DOWNTOWN WATERFRONT DISTRICT MUNICIPAL HARBOR PLAN

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1. SUMMARY

The Boston Redevelopment Authority (BRA), doing business as the Boston Planning & Development Agency (BPDA), has developed this Downtown Waterfront District Municipal Harbor Plan (DTW MHP), which includes the Downtown Waterfront Public Realm and Watersheet Activation Plan, to provide long-term guidance on the development, activation, and public use of this central part of Boston. This MHP includes flexible development standards for two key parcels:

- The Harbor Garage site, where a new structure up to 600 feet tall and with 50% of the project site as open space replaces the existing 70-foot high structured parking garage that provides virtually no open space; and

- The Hook Wharf site, where the temporary home of the James Hook Lobster Company will be replaced with a new structure up to 305 feet tall, with 30% of the lot coverage as open space.

Each of these projects will require offsets to improve the ground-level exterior public spaces and water transportation services within the DTW MHP area. In addition, special provisions of the DTW MHP, known as amplifications, provide detailed instructions for project licensing on the degree and types of public activation that are anticipated in this MHP. An amplification to protect and promote the New England Aquarium ("NEAq") as a water-dependent use will be implemented through a memorandum of understanding, or other mutually agreed upon agreement, between the City of Boston, NEAq and the project proponent of the Harbor Garage. The DTW MHP substitutions, offsets and amplifications will also supersede those of the Fort Point Downtown MHP (2003) for the Hook Wharf site.

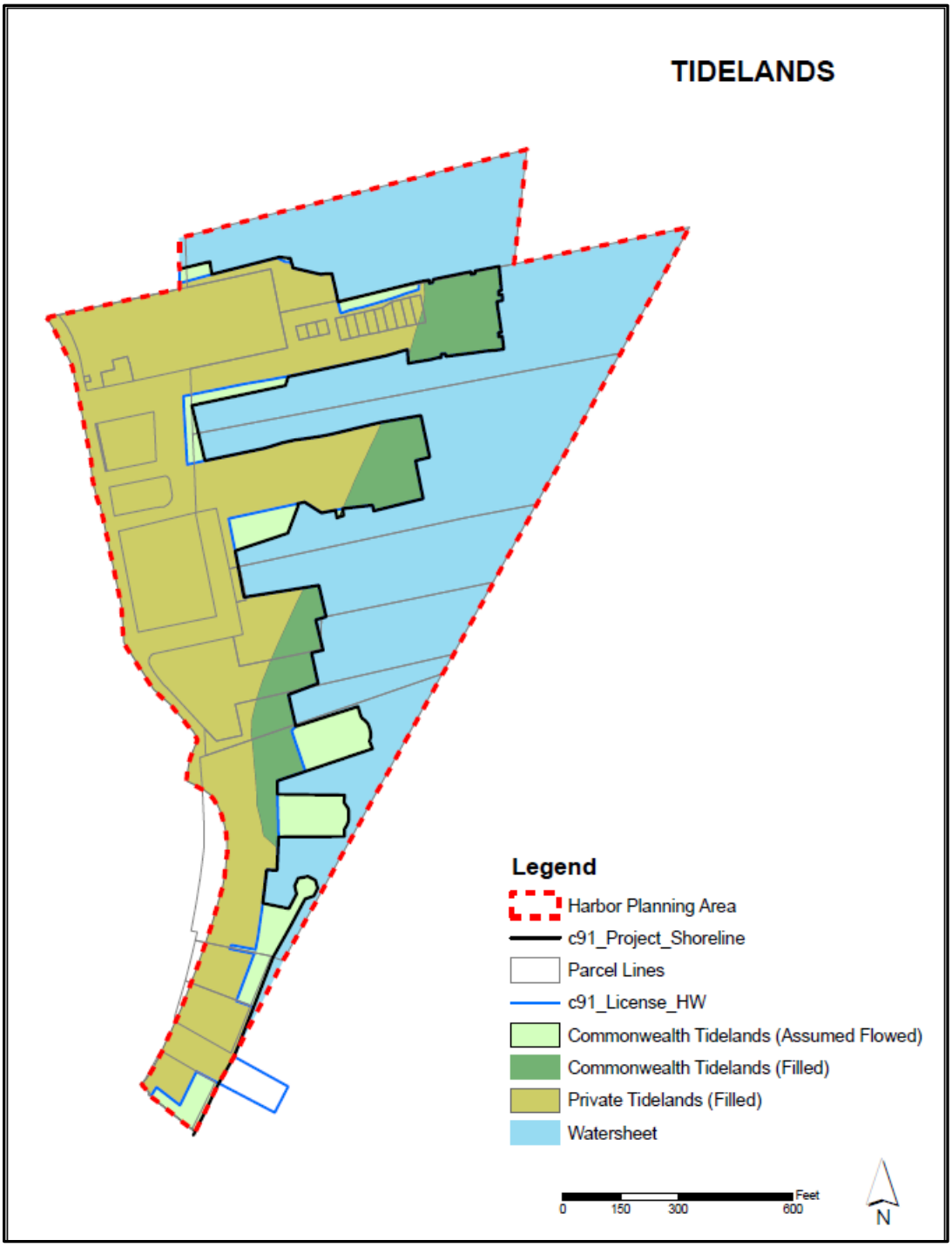
The DTW Municipal Harbor Planning Area is subject to the State's Waterways regulations at 310 CMR 9.00 and comprised of approximately 42.1 acres, 20.2 acres of which are flowed Commonwealth Tidelands and 21.9 of filled tidelands. As shown on Figure 1 and Figure 2, the planning

area consists of 26 parcels and is bounded to the west by Atlantic Avenue and the Rose Kennedy Greenway; to the east by the Inner Harbor and Fort Point Channel; to the north by Christopher Columbus Park; and to the south by Evelyn Moakley Bridge.

Currently, the total lot coverage or building footprint of the DTW MHP area is approximately 39%, publicly accessible open space is approximately 52%, and open space area that is not publicly accessible is approximately 8%. The completion of the projects proposed in this MHP at full build-out would decrease the total lot coverage within the DTW MHP to approximately 37%; publicly accessible open space would be increased to approximately 54%; and private open space not open to the public would remain the same at 8%. Both scenarios exceed the open space requirements under the Waterways regulations, and additional provisions of the DTW MHP will improve the pedestrian experience through higher quality open space, improved vehicular access, and a unified approach to wayfinding.

Figure 1 – Downtown Waterfront District Planning Area

Figure 2 – Downtown Waterfront District Chapter 91 Jurisdiction



Regarding existing building heights, the DTW MHP area runs the full spectrum, from single-story structures to the Harbor Towers, two 400-foot high residential buildings. Other buildings with notable heights include portions of the Boston Harbor Hotel at Rowes Wharf, which tops out at 220 feet; 255 State Street at 157 feet; and the Marriott Long Wharf at 120 feet. Most of the other buildings are approximately 100 feet high or less.

The MHP Regulations (301 CMR 23.00) establish a voluntary procedure by which municipalities may obtain approval of MHPs from the Secretary of Energy and Environmental Affairs (EEA), promoting long-term, comprehensive, municipally-based planning of harbors and other waterways that fully incorporates state policies governing stewardship of trust lands. Approved plans guide and assist the Massachusetts Department of Environmental Protection (DEP) in making regulatory decisions pursuant to MGL Chapter 91 and the Waterways Regulations (310 CMR 9.00) that are responsive to harbor-specific conditions and other local and regional circumstances.

The DTW MHP provides an opportunity to build upon and implement the recently-completed Greenway District Planning Study Use and Development Guidelines (the "Greenway District Guidelines"), as well as improvements made within the Downtown Waterfront District since the 1990 Harborpark District Plan, including the completion of the Central Artery/Tunnel Project, the construction of the Rose Kennedy Greenway, the Boston Harbor Cleanup Project, Boston Planning and Development Agency ("BPDA") water transportation infrastructure improvements at Long Wharf, the New England Aquarium expansion, the Crossroads Initiative, and enhancements to the Harborwalk.

The DTW MHP implements the goals established in the Request for a Notice to Proceed ("RNTP"). The six goals in the DTW RNTP are to:

1. Continue to Develop the District as an Active, Mixed-Use Area that is an Integral Part of Boston's Economy;
2. Promote Access to Boston Harbor, the Harbor Islands and Water

Transportation;
3. Improve Waterfront Wayfinding and Open Space Connections;
4. Enhance Open Space Resources and the Public Realm;
5. Create a Climate-Resilient Waterfront; and
6. Implement the Greenway District Planning Study Wharf District Guidelines.

In this MHP, these goals are implemented primarily through substitute provisions, offsets, and amplifications under the MHP regulations. These provisions allow for the buildings that exceed the nonwater-dependent use standards of the Waterways regulations by providing an appropriate level of mitigation and public benefits to offset potential impacts to the waterfront with comparable or greater effectiveness than a Chapter 91-compliant development scenario.

2. MHP BACKGROUND & GOALS

2.1. The Downtown Waterfront Planning Area Boundary & Parcels

The DTW Harbor Planning Area comprises approximately 42.1 acres, 20.3 acres of which are flowed Commonwealth Tidelands and 21.9 of filled tidelands. The 26 property parcels within the planning area are subject to M.G.L. Chapter 91 jurisdiction and are bounded to the west by Atlantic Avenue and the Rose Kennedy Greenway; to the east by the Inner Harbor and Fort Point Channel; and framed by Christopher Columbus Park to the north and the Evelyn Moakley Bridge to the south. These properties are shown on Figure 1.

The DTW planning area includes the following properties:

Long Wharf – The oldest continually operated wharf in the country, Long Wharf accommodates a number of public and private uses and serves as one of the City's primary water transportation hubs. The 402-room Marriott Hotel and garage were opened in 1982 as part of the redevelopment and transformation of the wharf from a blighted property to the modern, service-oriented uses and public open space we currently associate with the Downtown Waterfront District. The eight-story, 277,000 square foot brick building with peaked, upper-story massing and bowed harbor-side wall reflects the profile of a

cruise ship. The interior lobby is open to the public and connects Christopher Columbus Park to Central Wharf and Old Atlantic Avenue. In 2012, the Marriott completed a four-year, $30 million renovation of the hotel including upgrades to the lobby, the new Waterline restaurant and Harbor View Ballroom, room and suite upgrades, and new public restrooms at the hotel's north entrance. As with many buildings constructed adjacent to the elevated Central Artery, the ground plane facing the Greenway does not include many openings other than service and loading entrances. Currently, Tia's Restaurant operates on the northern side of the building and various trolley tour companies have ticketing kiosks on the Greenway end of the structure. The Marriott and Long Wharf are also bounded to the north by Christopher Columbus Park. One of the City's first waterfront parks, it was opened in 1976, updated in 2003, and provides numerous public amenities, including active lawn areas, a play lot, spray fountain, the Rose Kennedy rose garden, a wisteria trellis, and programming throughout the year.

Additional structures on Long Wharf include the three-story Gardiner Building, which houses the Chart House restaurant, and the brick and granite Custom House Block building. This former warehouse, constructed in 1848, consists of five stories and now serves as office space. Office and headquarters for Boston Harbor Cruises, a water-dependent use and provider of water transportation services for the MBTA and Boston Harbor Islands, is also located in this building and benefits from proximity to the water transportation terminals at Long and Central Wharves. Both the Gardiner Building and the Custom House Block are on the National Register of Historic Places. The BPDA owns many of the wharf's public ways and open spaces, including the popular plaza at the end of Long Wharf. Both the north and south sides of the wharf provide water transportation terminals that service the Inner Harbor, Harbor Islands and coastal communities including Winthrop, Salem, and Provincetown. The terminals service over one million visitors and commuters a year. The BPDA has administered over $8 million in waterside and landside upgrades over the past 15 years, including new water transportation terminals on the north and south side of Long Wharf, new and improved sections of Harborwalk, and seawall stabilization,

as well as public amenities, such as benches and wayfinding signage. Boston Waterboat Marina is also located on the north side of the wharf, serving as Boston's oldest continually operating marina facility, which provides transient dockage for about 40 to 50 boats.

255 State Street – Immediately to the south of Long Wharf is the twelve-story 231,000 square foot office building, constructed in 1916. The building is owned and managed by Pembroke Real Estate, the real estate division of Fidelity Investments. The building was converted into office and commercial space in the 1980s by the New England Telephone Company, which had used the property as a switching center. The lower floors of the building currently provide space for several restaurants. The property is located in an area with significant public foot traffic, being situated between Faneuil Hall Marketplace, the New England Aquarium and the Long Wharf water transportation facilities. Opportunities exist to enhance the pedestrian experience around the building, as well as the connections to the adjacent Greenway and Central Wharf Park, maintained by the Frog Pond Foundation, which separates the property from the Harbor Garage. Several tour bus kiosks and vendors operate during the warmer months on the waterside of the building on Old Atlantic Avenue.

Central Wharf, The New England Aquarium – The New England Aquarium is one of Boston's premier attractions, with well over 1.3 million visitors a year. The five-story, 136,000 square foot reinforced concrete building was completed in 1969, and provides a home for over 20,000 marine animals. The primary attraction at the Aquarium is the 200,000-gallon Giant Ocean Tank, which opened in 1970 and has recently been upgraded and refurbished. The facility was expanded in 1998 with the completion of the West Wing, a glass and steel addition that includes a harbor seal exhibit, ticketing booth, galleries, gift shop, and lobby. In 2001, the Aquarium constructed the Simons IMAX theater with a six-story high screen and waterfront deck. More recent modifications include the construction of the Marine Mammal Center on the harborside of the building, improvements to Harborwalk, interpretive signage, and installation of a ramp and dock system on the southern side of Central Wharf.

The Aquarium conducts year-round educational programming, both on and off-site, performs research, and also maintains marine mammal care and rehabilitation facilities in Quincy. The Aquarium provides perimeter public access around Central Wharf, with numerous public amenities, and maintains docking infrastructure on the south and north side of the wharf. Over 120,000 people a year participate in the Aquarium's whale watch excursions which leave from Central Wharf. The plaza in front of the Aquarium provides ticketing kiosks and is an active public gathering area. In the fall of 2016 the New England Aquarium (NEAq) announced plans to improve its facility including greater presence along the Greenway and Atlantic Avenue and coordinated views, open space and public access with the redevelopment of the Harbor Garage "The Blueway". One critical component to these plans is to remove the IMAX Theater and restore the site as open space and better views to Boston Harbor from the Greenway.

The Boston Harbor Garage, 70 East India Row – The seven-story 459,000 square foot structure provides six levels of parking with ground floor retail and office space leased by the New England Aquarium, among others. The building is located at a hub of tourist activity with its proximity to the harbor, adjacency to the New England Aquarium, and frontage along some of the most active parts of the Greenway. The garage also houses utilities and operational infrastructure for the adjacent Harbor Towers condominiums. The garage provides accessory parking for nearby water-dependent uses, including the New England Aquarium and Boston Harbor Cruises and residences at Harbor Towers.

India Wharf, Harbor Towers, 65 & 85 East India Row – The two, forty-story, 400-foot tall residential towers were completed in 1971 and continue, along with the Harbor Garage and Aquarium, the concrete, Brutalist architectural vernacular of this part of the Downtown Waterfront. The construction of the two tallest residential structures in Boston at the time assisted in the redevelopment and reinvention of the Downtown Waterfront, which had long been in decline. There are 624 units and approximately 1,200 residents within the buildings that are managed as separate

condominiums. The Harbor Garage was constructed along with the towers and provides for resident parking spaces, as well as mechanical systems that serve the residential structures. The property provides perimeter public access (Harborwalk) along the waterfront, as well as an enclosed yard and pool area for unit owners. The property also includes a small marina and a public plaza with a steel sculpture, entitled "Untitled Landscape," at the base of the buildings.

Rowes Wharf, Boston Harbor Hotel & Rowes Wharf Condominium – Completed in 1987, the Rowes Wharf development includes a mix of uses, water-dependent activity, numerous public amenities, and access to the harbor. The building's varied massing, ranging in height from seven- to sixteen-stories, along with its vaulting archway, creates an openness and porosity between the waterfront and the Greenway. The property includes the Boston Harbor Hotel, along with office space, residential uses and ground floor retail activity. Since the opening of the Greenway, restaurants have functioned to further activate the Atlantic Avenue side of the facility with café seating and dining. Harborwalk is present around all of the property's wharves and programming is provided throughout the summer months with music, movies and outdoor dining. Waterfront activation has also recently been extended over the winter season with the installation of a temporary ice skating rink beneath the archway. Additional unique public amenities at Rowes Wharf include the waterside gazebo, the hotel lobby, which is home to a number of Norman B. Leventhal's historic waterfront maps, and a new visitor's center on the waterside of the archway. Waterside facilities include a small marina and water transportation hub providing a ticketing area and public restrooms, and commuter service to Hull, as well as harbor excursion services. The water transportation terminal serves over 600,000 commuters a year and is the operational center for Massachusetts Bay Lines, Odyssey Boston Cruises and the Rowes Wharf Water Transport water taxi company.

The Atlantic Building, 400 Atlantic Avenue – This converted six-story 264,000 square foot brick and beam warehouse currently houses the offices of the Goulston and Storrs law firm. The property

fronts on Atlantic Avenue and provides Harborwalk on the waterside of the property along with a private deck area.

United States Coast Guard Building - Captain John Foster Williams Building, 408 Atlantic Avenue – This eight-story building was constructed in 1918 as a warehouse for goods to be inspected at the adjacent Custom House. The structure was built by, and continues to be maintained by the Federal Government. Currently, the United States Coast Guard and Department of Homeland Security operate out of the building. Harborwalk is present on the waterside of the building, with a stairway bringing the walkway up to the elevation of the adjacent Northern Avenue Bridge landing. However, it is not universally accessible and does not read as accessible to the general public. Access to the building is through the old loading bays on the southern side of the building, which open onto Old Northern Avenue, an area currently being used for vehicular parking.

Hook Wharf, 440 Atlantic Avenue - The Hook Wharf parcel consists of less than one-half acre of land and pier, the majority of which is pile-supported structure over flowed tidelands. The property is uniquely situated between the Evelyn Moakley and Old Northern Avenue Bridges, and provides a gateway to the Fort Point Channel and South Boston Waterfront. James Hook Lobster, a wholesale and retail distributor of fresh seafood in Boston since 1925, currently occupies the site. After a fire destroyed the one-story warehouse style building in 2008, a modular structure was installed to conduct operations at the site. A pile-supported seawater pump and pump house constructed during the MBTA Silver Line Transitway Project are seaward of the property. While located along busy roadways, the site is isolated from pedestrians due to the condition of the wharf and the wharf's lack of physical connectivity to the existing public realm.

