengthen area as a center for industrial growth."

Community Board: 7 / Brooklyn

Though somewhat removed from the ship's historic context on the West Side of Manhattan, the Bush Terminal, Brooklyn Army Terminal and the ss *United States* are all prominent relics that evoke the heyday of New York's working waterfront. Today these neighboring facilities offer two of very few piers in the harbor large enough to accommodate the length and draft of the ss *United States*. Presently this stretch of the Brooklyn waterfront offers little in the way of recreational or other public amenities or access to the shoreline. Here again, the ss *United States* could be an opportunity to create a destination that would improve public use of the waterfront.

The drawbacks of this location are its distance from transit infrastructure and the city's tourist center and the city government's vision to stimulate industrial growth along this stretch of the waterfront. It is possible that the ship could be programmed with an appropriate mix of uses that both facilitate public access and achieve consistency with the New York City Economic Development Corporation's Sunset Park Waterfront Vision Plan, a \$270 million planning





agenda that seeks to “strengthen the area as a center for industrial growth.”²³
 (Reuse scenarios for the ship are discussed at greater length below.)

7) Pier 86 North River / Hudson River Park (Map p. 100)

Owner: New York City Economic Development Corporation

Status: Managed by Intrepid SeaAirSpace Museum by special agreement; south side of pier occupied by USS *Intrepid* since 1982, north side of pier partially occupied by USS *Growler*. Pier underwent \$65m government-funded complete reconstruction 2006-2008.

Community Board: 4 / Manhattan

The pier used historically by the ss *United States* in New York is currently home to the Intrepid Sea, Air & Space Museum. The *Intrepid* occupies the south side of Pier 86. The north side of the pier is occupied by the submarine USS *Growler*, but most of its length is unoccupied, and there is room in the slip north of the pier to accommodate both vessels. Though Pier 86 is the best place for the *United States* from a curatorial standpoint and one of the few piers in New York Harbor large enough to accommodate the ship, the pier’s current dedicated use limits its ability to host revenue-generating programs onboard a re-purposed *United States*. Any scenario that brings the *United States* to New York would need to take into account the impact of the ship’s reuse on the USS *Intrepid* museum, and devise its program in such a way as to complement rather than compete with the existing uses aboard the *Intrepid*.

In theory, a program could be developed for the *United States* to be restored as an extension of the *Intrepid* museum, but this would essentially entail doubling the size of the museum, and require a significant reformulation of its operating structure and mission. Neither of these are initiatives the Intrepid Museum Foundation would undertake without a guaranteed long-term endowment to support the expansion and a feasibility study that assured that whatever new program is developed for the *United States* would be complementary to the established uses aboard the *Intrepid*. Even with an endowment in place, taking over the ss *United States* would require a significant shift for the museum and its mission to maintain and interpret the USS *Intrepid* as an educational and cultural resource whose significance as a naval warship is fundamentally different from that of the *United States*.

7 Pier 86

PRO

- Adequate depth of harbor
- This is the ship’s historic New York home
- Will have minimal impact on existing views of the river and the USS *Intrepid*

CON

- Potential impact on Intrepid Sea Air & Space Museum could require changes to museum’s mission
- Could require redesign of recently reconstructed pier
- Little available space for shore-side facilities to support commercial component on ship

ABOVE: The Brooklyn Army Terminal (left) and Bush Terminal (right) both have large enough facilities to accommodate the ss *United States*.

If these issues could be resolved, Pier 86 could make an excellent home for the ship. Its proximity to the Passenger Ship Terminal and relative proximity to the Jacob Javits Convention Center could help increase the viability of a commercial component for its reuse. While a reuse program including an event space aboard the ss *United States* could compete with similar programming aboard the *Intrepid*, the largest of the spaces available for such use on the *United States* are still less than half the square footage of the *Intrepid's* 17,000 square foot main event hall, which limits the extent to which the *United States* would compete with the *Intrepid's* share of this market. Positioning the *United States* at the north side of Pier 86 would not block the view of the *Intrepid* from the south, though by the same token this is less desirable as it limits the potential of the *United States* to enhance the aesthetic character of the waterfront (the view from the north is already substantially obstructed by the Passenger Ship Terminal). The chief obstacle to any proposal to bring the *United States* to Pier 86 is the need to devise a program that would make the proposal compatible with the *Intrepid* museum as the occupant of this site for the past three decades.

8) Pier 84 North River / Hudson River Park (Map p. 100)

Owner: New York City Economic Development Corporation

Status: Managed by Hudson River Park Trust. Reopened in 2006 after complete reconstruction and re-design. Facilities include boathouse, classroom and interpretive center, comfort station and interactive water play area. A proposal by the *Intrepid* Sea-Air-Space museum to move the USS *Guadalcanal* to this site in the mid-1990s as a floating helipad sparked the formation of a group called "Friends of Pier 84" which successfully defeated the proposal.

Community Board: 4 / Manhattan

For its immediate proximity to the pier used historically by the ss *United States*, Pier 84 is an ideal location for the ship from a curatorial standpoint. While this pier remained a blank canvas for reuse many years after its role as a passenger ship facility was consolidated into the redeveloped Passenger Ship Terminal at Piers 88-92 in 1974, the structure's multi-million dollar reconstruction as part of the Hudson River Park in 2006 means that bringing the ship to this location would not improve public access to this part of the waterfront. A mid-1990s proposal advanced by the *Intrepid* Museum Foundation to bring the helicopter carrier USS *Guadalcanal* (built 1963, 19,395 tons, 602 feet l.o.a.) to Pier 84 for use as a consolidated heliport facility elicited staunch community opposition.²⁴ Though the proposal won the initial support of then Mayor Rudolph Giuliani, opponents feared the plan would block river views and inhibit public access to the only public pier on the Clinton waterfront, and organized a group called the Friends of Pier 84. The friends group successfully lobbied against the plan, suggesting Pier 76 as a more suitable alternate location. In 2006, the Hudson River Park Trust oversaw the pier's complete reconstruction as an extension of the park. (Ultimately the *Intrepid* museum did not pursue the heliport; the *Guadalcanal* was sunk for target practice in 2005.)

Though physically feasible and curatorially appropriate, the precedent of community opposition for a similar proposal, the potential opposition of the *Intrepid* museum on the basis that bringing the *United States* to this location would block views toward the aircraft carrier, and the recent expenditure of millions of dollars to redevelop this pier as a public park severely limit the apparent potential of this as a politically palatable site for the preservation of the ss *United States*.

8 Pier 84

- Adequate depth of harbor
- This is immediately adjacent to the ship's historic New York home
- Good view of ship

- Could require redesign of recently reconstructed pier
- Will block view of USS *Intrepid* from south
- Similar proposal for same pier prompted vehement public opposition

9) Pier 1 / Brooklyn Bridge Park (Map p. 105)

Owner: Empire State Development Corporation / Brooklyn Bridge Park Development Corporation

Status: Opened as part of Brooklyn Bridge Park, April 2010; Memorandum of Understanding with New York City provides for inclusion of “compatible uses” to make Park financially “self sufficient,” but lack of consensus on what this should be.

Community Board: 2 / Brooklyn

Preserving the ss *United States* at Pier 1 in Brooklyn would make the ship a spectacular addition to one of the most dramatic cityscapes in New York Harbor, with the Brooklyn Bridge and lower Manhattan skyline to serve as a backdrop. Like Pier 84 however, this facility has recently been completely redeveloped for use as a public park, which opened as part of the Brooklyn Bridge Park in the early spring of 2010. The configuration of the pier and the Army Corps Pierhead Line would require mooring the ship parallel to the shoreline. While the steep change in elevation to the east of the pier would allow such an arrangement to be implemented without blocking views toward lower Manhattan from the Brooklyn Bridge Promenade, it would almost completely block this dramatic view from the newly developed park, which would likely not win favor among the park’s users or administration.²⁵ No other pier at the Brooklyn Bridge Park is large enough to accommodate the ship. Since the pier has already been opened as a public park, bringing the ship here would not be a means of improving access to the waterfront. This together with its impact on views from the park severely limit the potential of this site as the ship’s permanent mooring place.

