

RESERVED CHANNEL DEVELOPMENT

OXFORD



PAPPAS ENTERPRISES, INC.

BCDC – Meeting #3 – Design Guidelines

July 21, 2026

Agenda

- *Mtg #1 – Introduction, Process, Plan*
- *Mtg #2 – Master Plan: Big Ideas, Feedback and Response*
- **Mtg #3 – Initial Phase: Design Guidelines**
 1. Planning Orientation and Response to Mtg #2
 2. Phase 1 Design Guidelines
 3. PDA Site / Block A
 4. Next Steps & Discussion

PLANNING ORIENTATION AND RESPONSES TO MEETING #2

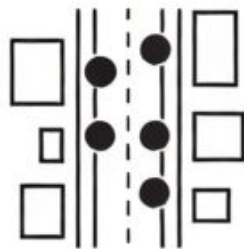
Feedback and Response

Mtg #2 – Master Plan: Big Ideas



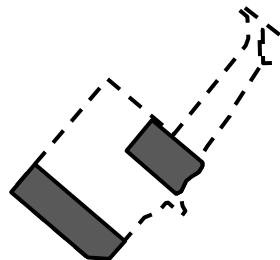
Connectivity & Context

Include broader context in diagrams to better visualize site integration and urban design big moves



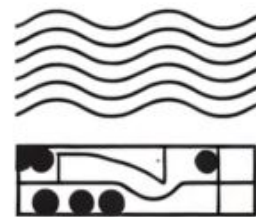
Street Design

Request for more information on F St., Pappas Way details and look and feel



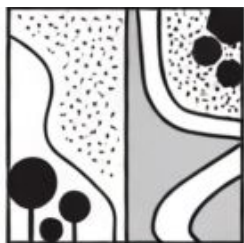
Documentation

Consistent orientation on plans and inclusion of block and open space dimensions



Waterfront

Share waterfront open space programming strategy, landscape design, and dimensions



Edges

Better explain grade transition along West First St and scape of the open spaces affected



Phasing

Overall master plan phasing and open space phasing



Resiliency

More information regarding resiliency assumptions



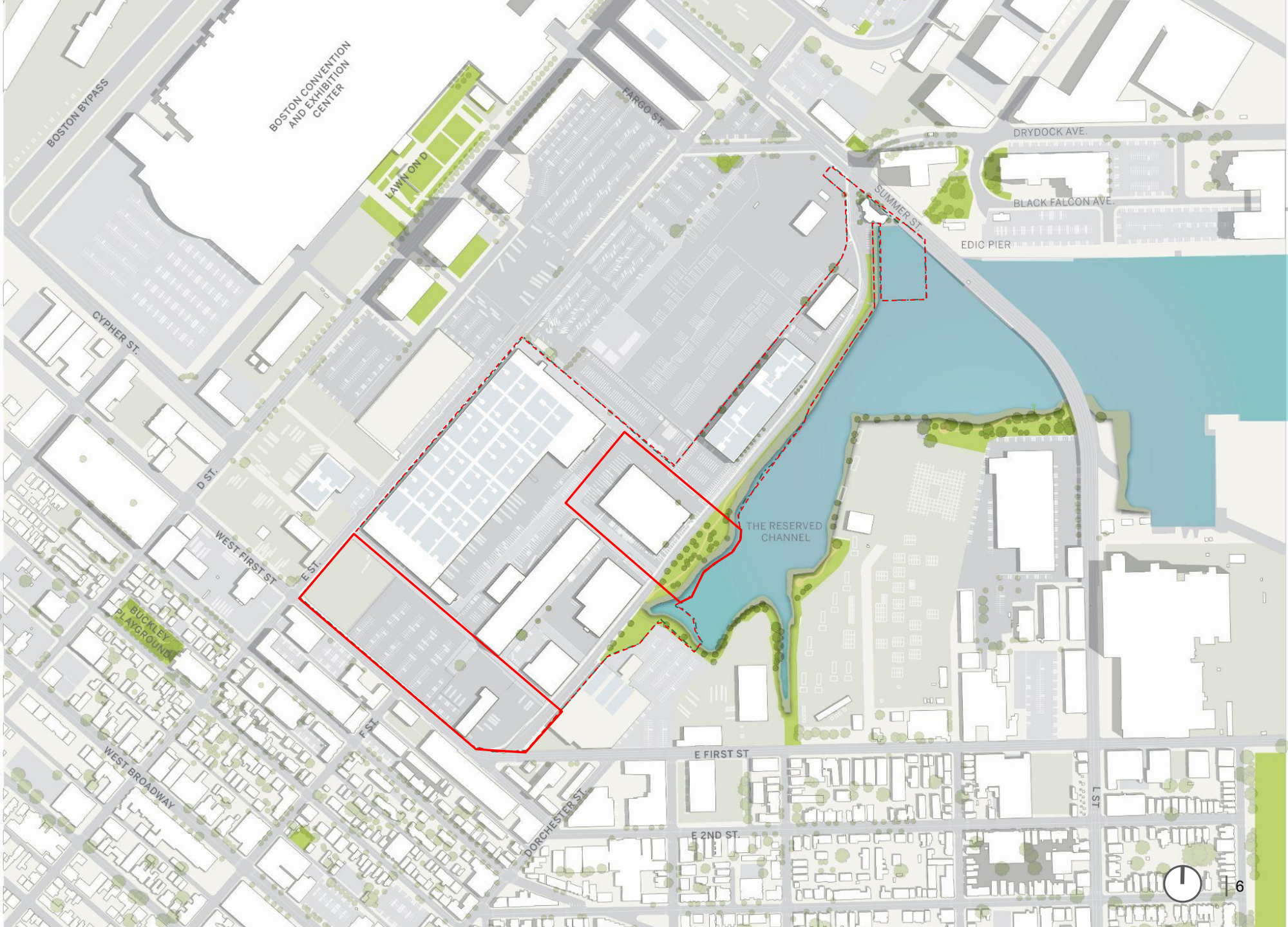
Site Elevation

More sections to clarify site elevation and relationship to surrounding

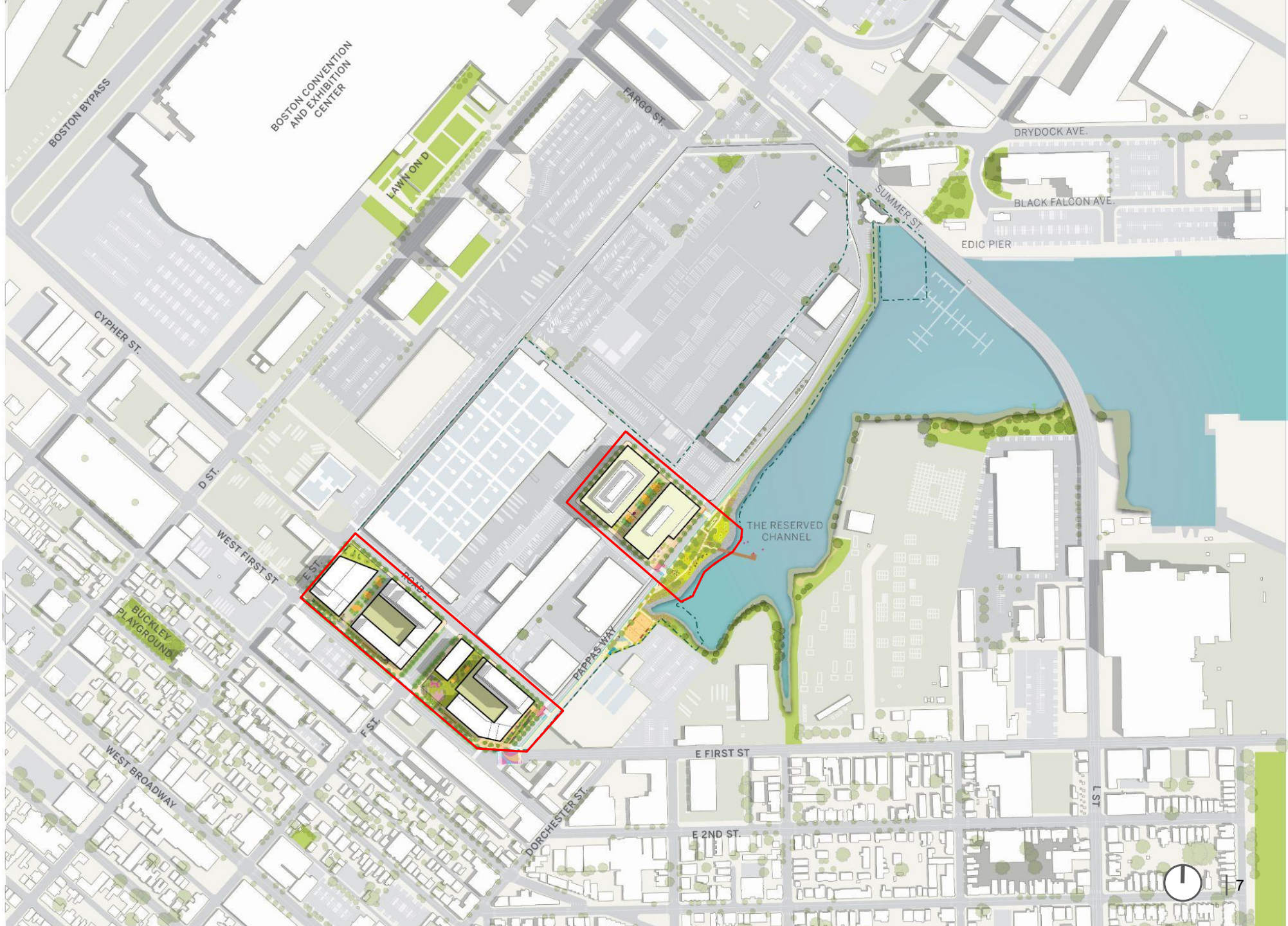
Project Location



Existing Site and Context



Phase 1 Development



Full Built Out



Key Open Spaces

Existing **2.9 Acres** of Open Space (7%)

Proposed **11.2 Acres** of Open Space (27% of Site)

+8.3 Acres of New Open Space (20% increase)

