



**boston planning &  
development agency**

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PLAN: East Boston

# **Workshop Toolkit: Waterfront and Economic Development Areas**



## Introduction

# Waterfront and Economic Development Areas

The built environment of East Boston’s Waterfront and Economic Development Areas (EDAs) includes buildings, regulated by Article 53 of the Boston Zoning Code, and streets, informed by Boston Complete Streets guidelines.

The East Boston waterfront is also governed by State regulations such as the Public Tidelands Act (MGL Chapter 91), which prioritizes public access to the harbor, and Designated Port Area (DPA) regulations, which emphasize water-dependent industrial uses.



In this document we'll explore—

Shaping the waterfront through State regulations

Shaping individual buildings through zoning

Shaping streets through Complete Streets guidelines



Much of East Boston was built before zoning, Complete Streets policy, or DPA regulations were adopted, which means there are many examples of buildings that do not comply with Article 53, streets that do not comply with Boston Complete Streets guidelines, and areas that are currently within DPA boundaries that might not qualify as a DPA currently.

## Introduction

# Waterfront and Economic Development Areas



### East Boston Inner Harbor

The Inner Harbor provides a broad mix of waterfront uses from the dynamic Boston Harbor Shipyard and Marina, to new residential mixed-use developments along Sumner and Marginal streets, active open space resources at Piers and LoPresti parks, as well as areas of the working waterfront with marine contractors and boatyards.



### Chelsea Creek

Chelsea Creek is located within a Designated Port Area and has long served as an important corridor of water-dependent industrial uses, such as boat repair, bulk fuel, and shipping. The waterway also provides unique ecosystem attributes as well with the Condor Street Urban Wild, broad tidal flats, and areas of salt marsh.



### McClellan Highway EDA

This EDA is situated between low-density residential areas and McClellan Highway (Route 1A). It currently houses low-density light industrial uses and hotels. The area lacks a street network or infrastructure, rendering it inaccessible to much of the neighborhood.



### Saratoga EDA

This EDA stretches from Saratoga Street near the Winthrop town line to Bennington Street, encompassing the Orient Heights MBTA Station. It includes MBTA-owned land, light industrial buildings, and low-density commercial buildings.



Economic Development Areas were established to encourage economic growth in a manner that is sensitive to the needs and interests of the community; to provide for economic development that is of a quality and scale appropriate to the surrounding neighborhoods; and to encourage the diversification and expansion of Boston's and East Boston's economy.

**Map of East Boston's Waterfront & EDAs**

## Introduction

# Resilience and the Waterfront

East Boston is already vulnerable to coastal flood events, which will increase in severity and frequency with future sea level rise. Protecting East Boston from flooding will require an enhanced shoreline, such as those envisioned through the Coastal Resilient Solutions report (2017) and the Mayor's Resilient Boston Harbor Vision (2018).

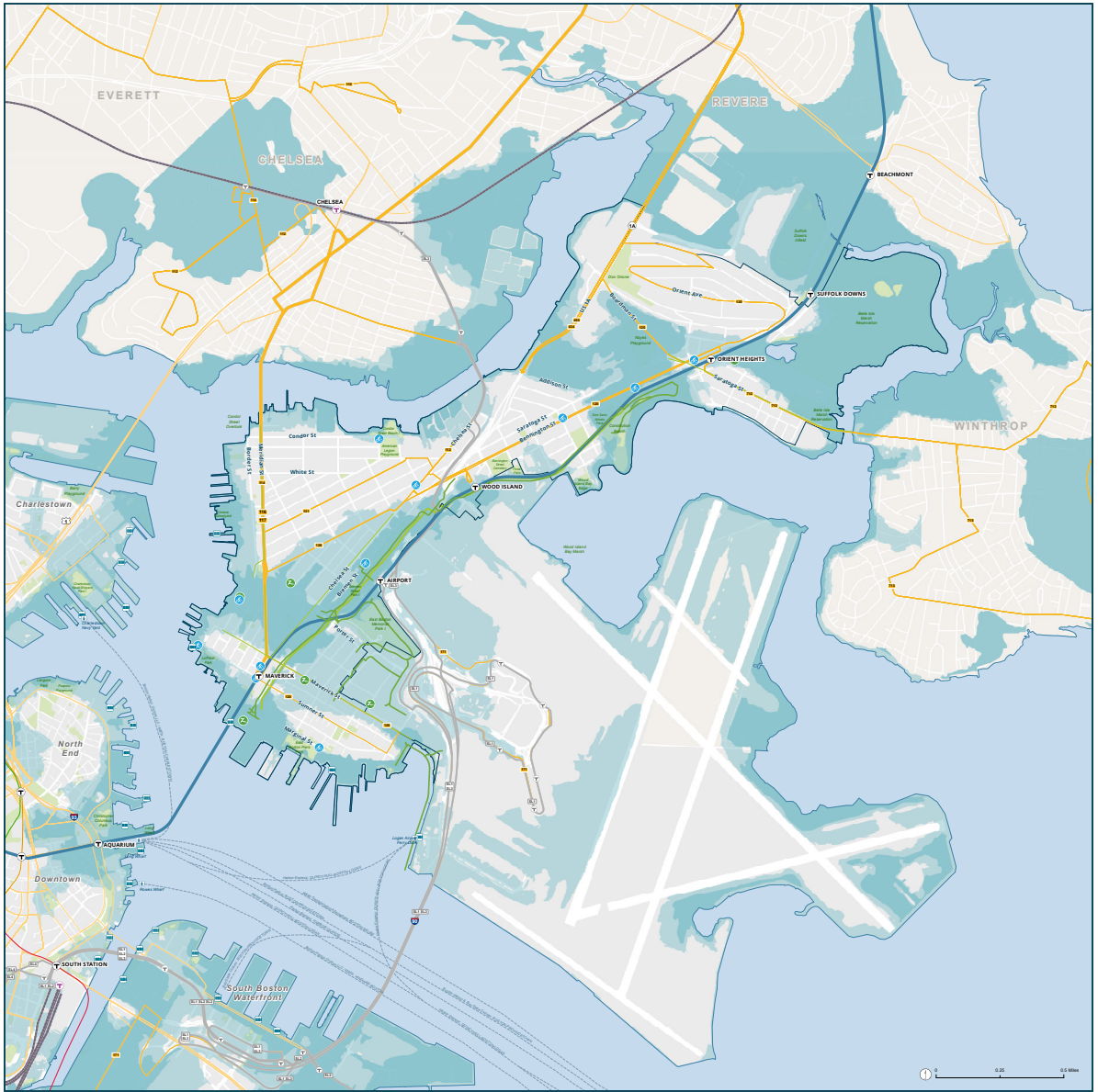


Coastal Resilience Solutions for East Boston and Charlestown (2017)  
Conceptual rendering of open space in East Boston's Inner Harbor.



Resilient Boston Harbor Vision (2018)  
Conceptual rendering of resilient infrastructure connecting Constitution Beach to Belle Isle Marsh and points north.

These initiatives look to promote new elevated berms, Harborwalk, plazas, and living shorelines along the East Boston waterfront that will provide protection from coastal storms, improve public access to the harbor, and revitalize coastal habitats, and underutilized areas of waterfront.



A quarter of East Boston's major streets and three of the five Blue Line stops in East Boston are vulnerable to flooding today. By 2070, more than 80% of East Boston's major streets and four of the five Blue Line stops in East Boston will be threatened by flooding.

