

WATER-DEPENDENT USE MANAGEMENT PLAN

Charlestown Navy Yard

May 2007



submitted to:

**Executive Office of
Environmental Affairs
MEPA Office**

submitted by:

**Boston Redevelopment
Authority**

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1.0 INTRODUCTION

1.1 PURPOSE

This Plan has been prepared by the BRA in response to Requirement 7(d) of the Approval on the 1991 Municipal Harbor Plan for Boston Inner Harbor (hereinafter the "MHP").

In 1991 the Secretary of Environmental Affairs approved the City of Boston's MHP. The approved MHP included modifications to the Chapter 91 regulatory standards, which allowed facilities of private of tenancy over flowed tidelands, a reduction in ground floor public uses, and reconfiguration of waterfront setbacks on Pier 5 in the Charlestown Navy Yard. Pier 5 was one of three locations within the Harborpark Plan where the MHP allowed Facilities of Private Tenancy over flowed tidelands, subject to certain conditions to preserve and promote public use of the project site.

The MHP approval required the City of Boston to pursue two amendments to the MHP. The amendments included a Network Plan for Special Public Destination Facilities (SPDF) and Pier Management Guidelines for Pier 5. Concurrent with the development of this Plan, the BRA is currently preparing a separate plan and corresponding MHP amendment for the Network of Special Public Destination Facilities.

As for the reuse of Pier 5 which is a Facility of Private Tenancy located over the water, the MHP decision under Requirement 7 mandates that:

(a) all buildings containing nonwater-dependent facilities of private tenancy shall conform to a height limit of 55 feet, to the setback requirements of Requirement 5(a)-(c), above, and to the site coverage limitations set forth in 310 CMR 9.51(3)(d);

(b) no more than 50 percent of the ground floor spaces within such buildings may be occupied by facilities of private tenancy, including upper-floor accessory services; and no parking may occur seaward of the high water mark;

(c) residential uses shall be allowed only on Battery Wharf in the North End and on Pier 5 in the Charlestown Navy Yard, and not then at the ground level; any residential use of the second floor shall be accompanied by a commensurate-increase one or a combination of public open space, building setbacks, interior facilities of public accommodation, or water-based public activities as the term is used in 310 CMR 9.53(2)(a);

(d) such facilities shall be subject to specific guidelines to avoid conflict and minimize incompatibility with the operation of nearby water-dependent and/or public activities; at a minimum, such guidelines shall address the factors identified in 310 CMR 9.51(1) that may give rise to such adverse effects; such guidelines shall,

be submitted for review and approval by the Secretary in accordance with 301 CMR 23.06(1).

As further discussed in Section 4 and in response to these requirements, the Pier 5 development will:

- limit building heights to 55 feet,
- setback the building approximately 19 feet from the sides of the pier and 100 feet from the end of the pier,
- maintain 50% of the site as publicly accessible open space,
- limit project parking to areas landward of the high water mark,
- provide facilities of public accommodation on the ground level of the building
- avoid pedestrian/vehicular conflicts by separating vehicular ways and the Harborwalk,
- forego the construction of a marina on Pier 5 to avoid any potential conflicts with the use of the watershed by the Courageous Sailing Center, and
- incorporate a series of measures further described in Chapter 4 to avoid conflicts with nearby water dependent and public activity uses.

Furthermore, the Water Dependent Use Management Plan is subject to the review and approval of the Secretary of the Executive Office of Environmental Affairs.

1.2 PLANNING AREA

The Planning Area for the Charlestown Navy Yard Water-Dependent Use Management Plan (hereinafter the “Plan”) incorporates the waterfront of the Charlestown Navy Yard and the Charlestown Gateway district. The Planning Area is depicted on **Figure 1-1, Locus Plan**, and encompasses an area starting at Tudor Wharf near the Washington Street Bridge northward to the U.S.S. Constitution National Park, and then along the waterfront of the Charlestown Navy Yard, ending at Building 114 along the Little Mystic Channel. The landward extent of the Planning Area is defined by Water Street within the Charlestown Gateway District, First Avenue within the majority of the Navy Yard, and Sixteenth Street within the Yard’s End portion of the Navy Yard.

The Charlestown Navy Yard is a 135-acre waterfront area, which extends from the U.S.S. Constitution National Historic Park to the South, Boston Harbor to the East, the Little Mystic Channel to the North and Chelsea Street to the West. The land area is host to a mix of uses including residential, commercial, institutional, and a sizeable volume of vacant property and structures many of which are owned by the Boston Redevelopment Authority (BRA).

The Navy Yard was one of the oldest active naval facilities, commencing operations in 1800. It was a center of Navy shipbuilding during World War II, employing as many as 50,000 people, and performed extensive maintenance and rehabilitation of naval vessels until its decommissioning by the federal government in 1974. In 1978, the BRA acquired

most of the property and a comprehensive redevelopment program was begun involving the adaptive reuse of existing historic structures in one of the largest historic preservation efforts ever undertaken in the country. In recent years, there has been a great deal of historic preservation and reuse for recreation, commercial, research and residential uses. Along the waterfront and within the adjacent watershed, the area is also host to a naval facility, provides extensive recreational marina use, public water transportation and public open space.

1.3 CONTENTS

This Plan includes five sections. The first section provides an overview of the purpose of the Amendment, summarizes some of the prior planning that has formed the basis for development in the Charlestown Navy Yard over the last 30 years, and outlines the content for the remainder of the Plan.

The second section presents the current ownership interest of each waterfront parcel within the Planning Area, describes the existing conditions along the shoreline of the Planning Area, and current in-water facilities that make-up the water-dependent uses in the Planning Area.

The third section identifies the location, size, and amenities associated with various existing and planned water-dependent uses throughout the Planning Area including marinas, water transportation terminals, and water taxi docking facilities.

The fourth section summarizes the specific guidelines for the development and management of private uses over the water, in order to address potential conflicts with nearby existing and proposed water-dependent uses.

The fifth section outlines the Plan's conformance with the State's tidelands policy objectives and regulatory principles.

1.4 INFORMATION SOURCES

In preparing this Plan, the BRA utilized a variety of sources including applicable DEP regulatory information, site visits, previous studies and planning products, and discussions with various agencies and property owners.

Meetings were held with each of the major property owners within the Planning Area including the National Park Service, the Massachusetts Port Authority, New England Development, as well as owners of the Constitution and Shipyard Quarters marinas. The BRA also met with the Executive Director of the Courageous Sailing Center, which is located adjacent to the Pier 5 project site, to review draft versions of the Plan.

Planning documents such as past Environmental Impact Reports for the Navy Yard and individual development projects, Municipal Harbor Plans and Amendments, the Charlestown and Yard's End Master Plans, Navy Yard Pier Management Plan and prior Chapter 91 Licenses were utilized as additional reference sources.

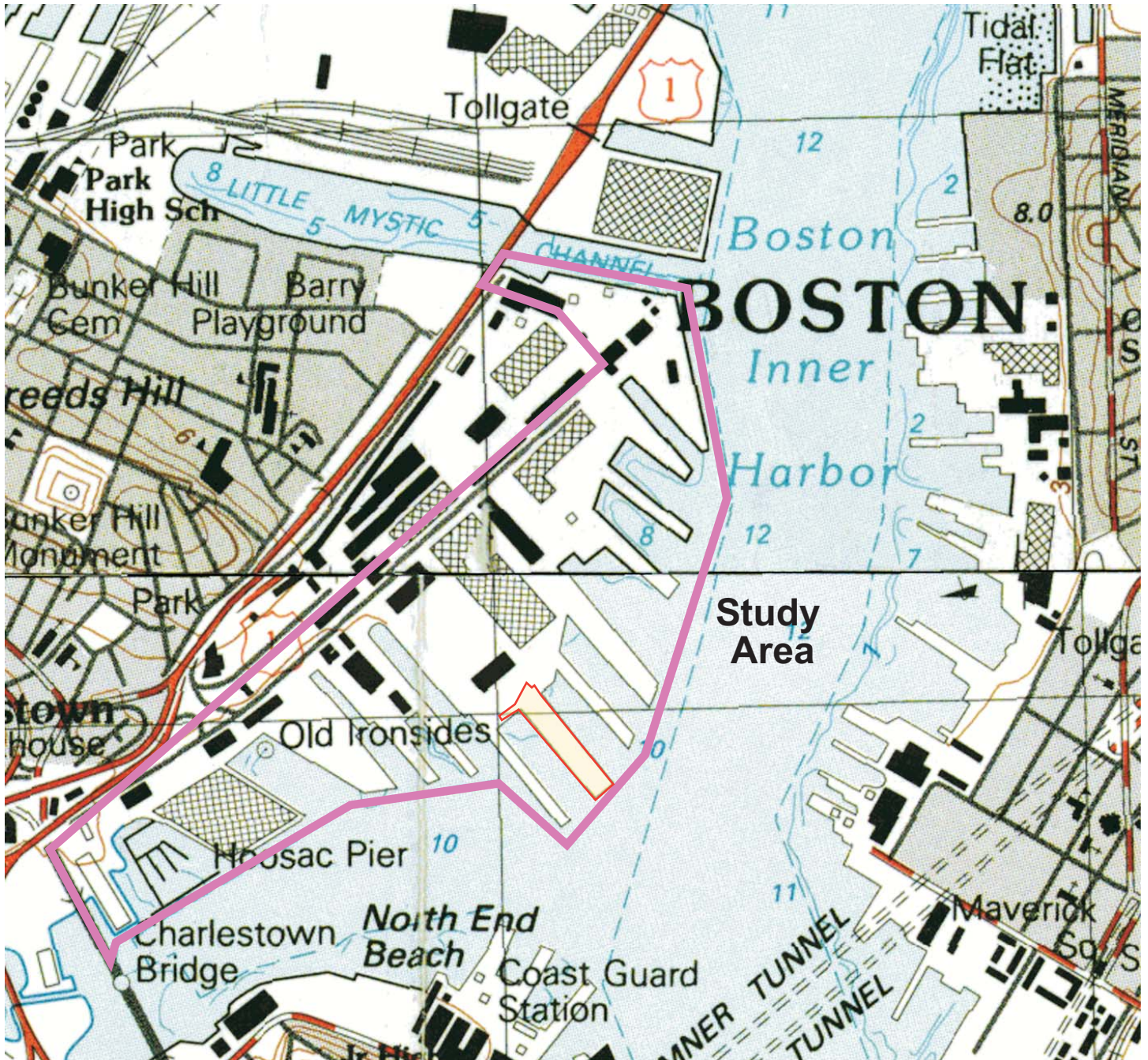


Figure 1-1
Locus Plan
Source: MassGIS

2.0 EXISTING CONDITIONS

2.1 INTRODUCTION

One of the primary task elements of the Water Dependent Use Management Plan is to inventory existing marine and shoreline features within the Planning Area. These conditions, features, programs and facilities are described in the following text.

The Charlestown portion of the Boston Inner Harbor offers numerous cultural and recreational opportunities for the public and public access to one of the most attractive waterfront viewing opportunities in America. Presently the Navy Yard National Park operated by the National Park Service attracts 2 million visitors a year from all over the world.

An existing waterfront Harborwalk allows the public to stroll along the vast majority of the Charlestown waterfront. This linear corridor links existing and planned public parks, programs, water transportation facilities, three full service marinas, commercial uses, and extensive residential development. Additional portions of the Harborwalk, which have yet to be built, are planned at Pier 5, Pier 11, and Parcels 4, 5, 6, and 7.

For context and reference purposes, **Figure 2-1, Property Ownership Plan**, notes the owners of land within the Planning Area.

Figure 2-1, Property Ownership Plan, also delineates the four sub-areas within the Planning Area. Sub-area A encompasses the Charlestown Gateway portion of the Planning Area from the Washington Street Bridge to the Hoosac Stores Warehouse. Sub-area B extends from the USS Constitution and includes Piers 1 through 3. Sub-area C starts at Pier 4 and extends to Pier 10. Sub-area D includes Parcels 4, 5, 6 and 7, and Building 114 in the Yard's End portion of the Charlestown Navy Yard. The existing conditions within each Sub-area are discussed in the text below.

2.2 EXISTING CONDITIONS

2.2.1 SUB-AREA 'A'

As mentioned earlier, Sub-area A encompasses the Charlestown Gateway portion of the Planning Area from the Washington Street Bridge to the National Park and the USS Constitution. See **Figure 2-2, Planning Sub-area 'A'**.

TUDOR WHARF

This property is located at the beginning of the Planning Area and abuts the North Washington Street Bridge. The property is owned by Tudor Wharf LLC/National Development and is directly east of Water Street in the Charlestown Gateway Subdistrict.

The landside portion of the site consists of a 7-story building, and vehicular and pedestrian circulation areas. See **Figure 2-3, Existing Conditions Photos – Tudor Wharf**. The building is used as an extended stay inn/hotel and is operated as a Marriott Residence Inn. The ground floor uses include retail space, a small café, and meeting, conference and function space.

The shoreline features consist of a steel sheet-pile bulkhead. Along seaward portion the site, public open space is provided upon a pile-supported deck. The onsite open space offers pedestrian access, seating, lighting and historic exhibits. A new walkway is under construction under the North Washington Street Bridge connecting to Paul Revere Landing North Park to the southwest. See **Figure 2-3, Existing Conditions Photos – Tudor Wharf**.

The site also includes in-water facilities consisting of marina slips and a water-taxi landing along the northeastern perimeter, which are managed as part of Constitution Marina. The landing is accessed via a ramp/gangway extending from the public open space, and leads to a 10' by 260' pile-held dock. The water taxi service is supported by a landside shelter, seating area, and call box located within the pile-supported open space and adjacent to the ramp system. See **Figure 2-3, Existing Conditions Photos – Tudor Wharf**.

CONSTITUTION MARINA

Constitution Marina is owned and operated by Bosport Docking, with portions of the facility leased from the Massachusetts Port Authority. Constitution Marina is one of the largest public recreational marinas in Boston Harbor. The details of the marina facility and amenities are described in Section 3, Water-dependent Uses, of this Plan. In general, the upland portions of the site are used for commercial and marina-related parking, with no formal public access available along the waterfront.

The shoreline of the Marina consists primarily of stone riprap and a pile-supported marina clubhouse/restaurant is located along the southern perimeter. As described in Section 3, the marina consists of approximately 300 slips of various sizes. See **Figure 2-4, Existing Conditions Photos – Constitution Marina**.