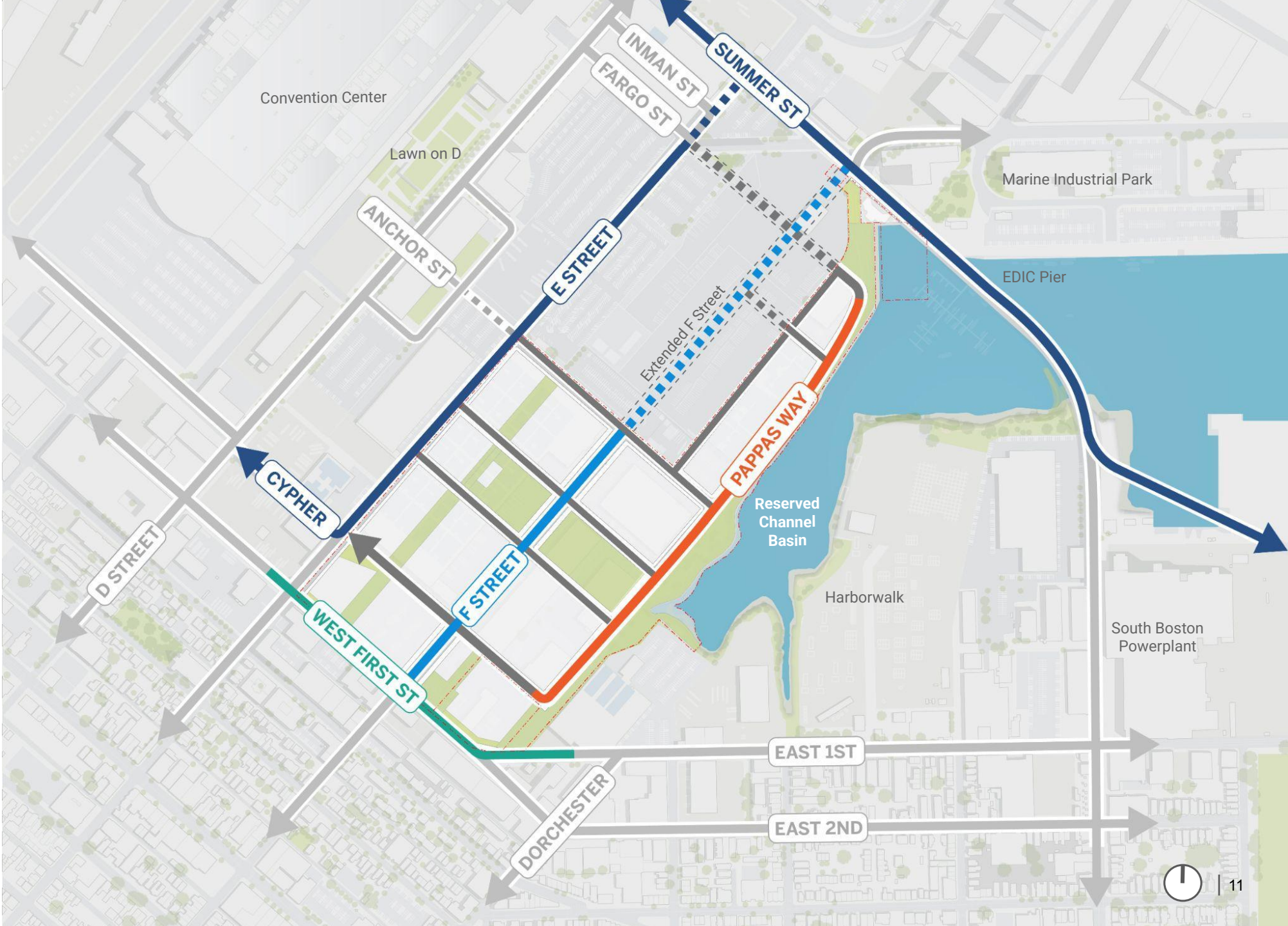


Existing Street Network



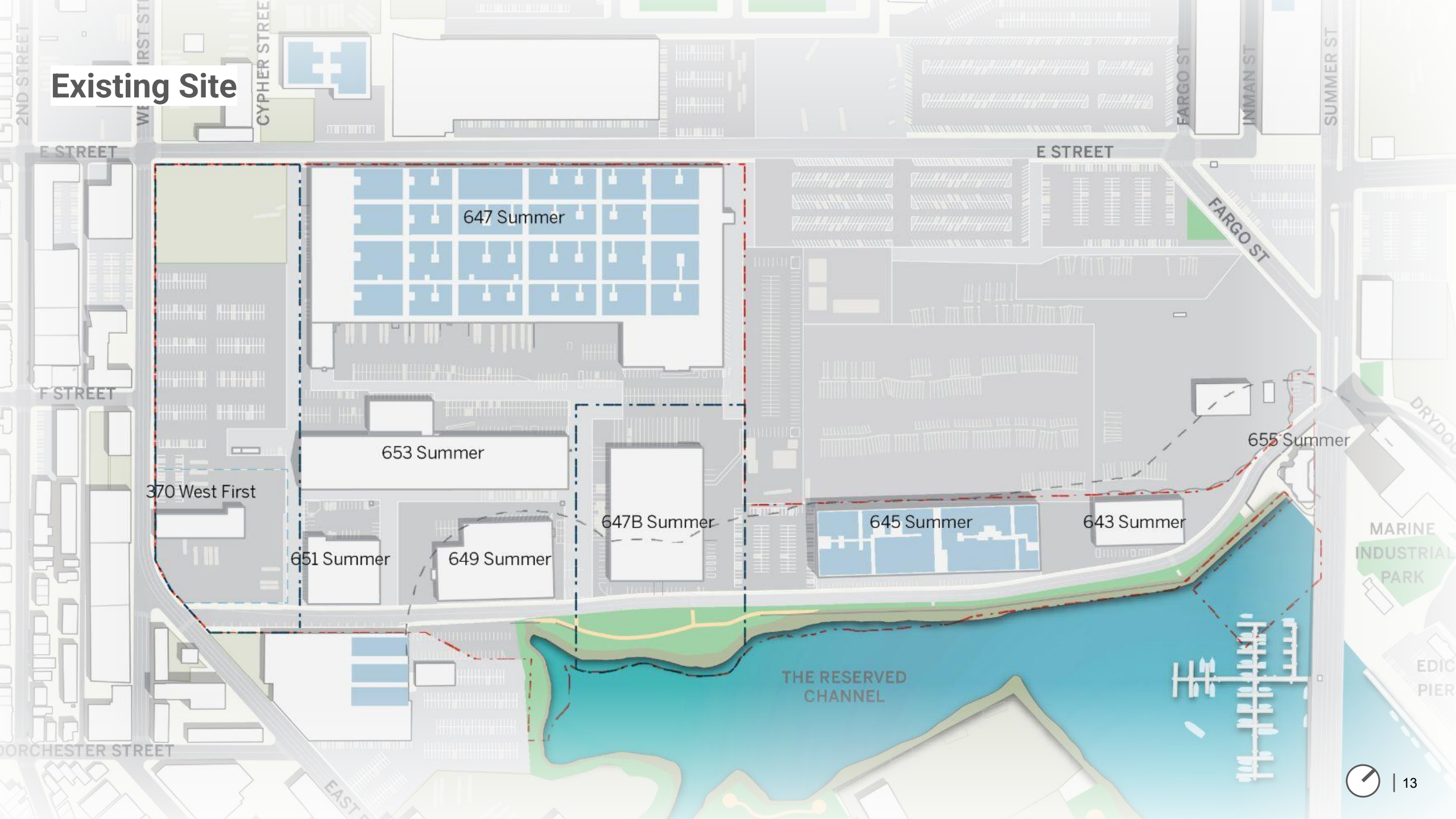
Existing Streets

Proposed Streets



Phasing and Framework Flexibility

Existing Site

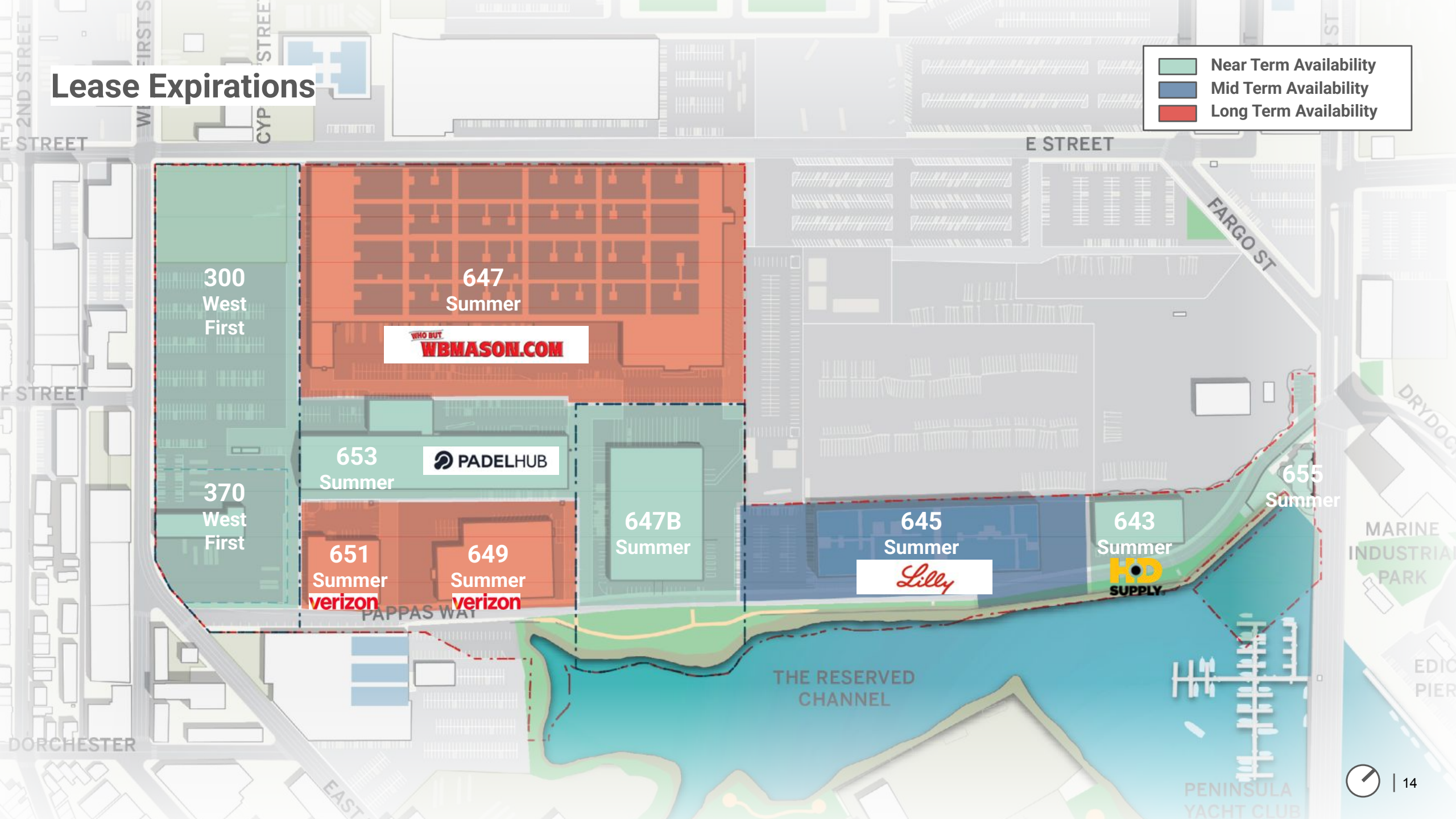


Lease Expirations

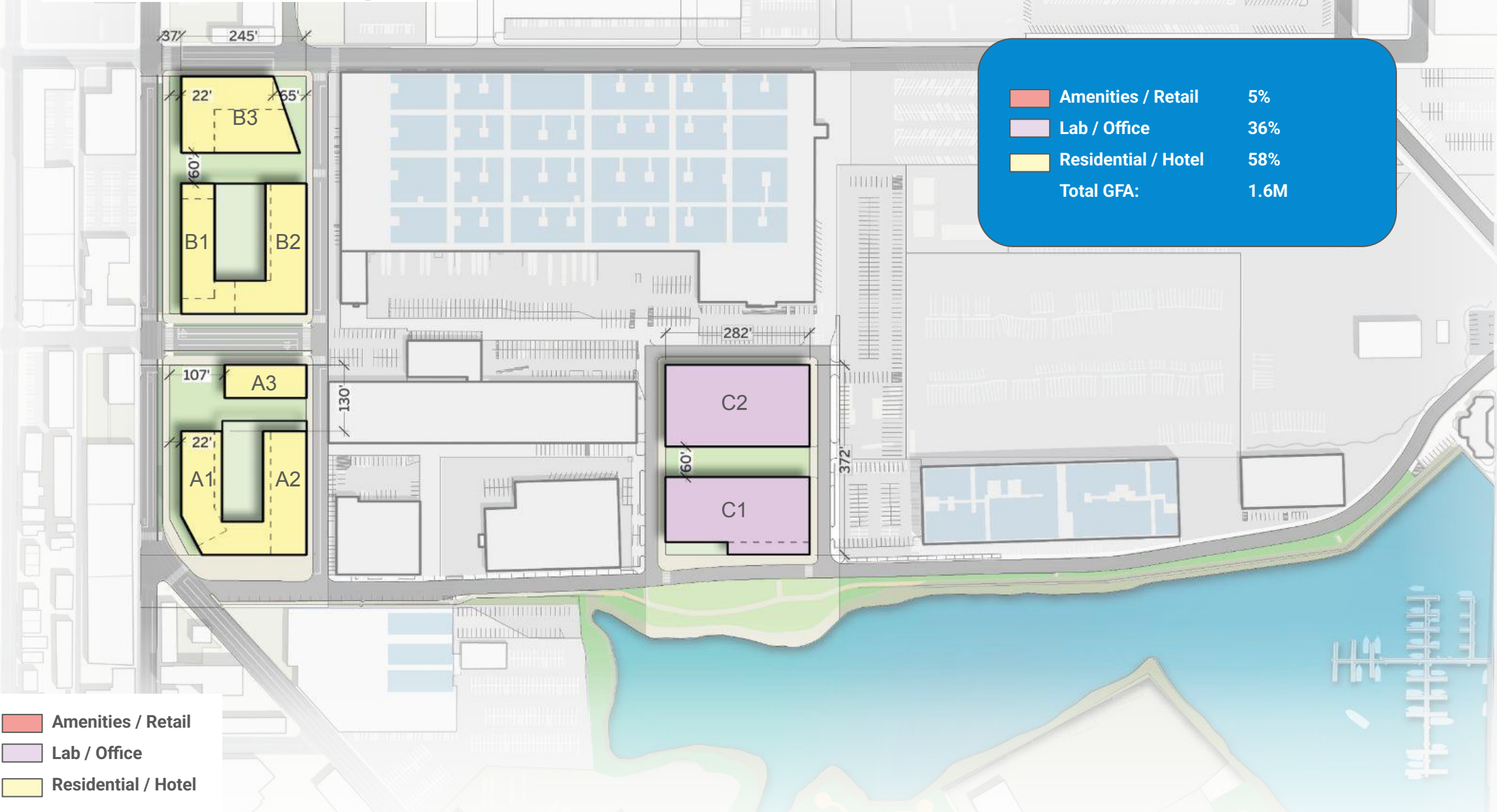
Near Term Availability

Mid Term Availability

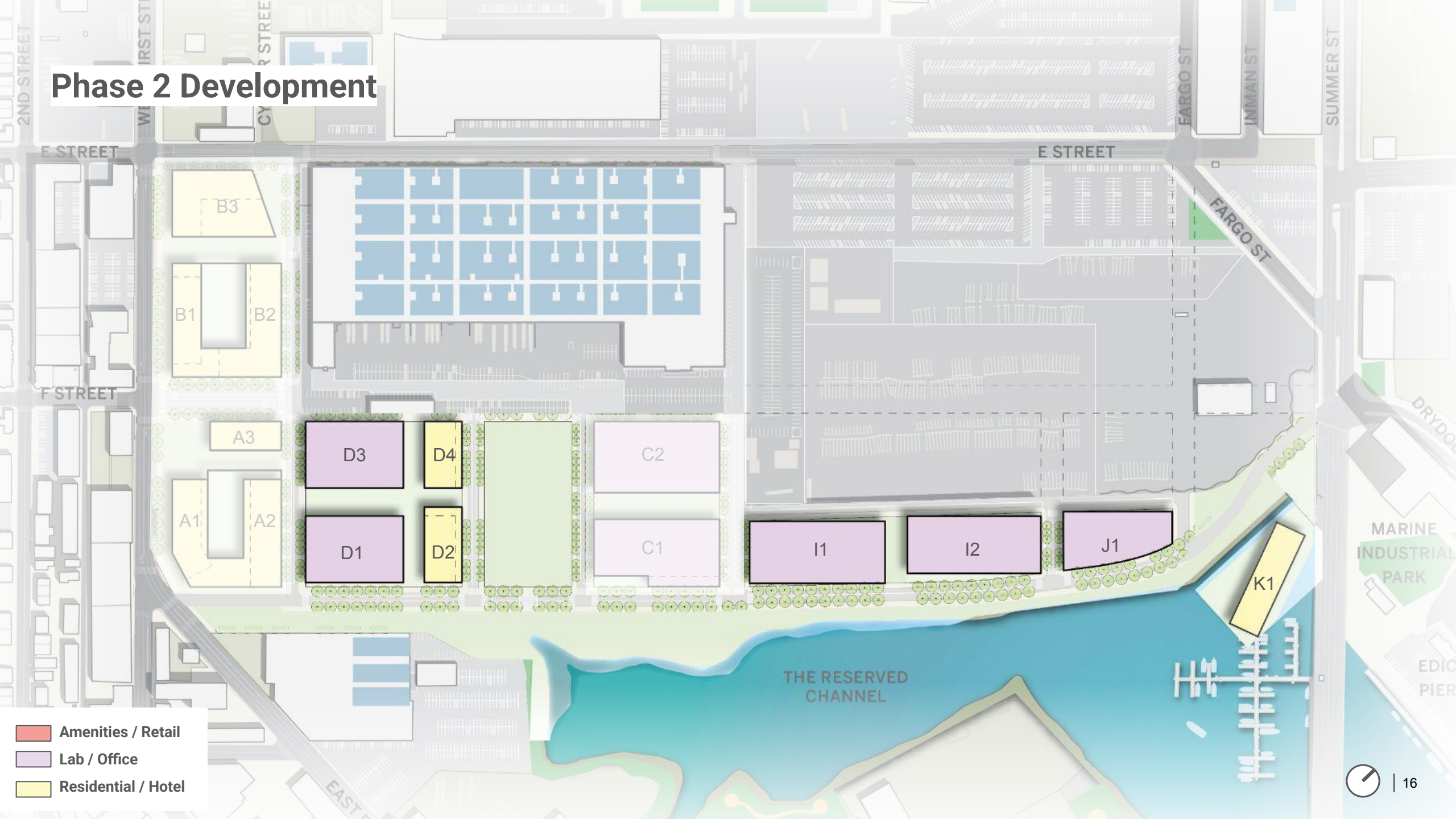
Long Term Availability



First Phase Development



Phase 2 Development



Phase 3 Development

	Amenities / Retail	4%
	Lab / Office	68%
	Residential / Hotel	28%
Total GFA:		6M

	Amenities / Retail
	Lab / Office
	Residential / Hotel

Flexible Base Plan



Amenities / Retail

Lab / Office

Residential / Hotel

Potential Alternative Outcome



Amenities / Retail	4%
Lab / Office	53%
Residential / Hotel	43%
Total GFA:	6M

The Blocks



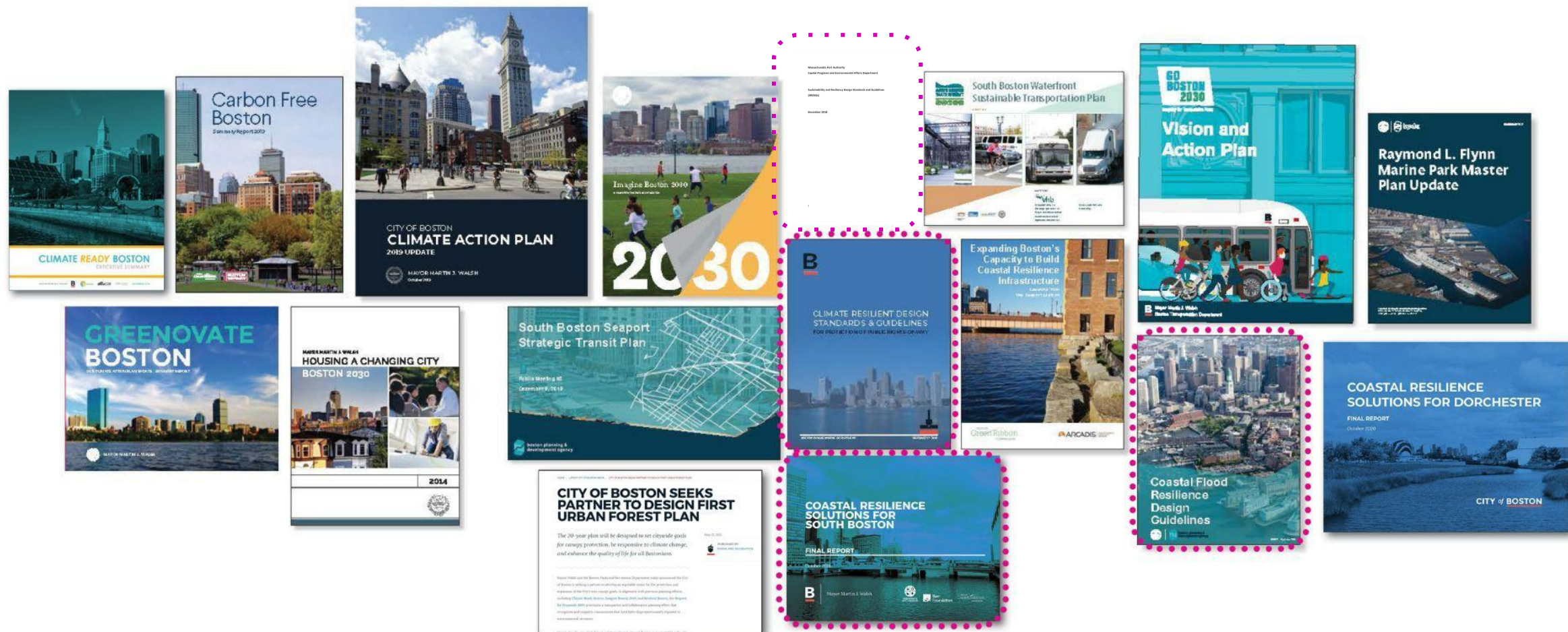
Resiliency

Resilience Goals

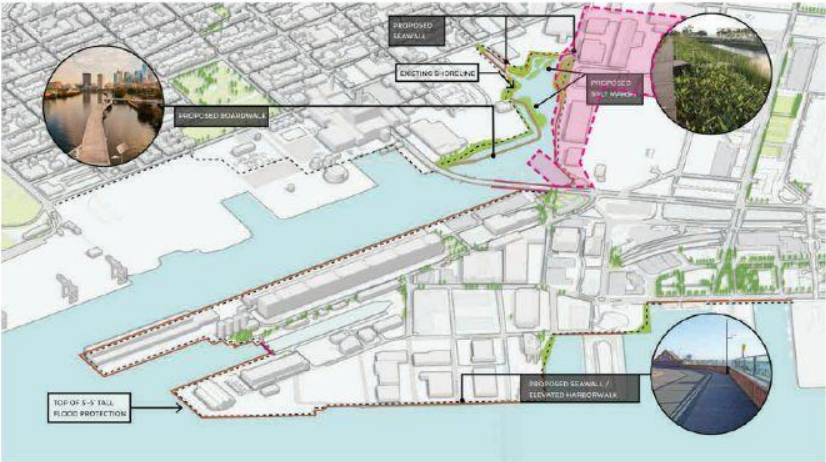
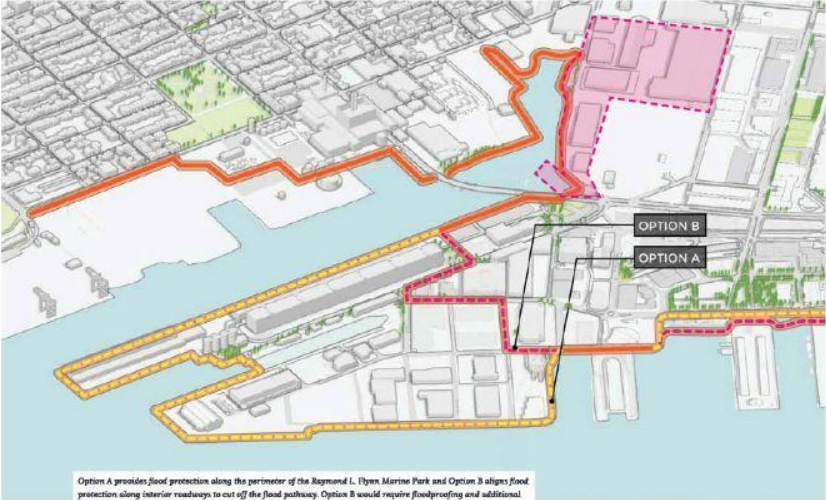
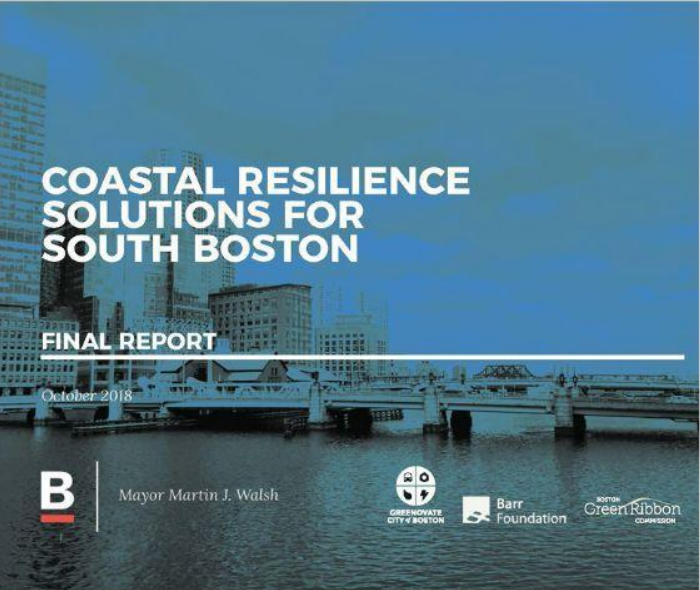
- 1| Develop an **accessible and inviting resilient waterfront landscape**
- 2| **Reduce impervious surface** on the site, adding areas for on site stormwater storage and infiltration
- 3| **Manage stormwater** (10-year, 24-hr storm) on site through a combination of engineered and landscape solutions
- 4| Expand and **enhance urban tree canopy**, cooling the site and mitigating the urban heat island effect
- 5| **Protect the site from coastal flooding, now and in the future.** Develop a long term resilient shoreline that compliments the city's vision for regional protection



Resilience Policy and Planning in Boston



City's Plan for Coastal Flooding and SLR



Estimated Costs for Alignment Options A and B

OPTION A	
ESTIMATED COST	\$97 - \$228 million
ESTIMATED MAINTENANCE COST	\$3.0 - \$3.4 million* per year

*Maintenance costs are expected to be 1.5 percent of the total cost to implement the solution and excludes floodproofing operations and maintenance (CFM).