### Map of Sea Level Rise in East Boston

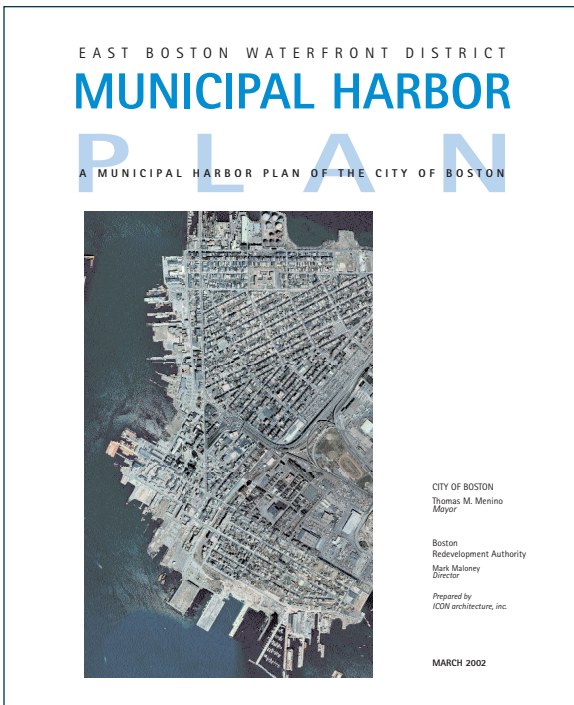
Sources: Boston Harbor Flood Risk Model, City of Boston, MassDOT, MassGIS, and the MBTA

- Current Flood Risk Zone (1% Flood)
- 2070 Flood Risk Zone (1% Flood)

## Regulatory Framework

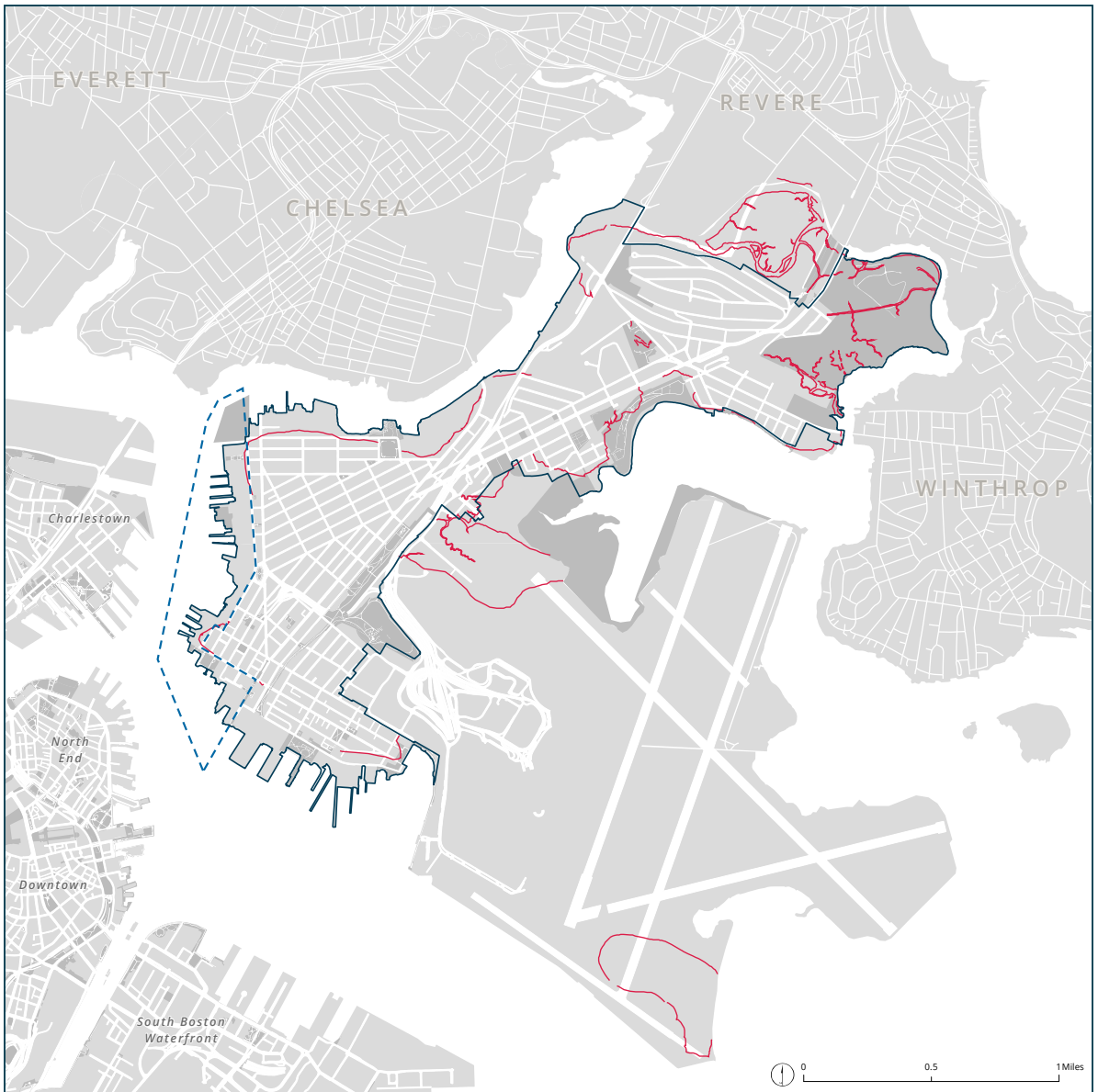
# Chapter 91 & Municipal Harbor Plans

Chapter 91 is a State regulation that guides waterfront development to promote public access to the harbor, prioritize water-dependent uses, and ensure private development advances public programming and use of the waterfront. Municipal Harbor Plans (MHPs) involve a public planning process to allow for changes to the uniform Chapter 91 use and dimensional requirements.



Chapter 91 accomplishes these objectives through dimensional and use restrictions for private waterfront development by requiring half of project sites to be open space, by placing limits on building height and setback from the water to allow for Harborwalk, and by requiring ground-floor uses that are available to the public. The regulations also support an activated waterfront through requirements for water transportation and public programming. Through an MHP the height, mass, and setback of new buildings, and location of open space can be altered to address community objectives and neighborhood character. An MHP can also specify the types of waterfront amenities, programming, and ground-floor uses residents would like to see with new development.





The East Boston Municipal Harbor Plan (EBMHP) was adopted in 2002 and amended in 2008. The document provided guidance to the community, developers and to the Department of Environmental Protection (DEP) Chapter 91 licensing process, and was built on findings published in the East Boston Master Plan in April 2000.

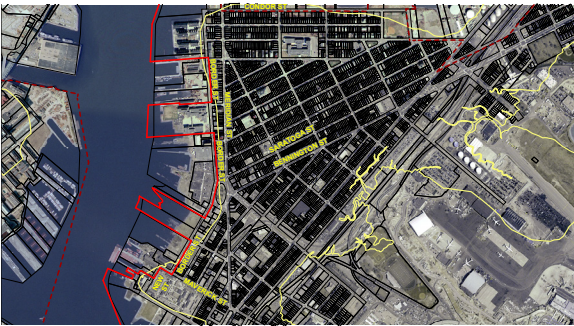
### Map of Chapter 91 Jurisdiction & EBMHP

- - - East Boston Municipal Harbor Plan (CZM)
- Chapter 91 Jurisdiction

## Regulatory Framework

# Designated Port Areas

The State has established certain areas of the East Boston waterfront as locations for marine industrial uses due to access to deep water berthing, existing industrial site characteristics, and access to transportation networks and roads. These areas include the Boston Harbor Shipyard, much of the Chelsea Creek, and other locations where marine contractors and marine services uses are currently or were formerly located.