CONSTITUTION CENTER

Constitution Center, located on Hoosac Pier is owned by Massport and leased to National Development, consists entirely of historically filled tidelands. The site includes a 3-story

and a 2-story office building totaling approximately 160,000 square feet, and an at-grade parking facility.

The shoreline is supported by a steel sheet-pile bulkhead with wooden fender piles. Along the water's edge, a walkway, approximately ten feet in width, including wooden benches, trash receptacle, and lighting is available to the public. See **Figure 2-5, Existing Conditions Photos – Constitution Center/Hoosac Pier.**

HOOSAC STORES WAREHOUSE

This site is owned by the National Park Service (NPS) and includes an existing 6-story building occupying half of an approximately 0.7 acre parcel. The remainder of the site is open and unused. The building is currently vacant. The NPS issued a Request for Proposals (RFP) in 2004 for the reuse of the six-story red brick warehouse building, and they continue to seek requests for redevelopment proposals. The Hoosac Store Building was built in 1895 and was part of a bustling complex of warehouses, docks and wharves, where goods were stored before being transferred from steamships to trains bound to the American West. Overlooking the USS Constitution, the shoreline consists of a steel sheet-pile bulkhead. The water's edge is currently inaccessible. See **Figure 2-5, Existing Conditions Photos – Constitution Center/Hoosac Pier.**

2.2.2 SUB-AREA 'B'

As noted above, Sub-area B extends from the USS Constitution and includes Piers 1 through 6. See **Figure 2-6, Planning Sub-area 'B'.**

BOSTON NATIONAL HISTORICAL PARK – USS CONSTITUTION, PIER 1, 2 AND 3, AND DRYDOCK 2

The Boston National Historical Park, owned by the National Park Service (NPS), includes the USS Constitution naval ship, the USS Constitution Museum, three piers and a drydock.

When the Charlestown Navy Yard closed in 1974 after nearly 175 years of serving the U.S. Navy fleet, 30 acres became part of Boston National Historical Park. The National Park Service now maintains an important part of the shipyard, and as part of the Park Service's interpretive program, the USS Constitution, in connection with the United States Navy, and USS Cassin Young are available for visitation as representative of the kinds of vessels built and repaired in this yard.

The National Park Service offers a variety of programs and activities in the Navy Yard. Visitors are invited to begin at the Navy Yard Visitor Information Center located on the Freedom Trail near Gate 1 of the Navy Yard. The Information Center is open daily and provides daily program schedules. Visitors may take self-guided or ranger-guided walking tours of the Navy Yard. The ranger-guided walking tour explores the yard's 174 years of history by taking visitors past such sites as the Chain Forge, where the iron anchor chain was first manufactured; the Ropewalk, a quarter-mile long building designed by famed

architect Alexander Parris; and Dry Dock 1, one of the first two dry docks constructed in the nation. This one-mile walking tour lasts 90 minutes.

The United States Navy docks the historic 210-year-old USS Constitution, a 204-foot vessel, along the southwestern side of Pier 1. The vessel is the focal point of visitor travel to the Charlestown Navy Yard. Although the vessel receives on going maintenance, a formal maintenance cycle of every five years places the vessel in drydock for more involved repairs and maintenance. Currently a 300-foot security zone upon the watersheet surrounds the Constitution as part of the Homeland Security initiative. This zone is delineated by a large floating boom stretching between Pier 1 and the MassPort property where the Constitution Center office complex is located. See **Figure 2-7, Existing Conditions Photos – USS Constitution.**

Pier 1 includes a 2-story building used by the National Park Service, as well as a small temporary building located at the end of the pier. The shoreline along Pier 1 consists of steel sheet piling with a concrete edge and wooden bumpers. The USS Constitution is docked along the southwestern side of Pier 1. See **Figure 2-7, Existing Conditions Photos – USS Constitution.**

Pier 2 includes the USS Constitution Museum as well one large maintenance and repair building and several smaller buildings used to conduct repair work on the USS Constitution. The shoreline along Pier 2 consists of steel sheet piling with a concrete edge and wooden bumpers.

Pier 3 is comprised of filled tidelands secured by a granite and concrete bulkhead. A pedestrian path runs along a portion of the pier along the edge of the Drydock. The end of the pier is deteriorated and closed off to the public. See **Figure 2-8, Existing Conditions Photos – National Park Area.**

2.2.3 SUB-AREA ‘C’

As noted above, Sub-area C starts at Pier 4 and extends to Pier 10. See **Figure 2-9, Planning Sub-area ‘C’.**

PIER 4 WATER TRANSPORTATION TERMINAL

Pier 4 is owned by the Boston Redevelopment Authority, and is located entirely over the flowed tidelands of Boston Harbor. The site consists of a bituminous pier deck, which is supported by concrete and steel piles. The Pier presently supports an MBTA water transportation terminal consisting of a handicap accessible ramp system and a pile-held 60’ x 120’ concrete float. See **Figure 2-10, Existing Conditions Photos – Pier 4 Water Transportation Terminal/Courageous Sailing Center.**

The majority of the Pier is used to support the Courageous Sailing Program. The Program utilizes a small two-story building, parking and open space on the Pier, as well as a series of floats and moorings within the adjacent watersheet. See **Figure 2-10, Existing Conditions Photos – Pier 4 Water Transportation Terminal/Courageous Sailing Center**.

PIER 5

Pier 5 is owned by the Boston Redevelopment Authority, and is located entirely over the flowed tidelands of Boston Harbor. The site consists of two parcels, totaling approximately 3.8 acres. Pier 5 is part of Parcel 1B and is approximately 1.9 acres in size. Parcel 1B also includes approximately 1.7 acres of watersheet to the north and south of Pier 5. Immediately landward of Pier 5 is Parcel 1C, which is approximately 0.187 acres in size.

The existing concrete pier deck is supported by approximately 1,500 steel H-piles. The Pier presently consists of a vacant, underutilized, and inaccessible pier structure. The landside portion of the Pier is currently used as open space and for public access purposes. See **Figure 2-11, Existing Conditions Photos – Pier 5**.

PIER 6

Pier 6 is owned by the Trustees of Shipyard Marina Trust and is located entirely over the flowed waters of Boston Harbor. The site consists of approximately 1.0 acre of pier structure tidelands and 4.0 acres of watersheet. The pier includes a 2-3 story building that currently houses a restaurant/bar (Tavern on the Water). The remainder of the pier is dedicated to parking for the restaurant and marina.

The pier is constructed of wooden piles and is in good condition. The marina at Pier 6 is a public recreational facility that contains approximately 190 pile-held slips. The marina is unique in its availability of single-loaded slips. A stationary pump-out facility is located at Pier 6. The entire perimeter of the site is open to the public. A wide Harborwalk runs along the entire west side of the pier and includes picnic tables and trash receptacles. The end of the pier has an expansive area of wooden decking with three covered benches for public seating. See **Figure 2-12, Existing Condition Photos – Pier 6 (Shipyard Quarters Marina)**.

PIER 7/CONSTELLATION WHARF

Pier 7 is owned by Constellation Wharf Condominium Association and is located entirely over the flowed waters of Boston Harbor. The site includes six multi-unit 3-story buildings, housing approximately 64 condominiums. The site also includes at-grade parking for the residences.

The buildings are supported by concrete piles and a concrete deck. A public access walkway and viewing areas are provided along the northeastern perimeter of the pier. See **Figure 2-13, Existing Conditions Photos – Pier 7 (Constellation Wharf)**.

PIER 8/SHIPYARD QUARTERS MARINA

Pier 8 is owned by the Trustees of Navy Yard Realty Trust, and is located entirely over the flowed waters of Boston Harbor. The pier includes a small marina office building near the end of the pier as well as a small marina building at the base of the pier, which includes laundry facilities, bathrooms and other amenities for marina patrons.

The marina at Pier 8 is a public recreational facility that contains approximately 187 pile-held slips and a floating wave attenuator and associated docks and ramps. The marina is unique in its availability of single-loaded slips. A fifty-slip expansion has been approved and permitted for the north side of the marina. Transient dockage is also available at the marina. The entire pier is open to public access without restriction. In addition, a demarcated Harborwalk of timber construction extends along the entire west side of the pier, around the end of the pier and along the landside half of the east side of the pier. A gazebo is located on the west side of the pier and the end of the pier offers public amenities including benches and picnic tables. See **Figure 2-14, Existing Conditions Photos – Pier 8 (Shipyard Quarters Marina)**.

2.2.4 SUB-AREA ‘D’

Sub-Area ‘D’ includes Parcels 4, 5, 6 and 7, and the Building 114 site in the Yard’s End portion of the Charlestown Navy Yard. See **Figure 2-15, Planning Sub-area ‘D’**.

PARCEL 4/HARBORVIEW

Parcel 4 is owned by Navy Yard Four Associates, Limited Partnership. The Project site is an approximately 114,656 square foot parcel. The BRA approved the construction of a 425,000-SF residential development known as Harborview. In addition to housing 224 residential condominium units, the new development will add nearly 40,000-SF of ground floor retail and restaurants uses which will help to activate the Navy Yard by serving visitors and residents alike. The development also includes 92,500-SF of structured parking for 340 spaces. Additionally, 1.3 acres of open space will enhance the public realm. Over 550 feet of Harborwalk with pedestrian amenities such as benches, lighting, and landscaping will enhance the public realm. A public water taxi dock will be constructed at the end of 16th Street. Harborview is scheduled to open in August, 2007. See **Figure 2-16, Existing Conditions Photos – Parcel 4/Harborview**.

PARCEL 5

Parcel 5 is owned by the Boston Redevelopment Authority, and consists of both filled and flowed tidelands. The site totals approximately 195,040 square feet. The site presently consists of a vacant and underutilized piece of land. A portion of the site is used for construction staging and support purposes to support various public and private construction projects in the vicinity. The site includes an abandoned drydock that is currently inundated by the tide. There is a 70’ wide by 700’ long concrete pier along the

eastern seaward edge of Parcel 5, which is used for docking large deep-draft vessels. See **Figure 2-17, Existing Conditions Photos – Yard’s End.**

PARCEL 6/7

The BRA is continuing its development review process currently in the urban design phase for the construction of a 240,000-SF 150-bed inpatient rehabilitation facility.. The Spaulding Rehabilitation Hospital (SRH) Facility will include a gymnasium, therapy rooms, and the SRH's innovative Charles H. Weingarten Adaptive Sports and Recreation Program. This program encourages patients to participate in sports and activities including canoeing, rowing, kayaking, sailing, paddleboating, and windsurfing. The location of this sports therapy and recreation program along the Harbor at the Navy Yard’s End will make active use of the waterfront and watersheet. The facility will also include 300 parking spots. Construction is anticipated to start in 2008. Various suggestions for enhancing the Spaulding Rehabilitation Facility from community organizations and local non-profits such as The Boston Harbor Association have included:

- Enhancing the water-dependent use of the proposed Charles H. Weingarten Adaptive Sports and Recreation Program by: (a) pursuing an exemption to the Harbor Line at that location, similar to the legislation which permitted the boat dock on the Charles River at the existing hospital site; (b) seeking approval to conduct the Weingarten program at the BRA's Dry Dock on Parcel 5; and (c) interim use by collaborating with Courageous Sailing Center to conduct sailing programs from the Courageous dock, perhaps storing the Hospital's specially-designed watercrafts at the Courageous dock and bringing Spaulding patients by van to the Courageous facility.
- Incorporating universal design into the Harborwalk in order to make the Hospital's Harborwalk a model for 21st century development on the waterfront. Examples of universal design elements include a Braille and/or audio handrail system, tactile interpretive displays on glass, and wayfinding elements along the Harborwalk which help guide users with disabilities.

Parcels 6 and 7 are owned by Partners Healthcare, and together total approximately 5.6 acres. The site presently consists of a vacant and underutilized piece of land. See **Figure 2-17, Existing Conditions Photos – Yard’s End.**

BUILDING 114

Building 114 is owned by Joinery Shop Associates, L.P., and is located on the filled tidelands of the Little Mystic Channel. The site totals approximately 2.3 acres. The majority of the existing building is located at the water’s edge and rests atop a historic granite seawall. Along the northeastern shoreline, a sheet pile bulkhead is capped with a concrete seating wall. Public open space, including a Harborwalk and seating area are located along the landward edge of the bulkhead, as well as parking and circulation in the remaining portion. See **Figure 2-18, Existing Conditions Photos – Building 114.**



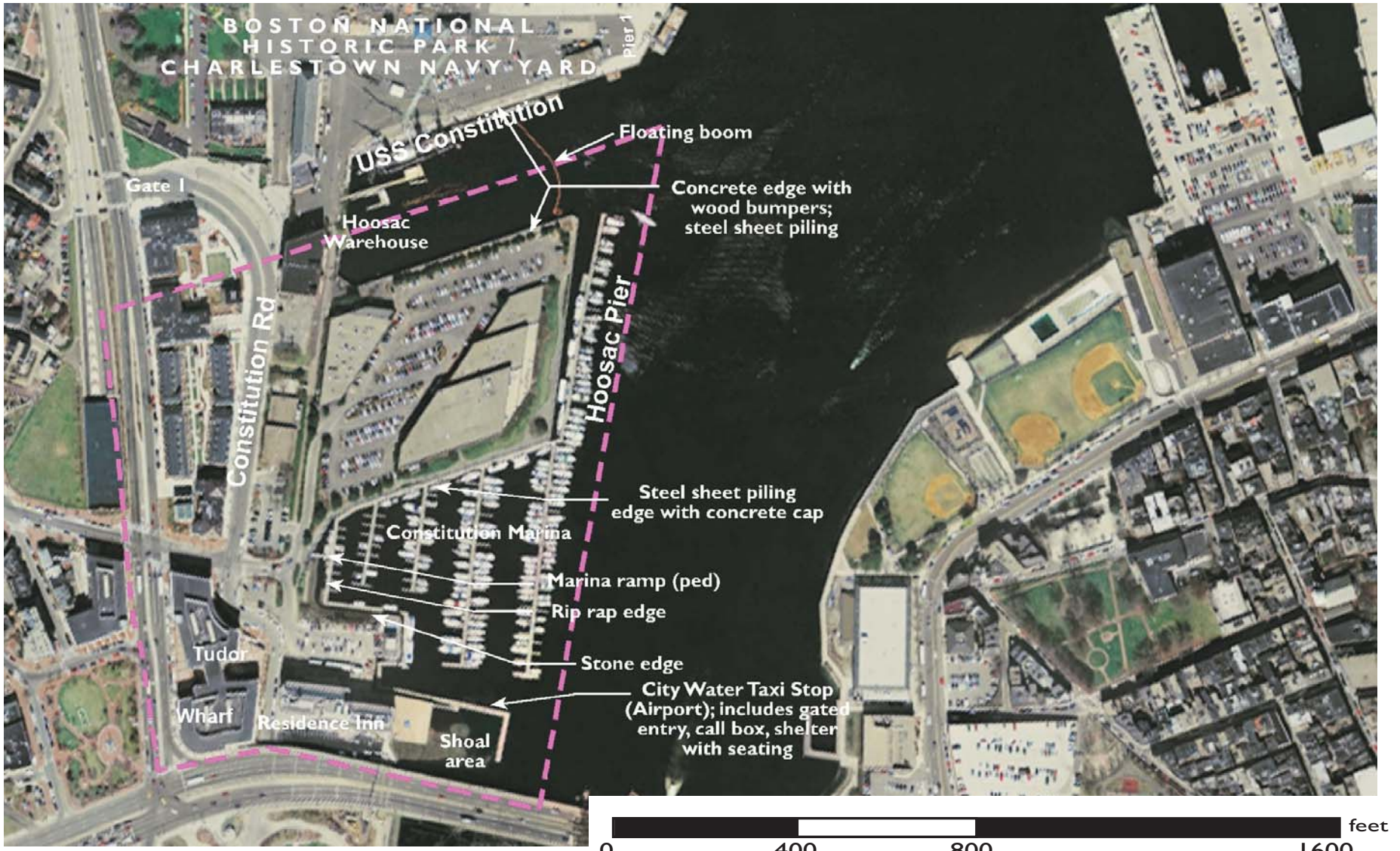
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* Ownership data courtesy of Boston Assessing Department, FY2003. Data represents ownership on January 1, 2002

Note: This map is for planning purposes only, and areas illustrated here are approximately located from large scale plans.