9 Pier 1

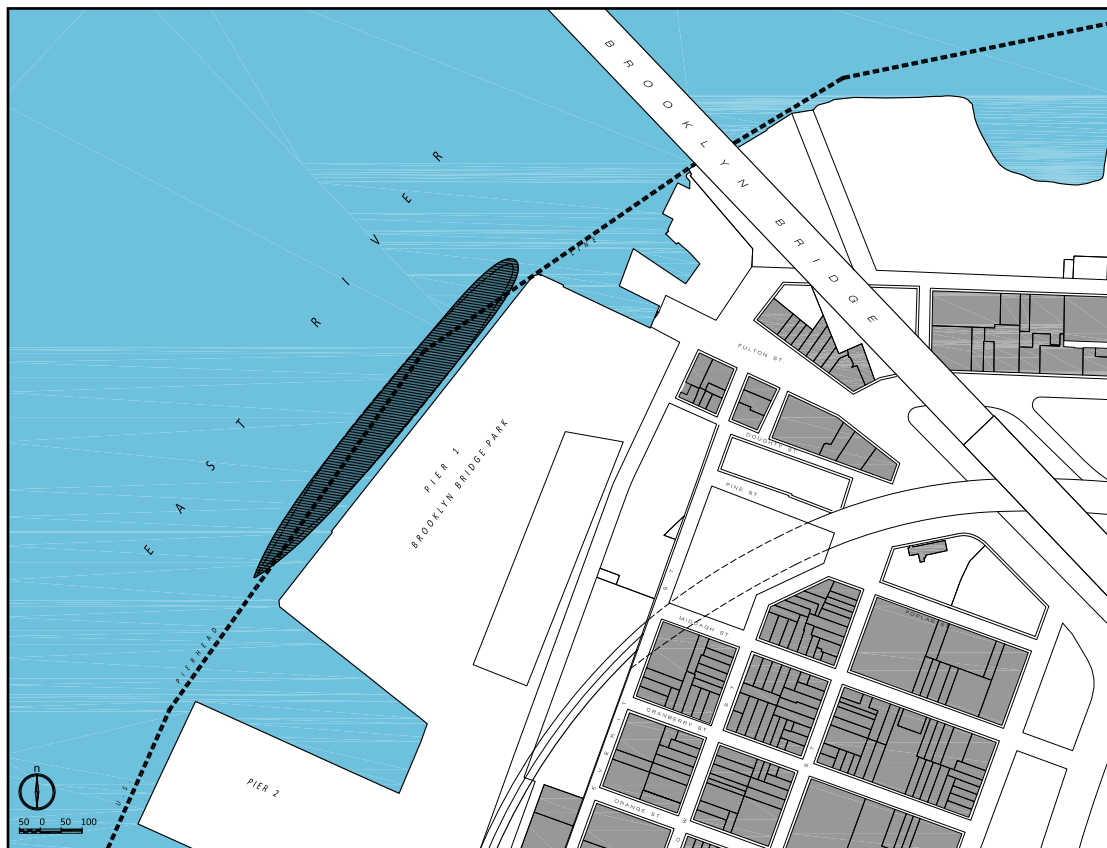
PRO

- Adequate depth of harbor
- Proximity to tourist & residential center
- Putting ship here would not block existing river views from Brooklyn Heights Promenade

CON

- Putting ship here would block river view from new park on Pier 1
- Could require redesign of recently reconstructed pier

BELOW: Possible mooring arrangement for the ss *United States* at Pier 1, Brooklyn.



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10 Piers 25-26

PRO

- Proximity to educational institutions provides opportunity for alternate program such as school or student housing
- Proximity to tourist, business & residential centers
- Perpendicular mooring arrangement would have minimal impact on view corridors

CON

- Would require redesign of recently constructed park pier
- Could require extensive dredging which is generally prohibited at Hudson River Park
- Would require special legislation to permit commercial program aboard ship

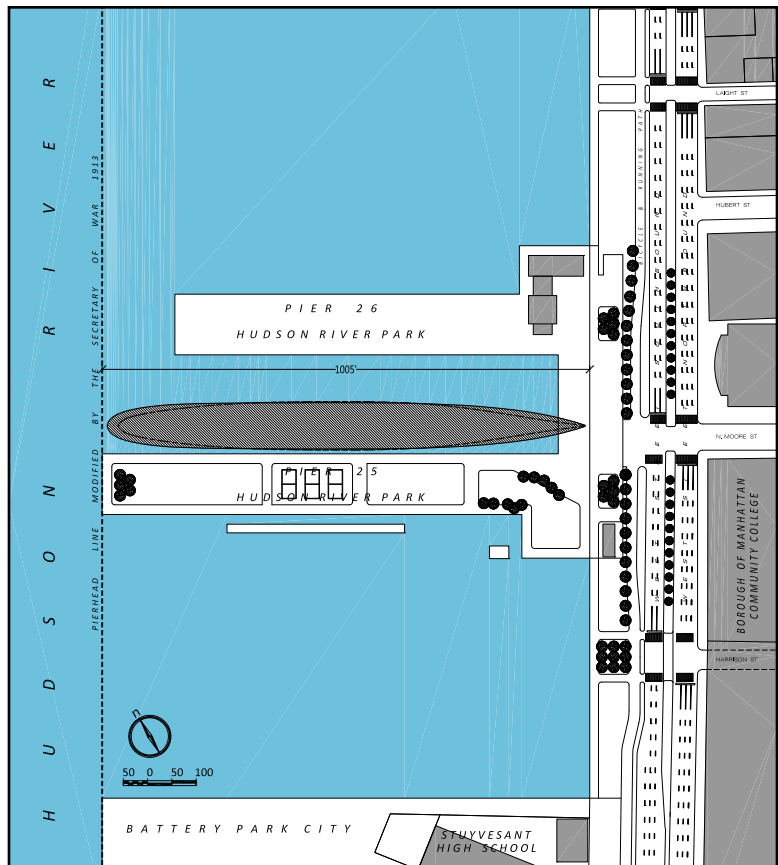
10) Piers 25-26 North River / Hudson River Park (Map p. 106)

Owner: Port Authority of New York & New Jersey / Hudson River Park

Status: Completely reconstructed as part of \$70 million upgrade of Tribeca section of Hudson River Park funded by the Lower Manhattan Development Corporation. New programming includes miniature golf course, volley ball courts, playground, open space and mooring places for historic vessels.

Community Board: 1 / Manhattan

Piers 25 and 26, immediately above the projecting landfill of Battery Park City, are scheduled to re-open to the public in 2010 as part a \$70 million project to develop the Tribeca section of the Hudson River Park. Both of these piers are long enough to accommodate the ss *United States*. They have the advantage of being relatively close to the ship's historic spatial context, and to existing transit infrastructures, tourist and business centers. The ship could be moored here perpendicular to the shoreline, minimizing its impact on existing views toward the river. Its programming could be coordinated with adjacent educational facilities, such as Stuyvesant High School or the Borough of Manhattan Community College. However, since these piers are already programmed for public access, bringing the ship here would not capitalize on the ship's potential to improve access to the waterfront as it would at sites such as Pier 76 or the Brooklyn Army Terminal. Extensive silt accumulation at these piers could further complicate matters by requiring significant dredging to bring the ship to this location, adding another hurdle to the regulatory process at this site.²⁶



RIGHT: Possible mooring arrangement at Pier 25, North River.

Other Appropriate Sites

It is the position of this thesis that the various curatorial and practical reasons for bringing the ship to New York far outweigh the obstacles for doing so. However, by the same token, the potential of these obstacles to block an effort to install the ship as a stationary feature on the New York waterfront warrants the consideration of alternate scenarios for the vessel's permanent relocation. The same principles that should guide the site selection process in New York harbor can be applied toward the selection of a site in an alternate location.

Philadelphia

Since 1996, the *United States* has been a feature of the Philadelphia waterfront. Even with absolutely no public access allowed, her presence here has engendered significant grassroots interest for her future in the Philadelphia area. This has manifested itself in local involvement in the friends groups dedicated to the vessel's preservation, in sustained interest among local media outlets, and in a 2009 resolution in support of the ship's restoration adopted by the Philadelphia City Council. Although the vessel's weaker historic ties with the port of Philadelphia make this scenario less attractive from a curatorial standpoint, the local interest generated by her presence here justifies consideration of a future for the *United States* on the Philadelphia waterfront.

Philadelphia is not without a historic relationship to the *ss United States* and the history of transatlantic merchant shipping. Before migrating to Halifax, Samuel Cunard's family had settled at Philadelphia in the eighteenth century. The American Line, predecessor to the United States Lines, was based at Philadelphia. The company built its vessels *St. Louis* and *St. Paul* at the Philadelphia Shipyard of William Cramp & Sons. The United States Lines' vessels *Manhattan* and *Washington* were built on the Delaware River at nearby Camden, New Jersey. Perhaps most significantly, William Francis Gibbs, the ship's naval architect, was a Philadelphia native. He was present at the launch of the *St. Louis* in 1894, and accepted the Franklin Medal at a ceremony there in 1953. The city's maritime heritage is celebrated by the presence of the Independence Seaport Museum which is home to a small collection of historic vessels, and the USS *New Jersey* in nearby Camden, New Jersey.