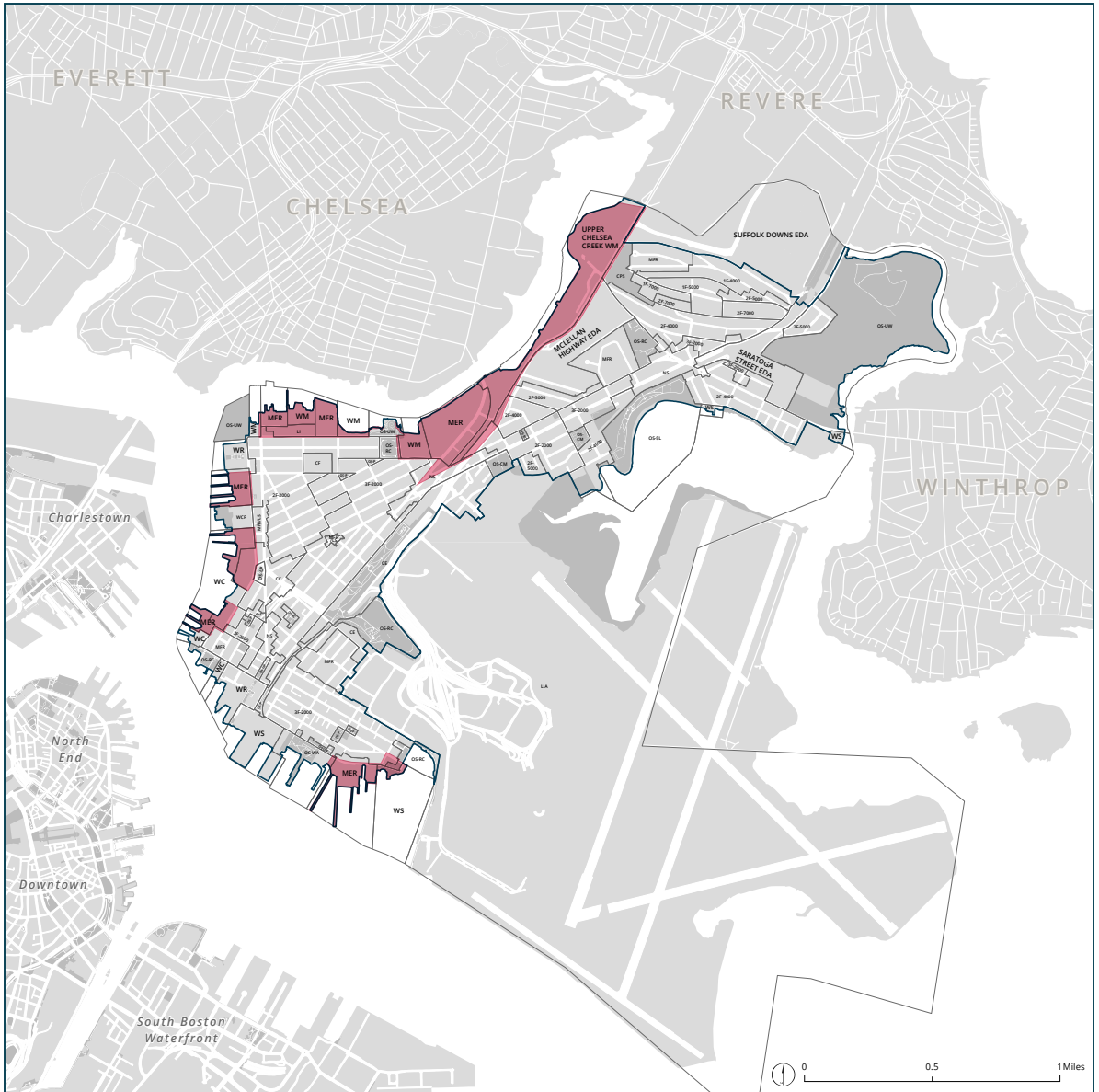


Map of DPA Boundary and Chapter 91 Jurisdiction published in EBMHP



Image of parking lot and retail uses located within the Border Street DPA

Some properties within the DPAs are currently underutilized since DPA boundaries were established about 40 years ago when there was more active marine industrial use along East Boston's waterfront.



The state standards allow for 25% of these areas to be allowed for other uses that support the waterfront industrial activities and generally do not permit public access.

Map of East Boston Designated Port Areas

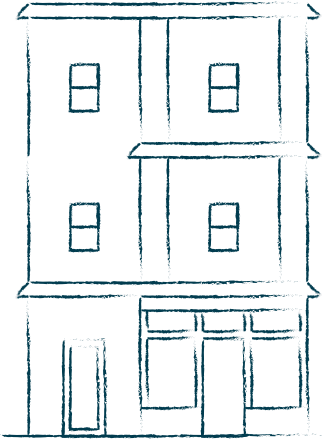
- Designated Port Area Boundary (DPA)
- Zoning Subdistrict Boundary

# Regulatory Framework

## Zoning

Zoning is the City’s legal mechanism to regulate what property owners can and cannot do with their property. Zoning keeps compatible things together—like types of uses or sizes and forms of buildings. Zoning complements and helps implement MHPs and DPA objectives.

What you see—



What the zoning looks like—

SUBDISTRICT	HEIGHT	FAR	SET BACK
WC	55'	1.0	none
WM	55'	1.0	none
LI	35'	1.0	20' rear
EDA*	45'	2.0	20' rear

Zoning abstracts features of buildings and groups them by shared characteristics. There are three main parts to zoning:

### Geography

Zoning controls how growth and development occur by identifying different areas, or zoning subdistricts, with different use and/or dimensional standards.

### Use

Zoning regulates what type of activities, or uses, are allowed in each subdistrict. Some common uses defined by zoning include residential, commercial/retail, civic, and industrial.

### Dimensional Standards

Zoning guides the size and shape of buildings. It doesn't say what a building should look like, but it does set up rules about how big a building can be and where it should be located within a given parcel.

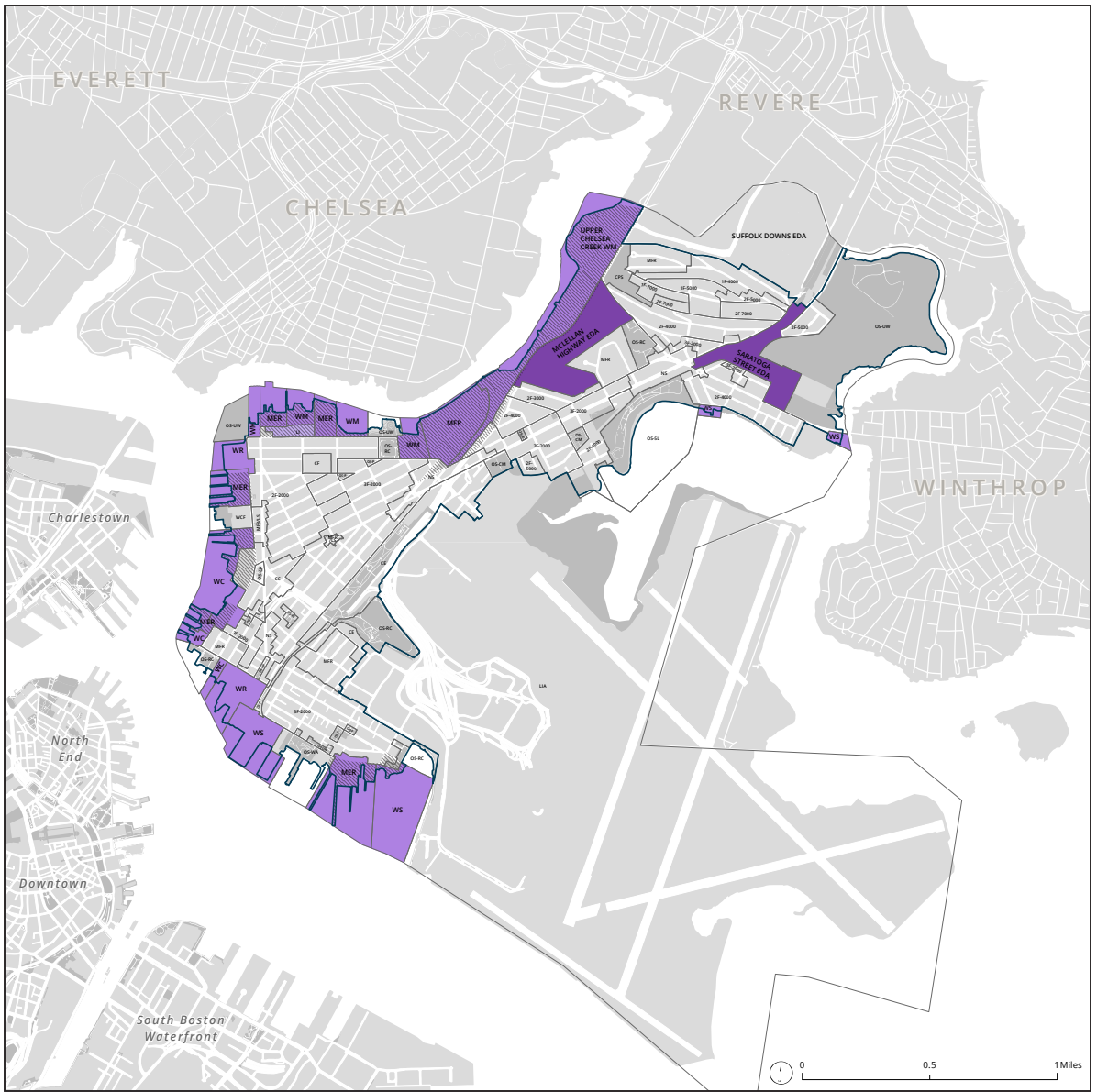
WC - Waterfront Commercial

WM - Waterfront Manufacturing

LI - Local Industrial

EDA - Economic Development Area

\* There are 3 EDAs in East Boston, each of which have specific dimensional requirements. All three EDAs allow for Planned Development Areas or PDAs.