2.2. Chapter 91 Jurisdiction

As shown on Figure 2, the entire Downtown Waterfront District Harbor Planning Area is subject to M.G.L. 91 jurisdiction and the Waterways regulations. Pursuant to 301 CMR 23.03(4), State

tidelands jurisdiction is depicted based on historical data from the Massachusetts Historical Shoreline Mapping project available through MassGIS and contemporary shoreline information compiled from Chapter 91 License plans, visual observation, and City Assessing information. The extent and nature of jurisdiction shown on Figure 2, therefore, is approximate and for planning purposes only. Jurisdictional determinations for an individual project will, at a minimum, require an accurate field survey, suitable scale design plans, and consultation with DEP regarding the appropriate means of finalizing parcel-specific tidelands jurisdiction.

Based on the information described above, the extent and nature of state tidelands jurisdiction within the 42.1 acre Harbor Planning Area is summarized in Table 2.1:

TYPE OF AREA	JURISDICTION	ACRES
Watersheet (seaward of the project shoreline)	Flowed Commonwealth Tidelands	20.20 acres
Area Within The Project Shoreline		
	Filled Private Tidelands	16.98 acres
	Filled Commonwealth tidelands	3.19 acres
	Flowed Commonwealth tidelands (assumed)	1.73 acres
TOTAL HARBOR PLANNING AREA		42.1 acres

Table 2.1 – State Tidelands Jurisdiction

2.3. Historical Context & Historic Resources in the Planning Area

Boston's history and development are inextricably linked to the Downtown Waterfront District, which includes the location of the City's first port, originally known as the Town Cove. Following its exploration in 1614 by Captain John Smith and subsequent colonization by the Massachusetts Bay Company in 1630, Boston

quickly established itself as a bustling port and by 1660 almost all of the English imports for New England came through Boston Harbor.

Construction of Boston's waterfront began in earnest in 1634 with the development of the harbor's first wharves. Long Wharf, dating from the early 1700s, became the most prominent wharf in Boston and extended over a third of a mile from the early shoreline adjacent to Faneuil Hall out into the deep harbor waters. Due to its length and location it was the center of early Boston's booming shipping industry and acted as a gateway into the city. By the end of the 18th century, Long Wharf was the busiest among Boston's 80 wharves, providing docking facilities for up to 50 vessels. Because it served private merchants and the public who could buy directly from the warehouses and stores located there, Long Wharf functioned as a marketplace long before construction of Quincy Market in the 1820s.

After the Revolutionary War, Long Wharf was again used predominantly for trade. In addition to commerce with Europe, Boston merchants began trading with China and the East Indies using the wharf's warehouses for storage of imported goods. During the 1830s and 1840s, the Gardiner Building (Chart House) and Custom House Block were also constructed on the wharf to sell and store cargo. The buildings still stand today as the last remnant of what once were numerous storage and shipping buildings that were constructed on the wharf. After the Civil War, Long Wharf's importance declined with diminishing trade in Boston and business there shifted to coastal trade and fishing. In the late 19th century and early 20th century, Long Wharf and the adjacent T-Wharf served an important part of Boston's fishing industry with Italian immigrants from the North End running shore-side operations and sales from the wharves and from Atlantic Avenue.

As Boston's maritime commerce evolved over time, the wharf and its surrounding buildings changed. Infill on the landside of the wharf significantly decreased its length, as did the construction of Old Atlantic Avenue. The condition of the wharf and its associated infrastructure declined during the 20th century, along with marine commerce and trade within the Harbor. In the mid-1960s, the wharf

was purchased by the BPDA as part of the City's Urban Renewal program, with the intent of promoting public use and private redevelopment of the property. Currently Long Wharf is occupied by the Marriott Long Wharf Hotel, as well as the Gardiner Building and Custom House Block, which serve as restaurant and office space. Boston Waterboat Marina is located on the north side of the wharf, serving as Boston's oldest continually operating marina facility. Today, the wharf also provides water transportation facilities on both its north and south sides and is Boston's most active water transportation hub, offering ferry service to the Harbor Islands National Recreation Area, Boston's waterfront neighborhoods, other coastal communities, as well as services for whale watching and sightseeing.

Other important wharves are also located in the Downtown Waterfront District. Just to the south of Long Wharf is Central Wharf, which was constructed around 1816 to accommodate the increase in commerce following the war of 1812. Central Wharf was the waterfront's second deep water wharf and a focal point of the 15.9 acre Custom House District, an area characterized by 19th century mercantile buildings, including the iconic Customs House Building, constructed in 1848. During the 19th century, the wharf was part of the largest and longest continuous blocks of warehouses and merchant buildings in the country with over 54 stores. Over time the wharf decayed with the transfer of shipping activity beyond Boston. Most of the original stores were demolished with the exception of the buildings between Milk and Central Streets. Central Wharf was later transformed in the late 1960s with the construction of the New England Aquarium, which serves as one of the City's largest tourist attractions.

Adjacent to Central Wharf is India Wharf, which was completed in 1804 and was topped by a long mercantile building with 32 stores, designed by famed Boston architect Charles Bulfinch. The wharf was financed by Uriah Cottings along with several investors and was the first of many new commercial facilities to be built along the central waterfront. The location served as the primary departure point for ships headed to India and the Orient. After completion of the wharf,

Mr. Cottings engaged in land-making, or filling of the harbor, to better connect India Wharf to landside connections and adjacent wharves. Through this infilling between existing wharves, he created Broad Street and then later completed India Street in 1806. Additional filling between Long Wharf and India Wharf during the 1850s established the area where the Harbor Garage is now located. The wharf and long building were demolished in stages from 1868-1962, leaving only a fragment of the original wharf structure. The remains of the wharf were redeveloped in 1971 and the area is now home to the Harbor Towers, the first high-rise residential buildings on Boston's waterfront and until very recently the City's tallest residential towers. India Wharf Marina also currently operates at the location.

South of India Wharf is Rowes Wharf, which was originally home to the Sconce, or South Battery, a protective barrier built in 1666. During the 1740s, the battery was extended into the harbor and in the early 1760s, Rowes and Foster's Wharves, named after their respective owners, were built on the battery site. Rowes was a merchant sailor and used the shop and two warehouses on his wharf to support his whaling business, coastal fishing, and other enterprises. Continued land-making during the 1860s and 1870s established Atlantic Avenue, which extended from Rowes Wharf to Lewis Wharf and created Boston's current shoreline. A rail line was also developed along Atlantic Avenue, facilitating the transfer of goods from the wharves to North and South Stations. By the early 20th century, the wharves were used for fruit and other importation, as well as a base for the salt fish trade with the West Indies and the Maritime Provinces.

In the late 19th century, steamship operations predominated and the south shore was served from Rowes Wharf by the Eastern Steamship Line form the 1860s to 1940. The Boston, Revere Beach and Lynn Railroads had built wharf and ferry terminals between Rowes and Foster's Wharves that serviced East Boston with their ferries. In spite of a decline in Boston's waterfront by the 1930s, the Bay State Navigational School remained at Rowes Wharf, as did the Cape Cod Steamship Company at Foster's pier through the 1940s. During the

Urban Renewal period in the 1960s, much of the maritime activity left Rowes Wharf, with the exception of the Massachusetts Bay Lines, which had operated at the location for more than 20 years. The area underwent a major redevelopment in the mid-1980s and is now the home of the Boston Harbor Hotel and Rowes Wharf Condominium. The Boston Harbor Commuter Service also began operations from Rowes Wharf in 1984. Waterside infrastructure currently includes a marina and one of the city's most active water transportation facilities. The wharf redevelopment dramatically changed the area and resulted in numerous public amenities, including waterfront programming and some of the first sections of exemplary Harborwalk that serve as the standard expected today from new waterfront development.

Two major public works projects, the Boston Harbor cleanup and the Central Artery/Tunnel Project, have had dramatic and positive impacts on the Downtown Waterfront District. By the mid-20th century much of Boston's waterfront had been in economic decline for decades and was characterized by numerous dilapidated wharves, piers, and warehouses. The construction of the elevated Central Artery highway in the 1950s served to further alienate the waterfront, effectively cutting off the harbor from Downtown, relegating it to a backwater of the City. The public's interest in using and accessing the harbor was also deterred by its use as a dumping ground for the city's sewage, sludge and stormwater. By the 1980s, Boston Harbor's water quality was so poor a court case was initiated for violations of the Federal Clean Water Act. The enforcement case, known as the Boston Harbor Case, resulted in a $5.5 billion dollar effort to clean up the harbor through the separation of combined sewer overflow systems and the construction of the Deer Island Waste Water Treatment Plant. The Boston Harbor cleanup, administered by the Massachusetts Water Resource Authority, significantly improved water quality and clarity, providing for a healthier marine habitat and vastly increasing the number of swimmable beach days. The clean-up has removed psychological barriers as well, creating renewed interest in meaningful public waterfront access and recreation.

The 1980s also saw the initiation of the Central Artery/Tunnel Project, a $15 billion dollar effort to suppress the highway and reconnect the Downtown to its waterfront. The last sections of the elevated artery were removed in 2004 and the redevelopment of the new open space parcels commenced soon thereafter. Based upon the Boston 2000 Plan, which served as the Master Plan for the Central Artery air rights, seventy-five percent of the 27-acre area has been developed as open space and the remaining twenty-five percent is designated for commercial and residential development, much of which has already been completed. The area now known as the Greenway District is anchored by the Rose Kennedy Greenway, which was formally completed in 2008. The Greenway now provides a 1.5-mile corridor of signature parks spanning just over 17 acres. Framed by surface roads and ramps, the plazas, gardens and tree-lined promenades serve to reconnect City districts and neighborhoods previously separated by the elevated highway. Given the quality and level of programming within the new parks, and the density of adjacent communities, the Greenway is currently one of the most active and vibrant open space areas within the City.

2.4. Urban Context

The Downtown Waterfront is one of the most historically significant and active waterfronts in New England. This district—one of the oldest in Boston—includes a diverse range of building styles and heights, streets, view corridors, micro-climates, and open spaces. The planning area is at the convergence of two of Boston's greatest open space resources, the Rose Kennedy Greenway and the Harbor. It connects neighborhoods as disparate as the North End and the Financial District, the Fort Point Channel and the South Boston Waterfront.

Buildings in the Downtown Waterfront and its surroundings vary in character and scale, from pre-war Romanesque commercial buildings to post-war residential and office towers to historic wharf structures. One of the defining features of the planning area is the freestanding pier-like structures and variations in scale, which contrast with the continuous urban blocks on the west side of the Greenway. Heights of buildings range from less than 100' to 400' in

the planning area, to 496’ for the Custom House Tower and up to 600’ across the Greenway and along the Channel. Older structures in the area, such as 400 Atlantic Avenue and the buildings of Town Cove, tend to have larger building footprints, covering the entire parcel, and lower heights. More recent buildings, such as Harbor Towers and the Federal Reserve Building, are often taller and have smaller footprints, but this can have an adverse effect on ground-level wind conditions and cast greater shadows.

Within the planning area there are key view corridors to the waterfront, and from the Harbor to the city. These include views of the water from the Greenway, from State Street to Long Wharf, and from Broad Street to Rowes Wharf. The Custom House Tower, which is on the National Register of Historic Places, sits at the edge of the historic shoreline, and has long welcomed visitors to Boston. Maintaining, and even increasing, porosity from downtown to the water, and to the Custom House Tower strengthens links between the city and the Harbor.

Given the scalar and stylistic inconsistencies of the planning area and the surrounding neighborhood, there are no simple metrics for determining building form within the planning area. A one-size-fits-all approach does not work in this context. Rather, what is required is carefully calibrated and exceptionally executed architecture and public realm assets that balances the need for activation with contextual sensitivity at the city and neighborhood scales. “Appropriateness” must be measured not simply in terms of parity with the physical context, but should also include the building’s performance with respect to environmental impacts, view corridors, and ground-level experience of the public realm. The height, density, massing, open space and shadow impacts of buildings within the planning area should be considered in terms of how they related to and enhance the activation of the public realm, relate to the broader city, affect views and visual porosity from the Greenway and the Harbor, and impact waterfront access, both from within the planning area and in the context of downtown Boston and the Harbor.

Given such, this Plan includes allowance for massings that do not necessarily resemble their neighbors, but can act in a stand-alone,

iconic manner that could achieve multiple goals of the DTW MHP, and complement the broader urban context of the city in terms of light, shadow, quality of the public realm, and views to and from the waterfront.

2.5. Related Planning Efforts and Existing Zoning

The DTW MHP builds on the decades of planning and advocacy for this district and its environs. It incorporates ideas from multiple stakeholders, City officials, and consultants, such as the continuous Harborwalk, the importance of certain cross streets—termed Crossroads—in linking neighborhoods, and the role of water transportation for Greater Boston. The plan seeks to advance these objectives through specific improvements within the study area.

This area has been the subject of numerous planning studies since the 1960s, including:

Downtown Waterfront – Faneuil Hall Urban Renewal Plan (1965)

This Urban Renewal Plan pursuant to M.G.L. Chapter 121B outlines the first planning process for the revitalization for the downtown waterfront area.

Urban renewal dates back to the American Housing Act of 1949, when the federal government began to invest great sums of money to redevelop cities that were rapidly declining after World War II. Early urban renewal efforts attempted to tackle widespread blight by assembling land to develop massive infrastructure and public facilities. In 1964, Boston designated the Downtown Waterfront as an Urban Renewal area, with the original intent of revitalizing this key stretch of downtown; upgrading a pattern of land uses close to the North End residential community; establishing a functional connection between the unique adjacent neighborhoods: the North End, Government Center, and the Financial District; and to provide an environment suitable to the needs of the real estate market. This plan led to the development of Harbor Towers, Harbor Garage, and the New England Aquarium, which together assisted in the

redevelopment and reinvention of the then-declining Downtown Waterfront. The BPDA recently renewed the Downtown Waterfront Urban Renewal Plan, with a contemporary reframing of urban renewal as a relevant tool for planning and economic development. Goals for a renewed plan emphasize accessibility and connectivity; a quality public realm with built-in features to enhance resilience; an evolving waterfront designed to stimulate tourism, job creation, and redevelopment and enhance the public's connection to the Harbor Islands; and economic development.

Some of the objectives of this Urban Renewal Plan include:

- To provide public ways, parks, and plazas which encourage the pedestrian to enjoy the harbor and its activities;
- To create an unobstructed visual channel from the Old State House at Washington and State Streets down to Long Wharf and the harbor beyond;
- To provide paramount and careful consideration to pedestrian traffic.

Boston Zoning Code, Harborpark District, Article 42A, 1990. The planning area falls within the North End and Downtown Subdistricts of the Harborpark zoning district. The zoning emphasizes public access and water-dependent uses, and establishes height, massing, setback, and public realm requirements to advance these interests.

Harborpark Plan: City of Boston Municipal Harbor Plan, 1991. The central goal of the Harborpark Plan is to ensure public access to Boston's waterfront and open space, recreational, residential, and commercial uses. The Harborpark Plan re-establishes the historical ties between Boston residents and a waterfront that has always played a major role in the city's vitality. The primary urban design objectives for the North End/Downtown Waterfront are to: maximize public access to and activity along the entire waterfront area while preserving the original form and character of the area; promote active water-dependent uses such as public landings, commercial boating activities, and water taxi facilities; ensure that newly constructed buildings continue to reflect and blend with the existing

historic waterfront architecture; maintain view corridors to the harbor from significant streets in the North End neighborhood; and relate height, scale and massing of new development to the adjacent North End and Downtown Financial District areas.

The Boston 2000 Plan, 1991. The Boston 2000 Plan was adopted by the City as the land use master plan for the Central Artery air rights, covering the footprint of the elevated artery from Causeway Street to Kneeland Street. The Plan articulates broad principles for the development of the 27 acres of land after the removal of the elevated highway, devoting seventy-five percent of the land to open space and the remaining twenty-five percent for commercial and residential uses. A primary focus of the plan was to reconnect Boston's Downtown neighborhoods with the waterfront and Harborwalk.

Boston Zoning Code, Central Artery Special District, Article 49, *1991*. Following the master plan outlined in the Boston 2000 Plan, the goals and objectives of this Article and the Central Artery Special District Plan are to direct Downtown development in a way that promotes balanced growth for Boston that is sensitive to surrounding neighborhoods, provides public access, connections, and public open spaces.

Port of Boston Economic Development Plan, 1996. A joint effort between the BPDA and the Massachusetts Port Authority, the Plan studied the maritime industrial economy of Boston and land use needs of Maritime businesses. The goal of the Plan was to make the port more competitive in the global market place by: promoting and encouraging development of the seaport economy; maintaining maritime jobs and preserving property for maritime industrial uses; providing waterside and landside public infrastructure to support the growth of the industrial seaport; promoting the port as a component of the Boston tourist trade; and redeveloping portions of the port for a mixed Harbor-wide economy.

Boston Harbor Islands National Recreation Area, 1996. The United States Congress designated the 34 harbor islands as a National Recreation Area, to be managed by the National Park Service in 1996. The park also includes 16 islands of the Boston Harbor Islands State Park, which was established in the 1970's. The Downtown Waterfront serves as a key gateway to the Harbor Islands, with water transit terminals at Long Wharf and the opening of the Harbor Islands Pavilion on the Greenway in 2011, which provides maps, ticket kiosks and information on island programming, history and activities, and has helped to further boost awareness of the Harbor Islands' direct accessibility from Downtown.

The Seaport Public Realm Plan, 1999 - and the North End Historic Piers Network Plan, 1999. While not specific to the Downtown Waterfront District planning area, these initiatives involve communities adjacent to the Downtown Waterfront District and provide planning context. These plans emphasize improved connections to and along the waterfront, public amenities, and enhanced civic uses and open spaces. The North End Historic Piers Network Plan recognized the unique role each of the wharves and piers along the waterfront played in Boston's history.

City of Boston Inner Harbor Passenger Water Transportation Plan, 2000. The BPDA's Passenger Water Transportation Plan for Boston Inner Harbor is intended to address the growing appeal of water travel and promote access to the harbor by boat for residents, commuters, and visitors. To accommodate anticipated growth in ferry travel, the Plan focuses on expanding the capacity and quality of Boston's water transportation terminals and associated intermodal connections. Four Inner Harbor districts are analyzed in the Plan: Downtown, South Boston, Charlestown and East Boston. The Plan describes how and where to provide appropriate terminal and boating facilities to encourage the full growth of the ferry industry in response to the increasing demand for new routes and services. The Plan recommends mid- to long-term improvements to the water transportation terminal on the Downtown Waterfront, including Long Wharf, Central Wharf and Rowes Wharf.