Presently, the City of Philadelphia is in the process of planning for the redevelopment of a seven-mile stretch of its Delaware River waterfront, with the idea of improving public access to areas that remain in an underutilized, post-industrial state. To the south of the downtown area, the Philadelphia Naval Shipyard is in the process of a large scale redevelopment including space for office, retail and residential uses in underutilized historic buildings, with other areas earmarked for extensive new construction. In 2009, the Delaware River Waterfront Corporation commissioned the New York firm of Cooper, Robertson to create a master plan for the city's waterfront redevelopment scheme.²⁷ Unlike the Manhattan waterfront, 95% of the area to be covered in the master plan is privately owned. The proposal will build on an early study of the area prepared in 2007 by Wallace Roberts & Todd and Penn Praxis. It will likely seek ways to introduce new residential construction and public space similar in character to some of that in New York's Hudson River Park. Early projects in the area include a proposal for Pier 11 (also called the Race Street Pier), which is slated to open as a public park to designs by James Corner of the New York design firm Field Operations. Further study is required to identify

potential permanent mooring locations for the ss *United States* on the Delaware River waterfront.

Other prospective sites should be considered against the same criteria stated above to ensure that the site can facilitate the economic viability of the ship's reuse program and have some contextual tie with the ship's history. For its proximity to the ship's historic home, the New Jersey shoreline of New York Harbor could satisfy the criteria for curatorial appropriateness but fall short for certain reuse programs. Newport News, Virginia, where the ship was constructed, would similarly make sense for its historic ties for the ship, but here again a financial analysis of the proposed site would ultimately determine the viability of a proposal for her preservation there. This raises a more general question as to whether a more viable strategy is for the liner to be preserved at a large or a small city. Although a large city offers the benefits of high population density to provide the largest possible constituency to support the vessel's ongoing preservation, many large-scale maritime heritage initiatives have succeeded as "small town" initiatives for several reasons. (Noteworthy case studies include the stationary reuse of the RMS *Queen Mary* at Long Beach, California in 1967-71, and the preservation of the USS *Massachusetts* and other vessels at the Battleship Cove Naval Ship Museum at Fall River, Massachusetts in 1965.) In each of these cases, the vessel in question was generally welcomed by the host community as an urban revitalization initiative for an economically distressed, post-industrial port. Robert St. Jacques considered this issue in his October 2000 study of Naval Warship Museums:

Prior to the arrival of the warship [USS *Massachusetts*] in 1965, the downtown area of Fall River, Massachusetts was in a state of decay. The textile mills were closing, downtown was facing stiff competition from suburban malls, and the area was in need of a major renovation. The *Massachusetts* was the first major attempt to stop the decline of the city. . . . This helped change the nature and the morale of the city: instead of urban decay there was a sense of urban pride and the battleship *Massachusetts* became Fall River's ship.²⁸

Thus, whereas such a proposal will likely face significant regulatory hurdles in a city such as New York where the intense demand for waterfront development has prompted public skepticism toward large scale proposals, a smaller community may have a greater interest in helping to facilitate the same initiative, ultimately becoming a more active stakeholder in the vessel's preservation as the ship helps to put the town "on the map." This factor has at times come to the surface in the preservation of the *Queen Mary* at Long Beach, for example when officials discussed the possibility of selling the vessel in 1993. In that episode, "the council, but even more so the city manager, objected vehemently to selling the *Queen Mary* when what the city needed was every tourism asset it could find."²⁹ The *United States* could potentially benefit from such a symbiotic relationship in a smaller city.

USE

As a historic structure unable to serve its intended purpose, the ss *United States* is in no way unique. In New York City alone, from the former industrial lofts of SoHo to the High Line, hundreds of prominent adaptive reuse initiatives have demonstrated the potential of structures to successfully serve a purpose entirely different from that originally intended for them. As with any other historic resource, proposals for the vessel's adaptive reuse should be mindful of the ship's historic significance, and should be developed so as to capitalize on rather than mitigate her unique heritage value. Though the development of a

reuse program will ultimately depend to a certain extent on where the ship is to be permanently moored, some basic principles can be applied universally.

The *United States* is largely unique among merchant ships for having survived to an age at which she can be considered legitimately historic. Though the feasibility of any reuse program must be demonstrated by way of a balanced financial plan, the ship's historic significance should be an important factor in the development of a new use for the space onboard. While one could argue that her heritage value is sufficient to justify preserving the ship solely as a museum or cultural institution as has been done with so many large warships, the enormous costs of restoring and maintaining the vessel require the exploration appropriate revenue-generating uses that could defer if not completely defray these expenses. Any such program should capitalize on the lessons of the various case studies that exist for similar initiatives to accomplish the following goals:

- Capitalize on rather than mitigate, marginalize or trivialize the ship's unique heritage value.
- Consider the needs of the adjacent community to enhance the waterfront and improve the quality of life for the community and the region.
- Incorporate public access to seize on the ship's value as an educational resource and civic amenity.
- Proceed with a mindfulness of the successes and failures of comparable precedents.

These goals suggest that some part of the vessel should be preserved as a museum. The size and focus of the museum component is open to a degree of flexibility, but should be developed so as to achieve the first and third of the goals enumerated above (a maritime or industrial heritage museum would be more appropriate than a natural history museum or a wax museum, for example; the section on Preservation Design explores what spaces and elements on the ship can and should be incorporated into such a museum). The limitations of the dimensions of spaces onboard the ship, the character of those spaces and their context, the necessity of locating the ship at a waterfront location, and other factors effectively rule-out most reuse proposals that could be workable for conventional structures on land. For these reasons, this thesis considers the impracticability of repurposing the ship for such primary uses as permanent rental or cooperative housing, manufacturing or commercial retail to be foregone conclusions.

Apart from a museum element, the vast space aboard the ship (approximately 660,000 square feet) leaves room for various commercial programs. Large naval warships preserved as museums typically leave vast portions of the ship closed to the public and unused. Often, the intuitive solution has been to repurpose former merchant vessels as hotels. Already fitted with cabins and amenities and designed to function as "floating hotels," passenger ships especially have lent themselves to this reuse strategy and there are numerous examples of realized and unrealized initiatives for this scenario on both a permanent and temporary basis. While the interiors of the *ss United States* have been completely gutted and her passenger accommodation no longer

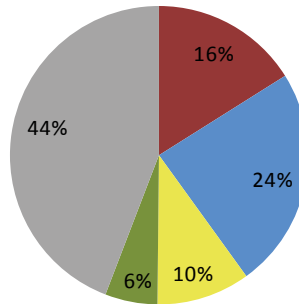
A Strategy to Preserve the ss *United States*

exists, re-programming a significant part of the ship as a hotel and event space is appropriate for several reasons. These uses are consistent with a significant aspect of the vessel's historic role; they can be implemented in a way that honors the ship's original purpose without compromising her physical integrity as a historic structure, and they offer a reasonable potential to generate sufficient financial return to help support the ship's stewardship in perpetuity (though this potential is dependent on where the ship is located).

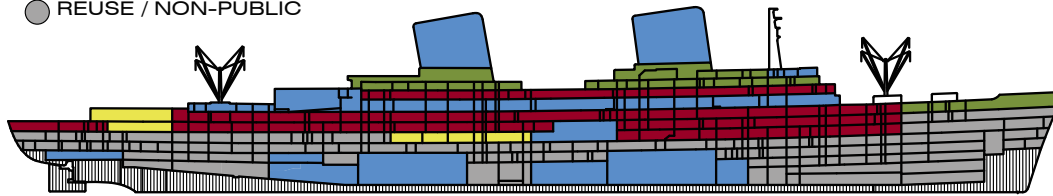
As an appropriate way to generate revenue for the stewardship of the vessel as a historic structure, this issue warrants consideration in the site selection process discussed above. In New York, waterfront land use restrictions prohibit the construction of hotels at several of the locations that are otherwise best suited as permanent moorings for the ship.³⁰ However, the Hudson River Park Trust has considered pursuing selective changes in the legislation to allow for the redevelopment of certain "problem areas" for which multiple RFP processes have failed.³¹ The appropriateness and viability of a reuse scenario involving a hotel component on the ship justify exploring the possibility of gaining special legislative action to facilitate the ship's reuse as a hotel or the consideration of alternate locations where this use can be enacted. A relevant precedent for

BELOW: Schematic proposals for diversified reuse scheme with 250-room hotel and non-public program such as datacenter.