OPTION B	
ESTIMATED COST	\$132 - \$193 million
ESTIMATED MAINTENANCE COST	\$2.0 - \$2.9 million* per year*

*Maintenance costs are expected to be 1.5 percent of the total cost to implement the solution and excludes floodproofing operations and maintenance (CFM).

RAYMOND L. FLYNN MARINE PARK: MID-TERM AND LONG-TERM COASTAL RESILIENCE SOLUTIONS

We examined two alignment alternatives for the Raymond L. Flynn Marine Park and Reserved Channel:

Option A. Flood protection along the perimeter of the Raymond L. Flynn Marine Park and Reserved Channel

Option B. Flood protection interior to the Marine Park

For each option, there are minor variations possible for the alignments, and for each alignment, there are multiple technical approach options and a variety of possible design concepts.

EFFECTIVENESS

The effectiveness of both options is limited in the long term by flood pathways generated from other parts of the district. Flood pathways originating in the Airport Boulevard area could connect with Raymond L. Flynn Marine Park and Reserved Channel flood pathways with 9 inches of sea level rise, or a low probability flood event now. The effectiveness of Option B largely depends on individual building floodproofing on the water side of the solution. Option A may be the most effective for the large portion of the Raymond L. Flynn Marine Park that would otherwise be at risk to at least monthly flooding with 40 inches of sea level rise.

ALIGNMENT OPTION A: FLOOD PROTECTION OPTIONS AT THE SHORELINE OF THE MARINE PARK

Option A includes a perimeter water's edge solution (e.g., flood wall, sea wall, stepped access) to prevent flooding within the Raymond L. Flynn Marine Park.

Principal causes of future design cost variation could include:

- Whether the flood protection alignment occurs on existing land or within the water
- Whether the structure is a wall or earthen feature
- Ship to shore connections
- The number of penetrations of the protection feature (for example, requiring flap gates or surface openings with closeable flood gates)

Current unknowns include:

- The number, type, and condition of existing outfalls along shoreline
- The number, type, and condition of buried subsurface utilities (electric, gas, stormwater, wastewater, fiber, etc.)
- Subsurface soil permeability conditions and the necessity for seepage cutoff measures such as sheet pile, earth walls, or other measures
- Ability to permit in-water construction and the presence of contaminated soils
- Availability of materials and labor and material costs

EVALUATION CRITERIA PERFORMANCE

CRITERION	PERFORMANCE
EFFECTIVENESS	4/5
ENVIRONMENTAL IMPACT	4/5
DESIGN LIFE AND ADAPTABILITY	4/5
FEASIBILITY	4/5
EQUITY	4/5
SOCIAL IMPACT	4/5
VALUE CREATION	4/5

KEY CONSIDERATIONS:

- Careful design is required to avoid disruption of current and planned waterfront uses
- Potential operational disruption during construction of the flood protection solutions
- Can be designed to address 40 inches of sea level rise now and may be adapted to address higher flooding later

Source: Coastal Resilience Solutions for South Boston, 2018



Mitigating Coastal Flooding

Create a dynamic waterfront that features natural and built infrastructure to protect from sea level rise and coastal flooding.

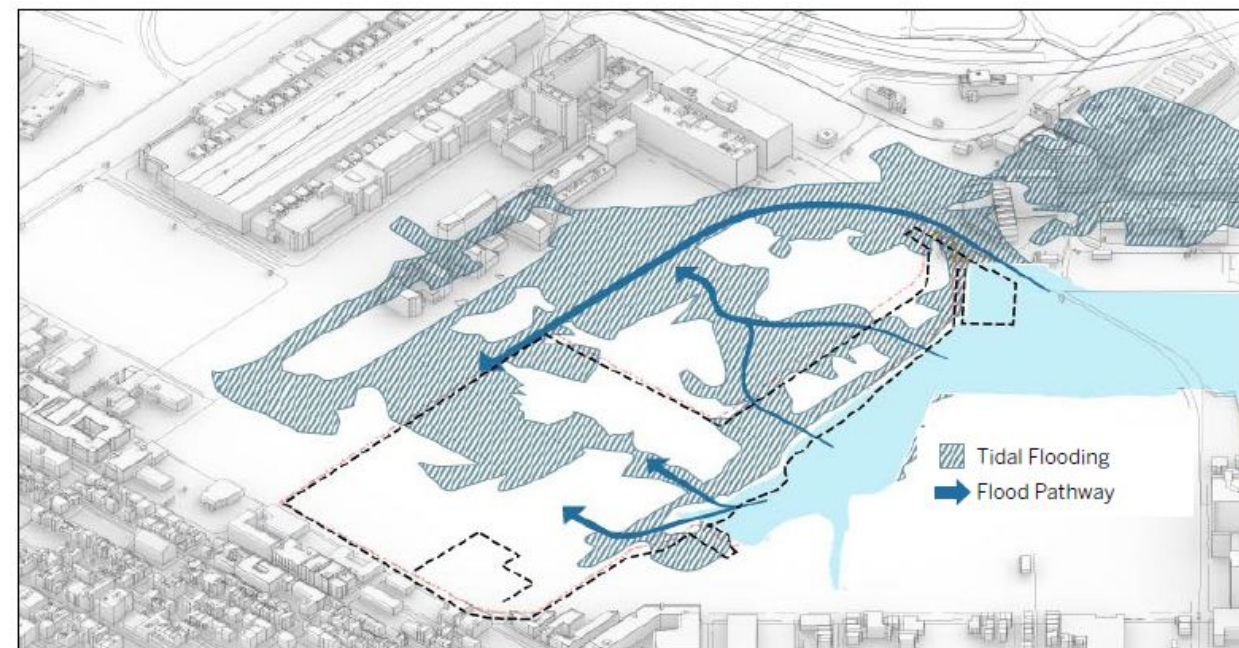
Some elements for mitigation might include:

- Buildings designed to withstand flooding
- Resilient open spaces
- Natural or Nature-based Infrastructure
- Elevated Site

COASTAL FLOODING AT THE RESERVED CHANNEL



1% Annual Chance Flood.



Average Monthly High Tide with 40" of Sea Level Rise



Managing Stormwater

Create a performative district that features green and grey infrastructure to capture rainfall and alleviates existing infrastructures

Some elements for mitigation might include:

- Bioretention Areas
- Vegetated Swales
- Constructed Wetlands
- Green roofs
- Permeable Pavers
- Underground Storage Tanks

PROJECTED STORMWATER FLOODING

Approximate stormwater flooding extents from a 10-year, 24-hour rainfall event under various climate conditions, due to combined future sea level rise and extreme precipitation (5.6-inch, 5.8-inch, and 6-inch rainfall).

Source: Boston Water Sewer Commission Wastewater Facilities Study

Note: This data should not be used for detailed analysis as it does not necessarily identify all areas subject to flooding particularly from local drainage sources of small size. Users should be aware that inundation areas are calculated by mathematical models with precision that is limited to historical calibrations.

STORMWATER FLOODING

■ Stormwater Flooding

▭ Project Site

Source: <http://www.boston.gov/departments/environment/climate-ready-Boston-map-explorer>

RESERVED CHANNEL DEVELOPMENT MASTER PLAN





Mitigating Extreme Heat

Create a robust tree canopy planting and other passive cooling options to provide relief from increasing temperatures

Some Mitigation elements might include:

- Urban Tree Canopy
- Robust Planting
- Pervious surfaces
- High Albedo materials
- Water Features

URBAN HEAT ISLAND



Data Source: Mass GIS (Bureau of Geographic Information) 2016

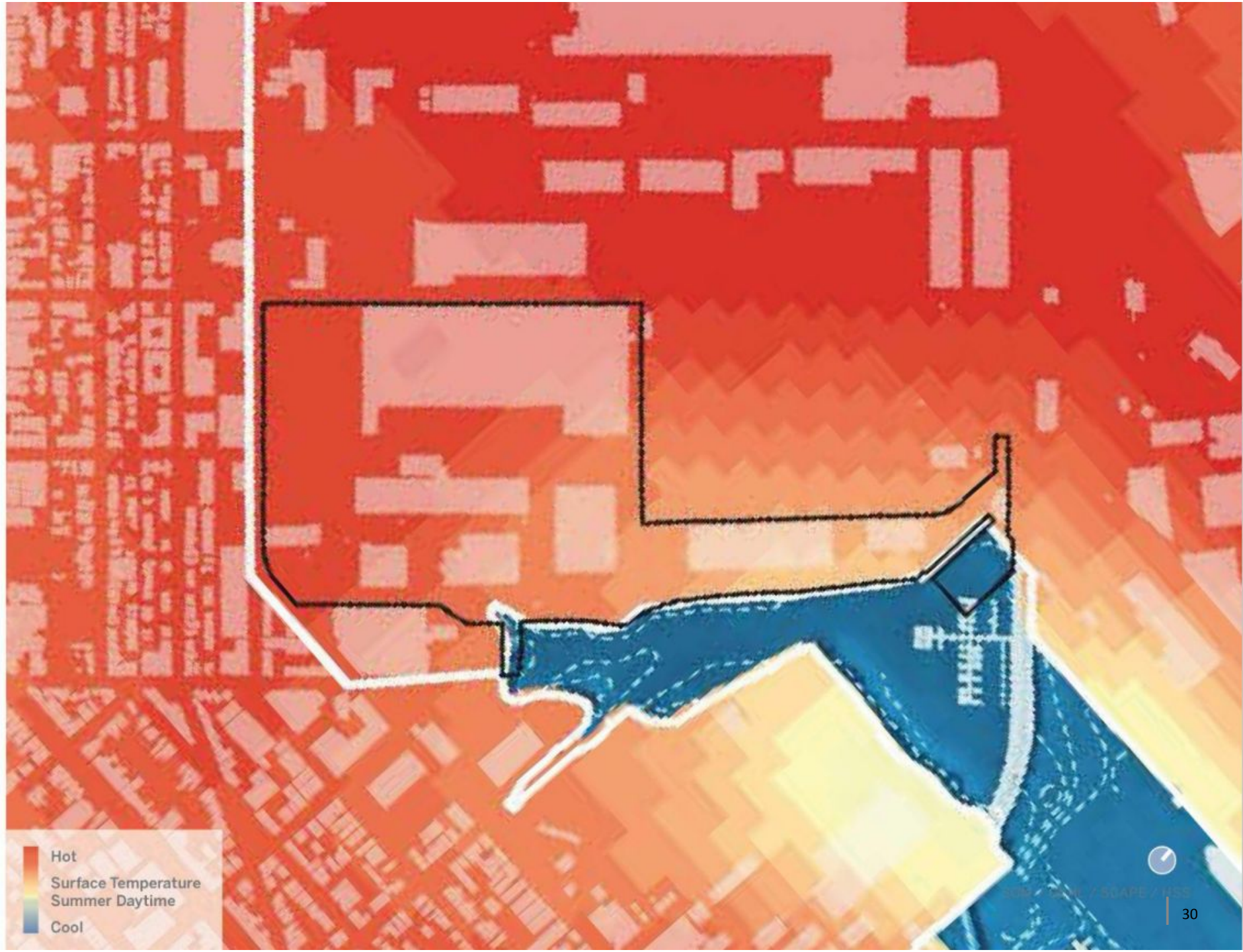
Tree Canopy
Permeable Soil
Bareland
Impervious



Data Source: City of Boston: Open data, Analyze Boston

Heat Island Data Source: Wang, Jonathan, 2019, "Land surface temperature and urban heat island effects on air temperature and vapor pressure deficit in Boston, MA", Harvard Dataverse, V1

RESERVED CHANNEL DEVELOPMENT MASTER PLAN



Hot
Surface Temperature
Summer Daytime
Cool

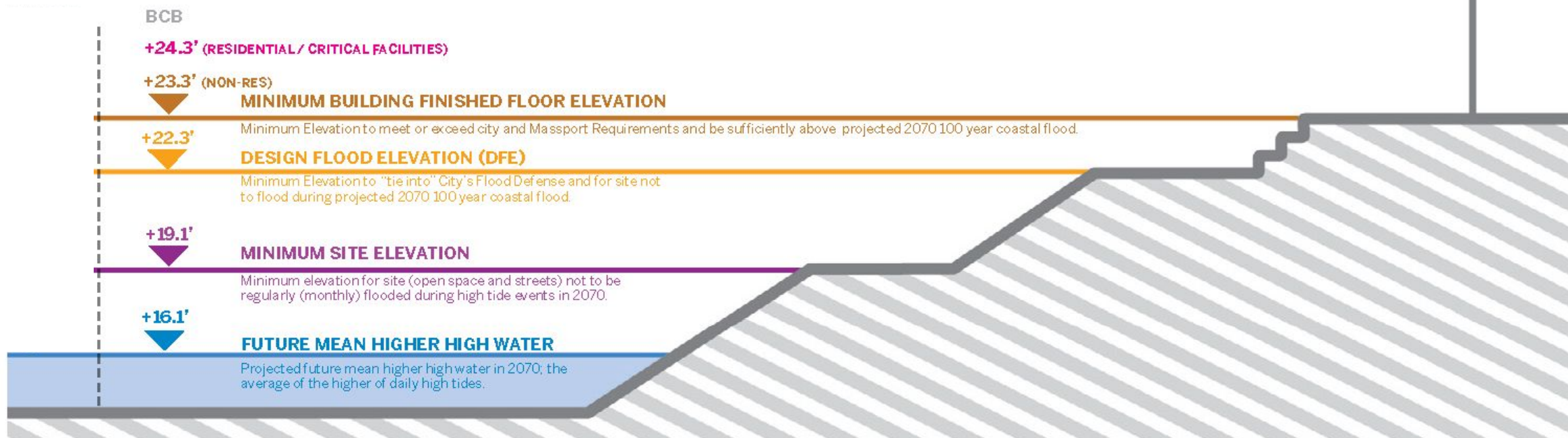


DATUM - MC-FRM**		BCB*	
BUILDING FINISHED FLOOR ELEVATION (FFE)	Minimum Elevation to meet or exceed city and Massport Requirements and be sufficiently above projected 2070 100 year coastal flood	23.1'-24.3' (16.6'-17.8' NAVD88)	City assumed DFE derived from MC-FRM +1'-2' Freeboard
DESIGN FLOOD ELEVATION (DFE)	Minimum Elevation to "tie into" City's Flood Defense and for site not to flood during projected 2070 100 year coastal flood	22.1'-23.3' (15.6'-15.8' NAVD88)	City assumed DFE derived from MC-FRM
MIN' WATERFRONT/ SITE ELEVATION	Minimum elevation for site (open space and streets) not to be regularly (monthly) flooded during high tide events in 2070.	19.1' (12.6' NAVD88)	MHHW+58" SLR derived from MC-FRM +3' Max Tide
FUTURE MEAN HIGHER HIGH WATER	Projected future mean higher high water in 2070; the average of the higher of daily high tides.	16.1' (9.6' NAVD88)	MHHW+58" SLR derived from MC-FRM

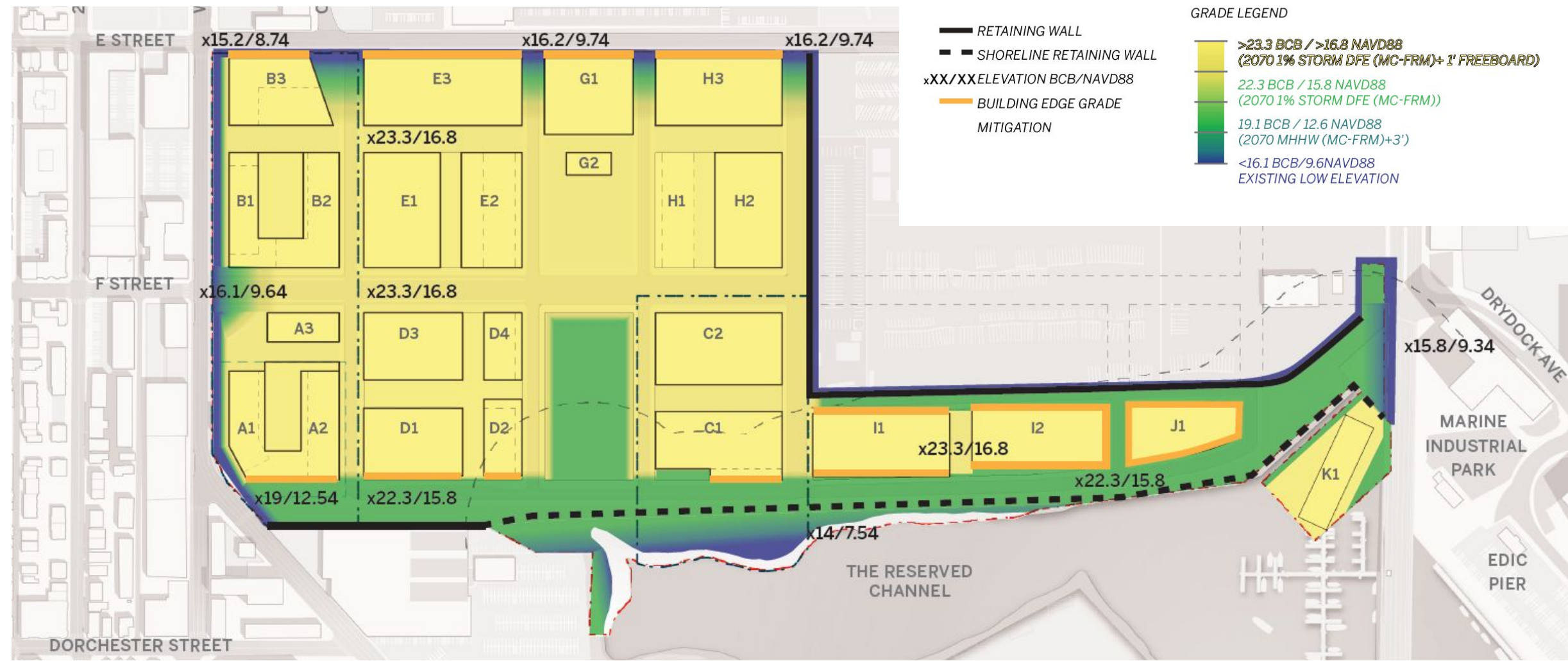
* Note: For elevations in Boston City Base, NAVD88 conversions are provided.

