

Downtown Waterfront Municipal Harbor Planning Advisory Committee



CITY OF BOSTON
Martin J. Walsh
Mayor



Boston
Redevelopment
Authority
Brian Golden, Acting Director

Consultants:
Utile, Inc.
Durand & Anastas
Noble & Wickersham

Agenda

I. Urban context of the Harbor Garage

- a. Previous planning studies
- b. Urban Design Considerations

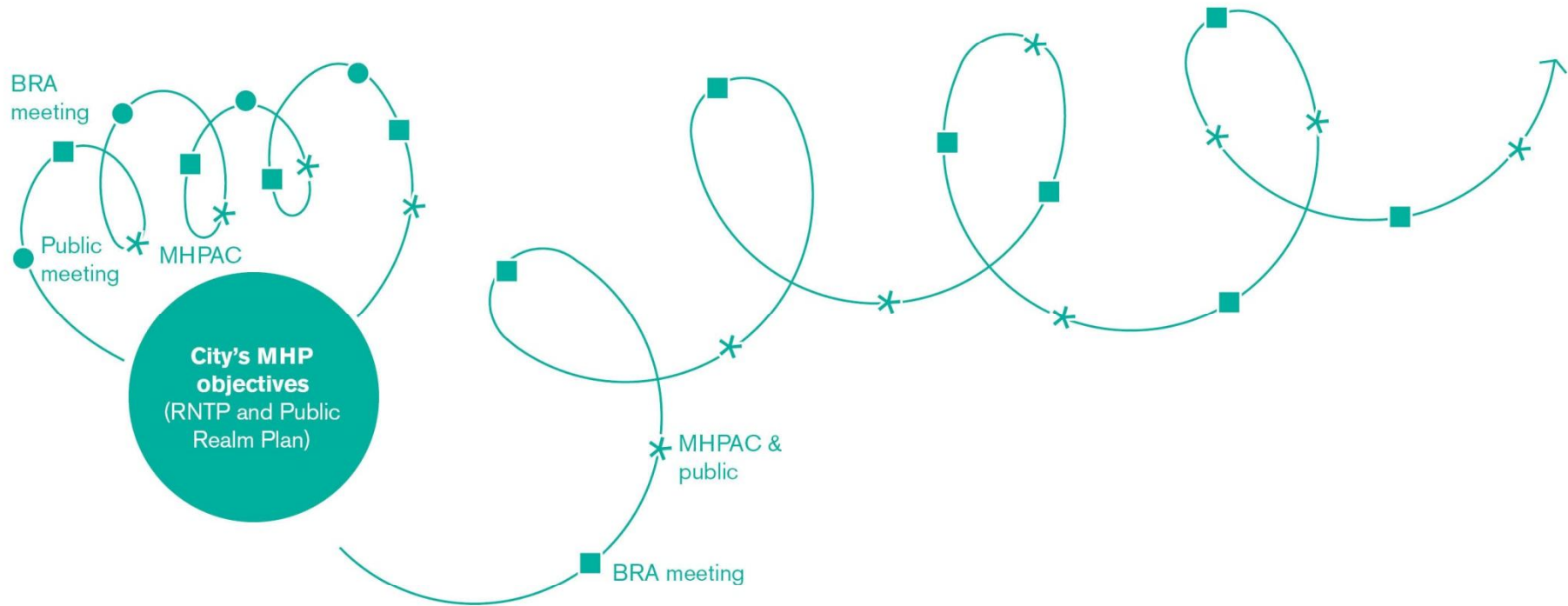
II. Review urban design of the proposed redevelopment

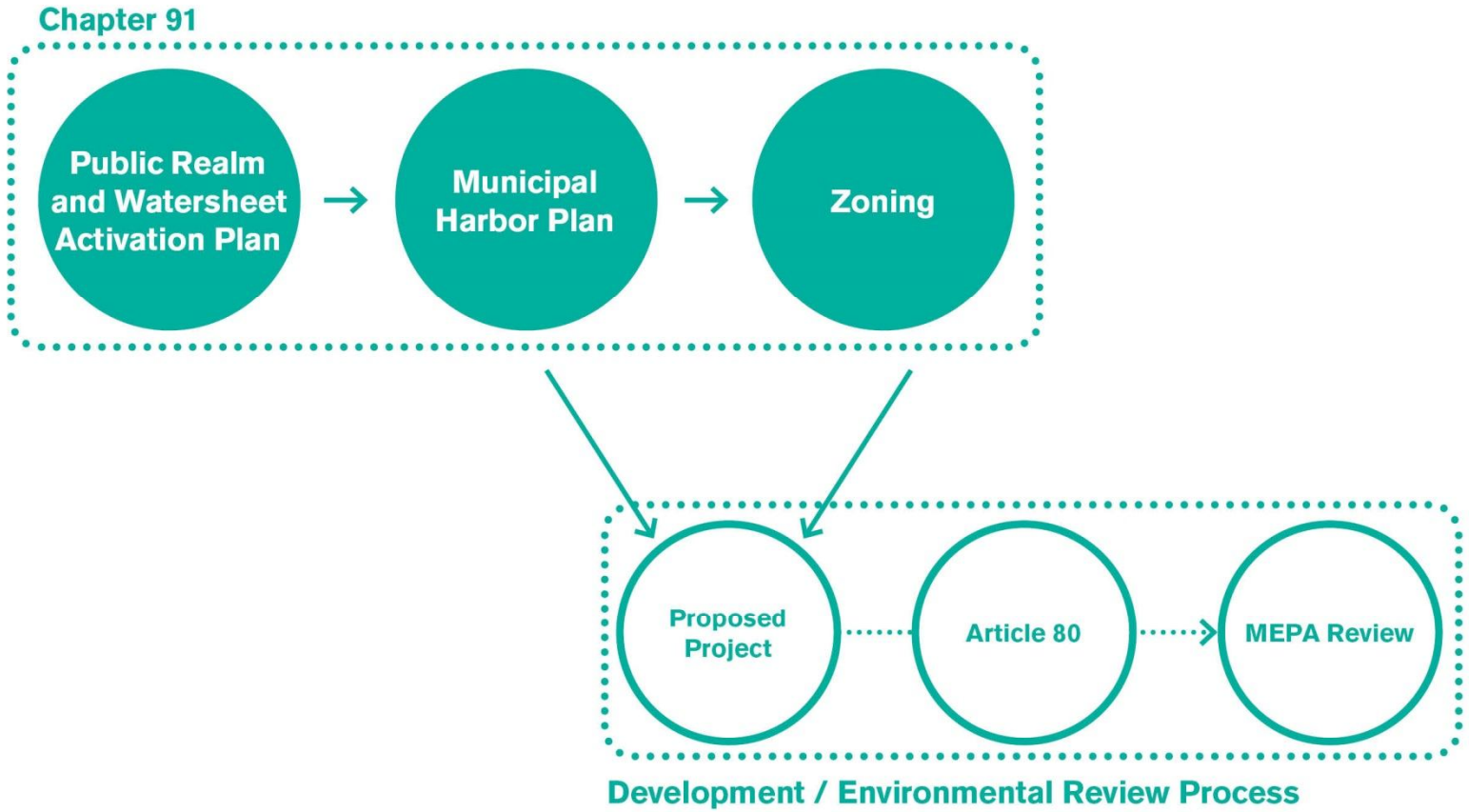
III. Review Ch. 91 shadow analysis

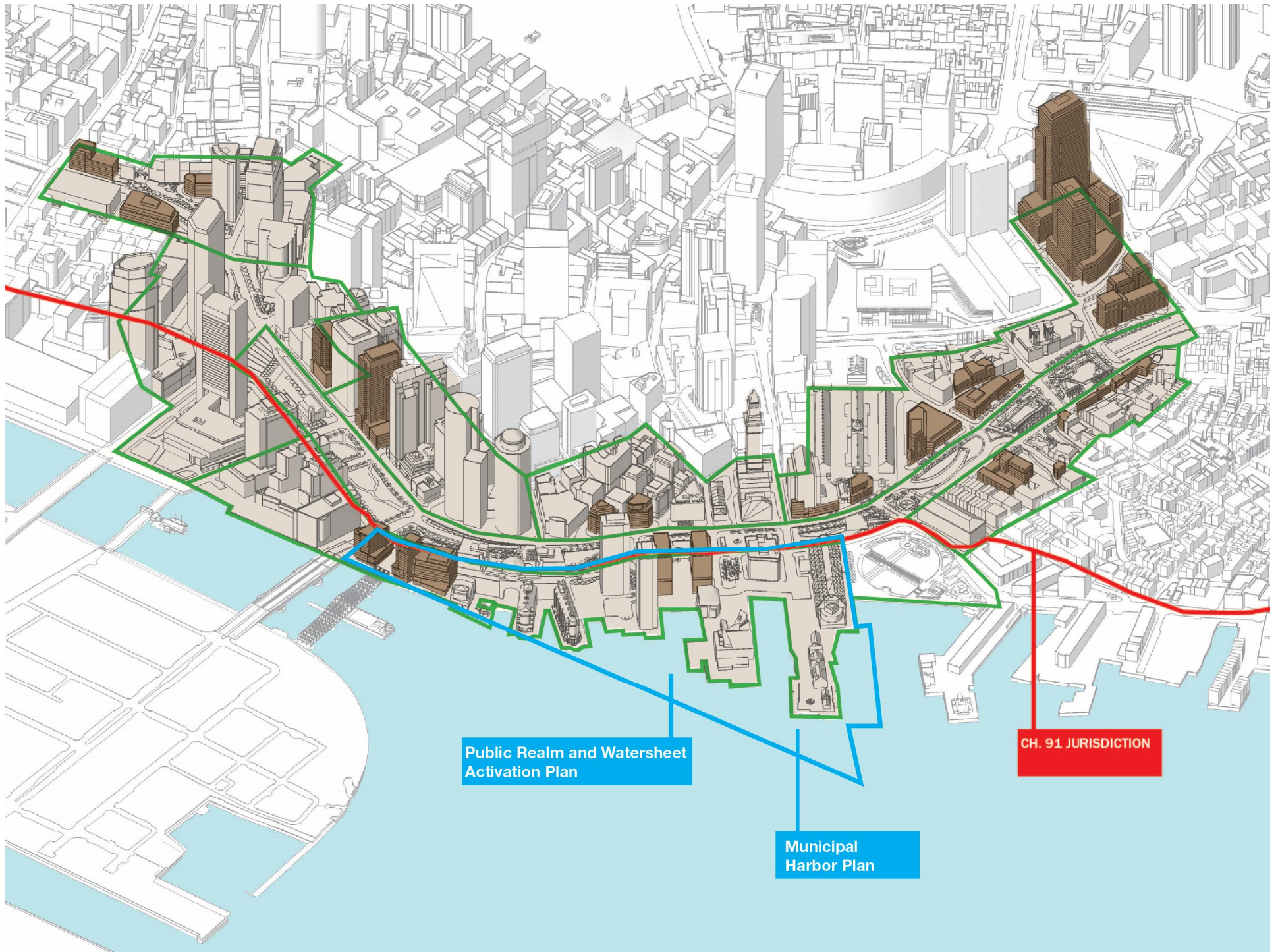
IV. Alternative Scenarios

- a. Variables to consider
- b. Scenarios for the MHPAC to consider

V. Comments and Questions







Public Realm and Watersheet
Activation Plan

Municipal
Harbor Plan

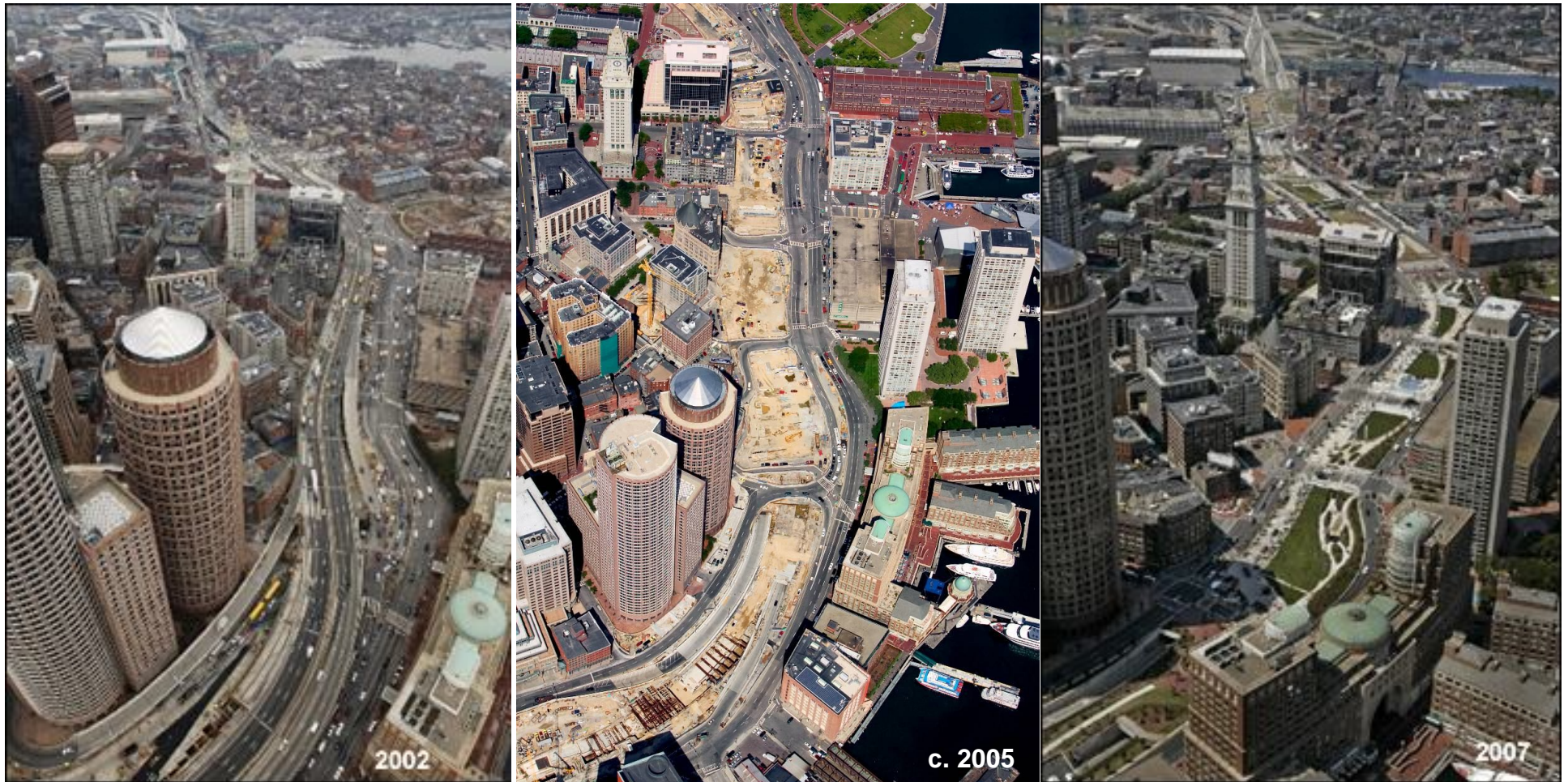
CH. 91 JURISDICTION

Urban Context of the Harbor Garage

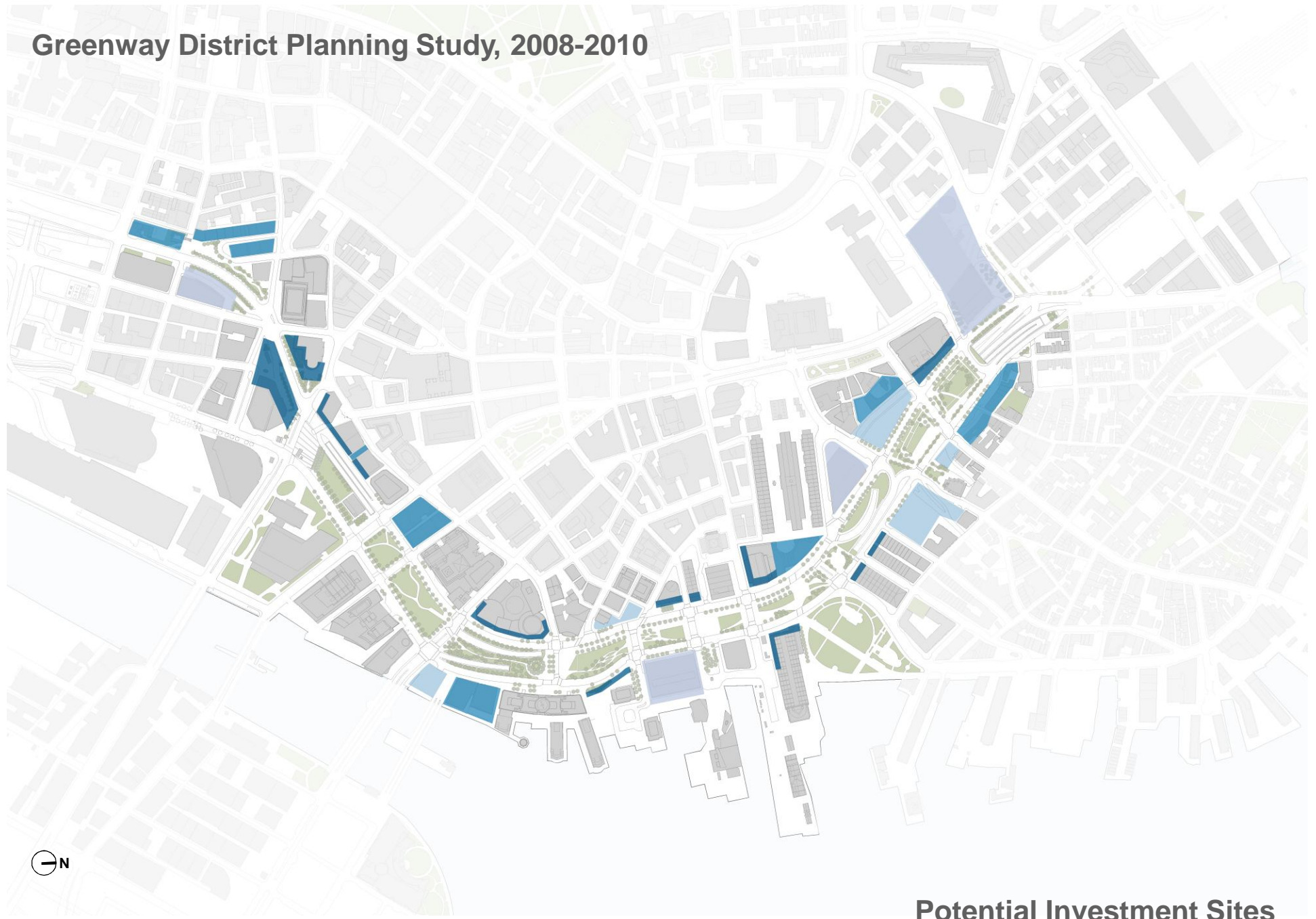
Review of Planning Recommendations

Review of Planning Recommendations and History

Central Artery/Tunnel Project

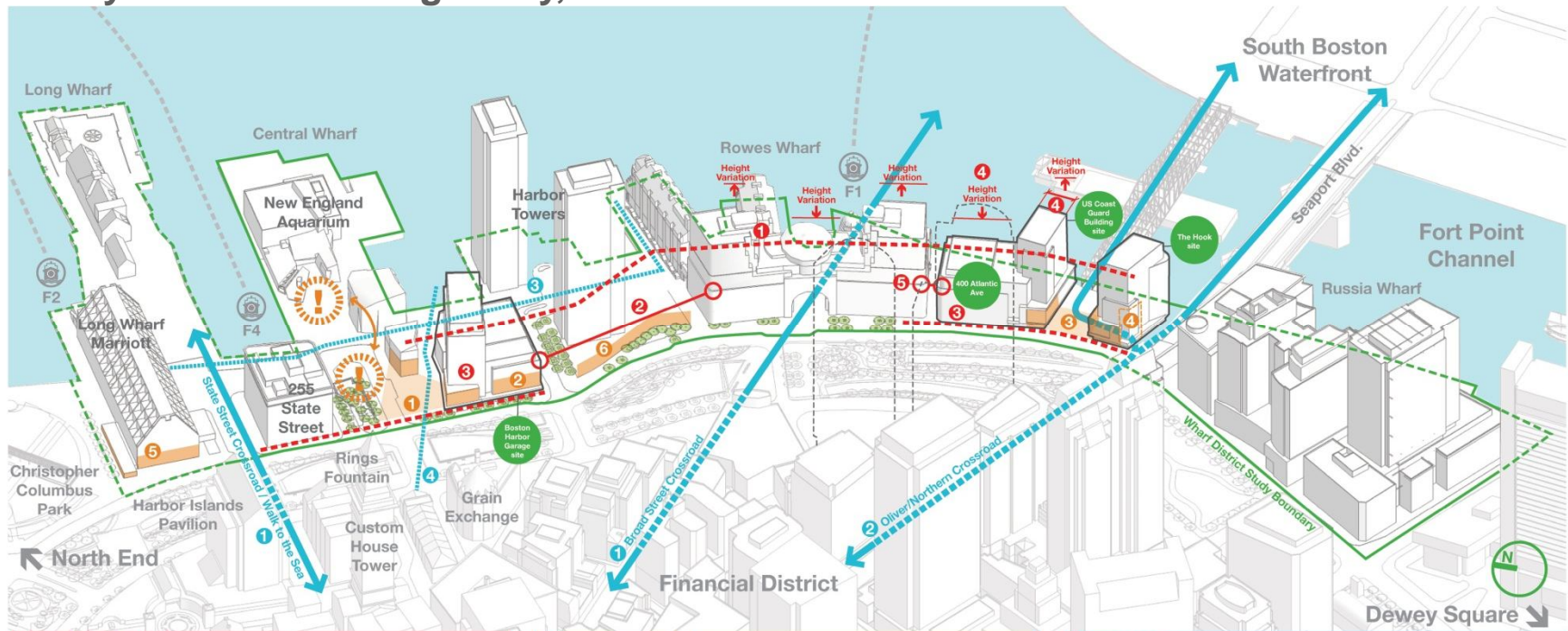


Greenway District Planning Study, 2008-2010



Potential Investment Sites

Greenway District Planning Study, 2010



Dimensional Criteria

- 1 All new buildings will have a maximum height of 200' (with the exception of the Hook site, at 175'), equivalent to the taller portions of Rows Wharf. Buildings should combine both low-rise and mid-rise elements in a way that takes cues from the existing context. Individual massing alternatives will be evaluated for how the shadows they create will impact the actively used portions of the park.
- 2 New buildings should establish a datum at the property's edge facing the Greenway. Ideally, the datum corresponds to and reinforces the heights in the immediate context, including the lower portions of Rows Wharf, the parapet of 255 State Street, or the tallest portion of Long Wharf, at about 125'. Taller portions of any new building should be set back by 10'-15' at this datum on the Greenway-facing sides of the building.
- 3 New development at the Boston Harbor Garage, 400 Atlantic Avenue, and the U.S. Coast Guard Building should reinforce the Atlantic Avenue street edge by building to it along a majority of its frontage. Significant breaks in that alignment should be in the service of opening connections to the waterfront.
- 4 All sites in the Wharf District, including 400 Atlantic Avenue, should vary in height like Rows Wharf, where taller masses alternate with lower masses of approximately 125' to allow for intermittent exposure to the sky plane, and to maintain visual access to the water. The lengths of any upper portion of a building over 125' should be limited to 125' on the Greenway-facing portions of the building.
- 5 The lower portions of 400 Atlantic Avenue should align with those of Rows Wharf.

Programmatic Goals

- 1 The lively occupation of the forecourt to the New England Aquarium should be extended as close the Greenway as possible. An additional ticket kiosk or similar related programming venue might facilitate this goal. New development on the Boston Harbor Garage site should feature active uses at the northwest corner that help anchor this node of activity and enhance enjoyment of the harbor.
- 2 New or replaced uses for the Atlantic Avenue edge of the Boston Harbor Garage should offer as many uses as possible that are complementary to the adjacent parks—restaurants, cafes, retail.
- 3 The ground floor uses at 400 Atlantic Avenue and the Hook site should reinforce the presence of the Oliver Street/Northern Avenue Crossroad with complementary active uses. Concentrations of small cafes will help mark the space between them as an important link over the bridges between the Greenway and South Boston.
- 4 The southwest corner of the Hook site should acknowledge in its architectural form the importance of the Moakley Bridge "gateway" to the South Boston waterfront. The form and orientation of the building should reflect the important urban morphologies that have created the site and that announce the grid of the adjacent emerging neighborhood.
- 5 The edges of the Long Wharf Marriott site have the opportunity to offer expanded ground level uses complementary to the adjacent Greenway and Christopher Columbus Park.
- 6 The base edge of Harbor Towers is currently defined by a perimeter fence. This location would benefit from an increased residential presence and openness at the ground level.

Connectivity

- 1 State and Broad Streets are two important Crossroads, the only two that terminate at the water's edge. Future development along these axes should enhance these rare direct views to the water from the Financial District, such as those through the arch at Rows Wharf.
- 2 Development at the Hook site and 400 Atlantic Avenue should enhance the ground plane in such a way as to render this most fragile Crossroad connection more legible. Ground floor uses and special attention to landscape design will help in this regard.
- 3 All developments in the Wharf District should enhance the continuity and accessibility of the Harborwalk by providing additional points of connection from the Greenway and by "repairing" breaks in the community caused by grade changes and buildings or other obstructions.
- 4 All developments in the Wharf District, and the Boston Harbor Garage site in particular, should increase visual access to the waterfront, either at the building edges or through-building connections.

Wharf District



Greenway District Planning Study, 2010



Long and Central Wharves

Touch the Water

24

Long and Central wharves are where the city has historically met the harbor. Throngs of tourists, families, residents, and workers pass through here on a daily basis, drawn by the rich historical significance of the area, the Aquarium and IMAX theater, the nearby Rings Fountain and Greenway Carousel, and the water transportation options. This is the most activated waterfront in Boston.

The primary objective is to **create an exemplary twenty-first-century waterfront, so generations to come can experience the water's edge**. This requires concerted efforts by the many operators and property owners to come together around common goals, such as managing the pedestrian, bicyclist, and ferry traffic; coordinated wayfinding; and preserving and enhancing key view corridors. Both incremental physical improvements as well as management strategies can help organize and clarify the public realm and movement through this area.

The goals for this area are to:

- **Improve signage and wayfinding and develop coordinated signage system.** This includes a unified water transit system and consistent wayfinding for the transit options. This may include new landmarks, such as public art or flagpoles, along the waterfront.
- **Diversify the uses within the area,** such as include a broader range of retail and food venues, ranging from casual (e.g., food trucks) to fine dining. Consider uses that support the residential community and local workers.
- **Improve the Aquarium plaza / Central Wharf Park area** through consistent paving, improved wayfinding, and enhancing key view corridors to

the Aquarium and the harbor from the Greenway.

- **Increase appreciation of the Harbor Islands and establish a permanent Harbor Islands ferry gateway** on Long Wharf North. In addition, more activities and seasonal programming should be considered for the Harbor Islands (e.g., Hubway or fall and winter nature walks).
- **Activate ground-levels** facing the waterfront, key public spaces (e.g., the Greenway and Christopher Columbus Park), and the waterfront.
- **Strengthen lateral connections to waterfront** through programming and ground-level activity and maintaining view corridors from the Greenway to the harbor.
- **Invest in ferries and water transportation,** including subsidies for infrastructure improvements and ongoing maintenance.
- **Strengthen management of the public realm,** such as the bus/trolley parking in the area and vendors. Develop management plan for vendors, trolley operators, seasonal services, etc.
- **Increase appreciation of the Downtown Waterfront** through interpretive signage (both historical and environmental). Physical improvements such as storm surge barriers or public spaces designed to withstand inundation are educational opportunities.
- **Create a range of open spaces,** from quiet and contemplative zones to active hardscaped areas to shared streets. For example, the Chart House parking lot might be redeveloped as a pocket park with seating, which could complement the restaurant in the Marriot Long Wharf and offer an outdoor waiting area for

ferry passengers. The end of Long Wharf should be a destination, with programming, such as food trucks or casual dining.

- **An innovative rotating public art program,** such as those organized by the Public Art Fund in New York and Friends of Fort Point Channel locally, might also be considered at the underutilized public spaces. This program could focus on art about climate change and sea level rise or the history of the harbor.
- **Improve connections to the North End** and Christopher Columbus Park. This may be through signage or increasing the visual porosity through the Marriott.



Key Development Site

Harbor Garage

Redevelopment of the Harbor Garage site should respect both the residential uses of Harbor Towers and the activity of Central Wharf. It will form a key edge and gateway, linking the Town Cove neighborhood and the Rose Kennedy Greenway to the Aquarium and the waterfront. The edge along Milk Street, facing Central Wharf Park, needs to be designed with consideration to the streams of visitors heading to the Aquarium, the IMAX Theater, and the ferries on the wharves. This side of the parcel, as well as the edge facing the waterfront, are the most appropriate locations for new public open spaces on this parcel.

-  Targeted Area for Improvements
-  Area of Proposed Active Edge
-  Important Node
-  Significant Connections
-  Pedestrian Connections
-  Wayfinding Location
-  Existing Amenity
-  Harborwalk

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Wharves

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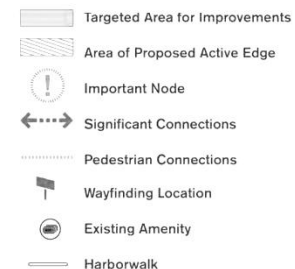
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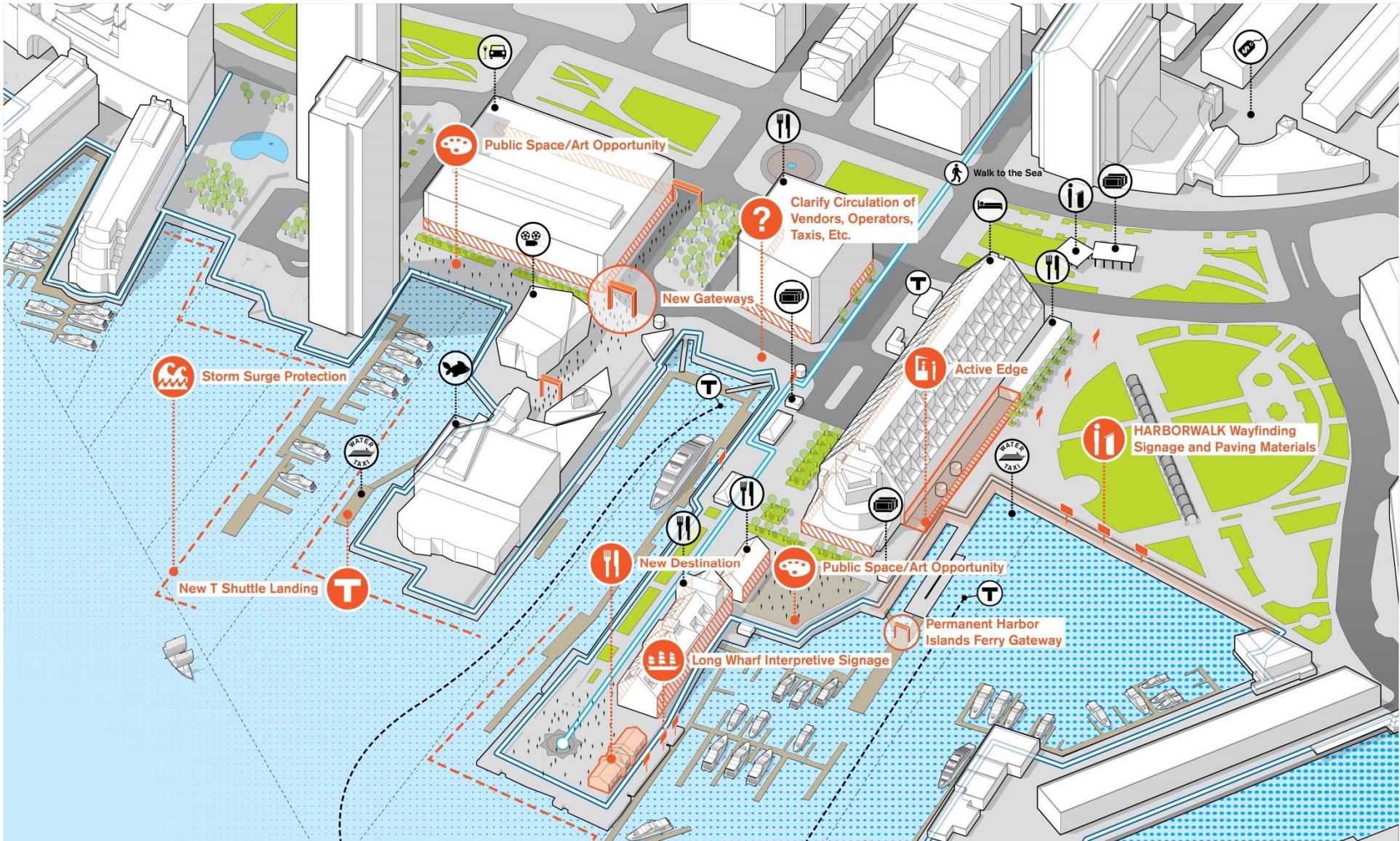


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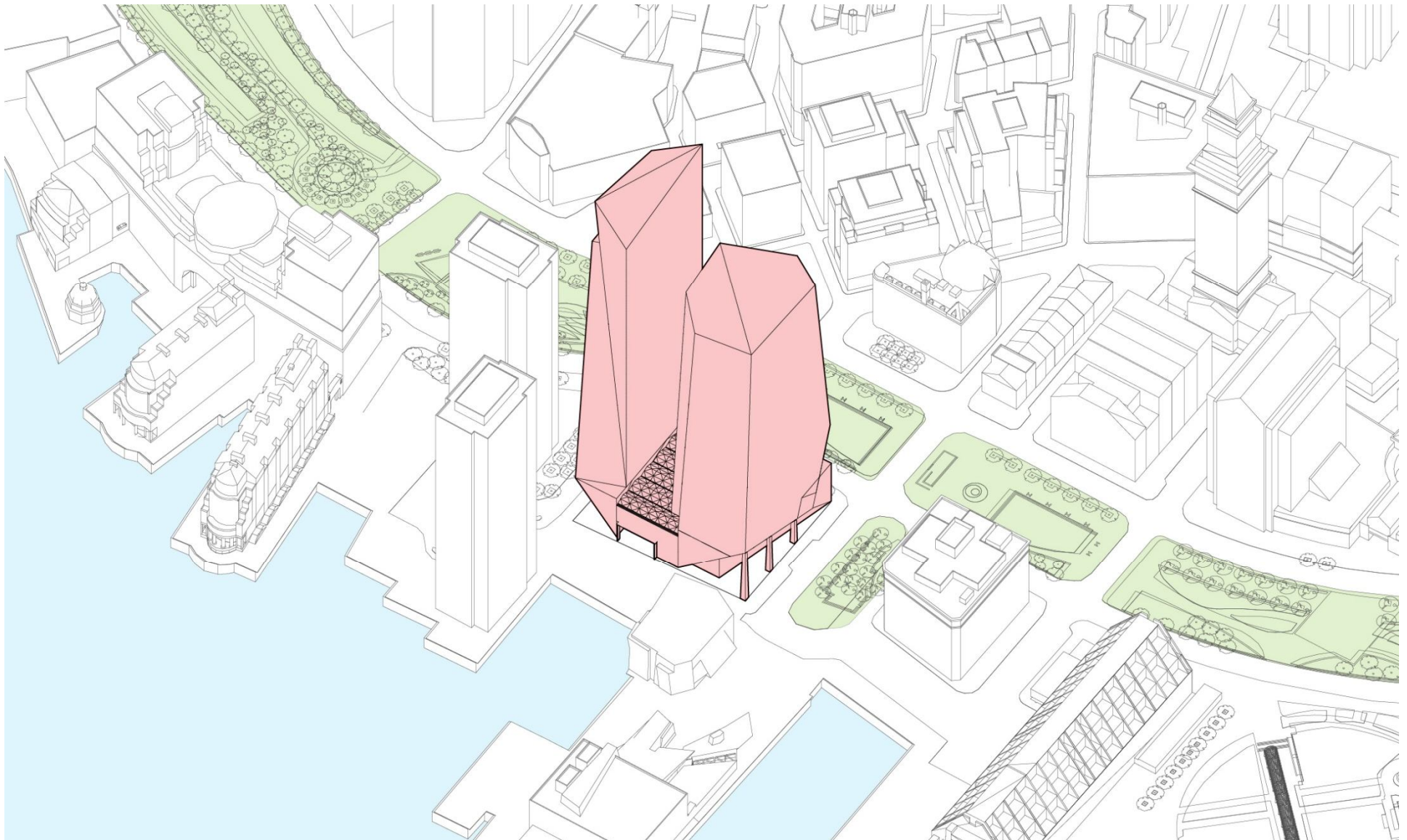




Urban Design Considerations

Overview of Proposed Redevelopment Scenario

Proposed Building



Evaluating the proposed redevelopment

Open Space	What is the quality of open space?
View Corridors	How visible is the water? The Aquarium?
Edges	How do the edges contribute to their surrounding context? Are they actively programmed?
Activation of the Public Realm	Does the proposed ground-level programs appropriately activate the public realm?
How it fits within the urban context	What massing is appropriate along the waterfront? What height is appropriate along the waterfront? In this historical context?
Environmental Effects	How will the proposed building affect the surrounding context? What will the shadow impacts be?

Evaluating the proposed redevelopment

MHPAC members asked....

Please review of **alternate building envelope scenarios** to better understand what the **incremental differences would be with shadow and differing heights.**

Expressed concern with the bulk of the proposed buildings and whether there are **other design options and massing variations** that could be reviewed.

What are the **views from the ground level** from a number of different vantage points? How will the massing be viewed from various pedestrian level vantage points?

What is a proposal closer to the **50% lot coverage standard**?

What about establishing of **shadow protection zones**? But not extending out into the middle of the harbor.