	HOLD	E	D	C	B	A	Main	Upper	Prom.	Sun	Sports	Nav.	TOTALS
Hotel / Accommodation						6,788	28,615	32,526		15,893			83,822
Event / Catering / Museum	29,780		27,036	23,513	8,322	7,896			24,230		1,158	3,069	125,104
Event / Catering / Dedicated						19,871	14,077	10,984	8,010				52,942
Maint / Admin								5,414	506		18,054	5,682	29,654
Re-Use / Non-Public	16,595	9,695	24,475	36,106	60,868	29,805	30,376	17,138		5,360			230,418
	46,375	9,695	51,511	59,619	69,190	64,360	73,068	66,062	32,846	21,253	19,212	8,751	521,942

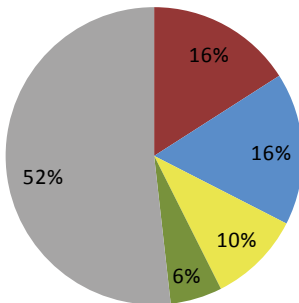


- HOTEL ACCOMMODATION
- EVENT / CATERING / MUSEUM
- EVENT / CATERING / DEDICATED
- MAINT / ADMIN
- REUSE / NON-PUBLIC

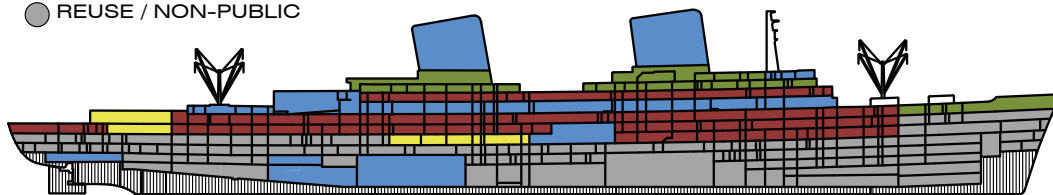


PROPOSED "A"
HOTEL / MUSEUM / NON-PUBLIC

	HOLD	E	D	C	B	A	Main	Upper	Prom.	Sun	Sports	Nav.	TOTALS
Hotel / Accommodation						6,788	28,615	32,526		15,893			83,822
Event / Catering / Museum	12,229		15,302	14,839	8,322	7,896			24,330		1,158	3,069	87,145
Event / Catering / Dedicated						19,871	14,077	10,984	8,010				52,942
Maint / Admin								5,414	506		18,054	5,682	29,654
Re-Use / Non-Public	34,146	9,695	36,209	44,780	64,784	29,805	30,376	17,138		5,360			272,293
	46,375	9,695	51,511	59,619	73,106	64,360	73,068	66,062	32,846	21,253	19,212	8,751	525,858



- HOTEL ACCOMMODATION
- EVENT / CATERING / MUSEUM
- EVENT / CATERING / DEDICATED
- MAINT / ADMIN
- REUSE / NON-PUBLIC



PROPOSED "B"
HOTEL / MUSEUM / NON-PUBLIC
FORWARD ENGINE ROOM RE-USED

study is an unrealized proposal to preserve the former ss *Monterey* of 1932 as a hotel on the San Francisco waterfront in 1999-2000. In this case, though land use ordinances similar to those in place in New York City prohibited waterfront hotels, initial decisions by local authorities found that the restrictions were not applicable in the case of a ship moored on the shoreline, and the initiative enjoyed the support of city officials and the local media.³²

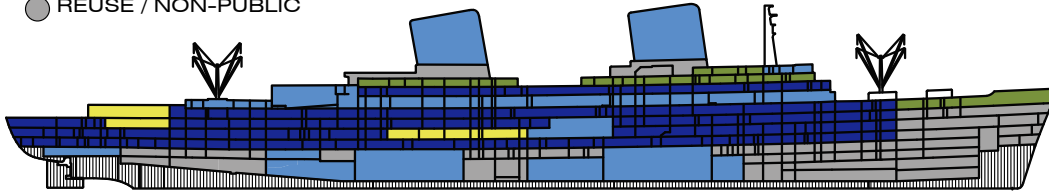
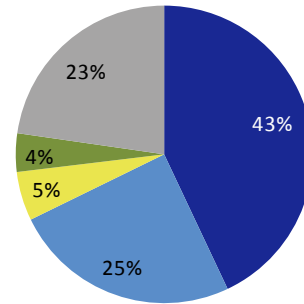
Repurposing the ss *United States* to accommodate an educational facility or student accommodation vessel has also been proposed.³³ Though somewhat less ideal from certain standpoints, the proposal has its merits and could be implemented in accordance with the basic guidelines enumerated above. It could be compatible with a museum housed in part of the ship, and could serve the needs of an adjacent community. In theory, this use is less specifically dependent on location for its viability, though location remains an important consideration. It is noteworthy that this idea is not without precedent in New York. From 1946 until 1986, the city's Board of Education housed its Maritime Trades High School aboard the ss *John W. Brown*, a World War II-era "Liberty Ship." The vessel was maintained at Pier 42 North River, at the foot of Charles Street in Greenwich Village. Across the Hudson River, the Stevens Institute of

OVERLEAF: Keyed plan diagrams showing space usage aboard the ss *United States* as built and as proposed in scheme "A".

BELOW: Schematic proposals for reuse as a student accommodation vessel or artists studio space.

	HOLD	E	D	C	B	A	Main	Upper	Prom.	Sun	Sports	Nav.	TOTALS
Student / Accommodation						67,017	30,308	57,027	54,352		15,893		224,597
Event / Catering / Museum	29,780		27,036	23,513		7,896	6,454	6,296	24,330		1,158	3,069	129,532
Event / Catering / Dedicated						19,871			8,010				27,881
Maint / Admin								5,414	506		10,197	5,682	21,799
Re-Use / Non-Public	16,595	9,695	24,475	36,106	2,772	6,285	9,587			5,360	7,857		118,732
	46,375	9,695	51,511	59,619	69,789	64,360	73,068	66,062	32,846	21,253	19,212	8,751	522,541

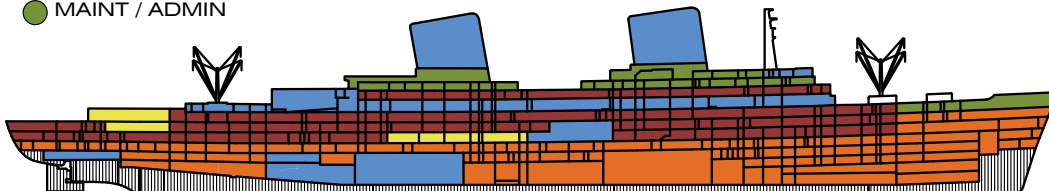
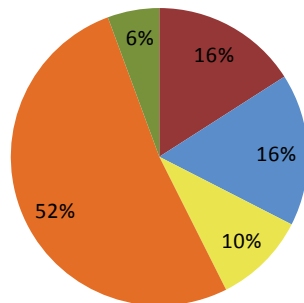
- STUDENT ACCOMMODATION
- EVENT / CATERING / MUSEUM
- EVENT / CATERING / DEDICATED
- MAINT / ADMIN
- REUSE / NON-PUBLIC



PROPOSED "C"
 MUSEUM / DORMITORY /
 NON-PUBLIC

	HOLD	E	D	C	B	A	Main	Upper	Prom.	Sun	Sports	Nav.	TOTALS
Hotel / Accommodation							6,788	28,615	32,526		15,893		83,822
Event / Catering / Museum	12,229		15,302	14,839	8,322	7,896			24,330		1,158	3,069	87,145
Event / Catering / Dedicated						19,871	14,077	10,984	8,010				52,942
Artists Studios / Cultural	34,146	9,695	36,209	44,780	64,784	29,805	30,376	17,138		5,360			272,293
Maint / Admin								5,414	506		18,054	5,682	29,654
	46,375	9,695	51,511	59,619	73,106	64,360	73,068	66,062	32,846	21,253	19,212	8,751	525,898

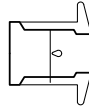
- HOTEL ACCOMMODATION
- EVENT / CATERING / MUSEUM
- EVENT / CATERING / DEDICATED
- CULTURAL / ARTISTS' STUDIOS
- MAINT / ADMIN