**Derived using data from the latest Massachusetts Coastal Flood Risk Model (MC-FRM)

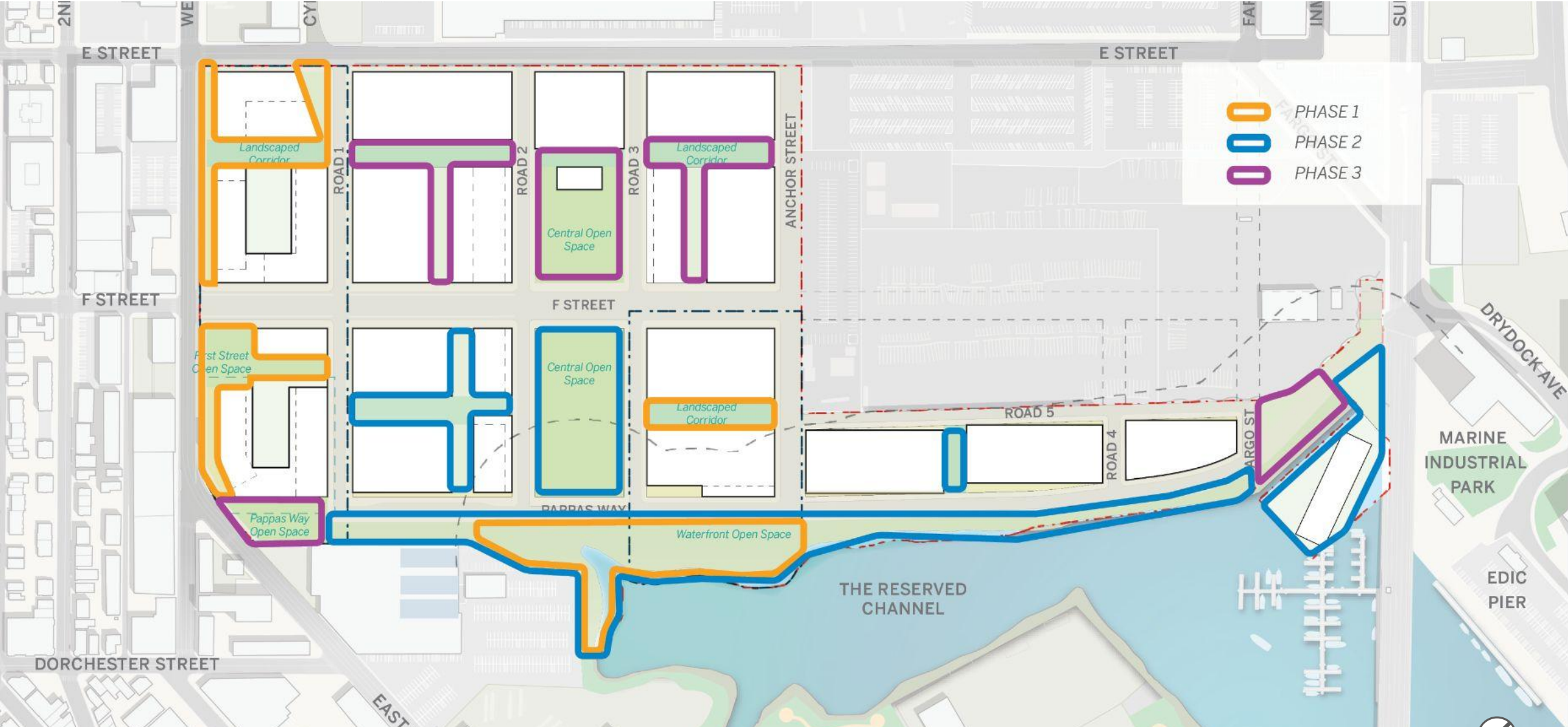
DERIVED FROM MC-FRM**



Full Buildout - Grading and Grade Change Mitigation



Open Space Sequence



Resilience Benefits

1. Meet and exceed the State and City minimum flood defense Flood Elevations

- Design Flood Elevations: from 22.1' to 23.3' BCB (depending on open space type)
- Finished Floor Elevations: from 23.3' to 24.3' BCB (depending on building type)
- All critical equipment elevated above 23.46' BCB (per Massport floodproofing design guidelines)

2. Maintain and create good urban connections with the surrounding neighborhoods

- Shallow slopes and open spaces to navigate grade change

3. Mitigate any potential increases in stormwater flooding

- Site is currently 95% Impervious
- Project proposes vast open space and landscape areas including provisions for green infrastructure to manage stormwater

4. Mitigate heat island effect through tree planting and exceeding the city's tree canopy coverage guidance

- More than 250 estimated added trees in Phase 1 (<50 existing trees currently)
- More than 1,000 estimated added trees in the full master plan
- More than 25% tree canopy coverage

5. Provide stewardship and educational opportunities

PHASE 1 DESIGN GUIDELINES

Design Guidelines Overview

1. Planning Orientation

- Intent of Design Guidelines
- Background
- Block Plan Parameters

1. Public Realm Design Guidelines

Overview

- Approach
- Character Zones and Programming
- Resiliency Strategy

Open Spaces

- Landscaped Corridors
- West First Gateway
- Pappas Way (Interim Improvements)
- Waterfront Improvements (Interim Improvements)

Streetscapes

- West First Street
- F Street
- Road 1 (Interim Improvements)
- Road A, B, C (Interim Improvements)

3. Building Design Guidelines

Overview

- Height Control
- Massing Expression and Articulation
- Building Height and Mechanical Enclosures
- Access and Pedestrian Prioritization
- Building Frontages
- Design Expression

Block A Guidelines

- Setback and Street Relationship
- Massing
- Ground Floor Activation
- Facade Look and Feel

Block B Guidelines

- Setback and Street Relationship
- Massing
- Ground Floor Activation
- Facade Look and Feel

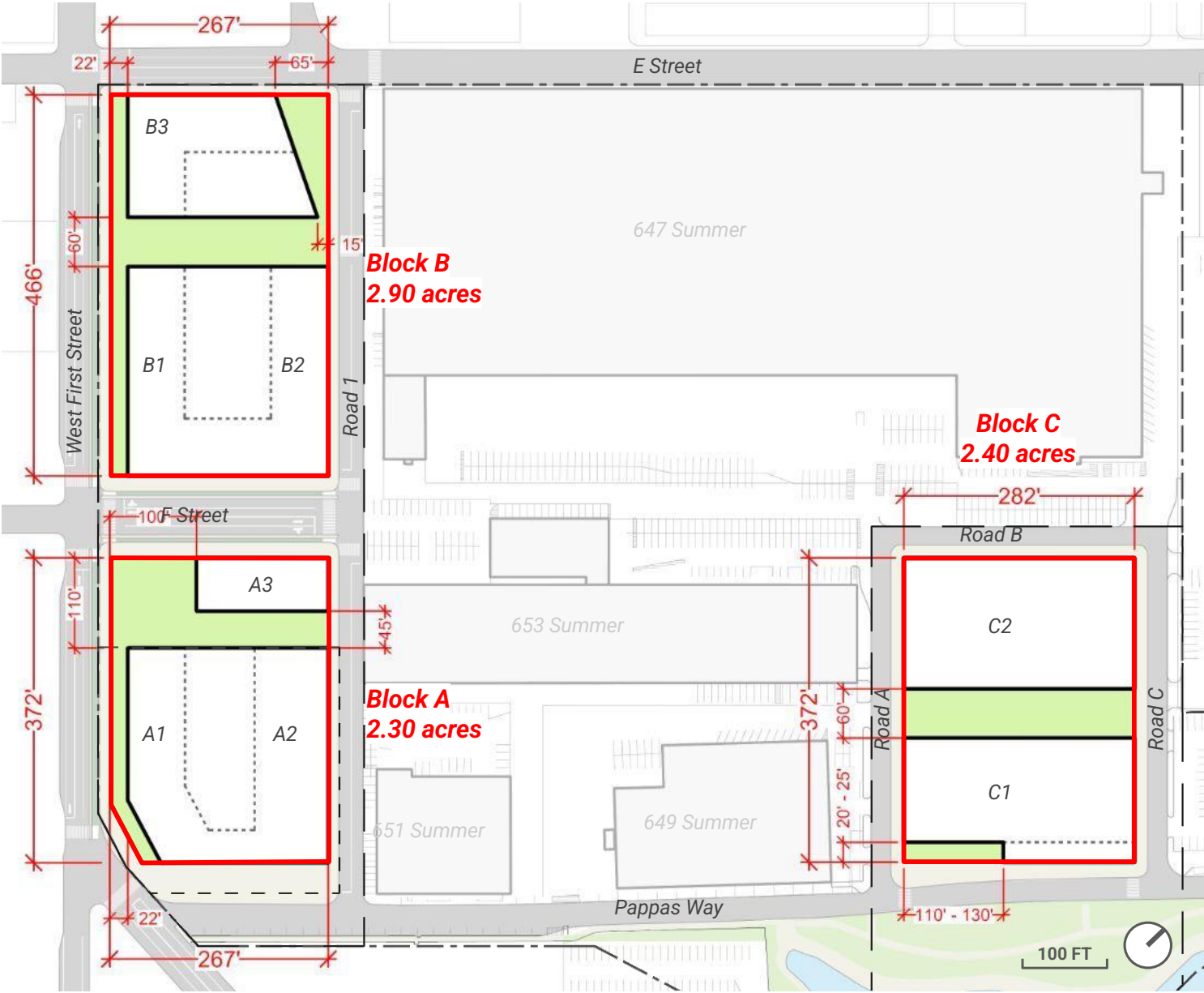
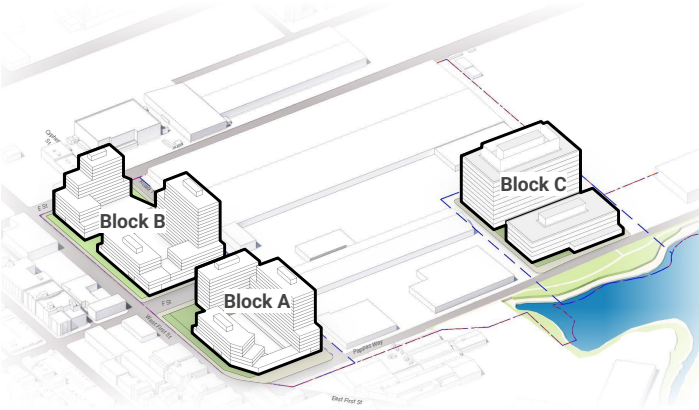
Block C Guidelines

- Setback and Street Relationship
- Massing
- Ground Floor Activation
- Facade Look and Feel



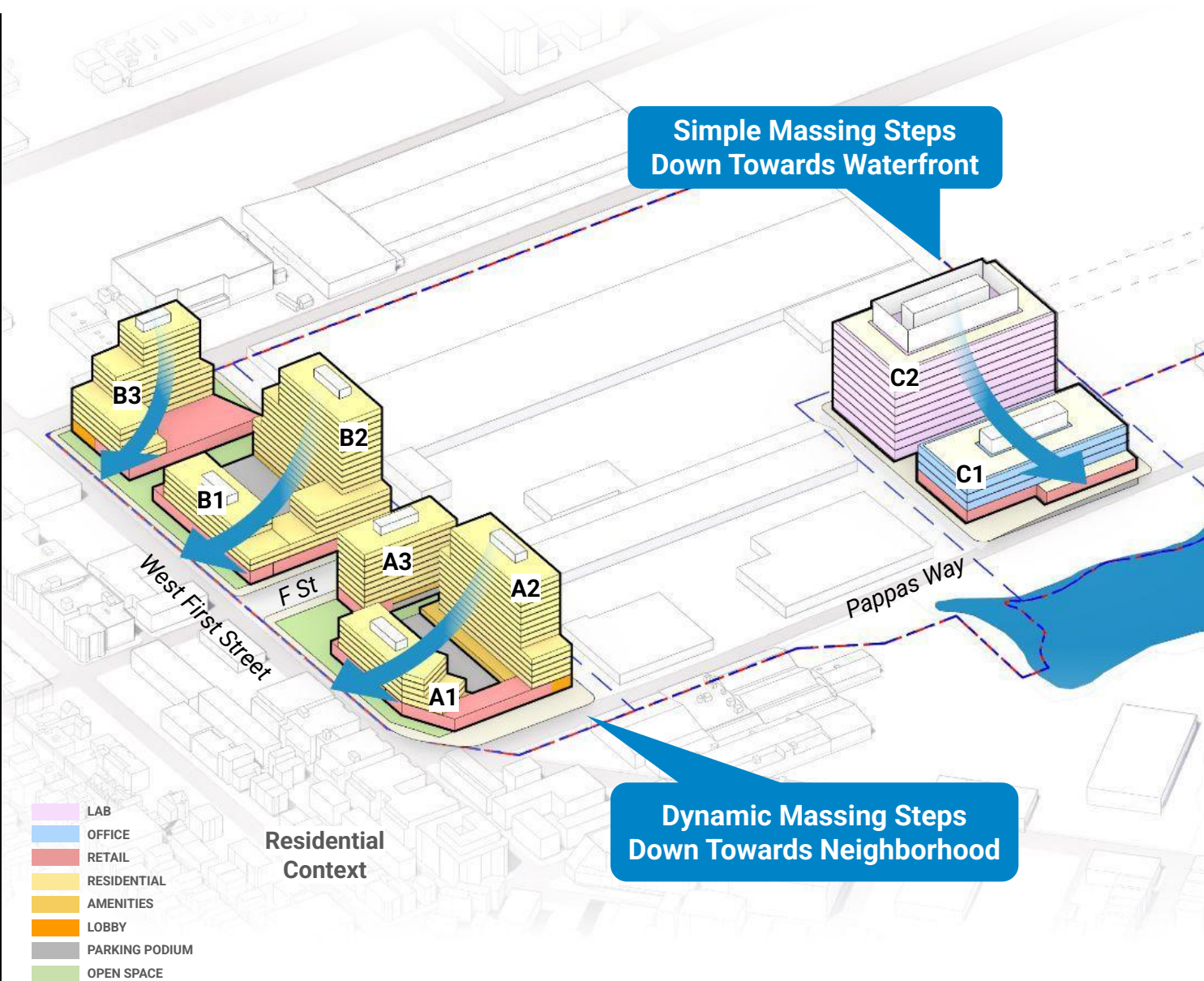
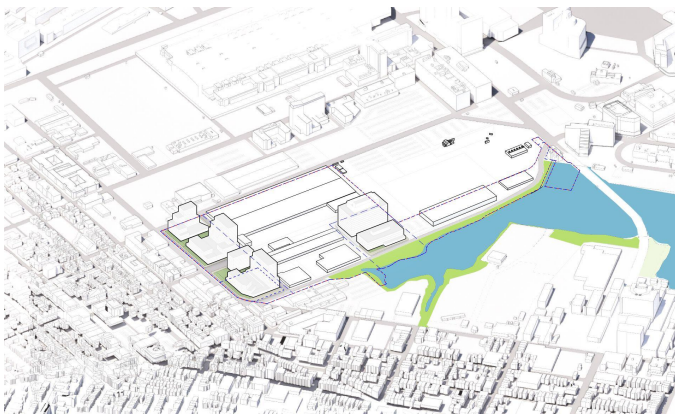
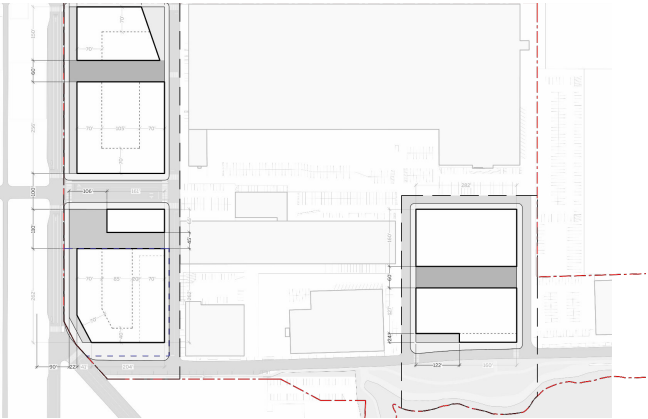
Design Guidelines