Overview of the Harbor Garage Parcel

Harbor Garage



Overview of the Harbor Garage Parcel

Harbor Garage



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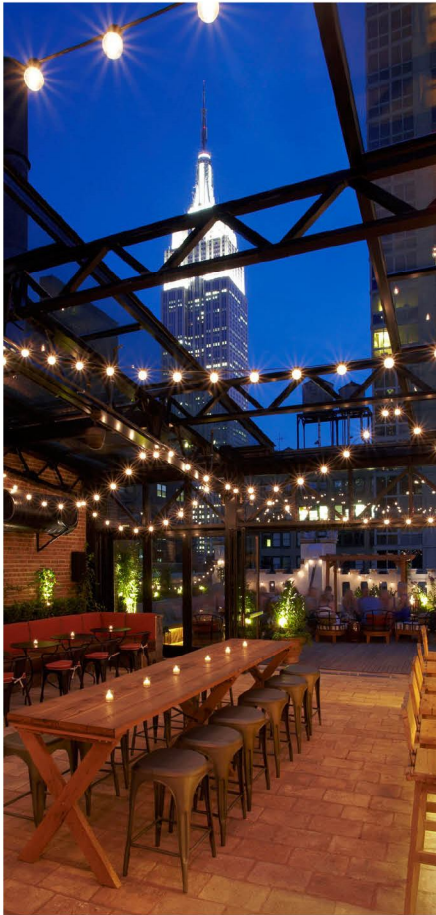
Overview of the Harbor Garage Parcel

Harbor Garage

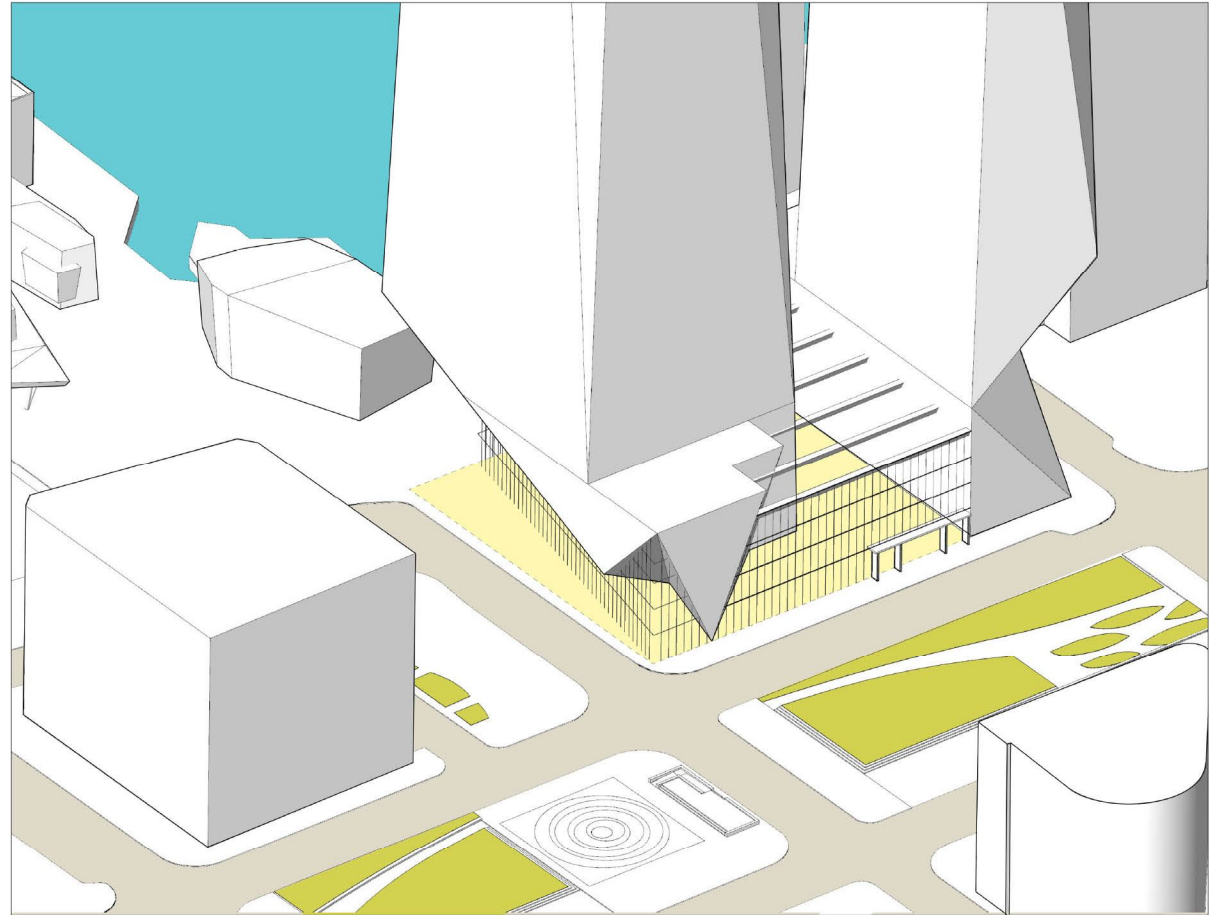


Overview of the Harbor Garage Parcel

Harbor Garage Proposal



Year-round activities



Addition of retractable canopy increases streetscape activation year-round

Overview of the Harbor Garage Parcel

Harbor Garage Proposal



Overview of the Harbor Garage Parcel



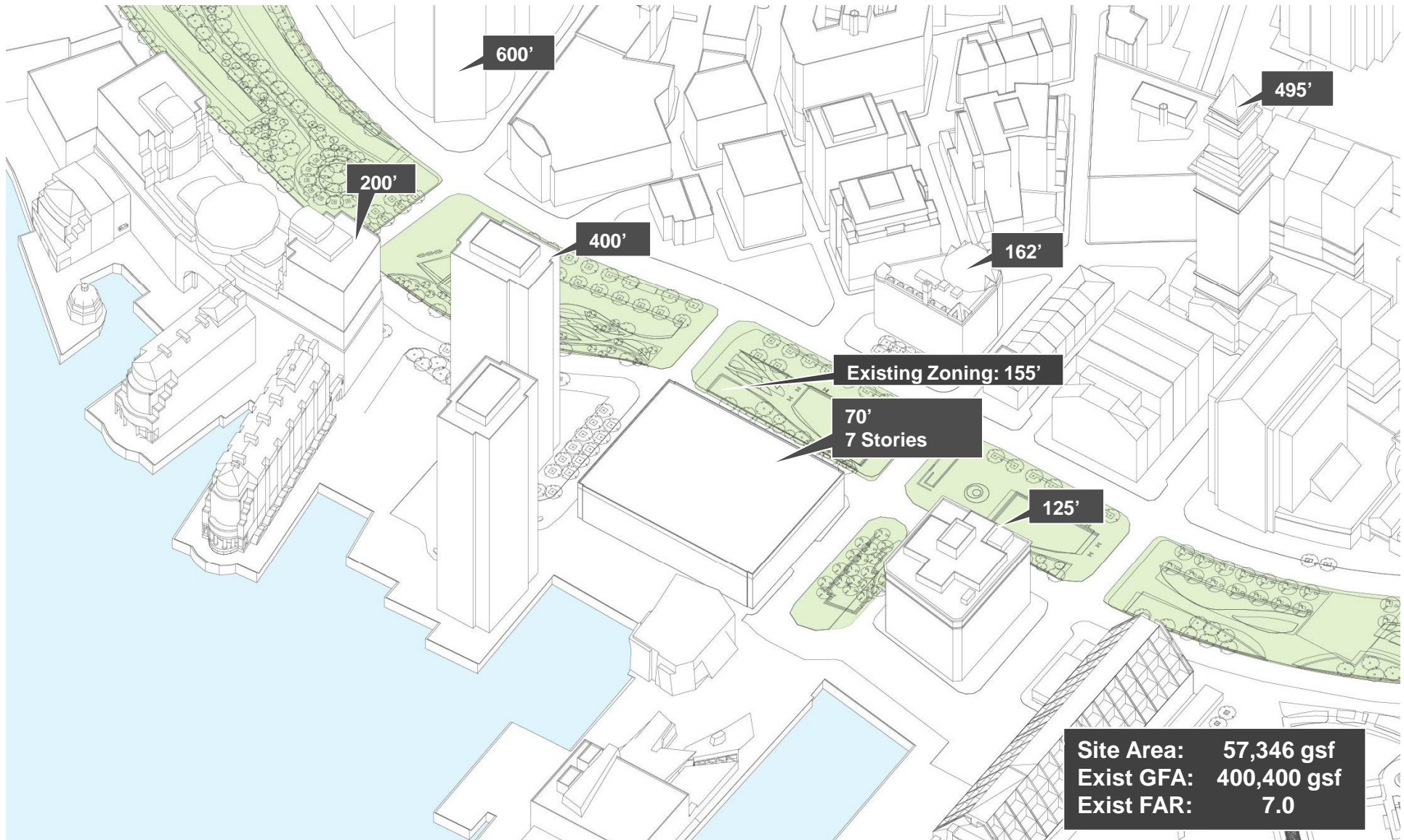
Overview of the Harbor Garage Parcel



Review Ch. 91 shadow analysis

Existing Conditions

100% Building Coverage
0% Open Space

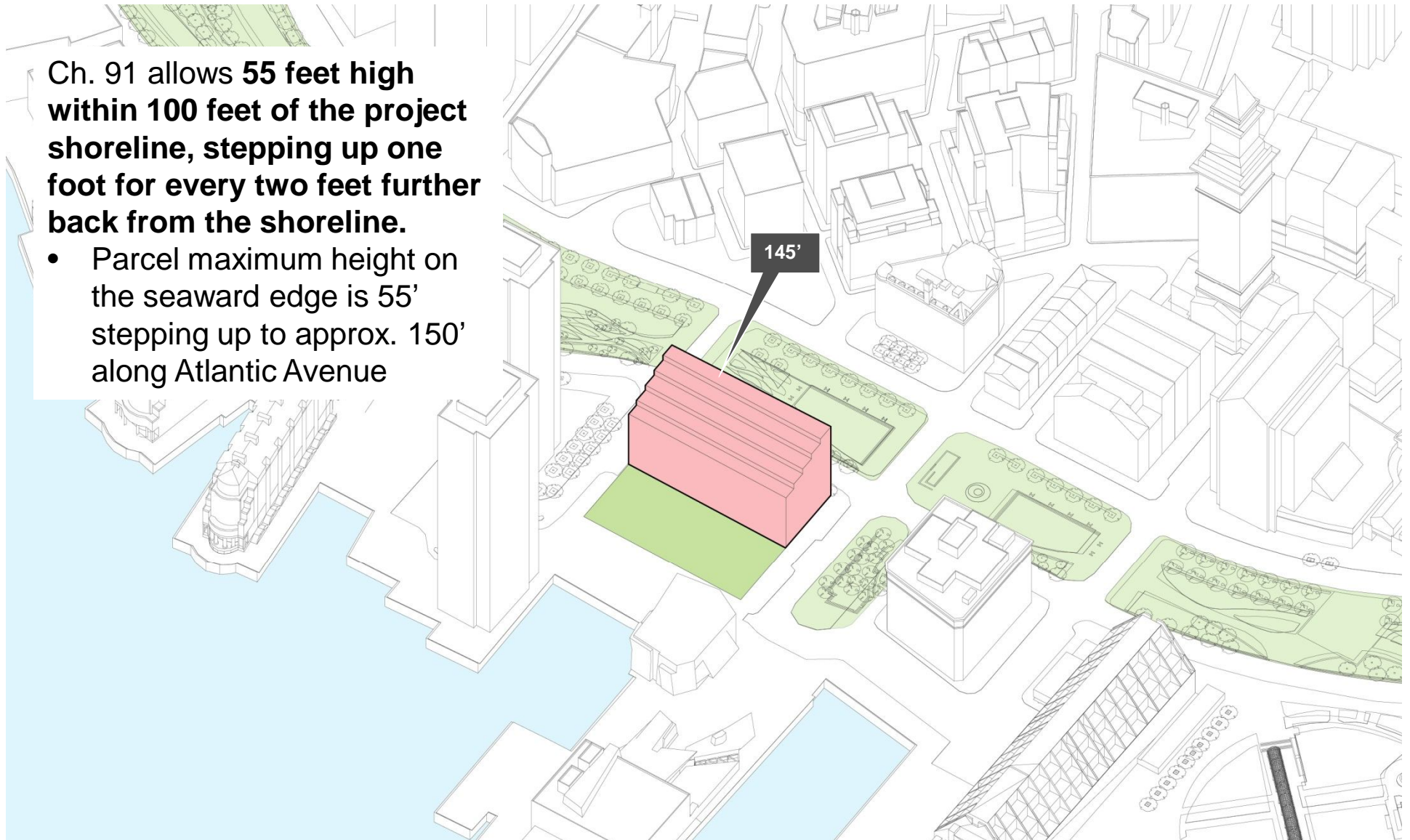


Ch. 91 Baseline

50% Building Coverage
50% Open Space

Ch. 91 allows **55 feet high within 100 feet of the project shoreline, stepping up one foot for every two feet further back from the shoreline.**

- Parcel maximum height on the seaward edge is 55' stepping up to approx. 150' along Atlantic Avenue



Proposed Development

100% Building Coverage
0% Open Space

For Ch. 91 purposes,
shadows are
calculated based on
the highest occupiable
floor.

582'

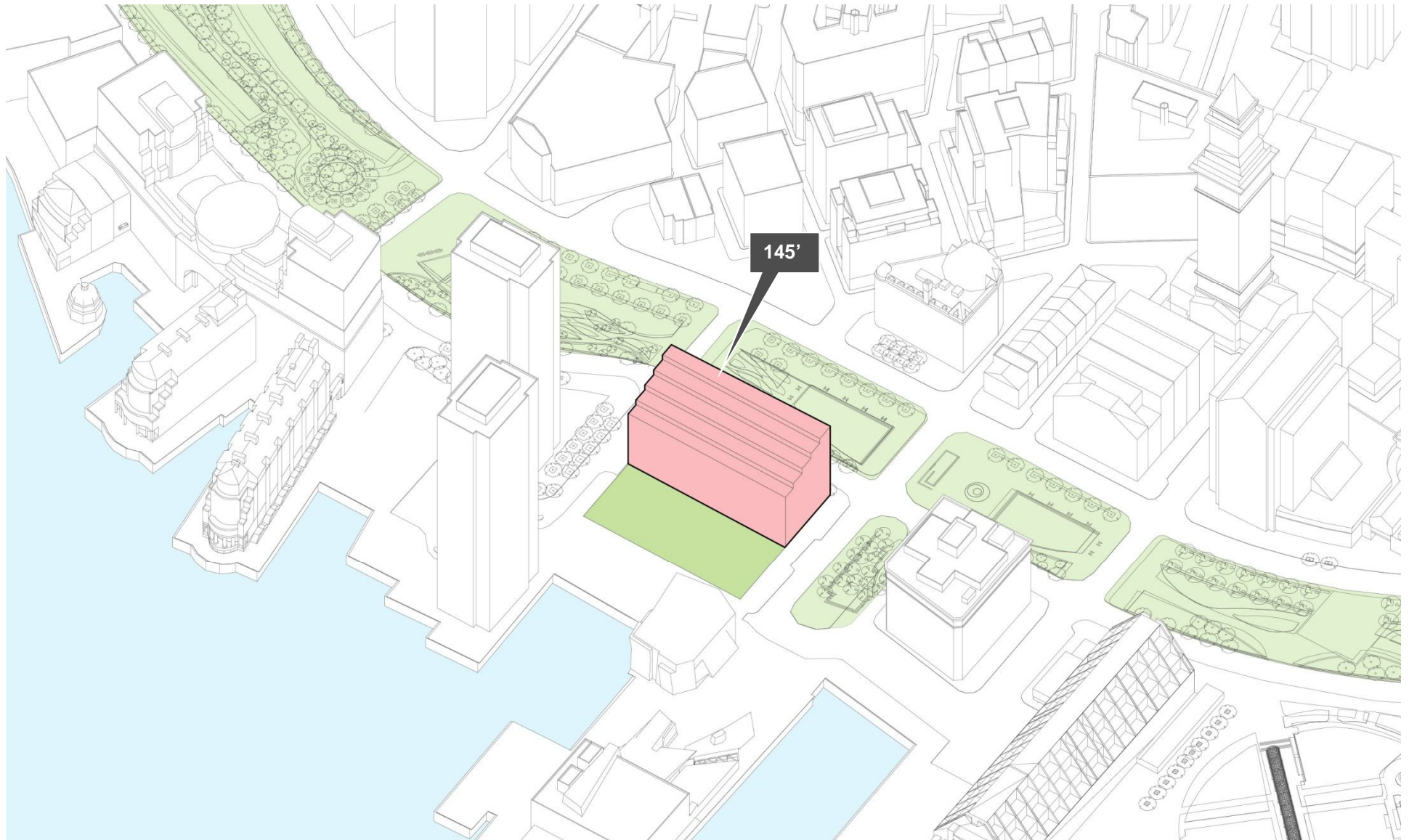
485'

Tower 1
Highest Occupiable floor – **582'**
Total height – **615'**

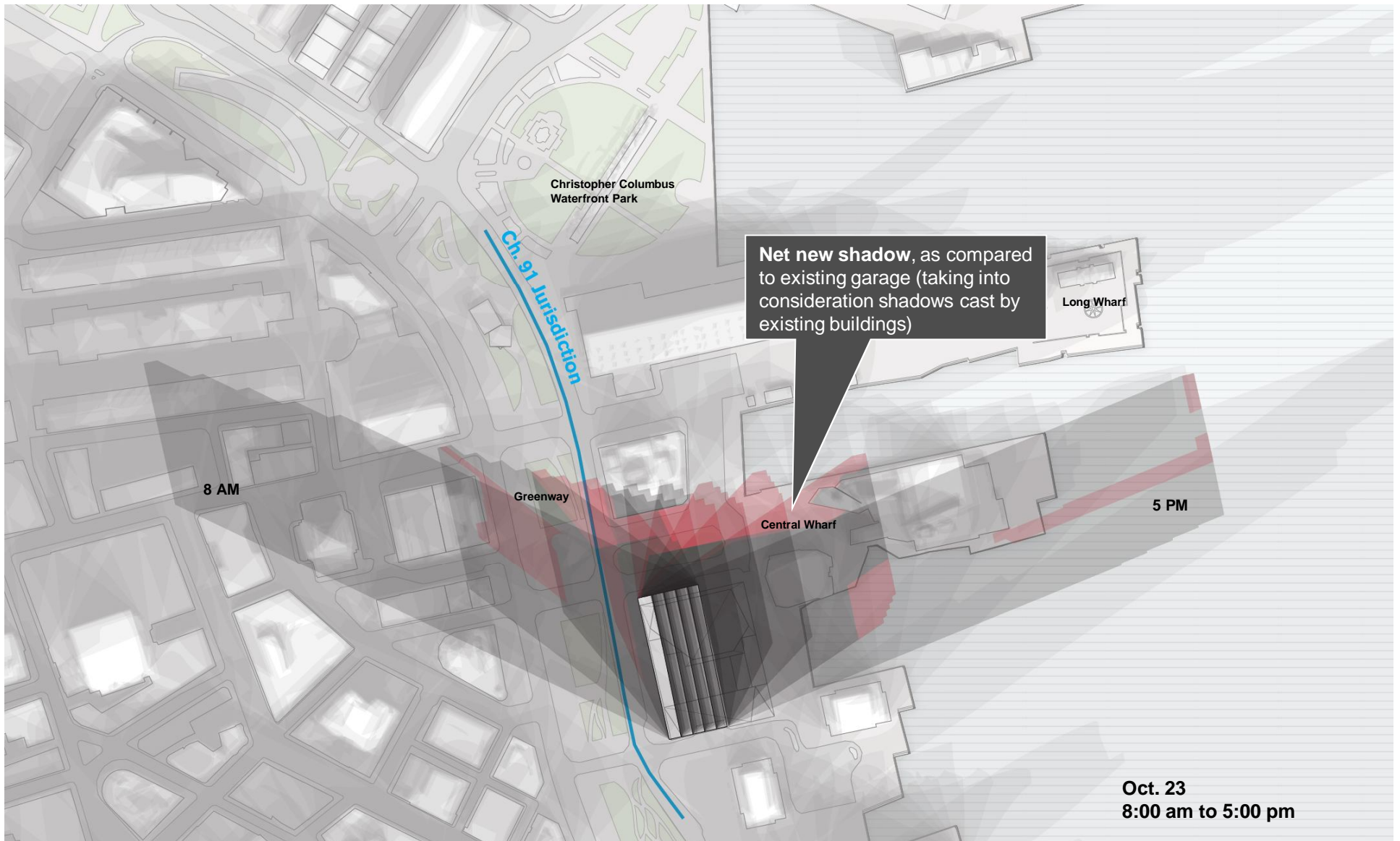
Tower 2
Highest Occupiable floor – **485'**
Total height – **538'**

Chapter 91 Compliant Scenario

50% Building Coverage
50% Open Space

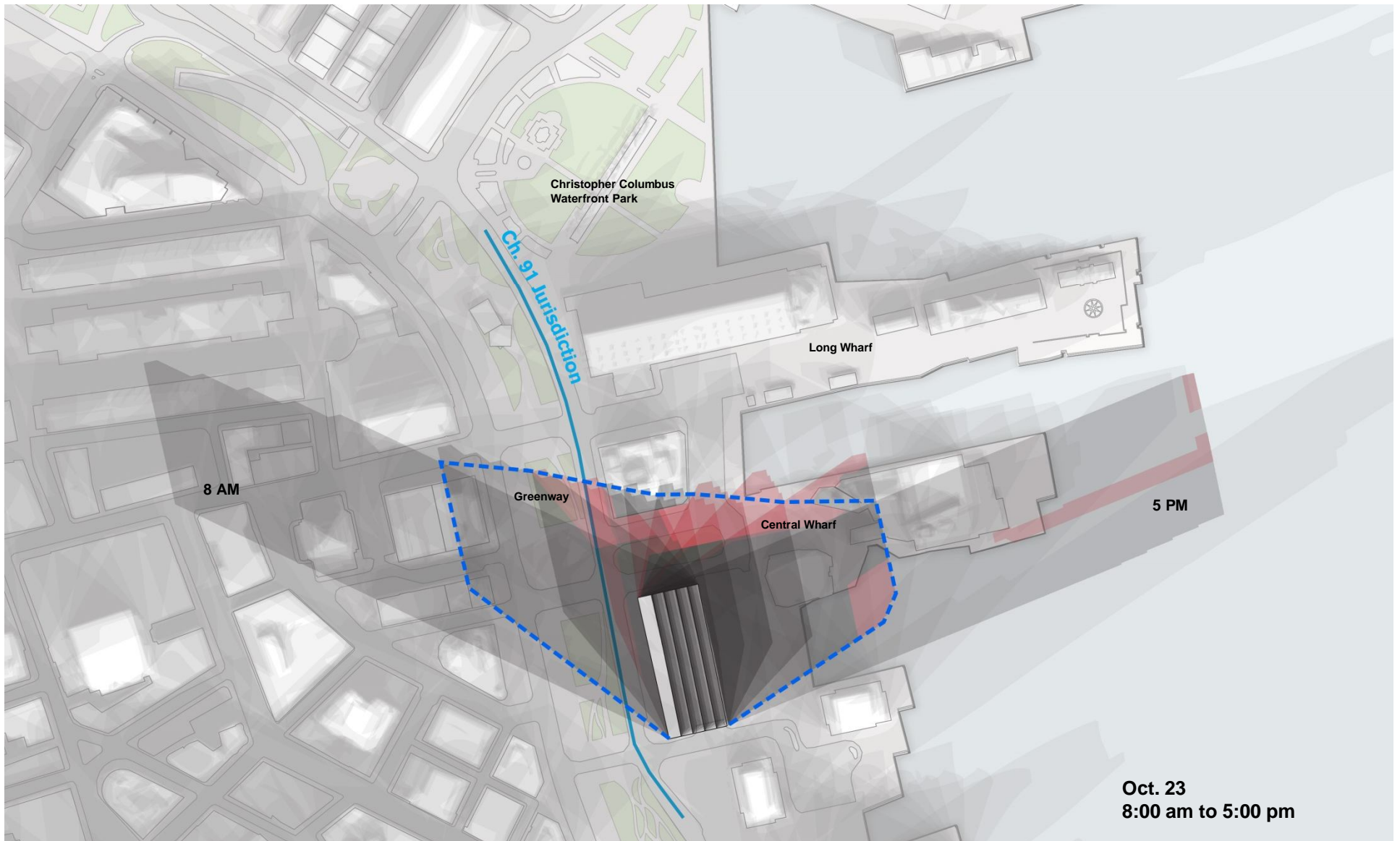


Chapter 91 Compliant Scenario



Ch. 91 Baseline and the Proposed Redevelopment Scenario
Chapter 91 Compliant Scenario

----- Minimum 1 hour or more continuous shadow extent for Chapter 91 Compliant scenario



Proposed Building

For Ch. 91 purposes, shadows are calculated based on the highest occupiable floor.

582'

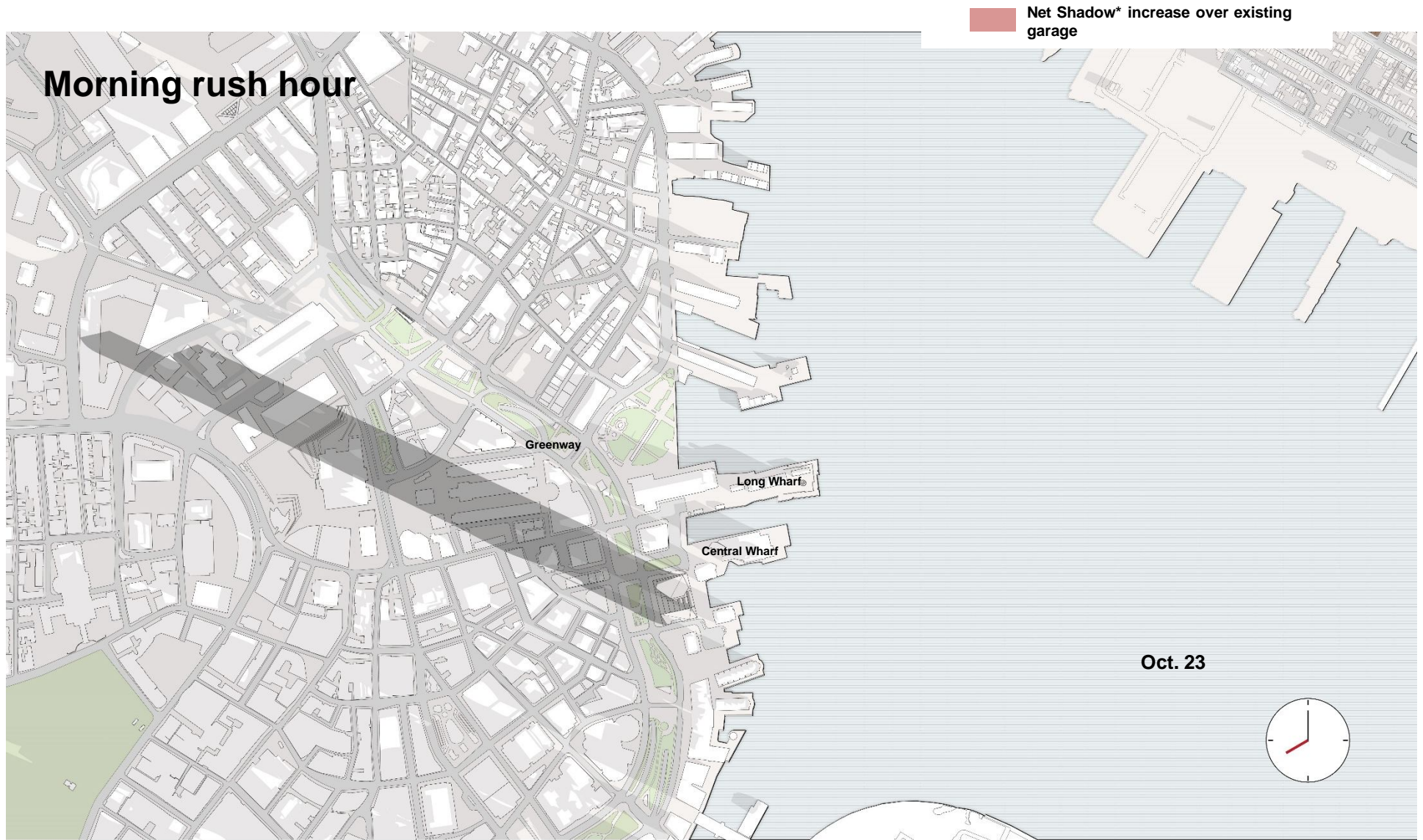
485'

Tower 1
Highest Occupiable floor – **582'**
Total height – **615'**

Tower 2
Highest Occupiable floor – **485'**
Total height – **538'**

Chiofaro Co. Proposal – Oct. 23

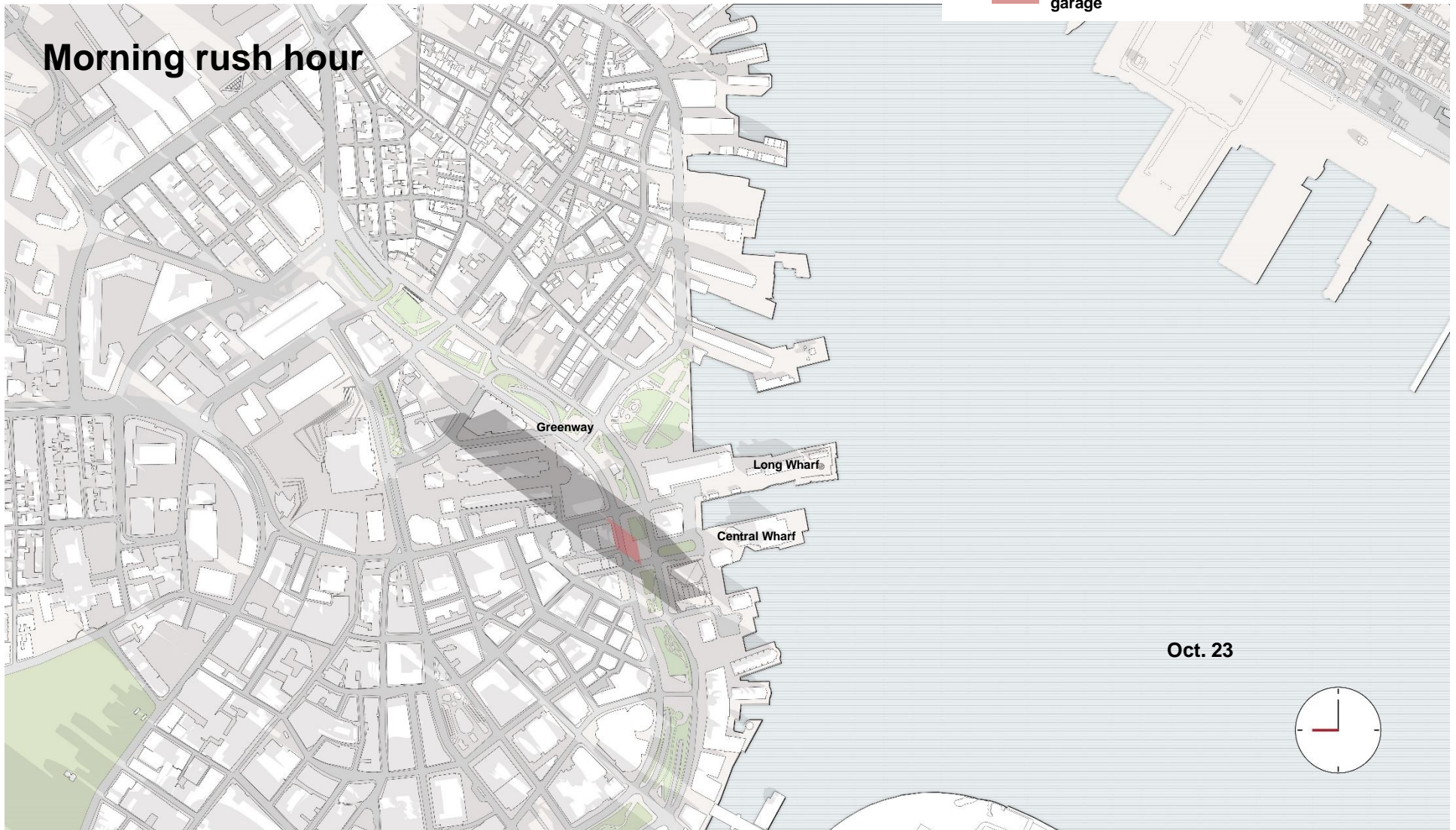
Shadow based on Highest Occupiable Floor



Chiofaro Co. Proposal – Oct. 23

Shadow based on Highest Occupiable Floor

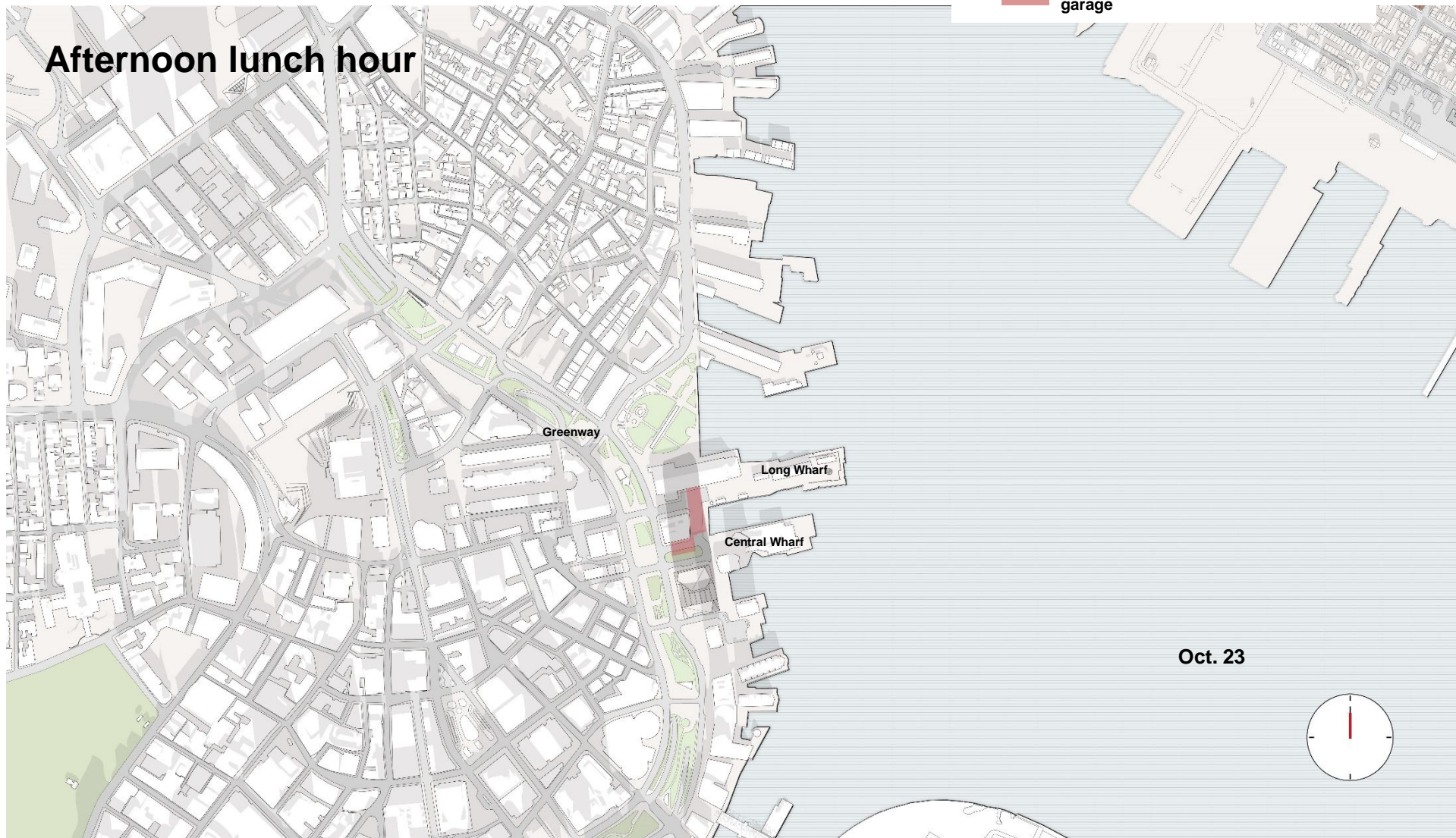
Net Shadow* increase over existing garage



Ch. 91 Baseline and the Proposed Redevelopment Scenario
Chiofaro Co. Proposal – Oct. 23

Shadow based on Highest Occupiable Floor

Net Shadow* increase over existing garage



Afternoon lunch hour

Oct. 23

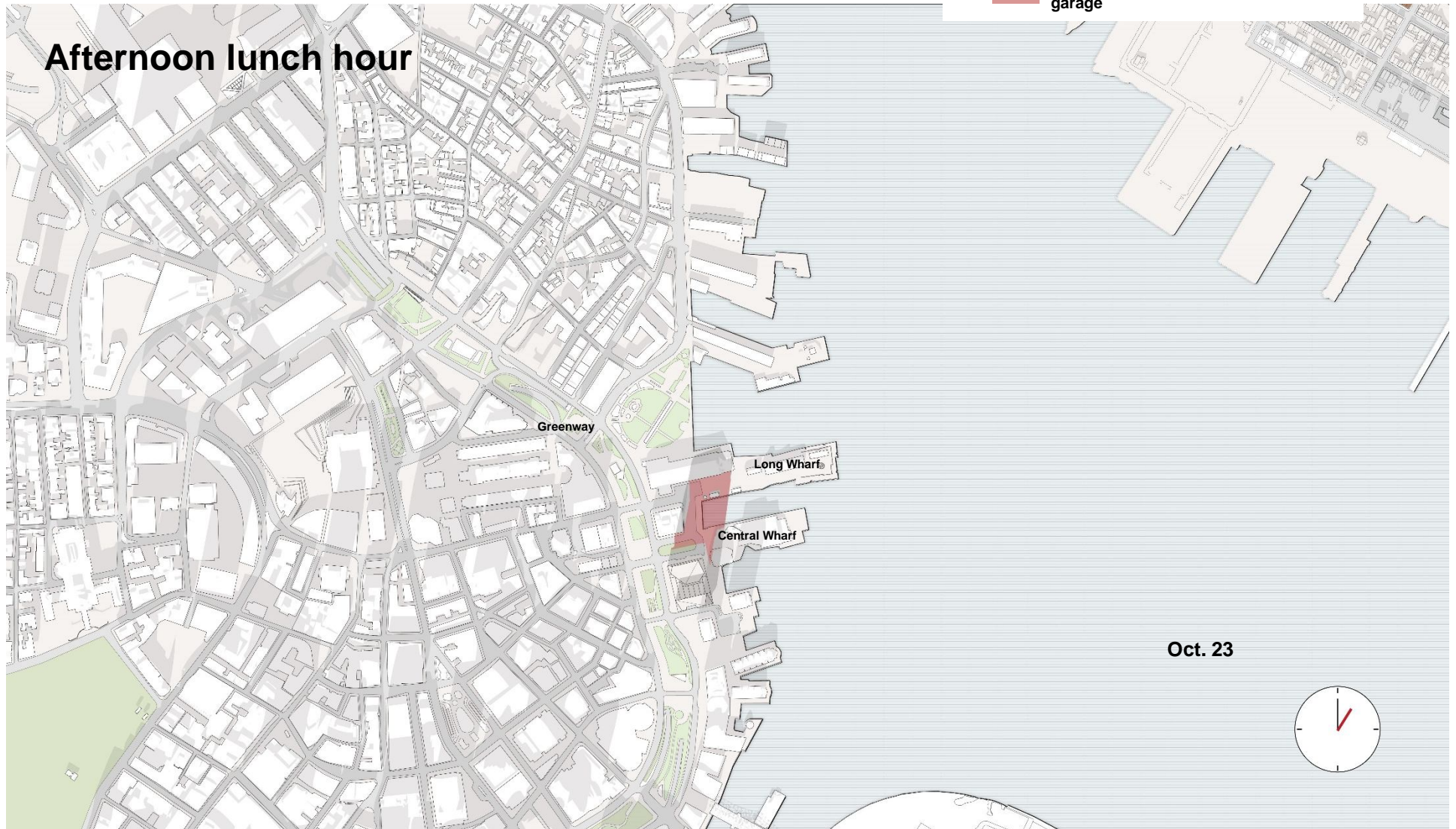
Ch. 91 Baseline and the Proposed Redevelopment Scenario

Chiofaro Co. Proposal – Oct. 23

Shadow based on Highest Occupiable Floor

Net Shadow* increase over existing garage

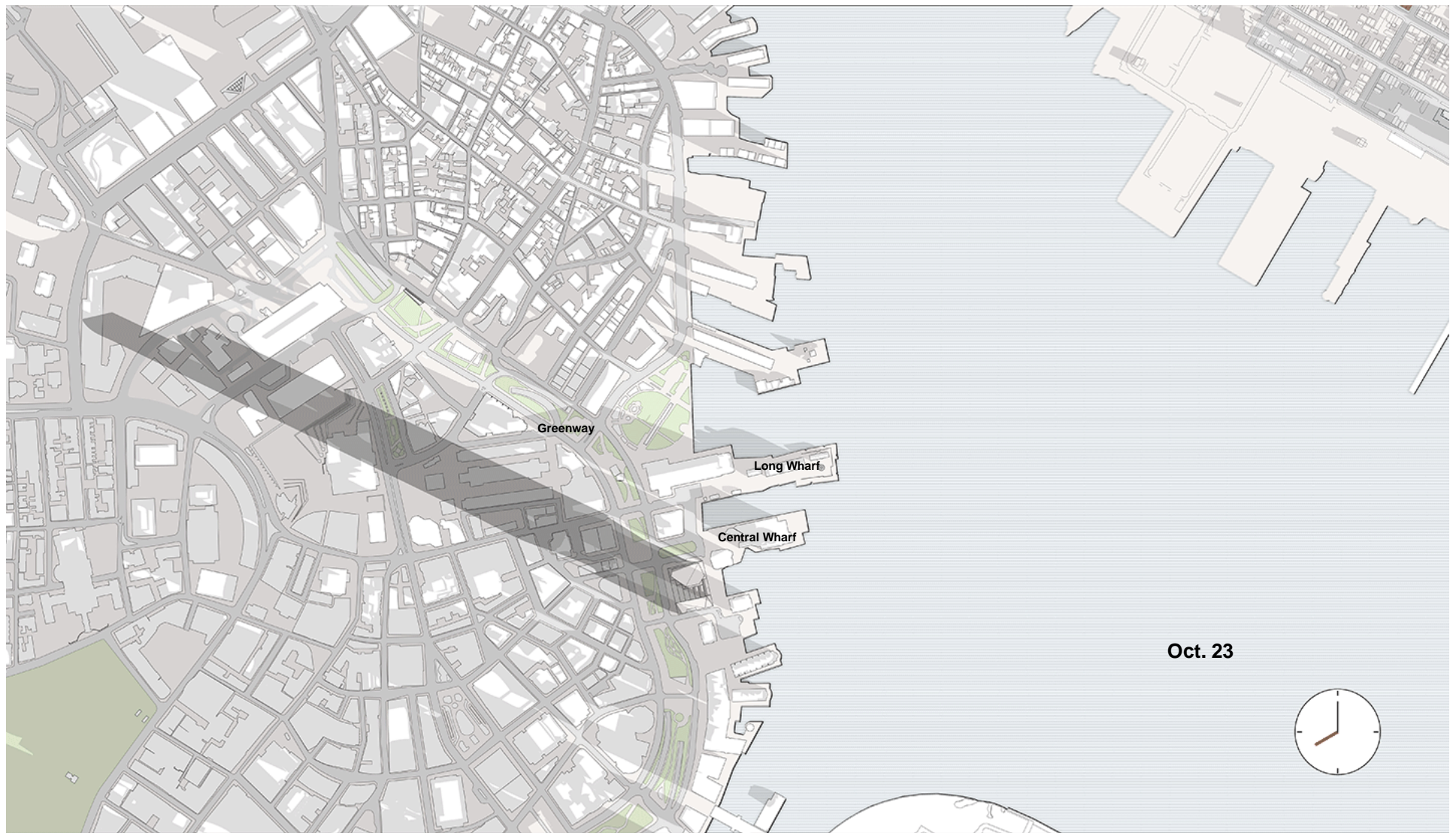
Afternoon lunch hour



Ch. 91 Baseline and the Proposed Redevelopment Scenario

Chiofaro Co. Proposal – Oct. 23

Shadow based on Highest Occupiable Floor



Ch. 91 Baseline and the Proposed Redevelopment Scenario
Chiofaro Co. Proposal – Oct. 23

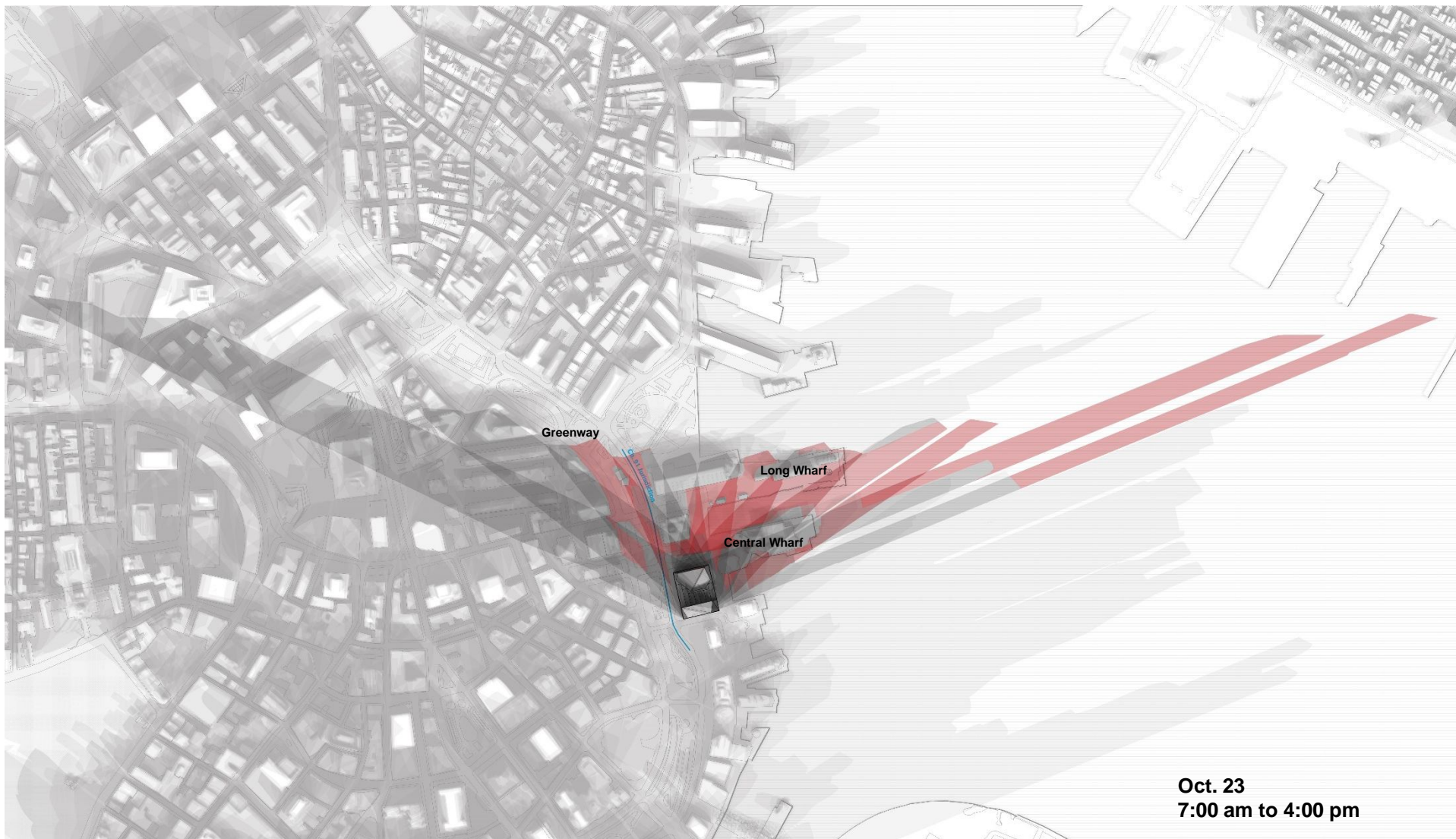
Shadow based on Highest Occupiable Floor

* Net shadow increase, as compared to existing garage
(taking into consideration shadows cast by all existing buildings)



Ch. 91 Baseline and the Proposed Redevelopment Scenario
Chiofaro Co. Proposal – Oct. 23

Shadow based on Total Height



Ch. 91 Baseline and the Proposed Redevelopment Scenario Chiofaro Co. Proposal – Oct. 23

Shadow based on Highest Occupiable Floor

- Minimum 1 hour or more continuous shadow extent for Chapter-91 Compliant proposal
- Minimum 1 hour or more continuous shadow extent for Development Scenario
- Net Shadow* increase over existing garage