East Boston's zoning code, known as Article 53, was last updated in 1993. East Boston's last MHP was adopted in 2002 and was amended in 2008.

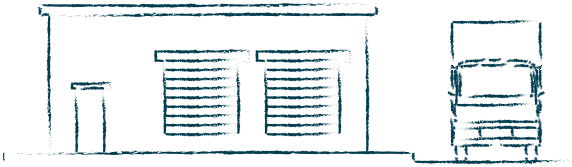
### Map of Zoning Subdistricts in Article 53

- Waterfront zoning
- Local Industrial
- Economic Development Area (EDA)
- Designated Port Area (DPA)
- Zoning Subdistrict Boundary

## Regulatory Framework

# Zoning - Land Use

Historically, the primary purpose of zoning was to segregate uses that were thought to be incompatible. Waterfront and Economic Development Area zoning subdistricts in East Boston typically prioritize commercial and industrial uses.



### Development Trends

The economy of East Boston has changed over time and as a result, demand for certain land uses have changed as well. The neighborhood historically served many water-dependent industrial businesses. Today there is tremendous economic interest in developing land for residential uses, however several of the East Boston's zoning subdistricts do not allow residential uses. Determining where to prioritize commercial and industrial uses versus where to prioritize residential use, is a critical part of planning for neighborhood growth.

Use	WC	WM	LI	EDA
Machine Shop	A	A	A	A
Boatyard	F	A	F	F
Multi-family Residential	C	F	F	F
Restaurant	A	A	C	A
Art Gallery	A	A	A	A
Wholesale Office	A	A	A	A

### Article 53 - Table B

Uses are encoded as "Allowed" (A), "Conditional" (C), or "Forbidden" (F). Table B of Article 53 of the Boston Zoning Code lists 26 distinct use categories. For definitions of each use category and certain specific uses, see Article 2A of the Boston Zoning Code.

WC - Waterfront Commercial

WM - Waterfront Manufacturing

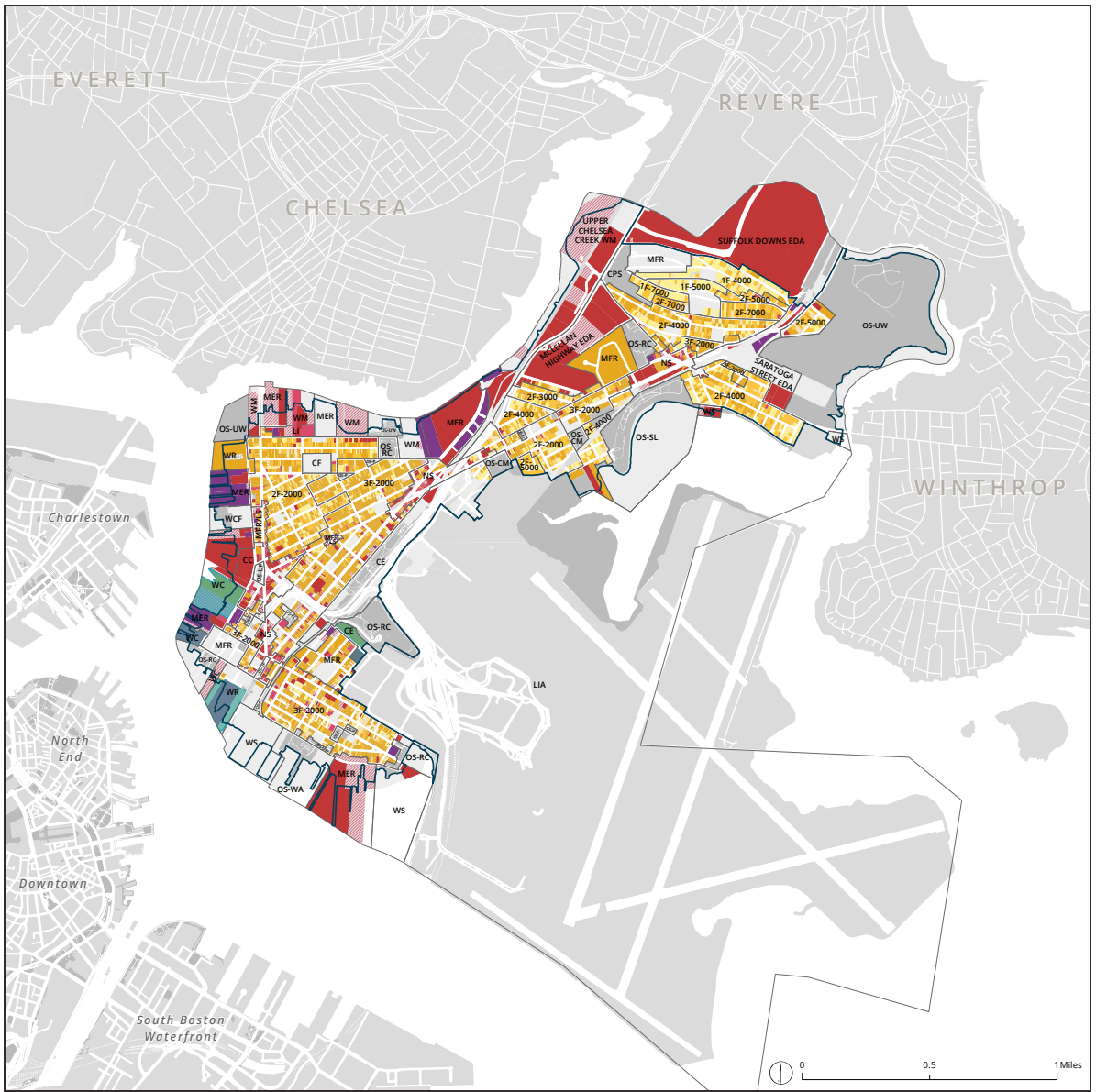
LI - Local Industrial

EDA - Economic Development Area

A - Allowed

C - Conditional

F - Forbidden

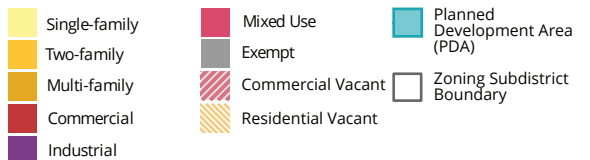


**Existing Non-conformity - Land Use**

There are many examples of existing uses that are forbidden by zoning but are desirable to the neighborhoods they are located in.

**Map of Existing Land Use by Parcel**

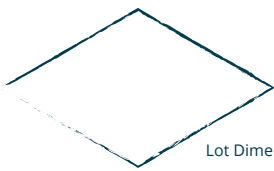
Sources: Zoning, Assessing FY'18 (as of Jan.1 2017)



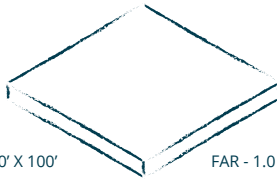
## Regulatory Framework

# Zoning - Density

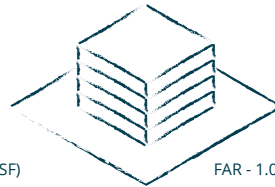
One of the main ways zoning limits the size of buildings is by regulating allowed Floor Area Ratio (FAR). FAR is the total square footage of all the floors of a building, divided by the total square footage of the parcel.