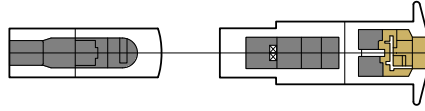
PROPOSED "D"
 MUSEUM / HOTEL / ARTISTS'
 STUDIOS & CULTURAL CENTER

DECK PLANS / AS BUILT

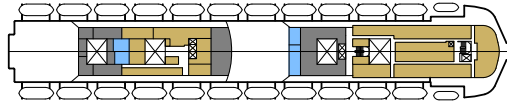
- HOLD
- MECHANICAL
- CREW
- PASSENGER ACCOMMODATION
- PUBLIC ROOMS



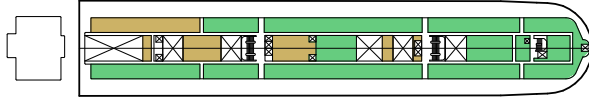
WHEEL HOUSE TOP



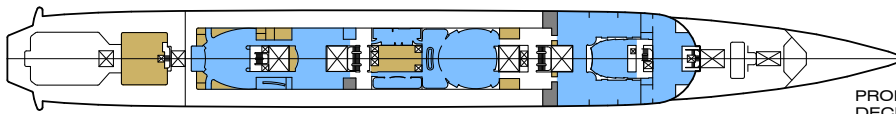
NAV. BRIDGE DECK



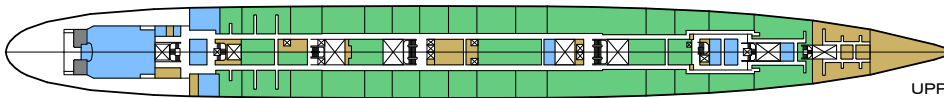
SPORTS DECK



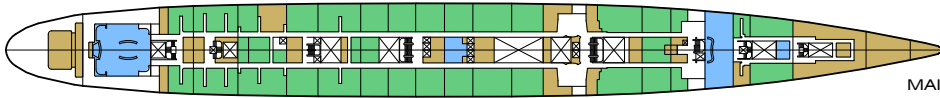
SUN DECK



PROMENADE DECK



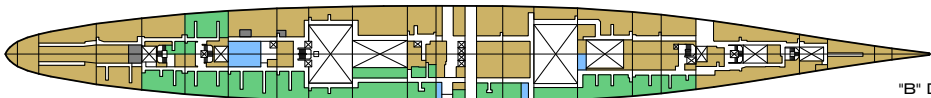
UPPER DECK



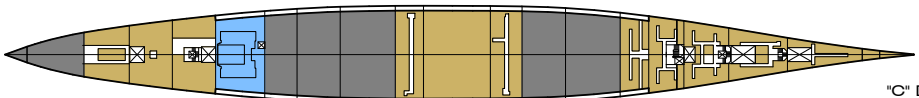
MAIN DECK



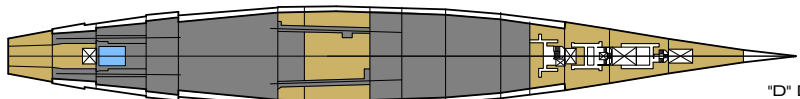
"A" DECK



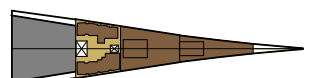
"B" DECK



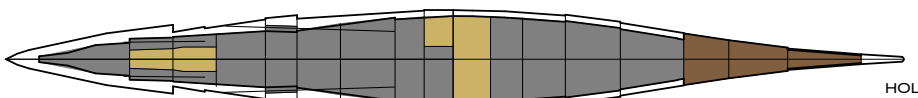
"C" DECK



"D" DECK



"E" DECK

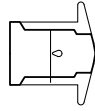


HOLD

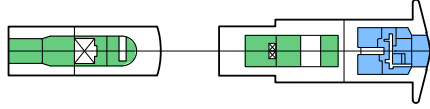
T. RINALDI

DECK PLANS / PROPOSED

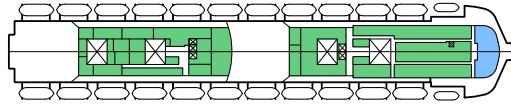
- HOTEL ACCOMMODATION
- EVENT / CATERING / MUSEUM
- EVENT / CATERING / DEDICATED
- MAINT / ADMIN
- REUSE / NON-PUBLIC



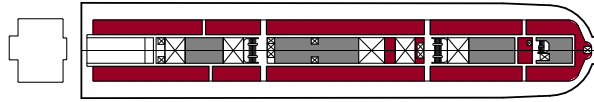
WHEEL HOUSE TOP



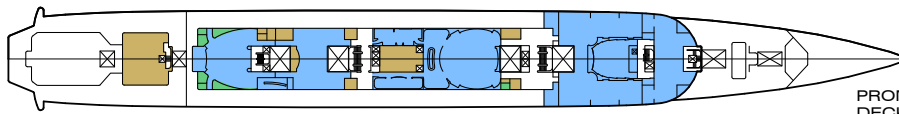
NAV. BRIDGE DECK



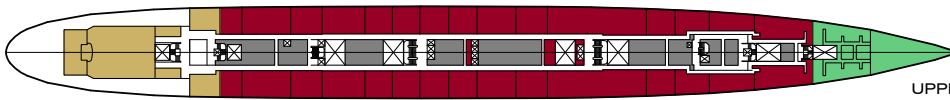
SPORTS DECK



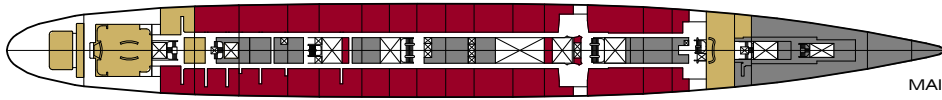
SUN DECK



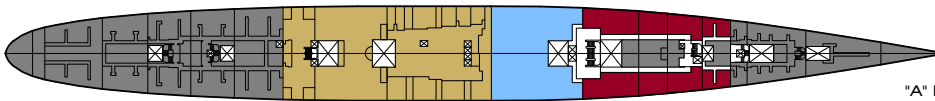
PROMENADE DECK



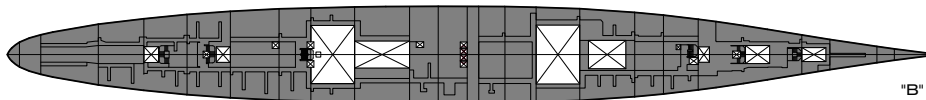
UPPER DECK



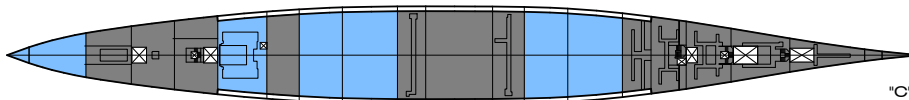
MAIN DECK



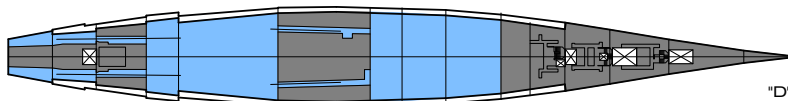
"A" DECK



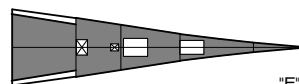
"B" DECK



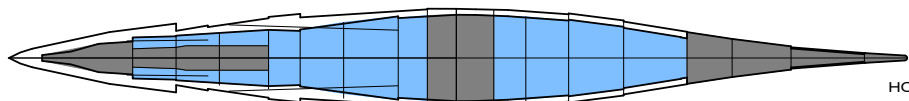
"C" DECK



"D" DECK



"E" DECK



HOLD



ABOVE: A 1999 proposal would have reused the former ss *Monterey* of 1932 as a stationary hotel at San Francisco, California.

Technology used the former passenger-cargo liner *Exchorda* as a floating student dormitory from 1968 to 1975. Though much smaller than the ss *United States*, both case studies are of particular relevance to any proposal to permanently moor the larger vessel at New York or repurpose her for educational use.

Others have advanced proposals to reuse the *United States* as a floating casino.³⁴ At the time of writing, this idea is one of several being explored as a possible scenario for the Philadelphia area.³⁵ If executed with care to preserve the ship's character defining historic features (as

discussed in the section on Preservation Design) and reserve some part of the ship for public access, a casino scheme could work as a means of repurposing the ship in a way that provides for her restoration and ongoing stewardship. However, such a proposal would almost certainly preclude the ship from finding a permanent home at New York, which as outlined above should be among the foremost objectives in planning the ship's preservation. The chief merit of such a plan is that it could buy time to preserve the ship for a more appropriate use in the long-term future. But the compromising effect this scheme on the ship's heritage value could function to alienate the preservation community from the initiative and mitigate the vessel's ability to galvanize a constituency of interested supporters, ultimately prolonging a more successful long-term solution.

Any reuse program involving public access would likely leave large portions of the ship underutilized or completely unused. This has been the experience of vessels such as the RMS *Queen Mary* and to an even greater extent with many large preserved warships. The nature of the ship's construction means that vast areas formerly used for crew's quarters, storage and mechanical functions would be of limited value for the curatorial interpretation of the vessel's historic significance and to the various re-purposing schemes discussed above. Most of these spaces are concentrated in the lower portions of the hull, which on the ss *United States* includes more than three full decks below water. While there is little precedent for the successful reuse of such spaces on large preserved merchant or warships, the adaptation of these spaces to generate revenue for the long-term stewardship of the ss *United States* warrants consideration.