Ch. 91 Baseline and the Proposed Redevelopment Scenario

Chiofaro Co. Proposal – Oct. 23

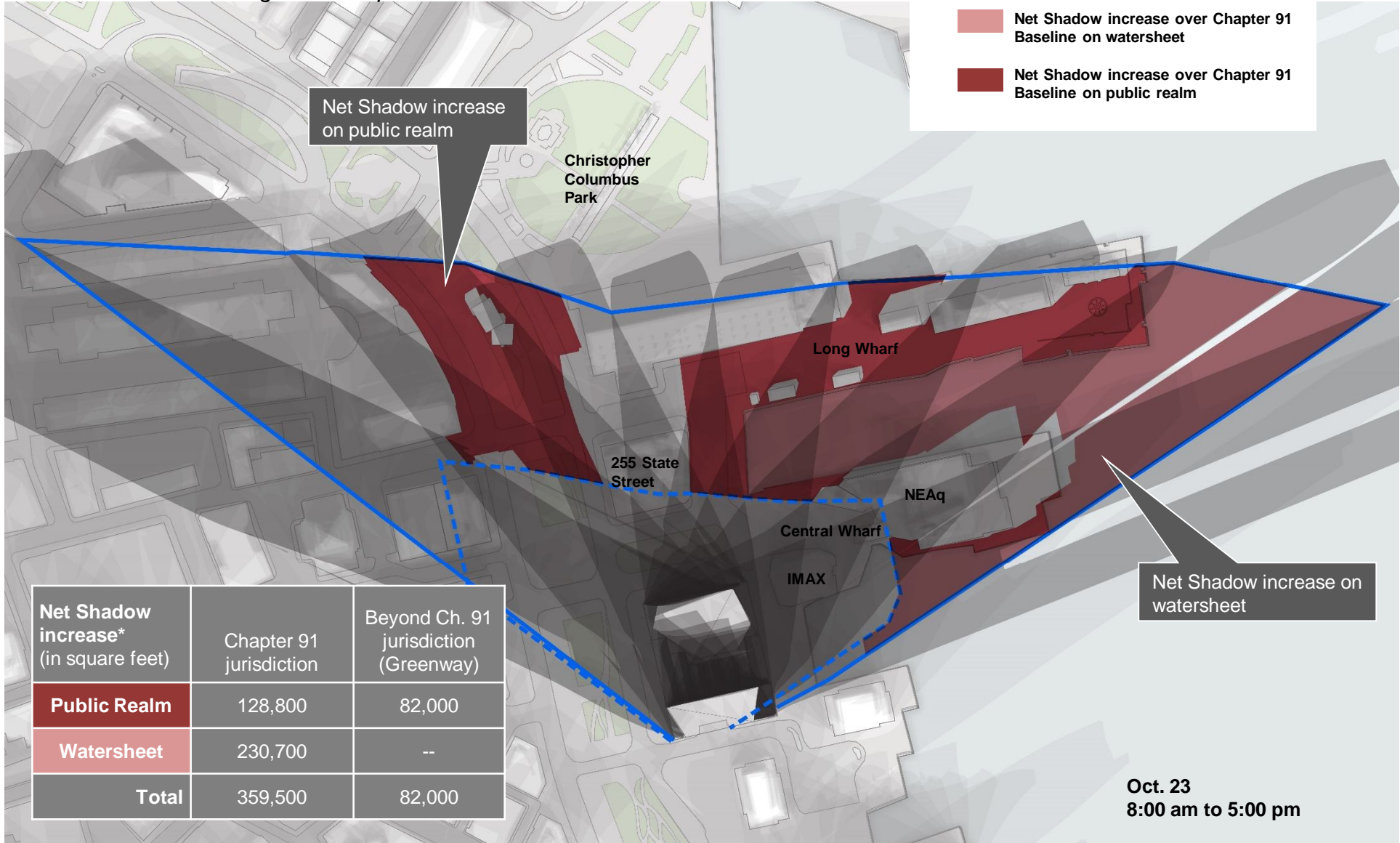
Shadow based on Highest Occupiable Floor

--- Minimum 1 hour or more continuous shadow extent for Chapter-91 Compliant proposal

— Minimum 1 hour or more continuous shadow extent for Development Scenario

Net Shadow increase over Chapter 91 Baseline on watersheet

Net Shadow increase over Chapter 91 Baseline on public realm



Net Shadow increase* (in square feet)	Chapter 91 jurisdiction	Beyond Ch. 91 jurisdiction (Greenway)
Public Realm	128,800	82,000
Watersheet	230,700	--
Total	359,500	82,000

Oct. 23
8:00 am to 5:00 pm

Ch. 91 Baseline and the Proposed Redevelopment Scenario

Chiofaro Co. Proposal – Oct. 23

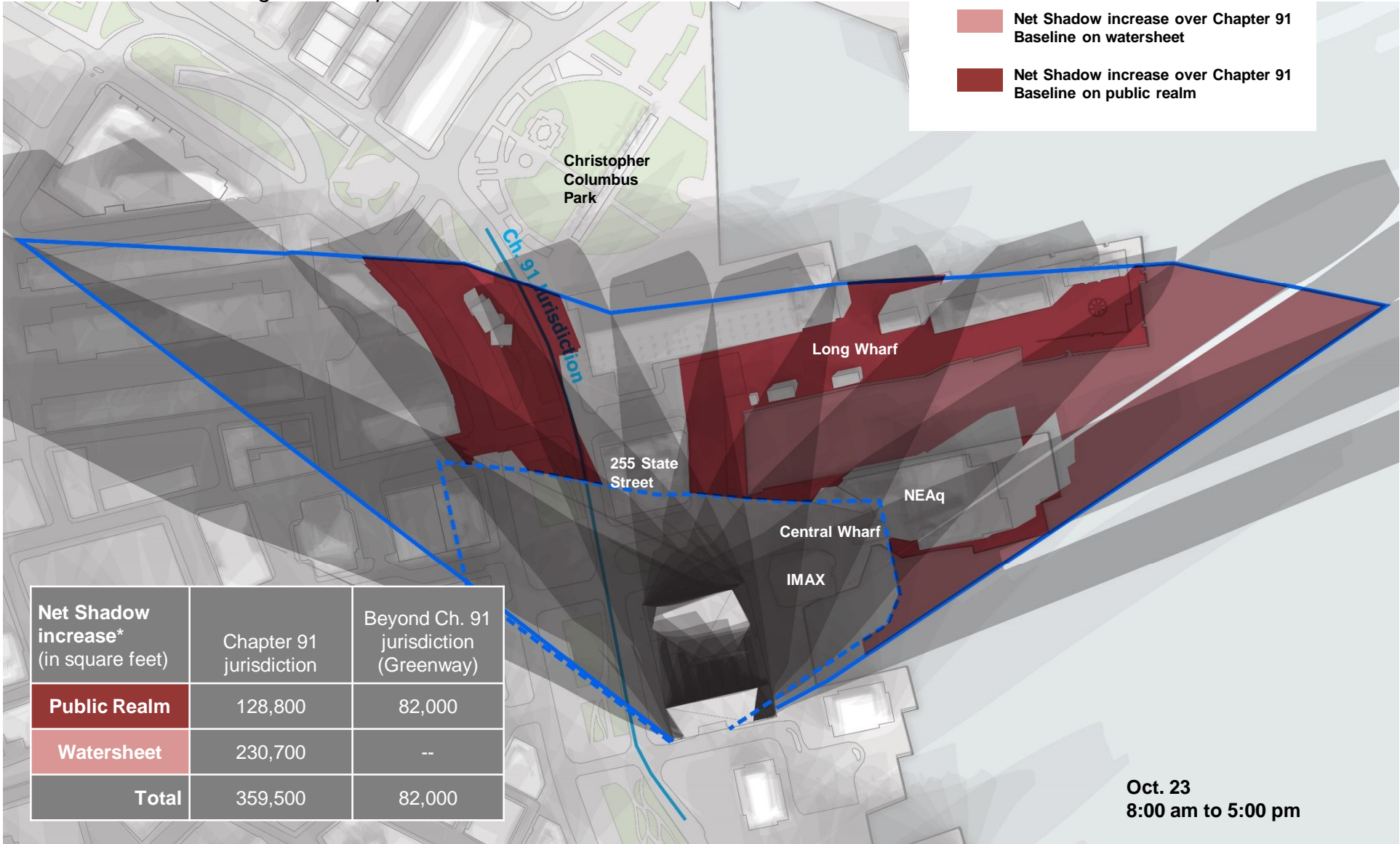
Shadow based on Highest Occupiable Floor

--- Minimum 1 hour or more continuous shadow extent for Chapter-91 Compliant proposal

— Minimum 1 hour or more continuous shadow extent for Development Scenario

Net Shadow increase over Chapter 91 Baseline on watersheet

Net Shadow increase over Chapter 91 Baseline on public realm







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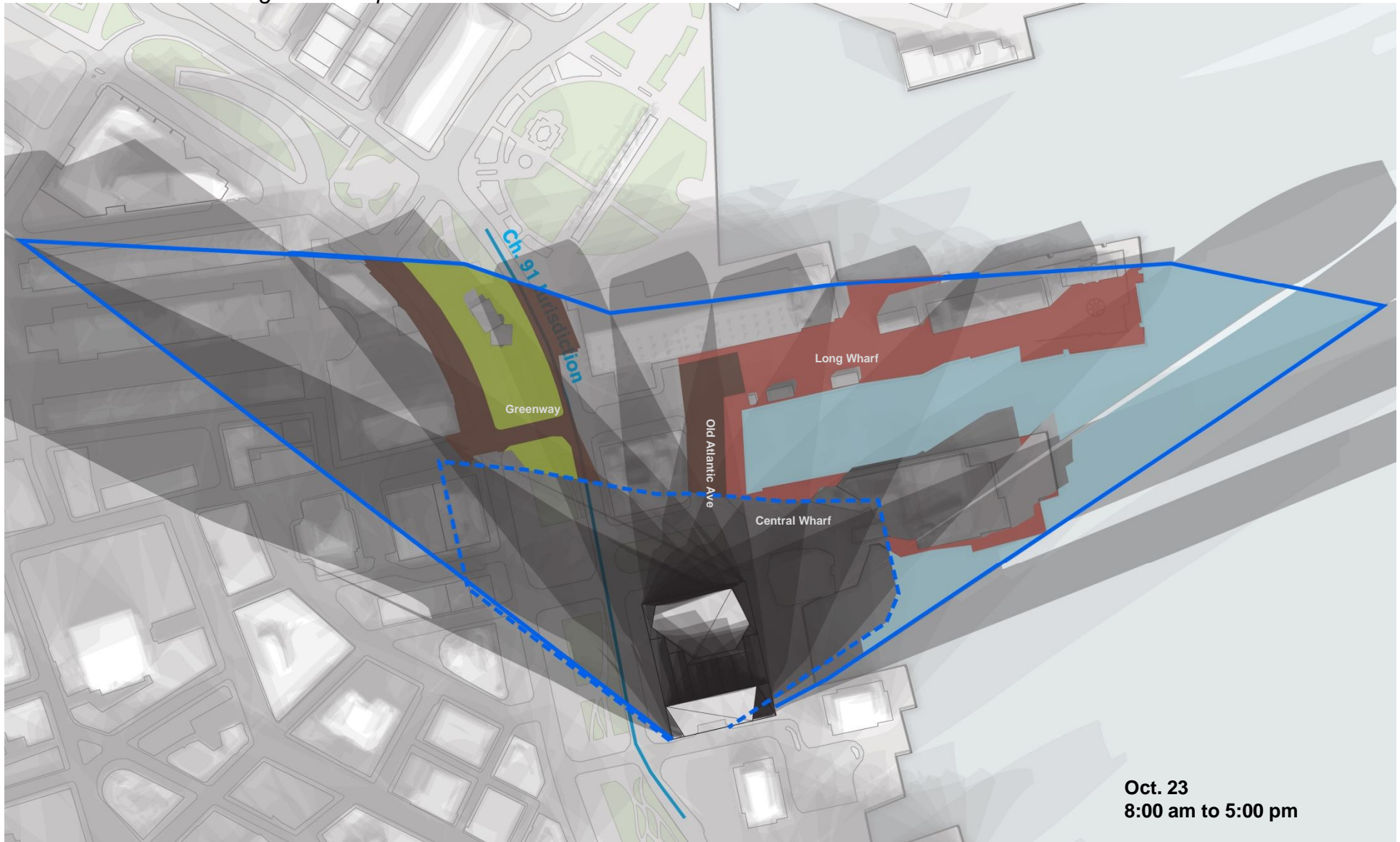
Oct. 23
8:00 am to 5:00 pm

Ch. 91 Baseline and the Proposed Redevelopment Scenario

Chiofaro Co. Proposal – Oct. 23

Shadow based on Highest Occupiable Floor

-  Net New Shadow over Greenway
-  Net New Shadow over Central Wharf and Long Wharf
-  Net New Shadow over watershed
-  Streets and Sidewalks



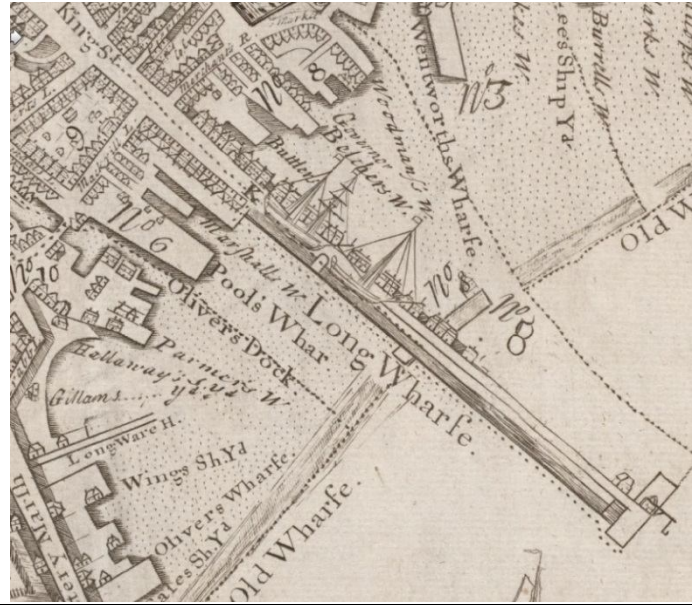
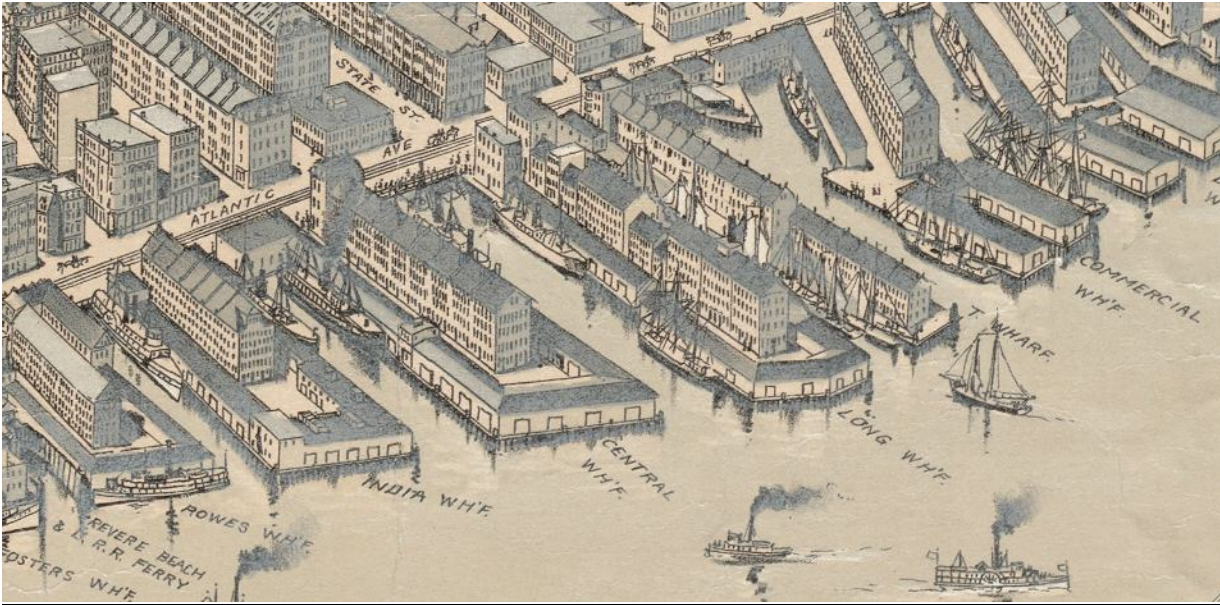
Oct. 23
8:00 am to 5:00 pm

Other criteria

Impact on Long Wharf

Downtown Waterfront

Long Wharf

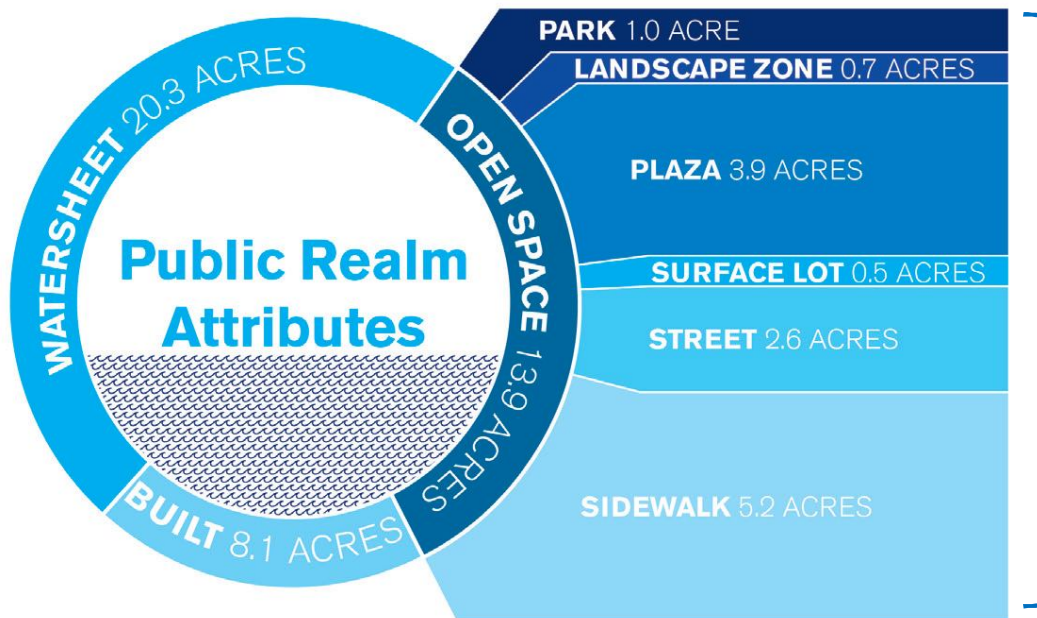


Downtown Waterfront

Long Wharf

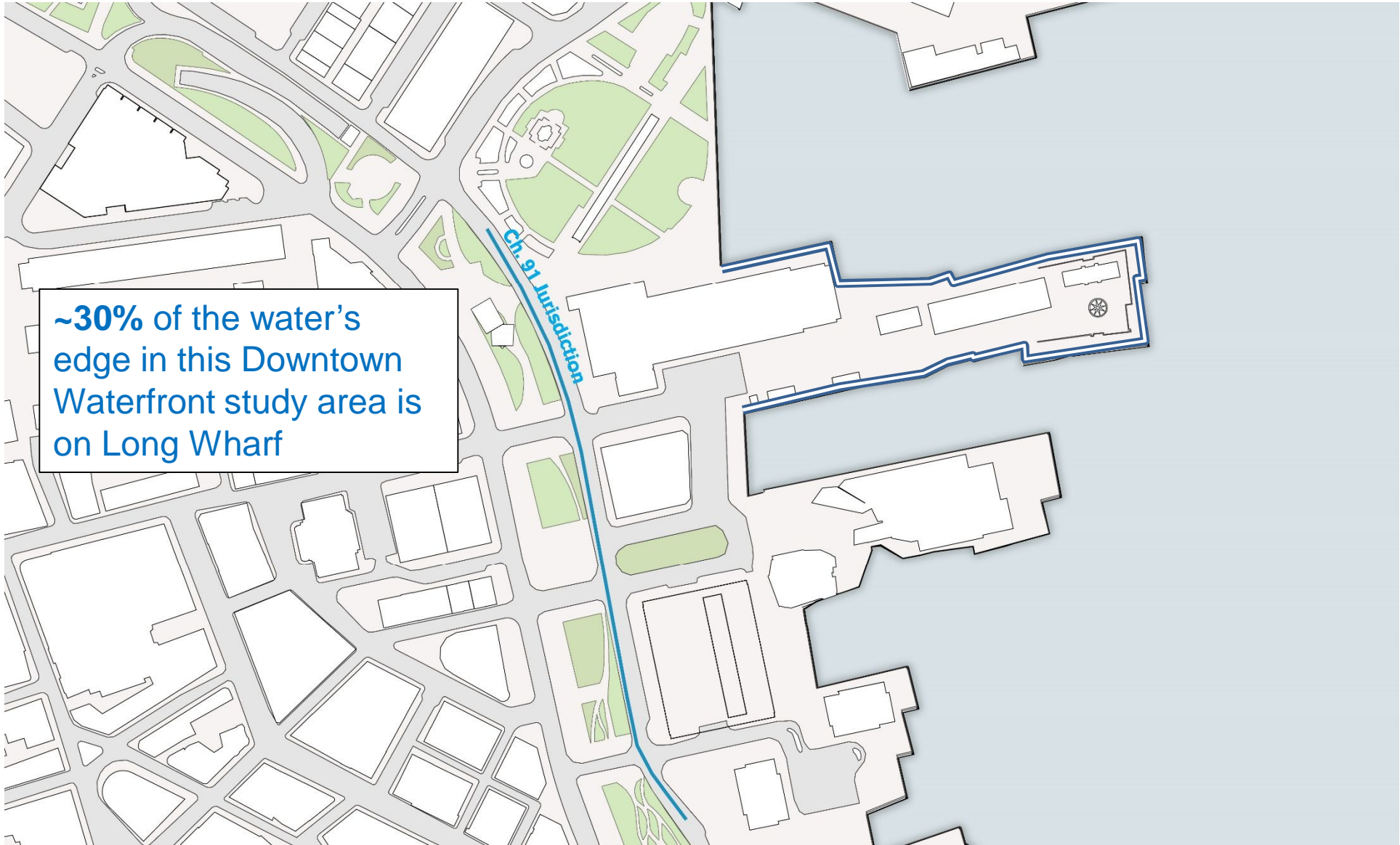


Long Wharf: Open Space Resource



~ 33 % of the open space in the Downtown Waterfront study area is Long Wharf

Long Wharf: Water's Edge

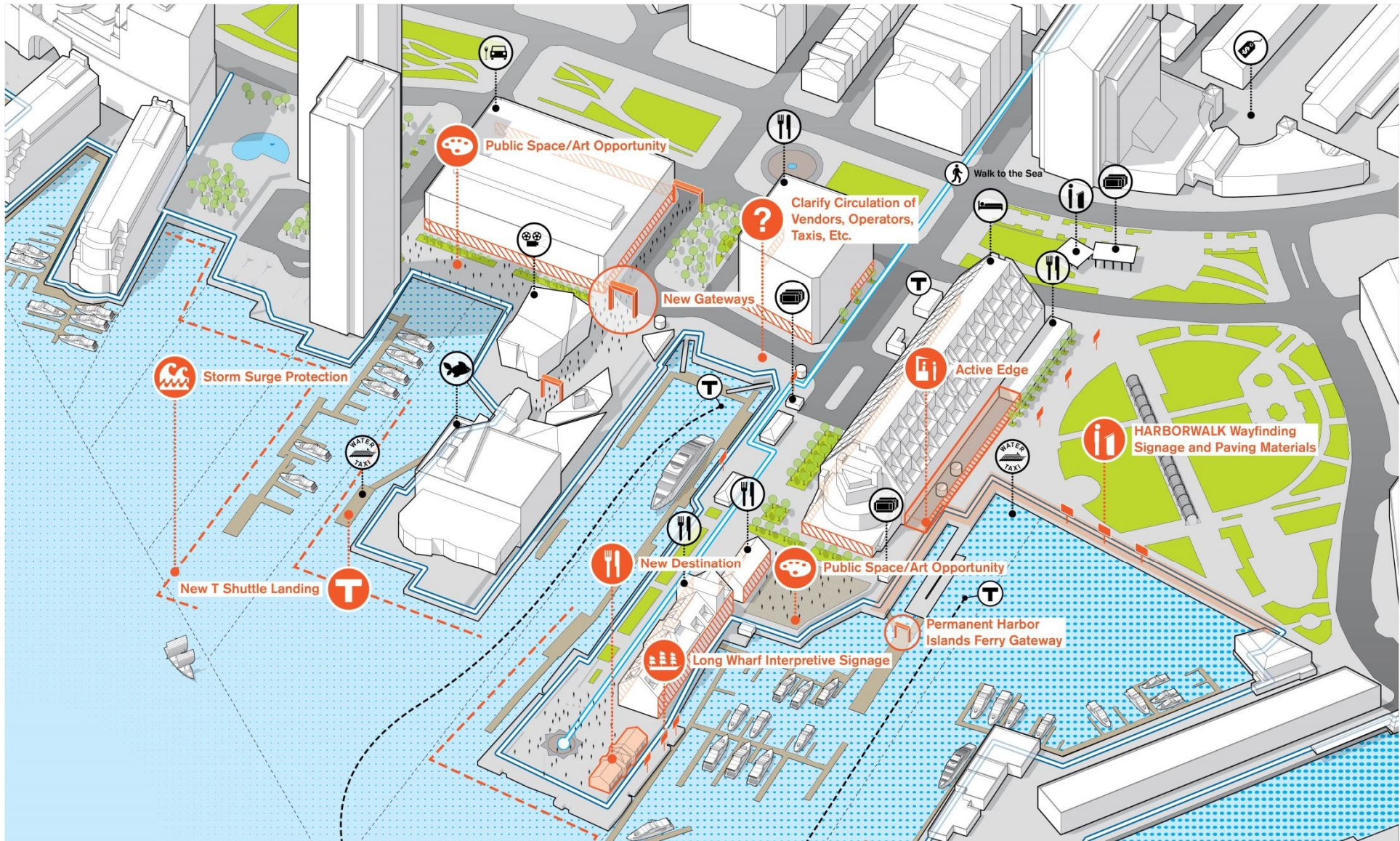


Long Wharf: Water Transportation Hub



Boston Harbor Cruises estimates an additional 400K annual riders in the next 5 years.

Harbor Island Alliance: 2014 was their busiest year with approximately 125,000 visiting the islands, which is up 17% from 2013.



Shadow Protection Zone

MHPAC members:

- Asked about “the extent of shadow impacts on significant open space resources.”
- “Referenced support for the establishment of **shadow protection zones**, but they should not extend out into the middle of the harbor.”



Figure 10-3 Fan Pier, Pier 4 and McCourt / Broderick Substitution Provisions

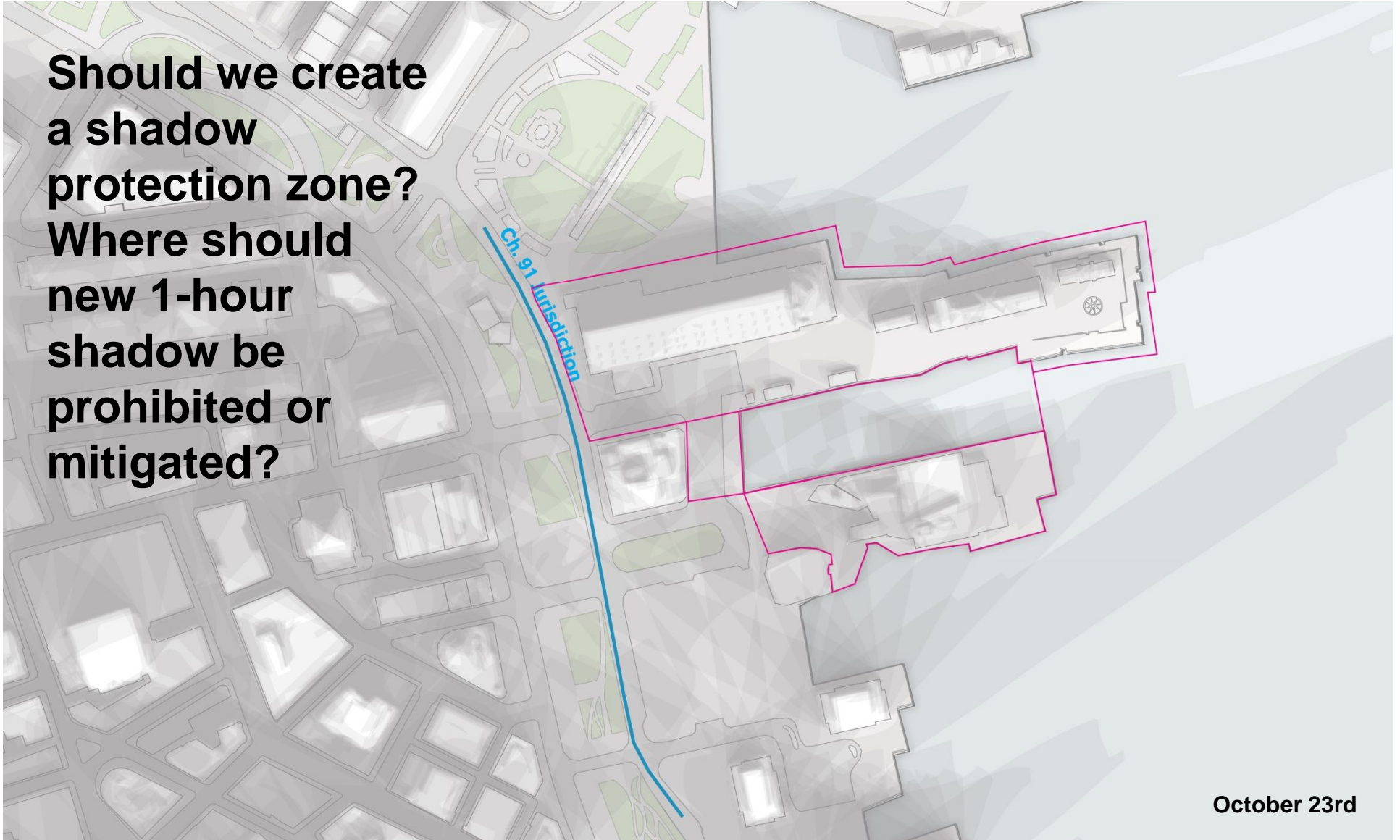
“Our greatest concern is the **shadows of longer duration**, as these can have a significant impact on the pedestrian environment.... Accordingly we focused our attention on those areas of the shadow protection zone that are in shadow more than one hour each day.”

- South Boston MHP

Ch. 91

Shadow Protection Zone

**Should we create
a shadow
protection zone?
Where should
new 1-hour
shadow be
prohibited or
mitigated?**



October 23rd

Other criteria

Open Space

Greenway District Planning Study, 2010



Overview of the Harbor Garage Parcel



Overview of the Harbor Garage Parcel



Other Scenarios

Greenway District Planning Study



Alternative Scenarios

Variables:

- Height
- One tower vs two towers
- Building Orientation
- Location of open space

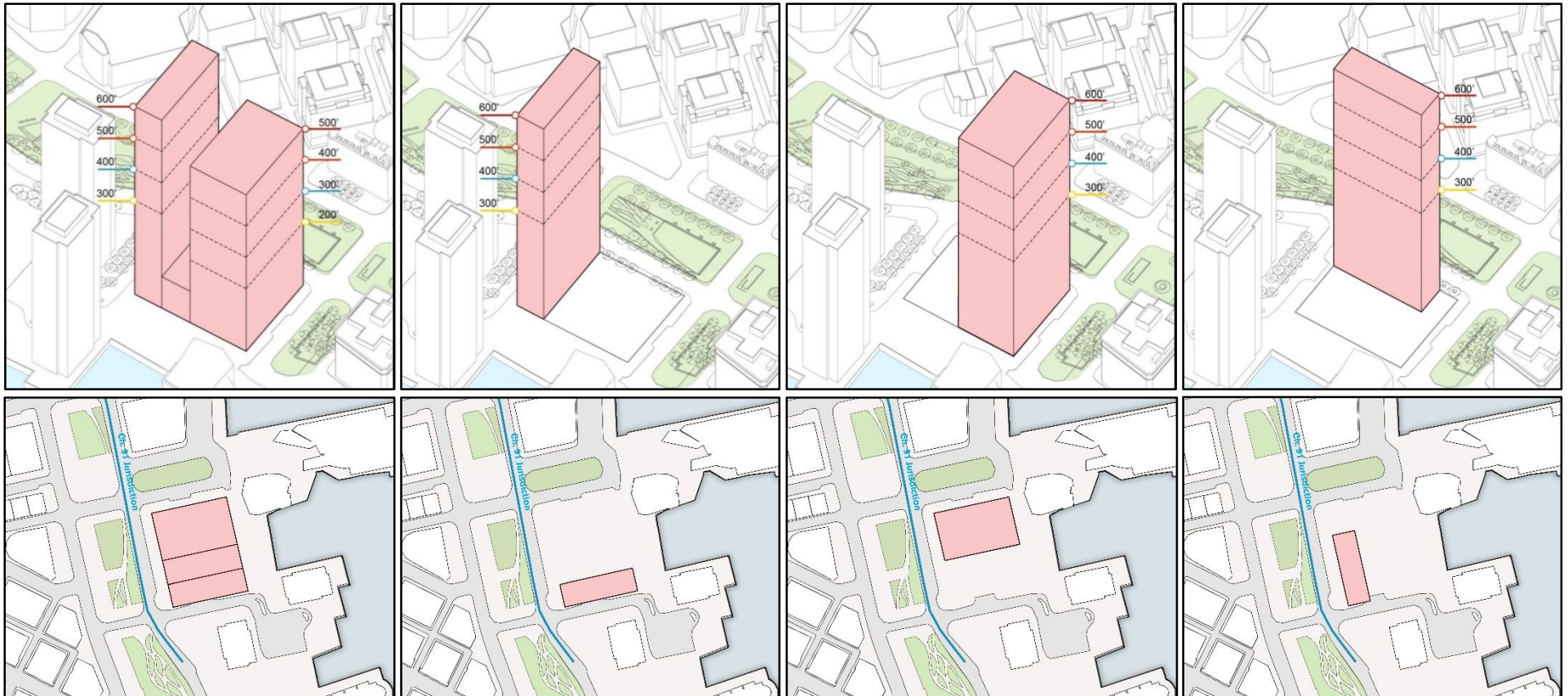
Variables

Height

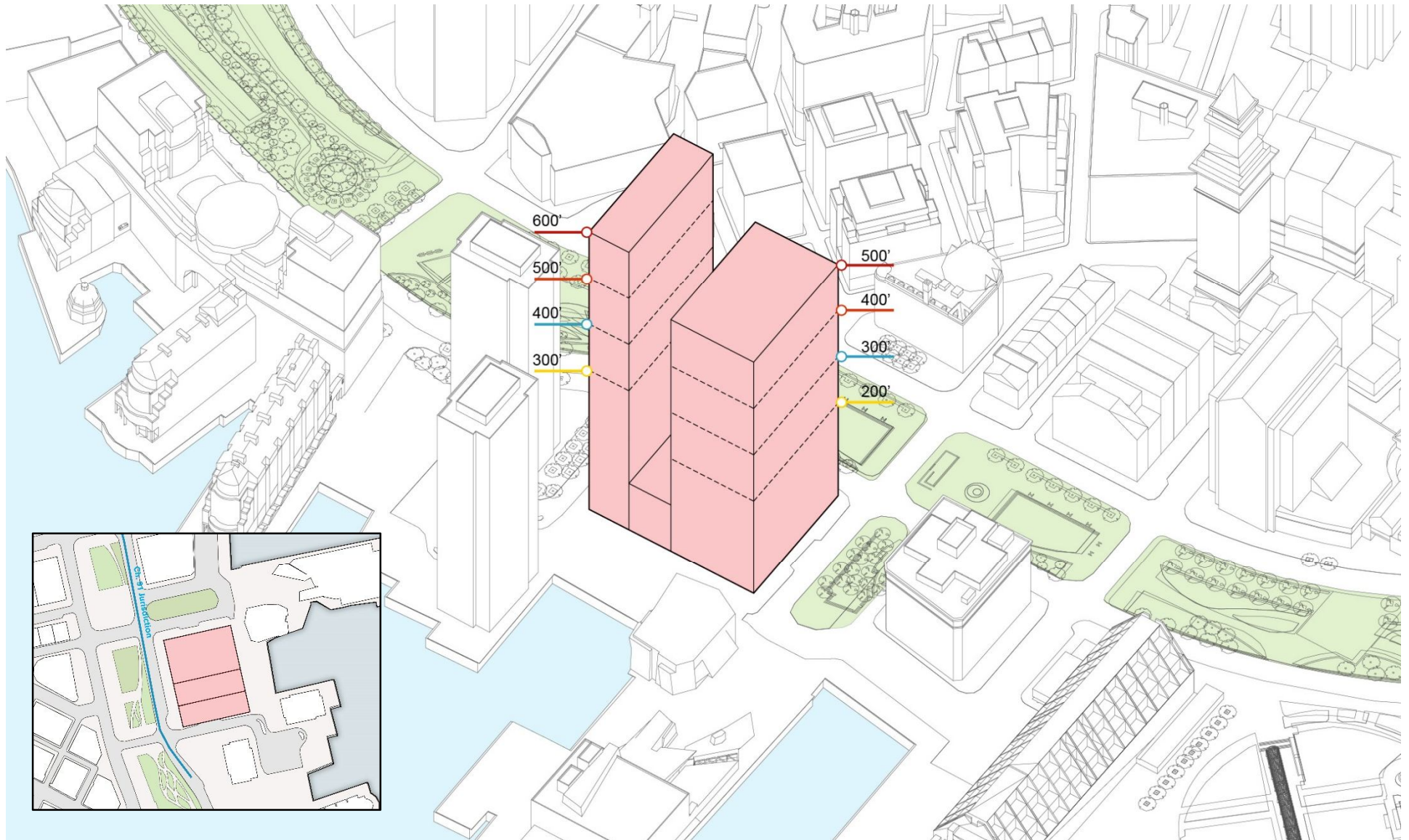
South Tower only

North tower only

Orientation

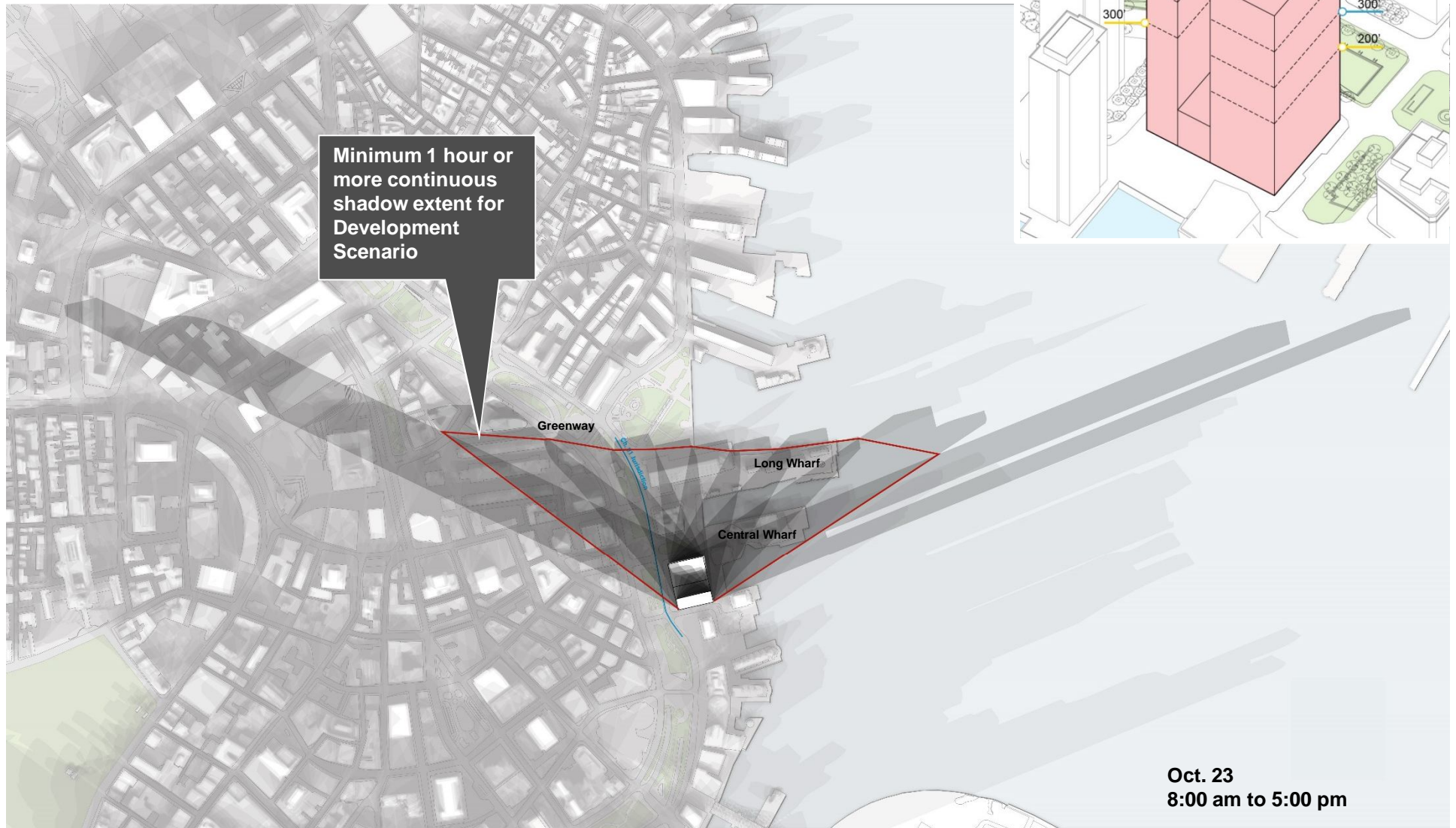


Variable: Height

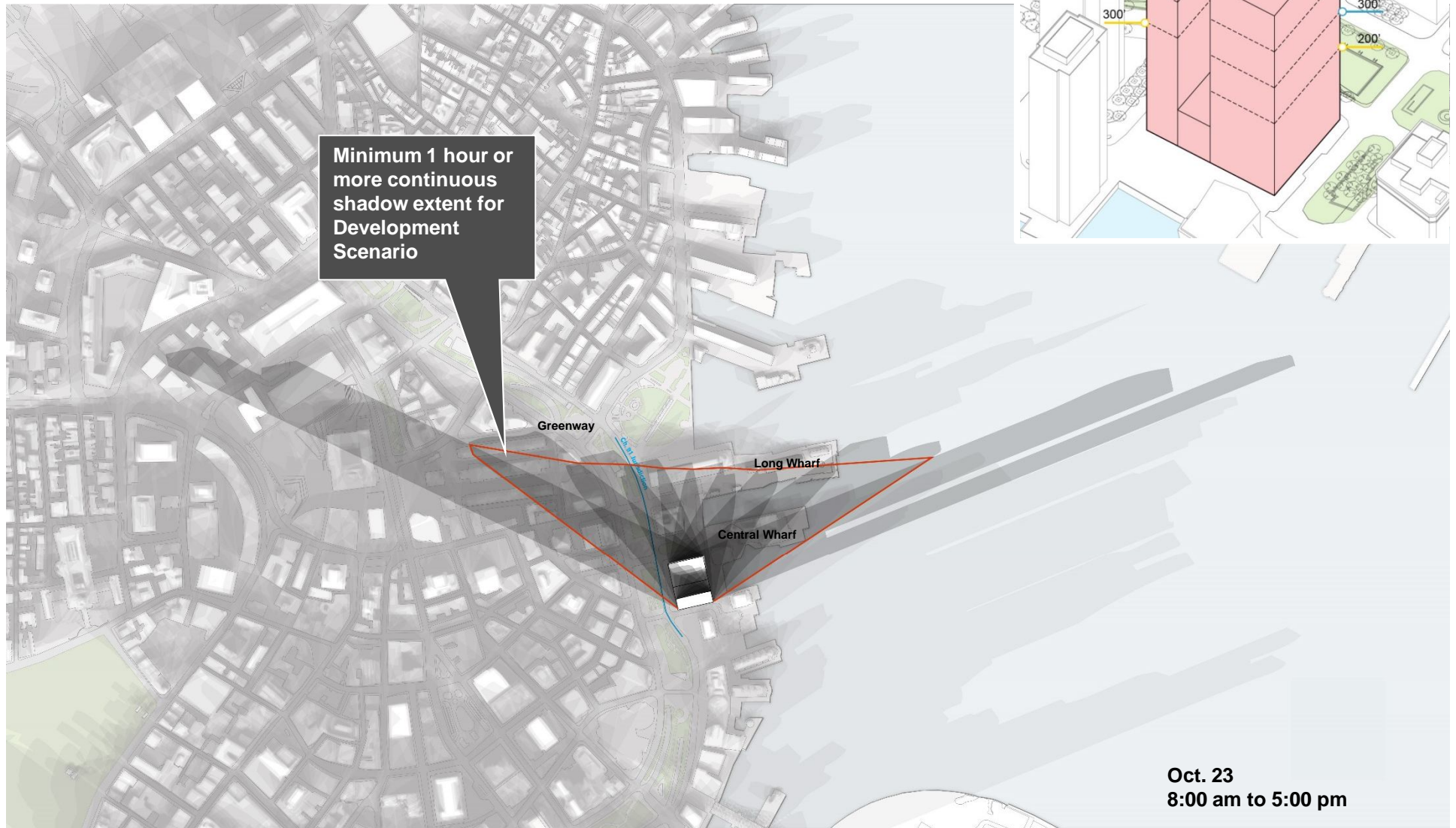


Alternative Scenarios

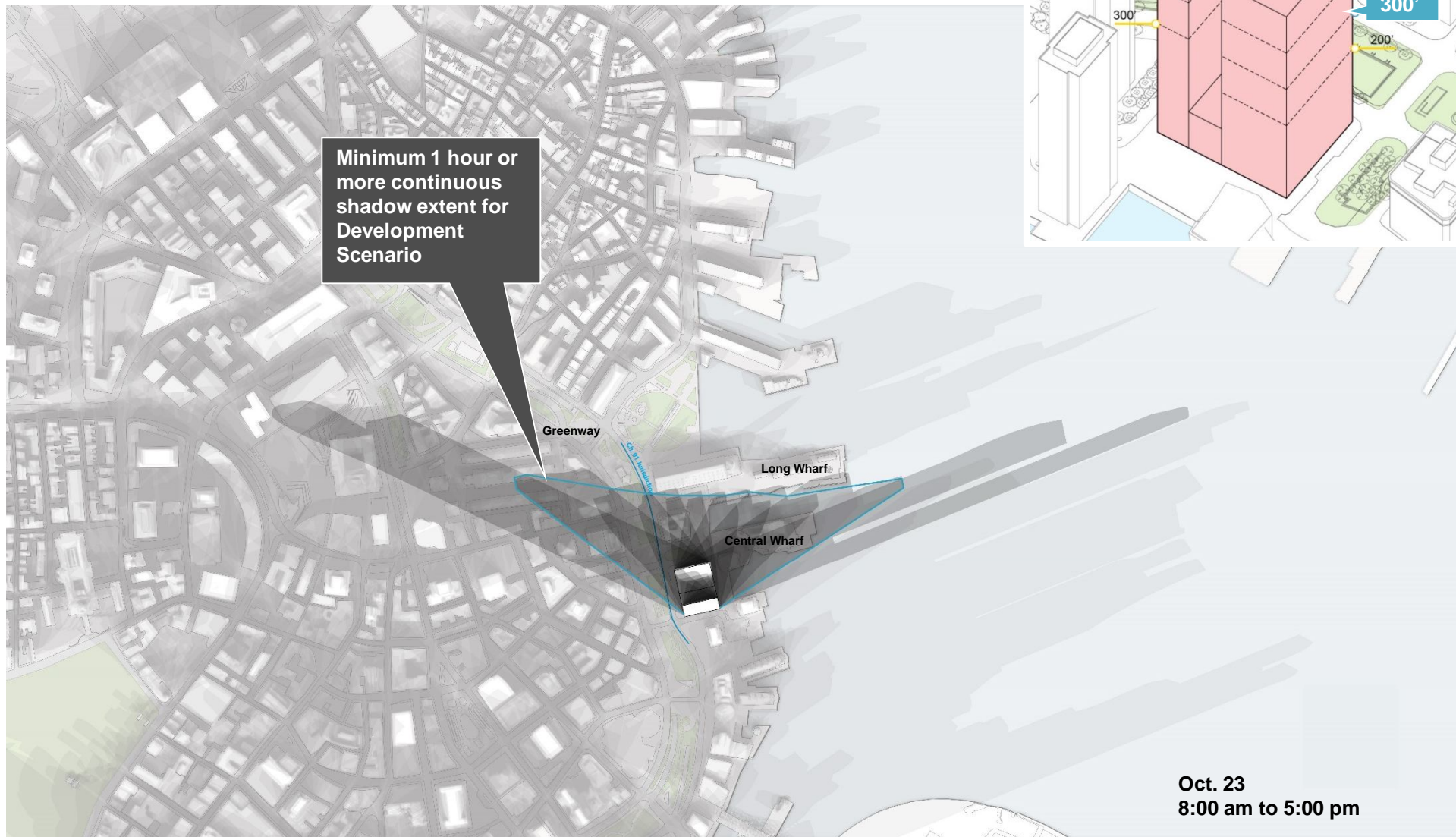
Two Towers – 600' & 500'