Planning Parameters



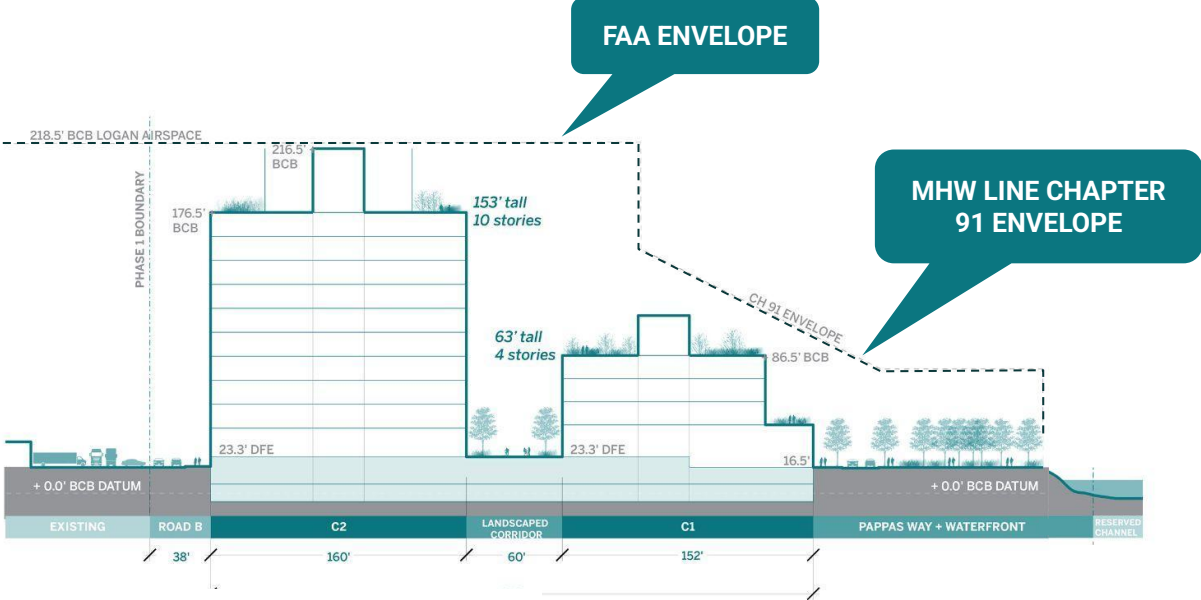
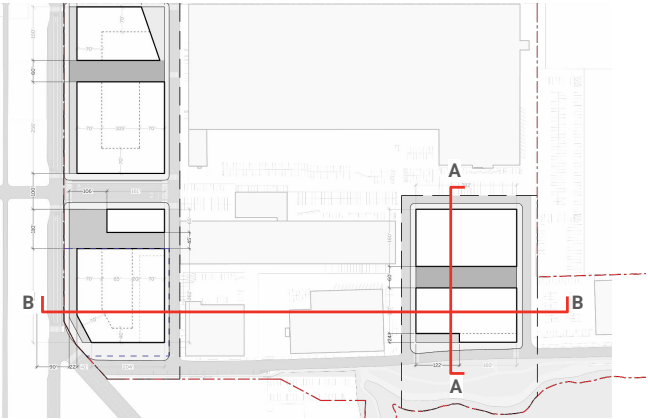
Design Guidelines

Massing Articulation

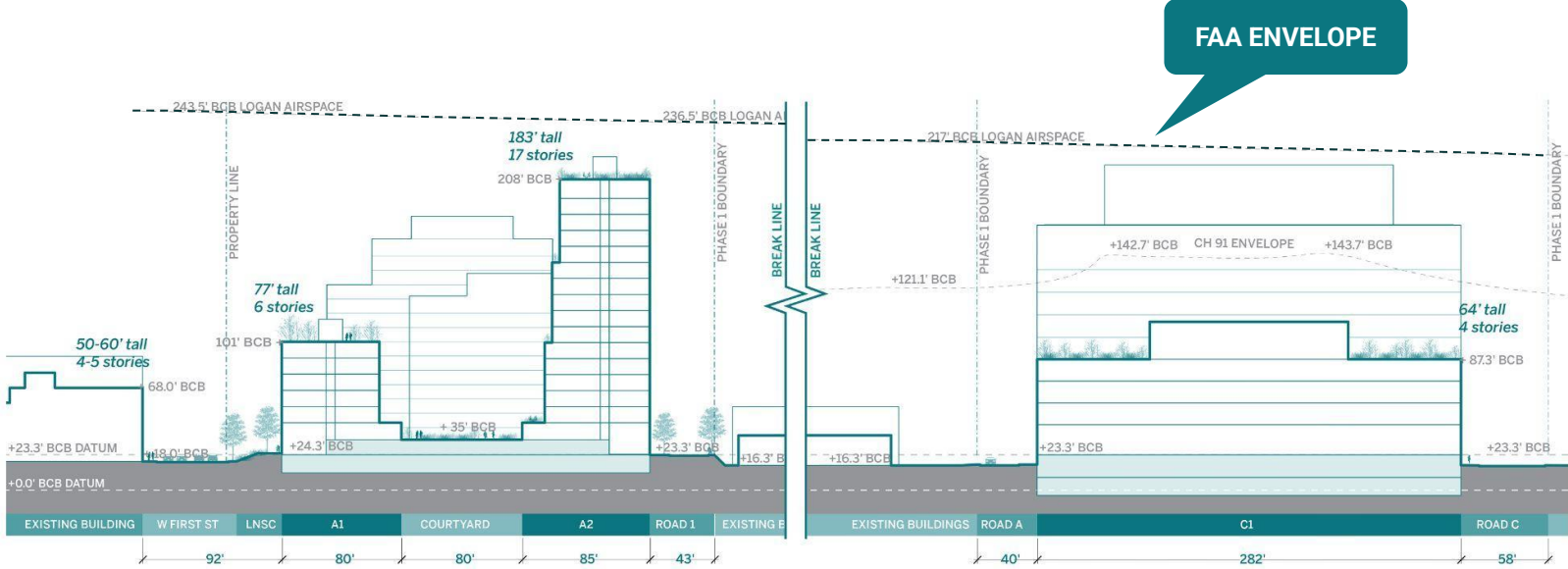


Design Guidelines

Sections



SECTION A

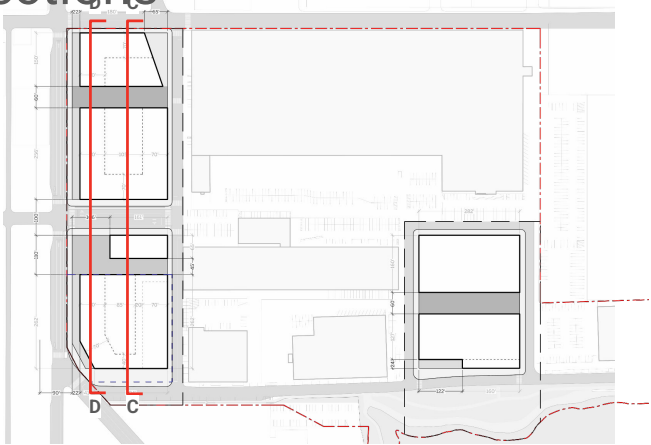


SECTION B

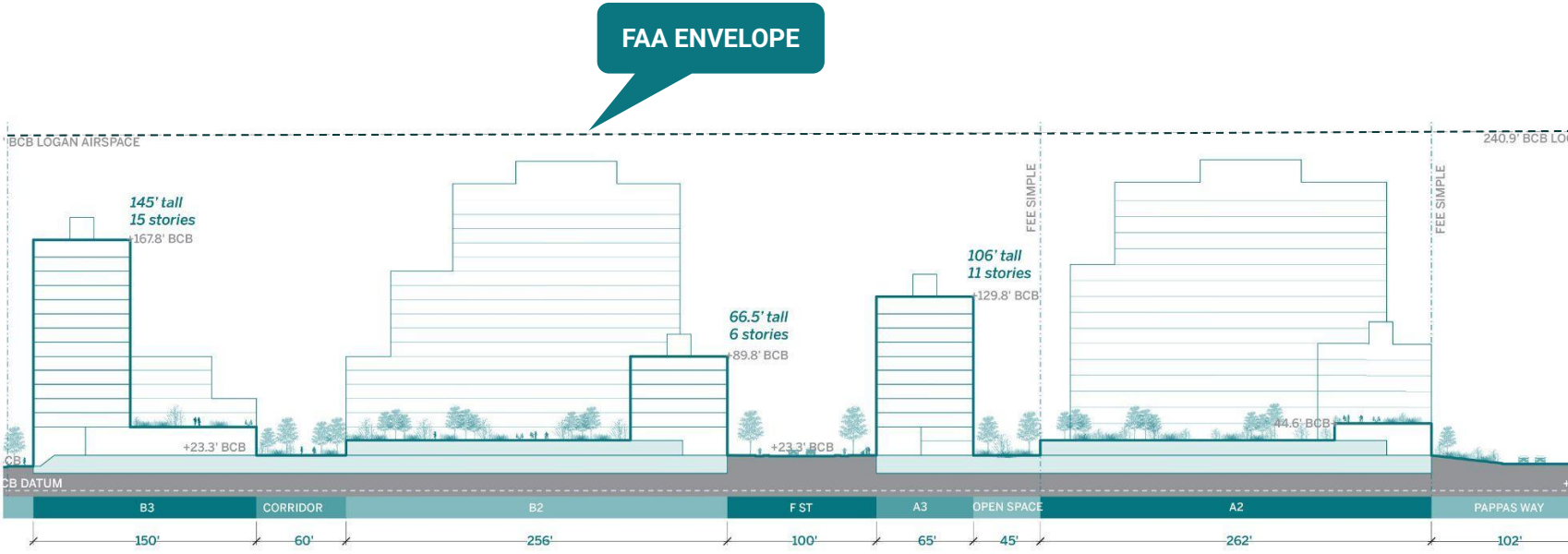
* Elevations are referenced to the BCB datum. To convert to NAVD88, subtract 6.46 ft.

Design Guidelines

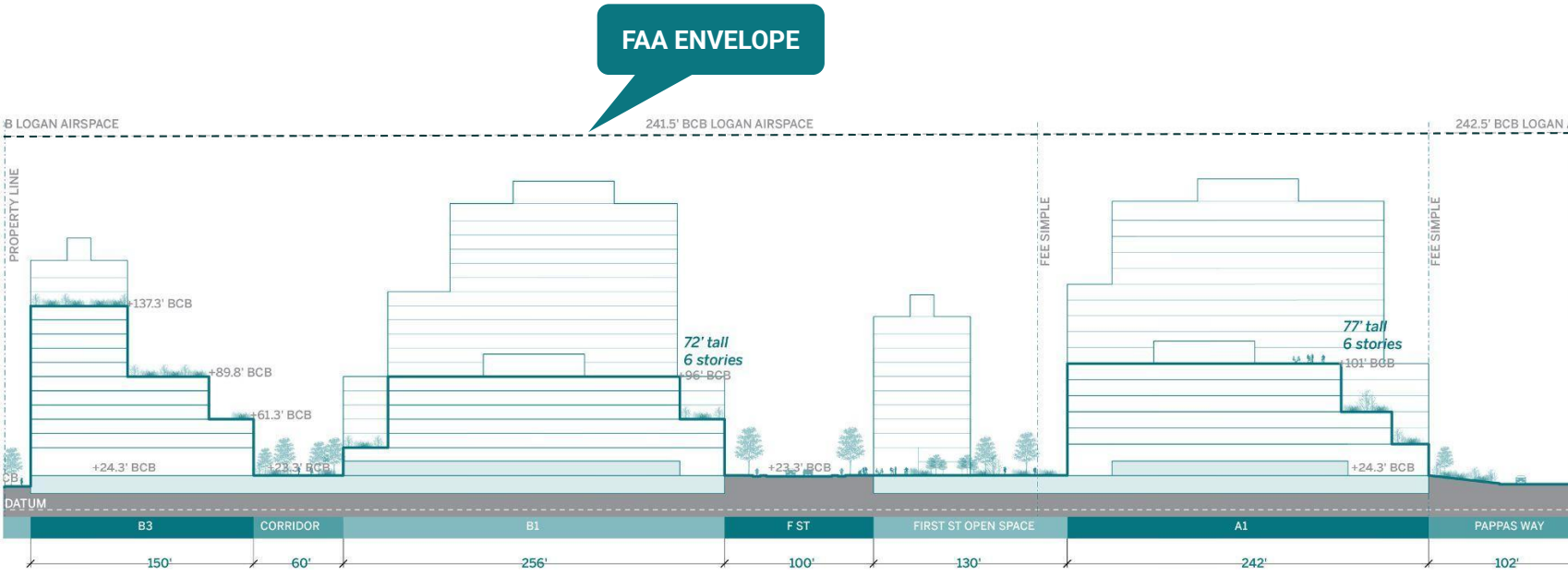
Sections



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SECTION C

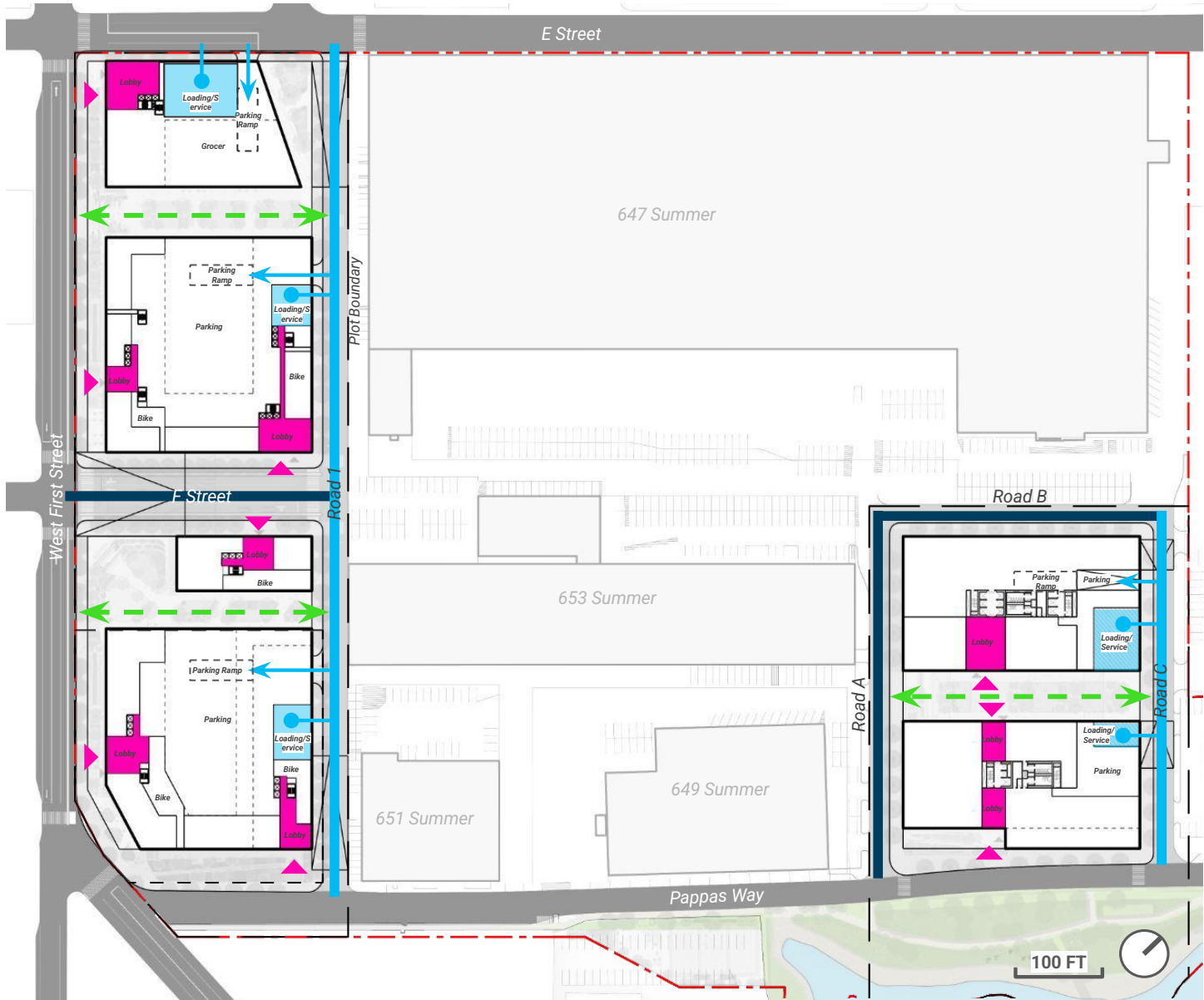


SECTION D

Design Guidelines

Pedestrian Access

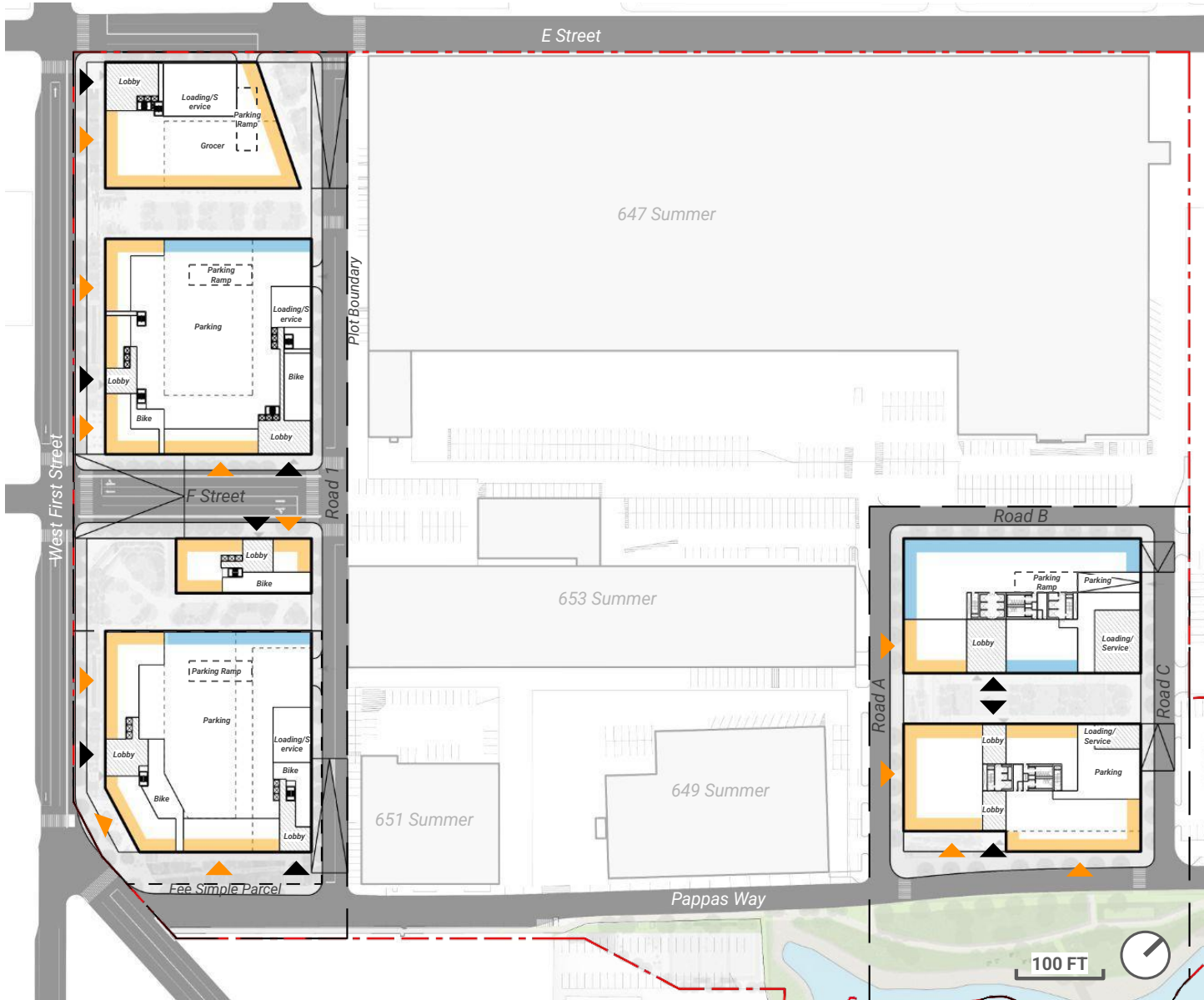
- Pedestrian/Open Passageways
- New Active Frontage Roads
- New Service Roads
- Existing Roads
- Lobby Entry
- Service Loading
- Parking Entry