Lot Dimension - 100' X 100'  
Lot Area - 10,000 SQ FT



FAR - 1.0 (10,000 GSF)  
Building Footprint - 10,000 SQ FT  
Building Height - 10 FT  
Lot Coverage - 100%



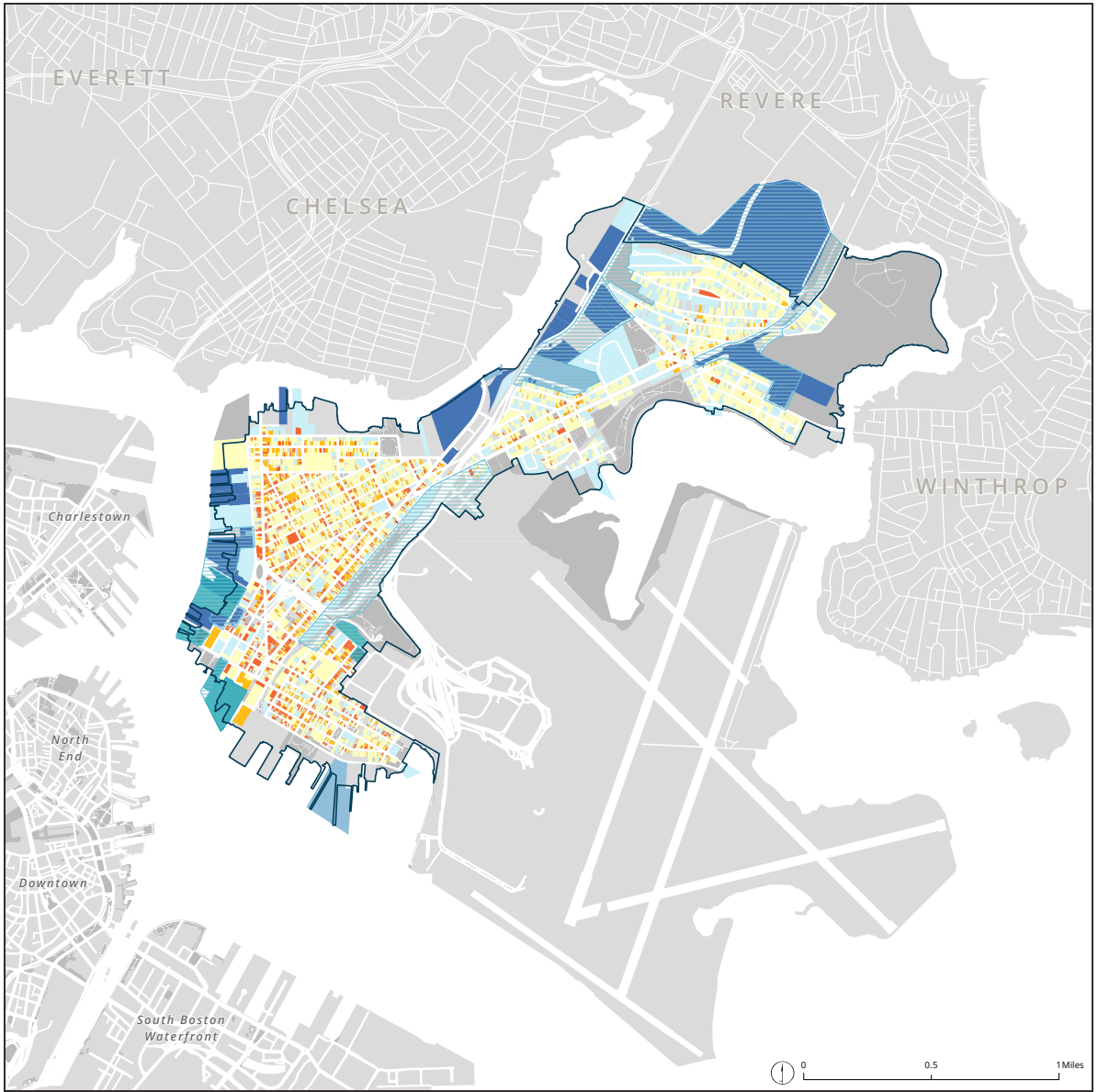
FAR - 1.0 (10,000 GSF)  
Building Footprint - 2,500 SQ FT  
Building Height - 40 FT  
Lot Coverage - 25%

SUBDISTRICT	FAR
Maritime Economy Reserve (MER)	2.0
Waterfront Manufacturing (WM)	1.0
Waterfront Service (WS)	1.0
Waterfront Commercial (WC)	1.0
Waterfront Residential (WR)	1.0
Local Industrial (LI)	1.0
Saratoga Street EDA	2.0
McClellan Highway EDA	2.0

### Calculating FAR

FAR operates as a multiplier. If a parcel is zoned as 1.0 FAR, multiply the site area by 1.0 to determine how much development would be allowed on the site. For instance, a 1,000-square-foot parcel with an FAR limit of 1.0 would yield 1,000 square feet in total. The diagram above demonstrates how the same amount of development could be deployed many ways.



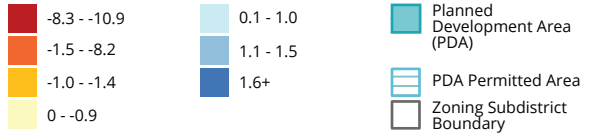


**Existing Non-conformity - Density**

60% of the parcels in East Boston have buildings with a larger FAR than zoning allows, many of which predate the adoption of the current zoning code. Many waterfront and industrial areas have parcels with excess FAR under existing zoning.

**Map of Existing FAR in relation to Allowable FAR**

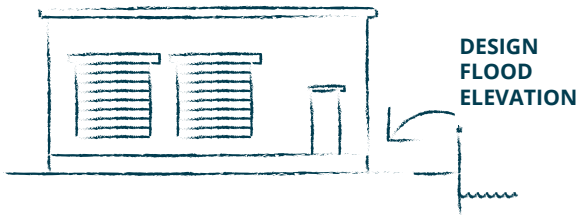
Source: Zoning, Assessing FY'18 (as of Jan.1 2017)



## Regulatory Framework

# Zoning - Height

Building height is one of several dimensional regulations encoded by zoning. Height is recorded in feet, and is currently measured from the average grade of a parcel to the top of the highest occupiable floor.