Alternative Scenarios
Two Towers – 500' & 400'



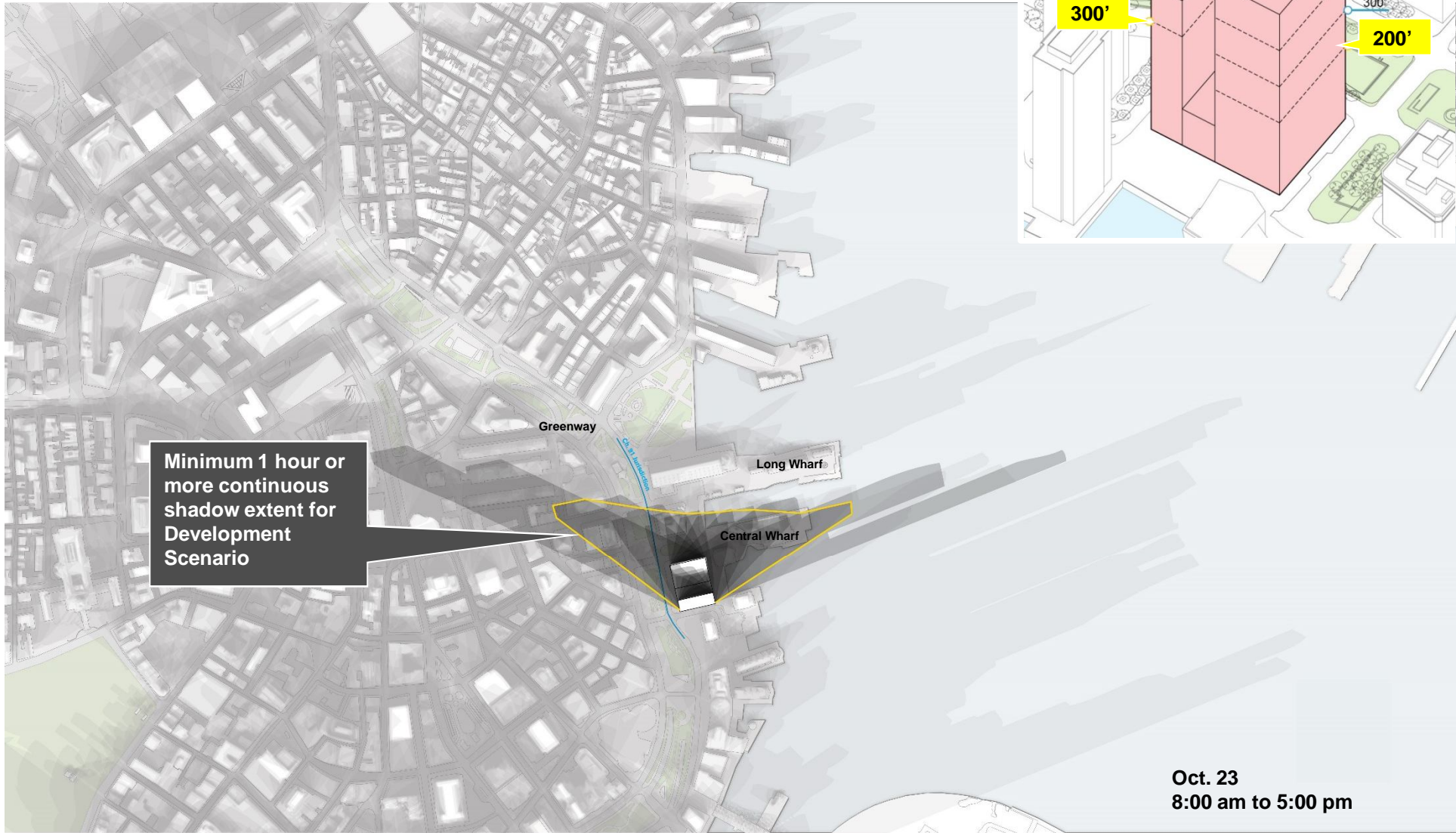
Ch. 91 Baseline and the Proposed Redevelopment Scenario
Two Towers – 400' & 300'



Oct. 23
8:00 am to 5:00 pm

Alternative Scenarios

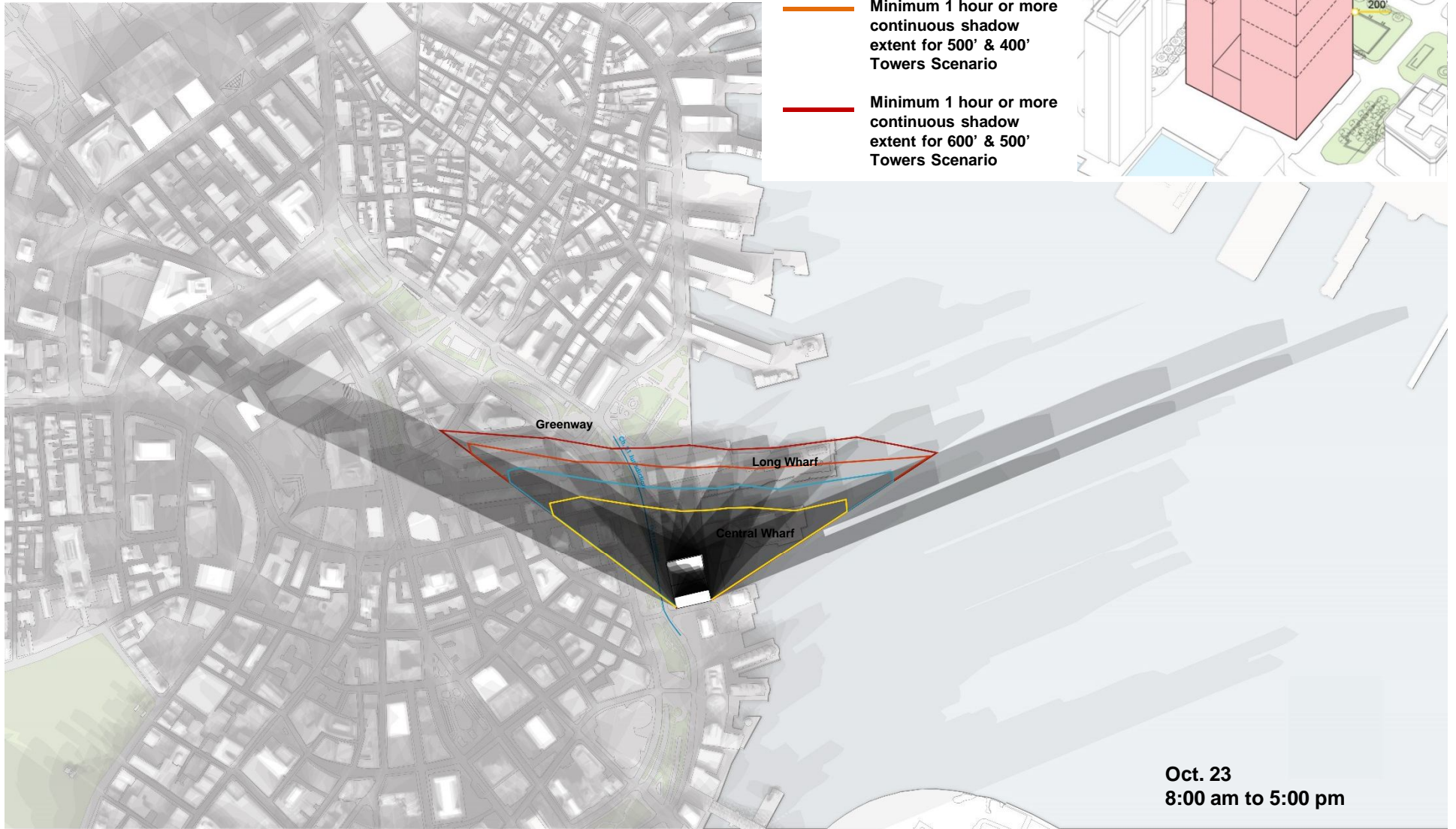
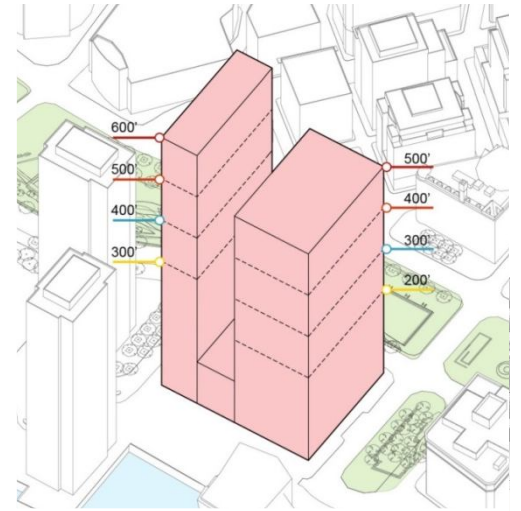
Two Towers – 300' & 200'



Oct. 23
8:00 am to 5:00 pm

Alternative Scenarios
Two Towers – Oct. 23

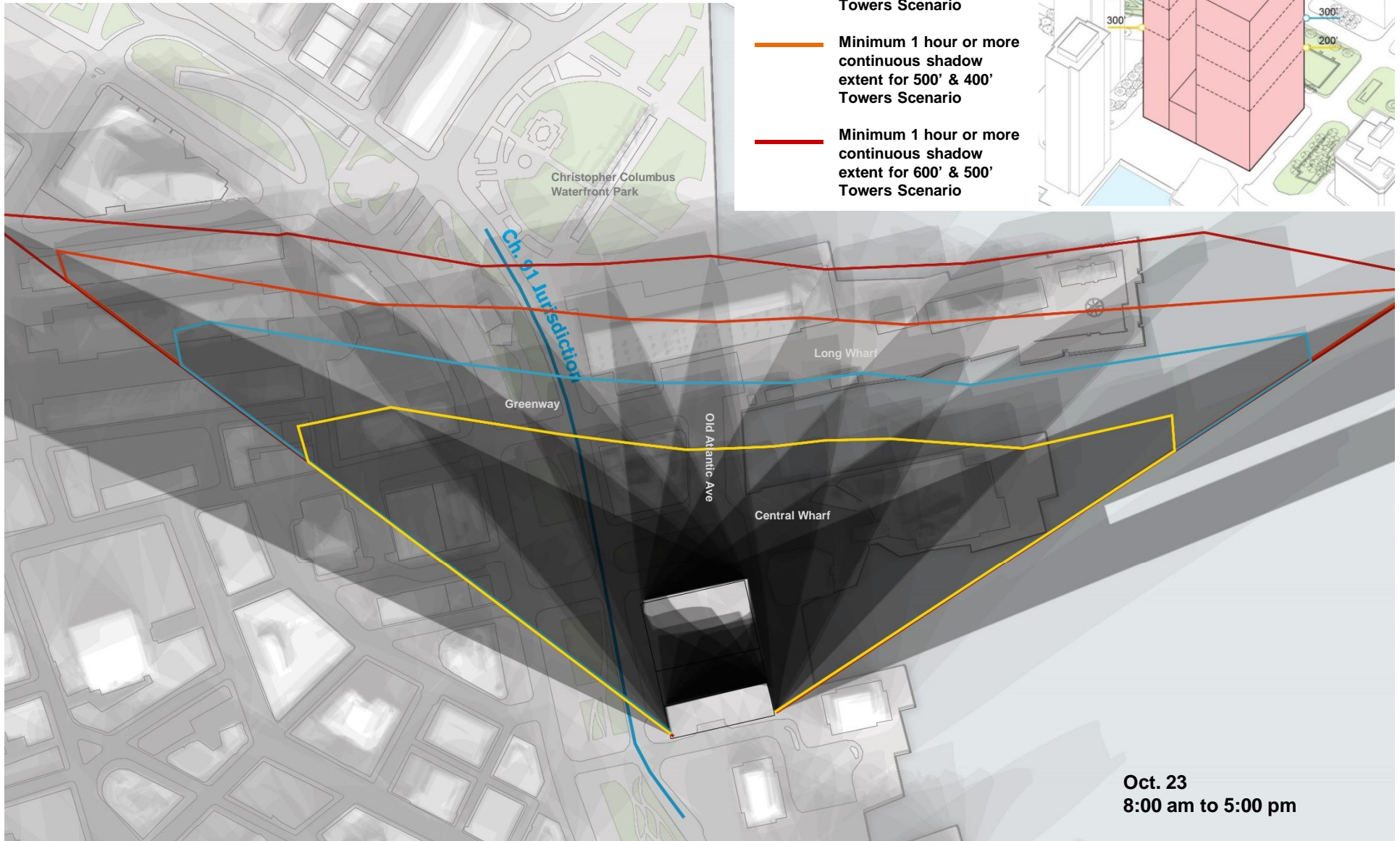
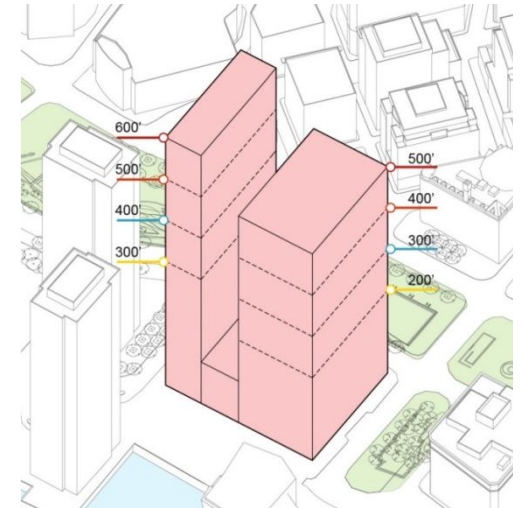
- Minimum 1 hour or more continuous shadow extent for 300' & 200' Towers Scenario
- Minimum 1 hour or more continuous shadow extent for 400' & 300' Towers Scenario
- Minimum 1 hour or more continuous shadow extent for 500' & 400' Towers Scenario
- Minimum 1 hour or more continuous shadow extent for 600' & 500' Towers Scenario



Oct. 23
8:00 am to 5:00 pm

Alternative Scenarios Two Towers – Oct. 23

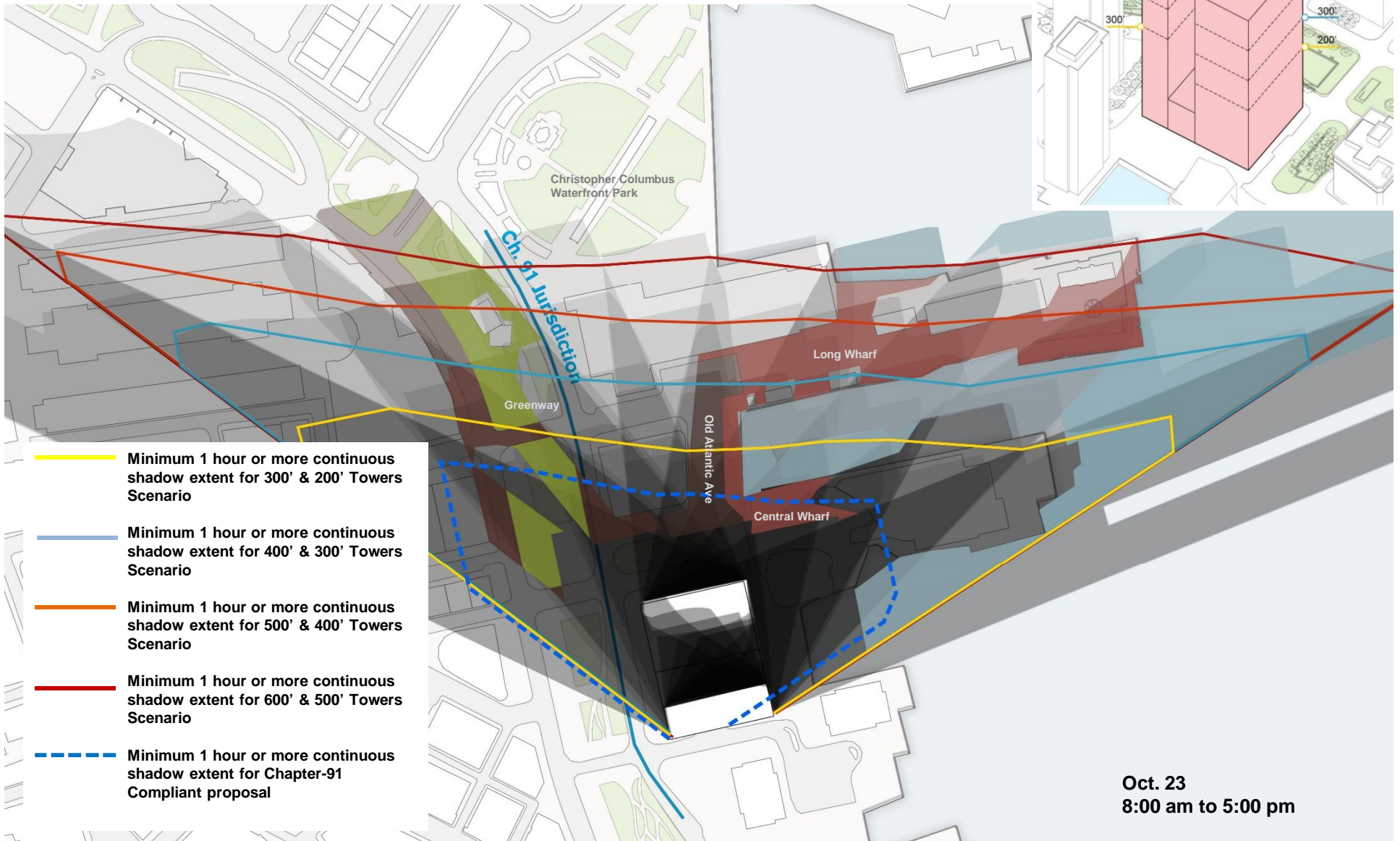
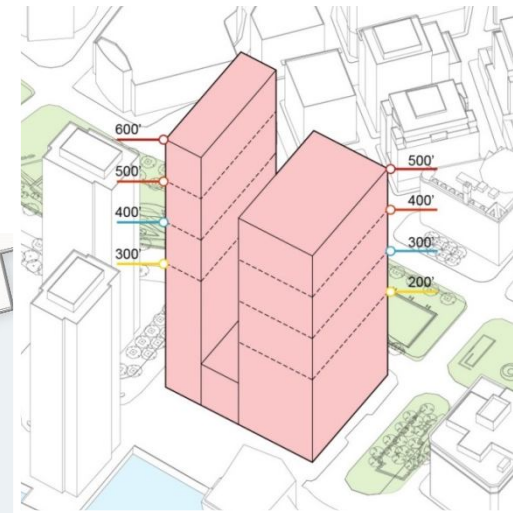
- Minimum 1 hour or more continuous shadow extent for 300' & 200' Towers Scenario
- Minimum 1 hour or more continuous shadow extent for 400' & 300' Towers Scenario
- Minimum 1 hour or more continuous shadow extent for 500' & 400' Towers Scenario
- Minimum 1 hour or more continuous shadow extent for 600' & 500' Towers Scenario



Oct. 23
8:00 am to 5:00 pm

Alternative Scenarios Two Towers – Oct. 23

- Net New Shadow over Greenway
- Net New Shadow over Central Wharf and Long Wharf
- Net New Shadow over watersheet
- Streets and Sidewalks

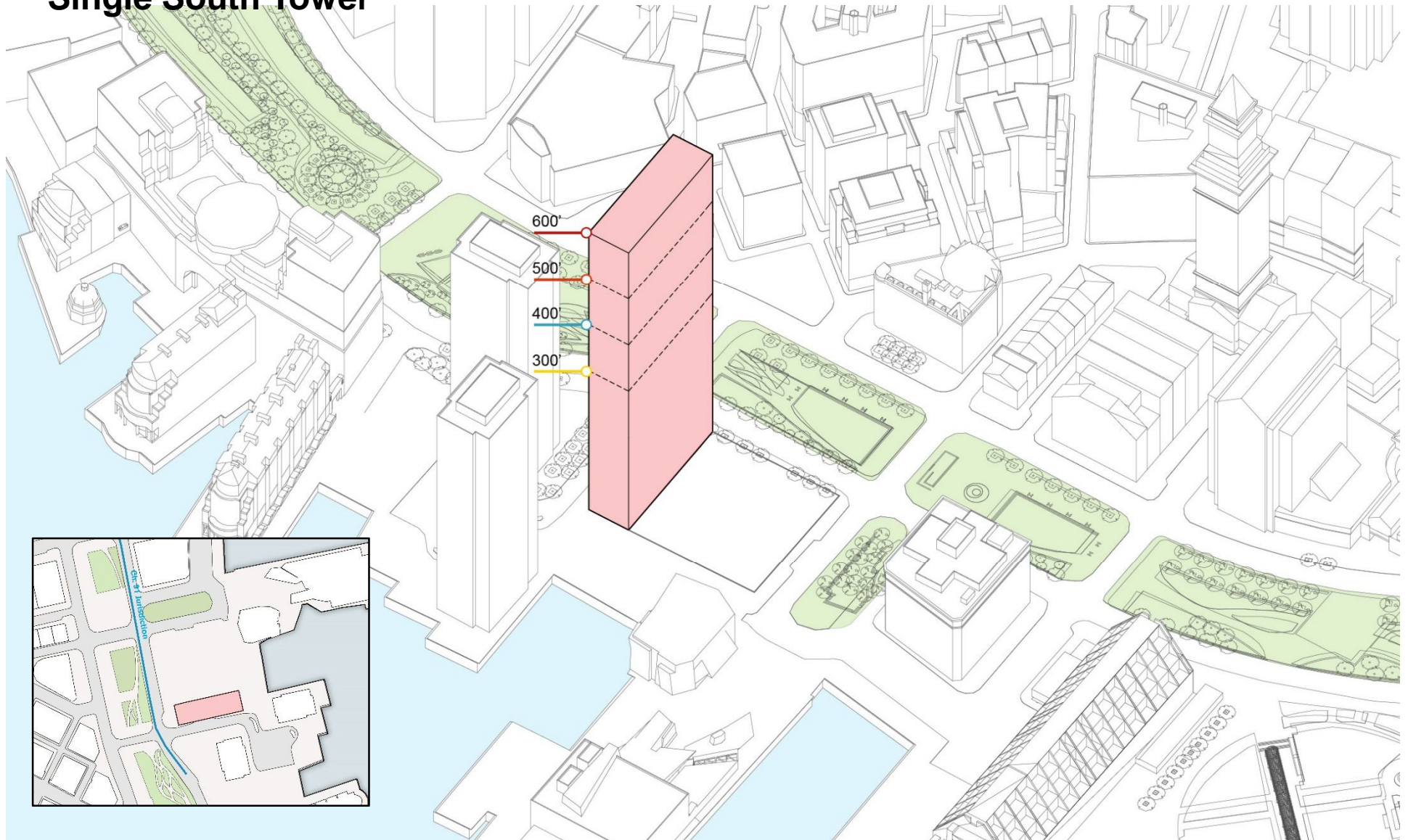


- Minimum 1 hour or more continuous shadow extent for 300' & 200' Towers Scenario
- Minimum 1 hour or more continuous shadow extent for 400' & 300' Towers Scenario
- Minimum 1 hour or more continuous shadow extent for 500' & 400' Towers Scenario
- Minimum 1 hour or more continuous shadow extent for 600' & 500' Towers Scenario
- Minimum 1 hour or more continuous shadow extent for Chapter-91 Compliant proposal

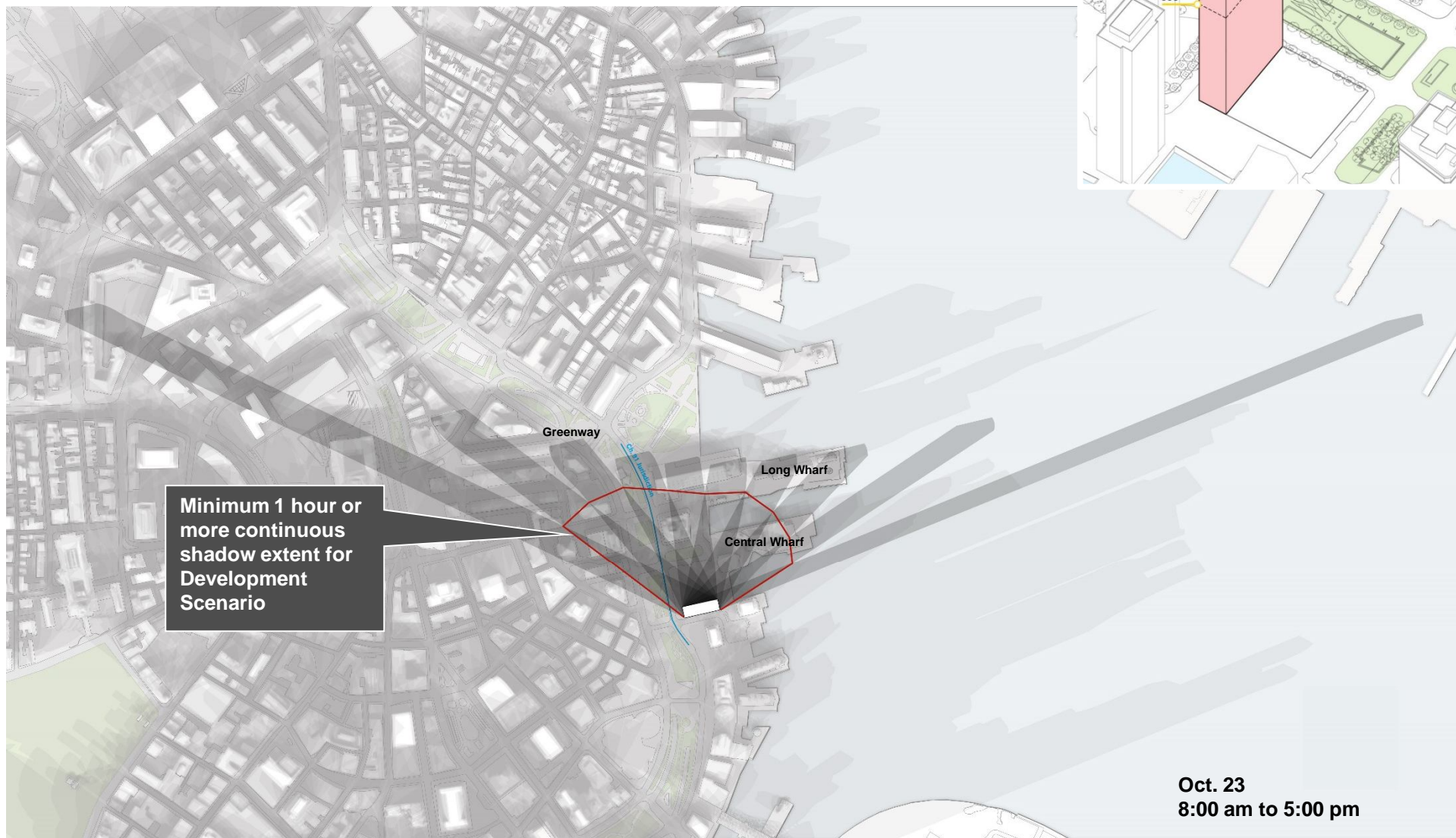
Oct. 23
8:00 am to 5:00 pm

Variable: Number of Towers & Location

Single South Tower



Alternative Scenarios
Single South Tower – 600'



Alternative Scenarios
Single South Tower – 500'



Alternative Scenarios
Single South Tower – 400'

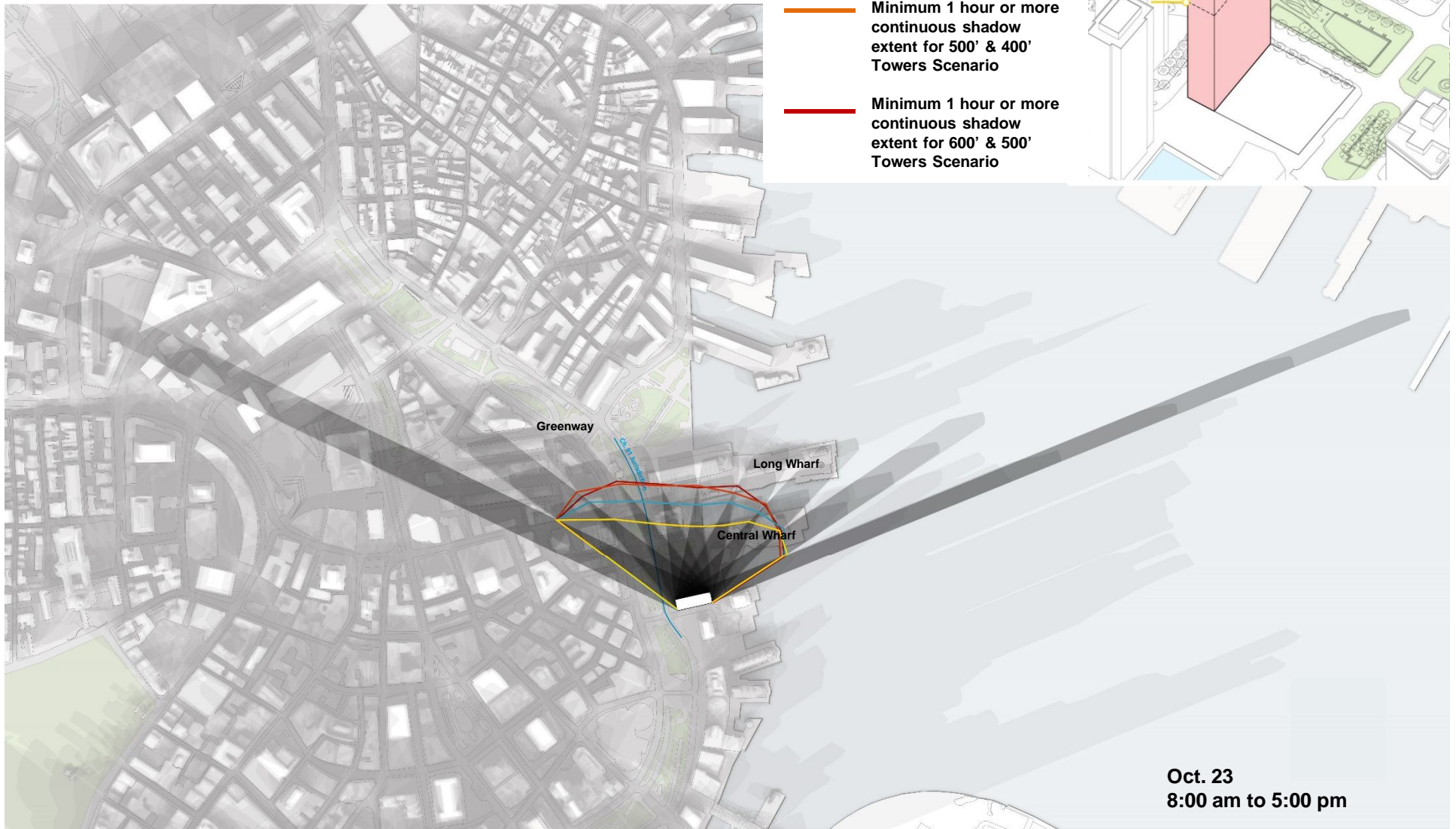
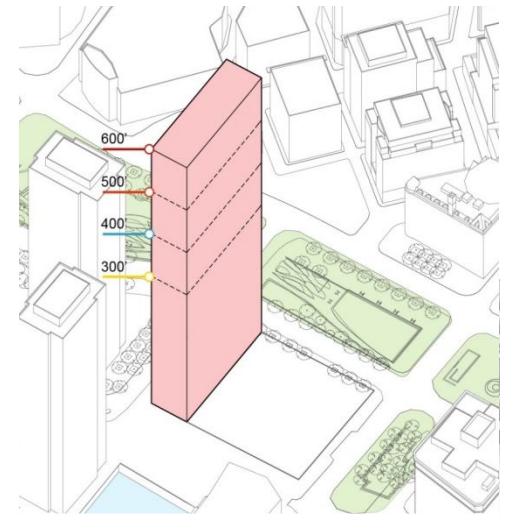


Alternative Scenarios
Single South Tower – 300'



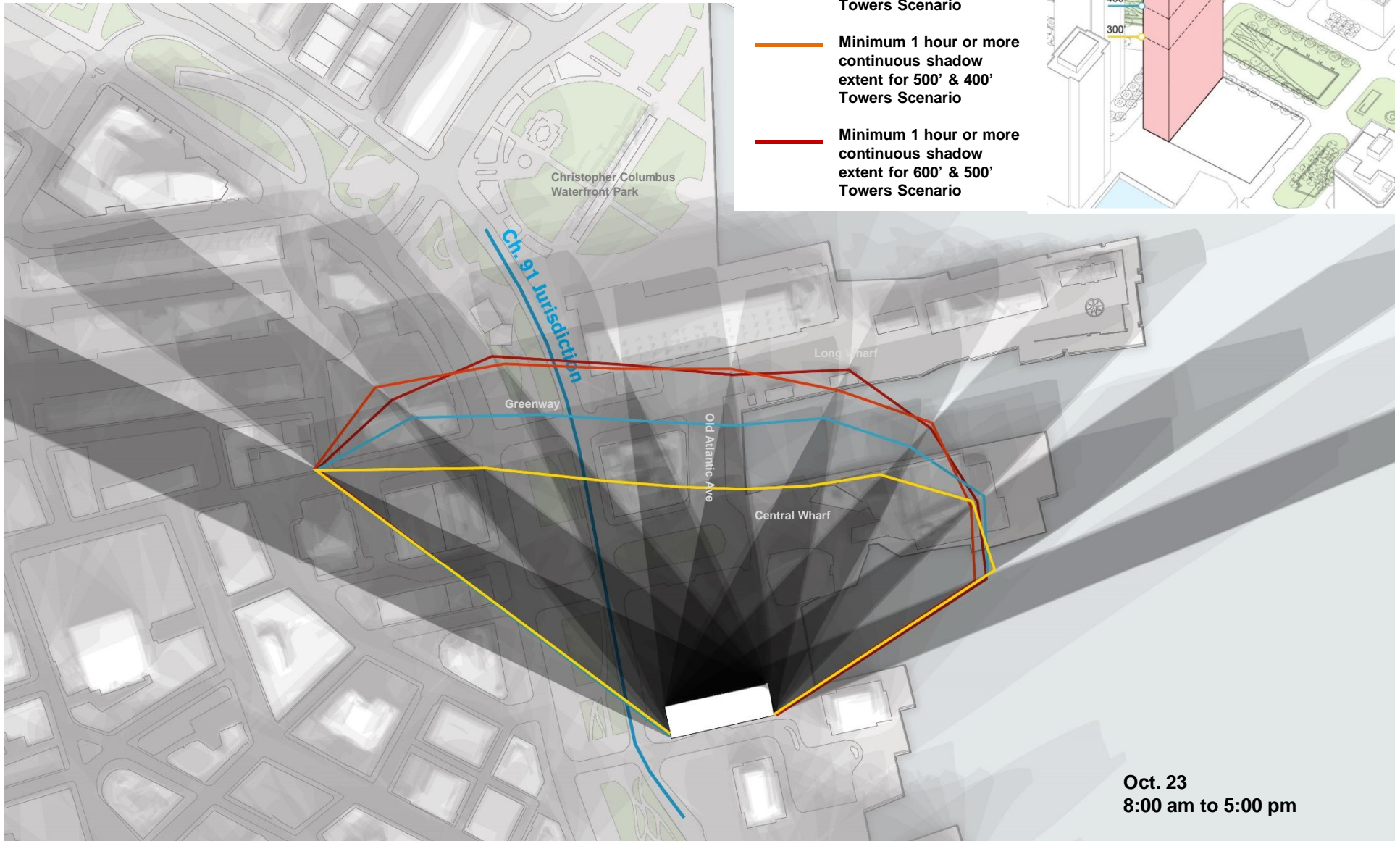
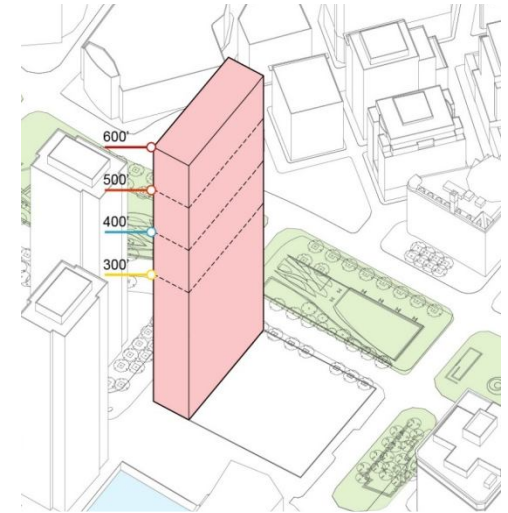
Alternative Scenarios
Single South Tower – Oct. 23rd

- Minimum 1 hour or more continuous shadow extent for 300' & 200' Towers Scenario
- Minimum 1 hour or more continuous shadow extent for 400' & 300' Towers Scenario
- Minimum 1 hour or more continuous shadow extent for 500' & 400' Towers Scenario
- Minimum 1 hour or more continuous shadow extent for 600' & 500' Towers Scenario



Alternative Scenarios
Single South Tower – Oct. 23rd

- Minimum 1 hour or more continuous shadow extent for 300' & 200' Towers Scenario
- Minimum 1 hour or more continuous shadow extent for 400' & 300' Towers Scenario
- Minimum 1 hour or more continuous shadow extent for 500' & 400' Towers Scenario
- Minimum 1 hour or more continuous shadow extent for 600' & 500' Towers Scenario