Design Guidelines

Building Frontages

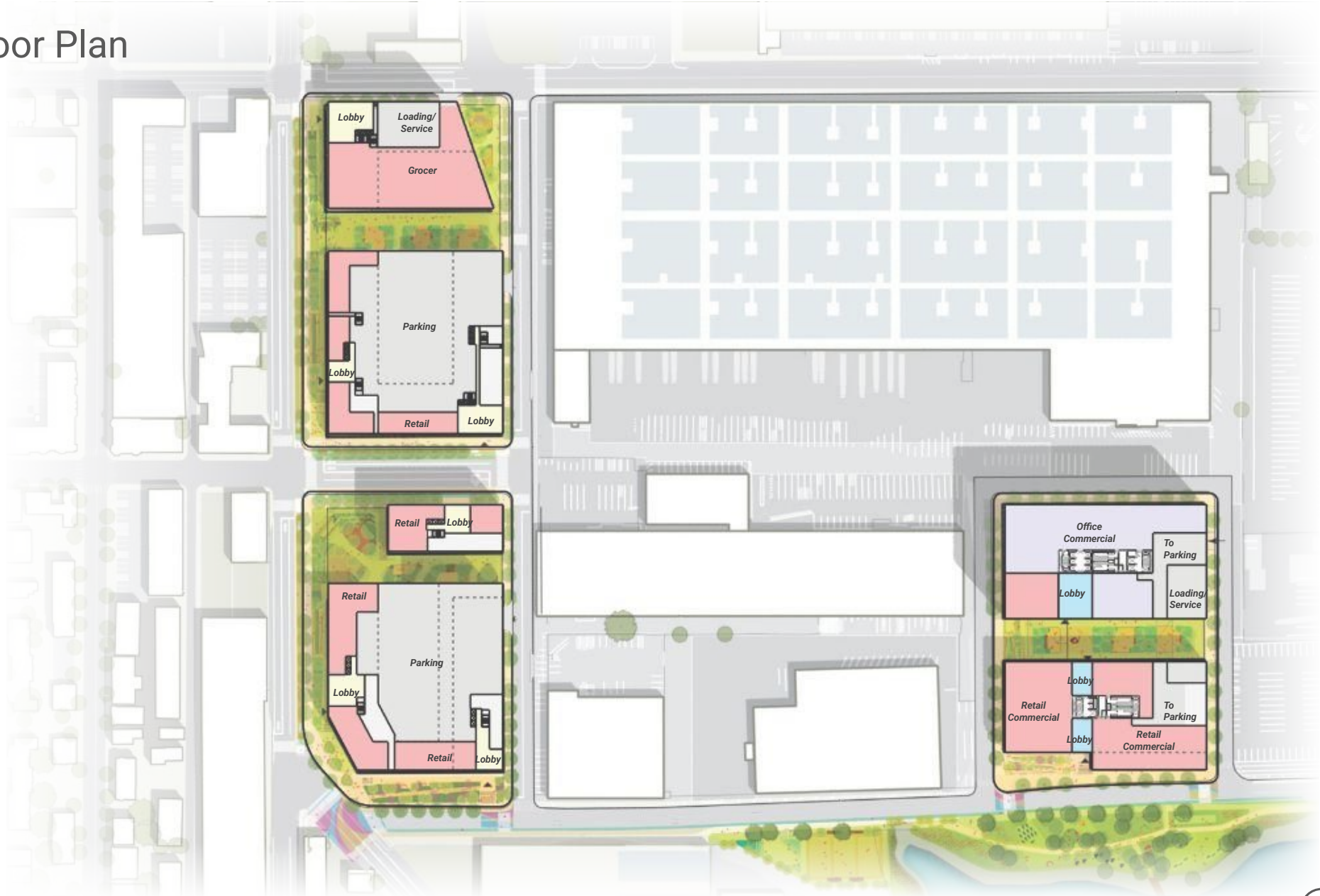
-  Lobby Entrance
-  Suggested Retail Entry
-  Active Frontage
-  Semi-active Frontage



Design Guidelines

Phase 1 Ground Floor Plan

- Residential Lobby
- Retail, Amenities
- Commercial Lobby
- Office Commercial
- Parking, BOH



Design Guidelines

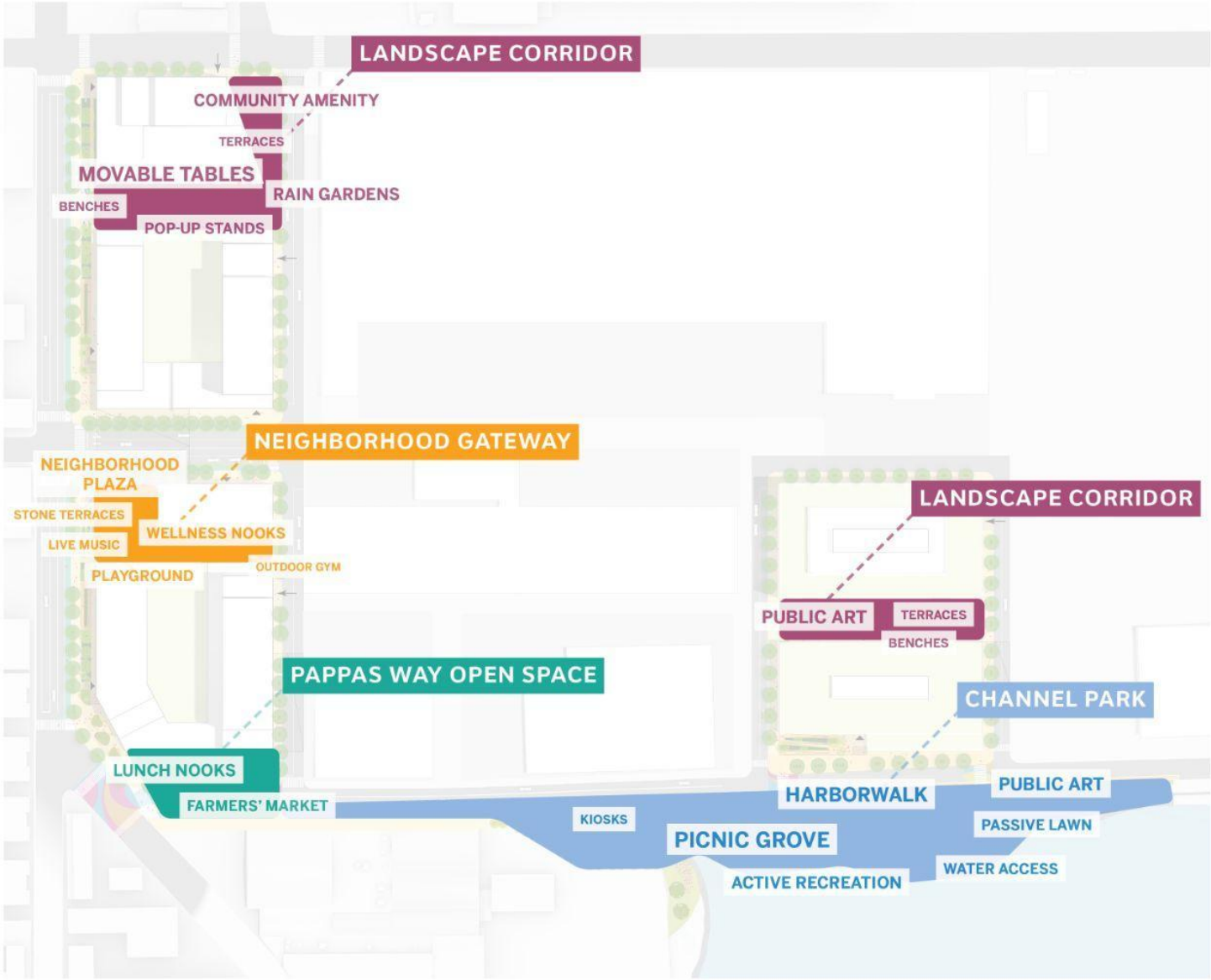
Public Realm Design



First Street Open Space

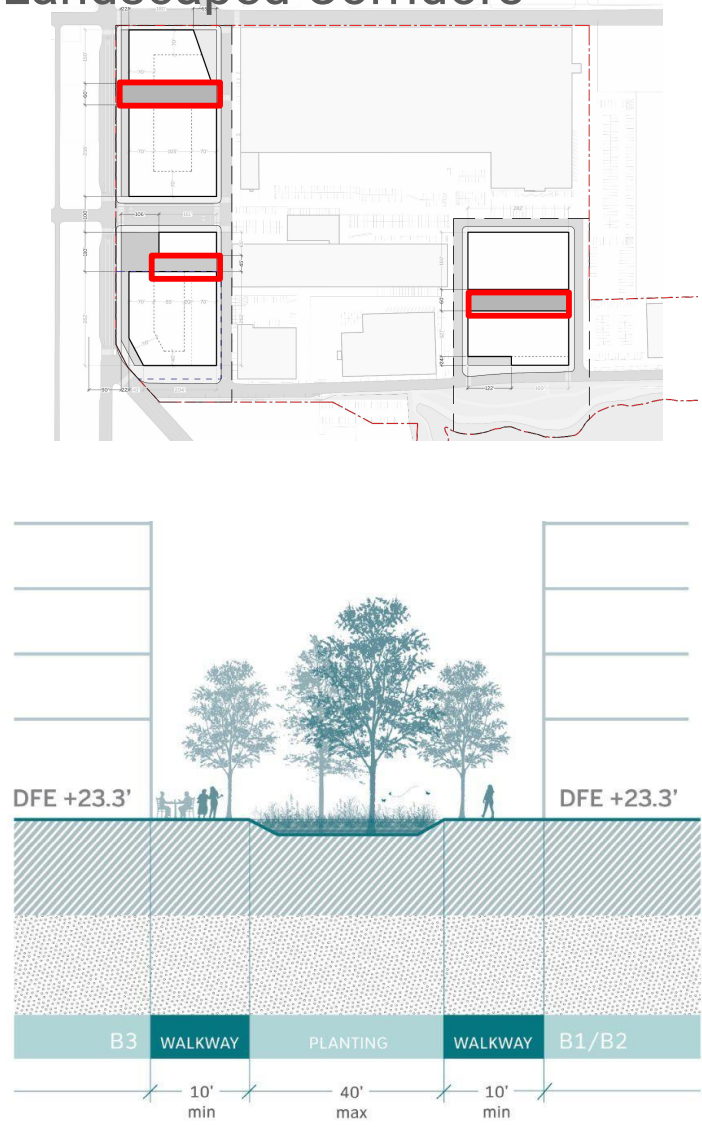


Pappas Way Interim Condition



Public Realm Design

Landscaped Corridors

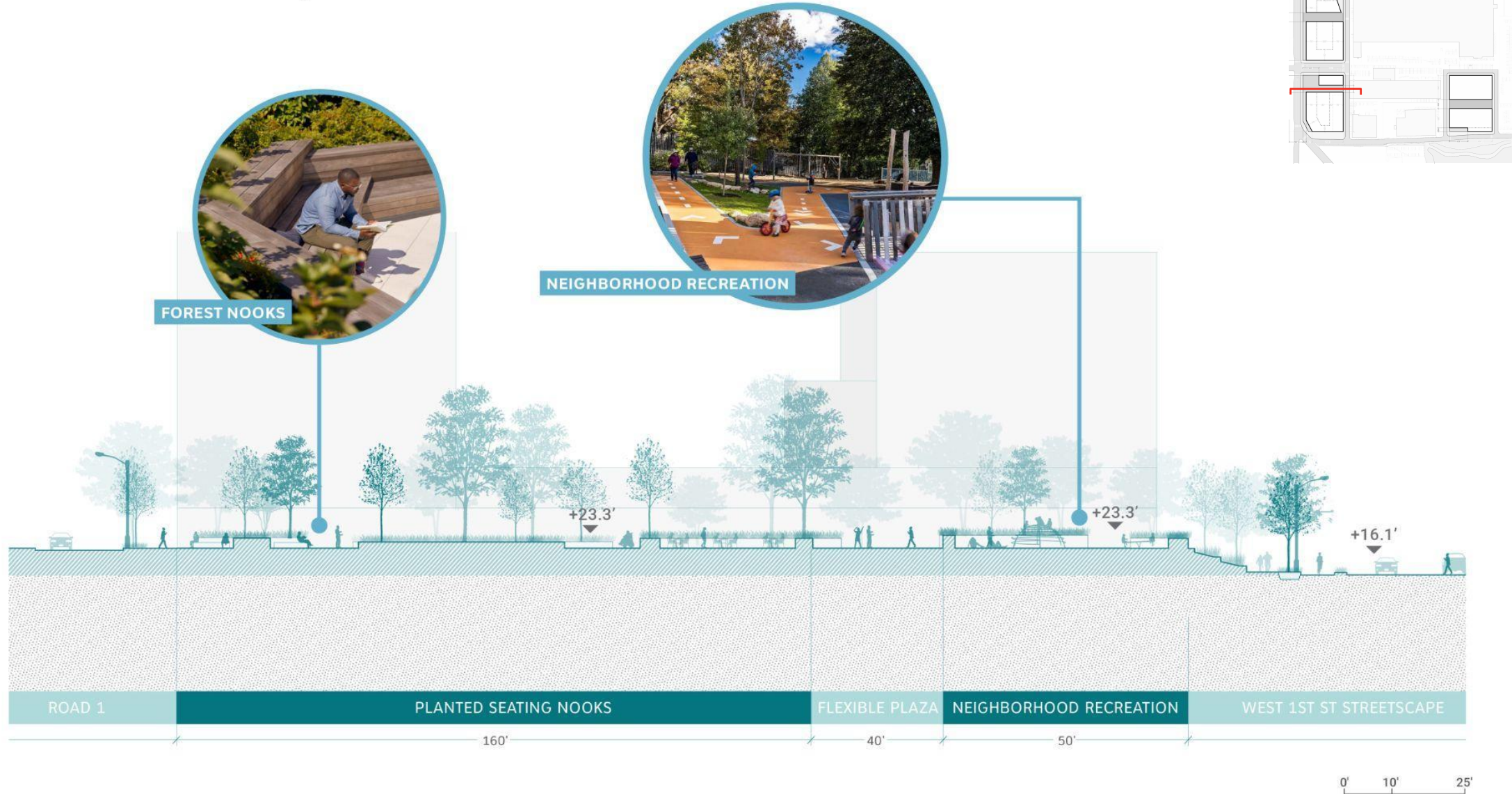


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III. Streetscape & Landscape Design Guidelines