Figure 2-1
Property Ownership Plan
 Source: BRA, 2002



Note: This map is for planning purposes only and areas illustrated here are approximately located from large scale plans.

Figure 2-2
Planning Sub-area 'A'



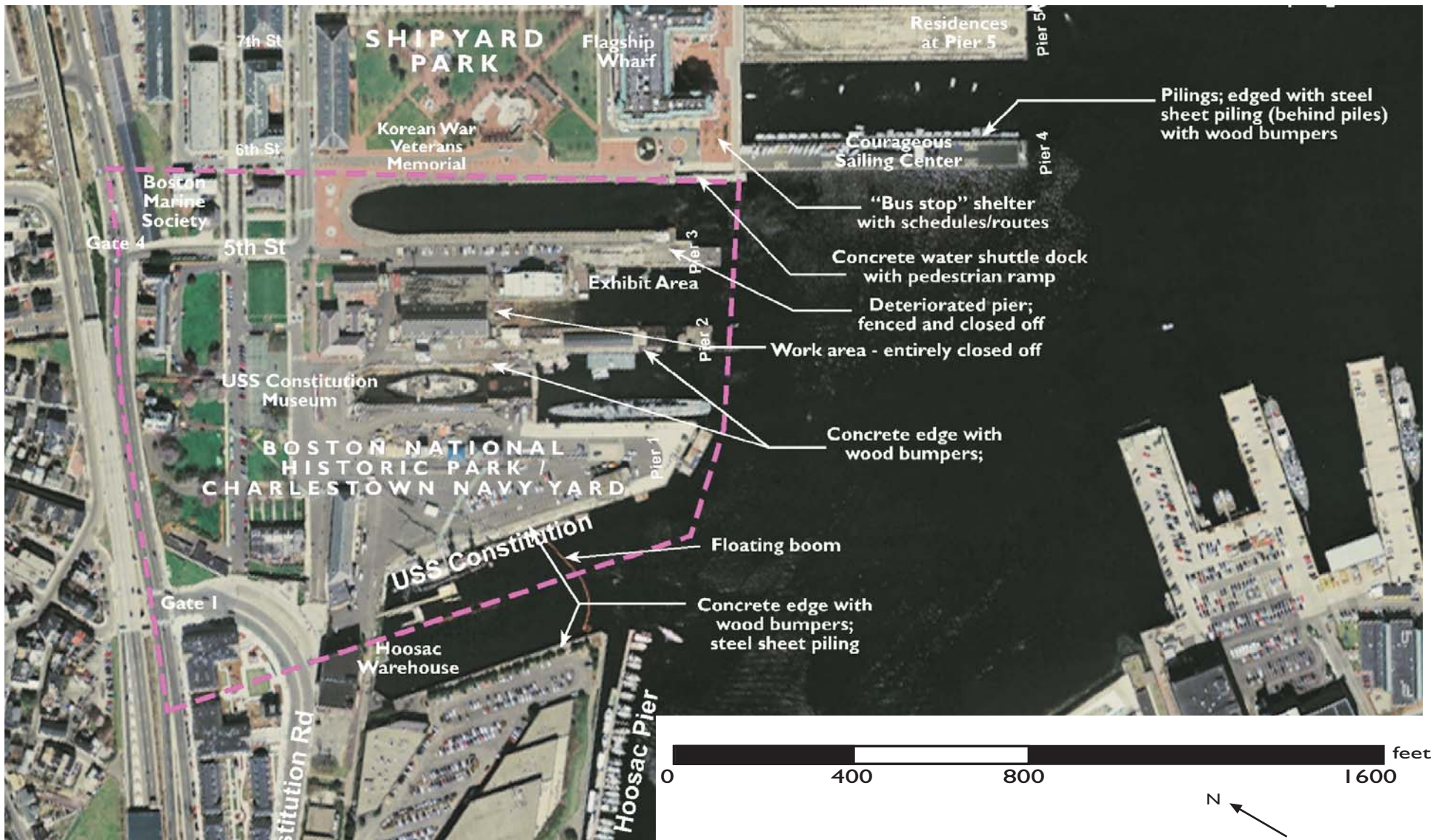
Figure 2-3
Existing Conditions Photos - Tudor Wharf
source: Fort Point Associates, Inc.



Figure 2-4
Existing Conditions Photos - Constitution Marina
source: Fort Point Associates, Inc.



Figure 2-5
Existing Conditions Photos - Constitution Center / Hoosac Pier
source: Fort Point Associates, Inc.



Note: This map is for planning purposes only and areas illustrated here are approximately located from large scale plans.

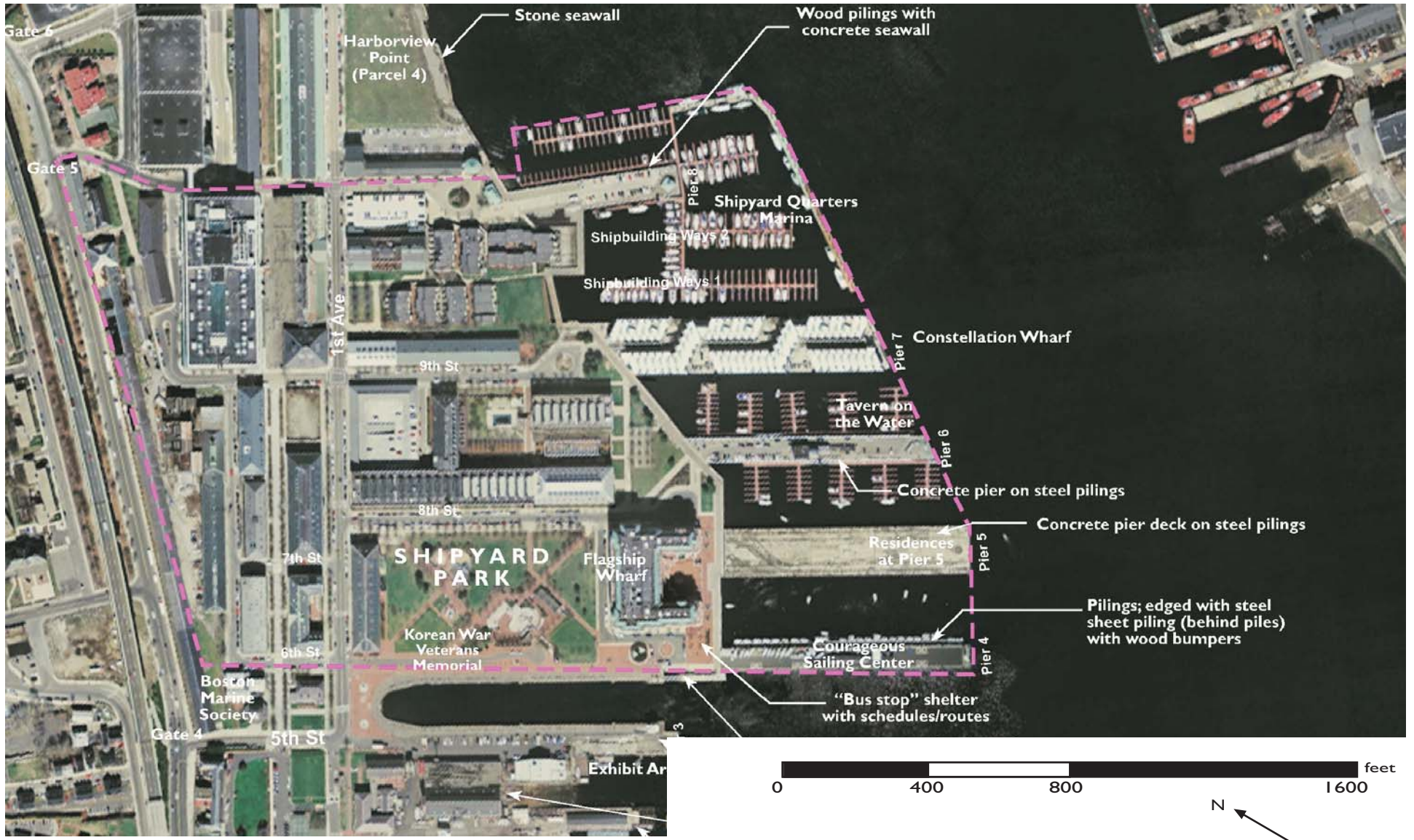
Figure 2-6
Planning Sub-area 'B'



Figure 2-7
Existing Conditions Photos - USS Constitution
source: Fort Point Associates, Inc.



Figure 2-8
Existing Conditions Photos - National Park Area
source: Fort Point Associates, Inc.



Note: This map is for planning purposes only and areas illustrated here are approximately located from large scale plans.

Figure 2-9
Planning Sub-area 'C'



Figure 2-10
Existing Conditions Photos - Pier 4 Water Transportation Terminal / Courageous Sailing Center
source: Fort Point Associates, Inc.



Figure 2-11
Existing Conditions Photos - Pier 5
source: Fort Point Associates, Inc.



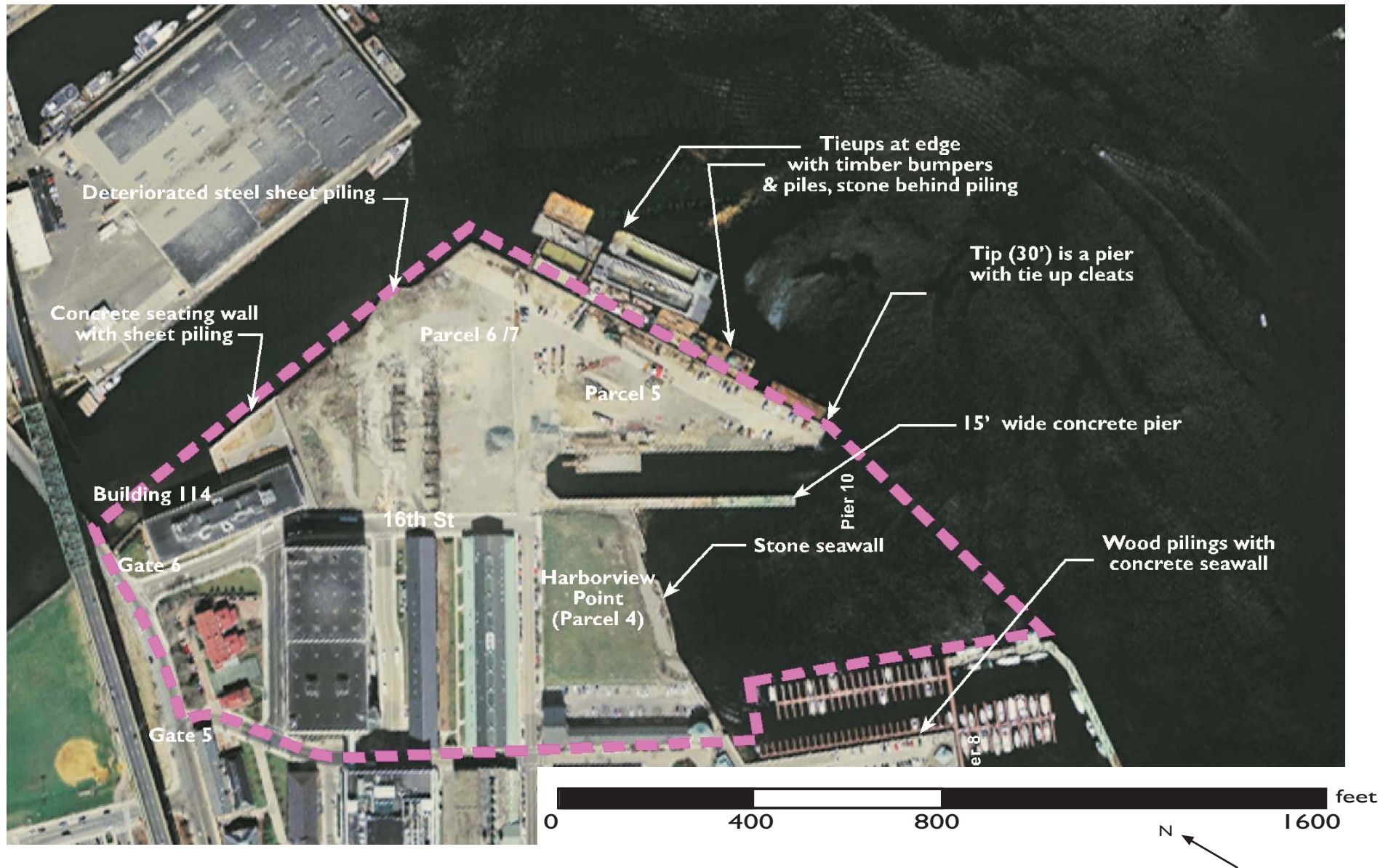
Figure 2-12
Existing Conditions Photos - Pier 6 (Shipyard Quarters Marina)
source: Fort Point Associates, Inc.