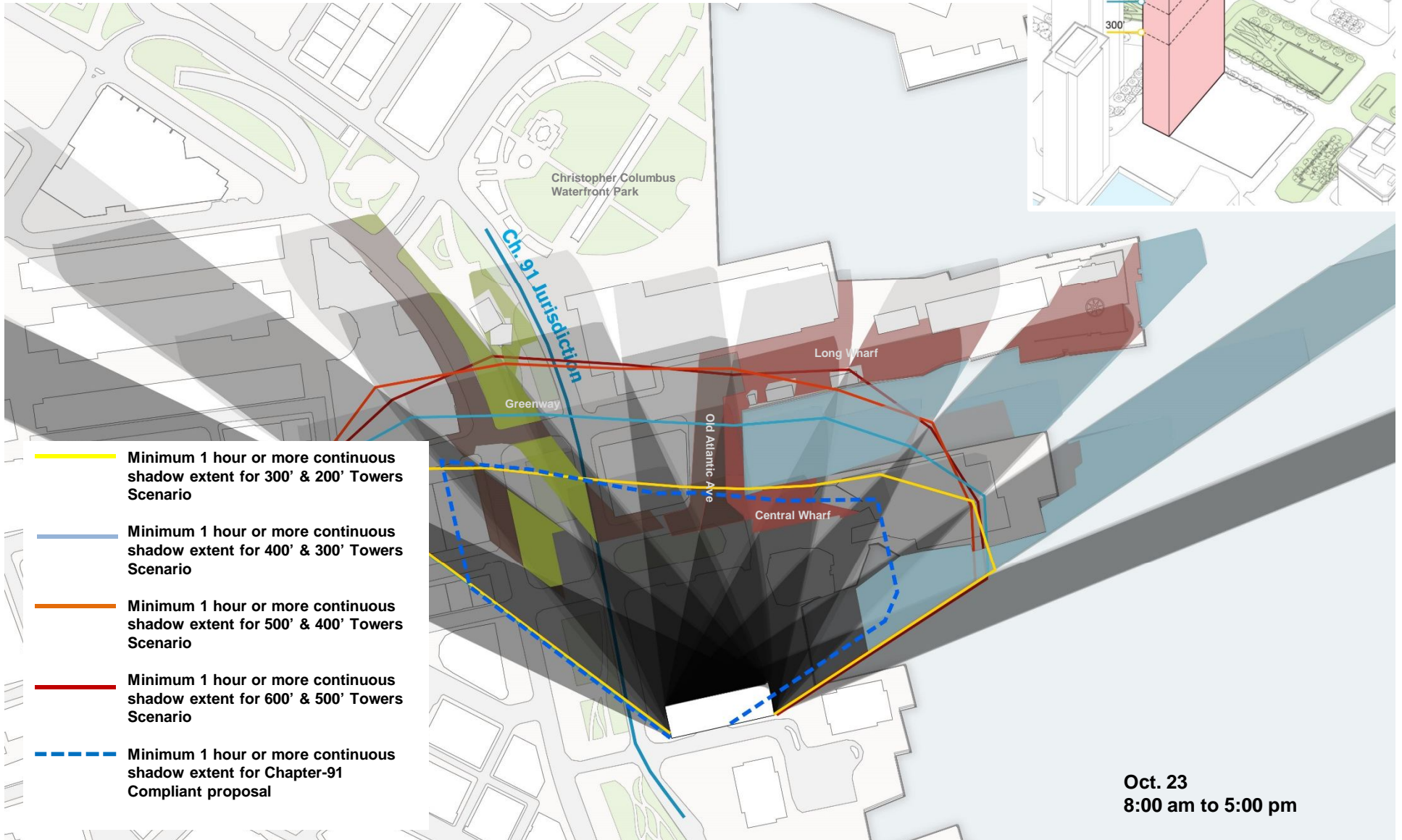
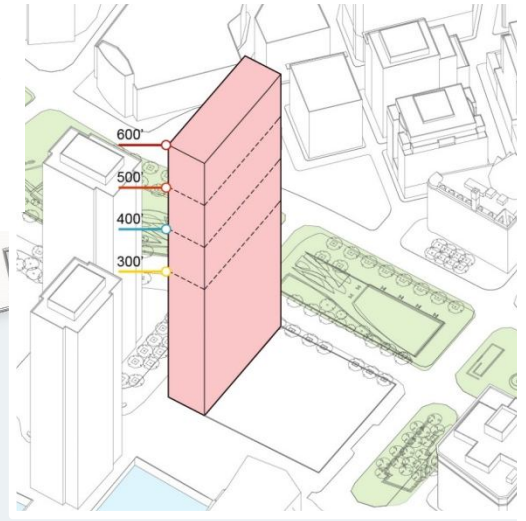


Oct. 23
8:00 am to 5:00 pm

Alternative Scenarios

Single South Tower – Oct. 23

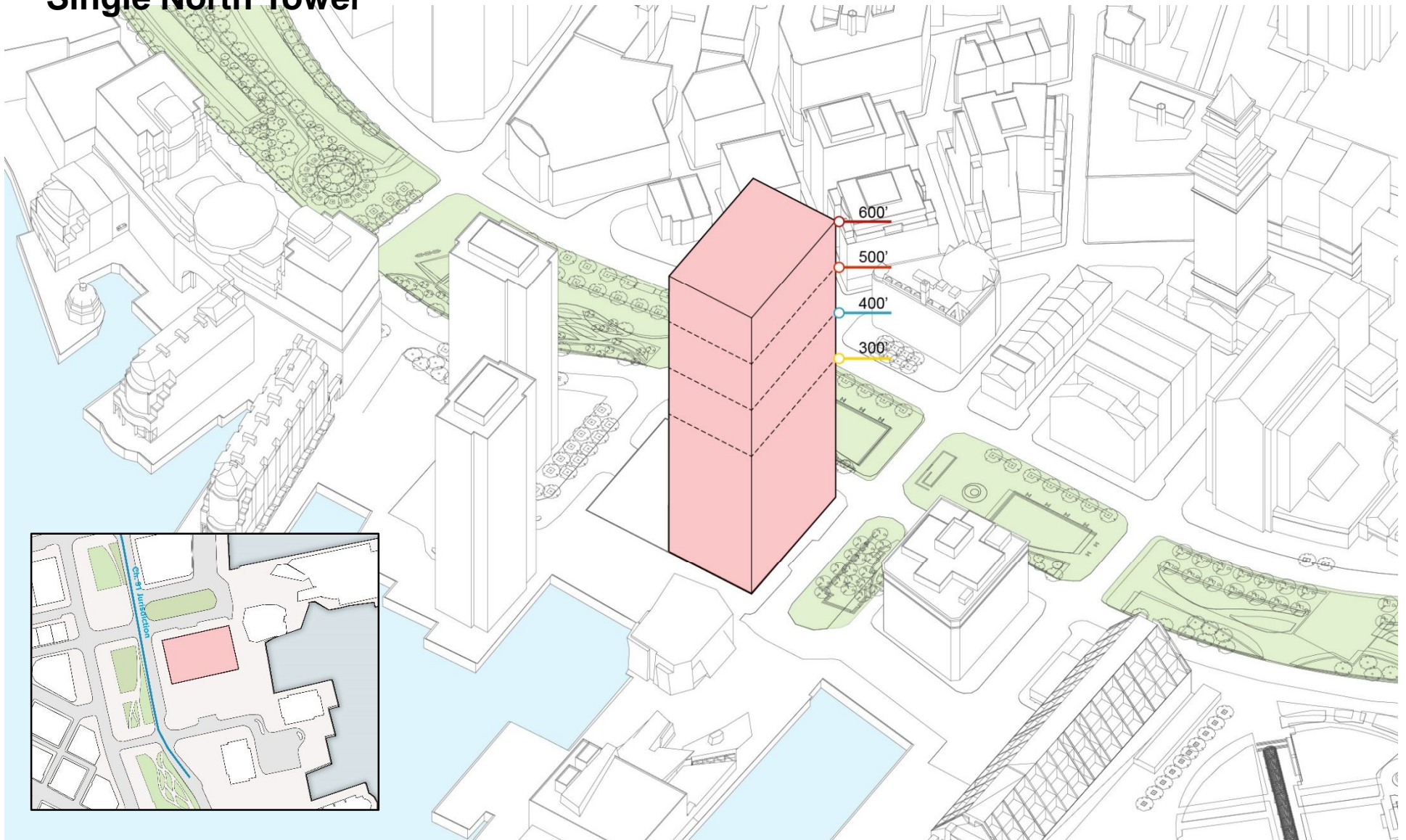
- Net New Shadow over Greenway
- Net New Shadow over Central Wharf and Long Wharf
- Net New Shadow over watershed
- Streets and Sidewalks



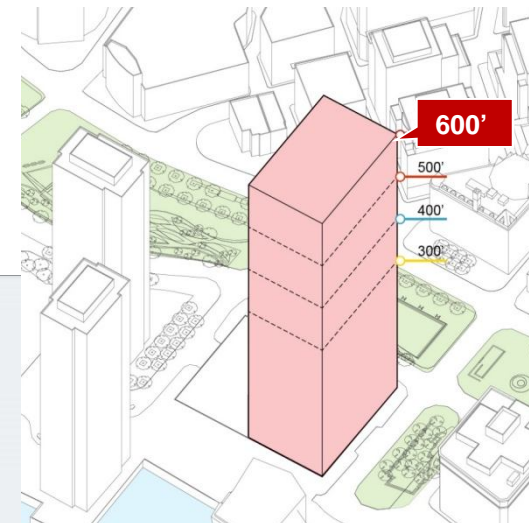
Oct. 23
8:00 am to 5:00 pm

Variable: Number of Towers & Location

Single North Tower



Ch. 91 Baseline and the Proposed Redevelopment Scenario
Single North Tower - 600'



Ch. 91 Baseline and the Proposed Redevelopment Scenario

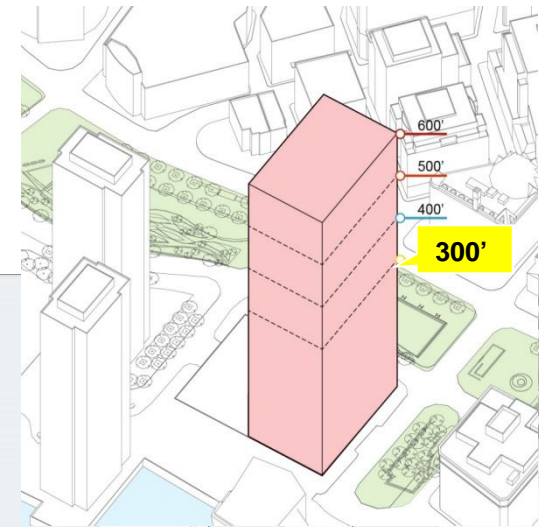
Single North Tower - 500'



Ch. 91 Baseline and the Proposed Redevelopment Scenario
Single North Tower - 400'

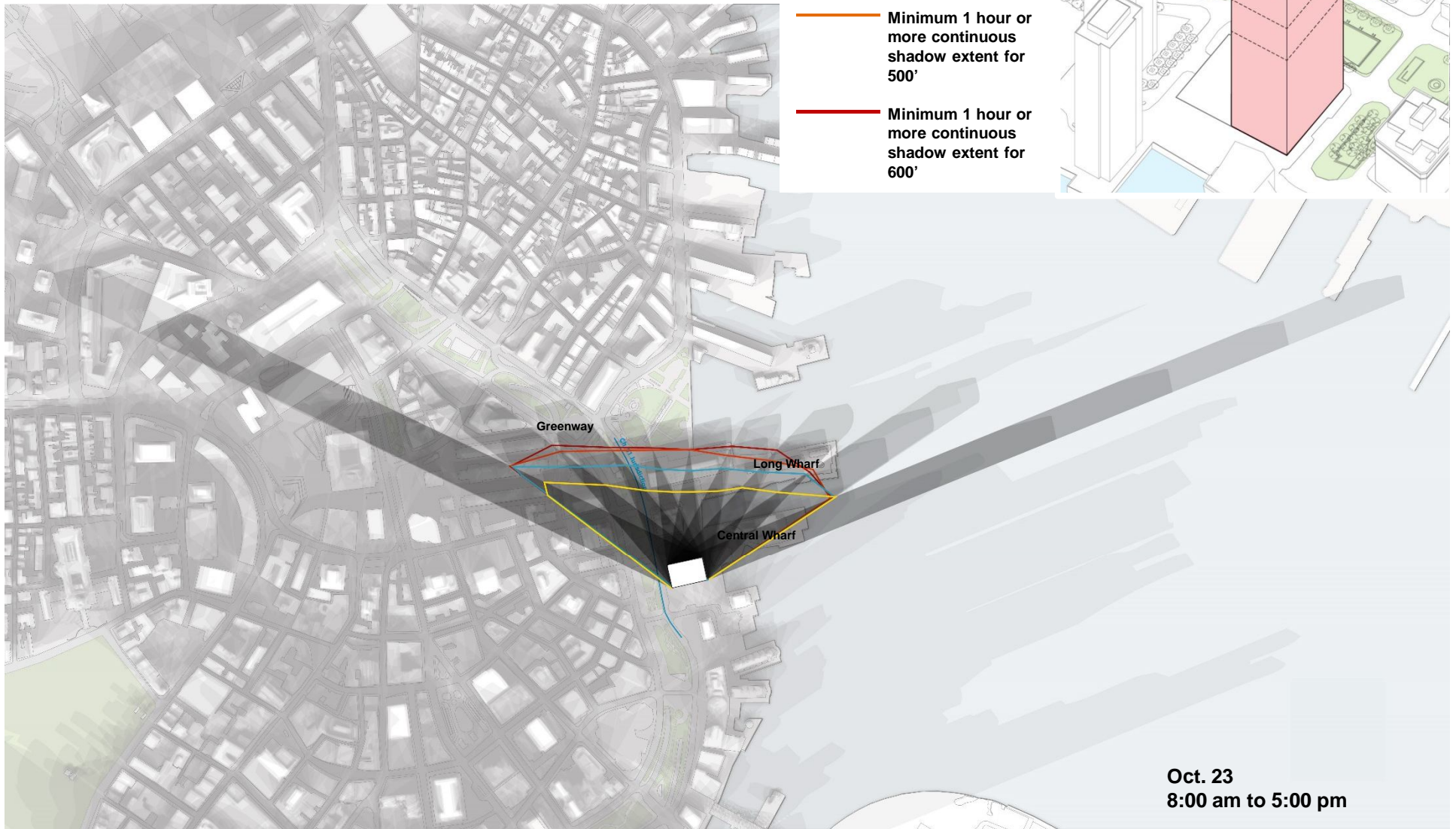
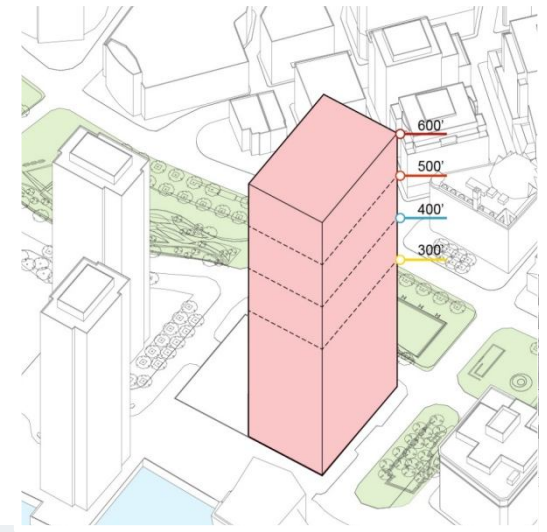


Ch. 91 Baseline and the Proposed Redevelopment Scenario
Single North Tower - 300'



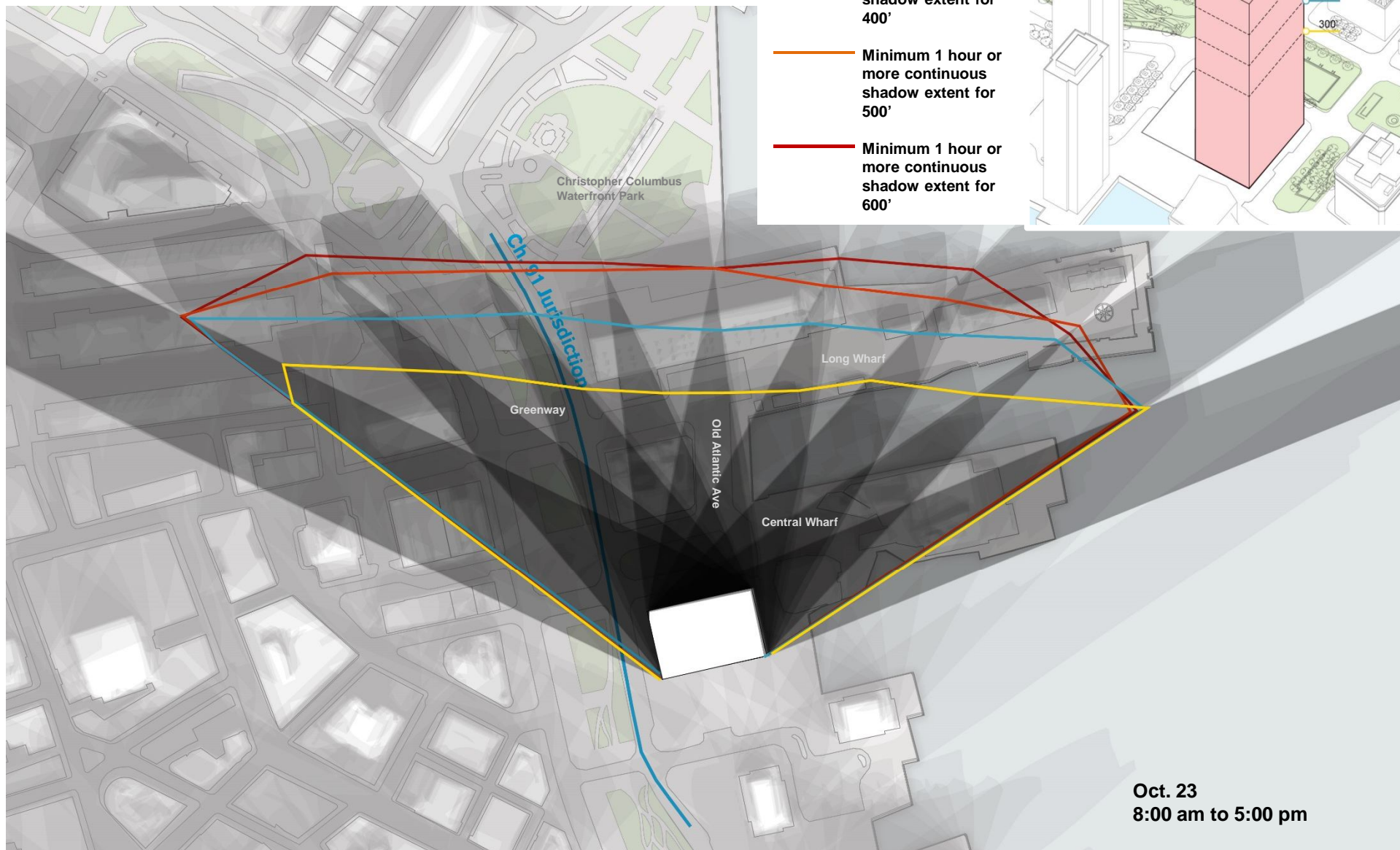
Alternative Scenarios
Single North Tower – Oct. 23

- Minimum 1 hour or more continuous shadow extent for 300'
- Minimum 1 hour or more continuous shadow extent for 400'
- Minimum 1 hour or more continuous shadow extent for 500'
- Minimum 1 hour or more continuous shadow extent for 600'



Alternative Scenarios

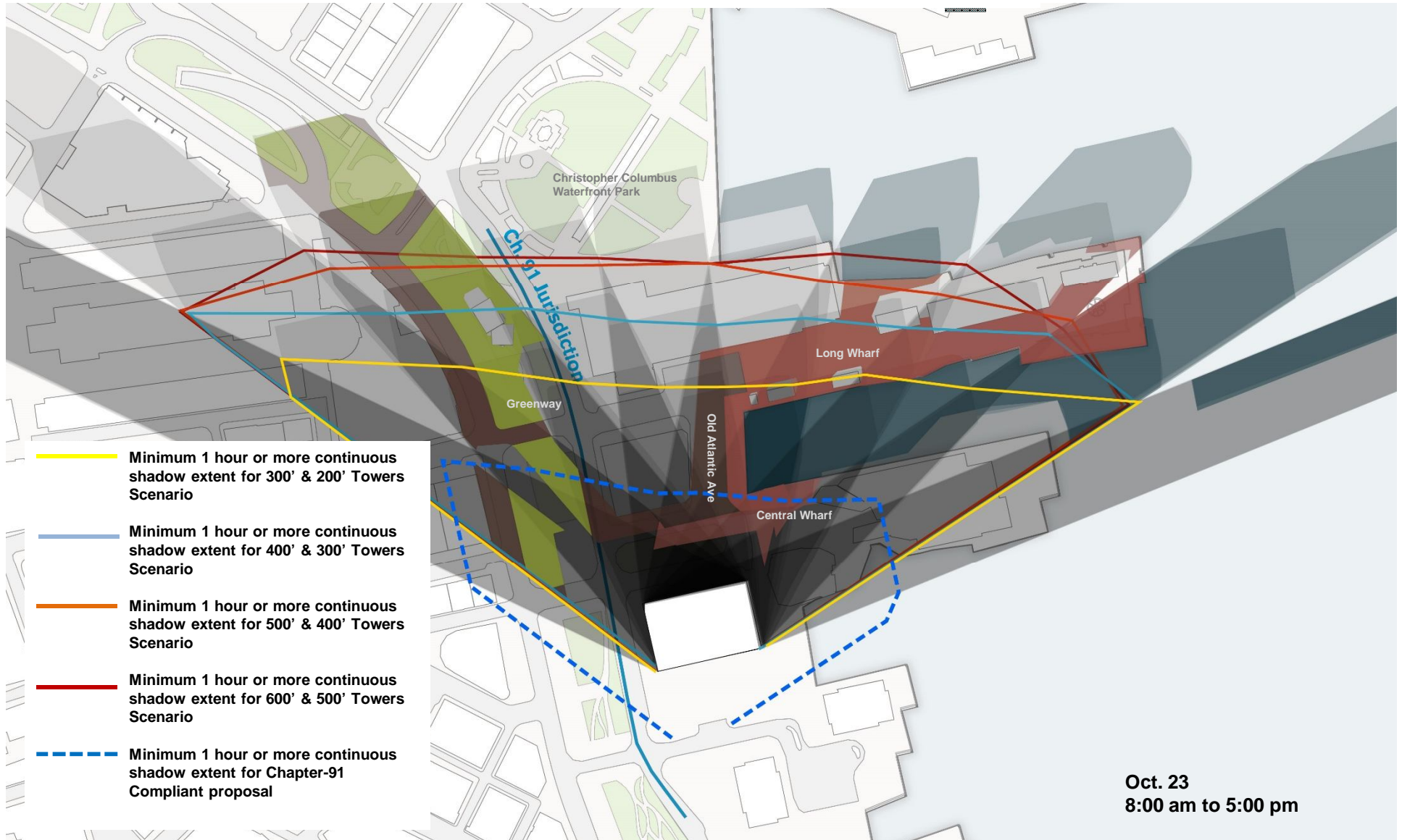
Single North Tower – Oct. 23



Alternative Scenarios

Single North Tower – Oct 23

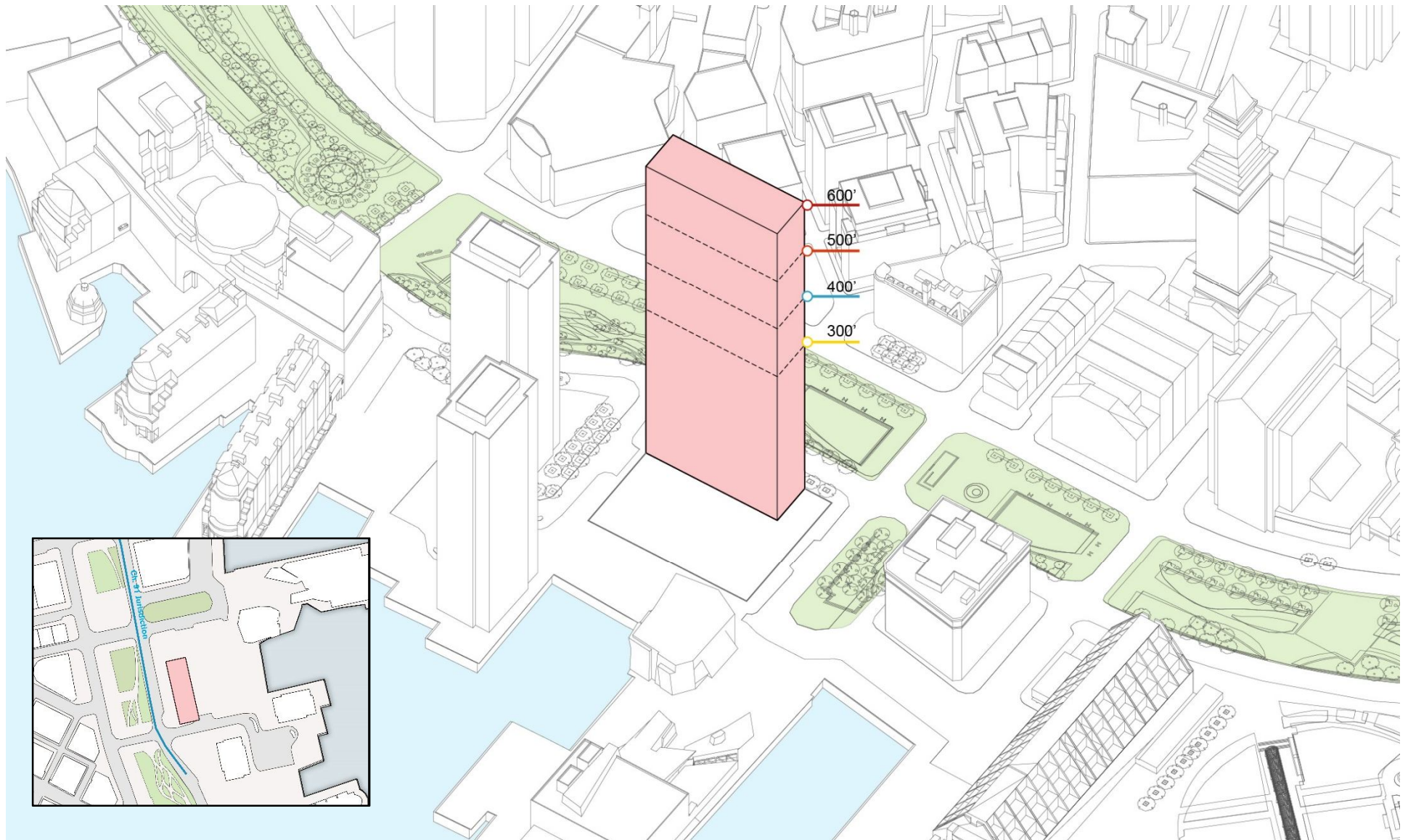
- Net New Shadow over Greenway
- Net New Shadow over Central Wharf and Long Wharf
- Net New Shadow over watershed
- Streets and Sidewalks



- Minimum 1 hour or more continuous shadow extent for 300' & 200' Towers Scenario
- Minimum 1 hour or more continuous shadow extent for 400' & 300' Towers Scenario
- Minimum 1 hour or more continuous shadow extent for 500' & 400' Towers Scenario
- Minimum 1 hour or more continuous shadow extent for 600' & 500' Towers Scenario
- Minimum 1 hour or more continuous shadow extent for Chapter-91 Compliant proposal

Oct. 23
8:00 am to 5:00 pm

Variable: Building Orientation



Alternative Scenarios

Single West Tower – 600'



Alternative Scenarios

Single West Tower – 500'



Alternative Scenarios
Single West Tower – 400'



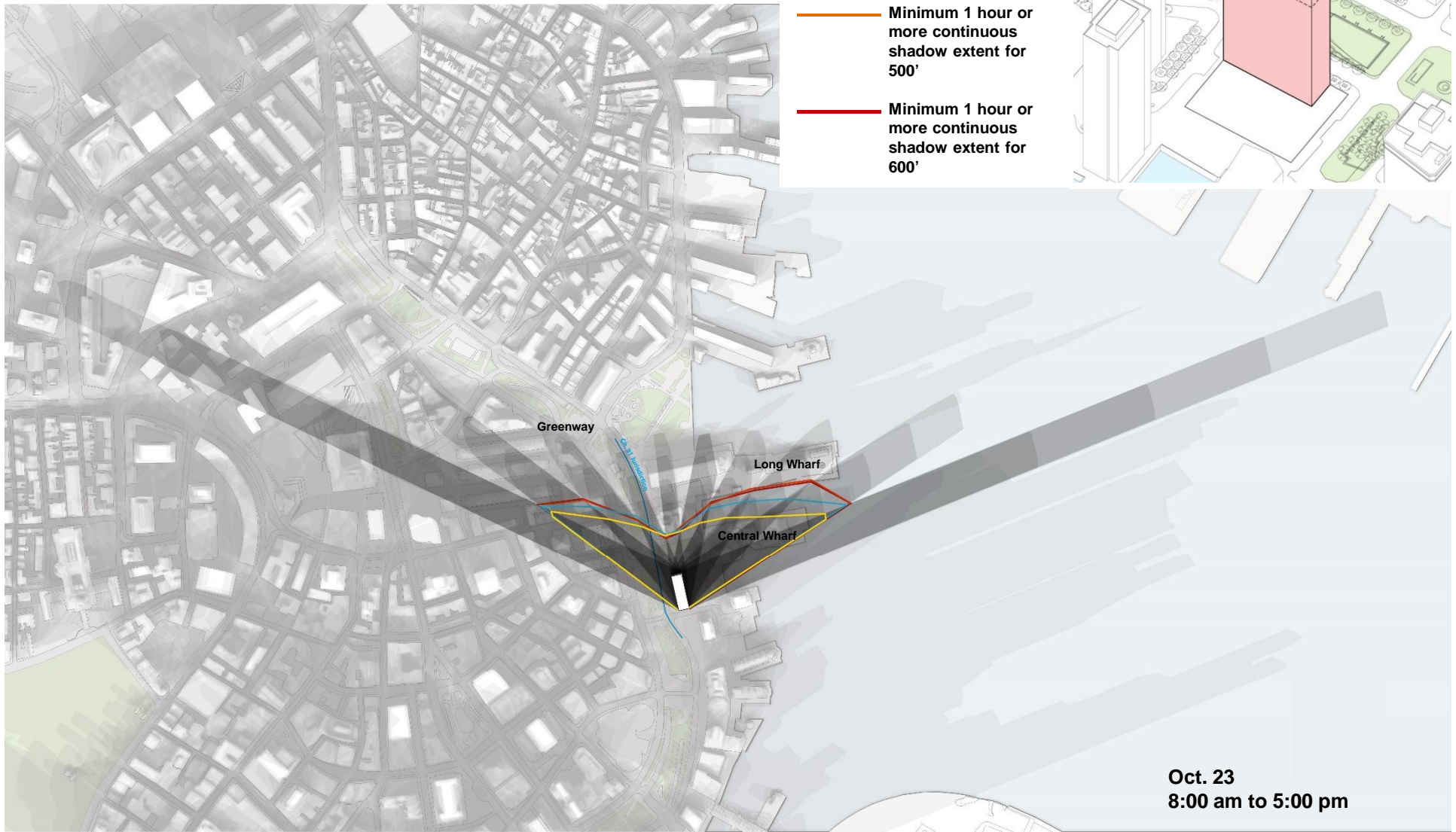
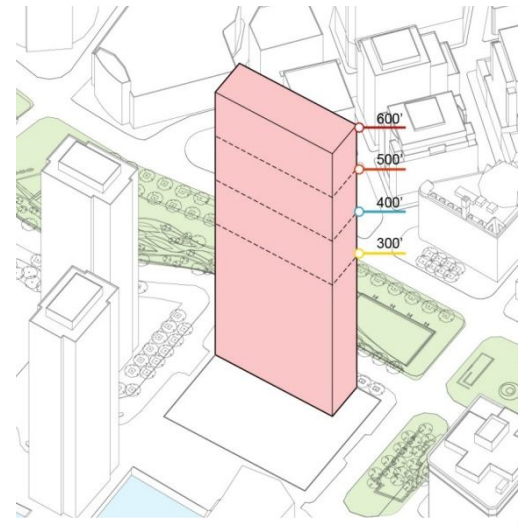
Alternative Scenarios

Single West Tower – 300'



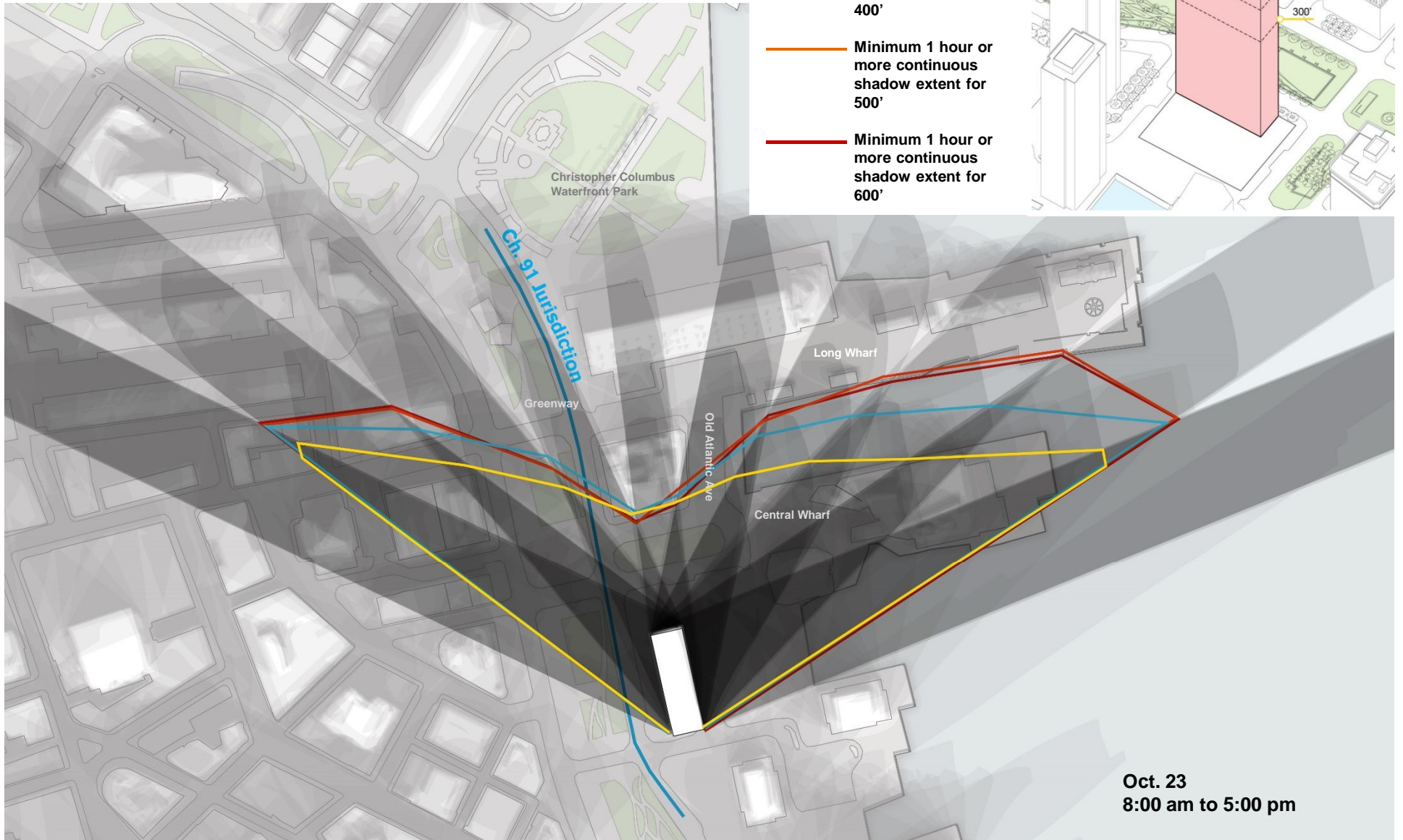
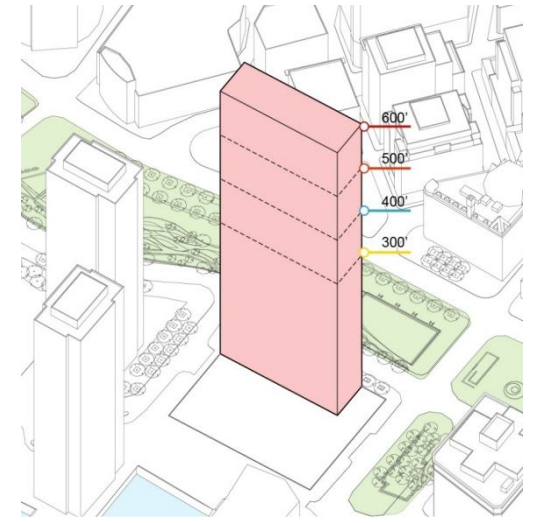
Alternative Scenarios
Single West Tower – Oct. 23

- Minimum 1 hour or more continuous shadow extent for 300'
- Minimum 1 hour or more continuous shadow extent for 400'
- Minimum 1 hour or more continuous shadow extent for 500'
- Minimum 1 hour or more continuous shadow extent for 600'



Alternative Scenarios
Single West Tower – Oct. 23

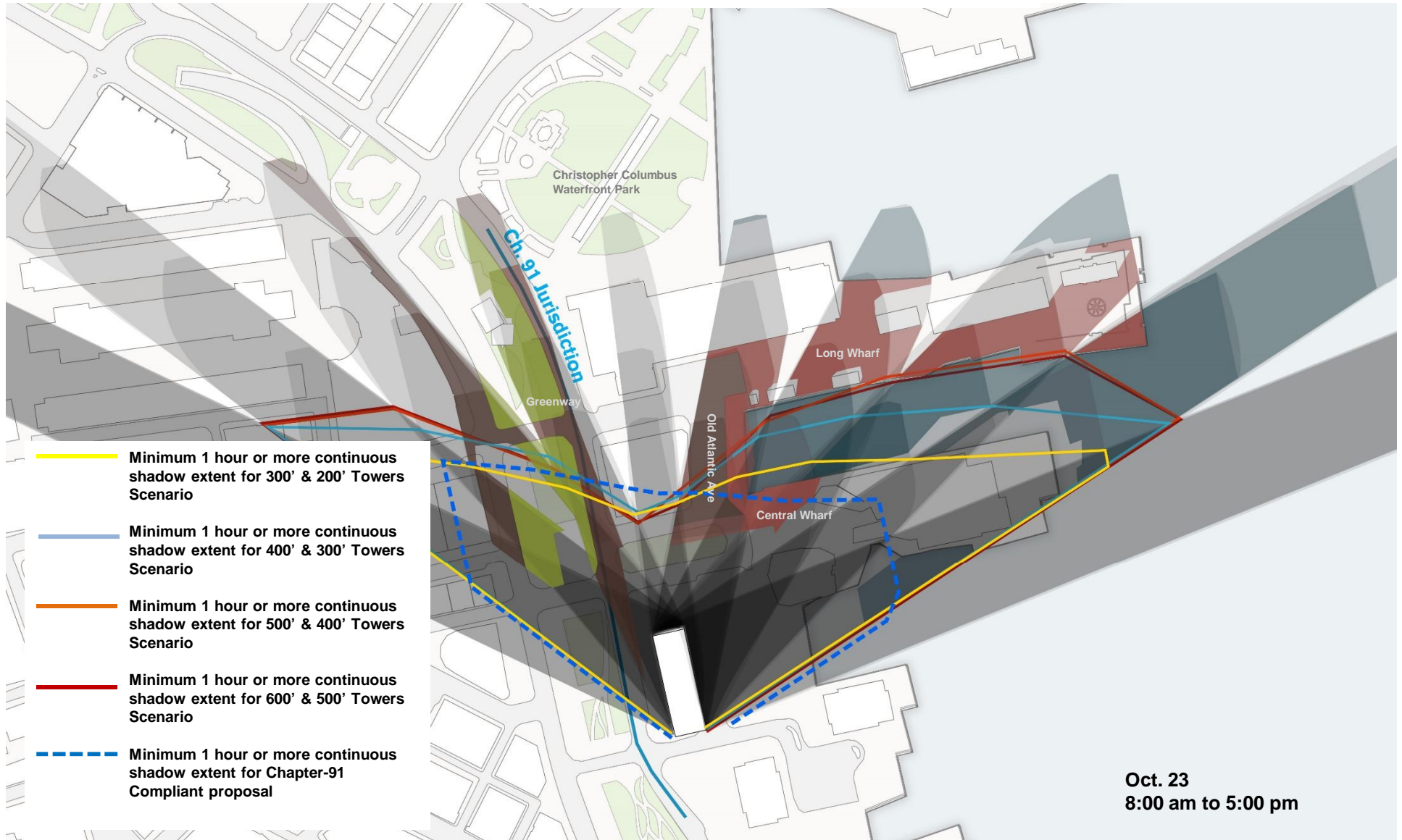
- Minimum 1 hour or more continuous shadow extent for 300'
- Minimum 1 hour or more continuous shadow extent for 400'
- Minimum 1 hour or more continuous shadow extent for 500'
- Minimum 1 hour or more continuous shadow extent for 600'



Alternative Scenarios

Single West Tower – Oct. 23

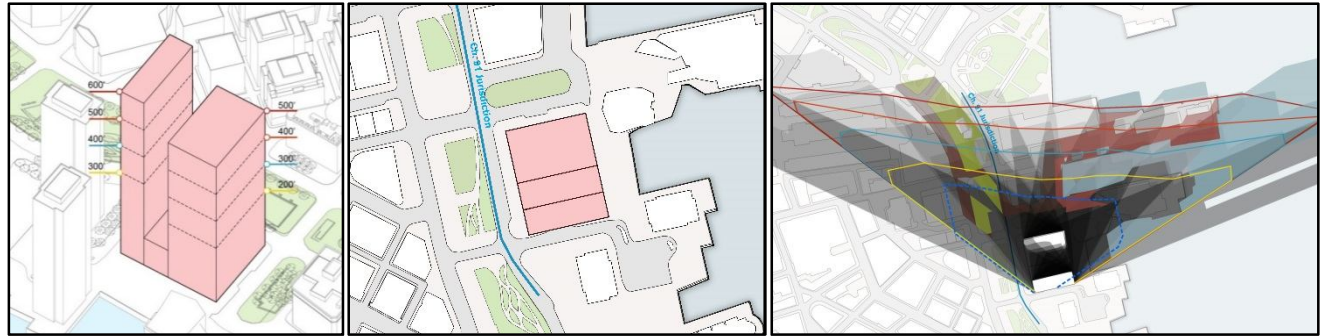
- Net New Shadow over Greenway
- Net New Shadow over Central Wharf and Long Wharf
- Net New Shadow over watershed
- Streets and Sidewalks