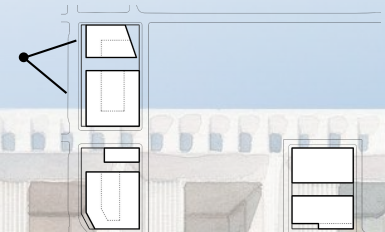
2. Open Spaces

a. West First Gateway



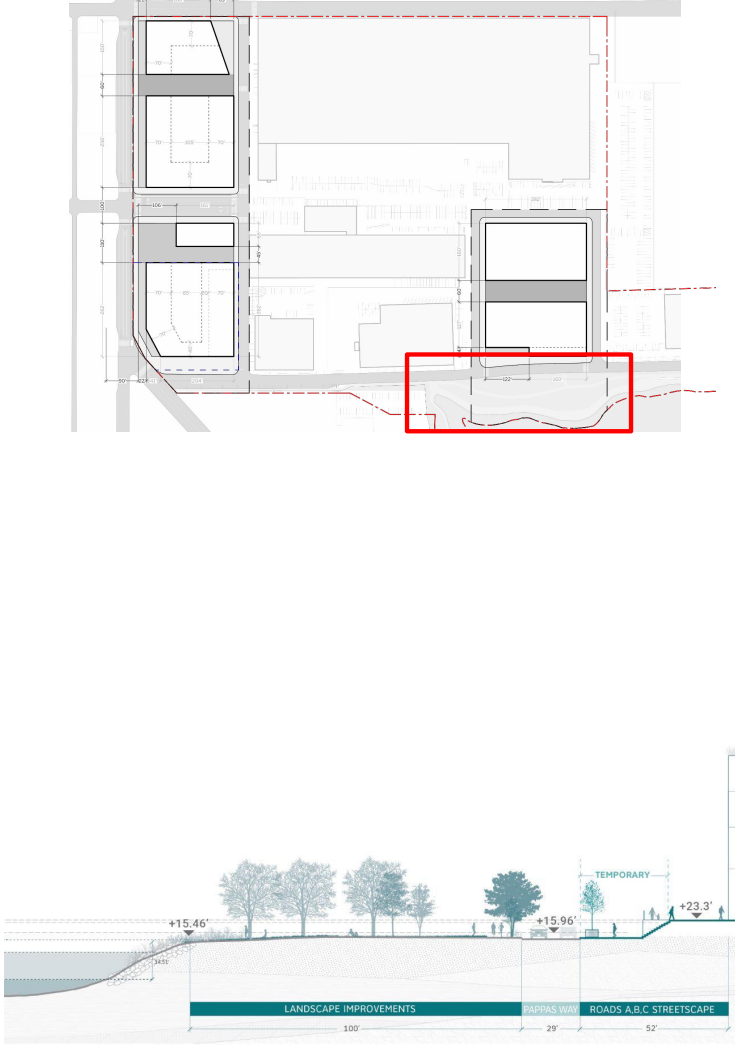
Public Realm Design

West First and Landscaped Corridor



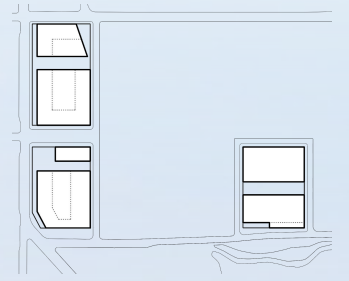
Public Realm Design

Interim Waterfront



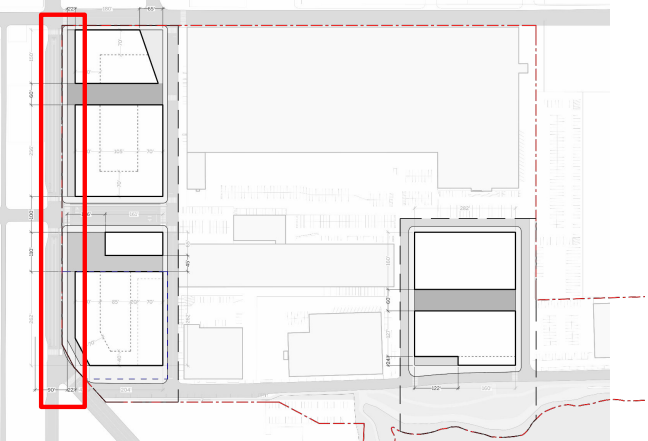
Public Realm Design

Interim Waterfront

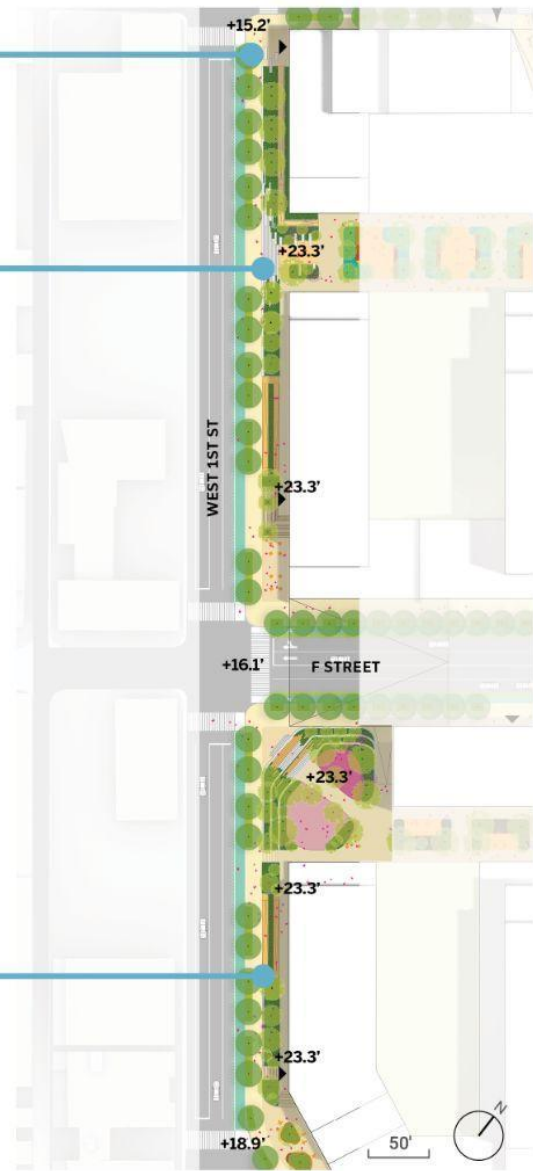
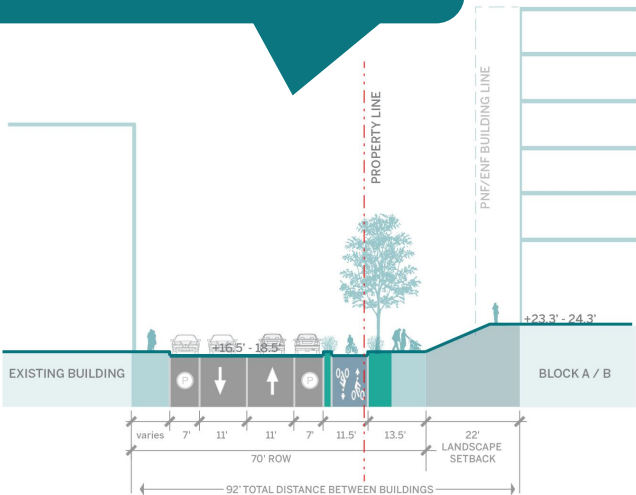


Public Realm Design

West First St



Widen ROW from approx. 55' to 70' (+15')
Add protected two-way bike lane
Provide additional 22' landscape setback
(total 92' building to building distance)



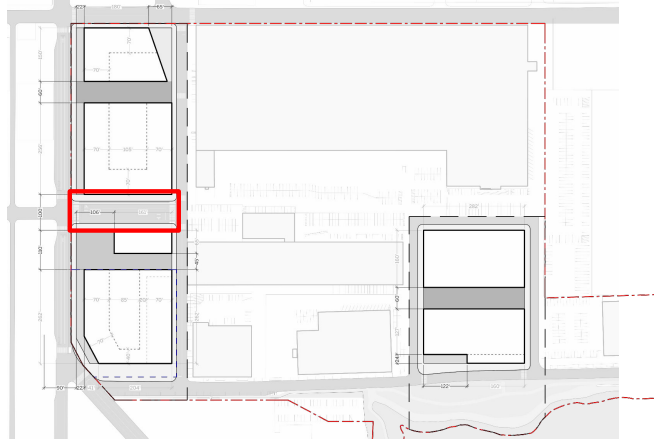
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Public Realm Design
West First St

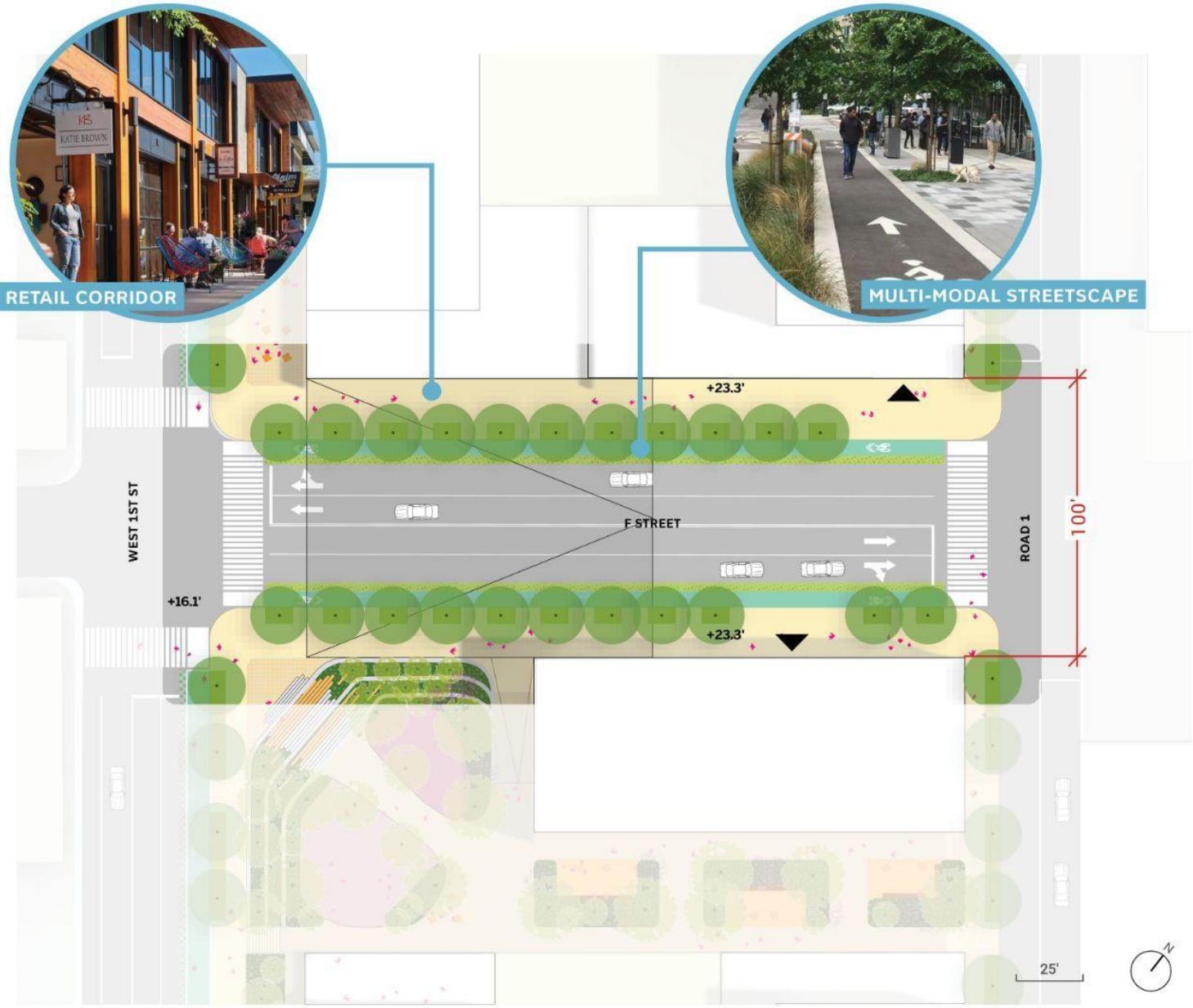
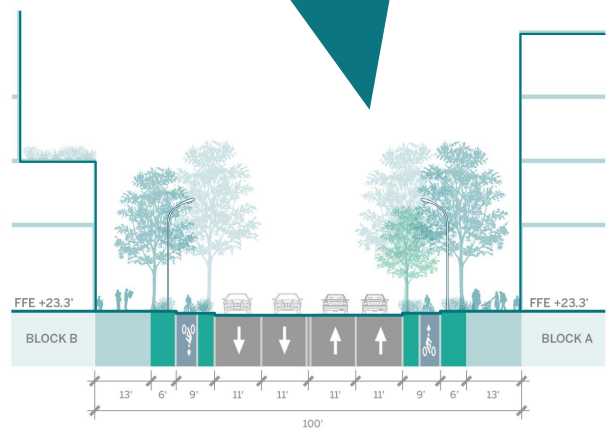


Guidelines

Public Realm Design
F Street



100' right-of-way, including:
Protected bike lanes
19'-wide sidewalks
Future extension to connect to Summer



* Elevations are referenced to the BCB datum. To convert to NAVD88, subtract 6.46 ft.

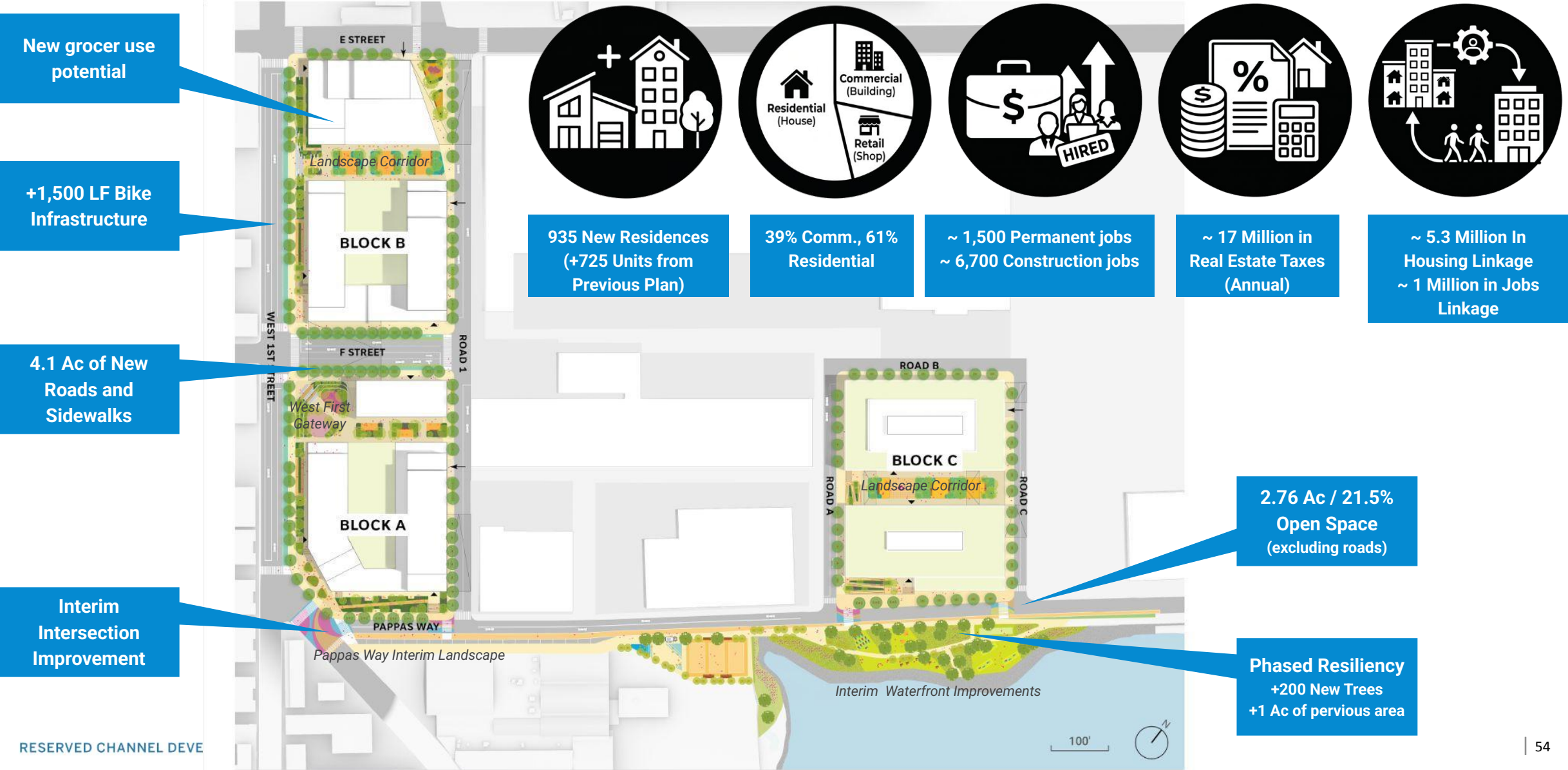
Public Realm Design

F Street



Note: the rendering depicts post-phase 1 condition, when more of the F Street corridor and adjacent development would be completed