Figure 2-13
Existing Conditions Photos - Pier 7 (Constellation Wharf)
source: Fort Point Associates, Inc.



Figure 2-14
Existing Conditions Photos - Pier 8 (Shipyard Quarters Marina)
source: Fort Point Associates, Inc.



Note: This map is for planning purposes only and areas illustrated here are approximately located from large scale plans.

Figure 2-15
Planning Sub-area 'D'



Figure 2-16
Existing Conditions Photos - Parcel 4 / Harborview
source: Fort Point Associates, Inc.



Figure 2-17
Existing Conditions Photos - Yard's End
source: Fort Point Associates, Inc.



Figure 2-18
Existing Conditions Photos - Building 114
source: Fort Point Associates, Inc.

3.0 WATER-DEPENDENT USES

3.1 MARINAS

Active marina use within the Planning Area enlivens this historic body of water and continues a maritime heritage of water dependent activity. As more and more of the public enjoy this significant quality of life amenity, demand for marina facilities, slip space and transient boat dockage will continue to increase. Private marinas currently operate within the Planning Area and have strong demand from boaters through out the region.

Presently two marinas operate within the Planning Area including the Constitution Marina from the watersheet area west of the Constitution Center office complex (Hoosac Pier) and the Shipyard Quarters Marina, which surrounds Pier 6 and Pier 8.

Informational details describing the private marinas have been obtained directly from marina operators and are shown below.

3.1.1 CONSTITUTION MARINA

The Constitution Marina is a full service, year round marina located between Tudor Wharf and Massport's Hoosac Pier. The marina generally consists of approximately 300 slips accommodating a vessel size ranging from dinghies to 200-foot craft. See **Figure 3-1, Aerial View – Constitution Marina**.

The marina is managed by Bosport Docking and owned by Peter Davidoff and Tom Cox. Portions of the marina facility are leased from the Massachusetts Port Authority.

The marina facility includes the following characteristics:

- Linear Footage of Main Docking Floats – Approximately 3,500 linear feet
- Number of Slips – Approximately 300
- Type of Vessels – Ranges from Dinghies to 200-foot vessels. Primarily – foot boats.
- Ramps – Three gated pedestrian ramps from Harborwalk to dock level.
- Transient Docking Facilities – All vacant/unoccupied slips are used for transient docking when available and unoccupied by lessee for more than 24-hours. Arrangements are to be made with the Dockmaster in advance.
- Boating Support Facilities – Clubhouse with pool, laundry, restrooms, shower, lounging deck, inside storage, and overnight lodging. Marina-related surface parking. Water and electric hook-ups, pump-out facilities (mobile and fixed), and a haul-out facility.

- Vessel Repair – Minor repair and maintenance services available.

The marina owners do not have plans to expand the facility in the immediate future.

3.1.2 SHIPYARD QUARTERS MARINA (PIER 6 AND PIER 8)

The Shipyard Quarters Marina is also a year-round marina with extensive services and facilities at Piers 6 and 8. The Shipyard Quarters Marina offers 400 slips for lease. See **Figure 3-2, Aerial View – Shipyard Quarters Marina**. The Marina is owned and managed by Shipyard Quarters Marina Trust and Navy Yard Realty Trust.

The marina facility includes the following characteristics:

- Linear Footage of Docks – Approximately 2,300 linear feet at Pier 6 and 2,900 linear feet at Pier 8
- Slips – 400 (25-50 foot length)
- Ramps – Gated pedestrian ramps from Harborwalk to docks
- Transient Docking Facilities – 300-400 feet of transient docking capacity. Additional dockage available when unoccupied by lessee and arrangements are made with Marina Manager in advance.
- Boating Support Facilities – Restrooms, restaurant, laundry, parking at both Piers, pump-out boat, grills, cable TV, showers, telephone hookups, electrical hookups.

An expansion to the Pier 8 section of Shipyard Quarters Marina has been approved by the Department of Environmental Protection's Waterways Regulation Program, the Boston Conservation Commission and the Army Corps of Engineers. The expansion includes the addition of 47 slips and berthing for large vessels. The new slips are intended to accommodate vessels between 50 and 60 feet in length. The expansion also includes construction of a breakwater along the outer perimeter of the marina. The expansion will be supported by existing facilities present at Pier 8 and 6 as part of the Shipyard Quarters Marina complex. Construction is expected to commence in 2007.

3.2 PUBLIC BOATING PROGRAMS

Courageous Sailing Center was established in 1987 in a joint effort between the City of Boston Parks and Recreation Department and the late South Boston sailing enthusiast Harry McDonough. The Courageous Sailing Center (CSC) is headquartered on Pier 4 and provides a public sailing program for children and adults. The mission of CSC is to create a sailing center that would teach children from all economic and ethnic backgrounds lessons in partnership and trust while delivering "the ultimate sailing experience." Through

Courageous' Five-Step Program, young sailors develop essential life skills including leadership, communication, decision-making, and teamwork.

The Pier 4 facility includes approximately 50 sailboats, which are docked along a float system located along the northern side of the Pier. The float system consists of a series of eight foot wide by ten feet long concrete floats that are held by piles and extend from the base of the Pier, approximately five hundred feet to the end of the Pier. Additional floats are stored at a series of mooring located between Pier 4 and Pier 5.

On the landside, the facility includes a small two-story building which accommodates boat repair and classroom space at the ground level and administrative offices on the second level.

3.3 EXISTING WATER TRANSPORTATION FACILITIES

Public water transportation is provided to and from the Charlestown Navy Yard by the Massachusetts Bay Transportation Authority, which as of April 2007 operates one ferry route to and from the Navy Yard. The water shuttle route (F4), travels between Long Wharf, in downtown Boston, and Pier 4 in the Charlestown Navy Yard. The water shuttle route is illustrated on **Figure 3-3, Water Transportation Routes**.

Water shuttle patrons can access the MBTA ferry service via a water transportation terminal located at the base of Pier 4, and on its south side. The terminal consists of a handicap accessible ramp system and one sixty foot by one hundred and twenty foot concrete float.

An interior water transportation waiting area of approximately 3,000 square feet was required on the ground floor of the Flagship Wharf building in accordance with their Chapter 91 license conditions. At present, approximately 500 square feet is provided on the southeast portion of the ground floor for such a waiting area, and the remainder of the space is currently leased to the New England Historic Seaport.

The Long Wharf to Navy Yard water shuttle departs from both docks every 15 minutes during the a.m. and p.m. peak hours. During the off-peak hours, shuttles run every 30 minutes, and on weekends, shuttles operate every 30 minutes. See **Figure 3-4, Water Transportation Schedule** for the complete operating schedule for the Long Wharf to Charlestown Navy Yard shuttle.

In April, 2007, the City of Boston received approval for FY 2007 Water Transportation Funds from the Executive Office of Transportation for a new water transportation terminal at Pier 3. This project is a multi-phased plan to rededicate and redesign Pier 3 for use as a primary/hub water transportation terminal. Phase One of this project will include the

relocation of the Pier 4 MBTA Commuter Dock to Pier 3. Phase One will be complete by December 2007.

3.4 EXISTING WATER TAXI SERVICE

A privately operated water shuttle service is available in the Charlestown Navy Yard, offered by City Water Taxi. City Water Taxi operates a fleet of vessels that provide year round water transportation on an on-call basis. The water taxi service has docking access at three locations in the Navy Yard, including Tudor Wharf at the Marriott Residence Inn; the Pier 4 water transportation terminal, and the Shipyard Quarters Marina at Pier 8. Upon completion of the HarborView project, the water taxi service will also have access to the new dock installed at the base of 16th Street (Pier 10).

3.5 FUTURE WATER TRANSPORTATION FACILITIES

In the short term, there are no additional water transportation routes or terminals planned for the Charlestown Navy Yard. In the future, however, expanded water transportation terminals and service is envisioned as outlined in the Boston Inner Harbor Water Transportation Study, which was prepared by the BRA in 2000. See **Figure 3-5, Existing/Future Water Transportation Terminals.**

The Study recommended expansion of the Pier 4 water transportation terminal to include a second sixty foot by one hundred and twenty foot float to accommodate low freeboard water-taxi and public touch and go drop off. The expanded facility is shown in **Figure 3-6, Pier 3 & Pier 4 Mid Term.** The Study recommended the expansion of said facility in the year 2005.

As previously noted, the City of Boston received approval for FY 2007 Water Transportation Funds from the Executive Office of Transportation for a new water transportation terminal at Pier 3. This project is a multi-phased plan to rededicate and redesign Pier 3 for use as a primary/hub water transportation terminal. Phase One of this project will include the relocation of the Pier 4 MBTA Commuter Dock to Pier 3. Phase One will be complete by December 2007.

The Study also recommended construction of a secondary water transportation terminal in the Yard's End portion of the Navy Yard. This facility is recommended to consist of a single sixty by one hundred twenty foot float system, with a low freeboard at the seaward end to accommodate both public water transportation and water-taxi and public touch and go use. The future water transportation facility is shown on **Figure 3-7, Pier 10 Mid Term.**

It should be noted that as part of the Chapter 91 license for the development of Parcel 4 (Harborview), DEP required the construction a docking facility to accommodate water-taxi and drop-off uses. This facility is installed and will be operational by late summer 2007.

Lastly, a docking facility to accommodate water-taxi and public touch and go service is also recommended at Pier 1 in the National Historic Park area. The recommended facility is shown in **Figure 8, Pier 1/Constitution Mid-Term**.

3.6 NAVIGABLE CHANNELS AND FAIRWAYS

The watershed adjacent to the Planning Area includes federal navigation channels, which lead to the Charles River Lock and Dam system, the Mystic River Basin, which serves numerous maritime industrial uses and the Chelsea Creek industrial port area. See **Figure 3-9, Water Depths/Navigable Channels**.

The main shipping channel immediately seaward of the Charlestown Navy Yard is approximately 700 feet in width, with water depths of 40 feet at mean low water. The main shipping channel is used by a variety of vessels, including large oceangoing tankers, work vessels, and recreational motorized and sailboats.

A secondary channel, southeast of Sub-Areas A and B, ranges between 450 to 600 feet in width and includes average water depths of 30 feet at mean low water. This channel connects the Inner Harbor to the Charles River Dam and Gridley Locks and is primarily used by recreational boats, passenger vessels and occasional work barges.



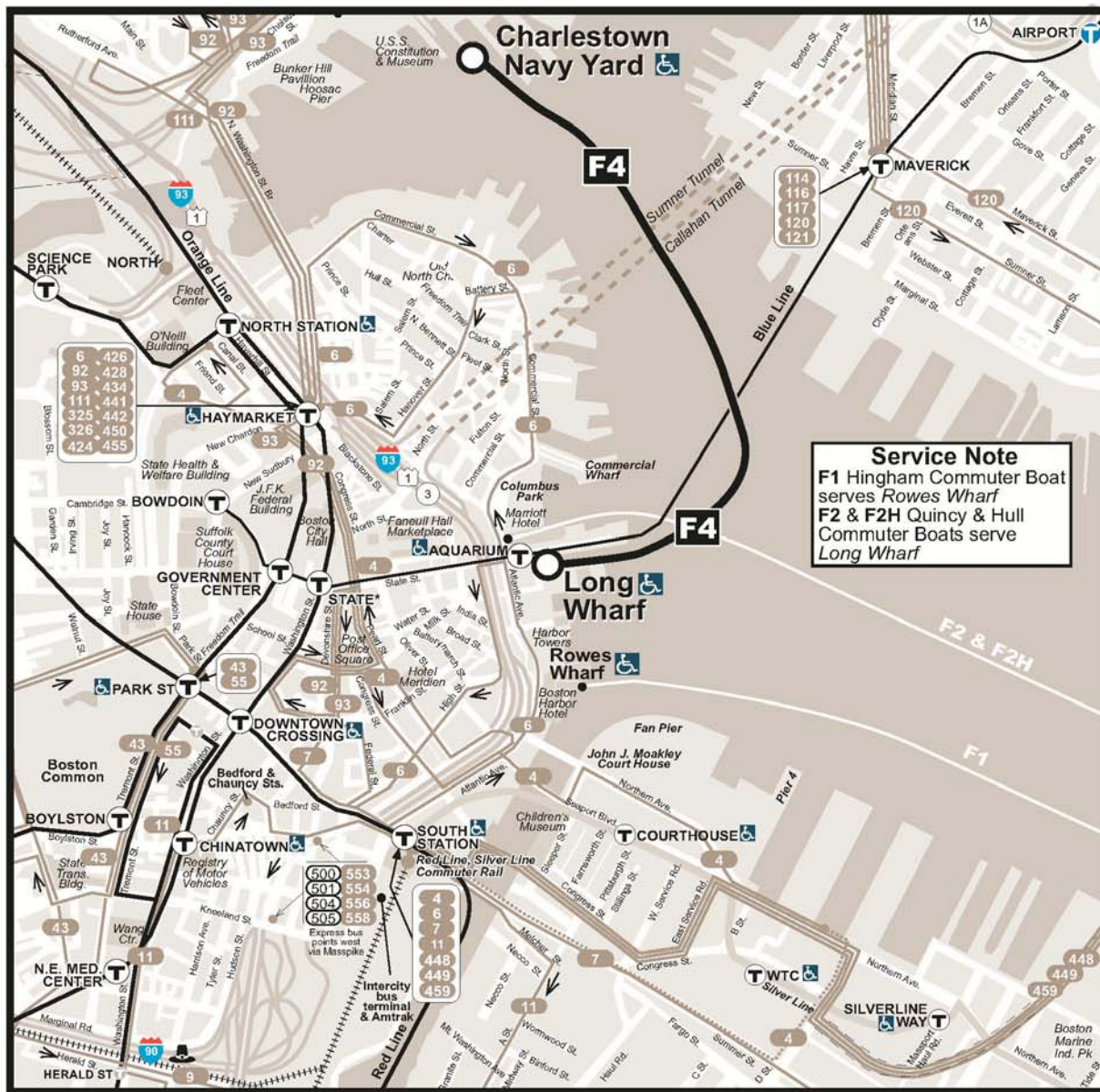
Figure 3-1
Aerial View - Constitution Marina
Source: MassGIS



Pier 6
Shipyard Quarters Marina

Pier 8
Shipyard Quarters Marina

Figure 3-2
Aerial View - Shipyard Quarters Marina
Source: MassGIS



Service Note
 F1 Hingham Commuter Boat serves Rows Wharf
 F2 & F2H Quincy & Hull Commuter Boats serve Long Wharf

T Inner Harbor Ferries

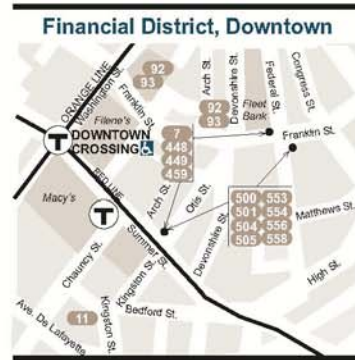
SPRING 2007



Commuter boats are accessible to persons with disabilities.