### Flood Resilience Zoning Overlay District

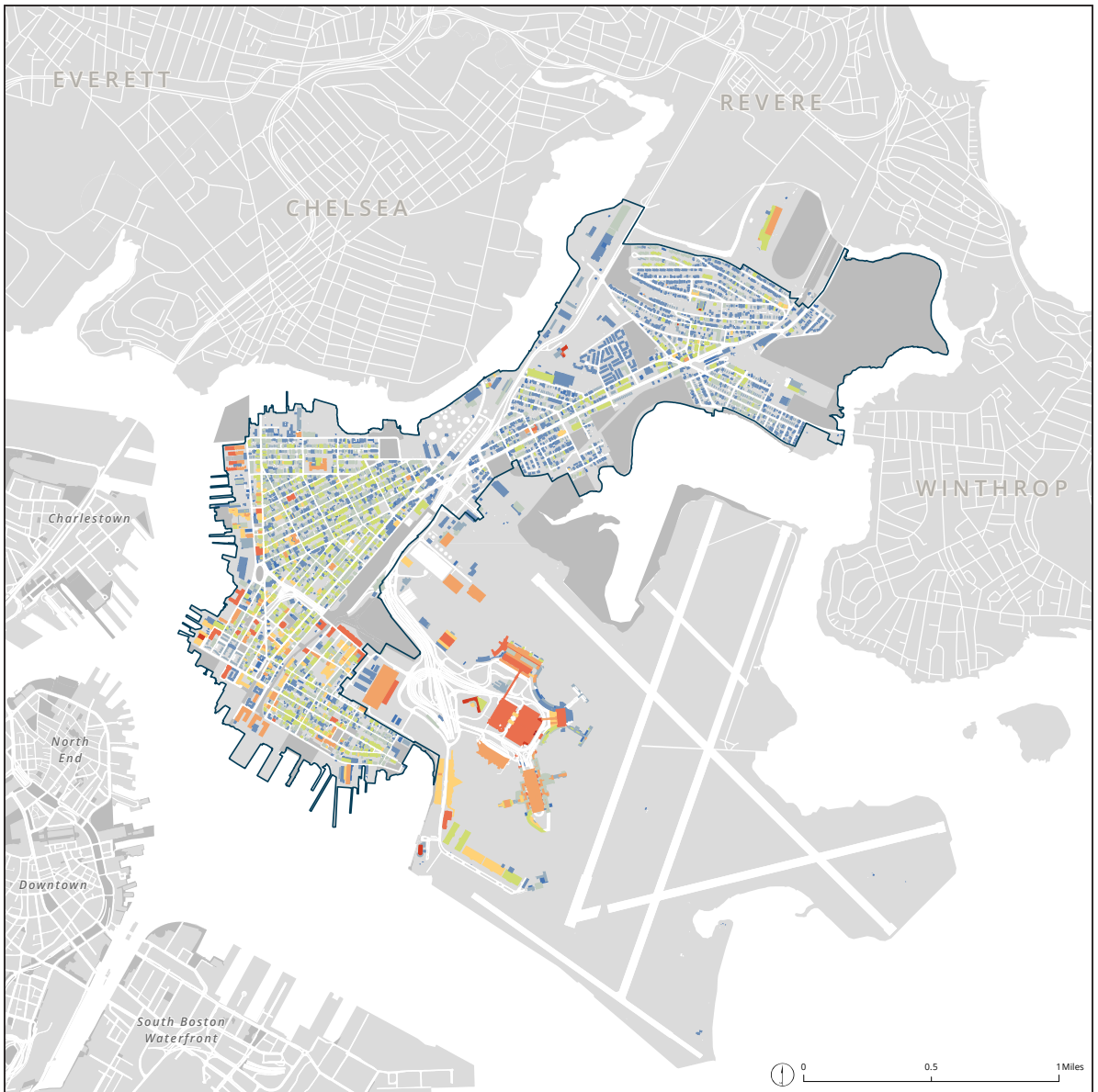
The BPDA is studying how to include future flood projections in zoning by amending the definition of height. Once adopted, height would be measured from the Finished Floor Elevation (FFE) of the ground floor, which would allow buildings to raise their ground floor without losing available height.

### Roof access

Mechanical space, roof decks, and access to roof decks are not included in measuring the height of a building because they are not technically occupiable space. Access to roof decks can be an important architectural feature of a building and in some cases may contribute to the impression of height.

\* Height for specific parcels in the EBMHP was amended to allow for 80'

SUBDISTRICT	Height
Maritime Economy Reserve (MER)	55'
Waterfront Manufacturing (WM)	55'
Waterfront Service (WS)	35'
Waterfront Commercial (WC)	55'
Waterfront Residential (WR)	35'
Local Industrial (LI)	35'
Saratoga Street EDA	35'
McClellan Highway EDA	45'

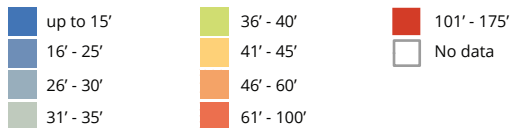


**Existing Non-conformity - Building Height**

Of existing buildings in East Boston, many are taller than the height allowed by zoning, many of which predate the adoption of the current zoning code.

**Map of Existing Building Height**

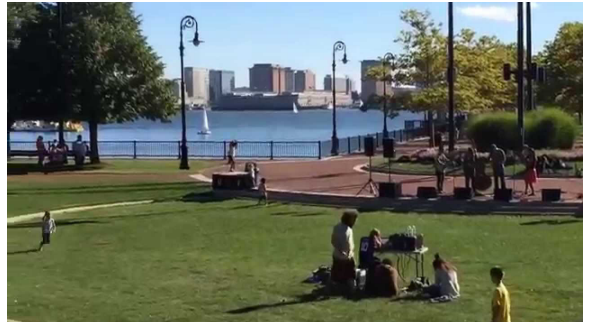
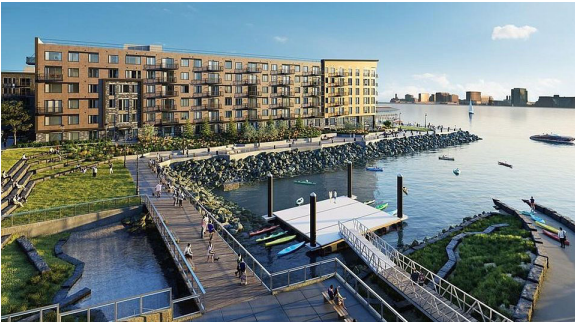
Source: 2010 LIDAR data, PNF documents for buildings erected after 2010  
 Building heights are approximate



## Public Space

# Harborwalk

The Harborwalk is a 12-foot-wide linear park system that covers more than 40 miles of the city's waterfront. It is protected open space and ensures the public's access to and use of the harbor. All new waterfront development must provide Harborwalk along with other amenities such as benches, interpretive signage, and public restrooms.

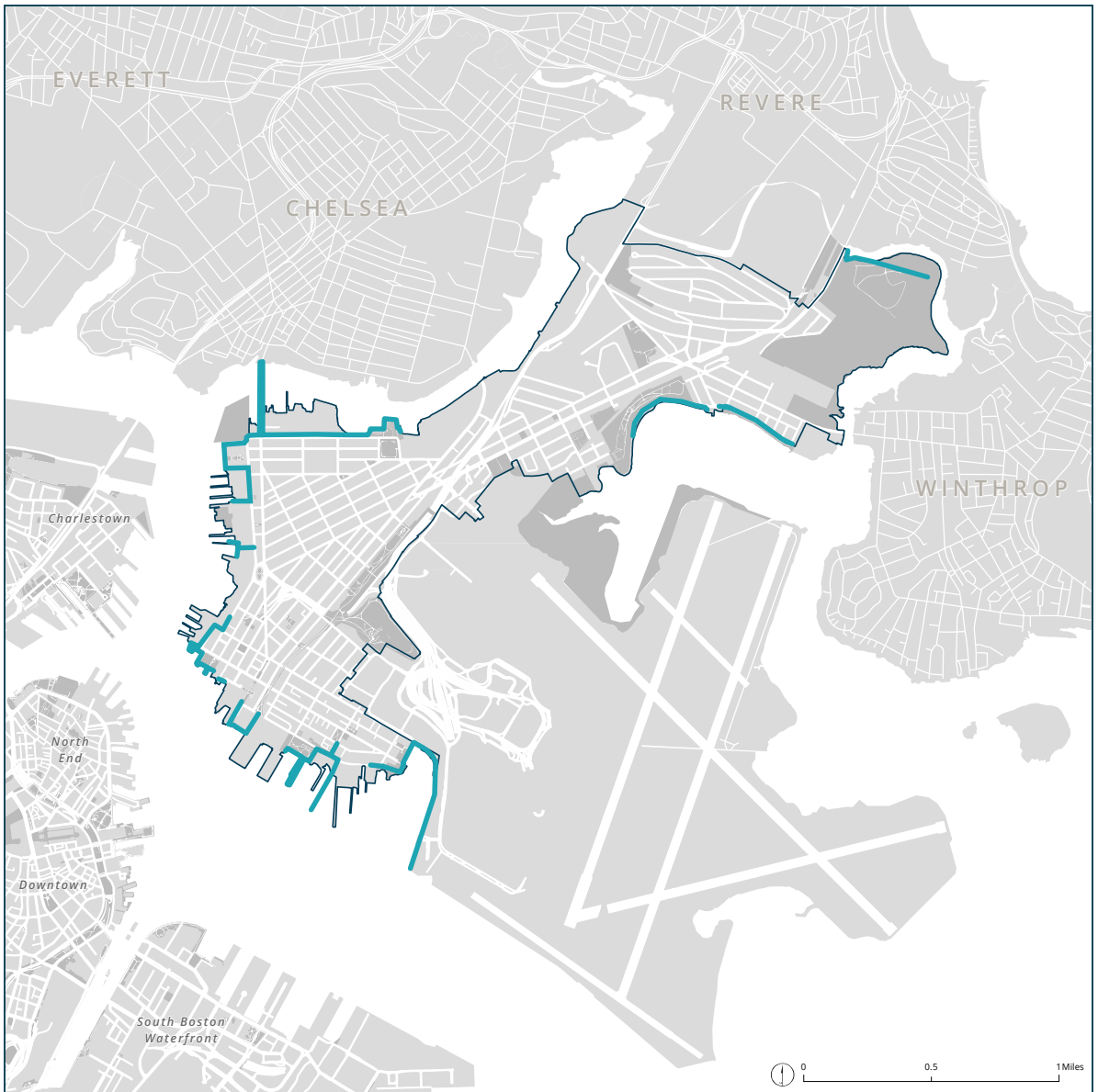


### Clippership Wharf

Clippership Wharf is an example of private development contributing to the creation of a public asset. The main dock located along western side of site will be available as a public landing for both water transportation operators and private recreational boats. Canoe and Kayak Center located at seaward end of Building 3, will provide safety instruction, education, tours, and boat rental and storage.