The Fort Point Channel Watersheet Activation Plan, 2002. A collaborative effort between the BPDA, the Fort Point Channel Working Group and Fort Point Channel Abutters Group, the Plan envisions the Channel as a location for a wide range of water's edge and "floating" public uses, including piers, docks and landings for cultural attractions, recreational boating and sightseeing. The Plan also endeavors to seamlessly balance these public uses with the existing water-dependent uses along the Channel, including the Gillette facility and Hook Lobster, as well as advancing water transportation initiatives.

The Crossroads Initiative, 2004. This effort focuses on enhancing the safety, accessibility, environmental quality, and the economic vitality of twelve of the streets that cross the Greenway, in order to provide seamless connections from Boston's downtown neighborhoods through the Greenway to the waterfront.

Study of Cultural, Civic, and Nonprofit Facilities of Public Accommodation in Boston, 2005. This study analyzed the network of public spaces on the waterfront in relation to the spatial needs of Boston's cultural, civic, educational and nonprofit organizations. Existing FPA space was inventoried as well as new space projected to come online in the next ten to fifteen years. Several themes specific to the Downtown Waterfront are referenced in the study, including the presence of numerous visitor destinations and a strong market for additional hotels, museums and restaurants; the presence of water-dependent uses and opportunities for new water-based recreation and historical interpretive elements; new residential development in the area and the need for FPA's that serve such populations; and the need to coordinate FPA planning with the new open space and development plans associated with the reclaimed Central Artery land. The study also provides suggestions for future cultural, recreational, entertainment and temporary uses in the planning area.

Facilities of Public Accommodation: Commercial Retail & Restaurant Market Demand and Supply Analyses, 2006. This study evaluated the market support for commercial FPA development within the Water's Edge Districts of Boston. The intent was to create an understanding

of how much space the market can reasonably be expected to absorb in each District over the course of the next 25 years and the conditions necessary for that space to be economically viable and sustainable in the long term.

Boston Zoning Code, Green Buildings, Article 37, *2007*. The nation's first green building zoning is a key aspect of the City's climate mitigation and adaptation agenda. The zoning article requires that all new buildings over 50,000 square feet be certifiable at the LEED Silver standard. The code ensures that major building projects are planned, designed, constructed and managed to minimize adverse environmental impacts, conserve natural resources, and promote sustainable development and quality of life in Boston.

City of Boston Open Space Plan 2015-2021, 2015. Developed by the City's Parks Department and updated every five years, the Open Space Plan provides a comprehensive overview of all the City's open space resources regardless of ownership or type of use. The plan is an integrated effort reviewing open space areas on a community level and relating these resources to demographic and socio-economic trends and needs. Through the planning process new opportunities for open space are realized and prioritized.

City of Boston Climate Action Planning (Ongoing). As a coastal city, Boston is particularly vulnerable to rising sea levels and more frequent and intense coastal storms, which are anticipated with a warming climate. Boston has been at the forefront of climate change adaptation and mitigation planning. With the City's participation in the U.S. Conference of Mayors Climate Protection Agreement in 2005, and the 2007 Executive Order Relative to Climate Action in Boston, the City became committed to meeting or exceeding the emissions targets specified in the Kyoto Protocol, by reducing community greenhouse gas emissions 25% by 2020 and 80% by 2050. More recently under Mayor Martin J. Walsh's leadership, the City has joined the C40 Cities Climate Leadership Group and recently released the *Greenovate Boston 2014 Climate Action Plan Update*. The Update serves as the City's climate change mitigation and resiliency roadmap and prioritizes Boston's continued commitment to reducing

Greenhouse gas emissions below 2005 levels; promoting healthy and equitable communities; advancing new means of tracking progress; preparing for the impacts of climate change; and, increasing community engagement. The Mayor is also supporting several policies and initiatives to prepare the City for impacts related to sea level rise, including the Boston Living With Water design competition to develop innovative solutions for creating a more resilient and sustainable waterfront. More recent climate preparedness efforts include Climate Ready Boston, which has established a Climate Projection Consensus, Citywide Vulnerability Assessment and Resiliency Initiatives to better prepare buildings, infrastructure, environmental systems and residents for the challenges posed by long- term climate change and ensure Boston continues to thrive.

State Street and Long Wharf Interpretive Plan (2007) As the oldest continuously operated wharf in the nation, Long Wharf is a National Historic Landmark. The State Street and Long Wharf Interpretative Plan was developed to make Long Wharf more welcoming and accessible; to reestablish the historic link to State (King) Street and the Old State House that had been severed for half of a century by the Central Artery; develop themes unique to the site that complement the interpretation of adjacent sites and are cohesive within the Harborwalk continuum; and integrate the interpretive elements with the site furniture to communicate a singular vision. The themes emphasize commerce, industry, and activity to create a robust interpretation of Long Wharf as the gateway to Boston in the 18th and 19th centuries and as a vital commercial center throughout its history. Installation of interpretative signage, storyboards, and other elements is pending.

The Old Northern Avenue Bridge Rehabilitation (Ongoing). In October 2015, the U.S. Coast Guard notified the U.S. Army Corps of Engineers that the structural condition of the bridge presented a public safety concern and recommended that elements of the bridge be taken down. In March 2016, the City of Boston announced the Northern Avenue Bridge Ideas Competition, through which the City solicited ideas from the public to shape and inform a Request for Proposals for the design, engineering, and construction of the future Northern

Avenue Bridge. The overarching goals of the competition were to improve the mobility between the Downtown and South Boston Waterfronts; honor the history of the existing structure; and create a destination on the Fort Point Channel that unites neighborhoods and celebrates Boston's connection to the sea. The winners of the competition were announced in May 2016, with the RFP expected to be issued by early 2017.

Greenway District Planning Study Use and Development Guidelines, 2010. The BPDA's Greenway District Planning Study sought to establish a set of guidelines to enable the positive redevelopment of the parcels adjoining the newly created Greenway. The study divided the area into the following subdistricts: Chinatown and the Leather District, Dewey Square, the Financial District, the Wharf District, Town Cove, the Market District and Government Center, and the North End. The resulting program and use guidelines generally encourage residential, hotel, and mixed-use development, with active ground-floor and streetscape designs, and ground floor retail programming with the goal of animating the park edges and contributing new populations to the Greenway and Downtown. Massing alternatives were explored for more than 20 key parcels along the corridor, with attention paid to the impacts from the perspective of the park user. Heights were carefully analyzed for their potential to cast large or lengthy new shadows on the park parcels. The Guidelines were implemented to work in conjunction with the BPDA's development review process, until such a time that zoning controls could be enacted.

Boston Zoning Code, Greenway Overlay District, Article 49A, 2013. Following the Greenway District Planning Study, the goals and objectives of this Article and the Greenway Overlay District are to activate the broader public realm in and surrounding the Greenway, preserve the character of the Greenway parks by setting design standards and guidelines for projects, ensure the long-term value of the public's investment in creating the Greenway parks by setting standards for the review of project impacts, and balance the development pressures in the Greenway Overlay District with other growth areas and development opportunities in the City of Boston as

a whole.

Central Artery Ramp Parcel Study, 2014-Ongoing. In the November 1990 Final Supplemental Environmental Impact Report and the January 1991 Final Supplemental Environmental Impact Statement for the Central Artery/Tunnel Project, the Massachusetts Department of Public Works committed to covering the open boat sections of highway access ramps (CA/T Parcels 6, 12, and 18) in the Downtown area to mitigate the effect of environmental blight, "while meeting federal and state Ambient Air Quality Standards and in-tunnel air quality limits." The Ramp Parcel Study, initiated in 2014 and still ongoing, is a shared effort between MassDOT and the BPDA to identify a plan that takes into account the CA/T Project's MEPA commitments and develop recommendations for each of the ramp parcel's permanent configuration. It is anticipated that a Notice of Project Change will be submitted to MEPA sometime in 2017.

2.6. Development Adjacent to the Planning Area

Located between the Rose Kennedy Greenway and Boston Harbor, the DTW MHP area consists entirely of filled and flowed tidelands and is, therefore, all within Chapter 91 jurisdiction. Several existing developments were permitted and built prior to the 1990 revisions to the Waterways regulations and therefore do not necessarily conform to all current dimensional standards for nonwater-dependent projects, including those for Building Height, Building Footprint, Facilities of Private Tenancy ("FPTs") over Private Tidelands, and Water-dependent Use Zones ("WDUZs").

To the west of the Rose Kennedy Greenway, in areas not subject to the Waterways regulations (*i.e.,* Downtown and the Financial District), office towers and other structures greatly exceed the types of dimensional standards that would normally be allowed within the DTW MHP. The predominant building typology is marked by much greater height and density; these large commercial structures play a significant role in shaping the Boston skyline. The combination of existing nonconforming Chapter 91 structures within jurisdiction and other large buildings adjacent or proximate to this MHP planning

area help to form an area where high-density development, mixed with large contiguous open space areas, forms the dominant urban design aesthetic.

2.7. The Magenta Zone

A significant portion of the DTW MHP watersheet area lies within the Magenta Zone, as represented in Figure 3, an area designated in 1968 by an Act of Congress (PL 90-312) as “non-navigable” and therefore not subject to the jurisdiction of the U.S. Army Corps of Engineers. The practical implication of this designation is that a greater degree of responsibility for the management of this watersheet lies with the City of Boston.

Although no project proposed in the DTW MHP appears to impact the Magenta Zone, proposed water transportation facilities, potential public amenities as specified in the City of Boston design and use plan (see the amplification in Section 3.2.1 below), and additional public amenities that may be required as part of the Waterways licensing process may be located within the Magenta Zone, providing greater flexibility in permitting these public amenities.

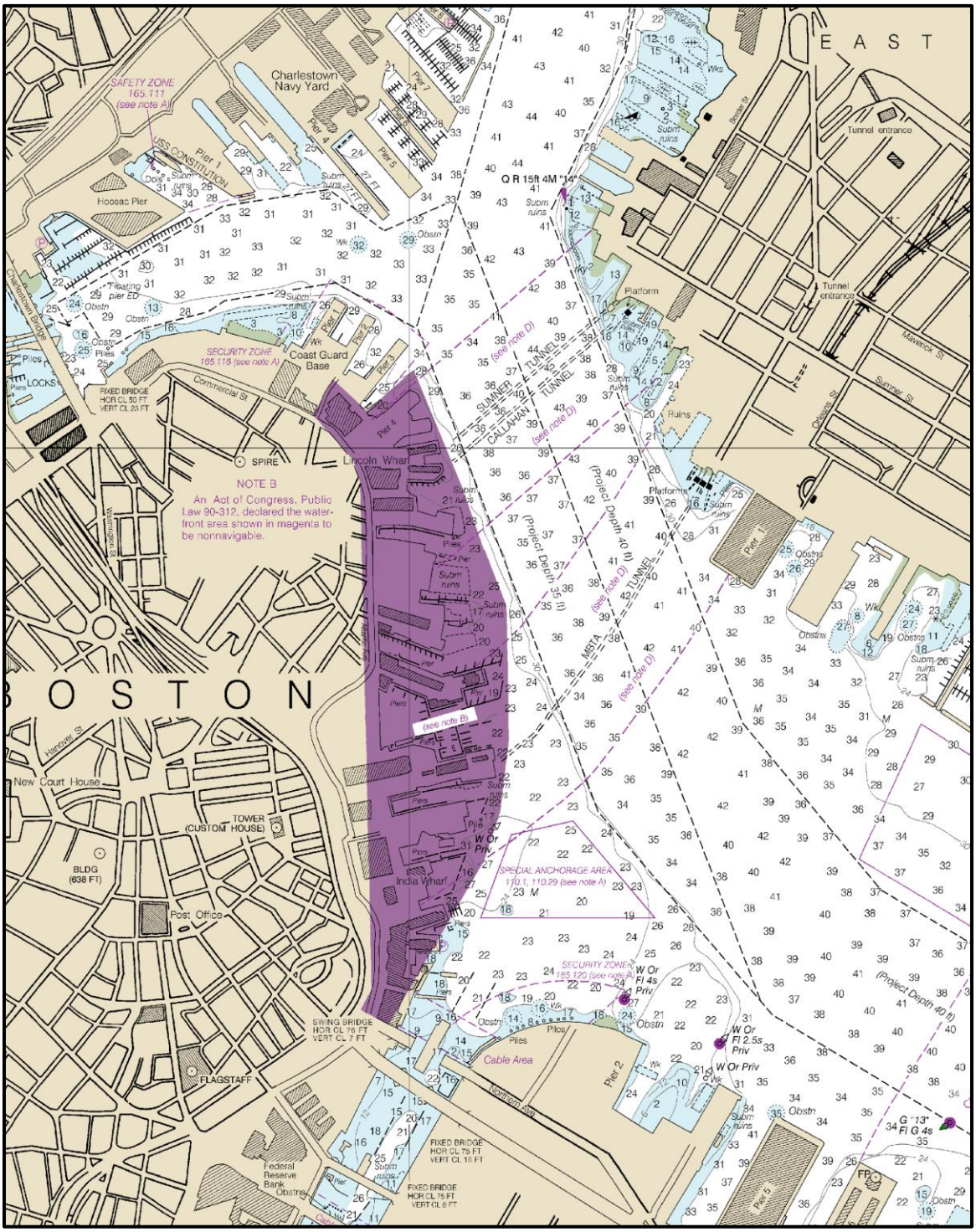
Public Law 90-312 reads as follows:

> AN ACT To declare a portion of Boston Inner Harbor and Fort Point Channel non-navigable.
>
> May 18, 1968 [H. R. 14681]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the portion of Boston Inner Harbor and Fort Point Channel in Suffolk County, Commonwealth of Massachusetts, lying within the following described area is hereby declared to be not a navigable water of the United States within the meaning of the laws of the United States: Beginning at the intersection of the northeasterly sideline of Northern Avenue and the westerly United States Pierhead Line of the Fort Point Channel and running northwesterly by the

northeasterly sideline of Northern Avenue to the westerly sideline of Atlantic Avenue; thence turning and running northerly and northwesterly by the westerly sideline of Atlantic Avenue and of Commercial Street to the southeasterly sideline of Hanover Street; thence turning and running northeasterly by the southeasterly sideline of Hanover Street to the southwesterly property line of the United States Coast Guard Base; thence turning and running southeasterly by the southwesterly property line of the United States Coast Guard Base to the southeasterly property line of the United States Coast Guard Base; thence turning and running northeasterly by the southeasterly property line of the United States Coast Guard Base extended to the United States Pierhead Line; thence turning and running southeasterly, southerly and southwesterly by the United States Pierhead Line, to the point of beginning. Approved May 18, 1968.

Figure 3 – USACOE Magenta Zone



2.8. MHP Process

The Downtown Waterfront Municipal Harbor Plan Advisory Committee consists of members appointed by the Mayor from all of Boston's waterfront communities, as well as representatives from institutions, resident associations, and business organizations within the planning area. The Advisory Committee also includes elected officials and representatives from federal, state, and local regulatory agencies, harbor advocacy groups, and commercial interests.

From April 2013, through October 2016, the BPDA held a total of 40 regular public meetings with the DTW MHP Advisory Committee and conducted additional coordination meetings with stakeholders, officials, and agencies having jurisdiction over, and ownership interests in, the planning area. The Office of Coastal Zone Management (CZM) and DEP have been consulted throughout the planning effort.

As indicated in the list of meetings appearing below, the DTW MHP Advisory Committee was provided with an extensive background on the planning area and its context, including a review of the Greenway District Guidelines. Property owners within the planning area presented the committee with proposed modifications and development programs related to their property. The DTW MHP Advisory Committee was fully briefed on the Waterfront Activation and Public Realm Plan and the regulatory environment, including Chapter 91 and Municipal Harbor Plans. A number of presentations were made on possible Substitute Provisions, Offsets, and Amplifications that might be associated with proposed development programs.

A list of DTW MHP Advisory Committee members and their affiliations appears in the introduction of the DTW MHP. A list of DTW MHP Advisory Committee meetings and other public forums appears in Appendix B.

2.9. MHP Goals

The City of Boston articulated its goals for the DTW MHP in its Request for a Notice To Proceed (RNTP), submitted on July 31, 2013 to the Massachusetts Office of Coastal Zone Management (CZM). These six goals form the basis of the Downtown Waterfront MHP and consist of the following:

Goal #1: Continue to Develop the District as an Active, Mixed Use Area that is an Integral Part of Boston's Economy. It is the existing mix of commercial, retail, residential, cultural, and recreational uses that make the Downtown Waterfront one of the most attractive, successful districts within Boston. The District is the most active of Boston's waterfront communities due to its concentrations of attractions and adjacencies to Faneuil Hall Marketplace, the Rose Kennedy Greenway, Fort Point Channel, and the quickly developing South Boston Waterfront. Efforts must be made to further develop the mix of uses to attract new populations to the area and also support area residents. The removal of the elevated artery highway has left residual spaces that are underutilized and inactive building edges that are oriented away from the Greenway and waterfront. New programming concepts, design principals, and development that fronts on both the waterfront and the Greenway can reactivate these areas and enliven the public realm. Crucial to this effort will be the advancement of an active and diverse ground floor environment that mixes restaurant, retail, civic and cultural uses to engage the public and enhance the streetscape and adjacent open space areas. Additional residential and office uses will also be central to the economic advancement and continued year-round activation of the District. The current and future activation and programming of the District also has implications for congestion within the area requiring a review of means to improve pedestrian circulation and efficient multimodal transit opportunities. The redevelopment of properties within and adjacent to the planning area, and the possible reduction of public parking in Downtown, will require a focus on enhancing public transportation options and promoting alternative means of

transport.

Goal #2: Promote Access to Boston Harbor, the Harbor Islands and Water Transportation. The Downtown Waterfront District is the most active of Boston's waterfront communities with over 12 million visitors frequenting the area and 1.4 million utilizing its water transportation services annually. Water transportation terminals at Long Wharf and Rowes Wharf, the Boston Harbor Island Alliance Pavilion on the Rose Kennedy Greenway, continuous Harborwalk and waterfront plazas, and facilities of public accommodation, such as the New England Aquarium, provide a significant amount of infrastructure in the area. Opportunities exist to build upon existing water transportation infrastructure and improve multi-modal transit connections to alleviate current and future congestion within the planning area. Underutilized areas along the harbor will also be reviewed to improve access, pedestrian circulation and create a more "user friendly" waterfront. Modifications could include including permanent ticketing and waiting areas for water transportation, updated transit and ferry wayfinding signage, and programming, such as a waterside element of the Freedom Trail. Other improvements might include the reconstruction of historic T-Wharf, activating the underutilized dock on the south side of Central Wharf, and subsidies to provide for additional service to the Harbor Islands and Inner Harbor water transportation.