F4 Boston - Charlestown

Long Wharf Charlestown Navy Yard



MASS TRANSIT reduces air pollution and conserves natural resources. THANKS for riding with us.



Figure 3-3
 Water Transportation Routes
 Source: MBTA, 2007

F4 Boston - Charlestown

Long Wharf Charlestown Navy Yard

Weekday Schedule

DEPART Boston (Long Wharf)	CHARLESTOWN Navy Yard	ARRIVE Boston (Long Wharf)	DEPART Charlestown Navy Yard	ARRIVE Boston (Long Wharf)
6:30A	6:40A	6:45A	6:55A	7:10
6:45	6:55	7:00	7:10	7:25
7:00	7:10	7:15	7:25	7:40
7:15	7:25	7:30	7:40	7:55
7:30	7:40	7:45	7:55	8:10
7:45	7:55	8:00	8:10	8:25
8:00	8:10	8:15	8:25	8:40
8:15	8:25	8:30	8:40	8:55
8:30	8:40	8:45	8:55	9:10
8:45	8:55	9:00	9:10	9:25
9:00	9:10	9:15	9:25	9:40
9:30	9:40	9:45	9:55	10:10
10:00	10:10	10:15	10:25	10:40
10:30	10:40	10:45	10:55	11:10
11:00	11:10	11:15	11:25	11:45
11:30	11:40	11:45	11:55	12:00N
12:00N	12:10P	12:15P	12:25P	12:30P
12:30P	12:40	12:45	12:55	1:00
1:00	1:10	1:15	1:25	1:30
1:30	1:40	1:45	1:55	2:00
2:00	2:10	2:15	2:25	2:30
2:30	2:40	2:45	2:55	3:00
3:00	3:10	3:15	3:25	3:30
3:30	3:40	3:45	3:55	3:45
3:45	3:55	4:00	4:10	4:00
4:00	4:10	4:15	4:25	4:15
4:15	4:25	4:30	4:40	4:30
4:30	4:40	4:45	4:55	4:45
4:45	4:55	5:00	5:10	5:00
5:00	5:10	5:15	5:25	5:15
5:15	5:25	5:30	5:40	5:30
5:30	5:40	5:45	5:55	5:45
5:45	5:55	6:00	6:10	6:00
6:00	6:10	6:15	6:25	6:15
6:15	6:25	6:30	6:40	6:30
6:30	6:40	6:45	6:55	7:00
7:00	7:10	7:15	7:25	7:30
7:30	7:40	7:45	7:55	8:00
8:00	8:10	8:15	8:25	

Saturday/Sunday/Holiday* Schedule

DEPART Boston (Long Wharf)	CHARLESTOWN Navy Yard	ARRIVE Boston (Long Wharf)	DEPART Charlestown Navy Yard	ARRIVE Boston (Long Wharf)
10:00A	10:10A	10:15A	10:25A	10:40
10:30	10:40	10:45	10:55	11:10
11:00	11:10	11:15	11:25	11:40
11:30	11:40	11:45	11:55	12:00N
12:00N	12:10P	12:15P	12:25P	12:30
12:30	12:40	12:45	12:55	1:00
1:00	1:10	1:15	1:25	1:30
1:30	1:40	1:45	1:55	2:00
2:00	2:10	2:15	2:25	2:30
2:30	2:40	2:45	2:55	3:00
3:00	3:10	3:15	3:25	3:30
3:30	3:40	3:45	3:55	4:00
4:00	4:10	4:15	4:25	4:30
4:30	4:40	4:45	4:55	5:00
5:00	5:10	5:15	5:25	5:30
5:30	5:40	5:45	5:55	6:00
6:00	6:10	6:15	6:25	

NO SERVICE on Christmas Day and New Years Day. Use MBTA Bus Route 93 instead.

*Saturday/Sunday service provided on Memorial, Independence, Labor, Thanksgiving days.

AM-light type **PM-bold type**

- Inner Harbor Ferries are accessible to persons with disabilities
- No audible radios
- Bicycles allowed with restrictions; call for details
- Baby carriages must be folded
- NO SMOKING on MBTA property, ever
- For lost & found, call the carrier

Inner Harbor Ferries operate reliably year-round. For service updates during EXTREME weather, call the carrier or SmarTraveler at 617-374-1234*8

Ride Guide



Cash fares are collected on-board the ferry.

- One Way, Adult \$1.50
- Seniors, Children ages 5-11, & Persons w/disabilities with Transportation Access Pass \$0.75
- Blind persons w/Mass. Commission for Blind ID..... Free
- Children under 5 years Free
- 60-trip ticket \$81.00
- Boat, Zone 1-8, Combo+, and visitor unlimited ride passes.
- Bus and subway rides are FREE with these passes.



Please purchase tickets BEFORE boarding boat.



Inner Harbor Ferry Service is provided by Harbor Cruises, LLC, under contract to the Massachusetts Bay Transportation Authority.

Harbor Cruises, LLC
One Long Wharf, Boston MA 02110
617-227-4321

For up-to-the-minute info on ALL MBTA and MBTA-contracted services, call 617-222-3200 (TDD 222-5146) visit mbta.com, or call SmarTraveler 617-374-1234*8



All times approximate. Schedules subject to change. Your fare CANNOT guarantee a seat. Bus-ferry and train-ferry connections CANNOT be guaranteed.

Financial District, Downtown



MASS TRANSIT reduces air pollution and conserves natural resources. THANKS for riding with us.



Massachusetts Bay Transportation Authority
Thanks for riding with us!