### East Boston Piers Park


Piers Park is an example of public investment contributing to the creation of a public asset. Located in Jeffries Point, the park was constructed by the Massachusetts Port Authority in 1995 to allow residents access to the waterfront.



**The Harborwalk in East Boston is a product of both public and private investment. Several points along the path will rely on private development to complete the network.**

### Map of Existing and Proposed Harborwalk

Source: TKTK

 East Boston Harborwalk

## Public Space

# Street Types

Street types form the basis of the Boston Complete Streets Design Guidelines, which considers walking, biking, and taking transit equally important as driving. Street types are based on adjacent land uses, the character of the street, and the needs of all transportation modes.



Street types move beyond traditional transportation planning by broadly responding to the built environment and the needs of a safe and accessible multimodal network.

### Surrounding density

Most street types are divided into Downtown or Neighborhood contexts, responding to differences in public space needs and connectivity to the local and regional transportation network.



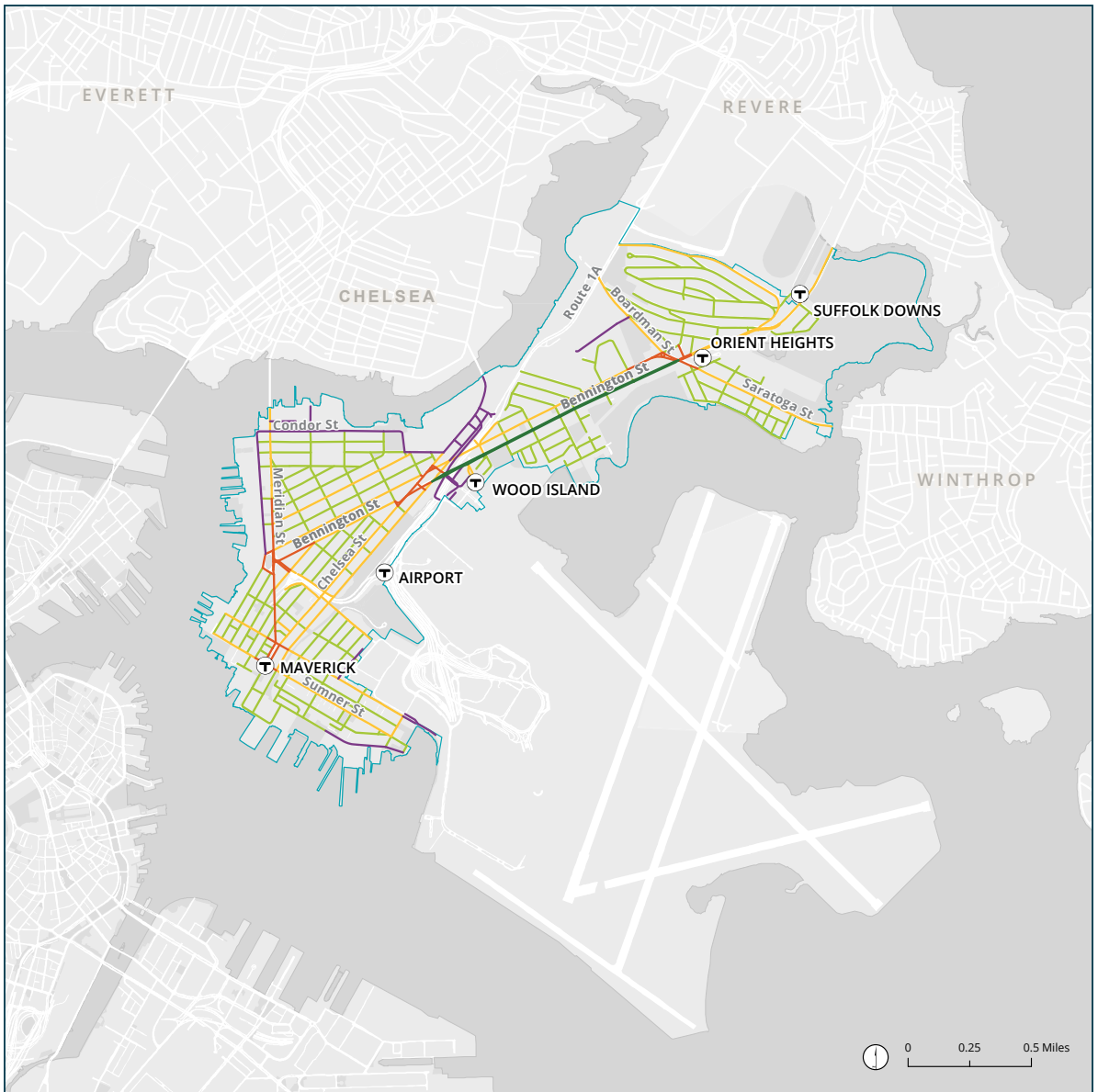
### Adjacent land use

Street types can be fluid—a single corridor may change street types several times as the surrounding land uses change, for example passing through commercial or industrial use within a neighborhood. This, in turn, influences foot traffic, diversity of travel modes, public realm, and curbside use.

### Special Street Types

In addition to land use, Shared Streets, Parkways, and Boulevards are characterized more by design elements unique to that type of street rather than solely by adjacent land use.

Bennington Street is a good example of how a single corridor may change street types several times as it moves through a neighborhood. The top image is of Bennington Street in Orient Heights, and the bottom image is of Bennington Street in Central Square.



### Street Types in East Boston

East Boston currently accommodates five street types. In waterfront and economic development areas, street types are primarily limited to Industrial. There are several places in these areas where the street network is incomplete or non-existent.

### Map of Complete Street Categorization

- Neighborhood Residential
- Neighborhood Connector
- Neighborhood Main
- Boulevard
- Industrial

Source: Boston Complete Streets Guidelines, BPDA GIS analysis

# Industrial Streets

Industrial streets support waterfront, manufacturing, and commercial business that form Boston’s industrial base. They accommodate truck traffic and often have narrow sidewalks that traverse frequent driveways and loading docks. Industrial streets are typically located away from or on the edge of residential communities.



In East Boston, some Industrial streets have transitioned to Neighborhood Residential streets with wider sidewalks, new curb ramps, and additional street trees and landscaping. For streets that are currently transitioning and continue to serve industrial uses, as shown here with Geneva Street, design solutions are needed to serve all roadway users safely and also maintain access for industrial and residential uses.

### Designing for large vehicles

Accommodation of truck traffic, including providing adequate turning space at intersection corners, is a primary design consideration for Industrial streets. Frequent curb cuts and accommodation of large vehicles on Industrial streets can make it difficult to design an accessible and inviting environment for all roadway users.