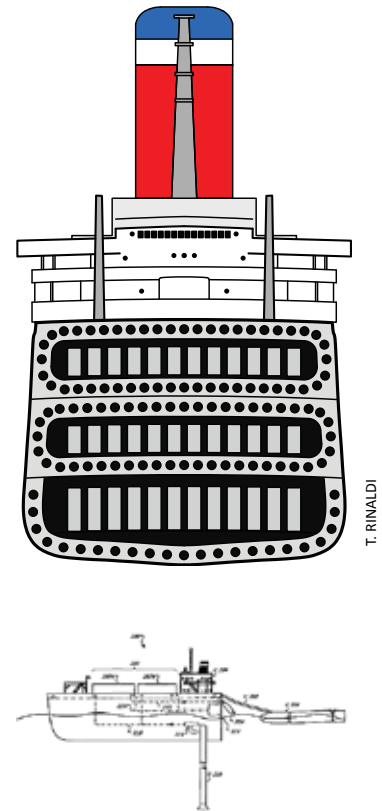
One potential reuse for these spaces is for a datacenter or server farm to accommodate digital data storage. This industry did not exist when reuse programs were designed for many of the maritime heritage conservation precedents studied in the section on Reusing Historic Ships. Such a facility could quietly occupy the vast portions of the ship that would be left underutilized by the various public reuse components discussed above. Though it requires no public access, it could require significant structural alterations to the unseen parts of the ship. An important precedent for study is a 2001 proposal for a large "cyber center" to be built on the west side of Manhattan at 57th Street and Twelfth Avenue, in very close proximity to possible locations for the ship. The Hudson River Park Trust explored installing such a facility at Pier 40, but received a lukewarm response from potential lessees reluctant to build such

a facility in a marine environment.³⁶ However, evidence suggests that spaces within the ship's steel hull could be made to conform to the temperature and humidity requirements of a data storage equipment.³⁷ At least two companies have begun to explore the feasibility of datacenters housed aboard large ships. In January, 2008, a California-based firm called International Data Security reportedly proposed to build as many as fifty datacenters on "de-commissioned cargo ships," with initial plans for one such ship to be moored at Pier 50 in San Francisco.³⁸ In September of the same year, the *New York Times* reported that Google, Inc. had filed a patent for mobile "water-based data centers" that could be housed on reused merchant ships and actually moved strategically as necessary.³⁹

The constraints of building a datacenter on the ss *United States* would relate more to the requirement for false ceilings or built-up floors of 18 inches or more to accommodate chases for wiring and HVAC systems.⁴⁰ Typical heights between decks aboard the ss *United States* are in the range of nine feet, which would present a significant challenge for the incorporation of the required electrical and HVAC chases. One potential way to address this problem would be to remove steel deck plating in the areas of the ship not essential to her curatorial interpretation. This could be done without impinging on spaces deemed important to the ship's historic character (see the section on Preservation Design), but would require special consideration to ensure the ship's structural integrity would remain intact in the process.⁴¹ The extent of space available for such reuse is subject to vary depending on decisions as to how much of the ship's original machinery is to be retained for its historic significance, a matter which is explored in the section on Preservation Design.

Conclusion

This section explores only a handful of reuse scenarios as examples to juxtapose them with the fundamental guidelines stated at the outset. Other uses should be considered and juxtaposed with these guidelines and with a thorough study of precedent. What may work in one location may not work in another. Certain uses, such as the datacenter scenario, could potentially support the ship's preservation with only a small museum as the public access component and eliminate the need for another revenue-producing use such as a hotel altogether. A wide range of options are possible, and indeed

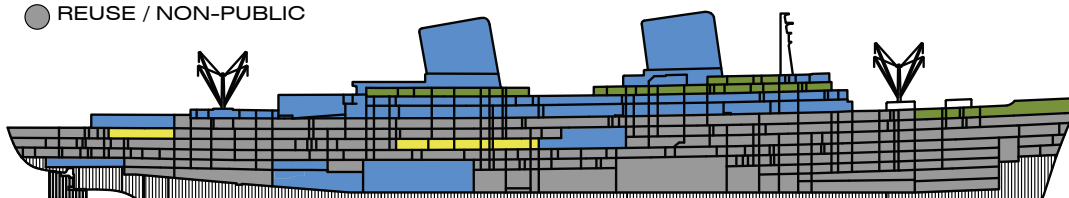
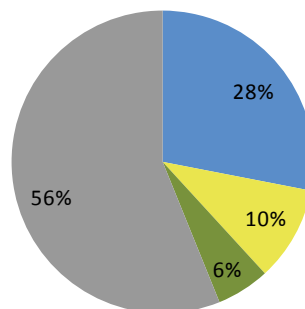


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ABOVE / TOP: Parts of the ship not essential to her curatorial interpretation could be altered to accommodate a datacenter.
ABOVE / BOTTOM: Google, Inc. proposal for a floating datacenter.
BELOW: Schematic proposal to reuse the ship solely as a datacenter with areas set aside for a museum and/or event space.

	HOLD	E	D	C	B	A	Main	Upper	Prom.	Sun	Sports	Nav.	TOTALS
Event / Catering / Museum	29,780		27,036	23,513	8,322	7,896			24,330	21,253	1,158	3,069	146,357
Event / Catering / Dedicated							19,871	14,077	10,984	8,010			52,942
Maint / Admin									5,414	506		18,054	29,656
Re-Use / Non-Public	16,595	9,695	24,475	36,106	60,868	36,593	58,991	49,664					292,987
	46,375	9,695	51,511	59,619	69,190	64,360	73,068	66,062	32,846	21,253	19,212	8,751	521,942

- EVENT / CATERING / MUSEUM
- EVENT / CATERING / DEDICATED
- MAINT / ADMIN
- REUSE / NON-PUBLIC



T. RINALDI

PROPOSED "E"
 MUSEUM / REUSE-NONPUBLIC

the exploration of even outlandish proposals as a public exercise could be of enormous value in galvanizing public interest and support in whatever is ultimately determined to be the most workable solution, as noted above in the section on Advocacy.

ENDNOTES

- 1 Miller, *S.S. United States*, 194.
- 2 Interview with Dan McSweeney, ss *United States* Conservancy, October 2009
- 3 Probably the closest parallel to this proposal, in recent decades, are two large former ocean liners, the *Doulos* (ex-ss *Medina* of 1914) and the mv *Anastasis* (ex-*Victoria* of 1953) both operated by religious charities beginning in the late 1970s. The adaptation of these ships required no substantial structural alterations. Both ships have since been withdrawn from service. Other vessels have been used as temporary accommodation ships at times of emergency, such as the mv *Regal Empress* (ex-*Olympia* of 1953) which briefly served in this capacity at Galveston, Texas in the wake of Hurricane Ike in 2008. In 2010 the World Food Program of the United Nations chartered two small cruise ships, the *Ola Esmeralda* & *Sea Voyager* to serve as staff accommodation vessels at Port au Prince, Haiti, in the aftermath of the devastating earthquake there. The charter reportedly cost the organization \$10 million for three months' use of the two vessels, prompting allegations of overspending and abuse of funds. Schaefer, Brett D. "National Review: The U.N. 'Love Boat.'" Online, www.npr.org/templates/story/story.php?storyId=125892832, Apr 13, 2010.
- 4 See "Historic and Significant Ships and Boats: Preservation versus Use," a lecture by John Kearon of the National Museums & Galleries of Liverpool delivered at Barcelona, Spain for the First Congress of European Maritime Museums on June 27, 2001.
- 5 The restoration of the ss *Rotterdam* was executed at shipyards in Cádiz, Spain, and Wilhelmshaven, Germany. Asbestos abatement aboard the ss *United States* was carried out in Ukraine.
- 6 A valid criticism of preservation initiatives for the RMS *Queen Mary* in Long Beach, California, the mv *Stella Polaris*, formerly at Mitohama, Japan, and the RMS *Queen Elizabeth 2*, slated for adaptive reuse at Dubai, UAE.
- 7 Hudson River Park Act, §(8)(3)(c): "Paragraph (b) of this subdivision shall not prohibit floating structures, and lateral stabilizing elements to secure such floating structures, for water dependent uses; minor improvements along the shore front including bulkhead and other repairs, habitat restoration, and platforms either for a waterfront esplanade or to allow public access to the Hudson river; subject to the limitation that, in the aggregate, no more than eight acres of the water section may be covered or altered by floating structures or minor improvements at any time."
- 8 Interviews with Ann Bittenwieser & Wilbur Woods, April 2010.
- 9 Hudson River Park Act, §(7)(9)(c): "The city of New York shall use best efforts to relocate the tow pound on Pier 76. Subsequent to relocation of the tow pound, the city of New York shall convey to the trust a possessory interest in fifty percent of Pier 76 for passive and active public open space use for a period not to exceed 99 years, provided that such open space portion of Pier 76 shall be contiguous to water. Upon such conveyance, the portion so conveyed will become part of the park and will be used solely for passive and active public open space uses."
- 10 Interview with Albert Butzel, March 2010.
- 11 "Engineering and Other Services for the Marine Export of Solid Waste Study of the Friends of the Hudson River Park Pier 76 Concept." New York: Greely & Hanson, commissioned by the New York City Department of Sanitation, July 2007.
- 12 "News & Issues." Online: <http://www.tomduane.com/news>, retrieved March, 2010.
- 13 Cohen, Steve. "On the Waterfront: Pier 40 and the Limits of Commercial Development." *The Observer*, Apr 21, 2008.
- 14 "Laws of New York State: Parks – Leases – Pier 57": "Approved and effective July 19, 2005. . . . the Hudson River Park Trust is hereby authorized to enter into a lease term for Pier 57 for a period not to exceed forty-nine years in order to allow rehabilitation expenditures of

a lessee of Pier 57 to qualify for federal rehabilitation credit provided by section 47 of the internal revenue code and to obtain financing that is more favorable for the lessee and the Hudson River Park Trust; provided that: (a) because of its historic status, Pier 57 is the only pier within the Hudson River Park that shall be granted the forty-nine year lease. . . ." Pier 40 is not listed in a survey of eligible historic resources along the Route 9A corridor prepared for the New York State Department of Transportation.