Figure 3-4
Water Transportation Schedule
Source: MBTA, 2007

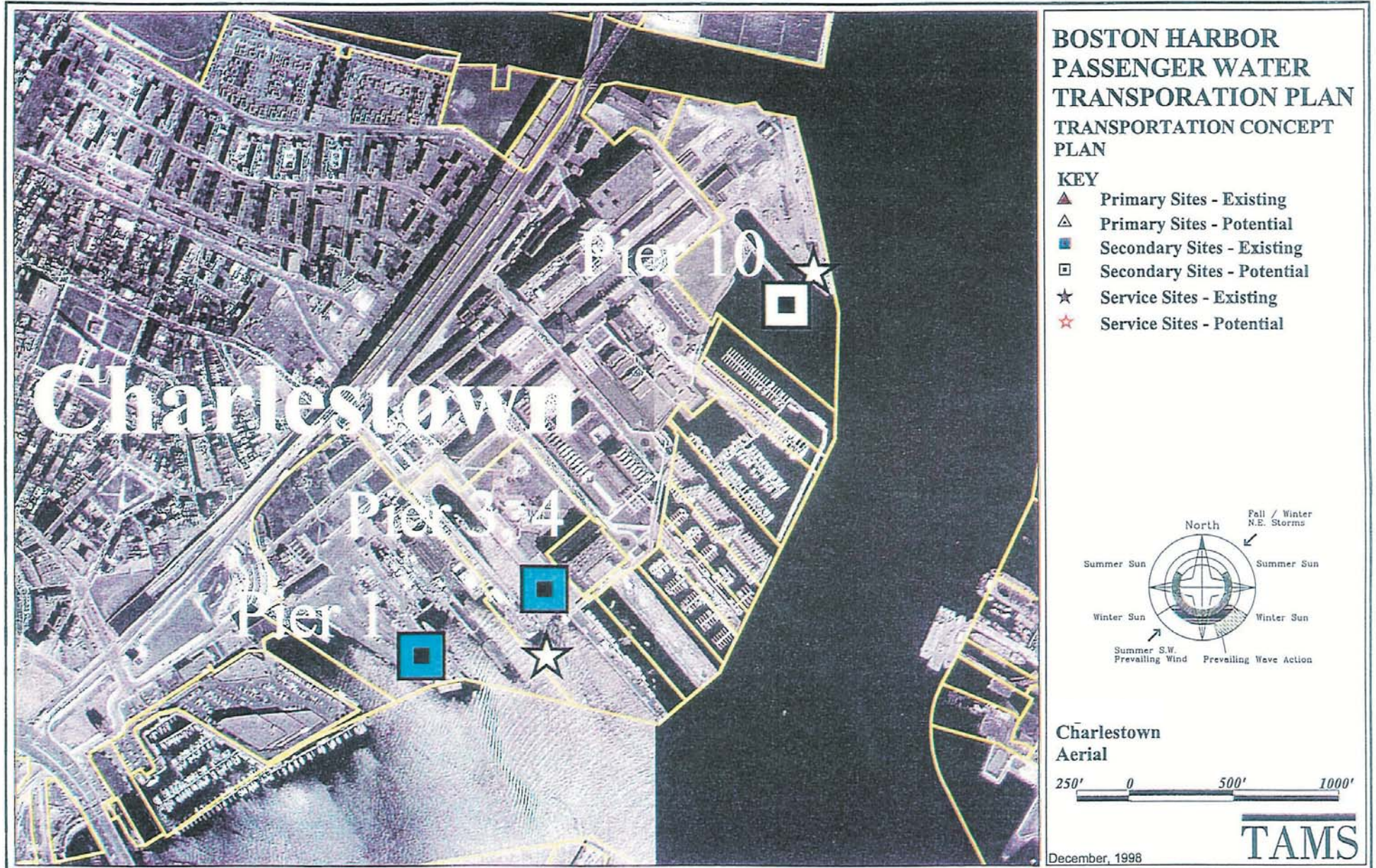


Figure 3-5
Existing / Future Water Transportation Terminals
source: BRA, 2000

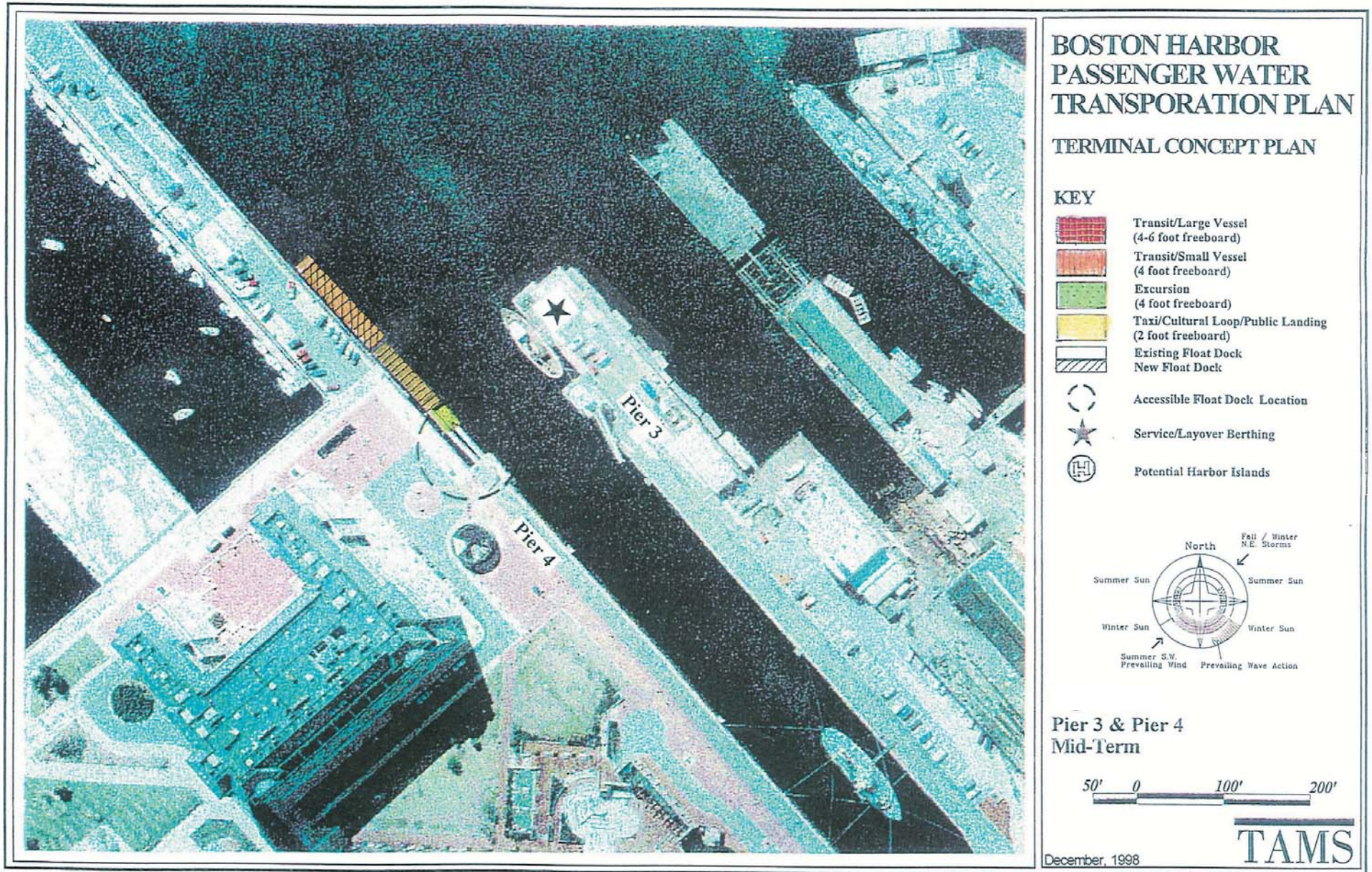


Figure 3-6
Pier 3 & Pier 4 Mid-Term
source: BRA, 2000

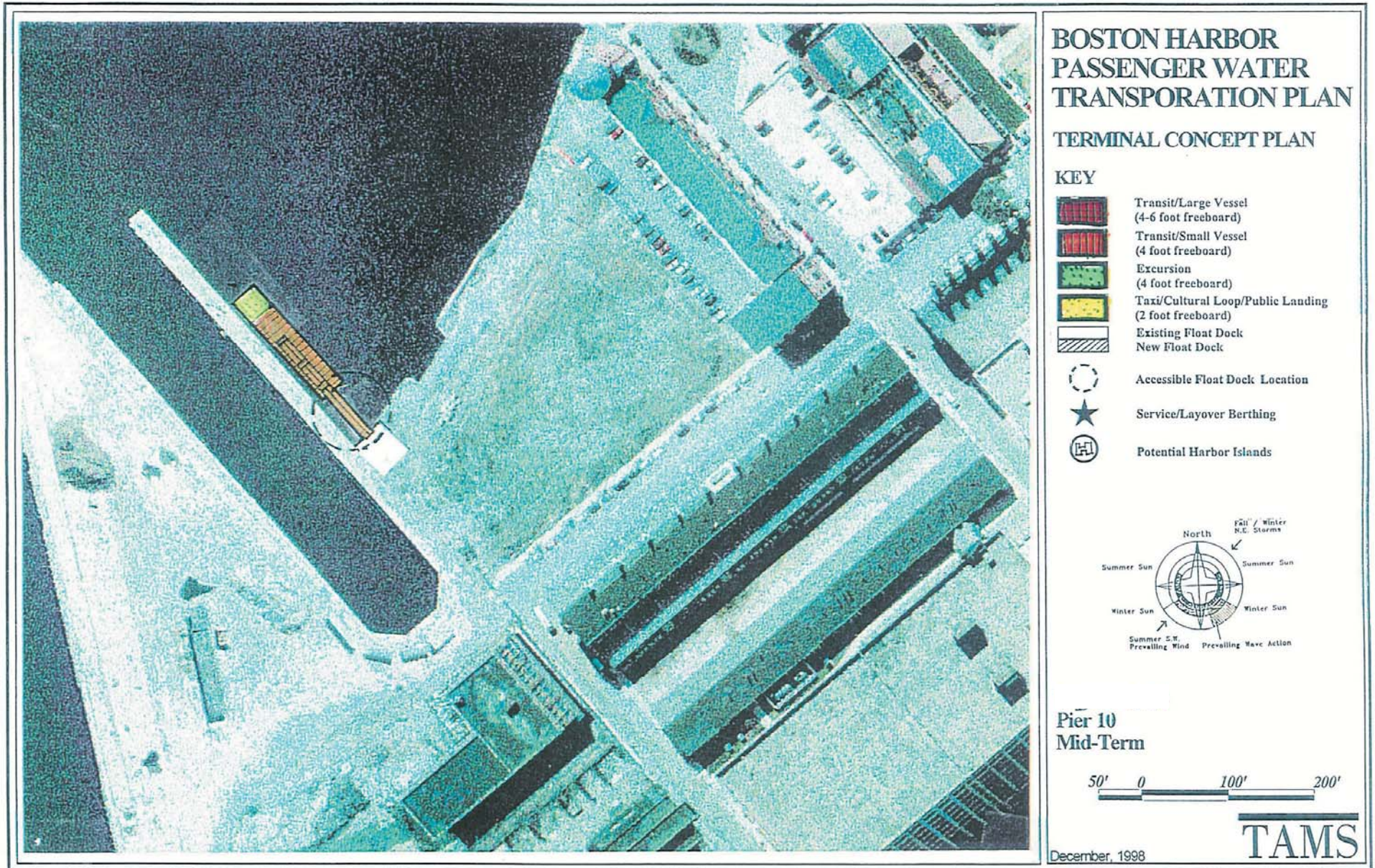


Figure 3-7
Pier 10 Mid-Term
 source: BRA, 2000

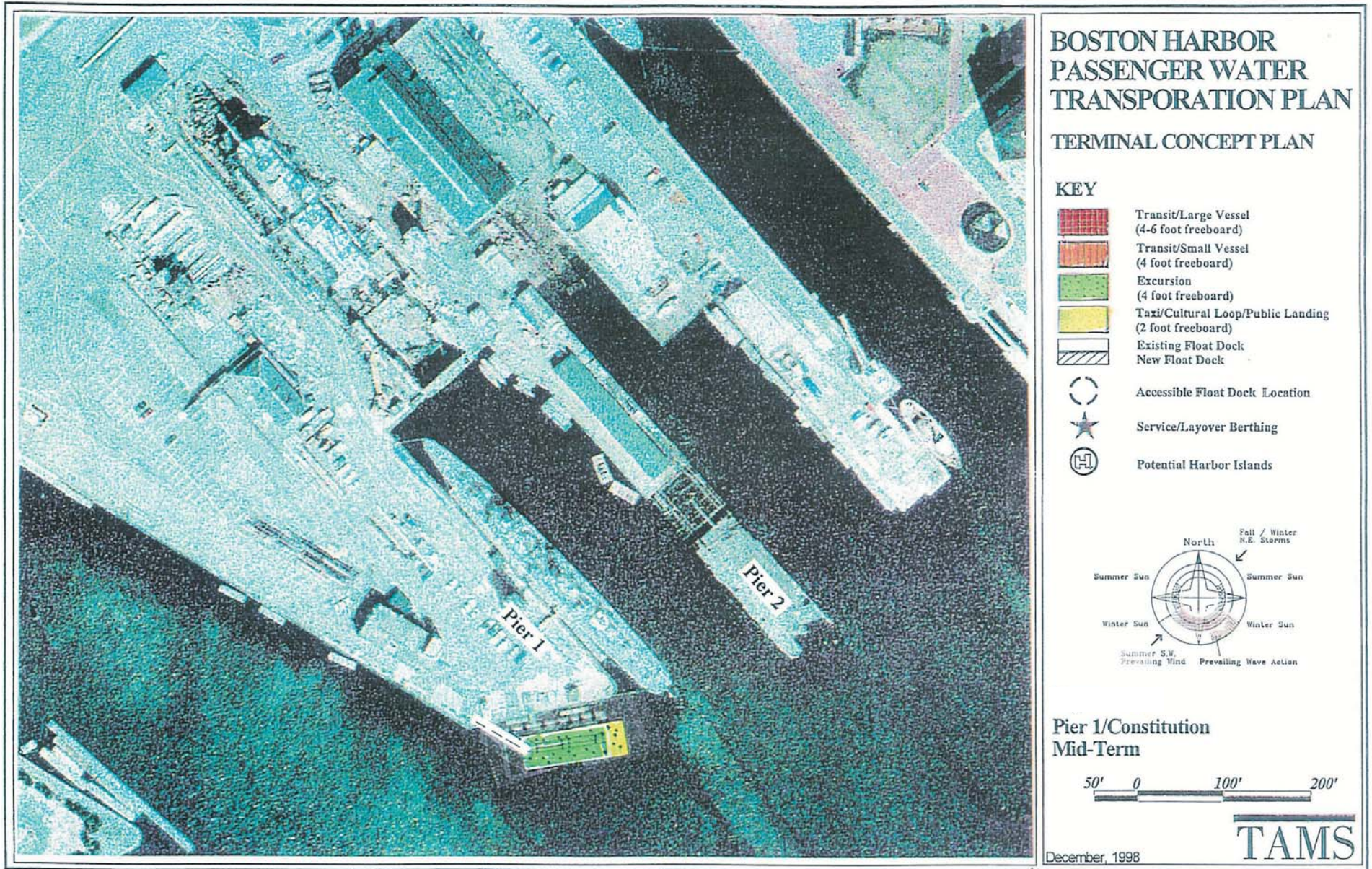
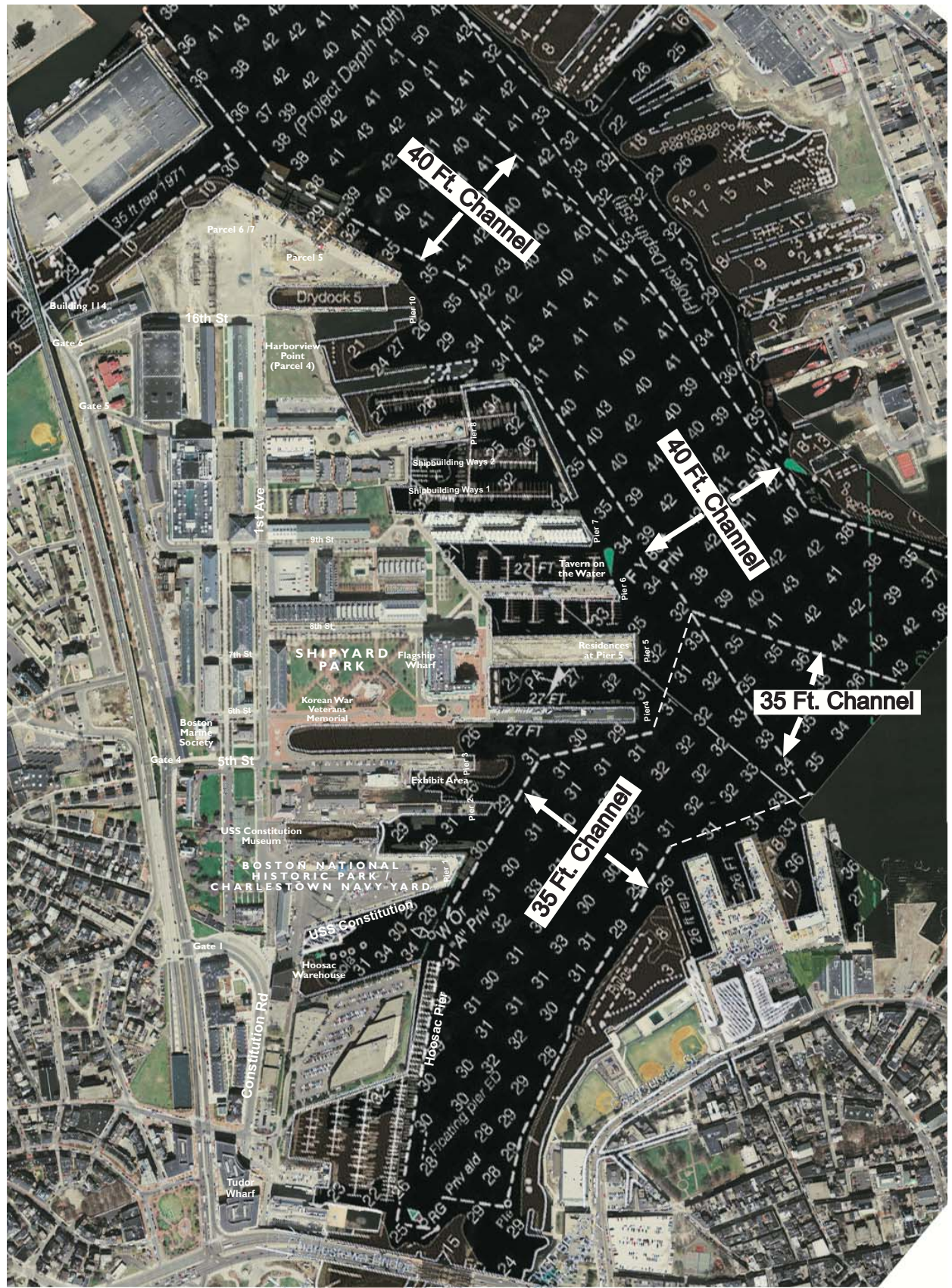


Figure 3-8
Pier 1 / Constitution Mid-Term
source: BRA, 2000



Note: This map is for planning purposes only and areas illustrated here are approximately located from large scale plans.

Figure 3-9
Water Depths/Navigable Channels
Sources: NOAA - 1995, U.S. Army Corps of Engineers - 2000

4.0 PIER 5 WATER-DEPENDENT USE MANAGEMENT PLAN

4.1 INTRODUCTION

As noted in Section One of this document, the Secretary's decision on the City of Boston's Municipal Harbor Plan required the development of guidelines to protect against potential conflicts between the proposed private uses over flowed tidelands and any water-dependent and public uses on and near the Project site. The guidelines were required to, at a minimum, address factors outlined in 310 CMR 9.51(1) of the Waterways Regulations, which include:

- Presence of noise and odors;
- Type of equipment and accessory services;
- Hours of operation and spatial patterns of activity;
- Traffic flows and parking needs;
- Size and composition of user groups;
- Privacy and security requirements; and
- Requirements for public infrastructure.

Adjacent use compatibility issues can arise when differing land uses are located near each other. Mixed-use development areas, such as waterfront areas are prime areas where such conflicts can be apparent and create conflicts between the various uses and user groups.

This Chapter outlines a series of dimensional, operational, programmatic and construction related guidelines for the development and management of Pier 5, and is intended to mitigate any potential conflicts between the proposed private uses on Pier 5 and the existing and any planned water-dependent uses at and adjacent to the Project site.

4.2 DIMENSIONAL GUIDELINES

In this section, the Plan details applicable dimensional guidelines, which are imposed by various federal, state and local regulatory agencies, and intended to protect and promote water-dependent uses on and adjacent to the Project site. The physical separation of the proposed development from the water dependent and public activity uses along the pier edge will go a long way toward minimizing potential conflicts. The Plan outlines dimensional requirements for both the Pier and its adjacent watershed.

4.2.1 LANDSIDE DIMENSIONAL/USE LIMITATIONS

In accordance with the Waterways Regulations at 310 CMR 9.51, any Project must preserve the site's capacity to serve water-dependent use. This standard is met by ensuring that any nonwater-dependent building is setback from the waterfront, a sufficient amount of open space is provided onsite, and buildings are relatively modest in size along the immediate waterfront.

Water-Dependent Use Zone: As stipulated in 310 CMR 9.51(3)(c), new nonwater-dependent buildings, or parking for any use cannot be located within a water-dependent use zone (WDUZ). The WDUZ at the end of a pier is equal to 25% of the distance from the end of the pier to its base, and can be no less than 25 feet, and no more than 100 feet. Along the sides of piers the WDUZ is equal to 15% of the width of the Pier, and no less than 10 feet.

The distance from the end of Pier 5 to its base is approximately 650 feet. As a result, the WDUZ for Pier 5 requires the maximum setback of 100 feet from the end of the pier. Pier 5 is approximately 125 feet wide, which requires a WDUZ setback of approximately 19 feet along each side of the Pier.

Open Space: In accordance with 310 CMR 9.51(3)(d), no more than 50% of a Project site may be occupied by nonwater-dependent buildings. The regulations require that, at a minimum, one square foot of open space be provided on the project site, for each square foot of tidelands occupied by the footprint of buildings containing nonwater-dependent uses. The decision on the City of Boston's Municipal Harbor Plan (MHP) reaffirmed this requirement by requiring that any Project which proposes to construct Facilities of Private Tenancy (i.e. residences) over flowed tidelands must provide 50% of the site as open space and no parking may occur seaward of the high water line.