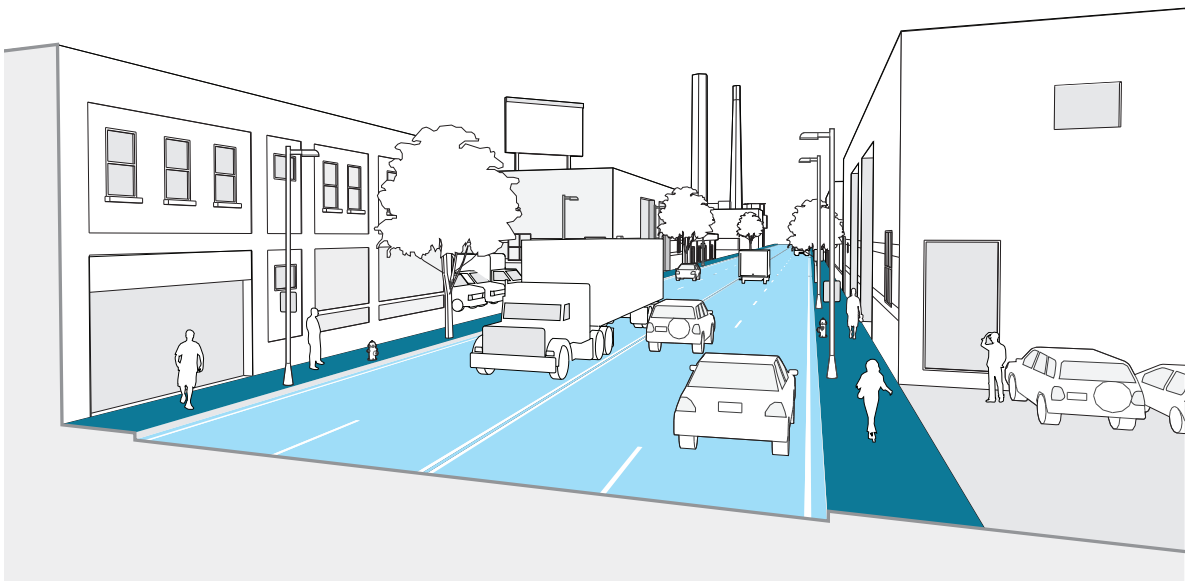
### Vision Zero

People walking and biking are particularly vulnerable in the event of a collision with a large vehicle, such as a truck. Vision Zero Boston is committed to eliminating traffic fatalities and severe injuries by reducing speeds, designing safer streets, and providing dedicated space for all travel modes.

### Streetscape

When present, sidewalks on Industrial streets are utilitarian and uncluttered. Street furniture is mainly limited to signs, lighting, and traffic signals. Because they may have higher concentrations of pollutants, Industrial streets may be excellent candidates for strategies to clean, remove, and stabilize contaminants with plants and greenscape elements.





### **Industrial Streets**

In East Boston, Industrial street sidewalks vary in width but can be as narrow as five feet. Because they can be so narrow, these spaces often lack trees or any buffer between the sidewalk and adjacent travel lanes.

Source: Boston Complete Street Design Guidelines

# Zoning Overview

## A brief history of Boston's zoning

Fifteen of the Boston's twenty-six neighborhoods were once separate towns (or neighborhoods of separate towns). As the years passed, these neighborhoods were slowly annexed by the City of Boston. To this day, many of these neighborhoods remain unique in their look and feel compared to the rest of the City. The most recent edition of the Boston Zoning Code, enacted in 1964, has evolved and adapted to accommodate the unique character of these places and it includes many separate maps and amendments. In the 1980s and 1990s, there was a comprehensive rezoning process that led to the rewriting of the zoning for many neighborhoods.

East Boston's zoning code, known as Article 53, was last updated in 1993.

## How Zoning Works

Different City agencies, departments, and boards and commissions play important, but separate, roles in zoning.

- The Boston Planning & Development Agency (BPDA) writes zoning.
- The Boston Zoning Commission (BZC) adopts zoning.
- The Inspectional Services Department (ISD) interprets and applies zoning.
- The Zoning Board of Appeal (ZBA) determines eligibility for exceptions from zoning.

When the public comes in contact with zoning issues, it does so most often through the BPDA or ISD.

A property owner must apply to ISD for a building permit or a change in use or occupancy permit. If the permit is denied because the proposed project violates the Zoning Code, the applicant may appeal the decision to the ZBA within ISD.

The BPDA makes recommendations concerning the case after its planning staff:

- Evaluates zoning applications
- Reviews the proposal

The BPDA makes its recommendations to the Board of Appeal on requests for variances and conditional uses and to the Zoning Commission in cases concerning Zoning Code amendments.

Members of the public and elected officials can also weigh in on requests for variances.

The BPDA makes no final rulings. Final decisions are made by the Board of Appeal and the Zoning Commission.

# Zoning Terms

**Accessory use** - a land use which is related to and on the same lot as the principal land use.

**Allowed use** - a land use which is permitted as a matter of right. Board of Appeal approval is not required.

**Appeal** - a request made to the Board of Appeal for relief from zoning code regulations.

**As-of-right-use** - those uses that are automatically allowed by the zoning code.

**Article 80** - Adopted in 1996 by the BPDA to provide clear guidelines for the development review process relating to large projects (adding/constructing more than 50,000 square feet), small projects (adding/constructing more than 20,000 square feet and/or 15+ net new residential units), Planned Development Areas (PDAs) (new overlay zoning districts for project areas larger than 1 acre), and Institutional Master Plans (IMPs) (projects relating to academic and medical campuses). The Article 80 process may include, but is not limited to, review of a project's impacts on transportation, public realm, the environment, and historic resources. BPDA Project Managers assist developers in navigating the Article 80 process. Public input is encouraged throughout a project's review timeline.

**Chapter 91, The Massachusetts Public Waterfront Act** - The Commonwealth's primary tool for protection and promotion of public use of its tidelands and other waterways. The oldest program of its kind in the nation, Chapter 91 regulates activities on both coastal and inland waterways, including construction, dredging and filling in tidelands, great ponds and certain rivers and streams.

**Conditional Use** - a land use permitted by the Zoning Code provided that it is found by the Board of Appeal to comply with certain conditions set out in the Code.

**Forbidden use** - A use that is not permitted in a particular district because of harmful impacts on other allowed uses (e.g., noise or pollution.)

**Height** - height is measured from the average grade of a parcel.

**Inclusionary Development Policy (IDP)** - Established in 2000 to promote the production of affordable housing in Boston. Under IDP, developers may include affordable units within their developments (on-site), create affordable housing in an off-site location, or make a cash contribution towards the creation or preservation of affordable housing.

**Inspectional Services Department (ISD)** - A City of Boston department which administers the Boston Zoning Code and the State Building Code and issues all building, use, and occupancy permits. If a project requires development review under Article 80, ISD will not issue a permit until the BPDA and the Zoning Commission (if necessary) have completed the required review and the BPDA has certified that the project described in the permit application is consistent with the project approved through development review.

**Lot, lot area** - the area of a parcel of land in single ownership and not divided by a street.

**Nonconforming use** - A use or activity that was lawful prior to the adoption or amendment of the Zoning Code, but which does not, because of such adoption or amendment, conform to the present requirements of the Zoning Code.

**Variance** - Permission to deviate from a specific requirement of the Zoning Code.

**Zoning Commission** - The Zoning Commission is responsible for adopting all new zoning and zoning amendments, for establishing PDAs and approving PDA Development Plans, and for approving Institutional Master Plans. The Zoning Commission is located within the City of Boston's administration, not the BPDA.

This workshop is part of a series focused on zoning and public realm in East Boston. These workshops explore the challenges and opportunities of different types of areas in the neighborhood including neighborhood residential, mixed-use nodes and corridors, and waterfront industrial and economic development areas. Discussions focus on how features of zoning and the public realm operate in these areas today, and how they could in the future.

### **Workshop 1 - Neighborhood Residential**

OCT 24, 2019 6:30 - 8:00 PM

East Boston YMCA, 54 Ashley Street

Small group discussions about the character of East Boston neighborhoods.

### **Workshop 2 - Mixed-use Nodes & Corridors**

NOV 06, 2019 6:30 - 8:00 PM

Excel Academy, 401 Bremen Street

Small group discussions about the character of East Boston's squares and main streets.

### **Workshop 3 - Waterfront & Economic Development Areas**

NOV 21, 2019 6:30 - 8:00 PM

East Boston High School, 86 White Street

Small group discussions about the character of East Boston's waterfront industrial and economic development areas.

### **Contact**

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### **Project Website**

[bit.ly/PlanEastBoston](http://bit.ly/PlanEastBoston)



**boston planning &  
development agency**