15 Cohen, Steve. "On the Waterfront: Pier 40 and the Limits of Commercial Development." *The Observer*, Apr 21, 2008.

16 Anderson, Lincoln. "Pier 40 Plan Sinks Again." *The Villager*, October 1, 2008.

17 Anderson, Lincoln. "Looking at Pier 40 With a Fresh Eye, Group Seeks Uses." *The Villager*, Sept 30, 2009.

18 Ibid.

19 Ibid.

20 Interview with Wilbur Woods, New York City Department of City Planning, April 2010.

21 "No Safe Harbor." *The New Yorker*, January 7, 2007.

22 Interview with Wilbur Woods, New York City Department of City Planning, and Applebaum, Alec. "East River Ruckus: Community groups present own plans for southeast waterfront." *Architect's Newspaper*, Nov 5, 2009.

23 "Mayor Bloomberg Announces Programs to Expand the Reactivation of Brooklyn's Working Waterfront." Press Release, July 20, 2009.

24 See Lambert, Bruce. "Intrepid Idea for Floating Heliport." *New York Times*, May 15, 1994; Scott, Janny. "Senate Agrees to Turn Over Carrier for Use as a Heliport." *New York Times*, June 5, 1994; and Lambert, Bruce. "Heliport: How the Deal Was Made." *New York Times*, Jan 21, 1996.

25 Interview with Ellen Ryan, Brooklyn Bridge Park Development Corporation, February 2010.

26 Interview with Connie Fishman, Hudson River Park Trust, 2010.

27 Byles, Jeff. "Philly, Ahoy." *The Architect's Newspaper*, January 20, 2010.

28 St. Jacques, 9.

29 Simon, 98.

30 Interview with Connie Fishman, Hudson River Park Trust, February, 2010.

31 Anderson, Lincoln. "Pier 40 Plan Sinks Again." *The Villager*, October 1, 2008.

32 "Bring Back the Lurline." *San Francisco Examiner*, June 7, 1999. The venture ultimately did not proceed due to lack of private sector financing and the ship sank en-route to scrappers in 2000.

33 Interview with Michael Kramer, April, 2010.

34 Skwire, Brendan. "Ante Up on the S.S. United States?" *Philadelphia Weekly*, Jan 25, 2010.

35 Interview with Dan McSweeney, ss United States Conservancy, October 2009.

36 Interview with Connie Fishman, Hudson River Park Trust, and Anderson, Lincoln. "Looking at Pier 40 With a Fresh Eye, Group Seeks Uses." *The Villager*, Sept 30, 2009.

37 Under the ownership of the US Maritime Commission, the ship was sealed and dehumidified so well that visitors reported finding un-yellowed newspapers dating to 1969 as much as ten years after the ship's withdrawal from service. In 2010, the Intrepid Sea, Air & Space museum began work to install a climate-controlled facility for storage of the museum's collections onboard the USS *Intrepid*. The facility will be required to maintain temperatures between 66-70 degrees Fahrenheit and relative humidity between 40-45% (according to correspondence with Jessica Williams, Curator of History, Intrepid Sea, Air & Space Museum). The American Society of Heating, Refrigerating and Air-Conditioning Engineers' "Thermal Guidelines for Data Processing Environments" recommends a temperature range of 61-75 degrees Fahrenheit and humidity range of 40-55% with a maximum dew point of 15°C as optimal for data center conditions.

38 Miller, Rich. "Data Centers on Cargo Ships?" Online: <http://www.datacenterknowledge.com>, retrieved April, 2010.

39 Vance, Ashlee. "Google's Search Goes Out to Sea." *New York Times*, Sept 7, 2008.

40 Correspondence with Christopher Arslanyan, Google Inc., April 2010.

41 The conversion of the RMS *Queen Mary* at Long Beach, California involved the removal of one the ship's lower decks to accommodate high-ceilinged exhibit space, but this work may have caused significant structural problems. Simon, 61.

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S.S. UNITED STATES
SPECIAL SECTION

Herald

NEW YORK



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TEEN PAGES

SUNDAY, JUNE 22, 1952

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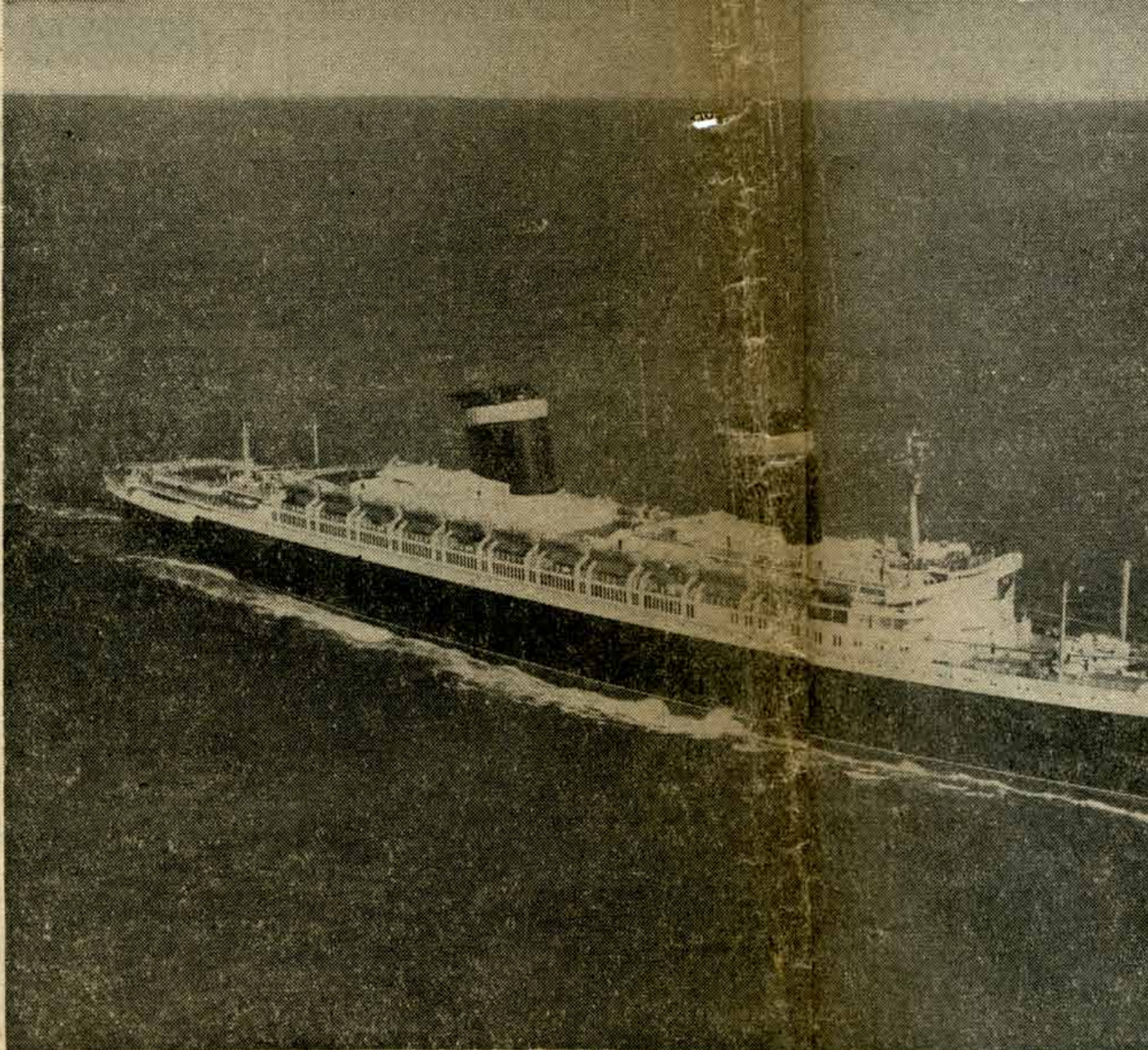
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The United States Takes Over as First Lady of the



At a regal pace, the 990-foot 53,300-ton United States glides across a calm and sunny sea off the Virginia coast.

40-Year Dream Comes True For Chief Designer of Vessel

William Gibbs Built First Model in '13 and Worked
to Perfect It; 1,200,000 Blueprints Used

Conclusion

Today, we risk losing the *ss United States*. With her would vanish one of the very last transatlantic ocean liners in existence, the largest passenger ship ever built in the Americas, and a displaced New York landmark that speaks with exceptional eloquence for the forces of international trade that made New York the economic and cultural capital of the world. Her loss would take with it an opportunity to enhance the character of the New York waterfront with a unique civic amenity that provides an enriched sense for the role of the harbor in the cultural identity of the city.