Water-Dependent Use and Public Access: In addition to reserving 50% of the site as open space, the regulations require that all exterior open space must be available to the public 24 hours a day for passive and active recreational use and include pedestrian amenities such as seating, lighting, trash receptacles and landscaping. Onsite exterior open space must also be available to the public twenty-four hours a day. 310 CMR 9.53(2)(a) and 9.52(2)(a) further requires that a Project provide one or more facilities that promote public water-based activity on the Project site.

Height: Lastly, pursuant to 310 CMR 9.51(3)(e), new or expanded buildings for nonwater-dependent use cannot exceed 55 feet in height within 100 feet of the high water mark. Since the entirety of Pier 5 is located over flowed tidelands, the maximum allowable building height on the Pier is 55 feet.

The above referenced upland dimensional and use limitations provide the physical framework to ensure that there are no conflicts between nonwater-dependent and water-dependent uses at the Pier 5 site. The building setback requirements and height limitations ensure that the water's edge is set aside to support water-dependent use, and the lot coverage requirements reserve a substantial portion of the site for water-dependent use, such as public open space and public access.

4.2.2 WATERSIDE DIMENSIONAL REQUIREMENTS

The Army Corps of Engineers and the Waterways Regulation Program impose certain dimensional criteria for any proposed activities with navigable waterways in order to preserve and protect the public's rights of navigation within waters of Nations and State's coastal waters.

In accordance with the Waterways Regulations at 310 CMR 9.35, a Project shall not significantly interfere with public rights of navigation, which include the right to conduct any activity which involves the movement of a vessel or other watercraft, the transport or the loading/unloading of persons from a watercraft, and the natural derivative thereof.

This standard is met by adhering to the following dimensional requirements of both the Waterways Program and Army Corps of Engineers.

Harbor Lines: No structures or floats shall extend seaward of any state harbor line, unless the structure or float is specifically authorized by law.

A State Harbor line is located at the seaward end of Pier 5. As a result, no floats or pile-supported structures will be allowed at the seaward end of Pier 5 as illustrated on Figure 4-1, Pier Management Guidelines.. However, the end of the Pier will be made available for special event berthing such as Tall Ships in order to further activate the Project site and its public open space.

Navigational Channels: No structures or floats shall extend into or over established navigational channels so as to impede free navigational passage.

As noted in Section 3 of this Plan a Federal Channel is located approximately 400 feet from the seaward end of Pier 5. See prior **Figure 3-9, Water Depths/Navigable Channels**.

Navigable Access for Abutters: A minimum setback of twenty-five (25) feet shall be maintained from the property line separating Pier 5 and Pier 4. A corresponding minimum navigable fairway of fifty (50) feet shall be preserved along the property boundary between the two piers.

The above-referenced waterside dimensional guidelines are intended to ensure that safe navigational access is maintained between piers, and that any proposed in-water facility(s) will not impede navigation in surrounding navigational channels.

In accordance with the above referenced standards, no berthing is allowed along the northeastern side of Pier 5, in order to preserve navigable access to the adjacent Shipyard Quarters Marina.

Water-dependent structures and floats would be allowed along the southern side of the Pier in conformance with dimensional guidelines detailed in **Figure 4-1, Pier Management Guidelines**. A compliant design for a recreational and public facility is depicted in **Figure 4-2, Pier 5 Management Plan – I**.

In light of concerns expressed by the Courageous Sailing Center, and based upon comment letters received from various state and local agencies, the Proponent of the Pier 5 project has agreed to eliminate the proposed marina at Pier 5. However, in the event Courageous Sailing Center or another non-profit public sailing program ceases to operate at Pier 4, the Proponent will be able to pursue approval of a marina consistent with the dimensional limitations outlined in this section. As depicted in **Figure 4-3, Pier 5 Management Plan II**, there is currently no plan to construct a marina associated with the Pier 5 Project.

4.3 CONSTRUCTION MATERIALS/TECHNIQUES

Nuisance sources that may create noise or odors in a water-dependent use environment and potentially impact an abutting residential use typically include sources associated with industrial port operations such as those found in the Moran and Conley terminals. In these instances, ship repair/construction, off and on-loading of vessels, as well as truck traffic associated with such uses have the potential to create conflict between user groups.

In the Pier 5 portion of the Planning area, such typical sources of conflict are not present. While the adjacent marina, sailing center and water shuttle terminal create noise associated with lanyards and associated hardware hitting masts, vessel engine sound, horn blasts, conversation from those tending to their nearby vessels and noise from general vessel maintenance, these sources do not typically engender conflict and are commonly accepted as part of living along the waterfront, as evidenced by the existing residential structures in the immediate vicinity at Flagship Wharf, Parris Landing and Constellation Wharf.

Nonetheless, such sound has the potential to penetrate residential structures through walls, doors and windows. In response to these outside noise sources building design should incorporate sound abatement techniques to mitigate potential noise infiltration through windows, walls and doors.

4.3.1 WINDOW SOUND TREATMENTS

Window treatments such as double pane glass and securely weatherstripped windows can be an effective tool in reducing sound transmission through windows and window openings. The addition of shutters on the interior of windows may also reduce sound penetration through window and would be a viable partial solution during nighttime hours.

4.3.2 WALL TREATMENTS

In traditional residential construction, wall framing and drywall covering transmit sound from the outside noise through the wall into the residence. Wall studs on occasion actually transfer sound as it penetrates the exterior wall into the wall itself before reverberating into the residence. Inserting dense fiberglass insulation into the wall may dampen the sound waves.

4.3.3 DOOR TREATMENTS

Doors treatments are another potential source of sound attenuation. Seals surrounding doors are helpful in creating an airtight opening for thermal and sound abatement purposes. Another approach is to install two doors, which are separated by the width of the exterior wall.

4.4 MANAGEMENT/OPERATIONAL INSTRUMENTS

The operation of water-dependent uses within a mixed-use environment can produce sources of potential conflict.

One method of reducing this potential conflict is to ensure that all prospective owners and tenants are fully aware of the surrounding environment and uses. This will be accomplished through the inclusion of disclosure statements in sales, ownership or leasing documents which reference the commitment to public access, active programming of public spaces including year round day and evening events throughout the Project's indoor and outdoor public spaces, the presence of existing and nearby water-dependent uses and activities, the regulatory protection granted to such uses, the hours of operation, and the associated noise and activity levels.

Should developers of mixed use projects request an extended term license, the BRA requests that DEP consult with the City regarding the implementation of the Charlestown Navy Yard Waterfront Activation Plan as the basis for an extended term. If DEP determines that additional public benefits above those directly provided through the implementation of the Network Plan are required for extended license terms, such benefits should be directed to support the Waterfront Network Fund and the Maritime Interactive Park as referenced in the *Charlestown Navy Yard Waterfront Activation Plan*. Such benefits should also be applied to support water transportation service, including subsidies, in the Charlestown Navy Yard. Such benefits may be

provided in the form of an annual subsidy subsequent to the granting of a Chapter 91 License. Through these means, ongoing activation and water transportation uses can be encouraged.

4.5 TRAFFIC FLOW AND PEDESTRIAN ACCESS

Vehicular access to the Project site is from Eighth Street, which currently ends at a cul-de-sac located northeast of the Flagship Wharf building and northwest of the Project site. A new site drive will connect to this cul-de-sac and provide a travel way to Pier 5. Once on the Pier 5 property, this drive travels approximately 130 feet between the north elevation of the building structure at the ground level, and a column line, which delineates the outer limits of the building's upper level footprint. The drive culminates in a cul-de-sac turnaround, also within ground floor footprint of the building, which will serve as a valet service point and allow automobiles to reverse directions when leaving the property and traveling back to Eighth Street or the Flagship Wharf Parking Garage. Service and emergency vehicles will also utilize this circulation pattern to access Pier 5.

The access drive will not cross the Harborwalk. Rather the access road will be placed toward the center of the pier and under the proposed building. The Harborwalk will be extended around the perimeter of Pier 5, thus reducing the potential for pedestrian/vehicular conflicts.. In order to ensure that the pedestrian access connection at the base of Pier 5 is maintained and not adversely affected by the proposed project, certain layout, visual and physical elements must be incorporated into the final access drive design.

In particular, the access drive should consist of a raised surface of at least four (4) inches as it transitions from the Eighth Street cul-de-sac to the formal site drive. The layout of the access drive shall be curvilinear so as to further reduce vehicular speeds entering the Project site.

The surface the site drive, where it crosses the pedestrian route, shall be a material that while conducive to vehicular traffic, is visually and physically pedestrian friendly (i.e. brick pavers).

The entrance to the site from the Eighth Street cul-de-sac and the exit from the site at the base of Pier 5 shall include signage indicating reduced speeds and a "Pedestrian Zone". Signage shall also be provided along the pedestrian route on both sides of the access drive to inform pedestrians of the vehicular crossing.

In addition, the portion of the access drive that transects the existing pedestrian route shall be outlined by a series of bollards to protect and alert pedestrians of the vehicular crossing.

These measures should ensure that any potential conflict between the proposed nonwater-dependent use at Pier 5 and existing public access are minimized.