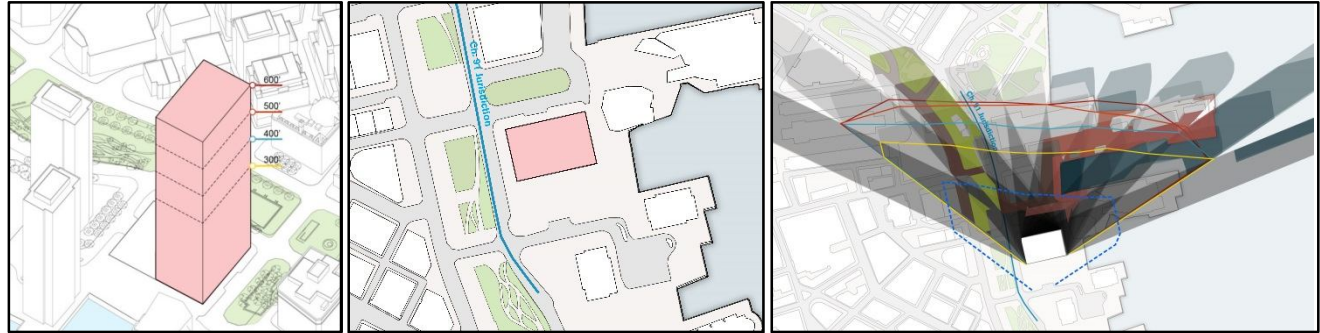
Alternative Scenarios
Comparison

Oct. 23
8:00 am to 5:00 pm

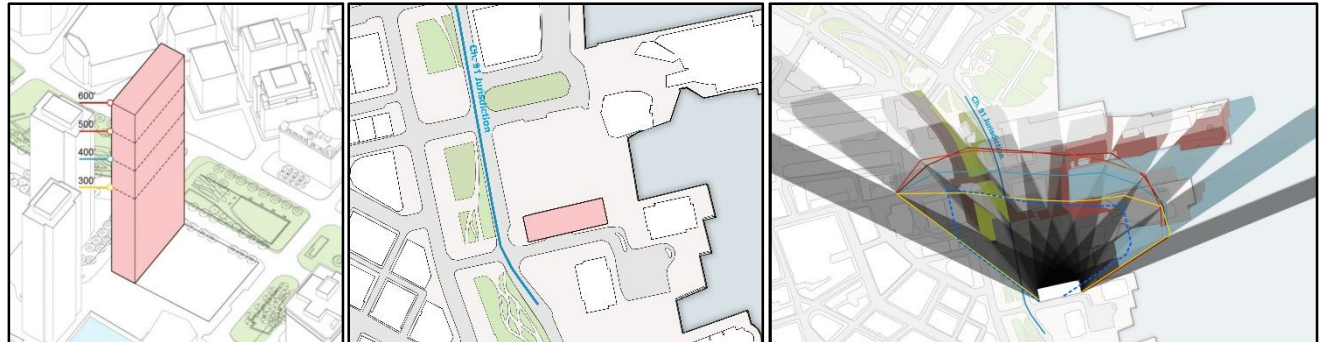
Two Tower



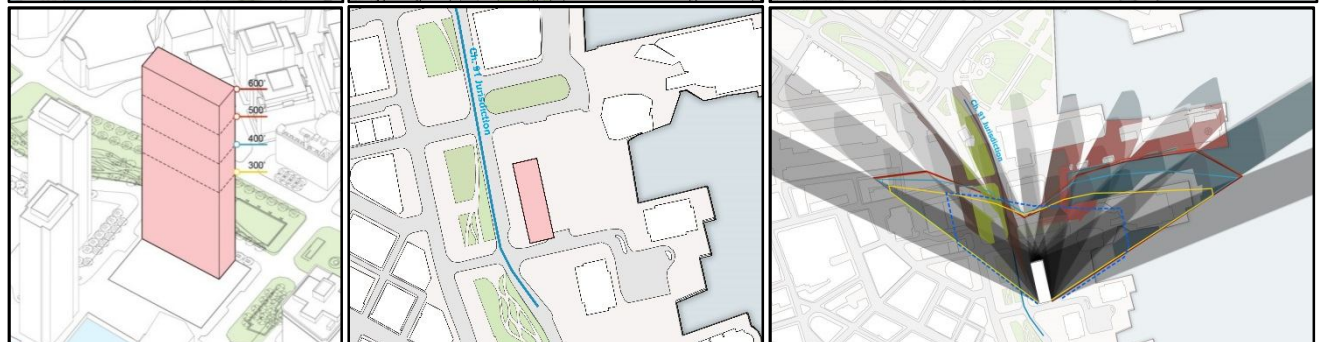
Single North Tower



Single South Tower

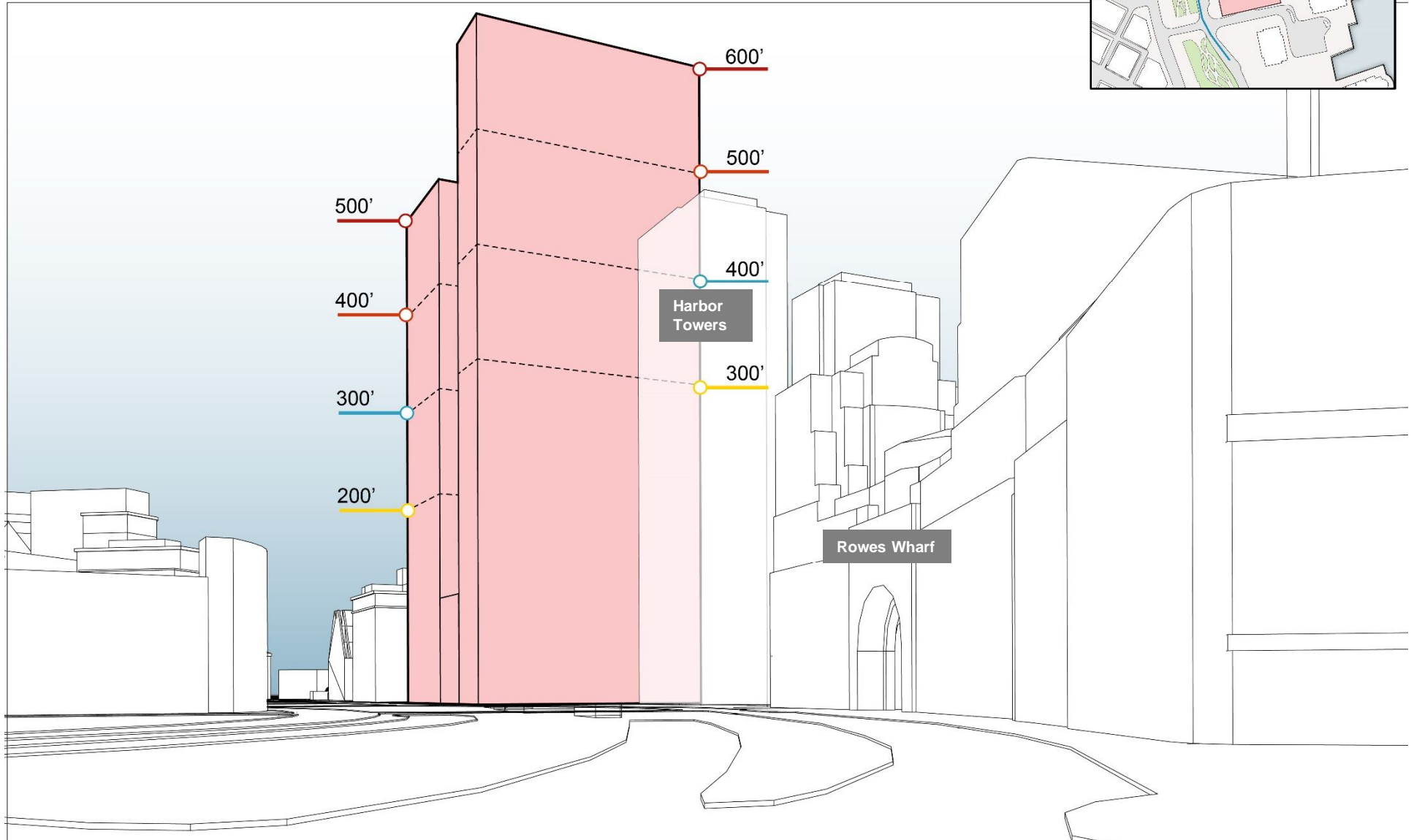
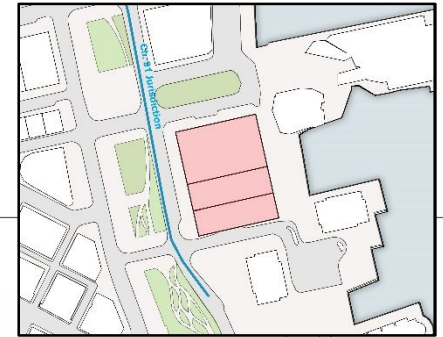


Single West Tower

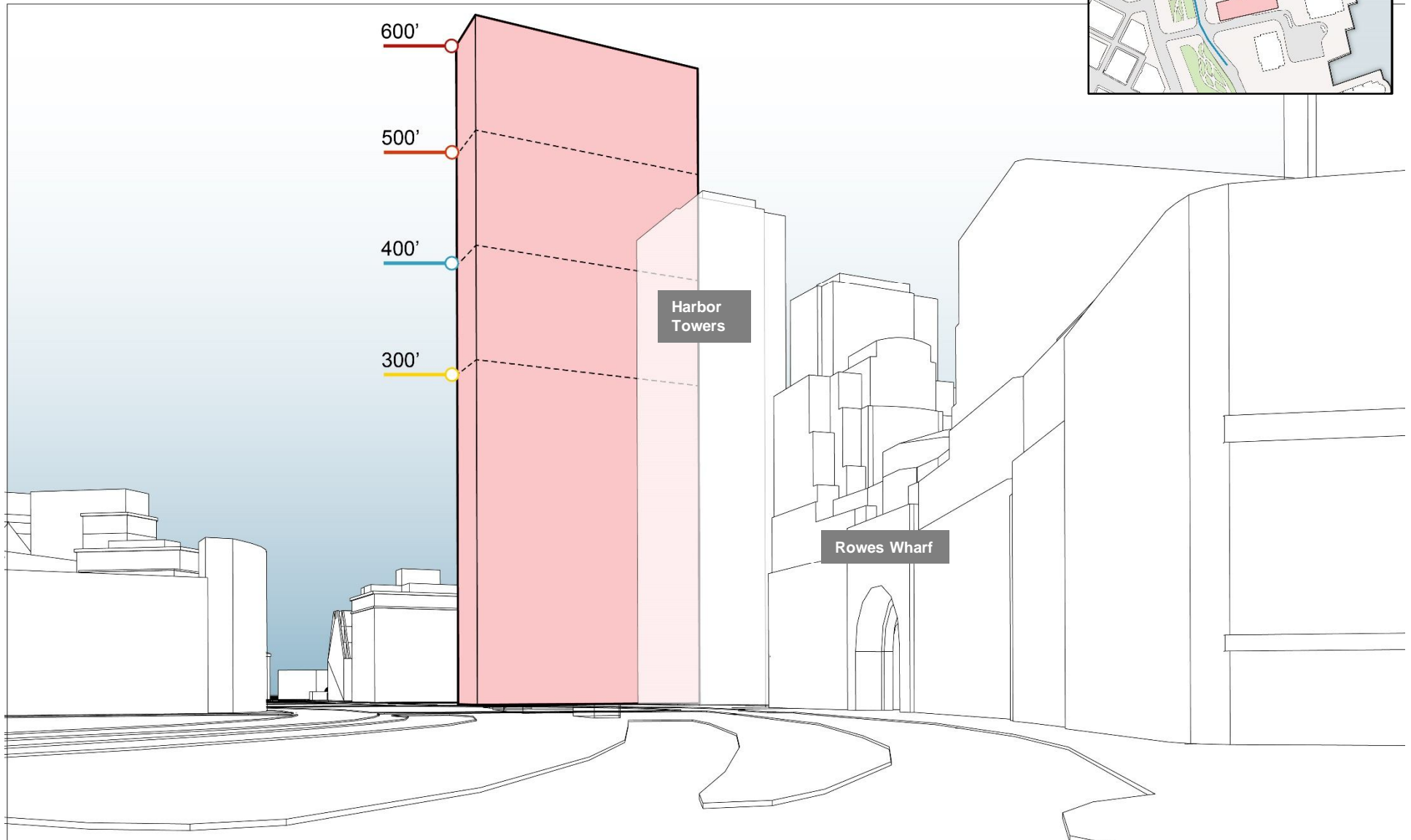
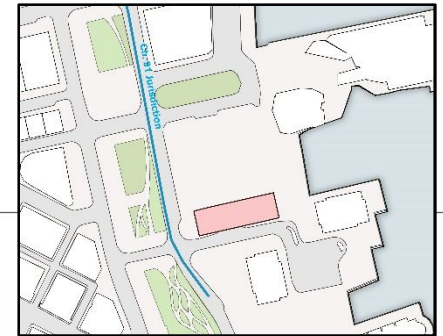


Alternative Scenarios: Ground-level Views

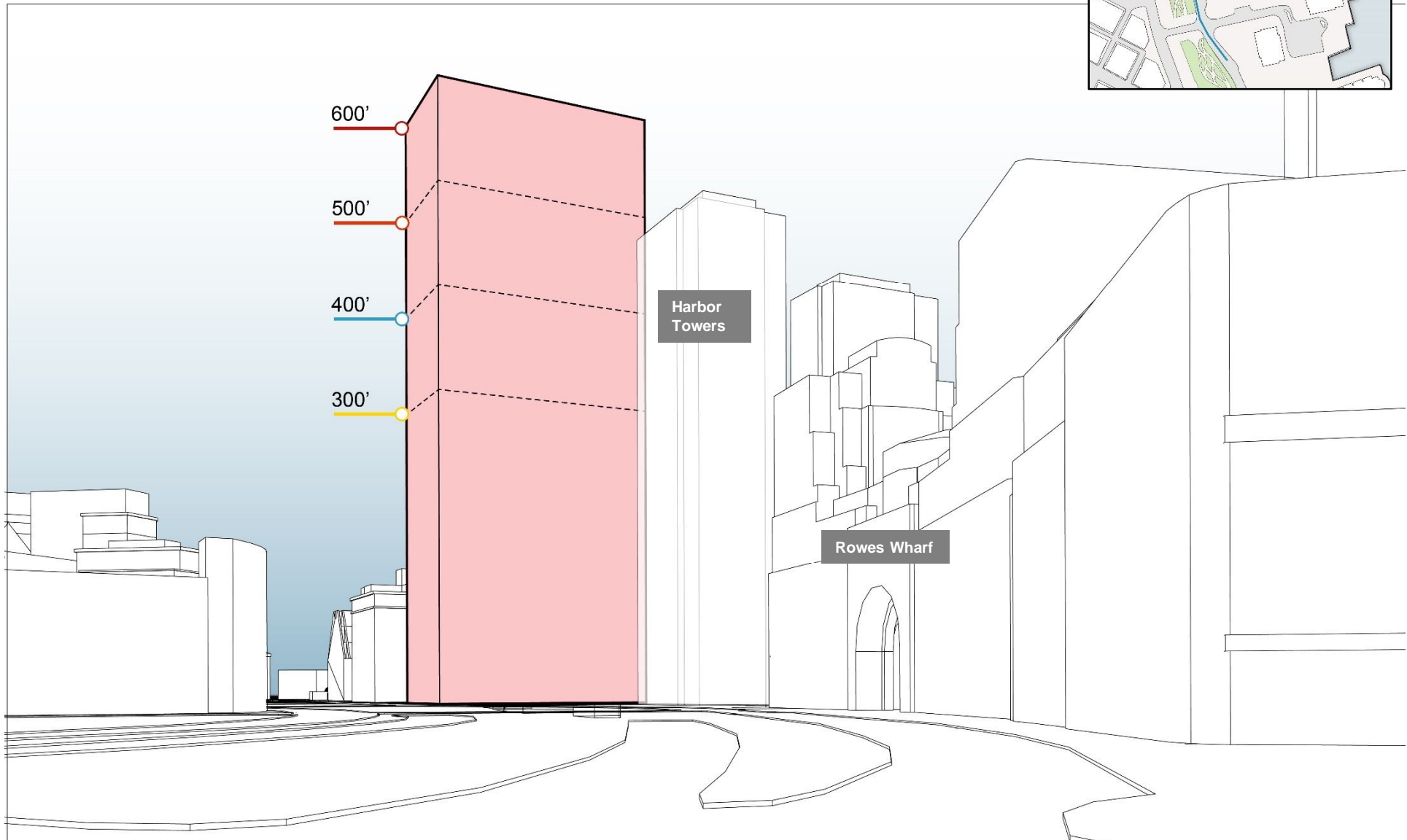
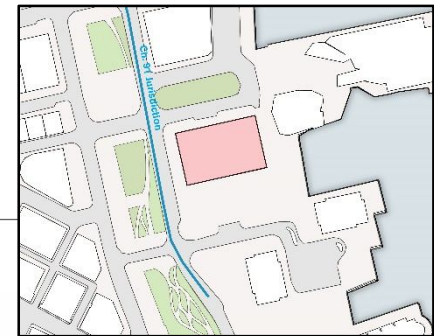
Two Tower



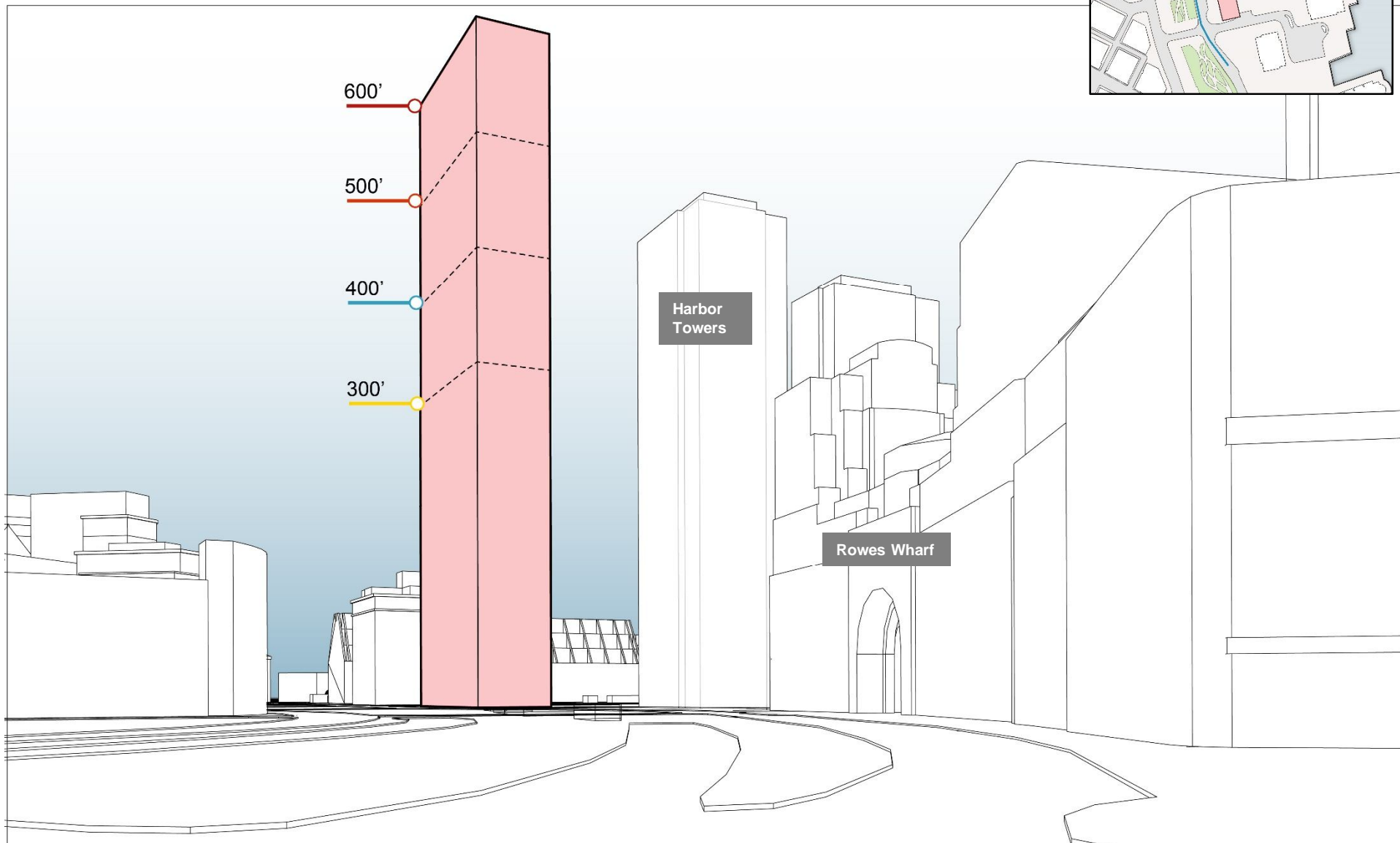
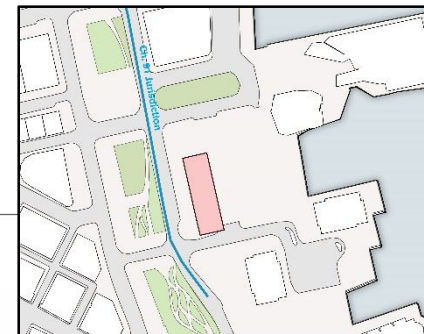
Ch. 91 Baseline and the Proposed Redevelopment Scenario
Single South Tower



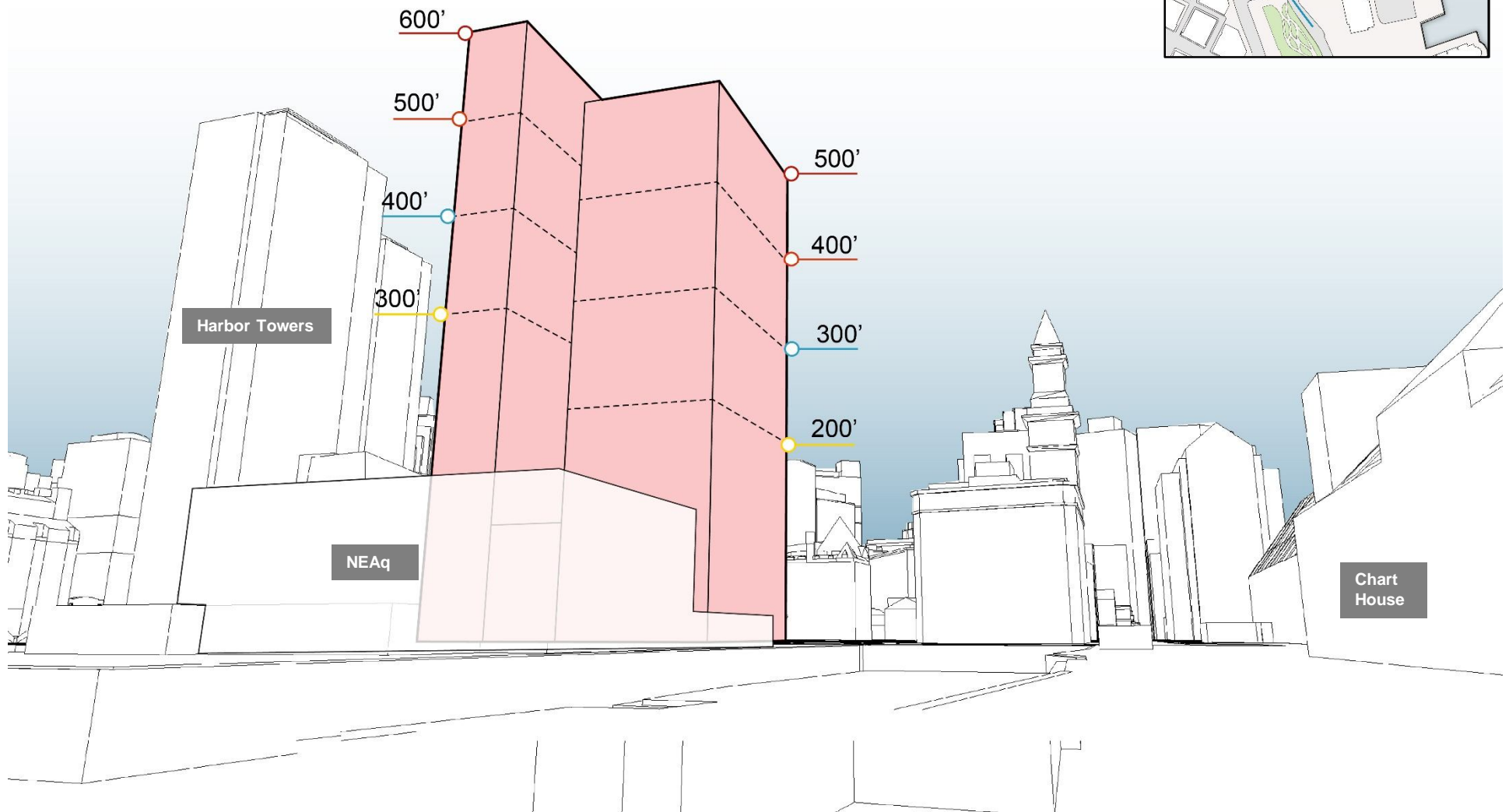
Single North Tower



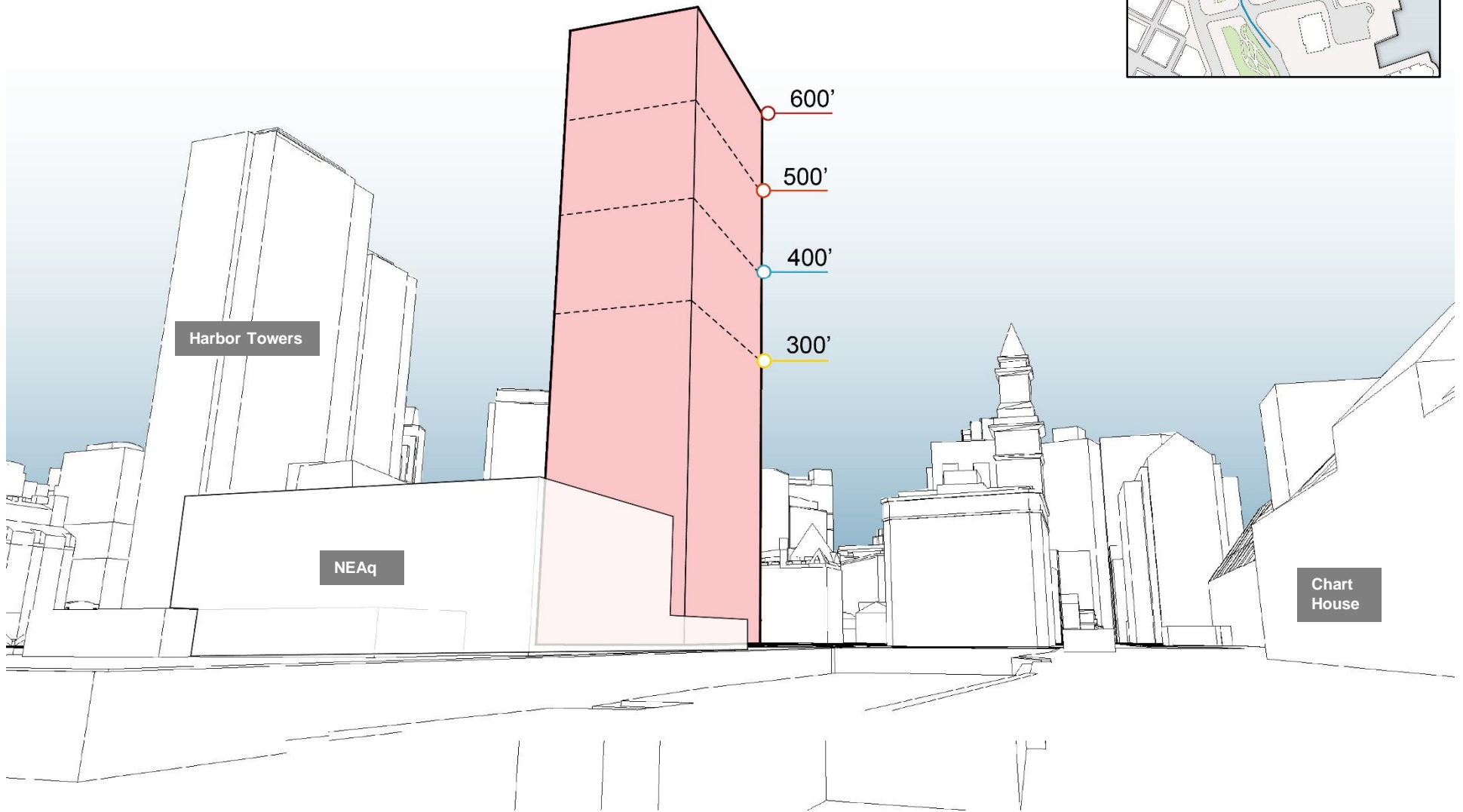
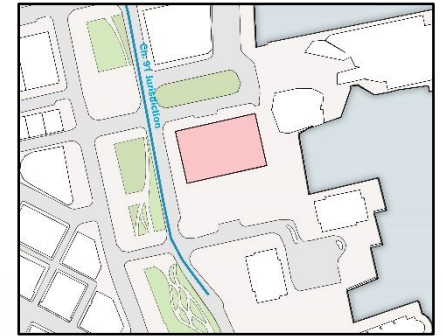
Single West Tower



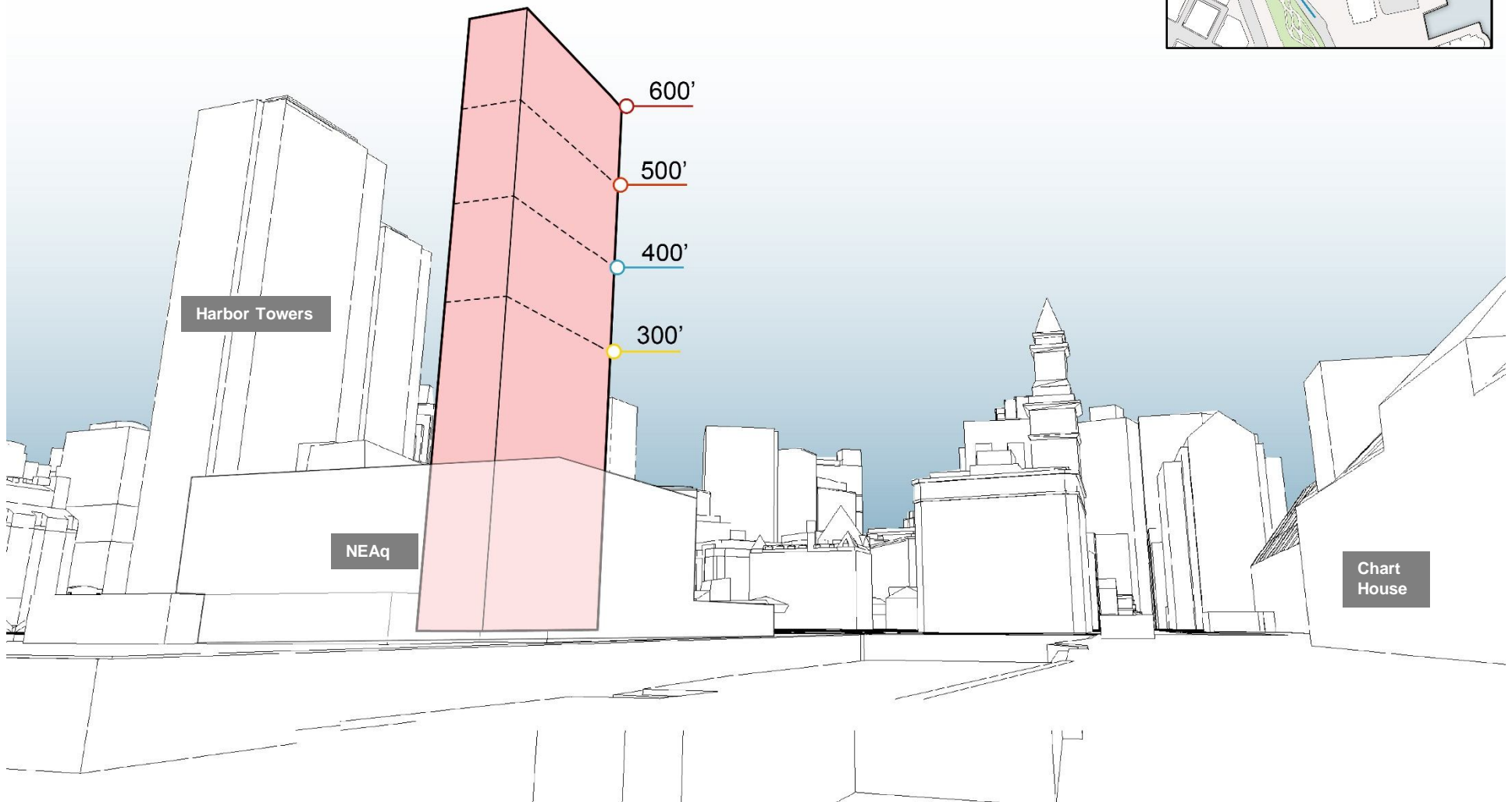
Ch. 91 Baseline and the Proposed Redevelopment Scenario
Two Tower



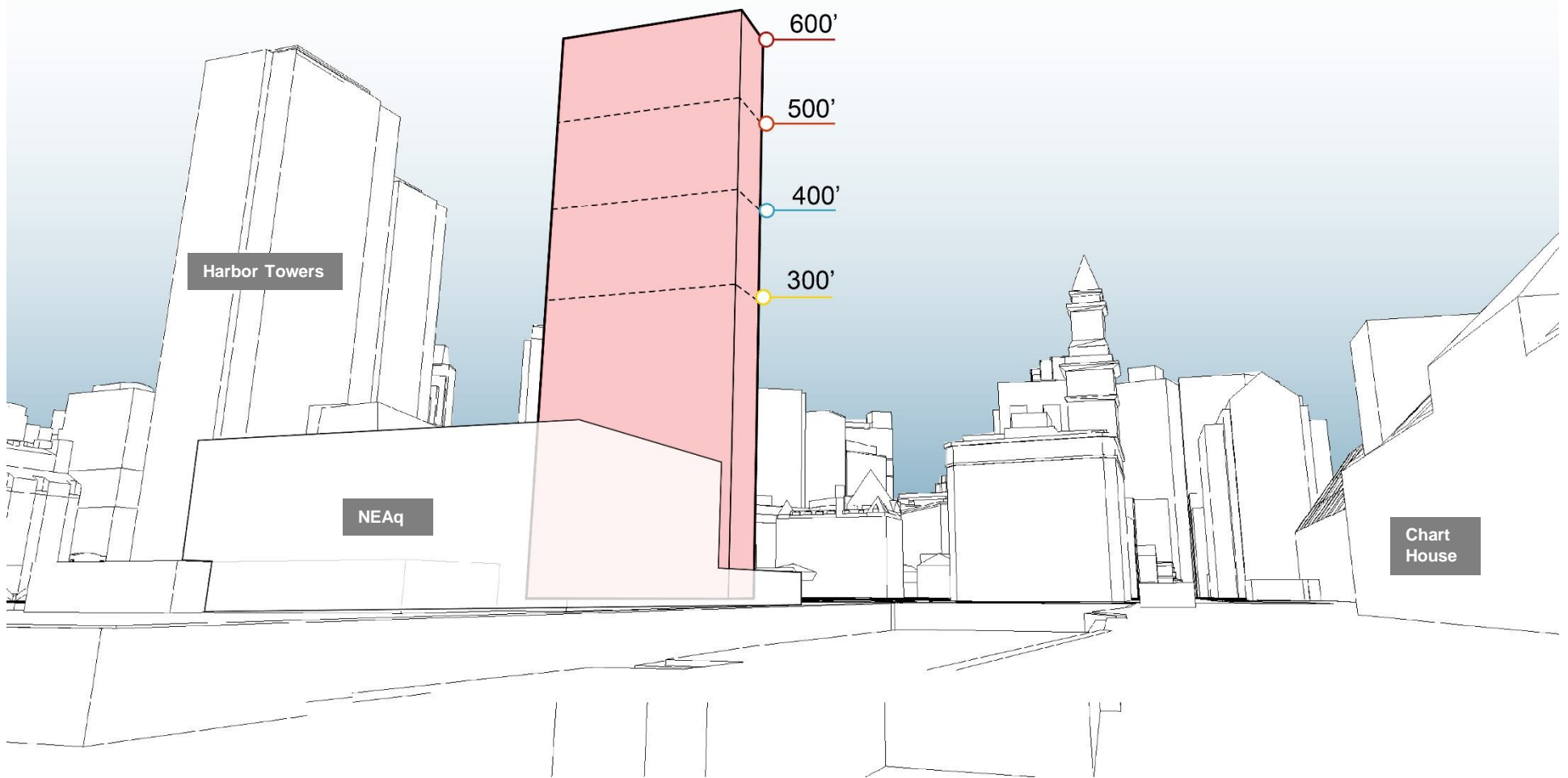
Ch. 91 Baseline and the Proposed Redevelopment Scenario
Single North Tower



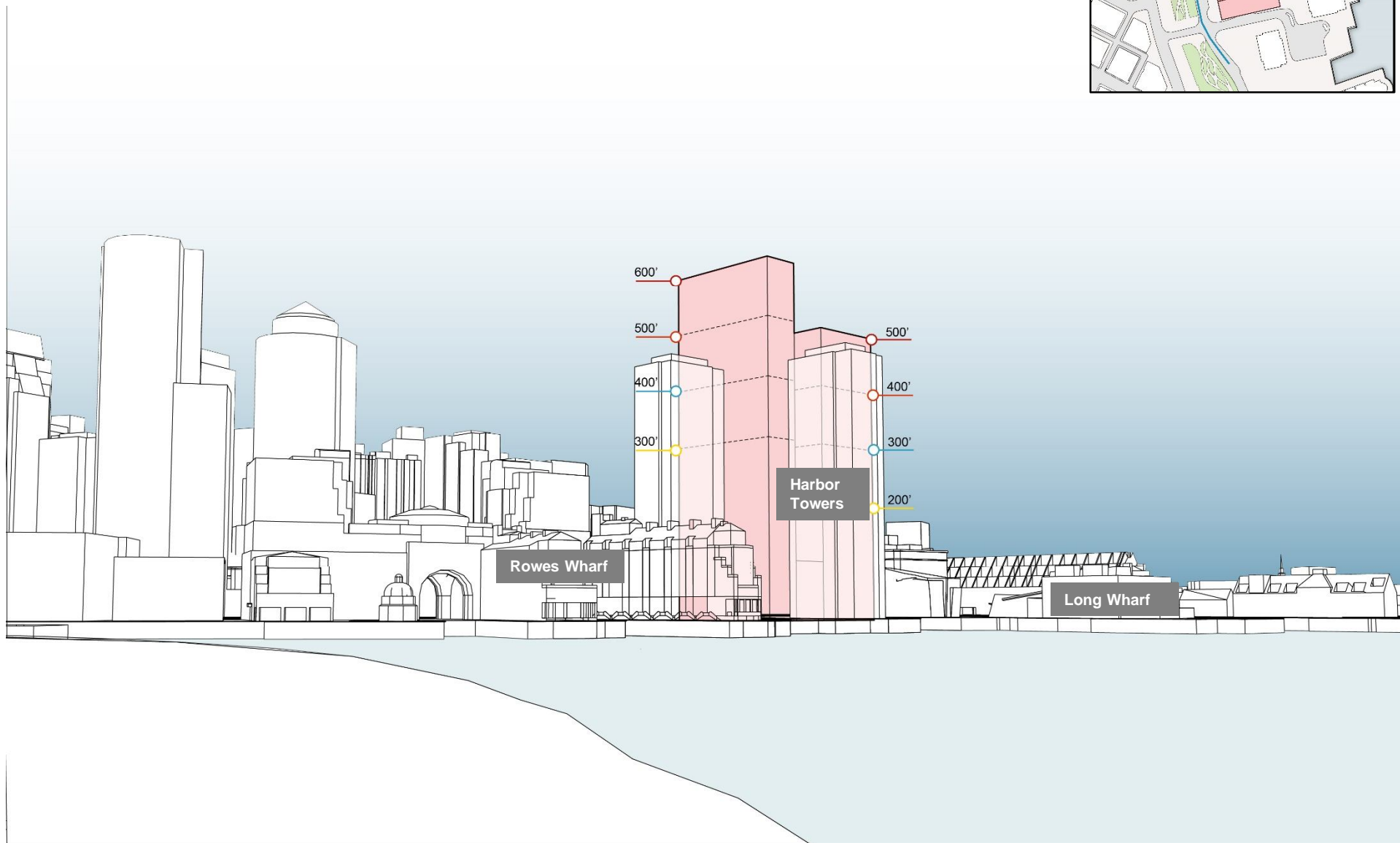
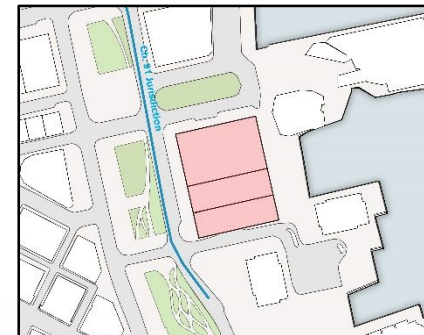
Ch. 91 Baseline and the Proposed Redevelopment Scenario
Single South Tower



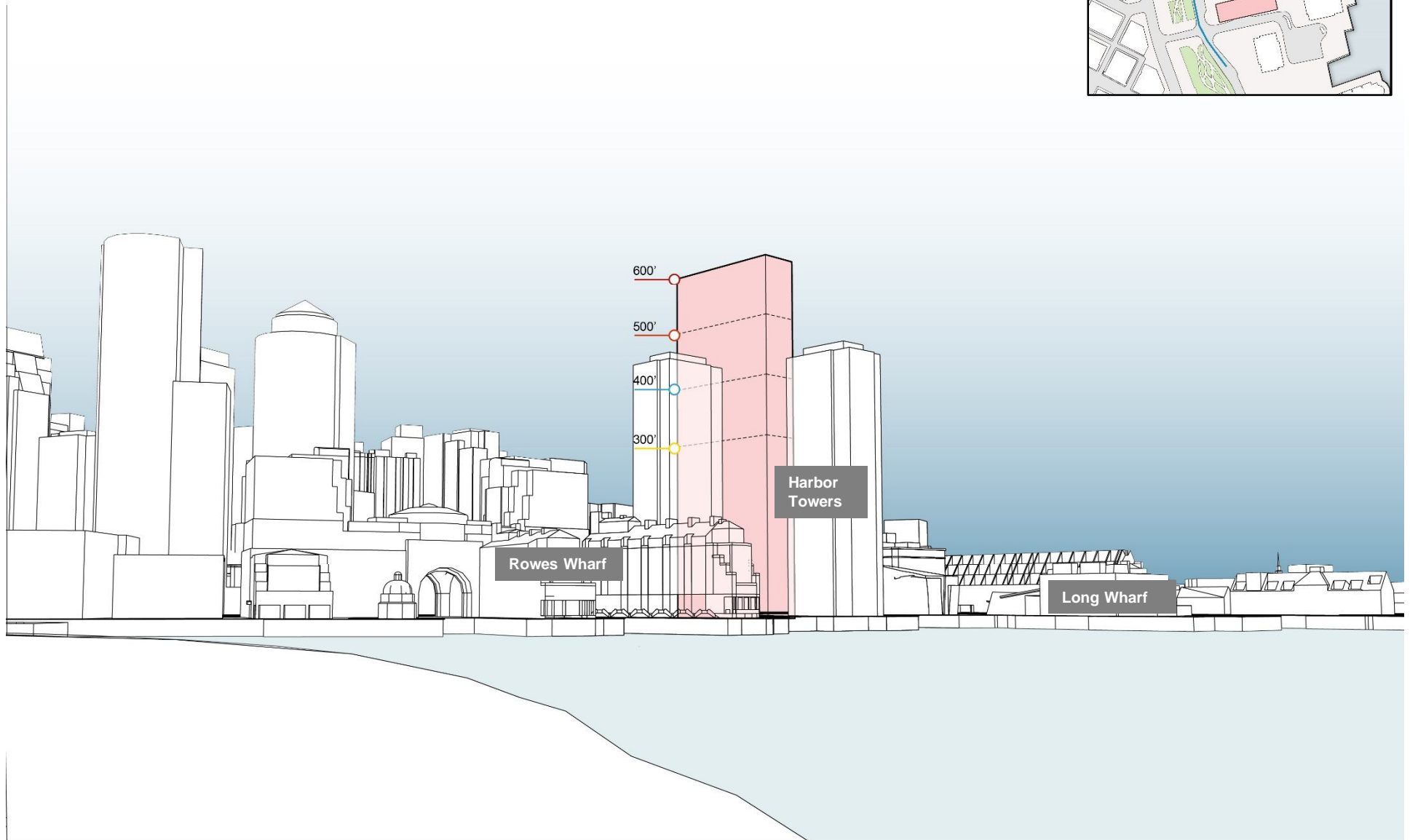
Ch. 91 Baseline and the Proposed Redevelopment Scenario
Single West Tower