Goal #3: Improve Waterfront Wayfinding and Open Space Connections. The District's waterfront has a continuous Harborwalk, providing a seamless connection from the Fort Point Channel and South Boston Waterfront to the North End. The Harborwalk at Rowes Wharf was some of the first sections of Harborwalk constructed in the City, and established the standard that is expected throughout Boston's waterfront. The completion of the Marine Mammal Center at the Aquarium provides an example of some of the most recent, improved portions of the walkway system. The Harborwalk as a whole, however, lacks continuity in quality and a unifying design theme. The planning process will provide an opportunity to explore improved means of wayfinding signage so the Harborwalk system "reads" more intuitively to the public and makes

connections to the adjacent Greenway. The integration of Harborwalk into existing wayfinding initiatives such as Connect Historic Boston, and effort to better connect Boston's historic resources with transit, bike, and pedestrian paths, will also be reviewed. Portions of Harborwalk that present design challenges will also be addressed in the planning process. The southern extent of the planning area will be an area of particular focus dues to the existing bridges, which create discontinuity in the Harborwalk sequence, as well as the waterside of 400 Atlantic Avenue where Harborwalk in the form of a stairway lacks universal access. Opportunities in this area also exist to establish a more formal gateway and connection between the Greenway and the South Boston Waterfront District. Access to the water and Harborwalk system can be improved upon with new development that is designed to increase visual access to the waterfront at building edges or through-building connections. The District also affords the potential for more extensive historic and interpretive signage to further engage the public and activate public spaces.

Goal #4: Enhance Open Space Resources and the Public Realm. Opportunities for the creation of additional open space resources within the District will be explored through the planning process. The Boston Parks and Recreation Department's most recent Open Space Plan (2015-2021) indicates the Downtown Waterfront area has some of the highest concentrations of active and passive open spaces and recreational facilities and recommends the continued improvement and enhancement of Harborwalk as well as unifying pedestrian pathways and open spaces adjoining the waterfront with the Rose Kennedy Greenway. The Public Realm Plan also references a need for more playgrounds and larger, multi-use space in the Downtown district. The Chapter 91 Waterways open space performance standards for non-water-dependent projects will facilitate increases in open space within the planning area and ensure its activation and maintenance. New development programs should also address these needs and must serve to protect and enhance the quality of existing open space resources and promote the public's use of these areas. Throughout the planning process, design opportunities will be explored to improve the public realm

along the edges of existing buildings and create new “front doors” to remedy the condition of many properties along the Greenway, which have their parking entrances, loading docks, service entrances and mechanical systems facing the parks. Additionally, creative concepts and resources for further programming open spaces for year round, off-hour and weekend activation will also be addressed through the planning process.

Goal #5: Create a Climate Resilient Waterfront. With rising global temperatures, coastal cities such as Boston must prepare for increasing sea levels, more frequent and intense storm events, and heat waves. As much of the Downtown waterfront is comprised of historic fill placed at an elevation a few feet above mean high water, and with expected increases in sea level by 2100 ranging from 2.4 to 7.4 feet, the District is vulnerable to sea water inundation. The effects of higher seas is already apparent at Long, India and Central Wharves, portions of which are inundated during storm surges and high-high tide events. As the new building infrastructure planned for the District will have an anticipated lifespan of 50 to 100 years, the implementation of climate smart development principles as part of these projects will be a necessity. Opportunities will be explored to integrate climate resilience with energy conservation measures, such as combined heat and power and district energy system that will allow property owners to save on energy costs and also maintain building functionality during power outages due to storms or inundation. The planning effort will advance the priorities of the City’s Climate Action Plan and Climate Ready Boston initiative, allowing for a review of anticipated climate change impacts on existing and future built infrastructure and practical climate resilient strategies.

Goal #6: Implement the Greenway District Planning Study Wharf District Guidelines. The Greenway District Guidelines articulate four planning goals for the Wharf District: create and enhance access to the waterfront and South Boston; reinforce the openness represented by existing freestanding pier-like structures; facilitate the accessibility of Harborwalk and further diversify abutting uses. Guidance specific to the Wharf Subdistrict provides background on

existing urban design parameters and context for future development programs in the area. Reference is made to the unique free-standing pier-like structures along the waterfront that vary in height, uses, and architectural style, and contrast with the continuous urban blocks found on the east side of the Greenway. In order to enhance the relationship and connections between the waterfront, nearby open space parcels, and existing buildings, the Guidelines specify that new development should emulate the pier-based development patterns, including varied massing and openings to the harbor and create new perpendicular connections between the Greenway and Harborwalk.

2.10. Downtown Waterfront Public Realm & Watersheet Activation Plan Recommendations

The Downtown Waterfront Public Realm & Watersheet Activation Plan identifies several types of public benefits. These public realm improvements were developed through robust discussions with stakeholders, property owners, MHPAC members, and the City.

The Downtown Waterfront can broadly be understood as four areas, each with its own character and potential:

- Northern Avenue, spanning from the Moakley Bridge to the Coast Guard Building
- Rowes Wharf and India Row goes from 400 Atlantic Avenue to the Harbor Towers (which was the former India Wharf)
- Long and Central Wharves, which includes the Harbor Garage, the New England Aquarium, and the Long Wharf Marriott
- In addition, the watersheet is a highly active place, and this plan considers it as a distinct zone in itself that needs its own spatial clarity and organization, with consideration to the adjacent uses.

Each of the Downtown Waterfront's subdistricts has its own distinct features, uses, and building styles. Moreover, each of the subdistricts connects to vastly different parts of the city, from the South Boston Waterfront to the North End. The goals for each subdistrict are

driven by a desire to reinforce the specific character of each subdistrict and maximize the connections between neighborhoods. For example, the Northern Avenue section presents the opportunity to connect to the South Boston Waterfront; the India Row/Rowes Wharf area is mature and well-established and could benefit from clearer north-south connections and visual connections from the Greenway; Long and Central wharves are where the city meets the harbor; and the watersheet offers the opportunity to experience the city and the harbor in a whole new way.

Northern Avenue: The Northern Avenue section is a key gateway between the historic center of the city and the city's newest destination neighborhood, the burgeoning South Boston Waterfront. This area, bounded by the Northern Avenue Bridge and the Moakley Bridge, is the gateway between these destinations.

The challenges—and opportunities—here lie with how to facilitate passage between these neighborhoods, and create a sense of entrance or arrival. The planned renovation or replacement of the Old Northern Avenue Bridge offers the chance to strengthen pedestrian and bike links to the South Boston Waterfront and South Boston and create a model Complete Street. Creating an accessible Harborwalk path along the waterfront at both the Moakley Bridge and the Northern Avenue Bridge will allow more people to enjoy the waterfront. In addition, these accessible connections might present an opportunity to expand the public space along the waterfront, which is very narrow in this area.

Rowes Wharf and India Row: The Rowes Wharf and India Row area is a thin sliver of land between the Greenway and the water. It is home to a robust residential community and a range of restaurants and events venues at Rowes Wharf. Here, the focus is on facilitating passage from north to south, especially universal accessibility at the section of the Harborwalk behind the U.S. Coast Guard Building, and connections from the Greenway to the water. Clear pedestrian and visual connections will facilitate north-south connectivity. Drawing people from the Greenway and Downtown to the water might require improving the lateral links by adding programming, retail or

restaurant uses, signage, and lighting.

In addition to facilitating connections, supporting the residential community and better integrating it into the city is a priority. Rowes Wharf is a premier gateway to the water and presents a wide range of public programs, which are supported by many of the residents. Harbor Towers allows public passage along the Harborwalk, but is otherwise physically isolated from its surroundings. Greater visual porosity through the property will help integrate the Harbor Towers into the city, and will visually connect Town Cove to the water. The challenge is balancing privacy for the residents with greater links with the public realm. More neighborhood services (e.g., pharmacies and grocery stores) should also be encouraged Downtown to support the growing residential community.

Long and Central Wharves: This is the most active and public area of the waterfront. With the Walk to Sea, the Rings Fountain on The Greenway, the Aquarium and the city's largest water transportation terminals and the Harbor Islands Pavilion, this is where Boston touches the water. The goal for Long and Central Wharves is to lead more people to the waterfront and fully utilize the space available, through programming, better wayfinding, and improved coordination.

Throngs of pedestrians, cyclists, residents, and tourists visit Long and Central wharves during the peak summer season. The challenge during the peak season is to manage the crowds and disperse the people throughout the area, while providing a high quality pedestrian and water-based experience. During the fall, winter, and spring, the challenge lies in how to draw more people here and encourage four-season use of the waterfront.

A range of strategies should be considered, such as a management group for this area, unified signage, and shared streets. In addition the end of Long Wharf can be better utilized and other areas offer the opportunity to create new open spaces (i.e., the Chart House parking lot) or higher- quality open spaces (i.e., the BPDA-owned land in front of the Harbor Garage and the Aquarium plaza).

The proposed design and use plan to be developed to implement the amplification in Section 3.2.1 below and the provisions of 310 CMR 9.53(2) shall provide an opportunity to integrate the plan of NEAq including the development of the "Blueway" concept.

The Watersheet: Building on decades of work and the cleanup of Boston Harbor, the goal for the watersheet is to facilitate experiencing the harbor. This requires a careful balance of different types of marinas and vessels, and a strong management plan to make the harbor friendly and inviting to all.

Enhanced and coordinated water transit will bring more people to the waterfront and should be expanded as a transit option. Landside facilities, such as heated waiting areas, office and storage for operators are critical to making water transit a four-season option for commuters.

Perhaps most importantly, public agencies and private property owners must prioritize protecting the water's edge. Climate change resilience and protection from storm surges is critical for both the public realm and the private properties in the area. New public spaces and buildings should be designed to withstand inundation and flooding. Retrofitting existing buildings and landscapes poses challenges, but should be encouraged. Significant research and analysis has been conducted on best practices – including reports by The Boston Harbor Association and the City's Environment Department, and ongoing work by the Green Ribbon Commission – and these form a strong foundation for creating a resilient waterfront.

The recommendations that evolved out the Downtown Waterfront Public Realm & Watersheet Activation Planning process fall into three broad categories, which are interrelated and mutually reinforcing:

Connectivity: Strengthened connections from Downtown to the Harbor, Downtown to the South Boston Waterfront, from the Greenway to the waterfront, and from north to south.

Boston has an incredible wealth of linear park systems and paths, from the Freedom Trail to the Walk to the Sea to the Rose Kennedy Greenway. This plan is an opportunity to enhance these connections and their relationship to the waterfront, and strengthen the Harborwalk and the Greenway—to draw people along the water's edge and along one of the great park systems of the city. The key priorities are:

- North-south connections, along both the Harborwalk and the Greenway.
- East-west links between the Greenway and the waterfront, building on the Crossroads Initiative.
- Connections from Northern Avenue to the South Boston Waterfront.
- Increasing water transit opportunities and connections, both within the Inner Harbor and beyond to neighboring communities.
- Increasing accessibility by all modes, with a special emphasis on the pedestrian.

Legibility: Improved legibility of the public space and public passages through wayfinding (e.g., signage, materials), gateway elements, and public art.

The Downtown Waterfront, as an area that has organically developed over the years, lacks legibility both as coherent place and for its constituent parts. Indeed, this is a shared concern among residents, workers, and visitors that was voiced during numerous public meetings. Improved wayfinding and legibility can address many of these issues.

Wayfinding is not only signs, maps, and graphics, but also perceptual gateways, such as how buildings and trees frame a space, tactile cues, such as changes in paving, and landmarks. Wayfinding should be inherent in the spatial and visual grammar of a place. The Downtown Waterfront has many of the right elements to give the area the legibility it needs. With fine tuning, what is public, semi-public, or private as well as its rich wealth of amenities could be clearer.

Key to clarifying the public realm and circulation are:

- Improving the Long Wharf and Central Wharf area, including the plaza in front of the Aquarium, and the area's relationship to Central Wharf Park and the Greenway, and mitigating congestion associated with garage access, bus/trolley staging and vendors.
- Creating landmarks and other visual clues or design elements, especially along key cross-paths to the harbor.
- Defining a unified wayfinding system for the various paths, transportation options (including water transit), and destinations.

Activation and Programming: Increased year-round ground-level and streetscape activation that reinforces the diverse uses in the study area.

This is one of the most activated waterfronts in New England. Since the opening of the Greenway, many property owners have introduced ground-level retail or restaurants, and others plan to do so. The new Greenway Overlay District Zoning (Boston Zoning Code Article 49A) will further encourage the ground-floor activation.

It is important to balance passive and active uses. Some areas within the district could be further activated, such as certain sections of the Harborwalk or the Northern Avenue area, and others, notably Central and Long Wharves, need to be better organized to manage the crowds, in particular watersheet and adjacent activation efforts, such as those in the emerging plans of the NEAq, should be incorporated into the overall activation efforts.

Ground-level activation and streetscape design should:

- Draw people, whether pedestrians or bicyclists, to the water's edge through programming/ground-level activity and maintaining view corridors.
- Encourage diverse uses, which includes a broad range of restaurants and retail, from casual to fancy, and amenities to support the residential community.
- Activate the waterfront year-round through four-season public

programming and uses.

In addition, increased coordination and management among the different property owners, operators, and stakeholders will ensure that the Downtown Waterfront becomes a beautiful, well-organized, and welcoming district for all Bostonians.

3. AMPLIFICATIONS, SUBSTITUTE PROVISIONS AND OFFSETS

3.1. Approach

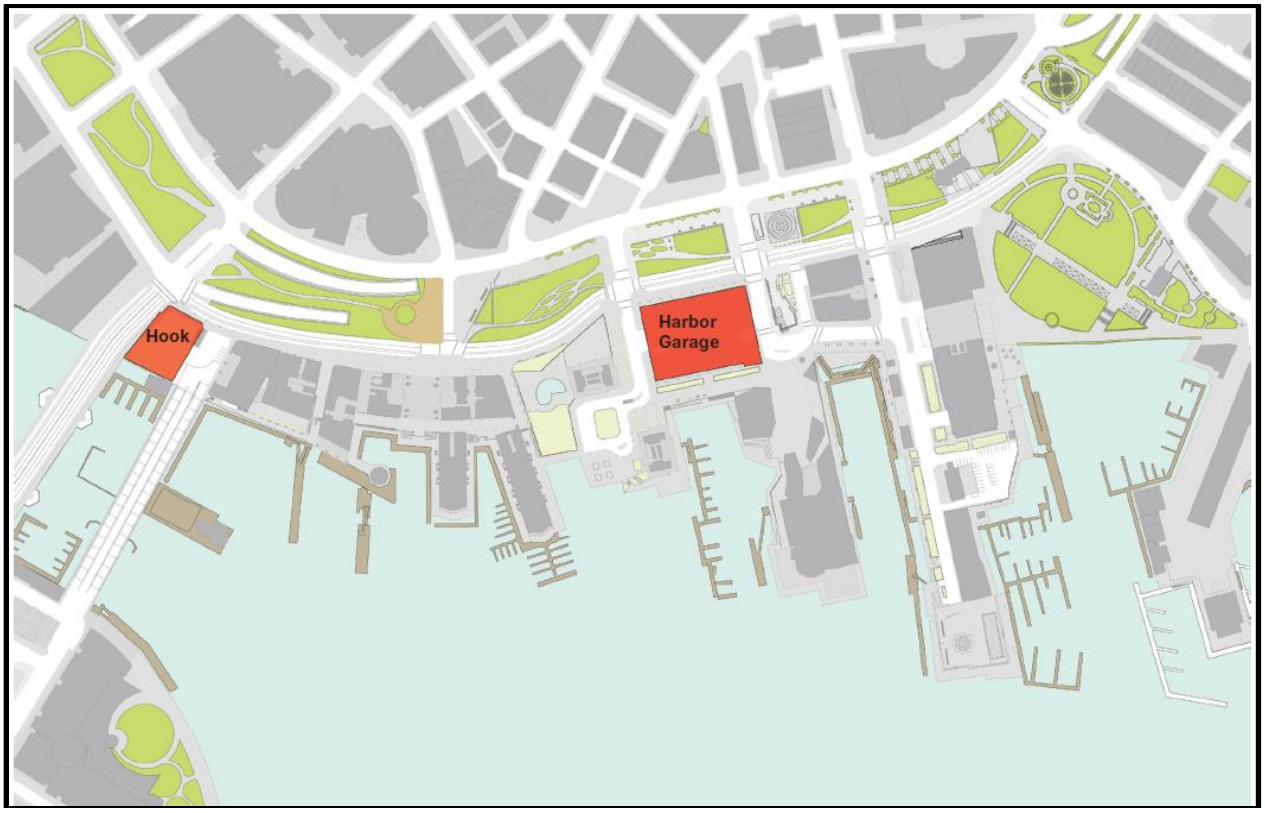
This MHP is structured to implement the public realm goals developed in the Request for a Notice to Proceed, the public realm plan, and the specific objectives that were developed as a result of extensive analysis of proposed projects and their impacts, public comments, discussions with the state, and comments by project proponents. It uses a combination of baseline requirements, amplifications, substitute provisions, offsets, and fees associated with long-term licenses to ensure that public rights on filled and flowed tidelands are promoted with equal or greater effectiveness than what is required under the Waterways regulations.

All new nonwater-dependent use projects provide baseline public benefits as stipulated in the Waterways regulations. Depending on the project, these baseline benefits include a pedestrian access network, or Harborwalk, Facilities of Public Accommodation ("FPA") in many waterfront areas, activation of the waterfront as a year-round destination, water transportation, and the construction, maintenance, or repair of waterfront infrastructure. For the DTW MHP, the amplifications detailed in Sections 3.2.1, 3.2.2, and 3.2.3 below enhance baseline expectations and requirements for new developments within the planning area, implementing significant components of the public realm plan, protecting water-dependent uses, and enhancing climate resiliency regardless of any substitute provisions that may be required for a new proposed development.

Substitute provisions are required for new projects that exceed the

nonwater-dependent use standards, such as building height and lot coverage, and must provide offsets to ensure that tidelands are promoted with equal or greater effectiveness than what is required under the Waterways regulations. To the extent allowed, long-term Chapter 91-related license fees may also be used to promote specific public benefits within or directly related to the DTW MHP.