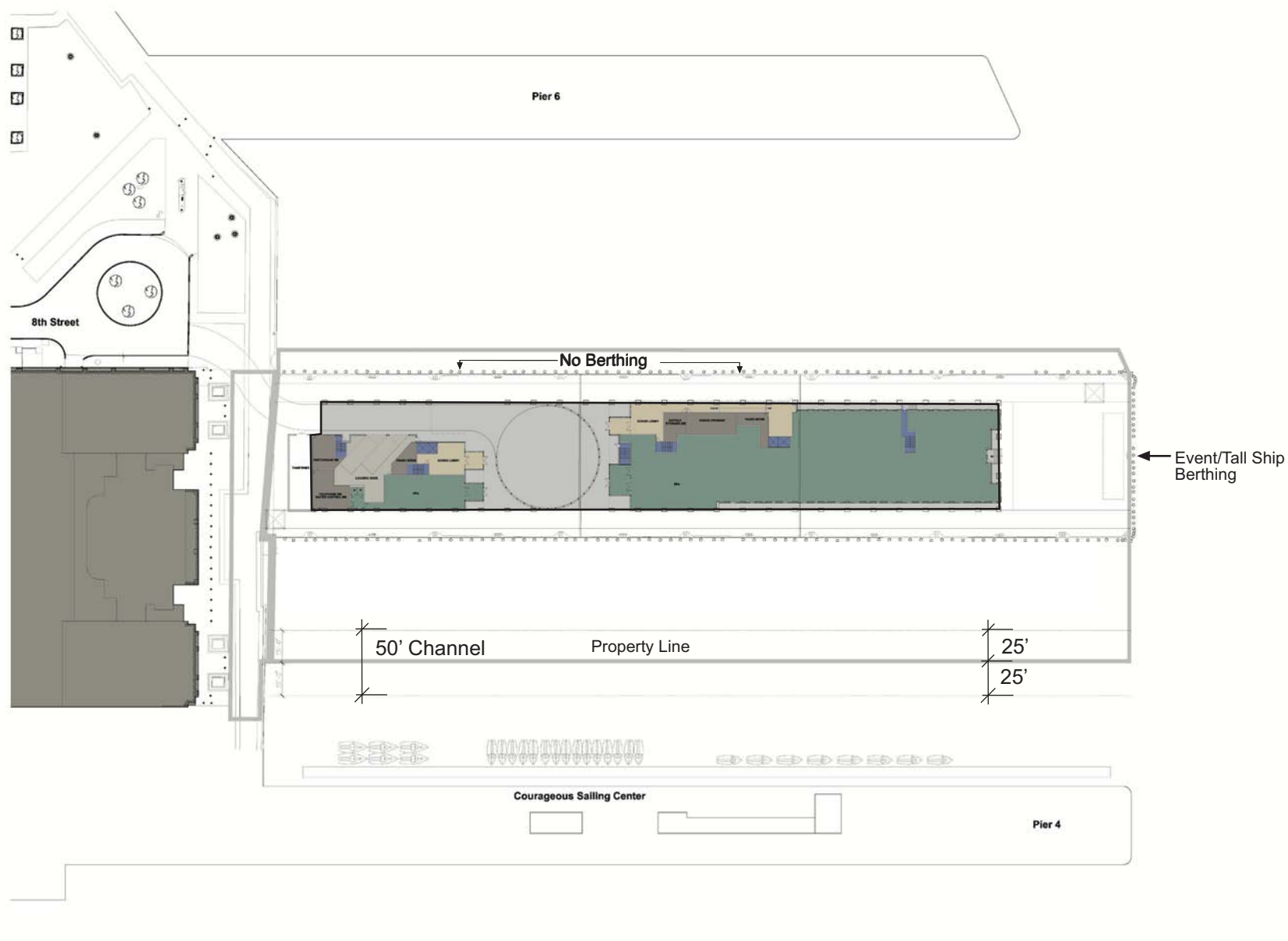


Figure 4-1: Pier Management Guidelines

Source: CBT Architects

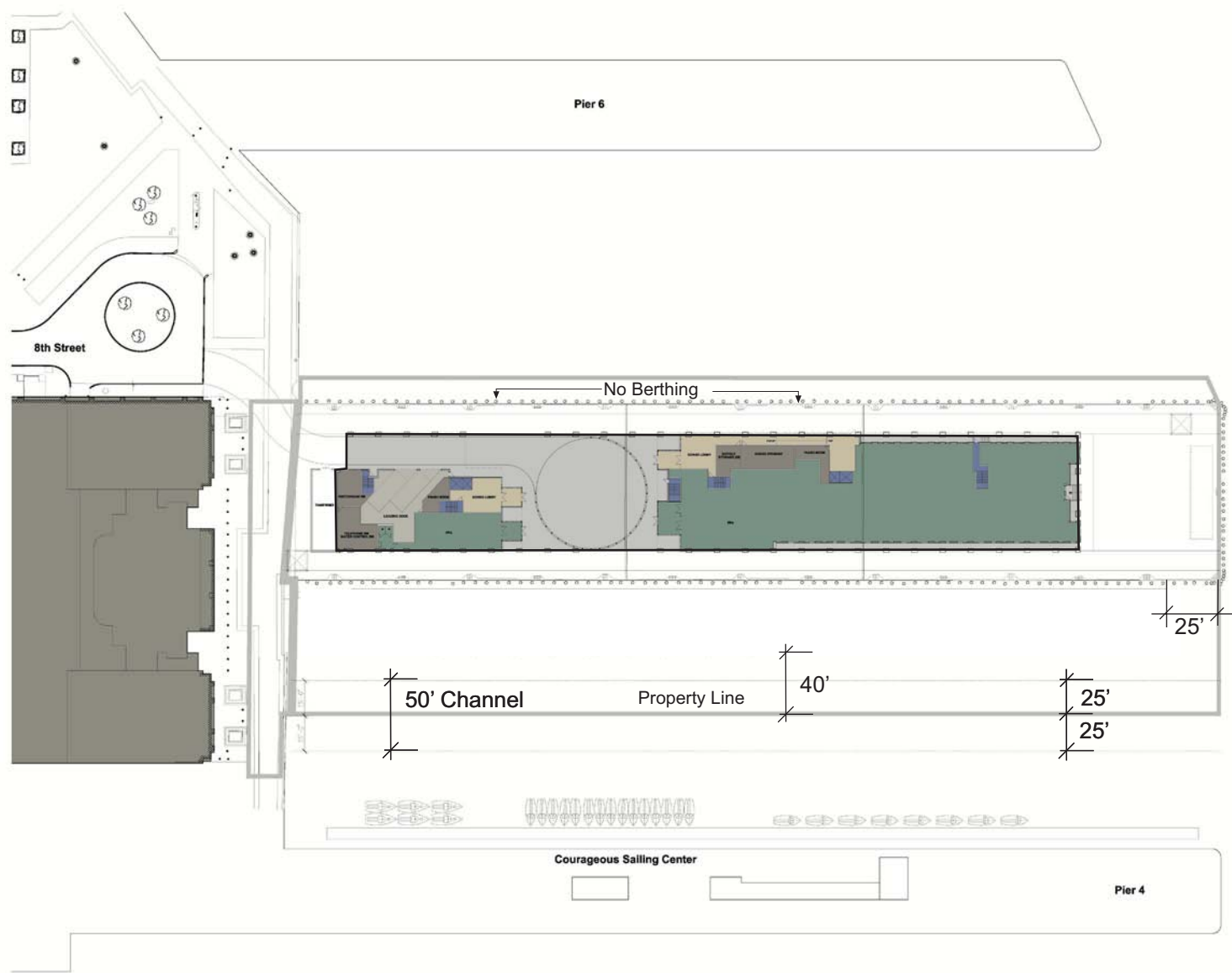


Figure 4-2: Pier 5 Management Plan - I

Source: CBT Architects

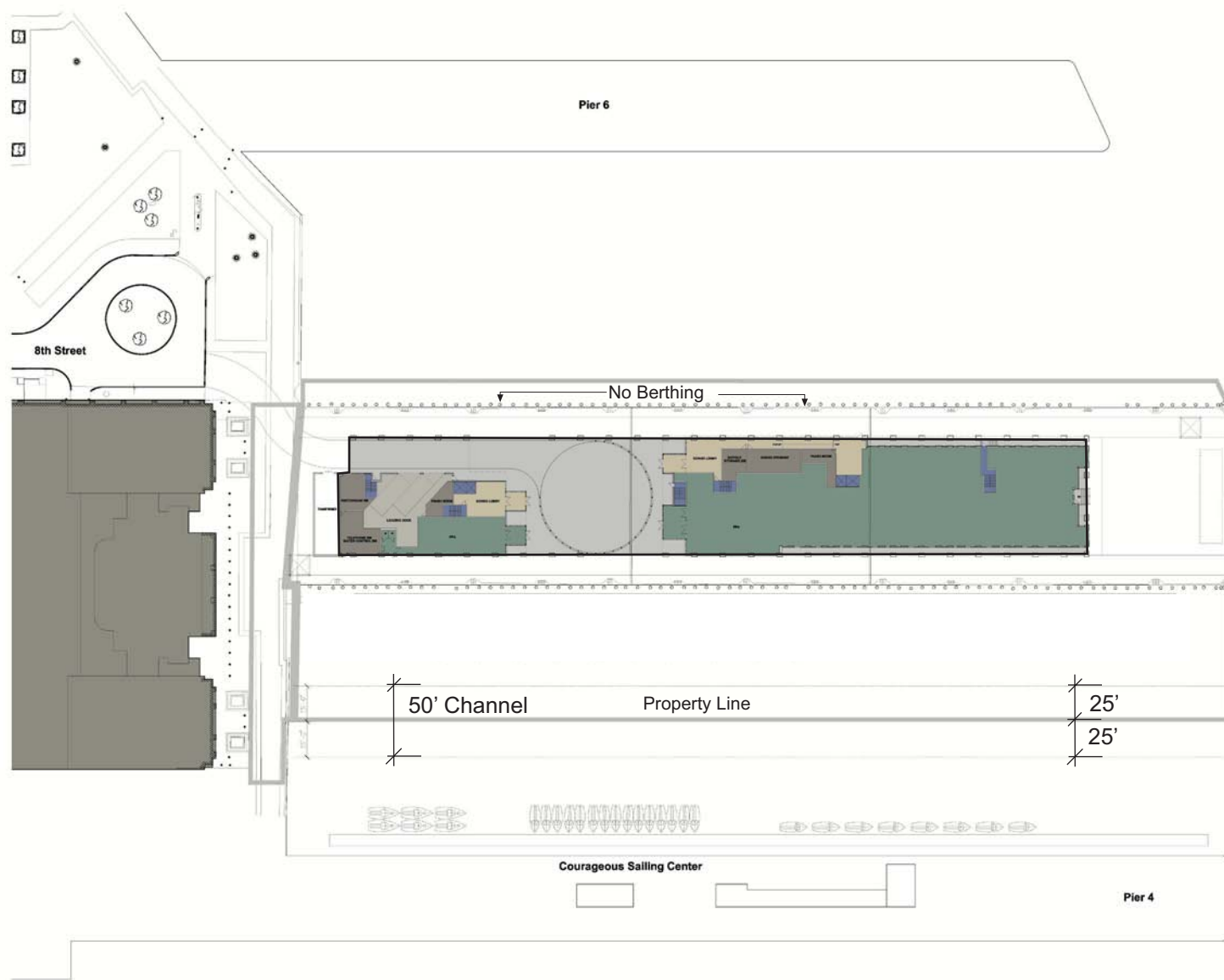


Figure 4-3: Pier 5 Management Plan - II
 Source: CBT Architects

5.0 CONSISTENCY WITH TIDELAND POLICY OBJECTIVES

5.1 INTRODUCTION

Standards for approval of a Municipal Harbor Plan (MHP) are set forth at 301 CMR 23.05 and require consistency with the ten state tidelands policy objectives, as set forth in the Waterways Regulations at 310 CMR 9.00, and summarized in the MHP Regulations at 301 CMR 23.05(3)(a).

The MHP Regulations identify ten primary state tidelands policy objectives. The manner in which the proposed MHP Amendment is consistent with each of these objectives is described below.

5.2 CONSISTENCY WITH TIDELAND POLICY OBJECTIVES

5.2.1 POLICY OBJECTIVE #1

To ensure that development of all tidelands complies with other applicable environmental regulatory programs of the Commonwealth, and is especially protective of aquatic resources within coastal Areas of Critical Environmental Concern, as provided in 310 CMR 9.32(1)(e) and 9.33.

The Planning Area, and the Pier 5 Project site in particular, are not located within an Area of Critical Environmental Concern. As documented through the Pier 5 Project's MEPA filings, the Project is in compliance with all applicable environmental regulatory programs of the Commonwealth.

5.2.2 POLICY OBJECTIVE #2

To preserve any rights held by the Commonwealth in trust for the public to use tidelands for lawful purposes, and to preserve any public rights of access that are associated with such use, as provided in 310 CMR 9.35.

As described in Chapter 4 of this MHP Amendment, and as outlined in MEPA filings associated with the Pier 5 Project, the development of Pier 5 is in compliance with the provisions of M.G.L. c.91 and the Waterways Regulations, as modified by the 1991 Approval of the Boston Municipal Harbor Plan. Moreover, the Project will comply with additional provisions and recommendation found in the MHP Amendment outlining a 'Network Plan' for Special Public Destination Facilities.

The Pier 5 Project includes almost one acre of publicly accessible open space, 1400 linear feet of new Harborwalk along the entire perimeter of the pier, and pedestrian amenities such as benches, interpretive signage, and lighting. All of which serve to promote and enhance future public access within the currently inaccessible Project site.

5.2.3 POLICY OBJECTIVE #3

To preserve the availability and suitability of tidelands that are in use for water-dependent purposes, or that are reserved primarily as locations for maritime industry or other specific types of water-dependent use, as provided in 310 CMR 9.32(1)(b) and 9.36.

As detailed in this MHP Amendment, the Pier 5 Project will be designed and programmed in such a way as to ensure that any existing water-dependent uses and limited maritime industrial uses located in the Charlestown Navy Yard are not adversely affected.

5.2.4 POLICY OBJECTIVE #4

To ensure that all licensed fill and structures are structurally sound and otherwise designed and built in a manner consistent with public health and safety and with responsible environmental engineering practice, especially in coastal high hazard zones and other areas subject to flooding or sea-level rise, as provided in 310 CMR 9.37.

The Pier 5 Project will be designed by registered professional architects and engineers, and constructed in accordance with all applicable building and health codes.

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) indicates the FEMA Flood Zone Designations for the site area (City of Boston, Community-Panel Number 250286 0005 D, November 2, 1990). The map of the Navy Yard shows that the landward half of Pier 5 is noted as Zone B (Areas between limits of 100-year flood and 500-year flood). A small portion toward the middle of the Pier is located in Zone A2, where the 100-year floodplain mapped by the Federal Emergency Management Agency (FEMA) is at an elevation of +11 National Geodetic Vertical Datum (NGVD). The seaward portion of the Pier is located within an area noted as Zone V4 where the floodplain elevation ranges from + 12 to +13 (NGVD). The still water flood elevation in this area is Elevation 10.2 feet (NGVD). On February 26, 2006, FEMA issued a Conditional Letter of Map Revision for the site, removing the building site from the V zone designation, provided certain structural measures were incorporated into the pier design.

As currently designed, there is approximately 120 feet of open space between the two first floor elements providing for two separate and isolated first floors. A structural solution has been included in the design in order to reduce the flood hazard potential on this portion of the site. A perimeter wall will be constructed in the high hazard zone to act as a wave barrier during the FEMA 100-year storm event. This will reduce the existing flood hazard exposure from V4 Elevation + 14 to AO Elevation + 2. The structure's first floor elevation at

the outshore end of the Pier will be maintained at approximately one foot above the Base Flood Elevation (BFE), elevation +14 NGVD. Since they are located in either a Zone A or Zone B, regulations stipulate that only the first floor has to be above the BFE. The inshore portion of the first floor, which is in Zone B will remain unchanged and will be held at elevation 11.49 NGVD.

As a result, the Project will be designed in consideration of coastal high hazard zones and sea-level rise.

5.2.5 POLICY OBJECTIVE #5

To ensure patronage of public recreational boating facilities by the general public and to prevent undue privatization in the patronage of private recreational boating facilities, as provided in 310 CMR 9.38; and to ensure that fair and equitable methods are employed in the assignment of moorings to the general public by harbor masters, as provided in 310 CMR 9.07.

In the event that the Project proposes a future recreational marina at the site, provided there is not a non-profit public sailing program located at Pier 4, said marina will be programmed and managed in accordance with the provisions of 310 CMR 9.38.

No moorings are proposed at the Pier 5 site.

5.2.6 POLICY OBJECTIVE #6

To ensure that marinas, boatyards, and boat launching ramps are developed in a manner that is consistent with sound engineering and design principles, and include such pumpout facilities and other mitigation measures as are appropriate to avoid or minimize adverse impacts on water quality, physical processes, marine productivity, and public health, as provided in 310 CMR 9.39.

Any proposed marina at the Project site will have less than 50-slips and therefore not require an onsite pumpout facility in accordance with 310 CMR 9.39(1)(a)3.b. However, programming and management of the marina will ensure that marina patrons are informed of the nearest pumpout facilities located at Shipyard Quarters Marina in the Charlestown Navy Yard.

5.2.7 POLICY OBJECTIVE #7

To ensure that dredging and disposal of dredged material is conducted in a manner that avoids unnecessary disturbance of submerged lands and otherwise avoids or minimizes adverse effects on water quality, physical processes, marine productivity, and public health, as provided in 310 CMR 9.40.

The Pier 5 Project does not include dredging or disposal of dredged material.

5.2.8 POLICY OBJECTIVE #8

To ensure that nonwater-dependent use projects do not unreasonably diminish the capacity of any tidelands to accommodate water-dependent use, as provided in 310 CMR 9.51.

As described in this MHP Amendment, and as conditioned as part of the Chapter 91 Licensing review process, the Project will be designed and programmed in accordance with the dimensional provisions outlined in 310 CMR 9.51. In particular, the proposed building will be setback from the end and sides of the Pier, thus reserving the entire perimeter of the site for water-dependent use. The building, and any exterior vehicular ways will be limited to fifty (50%) of the project site area, and the building will be limited to a maximum height of fifty-five (55) feet.

5.2.9 POLICY OBJECTIVE #9

To ensure that nonwater-dependent use projects on any tidelands devote a reasonable portion of such lands to water-dependent use, including public access in the exercise of public rights in said lands, as provided in 310 CMR 9.52.

As noted above, the entire perimeter of the Project site will be devoted to 1,400 linear feet of new Harborwalk. The Harborwalk will meet the City of Boston Harborwalk Design Guidelines, and include standard pedestrian amenities such as seating, lighting, and trash receptacles. The proposed Harborwalk will seamlessly connect to the existing Harborwalk on either side of Pier 5.

5.2.10 POLICY OBJECTIVE #10

To ensure that nonwater-dependent use projects on Commonwealth tidelands, except in Designated Port Areas, promote public use and enjoyment of such lands to a degree that is fully commensurate with the proprietary rights of the Commonwealth therein, and which ensures that private advantages of use are not primary, but merely incidental to the achievement of public purposes, as provided in 310 CMR 9.53.

The Pier 5 Project has been designed to meet the requirements of 310 CMR 9.53. In particular, all exterior open space outside the footprint of the building will be made accessible to the public twenty-four hours a day, and will be programmed to include interpretive elements and signage. The ground floor of the building will include Facilities of Public Accommodation and a Special Public Destination Facility.