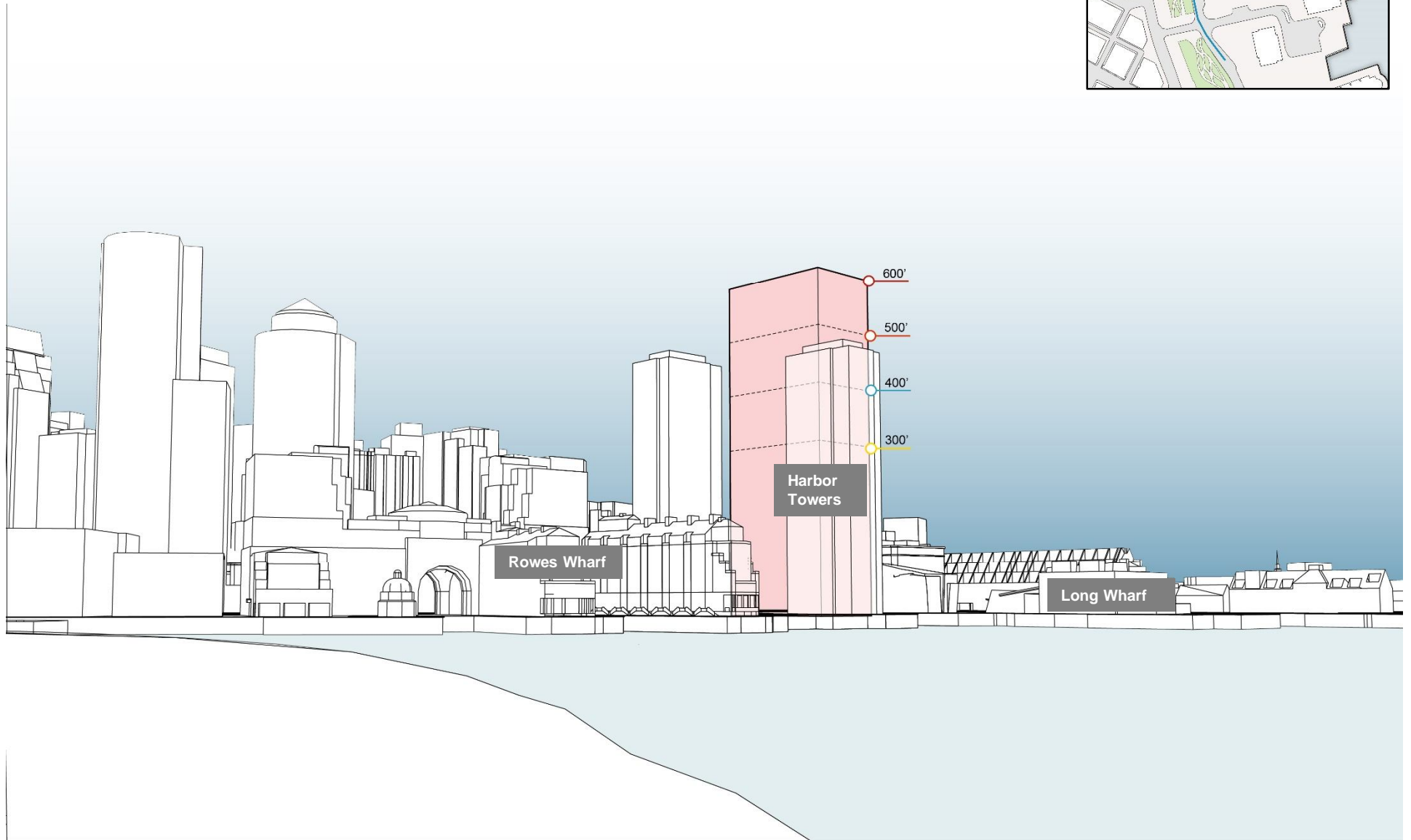
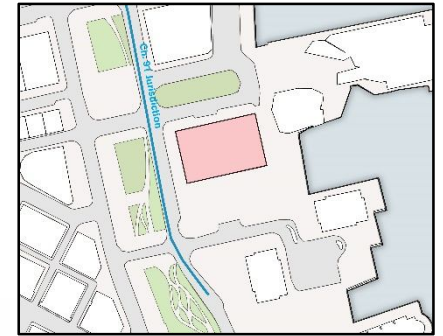
Alternative Scenarios – Ground-level Views
Two Tower



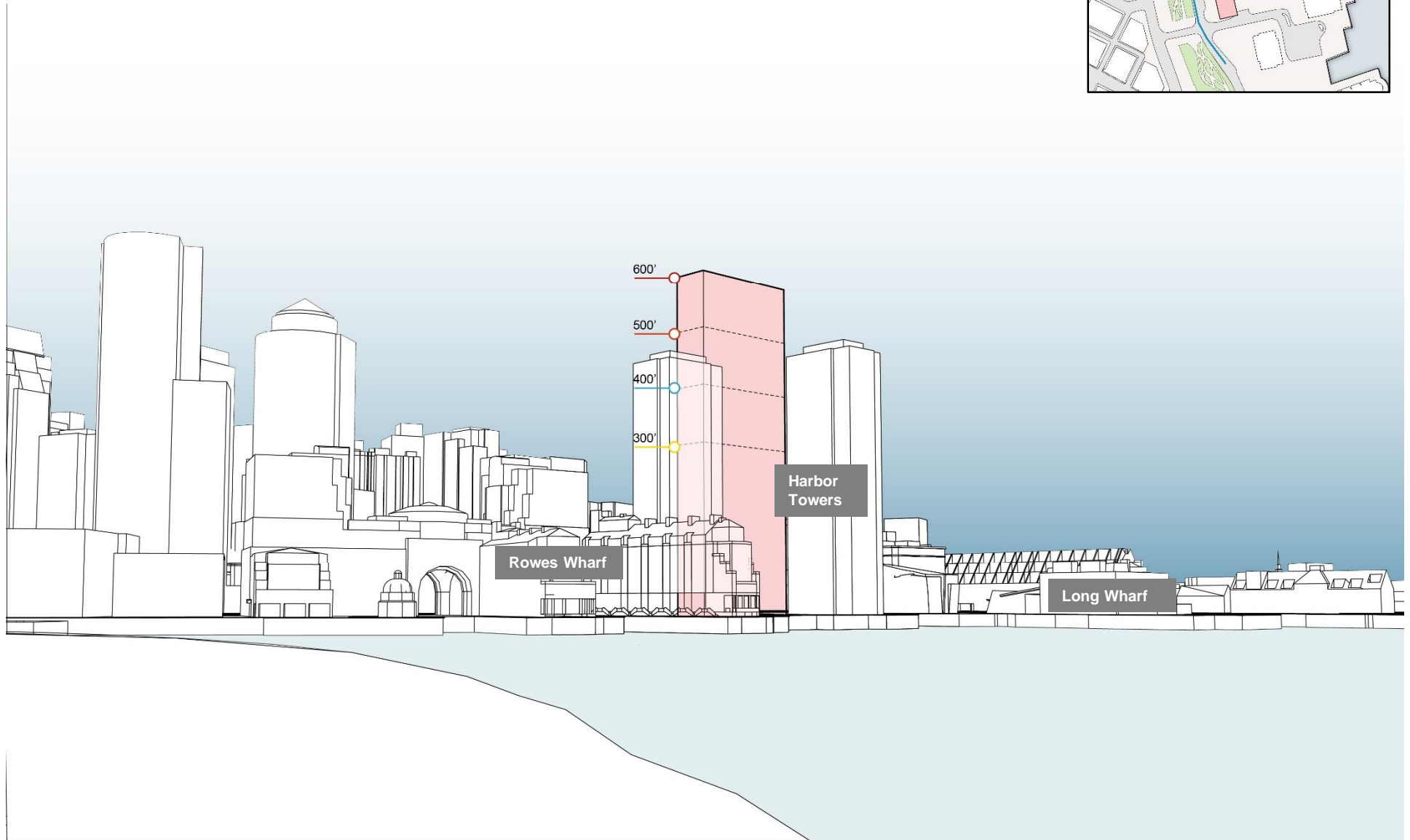
Ch. 91 Baseline and the Proposed Redevelopment Scenario
Single South Tower



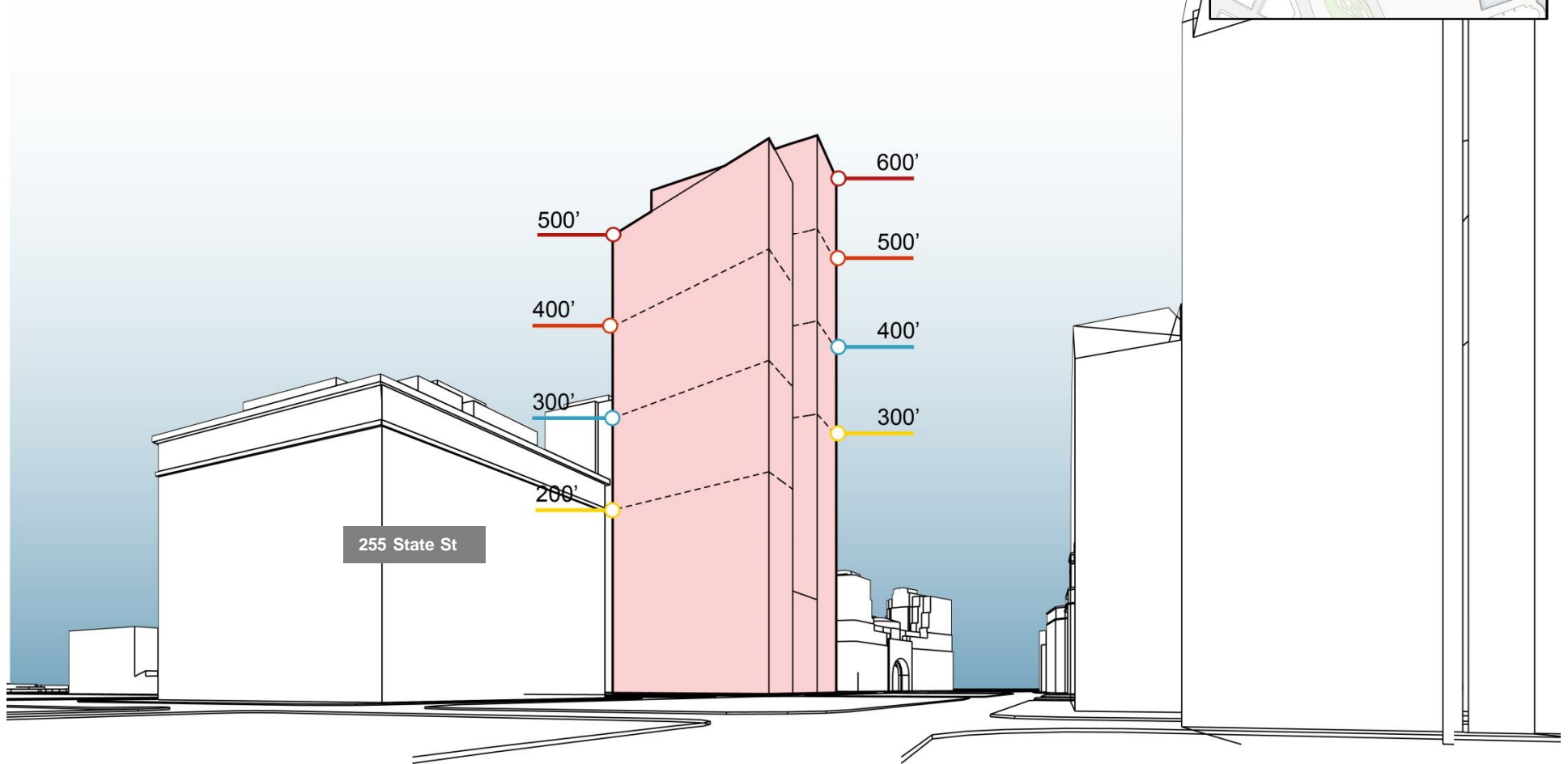
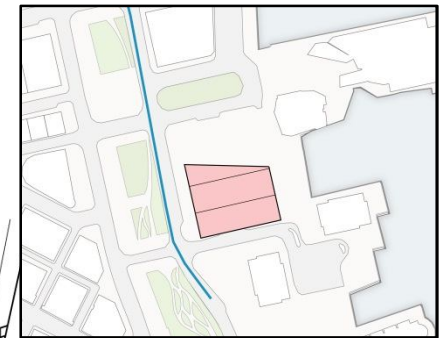
Ch. 91 Baseline and the Proposed Redevelopment Scenario
Single North Tower



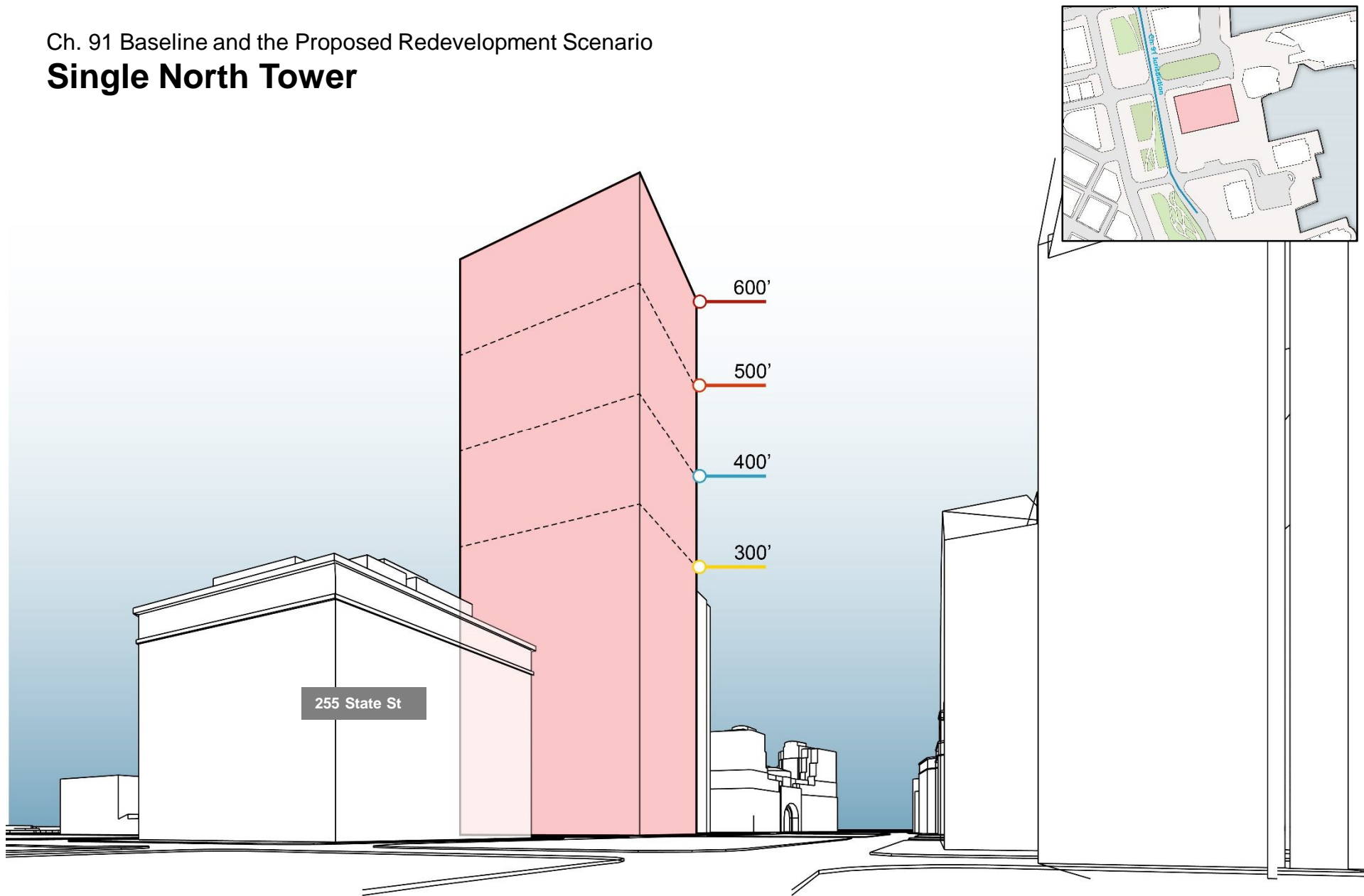
Ch. 91 Baseline and the Proposed Redevelopment Scenario
Single West Tower



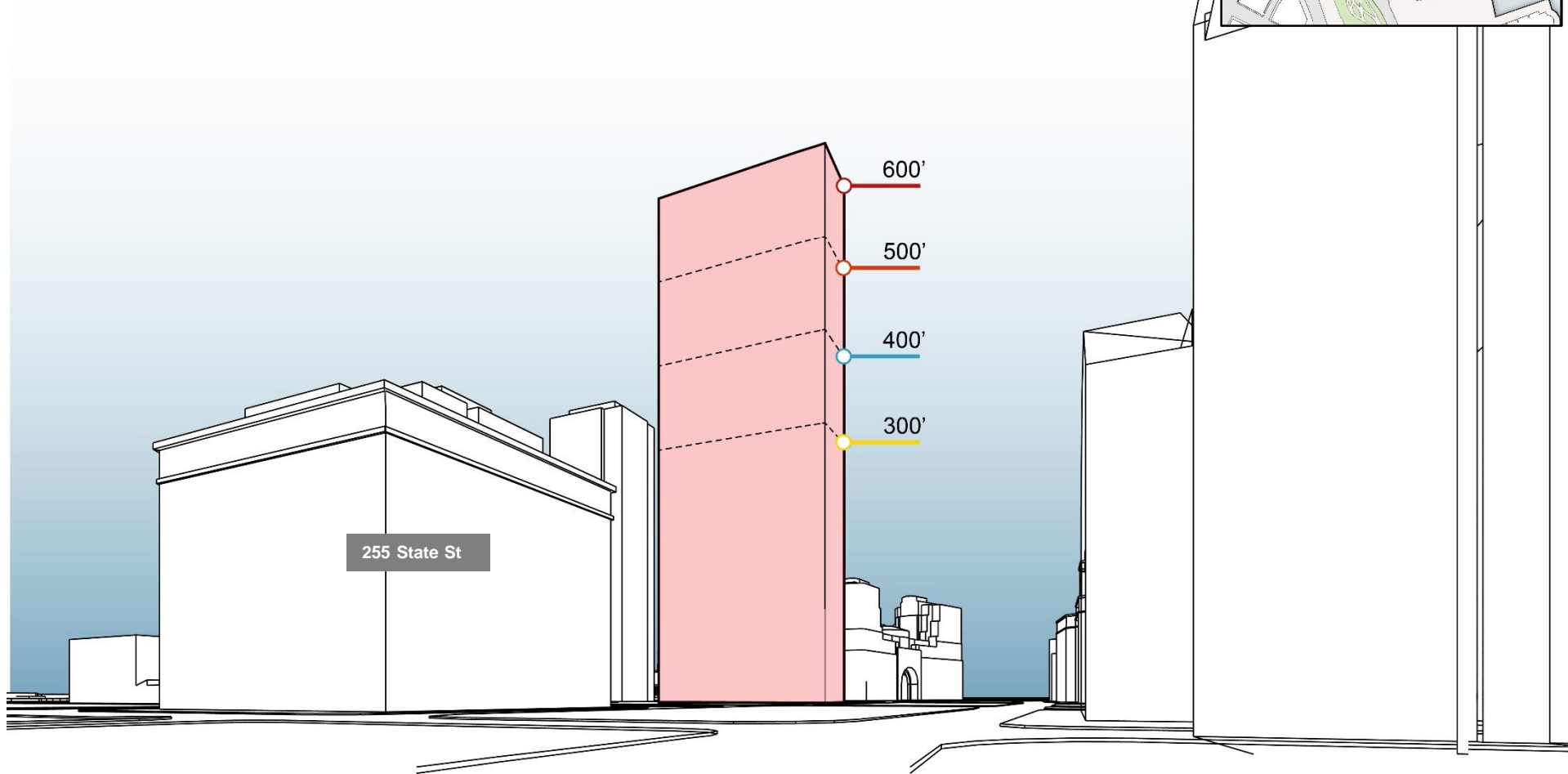
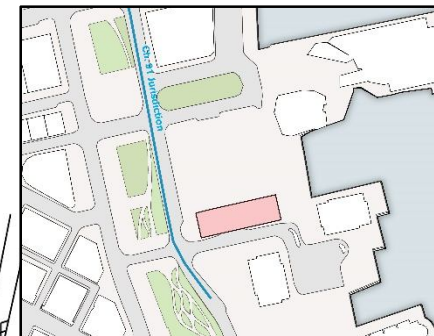
Ch. 91 Baseline and the Proposed Redevelopment Scenario
Two Tower – with open space on north



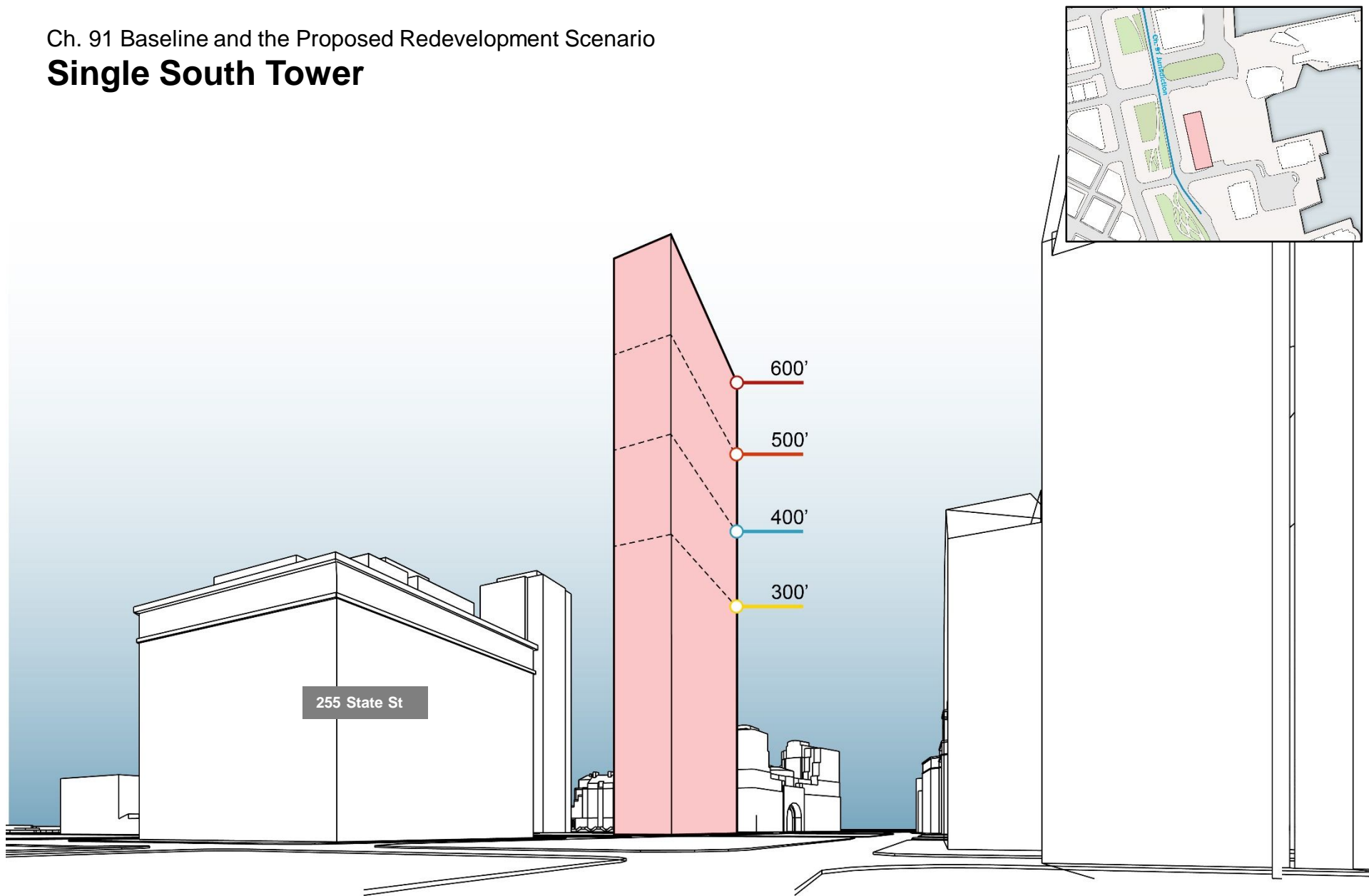
Ch. 91 Baseline and the Proposed Redevelopment Scenario
Single North Tower



Ch. 91 Baseline and the Proposed Redevelopment Scenario
Single South Tower



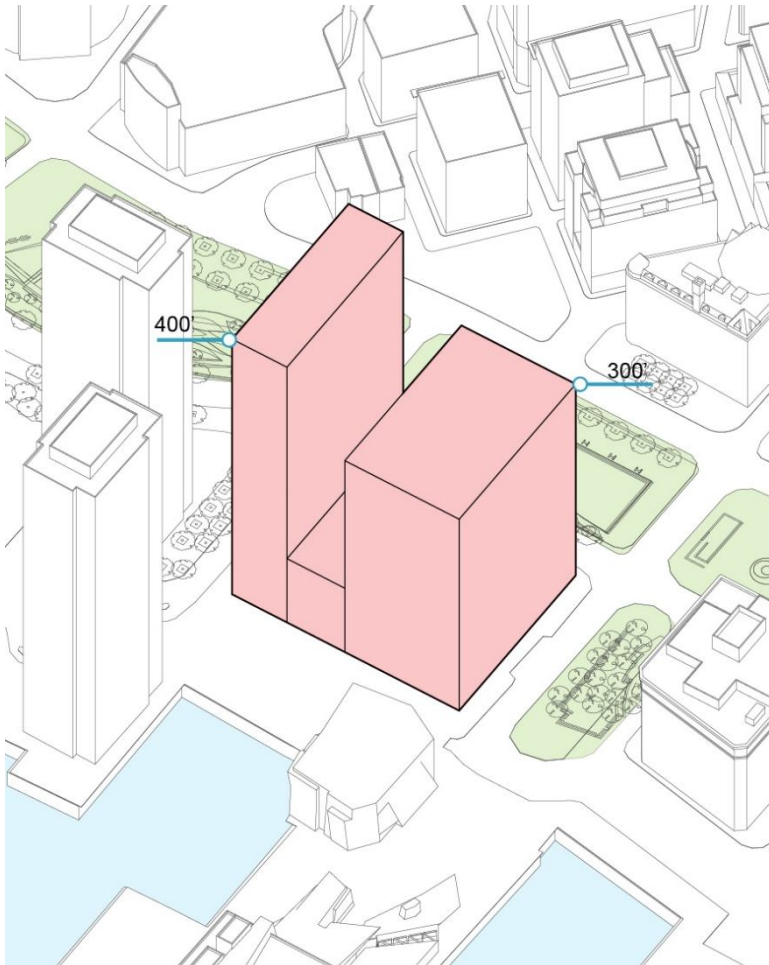
Ch. 91 Baseline and the Proposed Redevelopment Scenario
Single South Tower



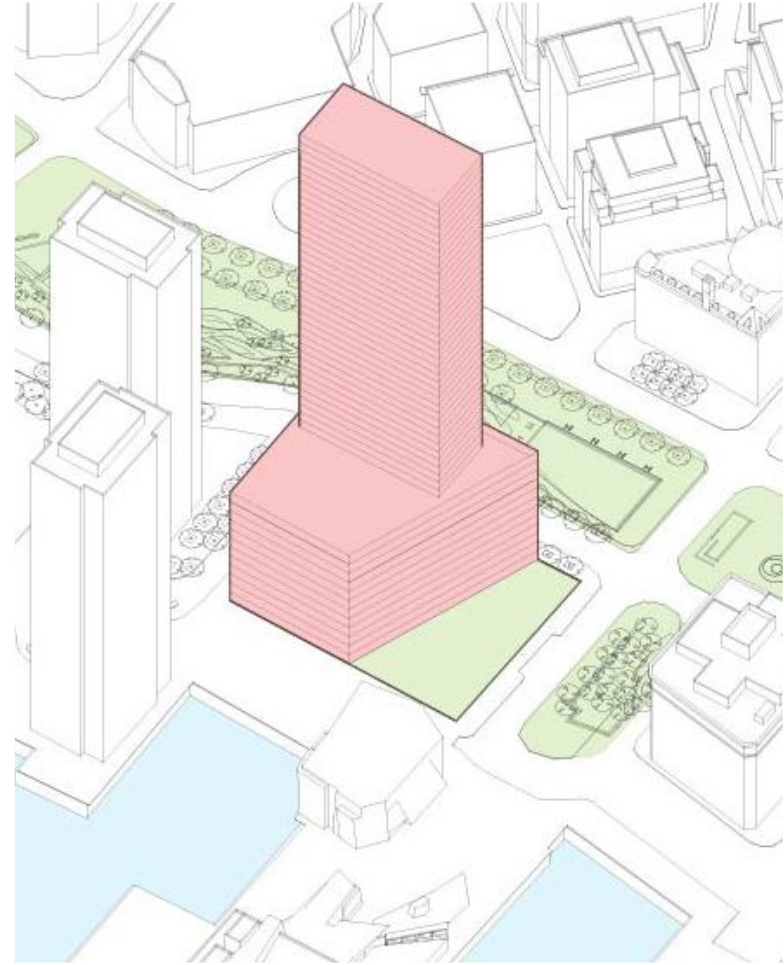
Scenarios for consideration of the MHPAC

Overall Comparison

400' & 300' Two Tower

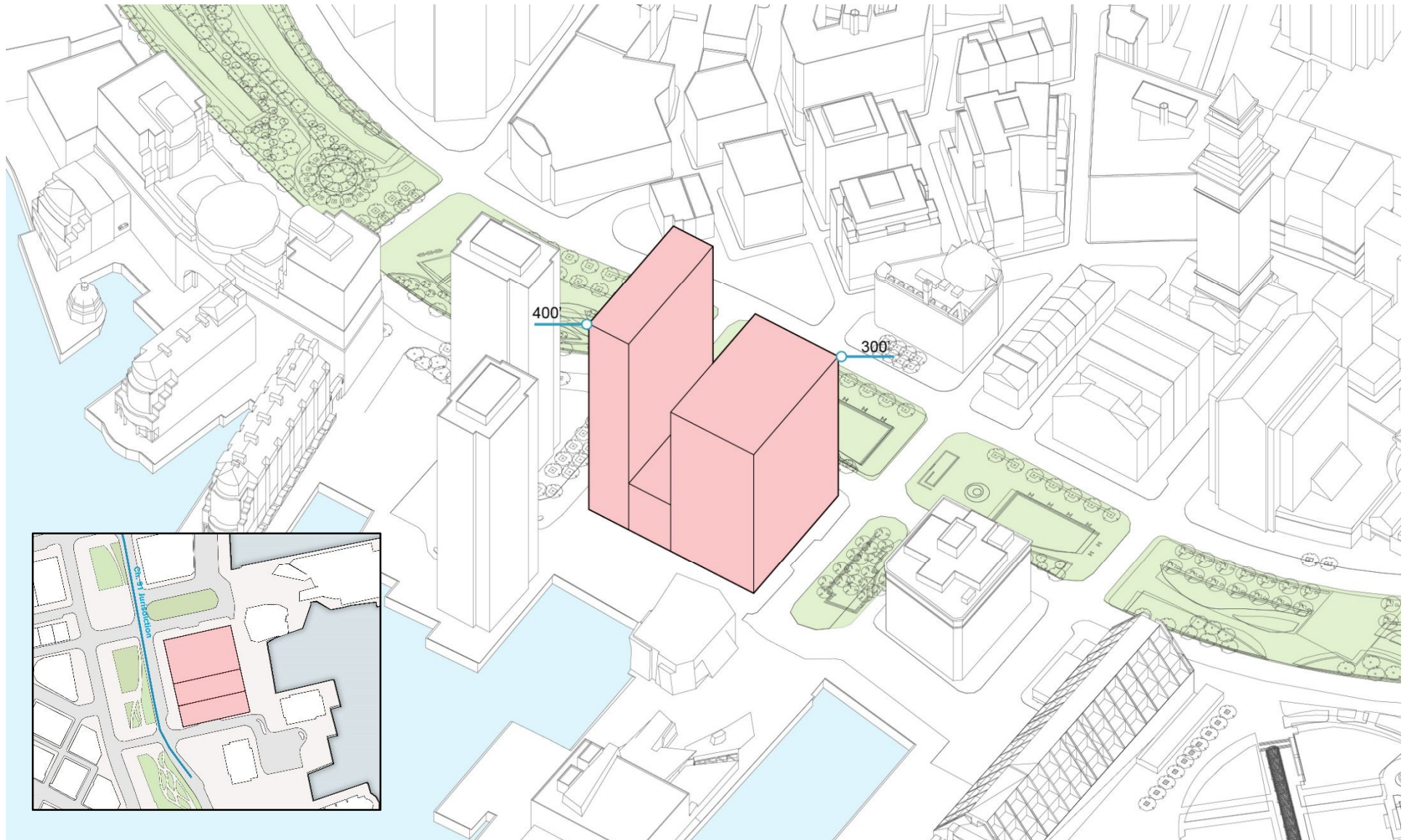


600' Single South Tower



Two Towers – 400' and 300'

100% Building Footprint Lot Coverage
0% Open Space



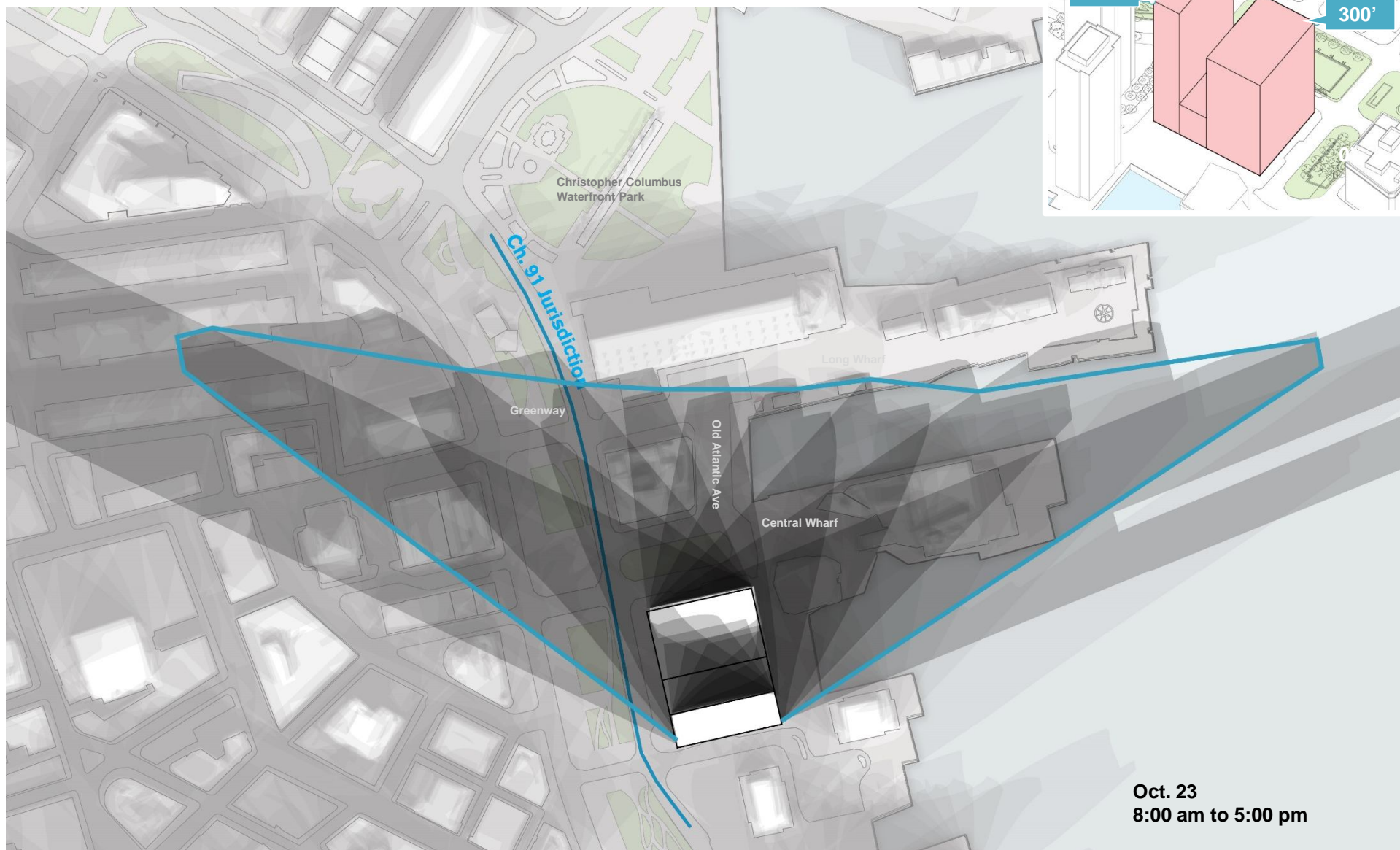
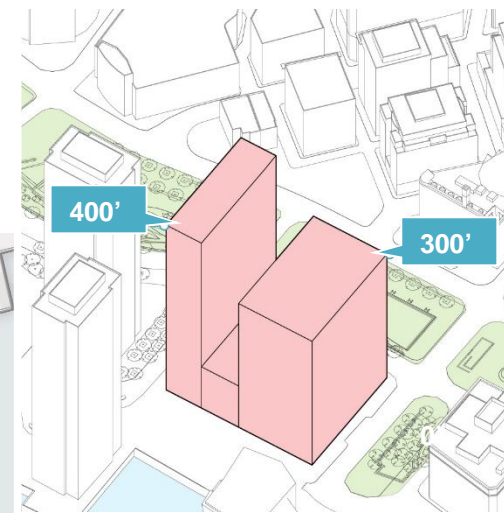
Alternative Scenarios

Two Towers – 400' & 300'



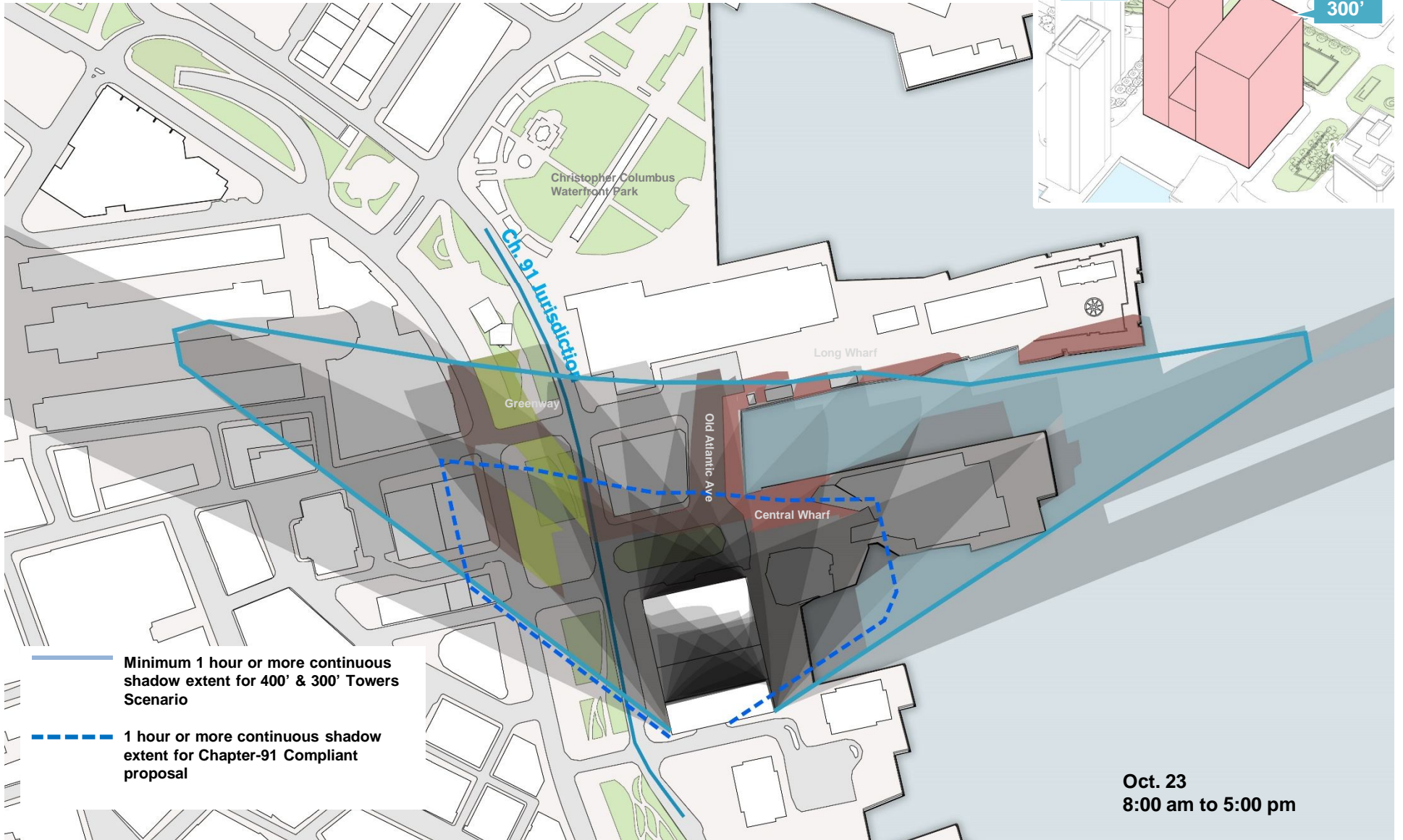
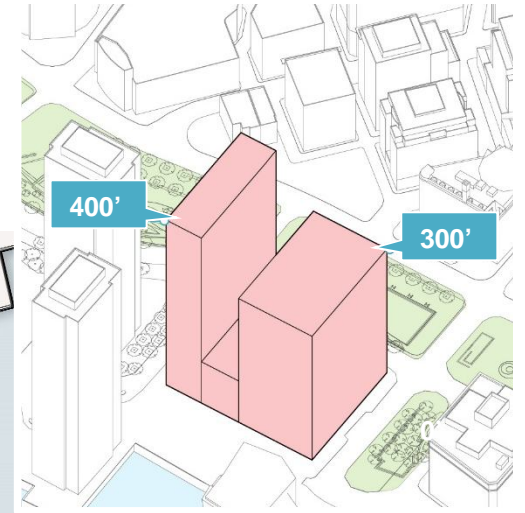
Alternative Scenarios Two Towers – Oct. 23

Minimum 1 hour or more
continuous shadow
extent for 400' & 300'
Towers Scenario



Alternative Scenarios
Two Towers – Oct. 23

- Net New Shadow over Greenway
- Net New Shadow over Central Wharf and Long Wharf
- Net New Shadow over watersheet
- Streets and Sidewalks