Figure 4 - Downtown Waterfront Planning Area Development Parcels



3.2. Amplifications and New Baseline Requirements

3.2.1. Activation of Commonwealth Tidelands for Public Use (310 CMR 9.53(2)(b) and 310 CMR 9.53(2)(c))

To ensure the Downtown Waterfront district provides high-quality public areas, without noticeable differences in the quality of public spaces on Private or Commonwealth tidelands, and to the extent possible, exterior areas located

on Private tidelands within the MHP planning area that are planned for public access shall be considered as if they are on Commonwealth tidelands and be required to conform to the exterior public activation requirements under 310 CMR 9.53(2).

To implement this amplification and the provisions of 310 CMR 9.53 (2), the City of Boston shall develop design and use standards for the area between, but not including, India Wharf and Christopher Columbus Park. These design and use standards shall, at a minimum, cover the following: (1) exterior design standards that relate to buildings within and adjacent to the DTW MHP area, especially any existing or proposed Special Public Destination Facility ("SPDF"), and other existing or proposed open space within or adjacent to the DTW MHP area; (2) public amenities that fully activate the area as a waterfront destination and create a sense of place for the Downtown Waterfront; and (3) water transportation facilities, including a water transportation and watersheet management plan. To the extent possible under applicable building codes, and subject to the amplification in Section 3.2.2 below, the design and use standards shall also provide direction and guidance on making interior Facility of Public Accommodation ("FPAs") and exterior public realm areas climate resilient.

All SPDFs, FPAs, signage, amenities, landscaping features, wayfinding, and the location and size of public restrooms shall conform to the City's design and use standards, which shall provide guidance to DEP to meet this amplification for Chapter 91 licensing decisions.

The design and use standards for all exterior areas subject to this amplification but not covered by the City's design and use standards above shall be addressed in the Waterways licensing process. If completed, the City's design and use standards shall be used as guidance for any portion of the DTW MHP between and including Hook Wharf and India Wharf that is subject to a nonwater-dependent use Waterways

license.

This amplification also clarifies that the New England Aquarium is the primary SPDF in the MHP planning area. The Aquarium, along with the numerous ferry routes, water-based excursions, water taxis, and marinas that serve this area, are collectively a diverse mix of water-dependent uses, and are afforded additional protection against displacement by nonwater-dependent uses in the Waterways regulations (310 CMR 9.00). The amplification to protect and promote the New England Aquarium ("NEAq") as a water-dependent use will be implemented through a memorandum of understanding, or other mutually agreed upon agreement, between the City of Boston, NEAq and the project proponent of the Harbor Garage.

3.2.2. Engineering and Construction Standards (310 CMR 9.37(3)(c))

The Waterways regulations at 310 CMR 9.37(3)(c) state that "in evaluating coastal and shoreline engineering structures, the Department shall require non-structural alternatives where feasible…." Given the entire shoreline of the DTW MHP consists of "shoreline engineering structures," and given the importance of climate resilient public realm areas in activating the DTW MHP, this amplification seeks to elevate the ground level of exterior public areas wherever feasible, as a non-structural alternative, to be more resilient to coastal inundation. Accordingly, the City of Boston, as part of its design and use standards required in Section 3.2.1 above, shall recommend appropriate increases in elevation for public open spaces that have been improved under the DTW MHP.

3.2.3. Upper Floor Uses Over Flowed Commonwealth Tidelands

The upper floors of any new nonwater-dependent use structure over flowed tidelands authorized under the DTW MHP shall provide offsets in accordance with Section 3.4.2,

regardless of the actual upper floor uses of the new, nonwater-dependent use structure.

3.3. Substitute Provisions

3.3.1. Building Height [310 CMR 9.51(3)(e)]

To realize the City's goal of an activated, mixed-use neighborhood and consistent with a diversity of pre-existing and proposed building heights three substitute provisions for building height are proposed.

The Waterways Regulations prescribe specific height limitations for buildings located within Chapter 91 jurisdictional areas. DEP will waive these limitations if the project conforms to an approved Municipal Harbor Plan which specifies alternative height limits and/or other requirements which ensure that, in general, such buildings for nonwater-dependent use are relatively modest in size, in order that wind, shadow, and other conditions of the ground level environment will be conducive to water-dependent activity and public access associated therewith, as appropriate for the harbor in question. Projects benefiting from a height substitution must meet applicable Boston wind standards for pedestrians.

For shadow impacts the BPDA employed methodologies that have been adopted for municipal harbor planning along Boston Harbor including comparative shadow analyses on October 23rd. The date of October 23rd is employed as representative of seasonal conditions during which such shadow impacts might reasonably be considered a detriment to the public use and enjoyment of the waterfront.
In our analyses of the Downtown Waterfront we determined that there are few areas within the DTW MHP planning area that are not under continuous one hour shadow on October 23rd. Areas that are not under continuous one hour shadow on October 23rd include sections of Harborwalk at 408 and 400

Atlantic Avenue and Rowes Wharf. Also, the majority of Long Wharf including Harborwalk and the open space at the end of the wharf has limited shadow. One other section of the planning area not in shadow on October 23rd is the watersheet in the cove between Central Wharf and Long Wharf (Figure 9).

This MHP establishes the open spaces on Long Wharf seaward of the Marriott Long Wharf Hotel as a shadow prohibition zone. New structures utilizing height substitute provisions shall be oriented to reasonably minimize net new shadow on other areas of the waterfront including open space, walkways and water-dependent use facilities in and along the water's edge.

The three substitute provisions for building height are provided as follows:

Harbor Garage: Chapter 91-compliant heights on this parcel range from approximately 110 feet up to approximately 150 feet. The Harbor Garage occupies a unique site in the City, and the redevelopment of the site must be exceptional. Given the scalar and stylistic inconsistencies of the surrounding neighborhood, there are no simple metrics for limiting the building's form. The opportunity to create a signature development in place of the Garage, while balancing the need for activation with contextual sensitivity at the neighborhood and City scales is paramount. "Appropriateness" on this site at the recommended scale must be measured not simply in terms of parity with the physical context, but should also include the building's performance with respect to environmental impacts, view corridors, and ground-level experience of the public realm. To promote higher density development and a variety of building heights within the DTW MHP area, the maximum height allowed on this site is 585 feet as measured to the highest occupied floor. In no case shall any building structure exceed the Federal Aviation Administration (FAA) height limitations for structures, or 600

feet in height, whichever is lower. To facilitate greater site porosity and view corridors, building(s) of this height shall not exceed 50% of the project site. Location of building foot prints for new buildings included in a redevelopment of the Harbor Garage project site shall conform to the proposed design and use plans and allow a significant component of the project's open space to the north and east of the project site to increase views from the Greenway to Boston Harbor, better visibility and connectively of the NEAq to the Greenway and long term plans to develop the NEAq "Blueway" concept design.

However, canopies, awnings, and covers that create a more comfortable environment for the public shall not be considered to reduce the calculated open space for Chapter 91 purposes. The total floor area of the proposed structure shall not exceed 900,000 square feet and an FAR of 15.7, as compared to the Waterways-compliant maximum of approximately 370,000 square feet.

The structure shall be oriented to reasonably minimize net new shadow and to avoid net new shadow on Long Wharf seaward of the Marriott. Any proposed development shall meet applicable Boston wind standards for pedestrians.

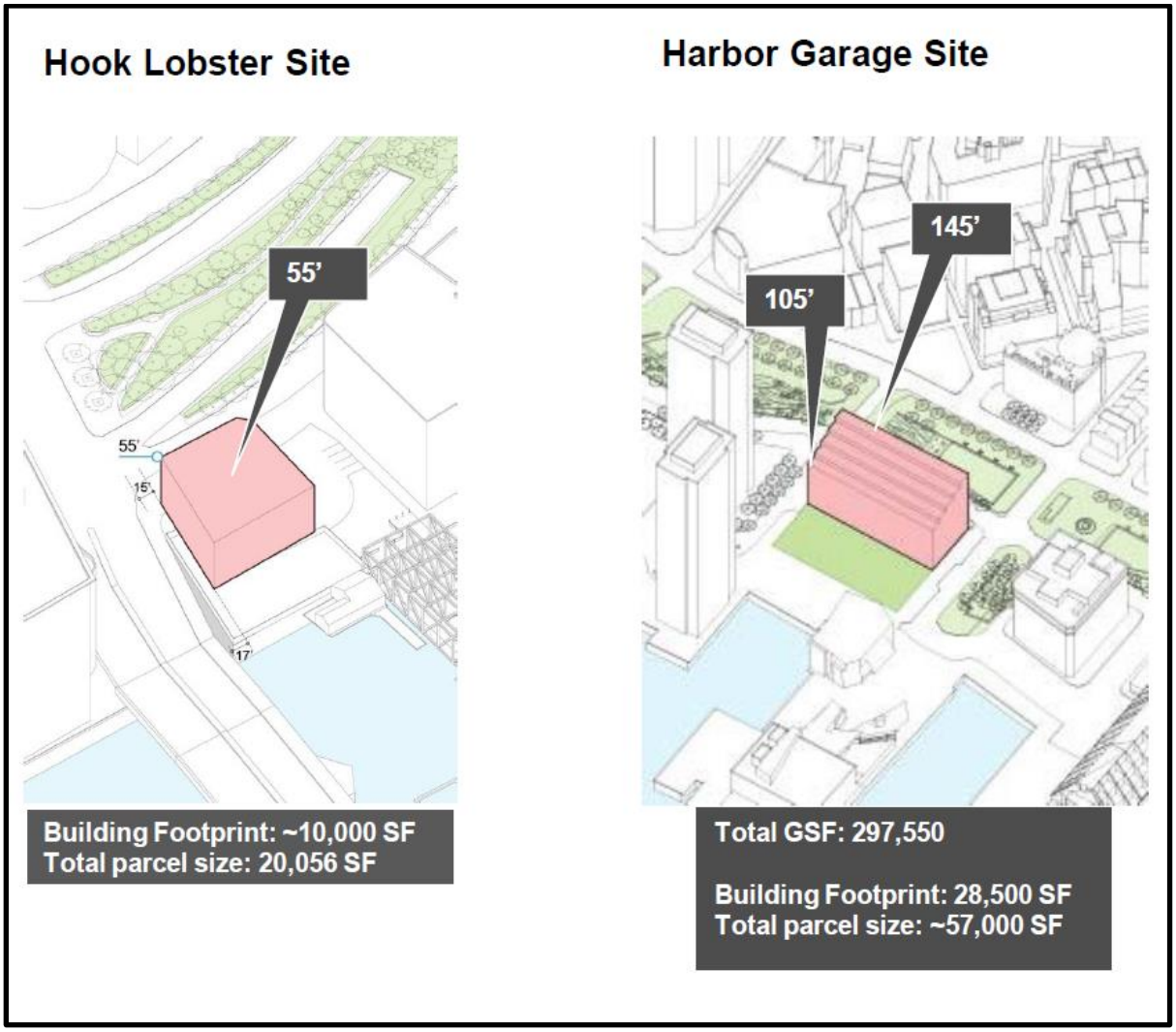
Building volume may range between 9,500,000 and 10,500,000 cubic feet, as compared to the Waterways-compliant maximum of approximately 3,400,000 cubic feet.

Hook Wharf: To accommodate a slender tower with a base podium, maximum building heights on this site shall be allowed as follows: (1) a maximum building tower height of 285 feet to the highest occupied floor, and 305 feet overall, shall be allowed for an area not to exceed 55% of the current project site, prior to the inclusion of any open space offsets; and (2) a maximum building podium height of not more than 55 feet shall be allowed on an additional building footprint of not more than 15% of the current project site, prior to the inclusion of any open space offsets. The total floor area of the

proposed structure shall not exceed 275,000 square feet and an FAR of 14.6, as compared to the Waterways-compliant maximum of approximately 50,000 square feet.

Building volume may range between 3,500,000 and 4,000,000 cubic feet, as compared to the Waterways-compliant maximum of approximately 550,000 cubic feet. The massing shall be oriented to reasonably minimize net new shadow. Any proposed development shall meet applicable Boston wind standards for pedestrians.

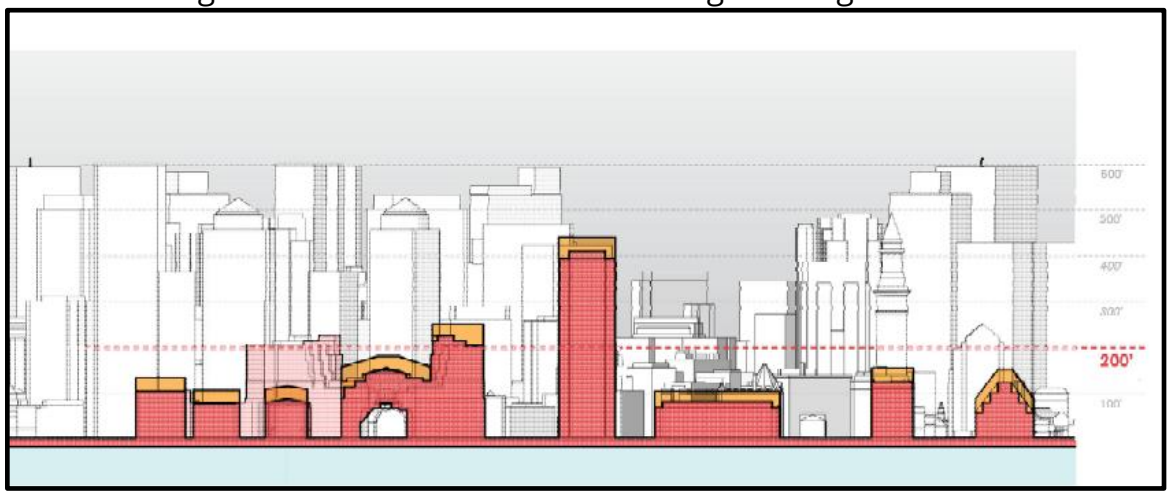
Figure 5 - Chapter 91 Baseline Massing and Height



New Structures on Existing Buildings: New structures on existing buildings, excluding those receiving relief through other sections of this MHP, shall be limited to an additional two floors, not to exceed 30 feet above the existing building height, including mechanicals, and shall not in any event exceed 200 feet in height, provided that: (1) any ground level or below ground level mechanicals shall be relocated to an upper floor, or otherwise flood-proofed, for purposes of climate sustainability; (2) all existing open space on the project

site shall be publicly accessible; (3) 100% of the interior ground floor area, minus upper level accessory uses as defined in 310 CMR 9.02, shall be FPA(s) or a water-dependent use, to comply with the provisions of Section 3.2.1 above; (4) any new structure shall be oriented to minimize net new shadow and to avoid net new shadow on Long Wharf seaward of the Marriott; and (5) any additional height shall be offset as described in Section 3.4.4 below. This additional building height is not "by right," and shall only accommodate projects that have received all other applicable federal, state, and local approvals.

Figure 6 – New Structures on Existing Buildings



3.3.2. Lot Coverage/Building Footprint [310 CMR 9.51(3)(d)]

To meet the standards at 310 CMR 9.51(3)(d), and to comply with the CZM Director's Notice To Proceed, a minimum of one square foot of open space shall be provided for every square foot of lot coverage, in the aggregate, within the DTW MHP. This standard will ensure that not less than 50% of the DTW MHP area, in the aggregate, shall be publicly accessible open space. In addition, each new project within the DTW MHP area must conform to the Waterways regulations or the applicable substitute provisions and offsets as set forth below.

Hook Wharf: Total lot coverage shall not exceed 70%. This substitution is recommended due to the constrained buildable area on the property. Lot coverage is also informed by the program of the first floor. The proponent of the project intends to accommodate the Hook family lobster business on the entire first floor including wholesale and retail facilities and a restaurant. For a project site of approximately 20,000 square feet, lot coverage shall not exceed 14,000 square feet, or approximately 4,000 square feet more than the Waterways standard. This additional amount of lot coverage of up to 20% of the site is allowed for fixed structures including canopies, awnings, building overhang or cantilevers and building podium with a maximum height of 55-feet provided podium ground floor uses serve as Facilities of Public Accommodation or are water-dependent uses.

All substitute provisions shall be offset in accordance with Section 3.4 below.

No substitute provision for lot coverage is proposed for the Harbor Garage project site, meaning that total lot coverage shall not exceed 50%. However, canopies, awnings, and covers that create a more comfortable environment for the public shall not be considered to reduce the calculated open space for Chapter 91 purposes. Building massing and lot coverage shall function to enhance open space, porosity and sight lines through the northern portion of the property to better connect the Greenway to Central Wharf and the New England Aquarium.

The BPDA Director shall maintain an accounting of the open space characteristics within the harbor planning area and provide a statement verifying compliance with this baseline requirement as part of the license application process for each project.

3.3.3. Facilities of Private Tenancy [310 CMR 9.51(3)(b)]

Under 310 CMR 9.51(3)(b), Facilities of Private Tenancy (FPTs) are prohibited over flowed tidelands and within 100 feet of the project shoreline without a substitute provision.

Hook Wharf: FPTs on upper levels over flowed tidelands are allowed within the lot coverage and building heights specified in Sections 3.3.1 and 3.3.2 above. This provision is subject to the amplification in Section 3.2.3 above. Any substitute provisions shall be offset in accordance with Section 3.4 below.

3.3.4. Water-Dependent Use Zone [310 CMR 9.51(3)(c)]

The WDUZ for a new or substantially new structure may be reconfigured, provided the overall area of the WDUZ is equal to or greater than that resulting from strict compliance with the dimensional standards of 310 CMR 9.51(3)(c). In no event shall the WDUZ be less than 12 feet in width.

Hook Wharf is the only proposed project in the MHP area with a WDUZ. Per the Waterways regulations, "a nonwater-dependent use project that includes fill or structures on any tidelands shall devote a reasonable portion of such lands to water-dependent use… [including] one or more facilities that generate water-dependent activity of a kind and of a degree that is appropriate for the project site, given the nature of the project, conditions of the water body on which it is located, and other relevant circumstances." In addition to a Harborwalk, the Hook Wharf project will also include water transportation infrastructure, including water taxi slips and other slips for boating uses, free public touch-and-go docking for public access, and docking for dinghies and small craft, all designed to meet Inner Harbor Passenger Water Transportation Guidelines.

In order to promote the public's access to the waterfront, the Hook Wharf project may require a reconfigured WDUZ. No

offset is required.