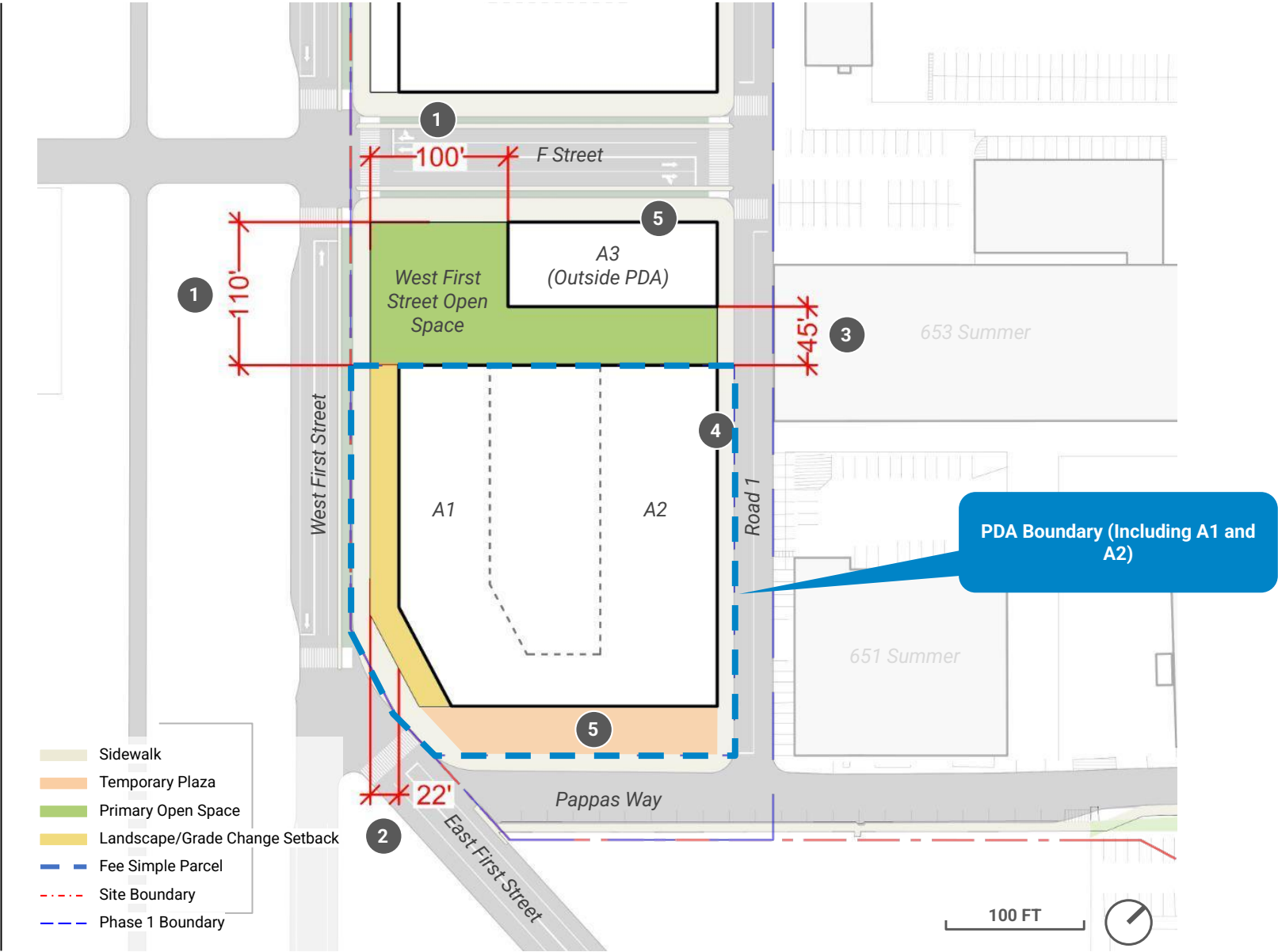
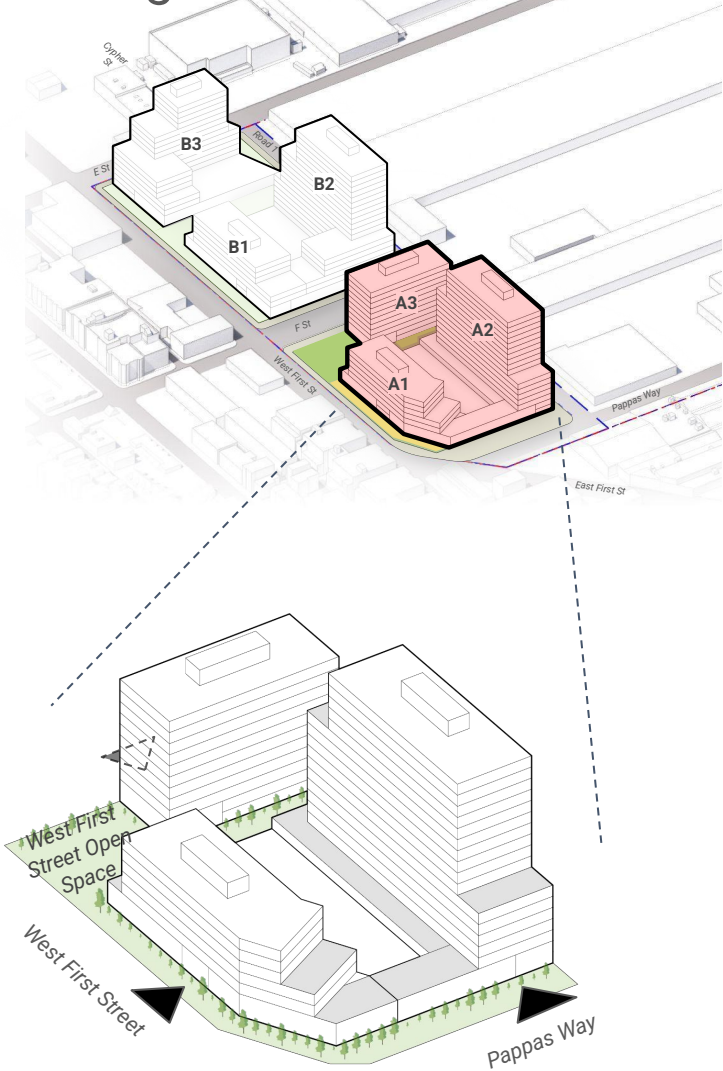
Phase 1 Public Benefits and Mitigation



PDA SITE / BLOCK A

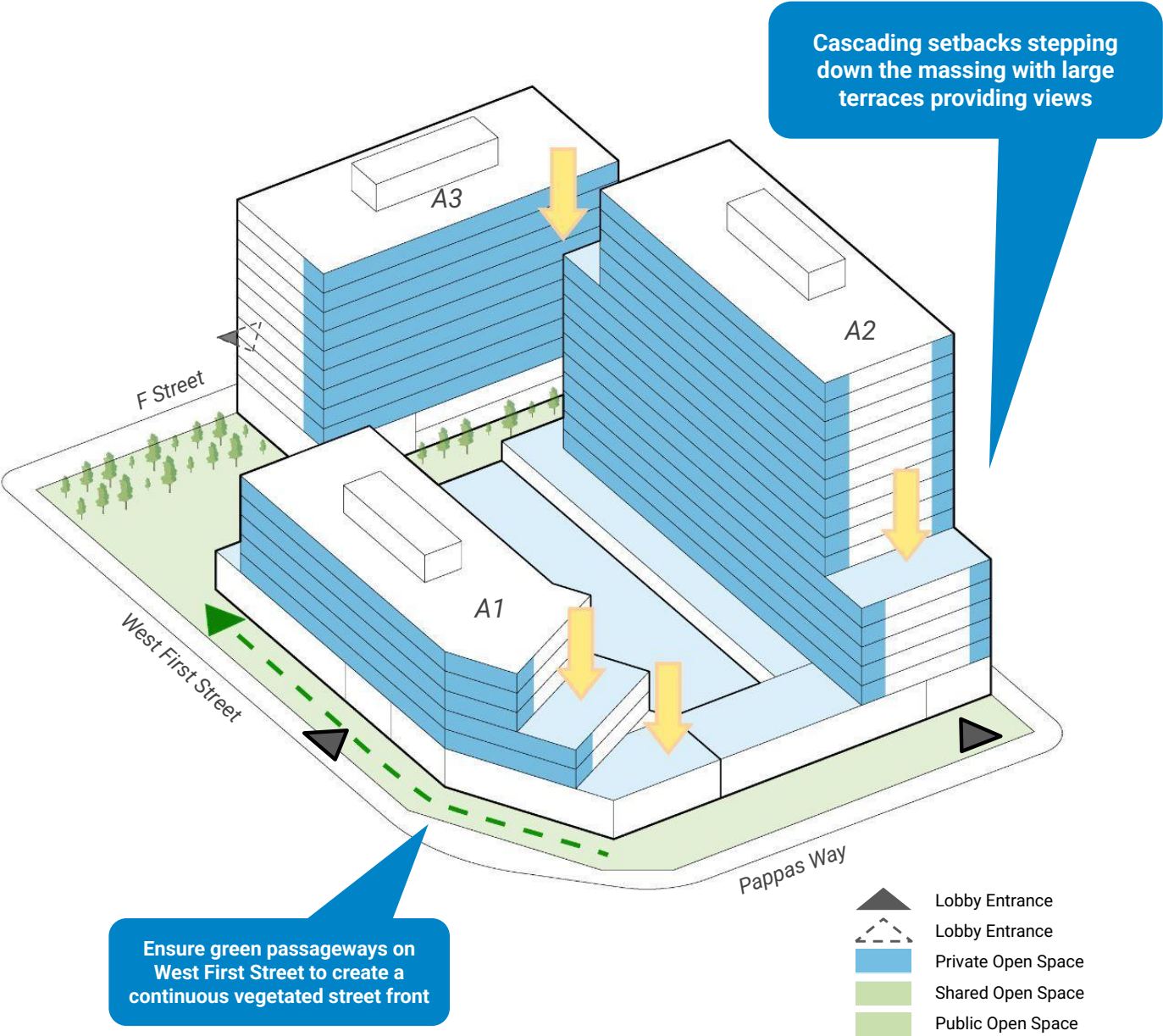
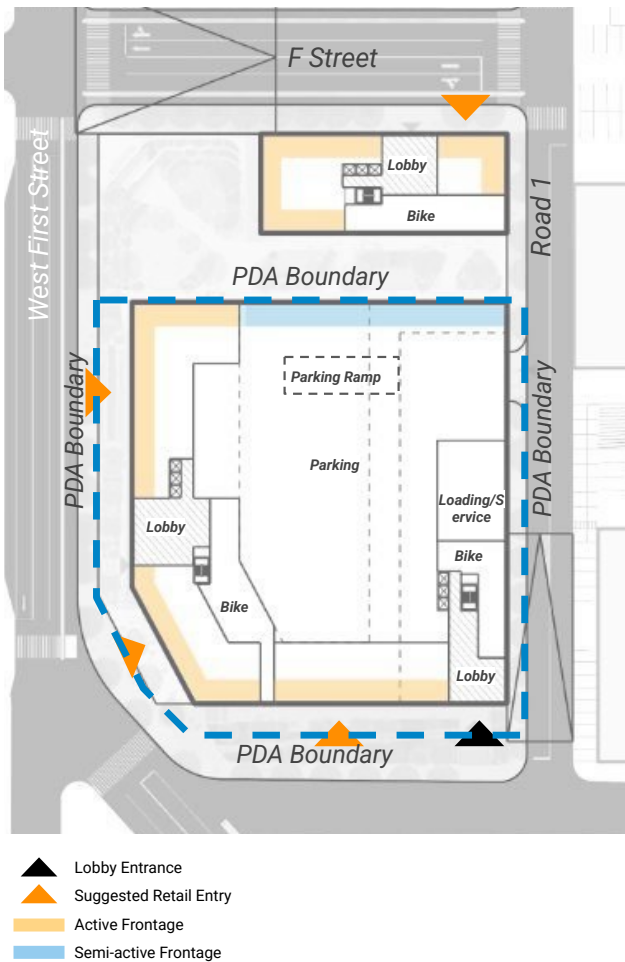
Block A

Massing and Dimensions



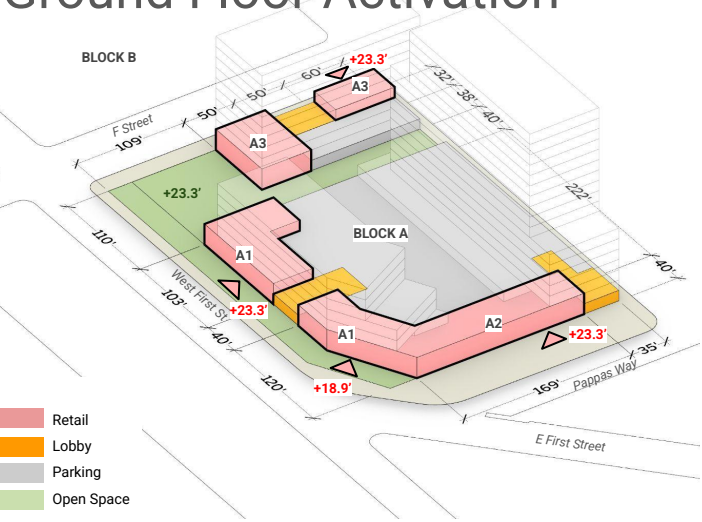
Block A

Massing and Dimensions



Block A

Ground Floor Activation



Block A

Material and Facade Expression



Architectural Character
South Boston's masonry streetscape and the Port and Reserved Channel's industrial heritage guide a facade strategy emphasizing material robustness, structural expression, and rhythm.



Window frames:
Anthracite grey

Railing:
Black steel rods

Facade cladding:
Green solid cladding

Balconies / Mullions:
Champagne Brushed Aluminum

Finishes:
Natural timber

Brick cladding:
Red brick

Brick cladding:
Linear grey brick

Pavers:
Light grey concrete

Finishes:
Natural timber

Concrete:
Colored concrete

Stone cladding:
Light grey stone

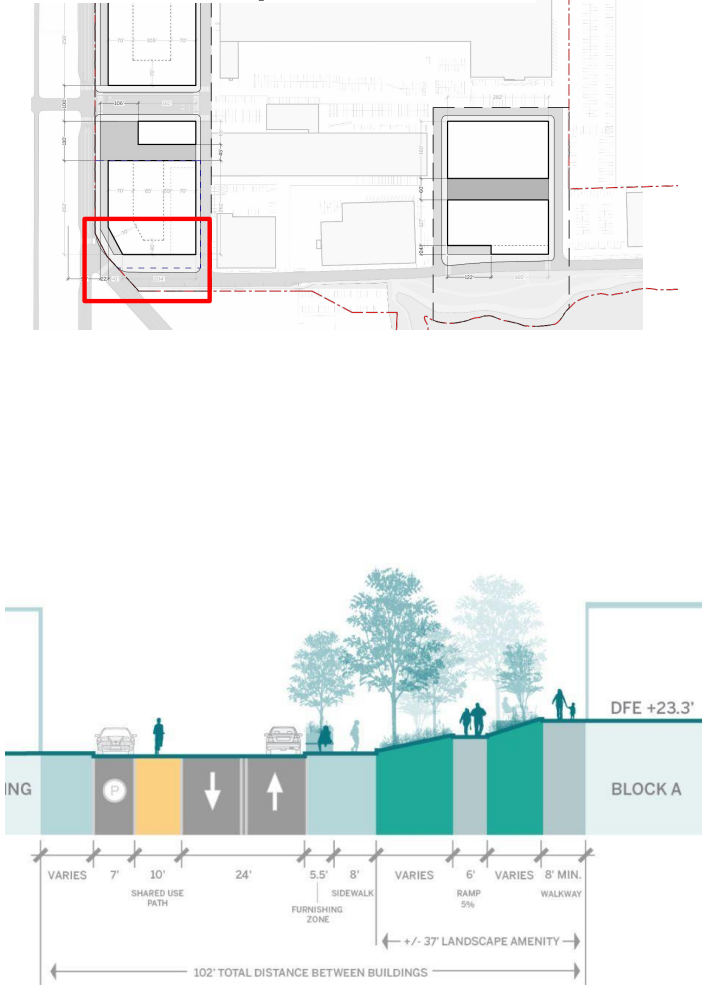
Block A
Material and Facade Expression



Block A
West First St

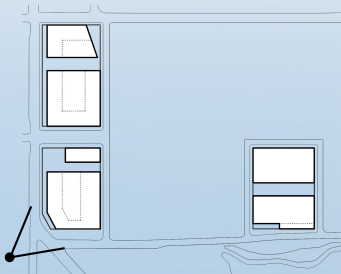


Block A Pappas Way Interim Improvements

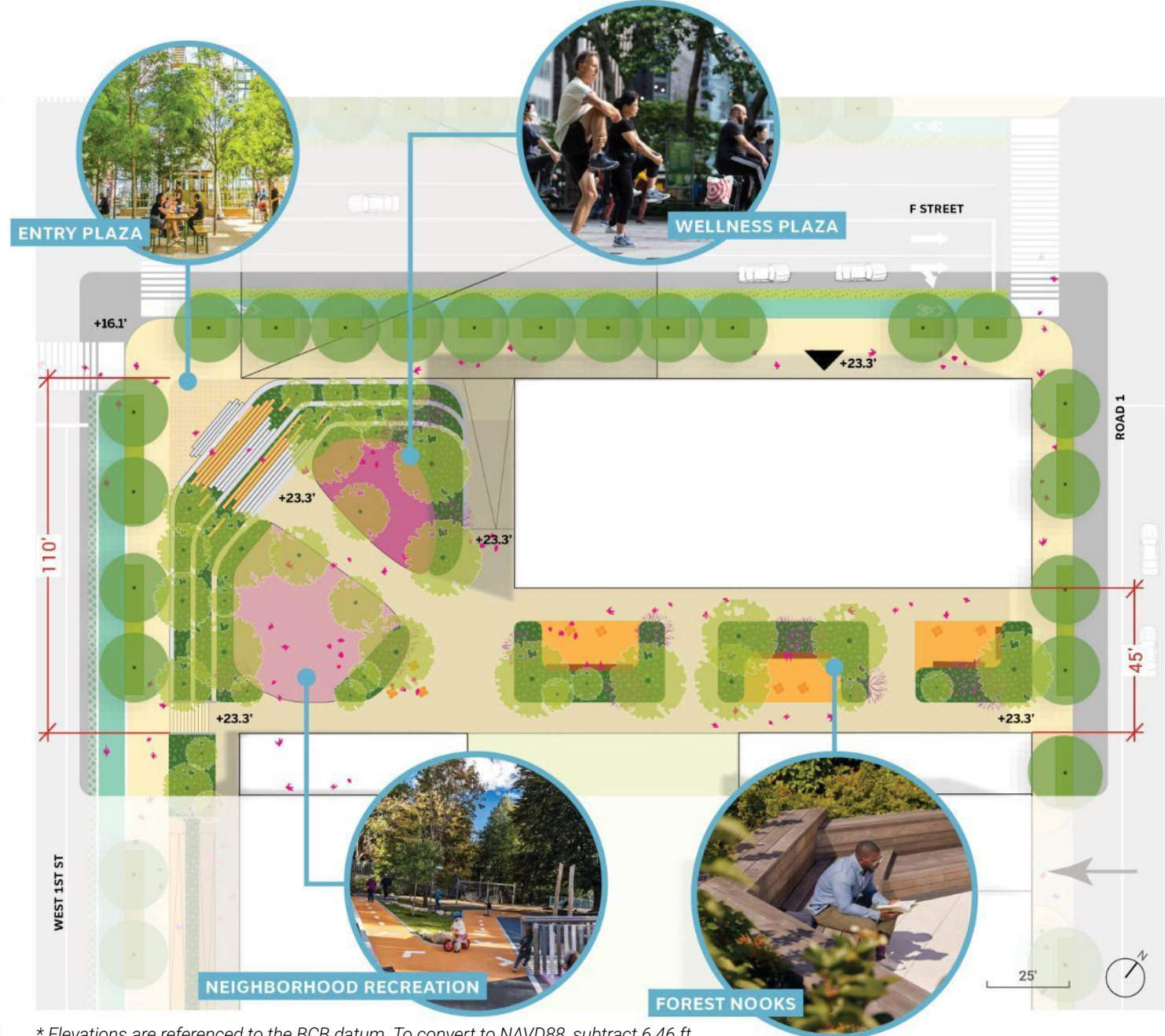


* Elevations are referenced to the BCB datum. To convert to NAVD88, subtract 6.46 ft.

Block A
West First St and Pappas Way



Block A
First St Open Space

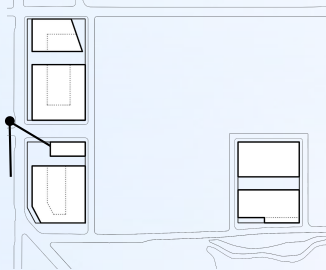


* Elevations are referenced to the BCB datum. To convert to NAVD88, subtract 6.46 ft.

Block A
First St Open Space



Block A
First St Open Space



NEXT STEPS AND DISCUSSION