There is a way to preserve the *ss United States* and seize on her potential to add a new dimension to the public's enjoyment of the waterfront. It requires those who believe in this potential to develop a clear vision for the future of this ship and to articulate that vision so as to channel funds from various sources toward the preservation of this unique structure in a way that puts her to work for a public good. The *ss United States* is a historic structure of great significance and rarity, an aesthetically engaging creation that ranks with the world's iconic triumphs of design and engineering. Her preservation requires a plan that can address daunting challenges of reuse programming, location, funding and management, and the demonstrated practical limitations of reusing ships in stationary roles. A sound management plan predicated on the ship's cultural value can capitalize on her unique strengths and use them to counterbalance her inherent limitations. This plan should balance a non-profit cultural program that allows the public to experience the heritage value of the ship with a revenue-generating commercial component to offset the costs of the ship's restoration and upkeep. Government cooperation is needed to secure a site for the ship in order to set the stage for private sector and philanthropic investment in her preservation.

Preserving the *ss United States* at her former home port of New York presents a unique opportunity to solve two problems at once. The ship could serve as the centerpiece of an initiative to introduce public access to one of several city-owned waterfront sites that have proven stubbornly resistant redevelopment proposals, such as Pier 76 or Pier 40 in the Hudson River Park. This preserves

A Strategy to Preserve the ss *United States*

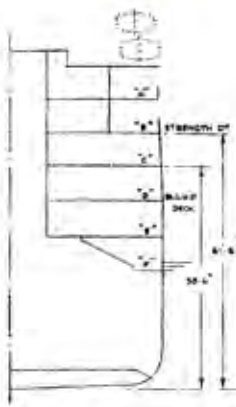
OPPOSITE: The famous Life Magazine photograph by Andreas Feininger showing the outbound *United States* with the midtown skyline beyond.

the ship and improves the character of the city's waterfront in one stroke. It capitalizes on her value as a historic structure by preserving the ship in her appropriate historic context, where this and many vessels like her once figured as celebrated parts of the cultural landscape of the city. While the challenges of bringing the *United States* to New York are formidable, the rewards of preserving the ship at her historic home port will allow her to be experienced in the proper curatorial context and increase the viability of a commercial program for her reuse. If she ultimately cannot be brought to New York, many of the same principles that would guide her preservation there could be applied towards her adaptive reuse in another appropriate location.

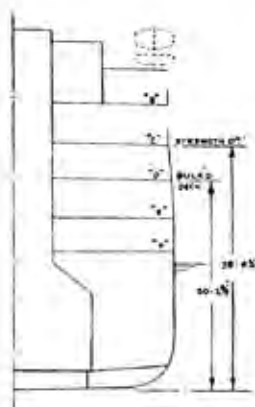
The success of non-profit advocacy groups to undertake campaigns of similar scale and complexity demonstrates the potential of such an effort to save the ss *United States*. In New York alone, such movements have galvanized support from governmental, philanthropic and for-profit entities to save, restore or repurpose prominent landmarks including Central Park, the Park Avenue Armory, the High Line, the theaters of 42nd Street, and others. These success stories can serve as models for a strategy to preserve the ss *United States*. Already, the organized effort to save this ship has begun the process by helping to raise awareness for her plight and by having the ship listed on the National Register of Historic Places. It remains for the friends groups that have dedicated themselves toward the ship's preservation to unify toward the advancement of a well developed plan for the ship's future.

The Atlantic liners were the stuff of children's books and Hollywood romance, Cole Porter lyrics and Berenice Abbott photographs. For more than a century they represented the sole means of carriage for royalty and entire diasporas between Europe and the Americas. At New York, where their routes converged, the liners were welcomed with fanfare and spectacle. Today, the ss *United States* is almost all that remains of them. In New York there remains remarkably little direct evidence that these ships ever existed, despite the critical role they played in the development of the city. The ss *United States* offers an opportunity to honor and celebrate that role in a way that contributes to the character, quality of life and cultural identity of the city. A dynamic effort to articulate and manage that potential can preserve this ship and put her back to work in service to the people of her home port.

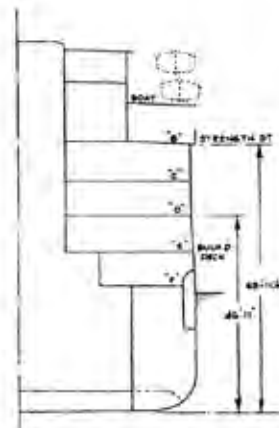




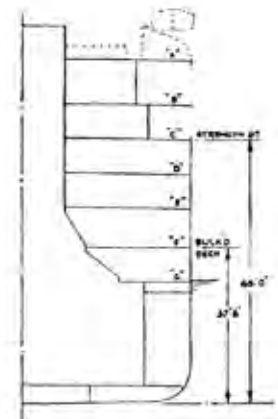
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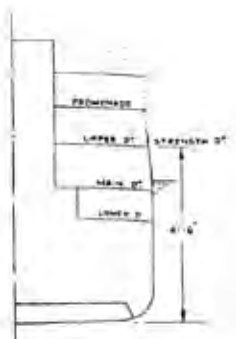
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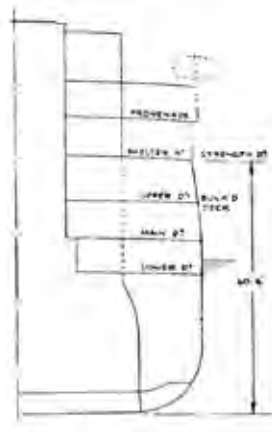
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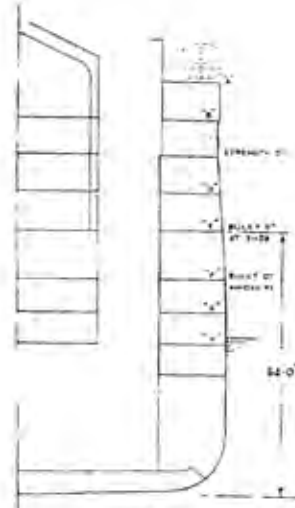
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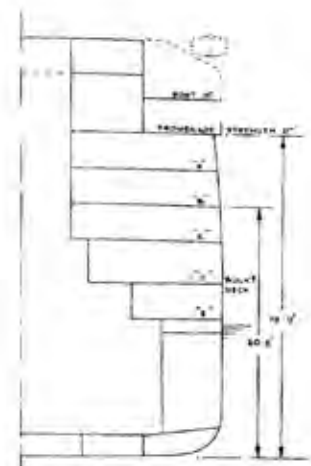
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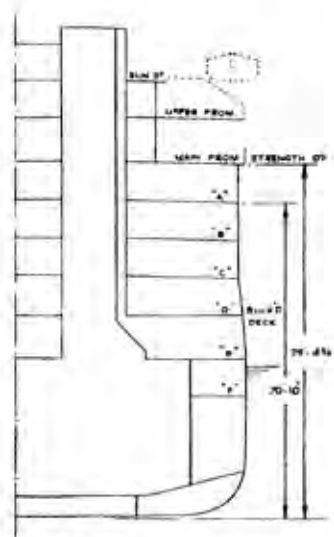
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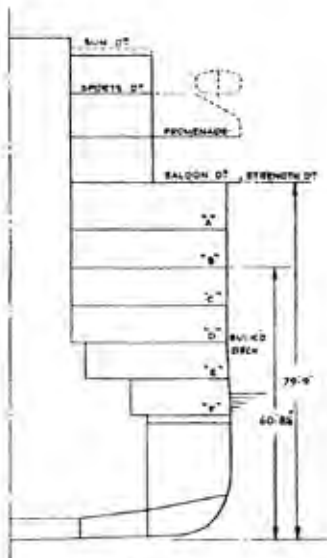
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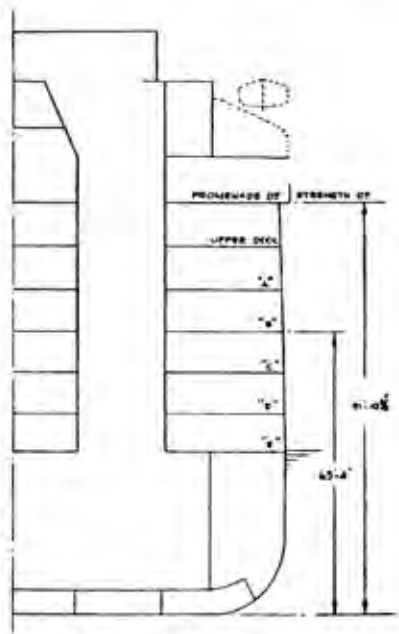
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