Figure 7 – Existing Shadow

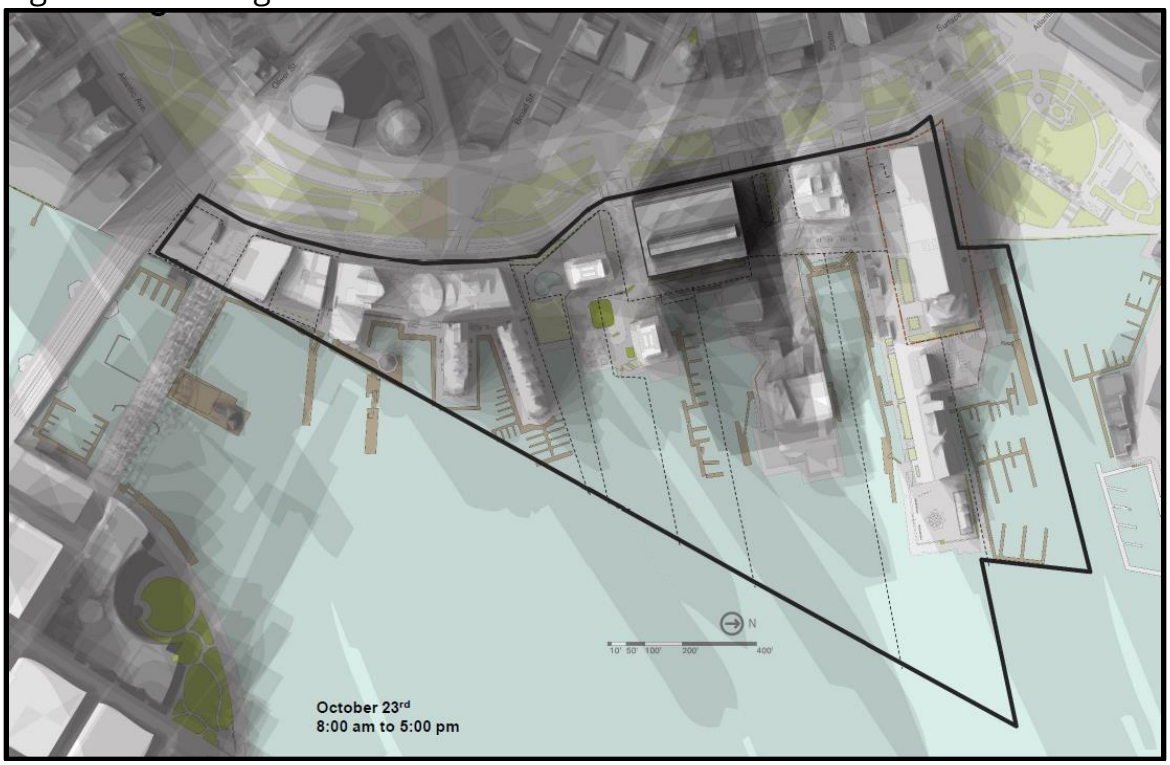


Figure 8 – Areas Without Continuous 1-Hour of Shadow (Oct. 23rd)

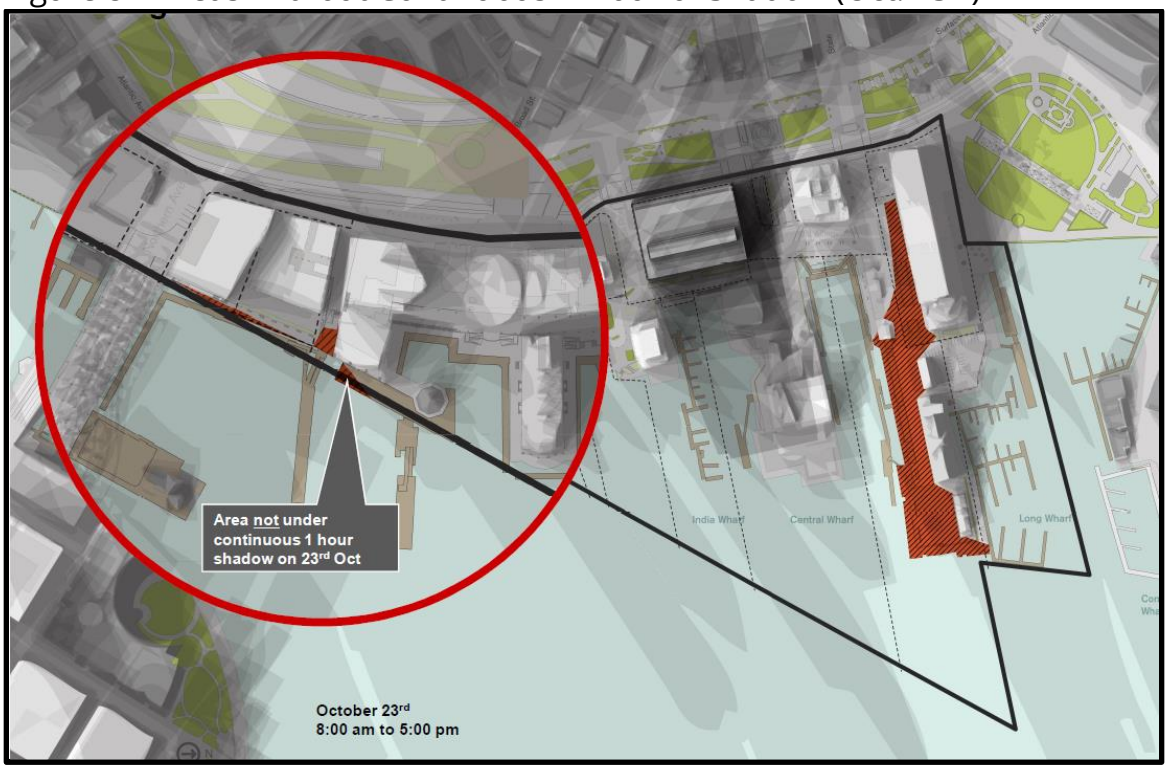


Figure 9 – Areas Without Continuous 1-Hour of Shadow (Oct. 23rd)

Figure 10 – Harbor Garage

The following is one of many possible massing scenarios based upon the recommended dimensional substitutions for the Harbor Garage site

Harbor Garage site:
Example Shadow-compliant One Tower Scheme

	Scheme E
GFA	898,023
Volume (ft3)	10,456,104
FAR	15.7
OS (sf)	28,715
OS %	50
Footprint (sf)	28,631
Height (ft)	591

Shadow study based on
One Tower Scheme E

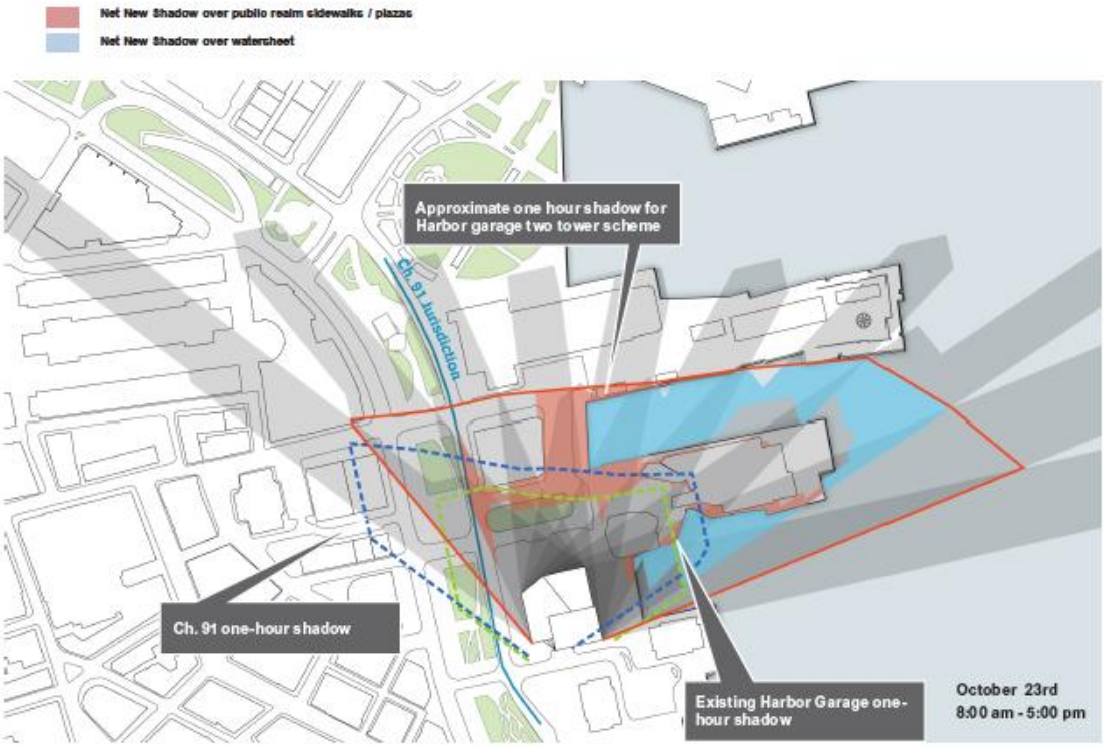
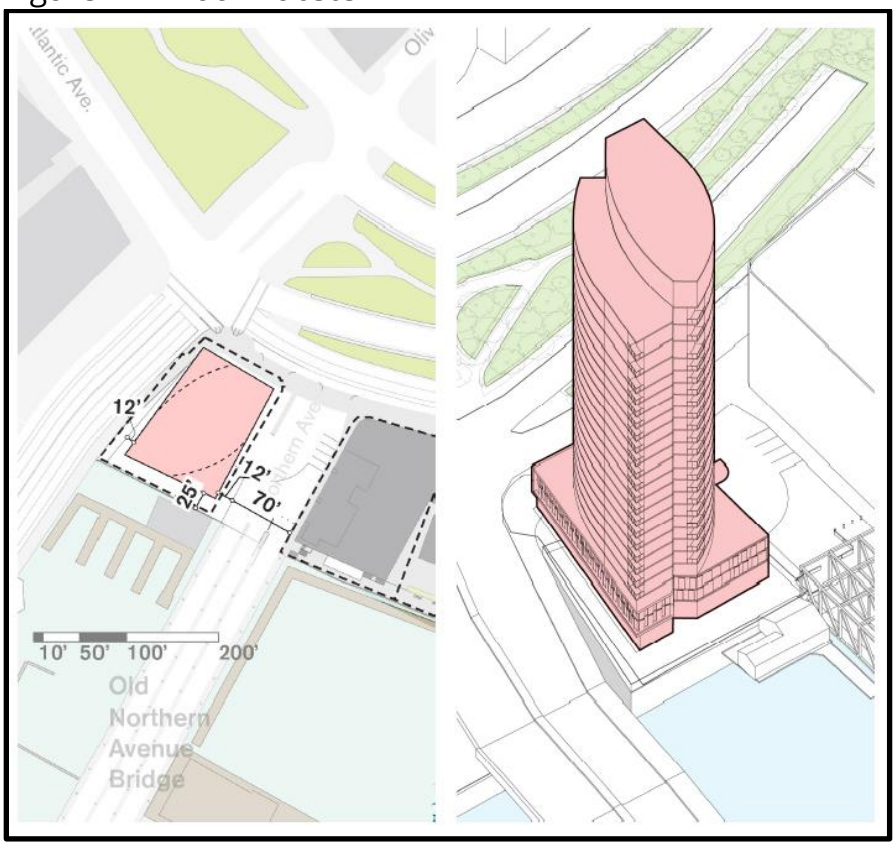
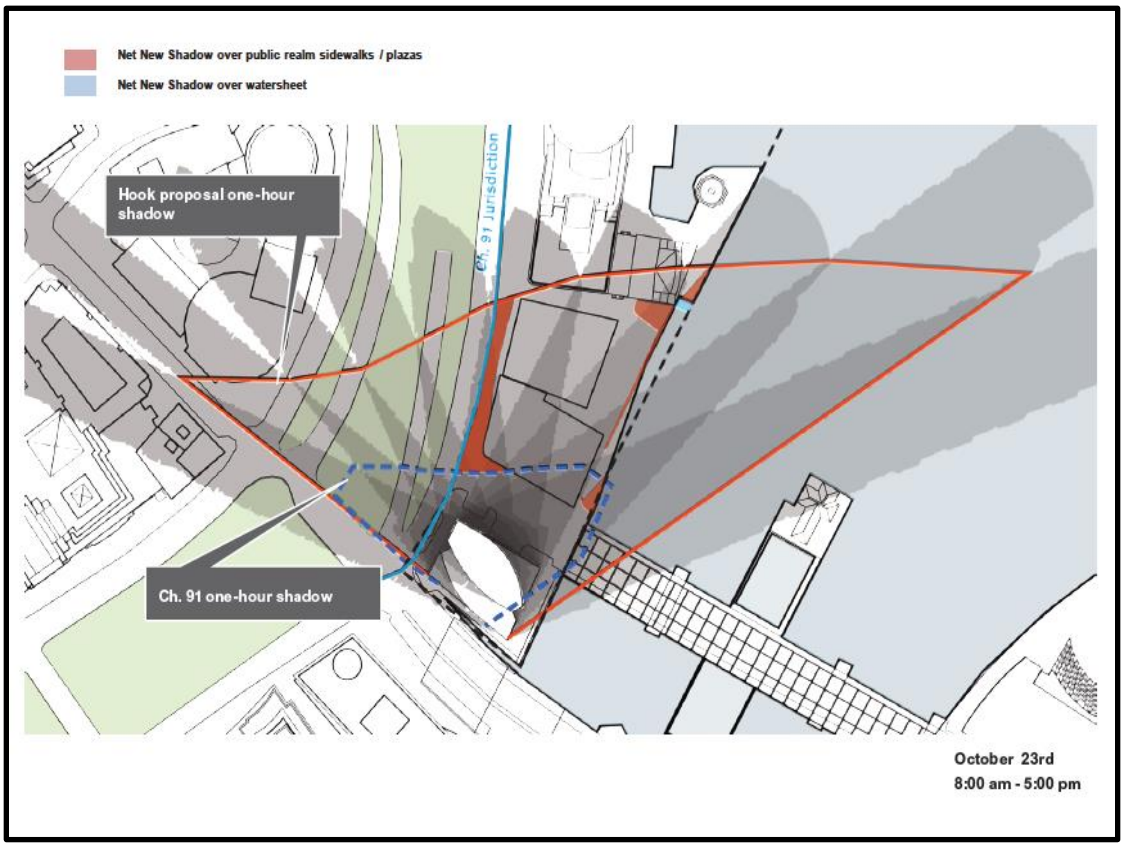


Figure 11 - Hook Lobster





3.4. Offsets

3.4.1. Hook Wharf

As a “Crossroads” parcel connecting the downtown area with Fort Point, the South Boston Waterfront District, and South Station, all of the offsets for this proposed project are focused on site improvements to fulfill the parcel’s public realm potential.

To offset the impacts of increased building height, including net new shadow, lot coverage of up to 70%, and FPTs over flowed tidelands, and subject to the amplification in Section 3.2.3 above, the following offsets are required:

- Prior to the submission of an Environmental Notification Form (ENF) for the proposed project to the Massachusetts Environmental Policy Act (MEPA) office, funding for the City of Boston’s design and use standards in Section 3.2.1 above. The City of Boston and the project proponent shall determine the amount of funding that shall be provided, which in no case shall be less than $100,000. The BPDA will match this amount up $100,000 for a total contribution of no less than $200,000. Completion of the design and use standards is required before the issuance of any new nonwater-dependent-use Waterways license, or before the approval of any change to open space or FPAs described within an existing nonwater-dependent use Waterways license.
- The creation of an interior and exterior Special Public Destination Facility that shall include enhanced open space areas and a ground floor with a deeded restriction for waterfront uses.
- Expanding the publicly accessible deck south to connect with Moakley Bridge pedestrian connections as offset for FPT’s;
- Promotion of the public’s access to and enjoyment of the waterfront through the following projects in order

of priority, at an inflation-adjusted 2017 cost of $1.5 million:

- An over-the-water, fully accessible connection between the project site and 470/500 Atlantic Avenue, to ensure a safe, continuous Harborwalk;
- the implementation of the vision for Channel Walk West, as presented in the Fort Point Channel Watersheet Activation Plan;
- Activation of the Fort Point Channel watersheet and the future Northern Avenue Bridge.

Alternative offsets to be determined in licensing shall be selected from the list of public realm improvements in Section 3.4.3 below.

Additional support for water transportation and other public amenities is covered under Section 4.

3.4.2. Harbor Garage

The redevelopment of the Harbor Garage project site has certain inherent public benefits, such as a reduction in lot coverage from the existing 100% level to a maximum of 50%. However, the building height exceeds the nonwater-dependent standards of the Waterways regulations, requiring offsets that are off-site but adjacent and relevant to the proposed project.

To offset the impacts of increased building height the following offsets are required:

1. Prior to the submission of an Environmental Notification Form (ENF) for the proposed project to the Massachusetts Environmental Policy Act (MEPA) office, funding for the City of Boston's design and use standards in Section 3.2.1 above. The City of Boston and the project proponent shall determine the amount of funding that shall be provided, which in no case shall

be less than $300,000. Completion of the design and use standards is required before the issuance of any new nonwater-dependent-use Waterways license, or before the approval of any change to open space or FPAs described within an existing nonwater dependent use Waterways license.

2. The conversion of the Chart House Parking Lot to public open space, subject to the amplification in Section 3.2.1, at an inflation-adjusted 2017 estimate cost of $5 million;
3. The removal of the New England Aquarium IMAX Theater and restoration of the site to public open space, subject to the amplification in Section 3.2.1, in conjunction with plans developed by the New England Aquarium, at an inflation-adjusted 2017 estimate cost of $5 million.
4. If the IMAX theater is not removed the offset could be used to fulfill other components of the New England Aquarium "Blueway" design concept (Figure 12); to enhance the Chart House parking lot open space with improved marine infrastructure and access including the restoration of T Wharf; or the renovation of Old Atlantic Avenue for public open space, at an inflation-adjusted 2017 estimate cost of $3.2-million.

Alternative offsets to be determined in licensing shall be selected from the list of public realm improvements in Section 3.4.3 below.

Additional support for water transportation and other public amenities is covered under Section 4.

3.4.3. Alternative Offsets

This Section applies to the following:

- All new projects for which no substitute provisions have been identified in Sections 3.4.1 and 3.4.2, above;
- All additions to existing structures for which no

substitute provisions have been identified in Sections 3.4.1 and 3.4.2 above; and
- All new projects with specific offsets in Sections 3.4.1 and 3.4.2 above, for which additional offsets are deemed appropriate, based on the impacts to the pedestrian environment and water-dependent activities as determined at the issuance of the Waterways license.

Offset for public realm improvements under this section, if required, shall be determined based on the design of the structure, its impacts on the pedestrian environment, and other conditions, developments, or public works projects that are in progress or planned. Offsets shall also be determined based on proximity to the impacts being offset, with consideration also given to improving the public realm throughout the DTW MHP.