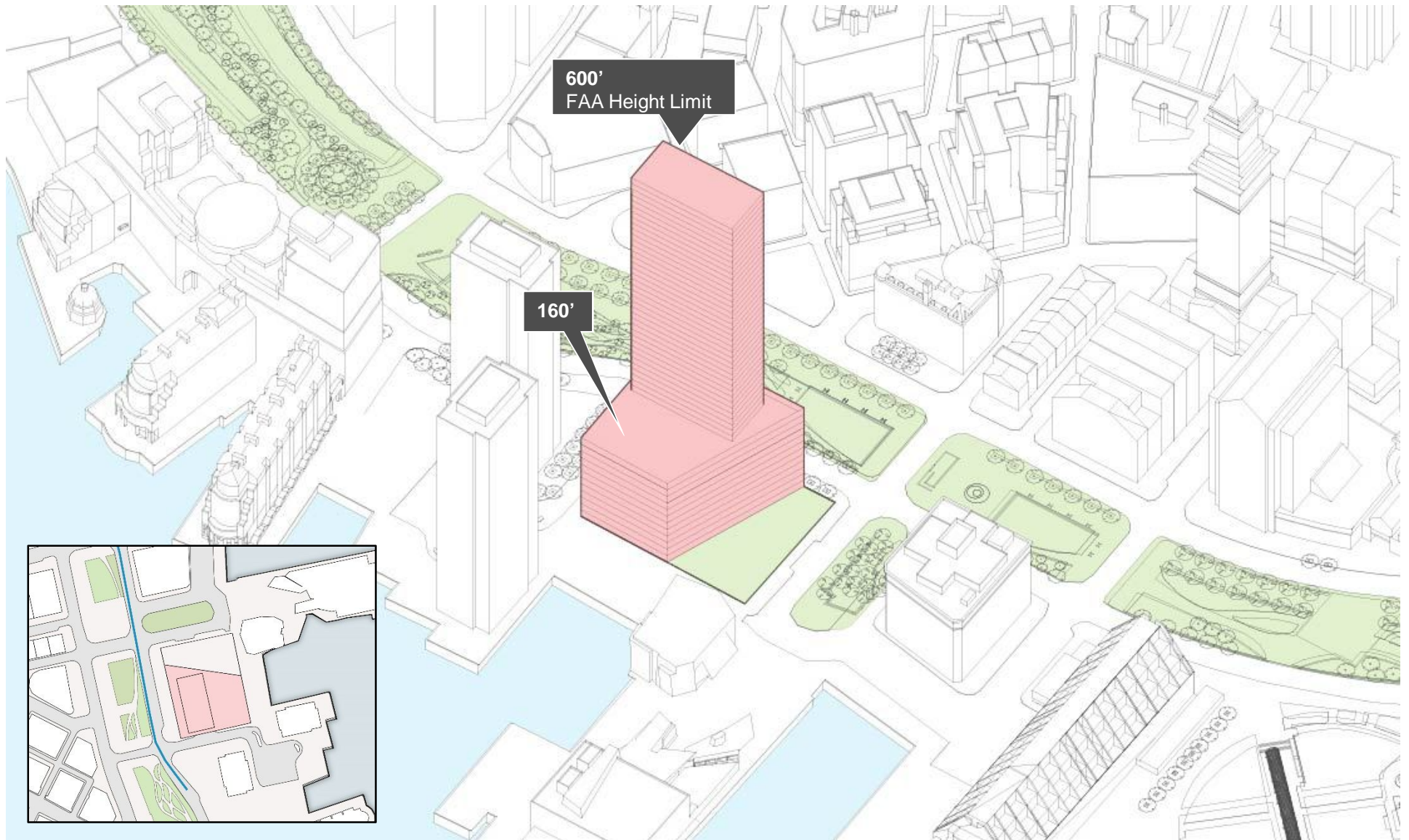
— Minimum 1 hour or more continuous shadow extent for 400' & 300' Towers Scenario

- - - 1 hour or more continuous shadow extent for Chapter-91 Compliant proposal

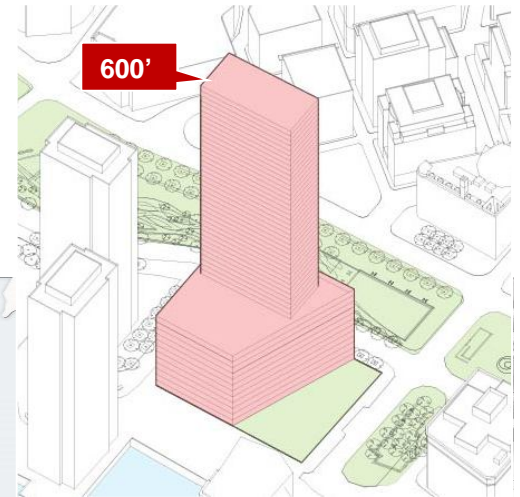
Oct. 23
8:00 am to 5:00 pm

Harbor Garage Site Development Scenario: 600' Mixed-use tower

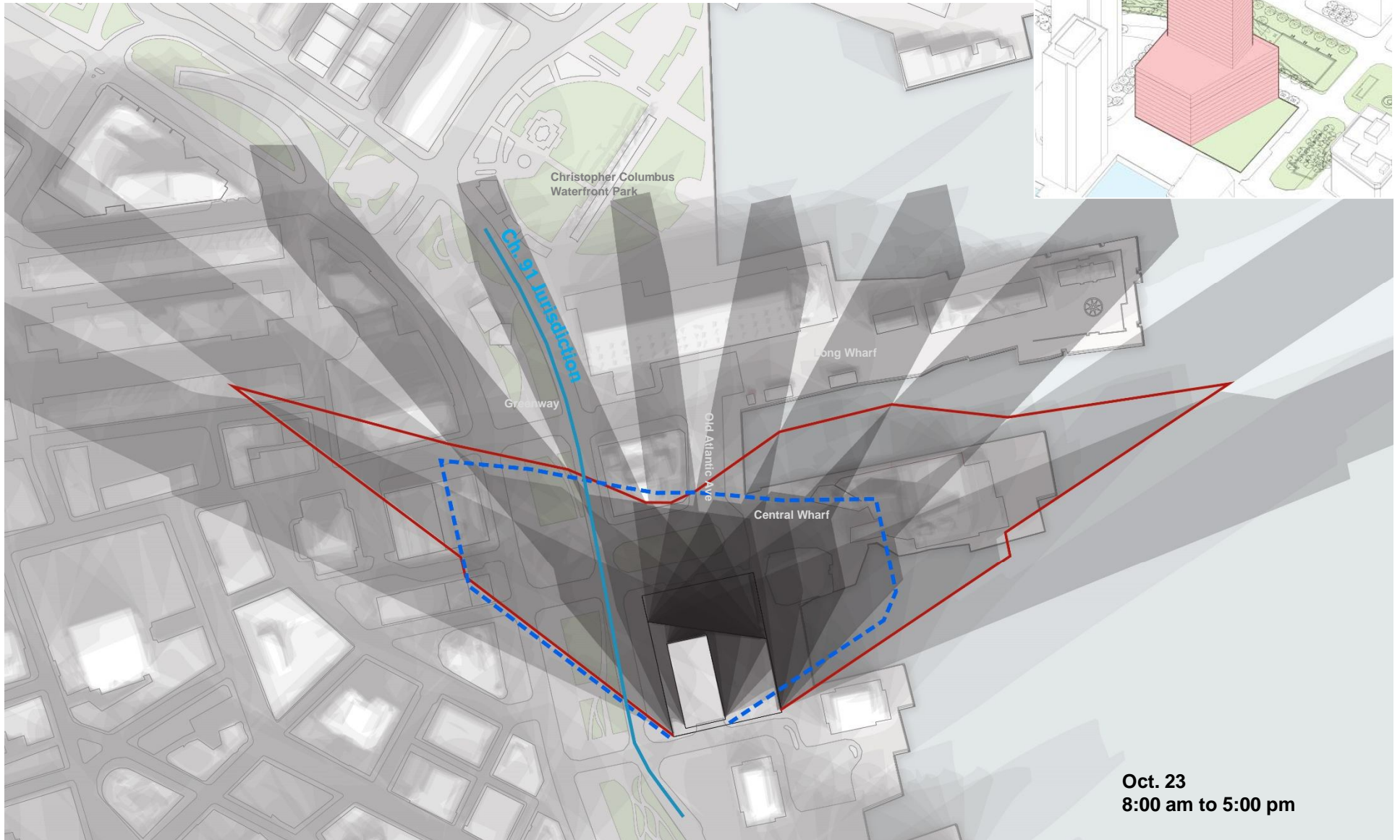
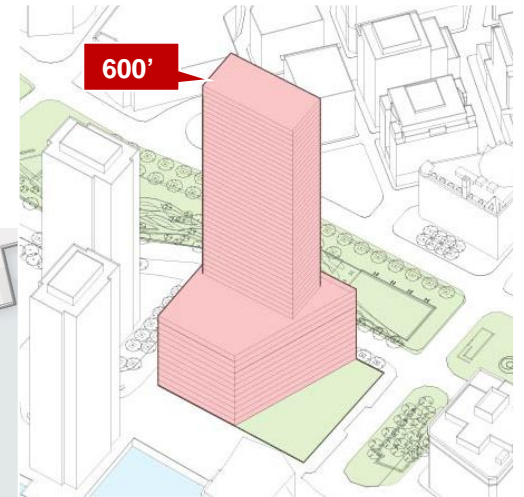
67% Building Footprint Lot Coverage
33% Open Space



Alternative Scenarios
Single South Tower – 600'



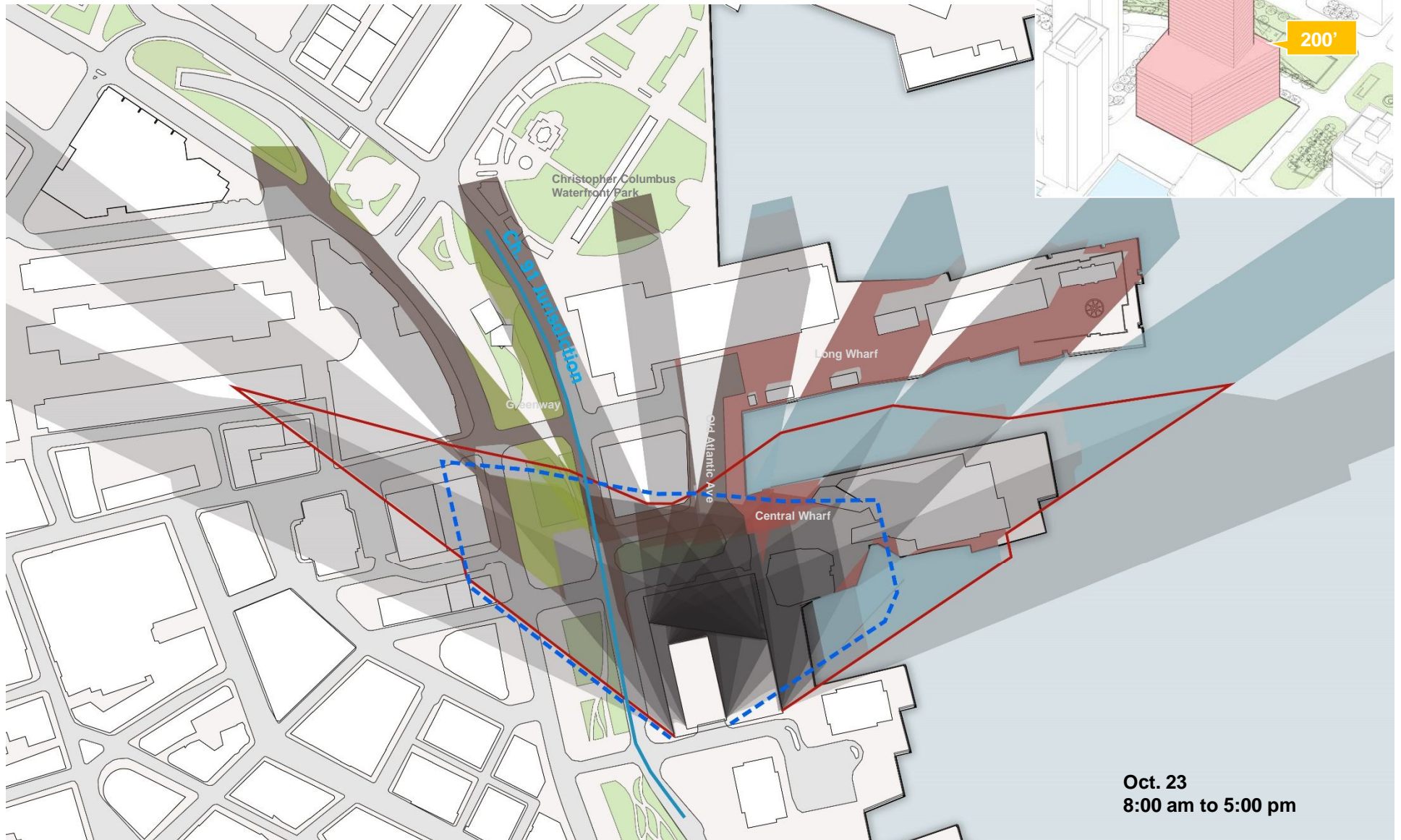
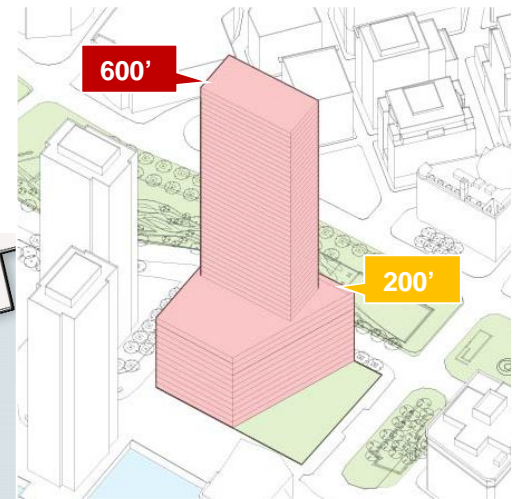
Alternative Scenarios
Single South Tower – Oct. 23rd



Alternative Scenarios

Single South Tower – Oct. 23

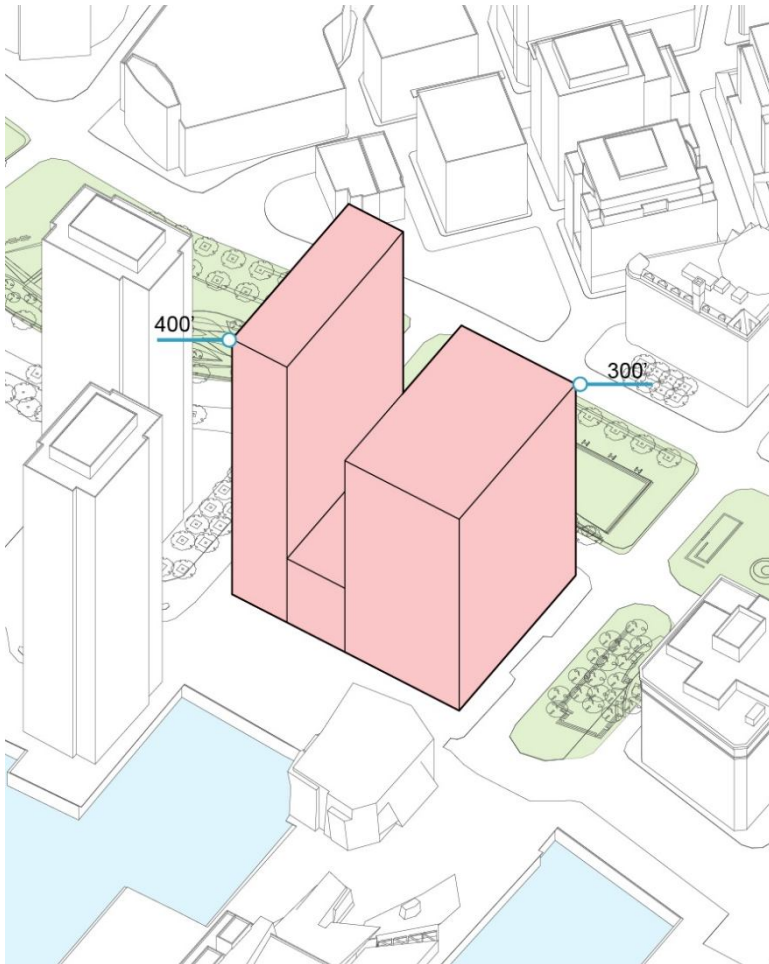
- Net New Shadow over Greenway
- Net New Shadow over Central Wharf and Long Wharf
- Net New Shadow over watershed
- Streets and Sidewalks



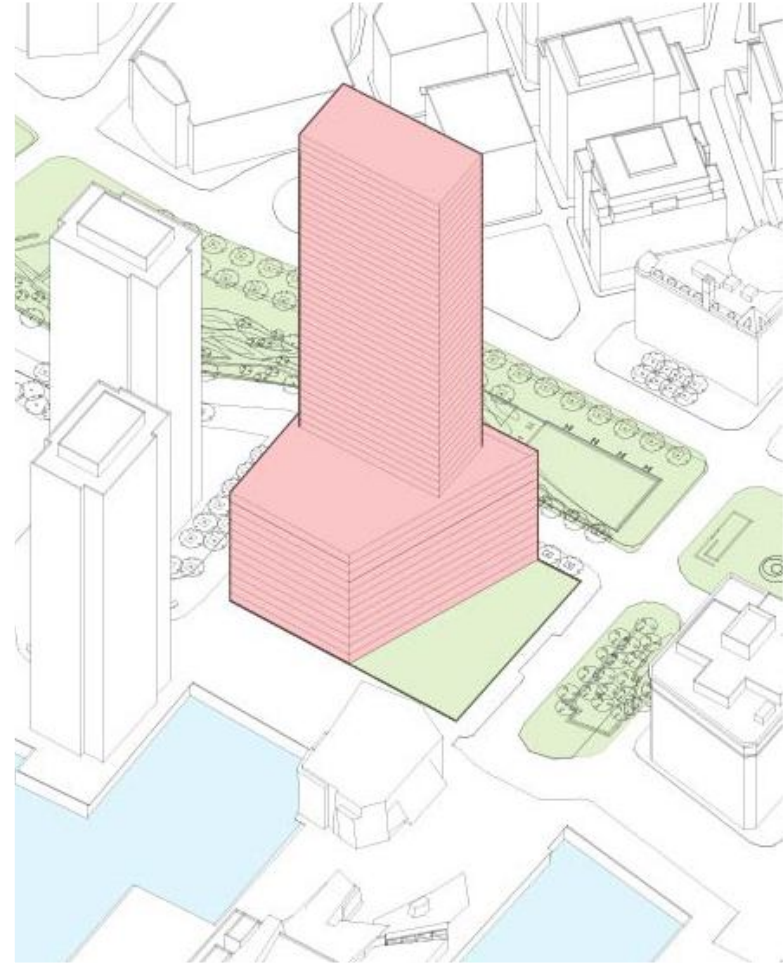
Oct. 23
8:00 am to 5:00 pm

Overall Comparison

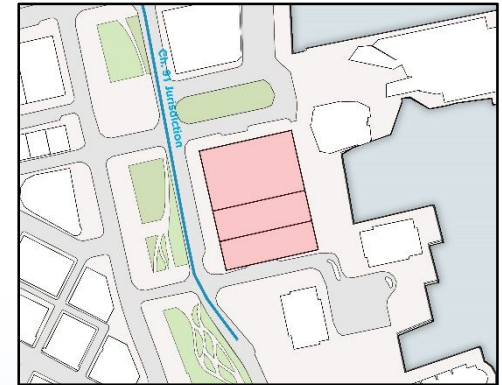
400' & 300' Two Tower



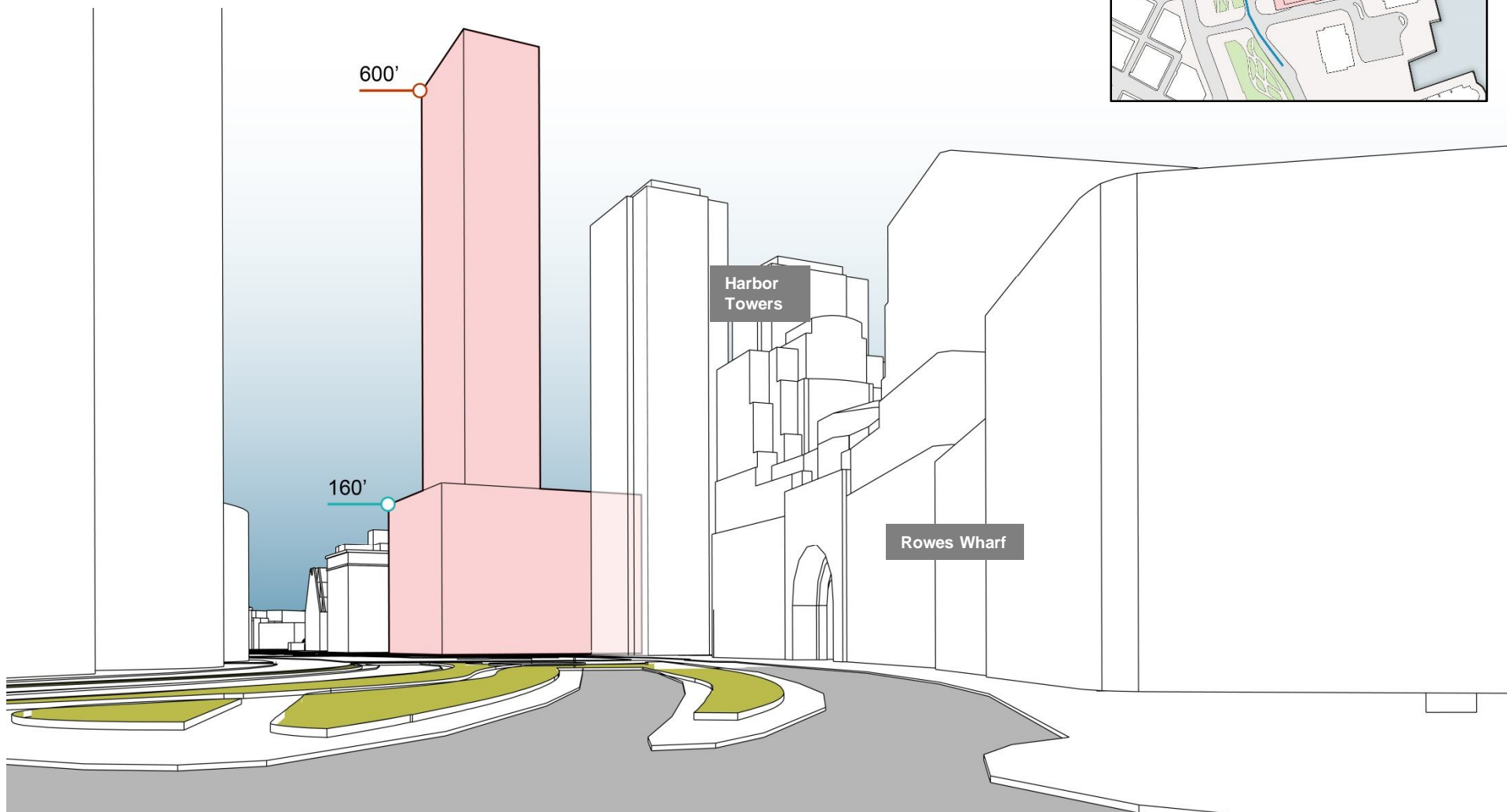
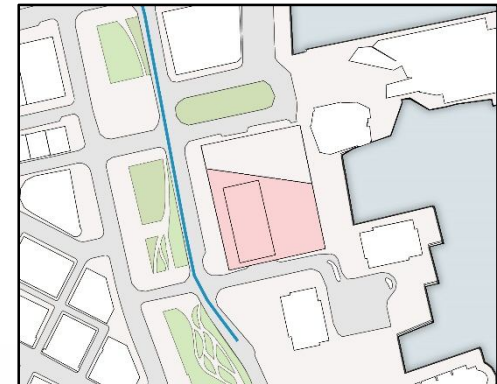
600' Single South Tower



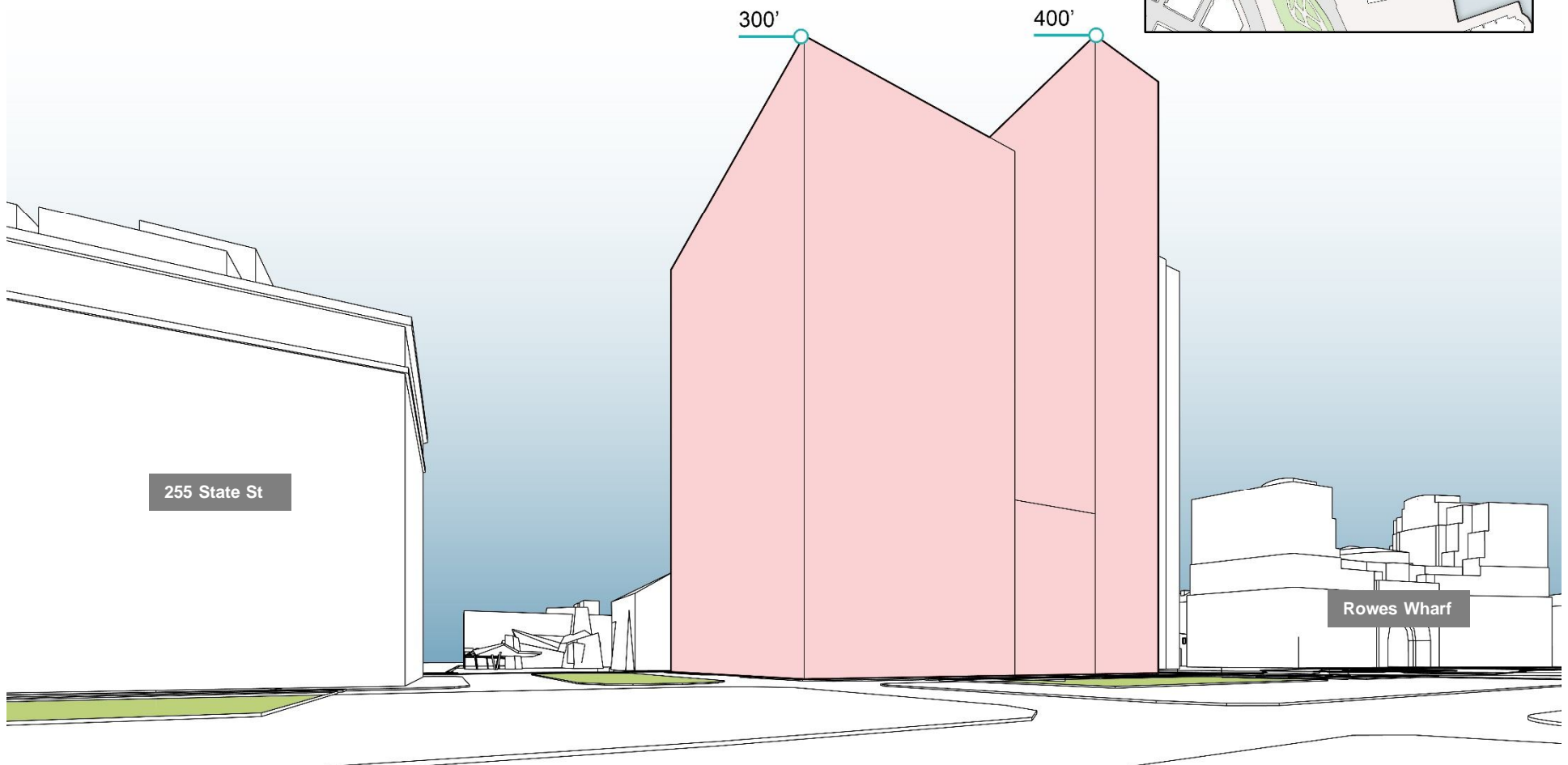
Ch. 91 Baseline and the Proposed Redevelopment Scenario
Two Towers – 400' and 300'



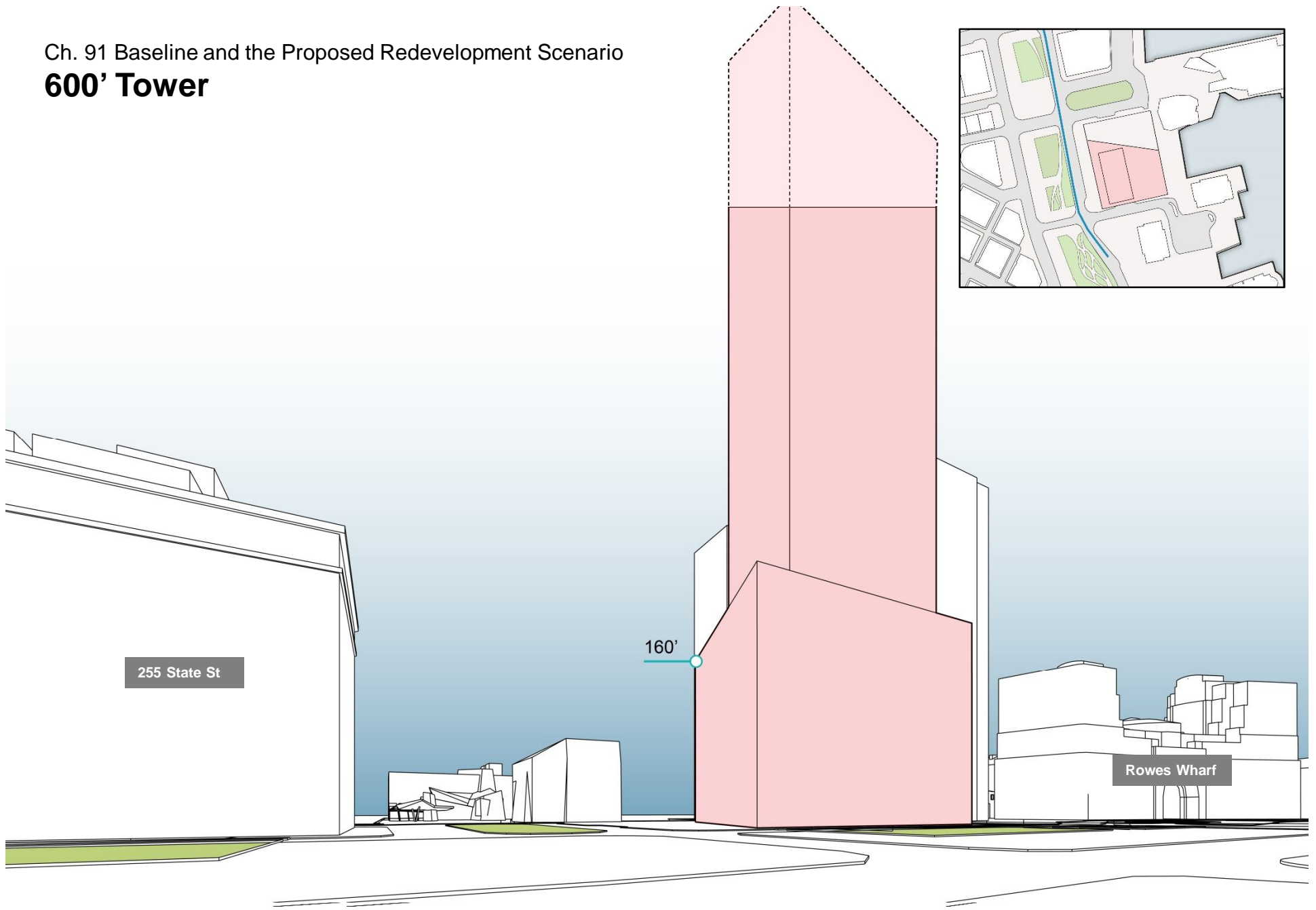
Ch. 91 Baseline and the Proposed Redevelopment Scenario
600' South Tower



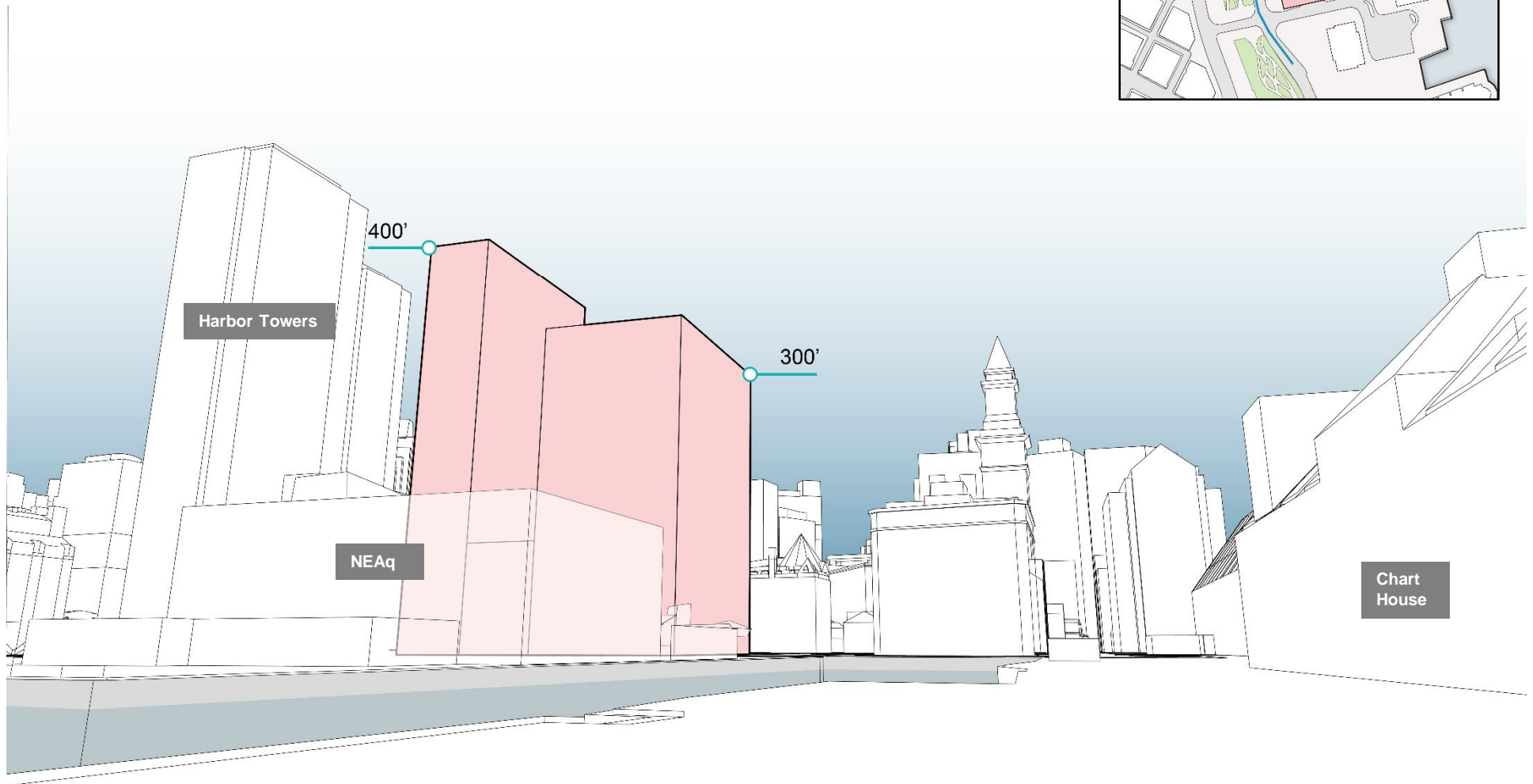
Ch. 91 Baseline and the Proposed Redevelopment Scenario
Two Towers – 400' and 300'



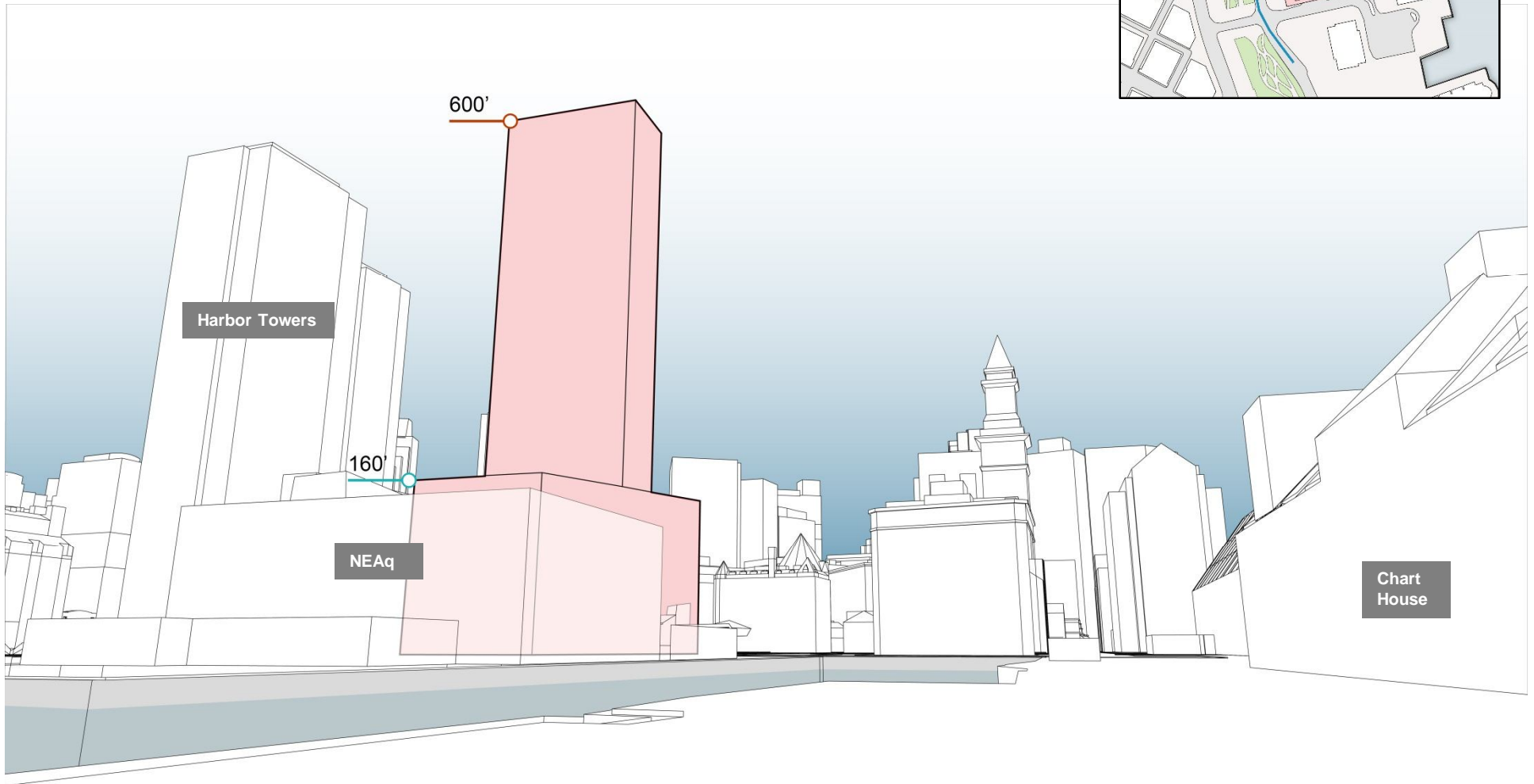
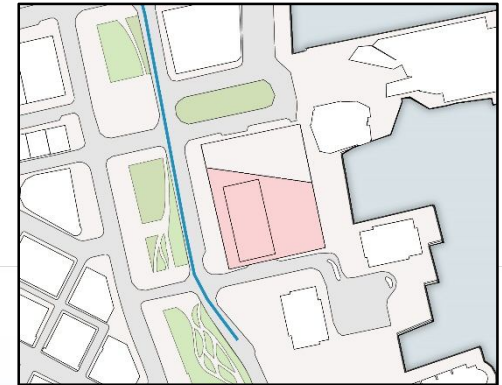
Ch. 91 Baseline and the Proposed Redevelopment Scenario
600' Tower



Ch. 91 Baseline and the Proposed Redevelopment Scenario
Two Towers – 400' and 300'

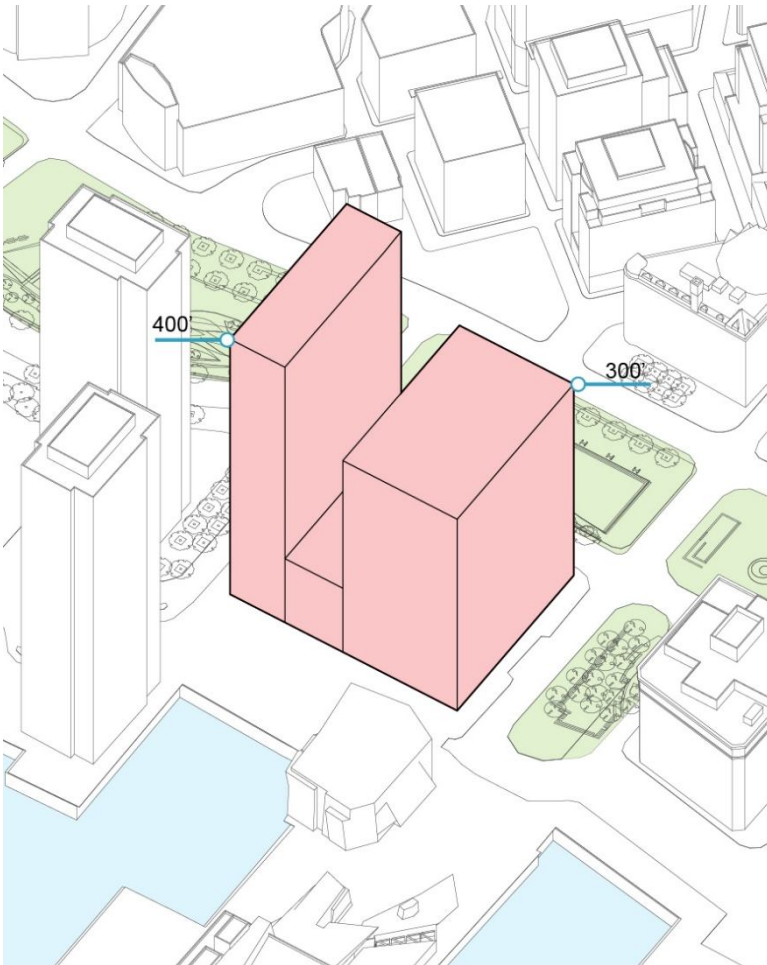


Ch. 91 Baseline and the Proposed Redevelopment Scenario
600' Tower

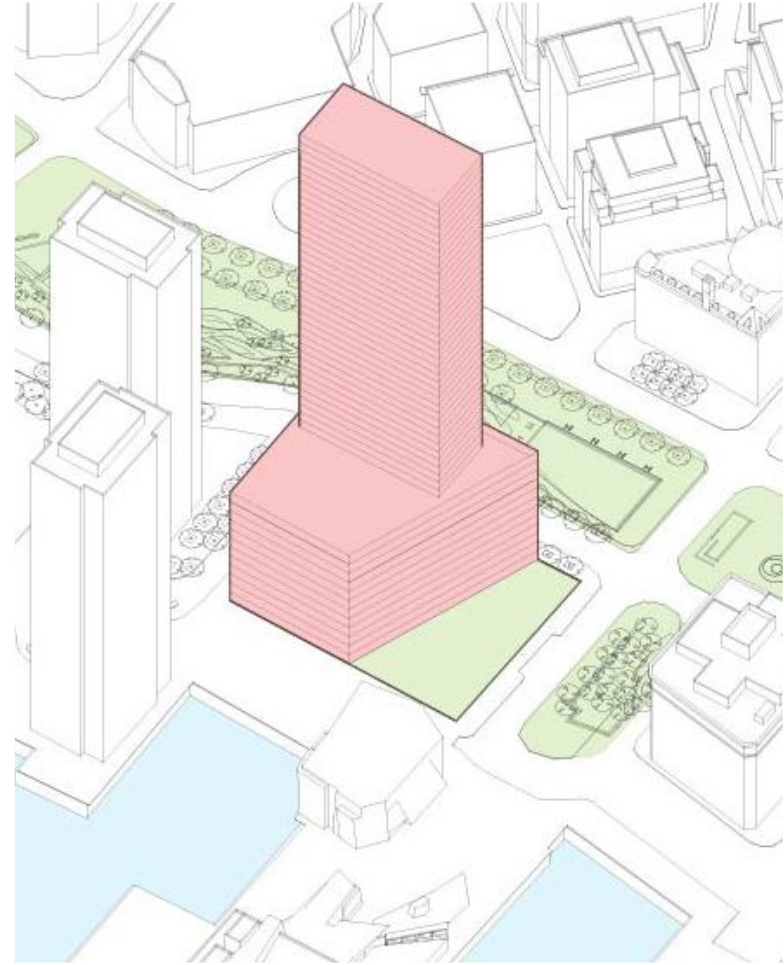


Overall Comparison

400' & 300' Two Tower



600' Single Tower



Downtown Waterfront MHP
MHP Study Area