Specific projects that are eligible for offsets are:
- Any of the offsets listed in Sections 3.4.1 and 3.4.2 if the offset(s) has/have not been completed in a timely manner. In the event a project does not fulfill its offset obligation(s) under Sections 3.4.1 or 3.4.2, a different offset of equal or greater value shall be substituted.
- Additional open space improvements, including the Northern Avenue Bridge, the current non-universally accessible section of the Harborwalk behind the U.S. Coast Guard building at 408 Atlantic Avenue, and the seaward end of Long Wharf.
- Water transportation facilities, including docks, piers, and waiting rooms that are resilient to the impacts of coastal inundation.
- Subsidies for water transportation, including scheduled service within Boston's Inner Harbor, water taxis, and ferries to the Boston Harbor Islands.
- Programming or capital improvement funds for exterior public open space areas, within the DTW MHP or within Christopher Columbus Park, the Rose Kennedy Greenway, and the Boston Harbor Islands.

Figure 12 – New England Aquarium Blueway

3.5. Summary of Chapter 91 Substitutions, Offsets and Amplifications

The following table summarizes the proposed amplifications, substitutions and the associated public benefits that will offset those substitutions

Waterways Regulation	DTW MHP Location	Amplification	Substitute Provision	Offset
Engineering and Construction Standards [310 CMR 9.37 (3)(c)]	All	For open space improvements, elevate exterior areas as feasible as a non-structural alternative to increase coastal resiliency	None	None
Facilities of Private Tenancy (FPTs) [310 CMR 9.51 (3)(b)]	Hook Wharf	Offsets for Hook Wharf, including FPTs over flowed tidelands, shall be provided regardless of upper floor uses over flowed tidelands	Upper floor FPTs shall be allowed only on a portion of the Hook Wharf site	The creation of an interior and exterior Special Public Destination Facility that shall include enhanced open space areas and a ground floor with a deeded restriction for waterfront uses. Expanding the publicly accessible deck beyond the project site south to connect with Moakley Bridge pedestrian connections as offset.
Water-Dependent Use Zone (WDUZ) [310 CMR 9.51 (3)(c)]	Hook Wharf	None	Any reconfigured WDUZ shall have an area that is equal to or greater than a compliant WDUZ and in no case shall it be less than 12 feet wide	None
Lot coverage (building footprint) [310 CMR 9.51 (3)(d)]	Hook Wharf	None	Lot coverage shall not exceed 70%	Offsets for all substitute provisions excluding for the FPTs over flowed tidelands, at the Hook Wharf site include (1) funding for the City's design and use standards; and (2) $1.5-million to promote the

				public's access to and enjoyment of the waterfront, such as an over-the-water Harborwalk connection under Moakley Bridge, Channel Walk West, and activation of the Fort Point Channel, potentially including the future Northern Avenue Bridge.
Building Height [310 CMR 9.51 (3)(e)]	Harbor Garage	None	Up to 585' to the highest occupiable floor, but no more than 600' overall; oriented to minimize net new shadow and avoid net new shadow on Long Wharf seaward of the Marriott	Offsets for all substitute provisions at the Harbor Garage site include: (1) funding for the City's design & use standards; (2) open space improvements to Chart House Parking lot, removal of the NEAq IMAX Theater, or potentially other open space improvements.
Building Height [310 CMR 9.51 (3)(e)]	Hook Wharf	None	Up to 285' to the highest occupiable floor, but no more than 305' overall; oriented to minimize net new shadow	Offsets for all substitute provisions, excluding for the FPTs over flowed tidelands, at the Hook Wharf site include (1) funding for the City's design and use standards; and (2) $1.5-million to promote the public's access to and enjoyment of the waterfront, such as an over-the-water Harborwalk connection under Moakley Bridge, Channel Walk West, and activation of the Fort Point Channel, potentially including the future Northern Avenue Bridge.
Building Height [310 CMR 9.51 (3)(e)]	New Structures on Existing Buildings	None	Additional building height of not more than 30'/2 additional floors; oriented to minimize net new shadow and avoid net new shadow on Long Wharf seaward of the Marriott	To be determined at licensing but including any unfinished offsets identified for other projects in this MHP, other open space improvements, water transportation, & programming or capital improvements for open

				space within or adjacent to the DTW MHP
Building Height [310 CMR 9.51 (3)(e)]	New Structures Seaward of the Marriott on Long Wharf	None	Additional building height over existing building heights of not more than 30'/2 additional floors; oriented to minimize net new shadow and avoid net new shadow on Long Wharf seaward of the Marriott	To be determined at licensing but including any unfinished offsets identified for other projects in this MHP, other open space improvements, water transportation, & programming or capital improvements for open space within or adjacent to the DTW MHP
Activation of Commonwealth Tidelands for Public Use [310 CMR 9.53 (2)(b) & (2)(c)]	Private Tidelands	Given the highly public nature of the DTW MHP area, all exterior private tideland areas that are planned for public access shall be held to the public activation standard used for Commonwealth Tidelands	None	None
Activation of Commonwealth Tidelands for Public Use [310 CMR 9.53 (2)(b) & (2)(c)]	All	The City shall develop design & use standards to ensure maximum public use and enjoyment of this area	None	None

4. CHAPTER 91 LONG-TERM LICENSE FEES

The fees associated with the long-term Chapter 91 license, including those for Commonwealth tidelands occupation, water transportation, and waterfront activation shall, to the extent possible, be directed to: (1) water transportation improvements for services to and from the DTW MHP area; and (2) open space programming for areas within the DTW MHP or within Christopher Columbus Park, the Rose Kennedy Greenway, and the Boston Harbor Islands.

5. PREPARING FOR CLIMATE CHANGE

The effectiveness of an MHP is based to a large degree on the document's use of specific components of the Waterways regulations. However, climate resiliency is not a focus of the Waterways regulations, so there are few provisions that can be substituted or amplified with a direct effect on climate resiliency, and an MHP cannot supersede applicable building codes with enforceable provisions.

In spite of these limitations, the DTW MHP addresses two specific elements of climate resiliency in Section 3.2.2, which amplifies the engineering and construction standards, and in Section 3.3.1, which provides a substitute provision for building height. In the first case, the amplification specifies that areas improved for public open space shall also be incrementally elevated, to improve resiliency. In the substitute provision, additional building height is allowed for existing structures as long as steps are taken to flood-proof mechanicals and provide additional public benefits. In addition, to the extent possible, the City of Boston will encourage design standards and construction methods that improve the resiliency of interior FPA space within the DTW MHP.

The sections below outline flood level conditions within the DTW MHP, assessments and programs at the local, state, and federal levels designed to address resiliency, and steps that may be taken to further protect this area from coastal inundation.

Overall, with rising global temperatures, coastal cities such as Boston must prepare for increasing sea levels, more frequent and intense storm events and heat waves. Much of the Downtown Waterfront is comprised of historic fill placed at an elevation a few feet above mean high water, making the district particularly vulnerable to storm surge and inundation with predicted increases in sea level ranging from 2.4 to 7.4 feet by 2100 under moderate to high emissions scenarios. The effects of higher seas are already apparent in the Downtown Waterfront with portions of Long, Central and India Wharves being partially inundated during coastal storms and high-high tide events. As the new building infrastructure planned for the district will have an anticipated life span of 50 to 100 years, the implementation of climate smart development principles as

part of these projects is a necessity. The City expects new development and infrastructure improvements in the Downtown Waterfront planning area to be designed, constructed and maintained with adequate climate preparedness and resiliency measures that will function to protect health and safety, prevent damage to the surrounding environment and built infrastructure, and limit disruptions to service and use of public spaces and buildings.

5.1. Existing City and State Climate Preparedness Requirements

At a minimum, new projects in the district governed by the MHP must address and comply with the following climate change mitigation and preparedness policies and requirements:

- City of Boston Climate Action Plan (CAP) - The 2014 CAP update requires that all city planning processes include an analysis of preparations for the effects of climate change. New buildings should function to advance the City's goal of reducing CO2 emissions from large buildings and institutions 14% by 2020. Large buildings and institutions are of specific concern regarding climate mitigation as this sector contributes approximately 50% of Boston's greenhouse gas emissions.
- Climate Ready Boston – A City initiative to develop resilient solutions for buildings, infrastructure, environmental systems and residents to address the challenges posed by long- term climate change and ensure Boston continues to prosper and thrive. The program will look to develop guidance for the City's climate preparedness policies and initiatives based upon an ongoing analysis of climate projections and scenarios, and integration of local and regional vulnerability assessments. Climate Ready Boston will also review and identify applicable resilient design measures and practices for vulnerable location and come forth with an implementation plan that also prioritizes solutions based upon costs and benefits.
- City of Boston Zoning Code - All new buildings over 50,000 square feet are subject to the City's Green Building Zoning Code Article 37 and are expected to show that their building can achieve equivalent performance at the LEED Silver rating for their new

assets to improve tenant comfort, safety and reduce energy demand, carbon emissions, and limit negative environmental impacts associated with stormwater runoff and heat island effect. Any project subject to Article 80 of the City's zoning code must also comply with the City's Climate Change Preparedness and Resiliency Checklist. Due to the Downtown Waterfront District's existing vulnerability to flood and storm surge conditions and future sea level rise, proponents will be expected to address and implement strategies and mitigation methodologies under Checklist Section B – Extreme Weather and Heat Events, and Section C – Sea Level Rise and Storms. All projects must also adhere to any flood resistant construction elevations as determined by the city.

5.2. District Vulnerability

The Downtown Waterfront is particularly vulnerable to inundation from coastal storms and future sea level rise due to its orientation to open water at the base of the Harbor and the area's elevation. FEMA's most recent Flood Insurance Rate Maps (FIRMs - March 2016) delineate much of the planning area, within a Special Flood Hazard Area, subject to the 100-year storm event. As the FIRMs are based upon analysis of historic storms of record, they do not account for future sea level rise in the delineation of the flood hazard areas or base flood elevations. Additionally the FIRMs represent most all of the ends of the district's wharves within a Velocity Zone where storm wave heights up to 3 feet. Projects in the planning area will therefore need to implement design and structural measures to mitigate wave action and energy.

To estimate vulnerability and risk associated with future sea level rise the City has developed climate projections and a vulnerability analysis through the Climate Ready Boston (CRB) initiative, which will be utilized for any new development within the planning area. The CRB findings and guidance provide relative sea level rise estimates for Boston, based upon the Global Sea Level Rise Scenarios for the United States National Climate Assessment and adjusts the scenarios and other sea level rise research. Moderate to high emission

scenarios anticipate 7 inches to 1.5 feet by 2050 and 2.4 to 7.4 feet by 2100. Project proponents should reference the CRB guidance and utilized the moderate to high emission scenario estimates for future sea level elevations and in developing a Design Flood Elevation above FEMA Base Flood Elevations to function as a datum for determining the project's base floor elevation and location of critical building systems. For more specific modeling information on future sea level rise scenarios, proponents should reference CRB guidance and the Massachusetts Department of Transportation's Boston Harbor Flood Risk Model (BH-FRM) to determine inundation risk and review dynamics and flood pathways in and around their property.

There are several state owned transportation assets in and around the planning area that will be vulnerable to sea level rise and storm surge, including the MBTA's Aquarium Station egress on State Street, and their Blue Line ventilation building at the end of Long Wharf, along with MassDOT's I-93 Central Artery tunnel ramps. The state has developed a Climate Change Vulnerability Assessment to determine the extent of vulnerability of these facilities. The City of Boston has also engaged Woods Hole Group to conduct a flood and storm surge modeling effort to better assess FEMA's Preliminary FIRM's, which can be used to better determine the nature and extent of flooding under a variety of future flood conditions. The City will continue to work with the State transportation agencies and coordinate efforts to prepare and protect public transportation infrastructure, the public realm and area properties.

5.3. Climate Preparedness Strategies and Expectations with New Development

Any property owner within the planning area filing for a new Chapter 91 License or Amended License, regardless of whether they are subject to the provisions of the MHP, shall conform with the climate change preparedness and resiliency standards specified in the MHP.

To determine a baseline of climate change preparedness and resiliency, property owners within the planning area shall complete an Existing Conditions Climate Change Preparedness Plan within one

year of the Secretary's approval of the MHP. The plan shall reference the MHP climate preparedness best practices specified below and best practices currently being employed or planned for implementation and installation within the next year. Within five years, or upon the filing of any document with the BPDA or MEPA office for a project, all property owners shall file a Climate Change Preparedness Plan for Future Conditions specifying measures referenced in the list below which will be incorporated into the project, including the climate preparedness best practices referenced below. The resiliency measures submitted as part of the plan for new development must be implemented as part of the development program for the proponent to utilize approved substitute provisions specified in the MHP for the project site.

Public open space and accessible areas must be designed and constructed with materials that will ensure their continued use by the public after periods of inundation. As much of the Downtown Harborwalk and shoreline is within areas designated by FEMA as subject to wave action, public plazas, walkways and Harborwalk should be designed and constructed with materials that can withstand wave action and function, to the extent practicable, to mitigate wave and tidal energy to assist in limiting damage to adjoining buildings and structures. Waterside infrastructure such as new docks, piers, as well as bulkhead and seawalls, shall be designed and constructed to withstand storm surge, wave action and future sea level rise. Materials for public spaces should also be of a higher albedo to assist in limiting heat island effect and incorporate vegetation and structural elements that provide shade and refuge from summer heat, as well as wind and precipitation.

All new projects shall incorporate additional freeboard in developing a Design Flood Elevation (DFE) and determining the base floor elevation for buildings, as well as elevations for underground garage portals, ventilation and exhaust systems, building mechanicals and utility connections. The level of freeboard shall be determined in accordance with the sea level rise ranges associated with the moderate to high emissions scenarios specified by Climate Ready Boston guidance documents. Consideration shall be given to the

design life of the building and the most conservative, applicable range of anticipated sea level rise.

For purposes of measuring building height within the planning area, project proponents shall utilize the base, or first floor elevation rather than the surrounding grade elevation to facilitate the incorporation of freeboard, or elevation of base floor height above the FEMA Base Flood Elevation. Project proponents may extend building height by the amount of freeboard provided above the FEMA Base Flood Elevation without having to offset shadow related to the added building height.

Existing property owners who wish to relocate vulnerable building mechanical systems or uses from the ground floor or below grade elevations to higher floors may construct additional heights to the building to compensate for loss of space without having to offset any new shadow created by the height, provided the ground floor is flood proofed and there is no loss of space on the ground floor dedicated to facilities of public accommodation. Vertical expansion of any building within the MHP area shall be in accordance with the *MHP Section 3.3.1 Building Height*.

The Downtown Waterfront should also serve as the city's first Flood Resiliency District, with property owners collectively evaluating risks of future sea level rise, district wide measures that can be implemented to reduce the risk and potential future damage, as well as funding mechanisms for area-wide infrastructure enhancements. Measures to consider could include offshore storm surge barriers and wave attenuators to break up wave action; armoring and fender systems at the ends of piers and wharves; and the elevation and utilization of waterfront plazas and Harborwalk as a heightened seawall that can protect the district from inundation while continuing to provide public waterfront access.

The following resiliency and adaptive measures and requirements may be revised over time in response to advancements in scientific research and findings on climate change, advancements in resiliency mitigation technology and measures, and changes in adaptation

regulations and initiatives undertaken by the City, Commonwealth or Federal Government.

5.4. Existing Conditions Climate Change Preparedness Plan

Property owners should address the feasibility of implementing the following climate preparedness best practices:

- Temporary watertight window and door barriers.
- Temporary deployable flood management measures such as sandbags, flood barriers and adjustable parapet walls.
- Sealed electrical, communications and fuel line wall penetrations.
- Septic line backflow prevention valves.
- Sump and discharge pumps.
- Alternative electrical lines for pumps to an external or emergency generator.
- Back-up utility connections for temporary generators.
- Use of dry and wet flood proofing coatings and materials on the ground floor and at sub-grade elevations.
- Measures for passive survivability in times of power and utility failure.
- Viability of fire suppression systems in flood conditions.
- Flood emergency plan to ensure worker and tenant safety and limit damage to building systems and infrastructure.
- Protection of building records and inventory.

5.5. Climate Change Preparedness Plan for Future Conditions

Property owners and project proponents shall evaluate and provide information on the following climate preparedness best practices:

- Design of ground floor as a sacrificial level that can be hardened in the future to prevent inundation, and elevate primary entrances to the building's second floor.
- Design of floor to floor heights on the ground level to accommodate future raised floor level on the ground floor.
- Determine Design Flood Elevation (DFE) for the property and related elevations for the following:
    - Building mechanicals: heating, HVAC, elevator systems
    - Ventilation exhaust and intakes

    - Utilities, telecommunication systems, electrical and plumbing
    - Back-up power systems and emergency generators
    - Fuel storage systems and hazardous materials
    - Points of egress and underground garage portals
- Dry and or wet flood proofing per FEMA construction standards up to DFE.
- Structural reinforcement measures up to the DFE to ensure building is designed to support hydrostatic and flood loading.
- Measures to limit inundation of underground parking garages such as drainage pumps and floodgates.
- Deployable flood management measures such as sandbags, flood barriers and adjustable parapet walls.
- Storage of hazardous materials outside or above flood hazard areas.
- Installation of watertight utility conduits and elevation of utility connections and exterior auxiliary hookups for portable generators above DFE.
- Cogeneration and backup power systems.
- Sewage backflow preventers.
- Building materials and measure to withstand direct and indirect impacts of high winds and limit damage from flood or wind induced debris.
- Use of high albedo pavers and roofing surfaces to manage heat gain.
- Operable windows to allow for air circulation in times of power outage.
- Use of saltwater tolerant landscape vegetation that also provides shade and mitigates the effects of wind.
- Implementation of Low Impact Design storm water measures and rainwater recycling
- Design elements for public outdoor areas including shade structures and measures to limit damage from inundation and wave action.
- Measures for passive survivability in times of power and utility failure.
- Viability of fire suppression systems in flood conditions.
- Flood emergency plan to ensure worker and tenant safety and

limit damage to building systems and infrastructure.
- Protection of building records and inventory.

6. MHP CONSISTENCY

6.1. Consistency with State Agency Plans

An MHP must include all feasible measures to achieve compatibility with plans or planned activities of all state agencies owning real property or responsible for the implementation or development of plans and projects within harbor planning area.

The Massachusetts Bay Transportation Authority (MBTA) is the only state agency that owns property within the MHP amendment area.

6.2. Consistency with State Tidelands Policy Objectives

As required by 301 CMR 23.05(3), the DTW MHP must be consistent with state tidelands policy objectives and associated regulatory principles set forth in the state Chapter 91 Waterways regulations at 310 CMR 9.00. As promulgated, the Waterways regulations provide a uniform statewide framework for regulating tidelands projects. Municipal Harbor Plans and associated amendments present communities with an opportunity to propose modifications to these uniform standards through the amplification of the discretionary requirements of the Waterways regulations or through the adoption of provisions that, if approved, are intended to substitute for the minimum use limitations or numerical standards of 310 CMR 9.00. The substitute provisions of Municipal Harbor Plans, in effect, can serve as the basis for a waiver of specific use limitations and numerical standards affecting nonwater-dependent use projects, and thereby reflect local planning goals in decisions involving the complex balancing of public rights in and private uses of tidelands.

The DTW MHP contains clear guidance that will have a direct bearing on Chapter 91 licensing decisions within the harbor planning area. Included in this guidance are provisions that are intended to substitute for certain minimum use limitation and numerical

standards in the regulations.

These provisions are each subject to the approval criteria under 301.CMR 23.05(3)(b)-(e), and as explained below.

The general framework for evaluating all proposed substitute provisions to the Waterways requirements is established in the Municipal Harbor Plan regulations at 301 CMR 23.05(2)(c) and 301 CMR 23.05(2)(d). The regulations, in effect, set forth a two part standard that must be applied individually to each proposed substitution in order to ensure that the intent of the Waterways requirements with respect to public rights in tidelands is preserved.

For the first part, in accordance with 301 CMR 23.05(2)(c), there can be no waiver of a Waterways requirement unless the Secretary determines that the requested alternative requirements or limitations ensure that certain conditions—specifically applicable to each minimum use limitation or numerical standard—have been met. The second part of the standard, as specified in 301 CMR 23.05(2)(d), requires that the municipality demonstrate that a proposed substitute provision will promote, with comparable or greater effectiveness, the appropriate state tidelands policy objective.

A municipality may propose alternative use limitations or numerical standards that are less restrictive than the Waterways requirements as applied in individual cases, provided that the plan includes other requirements that, considering the balance of effects on an area-wide basis, will mitigate, compensate for, or otherwise offset adverse effects on water-related public interests.

Under 301 CMR 25.5(2)(a), a MHP must be consistent with the relevant primary state tidelands policy objectives. For substitute provisions relative to the minimum use and numerical standards of 310 CMR 9.51(3)(a)–(e), 310 CMR 9.52, and 310 CMR 9.53, any proposal must ensure that nonwater-dependent uses do not unreasonably diminish the capacity of tidelands to accommodate water-dependent uses. Similarly, substitute provisions for nonwater-

dependent projects on Commonwealth Tidelands must 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 DTW MHP is consistent with the relevant primary state tidelands policy objectives as described below.

Categorical Restrictions on Fill and Structures – 310 CMR 9.32
None of the proposed site uses or improvements are categorically restricted in previously filled or flowed tidelands.

Environmental Protection Standards – 310 CMR 9.33
310 CMR 9.33 states all projects must comply with the applicable environmental regulatory programs of the Commonwealth. The regulatory programs specifically applicable to the Project are:

- The Massachusetts Environmental Policy Act (MEPA);
- The Massachusetts Wetlands Protection Act (a notice of intent will be filed with the City of Boston Conservation Commission);
- Massachusetts Historical Commission Act; and
- Coastal Zone Management Consistency Review.

Conformance with Municipal Zoning and Harbor Plans standards – 310 CMR 9.34
The Project meets the requirements set forth in Section 27P – 15 and Section 42E – 5 of the Zoning Code for the issuance of the Boston Planning and Development Agency's section 18 recommendation.

All projects within the DTW MHP shall conform with the substitute provisions for nonwater-dependent uses included in the Secretary's approval of the DTW MHP.

Standards to Preserve Water-Related Public Rights – 310 CMR 9.35
The Waterways regulations at 310 CMR 9.35 are designed to preserve the public's rights to navigation, free passage over and

through the water and access to Town landing, and to insure that public open spaces are properly managed and maintained.

All projects within the DTW MHP will comply with the appropriate components of this section.

Standards to Protect Water-Dependent Uses – 310 CMR 9.36
The regulations at 310 CMR 9.36 are designed to protect any water-dependent uses occurring at or proximate to the site. This includes water-dependent uses within the five years prior to the filing of the license application.

There are several water-dependent uses within the DTW MHP, including the New England Aquarium, the water transportation services of Boston Harbor Cruises, and ferry service to the Boston Harbor Islands. The DTW MHP includes specific provisions to protect and enhance these water-dependent uses through offsets and long-term Chapter 91 license fees.

Engineering Construction Standards – 310 CMR 9.37
All structures will be designed and constructed in a manner that is structurally sound and will be certified by a Registered Professional Engineer. Given the entire shoreline of the DTW MHP consists of shoreline engineering structures and given the importance of climate resilient public realm areas in activating the DTW MHP, the DTW MHP includes an amplification to recommend appropriate increases in elevation of public open spaces within the DTW MHP area.

Nonwater-dependent Uses on New Pile Supported Structures – 310 CMR 9.51(3)(a)
Nonwater-dependent structures on new pile-supported structures generally shall not extend beyond the footprint of existing, previously authorized pile-supported structures or pile fields. No new pile-supported structures are required within the DTW MHP with the exception of the Hook Wharf site, where new pile-supported structures to extend the water-dependent use zone and the Harborwalk are accomplished by reconfiguring and existing structure so that the new area is landward of the previous pile field and of

equal size.

Nonwater-dependent Facilities of Private Tenancy – 310 CMR 9.51(3)(b)

For nonwater-dependent uses on pile-supported structures, 310 CMR 9.51(3)(b) prohibits Facilities of Private Tenancy on any pile supported structure on flowed tidelands, or on ground floor of any filled tidelands within 100 feet of a project shoreline. The DTW MHP includes a substitute provision to allow upper level FPTs over flowed tidelands at the Hook Wharf site.

Water-dependent Use Zone – 310 CMR 9.51(3)(c)

For the water-dependent use zone, 310 CMR 9.51(3)(c), the MHP must specify alternative setback distances and other requirements that ensure that new or expanded buildings for nonwater-dependent use are not constructed immediately adjacent to a project shoreline, in order that sufficient space along the water's edge will be devoted exclusively to water-dependent use and public access associated therewith, as appropriate for the harbor in question.

Hook Wharf is the only proposed project in the MHP area with a WDUZ. The WDUZ for a new or substantially new structure may be reconfigured, provided the overall area of the WDUZ is equal to or greater than that resulting from strict compliance with the dimensional standards of 310 CMR 9.51(3)(c). In no event shall the WDUZ be less than 12 feet in width. In order to promote the public's access to the waterfront, the Hook Wharf project may require a reconfigured WDUZ. No offset is required.

Lot Coverage – 310 CMR 9.51 (3)(d)

For the lot coverage standard at 310 CMR 9.51(3)(d), an MHP must specify an alternative lot coverage, ratios and other requirements, that ensure, in general, buildings for nonwater-dependent use will be relatively condensed in footprint, and must demonstrate that the substitution provisions set forth will, with comparable or greater effectiveness, make available an amount of open space to accommodate water-dependent activity, and associated public access, commensurate with that occupied by buildings containing

nonwater-dependent uses.

The DTW MHP specifies a maximum lot coverage of 70% at the Hook Wharf site, provided that the appropriate offsets have been completed and the overall lot coverage for the MHP planning area is not less than 50%.

Building Height – 310 CMR 9.51(3)(e)

For the building height standard at 310 CMR 9.51(3)(e), an MHP must specify an alternative height limit that ensures that, in general, new or expanded buildings for nonwater-dependent use will be relatively modest in size**,** as appropriate for the harbor in question, in order that wind, shadow, and other conditions of the ground-level environment will be conducive to water-dependent activity and public access. The approval standards focus on how a building's mass will be experienced at the public open spaces on the project site, especially along the waterfront and key pathways leading thereto. New building heights that exceed that Waterways standards also include appropriate offsets and depend on the implementation of appropriate amplifications.

Utilization of Shoreline for Water-dependent Purposes – 310 CMR 9.52

This section of the Waterways regulations requires that "a nonwater-dependent use project that includes fill or structures on any tidelands shall devote a reasonable portion of such lands to water-dependent use, including public access in the exercise of public rights on such lands." Under subsection (1)(a), nonwater-dependent use projects with a WDUZ must include "…one or more facilities that generate water-dependent activity of a kind and to a degree that is appropriate for the project site, given the nature of the project, conditions of the water body on which it is located, and other relevant circumstances". The DTW MHP meets this standard.

Activation of Commonwealth Tidelands for Public Use – 310 CMR 9.53

Under 310 CMR 9.53, a nonwater-dependent use project "…that includes fill or structures on Commonwealth tidelands…must

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 the private advantages of use are not primary but merely incidental to the achievement of public purposes." In addition, the project "…shall attract and maintain substantial public activity on the site on a year-round basis, through the provisions of water-related public benefits of a kind and to a degree that is appropriate for the site, given the nature of the project, conditions of the waterbody on which it is located, and relevant circumstances." Under 310 CMR 9.53(2)(a), the proposed project must also "promote water-based public activity" including but not limited to ferries, cruise ships, water shuttles, public landings and swimming/fishing areas, excursion/charter/rental docks, and community sailing centers. The DTW MHP meets this standard.

Implementation Strategies – 301 CMR 23.05(4)

Pursuant to 301 CMR 23.05(4), the Plan must include enforceable implementation commitments to ensure that, among other things, all measures will be taken in a timely and coordinated manner to offset the effect of any plan requirement less restrictive than that contained in 310 CMR 9.00. The project will be subject to the requirements of the Boston Zoning Code, including provisions authorizing planned development areas that will ensure implementation of the offsets.

6.3 Consistency with State Coastal Policies

The DTW MHP complies with all applicable enforceable policies, as revised in 2011, of the approved Massachusetts Coastal Zone Management (CZM) program and will be implemented in a manner consistent with such policies.

Coastal Hazards Policy #1

Preserve, protect, restore, and enhance the beneficial functions of storm damage prevention and flood control provided by natural coastal landforms, such as dunes, beaches, barrier beaches, coastal banks, land

subject to coastal storm flowage, salt marshes, and land under the ocean.

The DTW MHP is characterized almost exclusively by a structural waterfront. To the extent practical, projects within the DTW MHP will utilize the waterfront area to enhance storm damage prevention.

Coastal Hazards Policy #2

Ensure that construction in water bodies and contiguous land areas will minimize interference with water circulation and sediment transport. Flood or erosion control projects must demonstrate no significant adverse effects on the project site or adjacent or downcoast areas.

Projects within the DTW MHP shall comply with all applicable water circulation and sediment transport standards.

Coastal Hazards Policy #3

Ensure that state and federally funded public works projects proposed for location within the coastal zone will:

- *Not exacerbate existing hazards or damage natural buffers or other natural resources.*
- *Be reasonably safe from flood and erosion-related damage.*
- *Not promote growth and development in hazard-prone or buffer areas, especially in velocity zones and Areas of Critical Environmental Concern.*
- *Not be used on Coastal Barrier Resource Units for new or substantial reconstruction of structure sin a manner inconsistent with the Coastal Barrier Resource/Improvement Acts.*

Not applicable.

Energy Policy #1

For coastally dependent energy facilities, assess siting in alternative coastal locations. For non-coastally dependent energy facilities, assess siting in areas outside of the coastal zone. Weigh the environmental and safety impacts of locating proposed energy facilities at alternative sites.

Not applicable.

Energy Policy #2

Encourage energy conservation and the use of renewable sources such as solar and wind power in order to assist in meeting the energy needs of the Commonwealth.

Projects within the DTW MHP shall comply with all applicable energy conservation and renewable energy use standards.

Growth Management Policy #1

Encourage sustainable development that is consistent with state, regional, and local plans and supports the quality and character of the community.

Projects within the DTW MHP shall comply with all applicable state, regional, and local plans. A central goal of the DTW MHP is to support the urban quality of the Downtown Waterfront area.

Growth Management Policy #2

Ensure that state and federally funded infrastructure projects in the coastal zone primarily serve existing developed areas, assigning highest priority to projects that meet the needs of urban and community development centers.

Not applicable.

Habitat Policy #1

Protect coastal, estuarine, and marine habitats—including salt marshes, shellfish beds, submerged aquatic vegetation, dunes, beaches, barrier beaches, banks, salt ponds, eelgrass beds, tidal flats, rocky shores, bays, sounds, and other ocean habitats—and coastal freshwater streams, ponds, and wetlands to preserve critical wildlife habitat and other important functions and services including nutrient and sediment attenuation, wave and storm damage protection, and landform movement and processes.

The DTW MHP is characterized almost exclusively by a structural waterfront. To the extent practical, projects within the DTW MHP will protect coastal and marine habitats consistent with this policy.

Habitat Policy #2

Advance the restoration of degraded or former habitats in coastal and marine areas.

The DTW MHP is characterized almost exclusively by a structural waterfront. To the extent practical, projects within the DTW MHP will advance the restoration of coastal marine habitats consistent with this policy.

Ocean Resources Policy #1

Support the development of sustainable aquaculture, both for commercial and enhancement (public shellfish stocking) purposes. Ensure that the review process regulating aquaculture facility sites (and access routes to those areas) protects significant ecological resources (salt marshes, dunes, beaches, barrier beaches, and salt ponds) and minimizes adverse effects on the coastal and marine environment and other water-dependent uses.

Not applicable.

Ocean Resources Policy #2

Except where such activity is prohibited by the Ocean Sanctuaries Act, the Massachusetts Ocean Management Plan, or other applicable provision of law, the extraction of oil, natural gas, or marine minerals (other than sand and gravel) in or affecting the coastal zone must protect marine resources, marine water quality, fisheries, and navigational, recreational and other uses.

Not applicable.

Ocean Resources Policy #3

Accommodate offshore sand and gravel extraction needs in areas and in ways that will not adversely affect marine resources, navigation, or shoreline areas due to alteration of wave direction and dynamics. Extraction of sand and gravel, when and where permitted, will be primarily for the purpose of beach nourishment or shoreline stabilization.

Not applicable.

Ports and Harbors Policy #1

Ensure that dredging and disposal of dredged material minimize adverse effects on water quality, physical processes, marine productivity, and public health and take full advantage of opportunities for beneficial re-use.

Not applicable.

Ports and Harbors Policy #2

Obtain the widest possible public benefit from channel dredging and ensure that Designated Port Areas and developed harbors are given highest priority in the allocation of resources.

Not applicable.

Ports and Harbors Policy #3

Preserve and enhance the capacity of Designated Port Areas to accommodate water-dependent industrial uses and prevent the exclusion of such uses from tidelands and any other DPA lands over which an EEA agency exerts control by virtue of ownership or other legal authority.

Not applicable.

Ports and Harbors Policy #4

For development on tidelands and other coastal waterways, preserve and enhance the immediate waterfront for vessel-related activities that require sufficient space and suitable facilities along the water's edge for operational purposes.

The DTW MHP preserves and enhances the immediate waterfront activity for vessel-related activities that require sufficient space and suitable facilities along the water's edge for operational purposes by requiring sites with WDUZ to provide such facilities and by directing offsets and license fees to these uses.

Ports and Harbors Policy #5

Encourage, through technical and financial assistance, expansion of water-dependent uses in Designated Port Areas and developed harbors, re-development of urban waterfronts, and expansion of physical and

visual access.

The DTW MHP requires sites with WDUZ to provide facilities for water-dependent uses, including water transportation and the Harborwalk. Offsets and license fees are directed to increasing water transportation within the DTW MHP.

Protected Areas Policy #1

Preserve, restore, and enhance coastal Areas of Critical Environmental Concern, which are complexes of natural and cultural resources of regional or statewide significance.

Not applicable.

Protected Areas Policy #2

Protect state designated scenic rivers in the coastal zone.

Not applicable.

Protected Areas Policy #3

Ensure that proposed developments in or near designated or registered historic places respect the preservation intent of the designation and that potential adverse effects are minimized.

Projects within the DTW MHP shall respect the intent of any registered historic places and minimize potential adverse impacts.

Public Access Policy #1

Ensure that development (both water-dependent or nonwater-dependent) of coastal sites subject to state waterways regulation will promote general public use and enjoyment of the water's edge, to an extent commensurate with the Commonwealth's interests in flowed and

filled tidelands under the Public Trust Doctrine.

A central focus of the DTW MHP is to improve and expand public access opportunities to the waterfront, including water transportation, and increase water-dependent opportunities for the public. Offsets to substitute provisions ensure that general public use and enjoyment of the waterfront will be promoted with equal or greater effectiveness than strict adherence to the Waterways regulations.

Public Access Policy #2

Improve public access to existing coastal recreation facilities and alleviate auto traffic and parking problems through improvements in public transportation and trail links (land- or water-based) to other nearby facilities. Increase capacity of existing recreation areas by facilitating multiple use and by improving management, maintenance, and public support facilities. Ensure that the adverse impacts of developments proposed near existing public access and recreation sites are minimized.

A central focus of the DTW MHP is to improve and expand public access opportunities to the waterfront, including water transportation, and increase water-dependent opportunities for the public.

Public Access Policy #3

Expand existing recreation facilities and acquire and develop new public areas for coastal recreational activities, giving highest priority to regions of high need or limited site availability. Provide technical assistance to developers of both public and private recreation facilities and sites that increase public access to the shoreline to ensure that both transportation access and the recreation facilities are compatible with social and

environmental characteristics of surrounding communities.

A central focus of the DTW MHP is to improve and expand public access opportunities to the waterfront, including water transportation, and increase water-dependent opportunities for the public.

Water Quality Policy #1

Ensure that point-source discharges and withdrawals in or affecting the coastal zone do not compromise water quality standards and protect designated uses and other interests.

Projects within the DTW MHP are shall comply with all applicable nonpoint source pollution standards.

Water Quality Policy #2

Ensure the implementation of nonpoint source pollution controls to promote the attainment of water quality standards and protect designated uses and other interests.

Projects within the DTW MHP are shall comply with all applicable nonpoint source pollution standards.

Water Quality Policy #3

Ensure that subsurface waste discharges conform to applicable standards, including the siting, construction, and maintenance requirements for on-site wastewater disposal systems, water quality standards, established Total Maximum Daily Load limits, and prohibitions on facilities in high-hazard areas.

Projects within the DTW MHP shall comply with all applicable subsurface waste discharge standards.

Appendix B – MHPAC Meeting Dates, and Appendix C – MHPAC Meeting Notes to be added