

USACE & Boston Coastal Storm Risk Management Study

East Boston Update
September 2025



City of Boston
Climate Resilience

ZOOM TIPS - INTERPRETATION

Spanish interpretation is available for this meeting. Please select your preferred language option at the bottom of the screen by clicking on the globe symbol. Click “Mute Original Audio to silence other languages.”

NOTE: EVERYONE MUST SELECT A LANGUAGE. REMEMBER TO SPEAK SLOWLY!

Se dispone de interpretación en español para esta reunión. Seleccione la opción de idioma de preferencia en la parte inferior de la pantalla haciendo clic en el símbolo del globo terráqueo. Haga clic en “Silenciar audio original para silenciar otros idiomas”.

NOTA: TODOS DEBEN SELECCIONAR UN IDIOMA. ¡RECUERDE HABLAR LENTAMENTE!



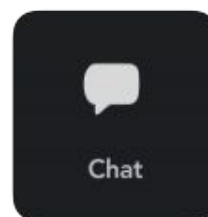
ZOOM TIPS - MEETING RECORDING

At the request of community members, this event will be recorded and posted on the project webpage for those who are unable to attend the Zoom event live:

www.boston.gov/usace-study

If you do not wish to be recorded during the meeting, please turn off your microphone and camera.

If your camera and microphone are off, you can still participate through the text chat feature.



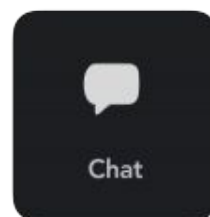
CONSEJOS PARA UTILIZAR ZOOM: GRABACIÓN DE REUNIONES

A petición de los miembros de la comunidad, este evento se grabará y publicará en la página web del proyecto para aquellos que no puedan asistir al evento de Zoom en vivo.

www.boston.gov/usace-study

Si no quiere que lo graben durante la reunión, apague su micrófono y la cámara.

Incluso si su cámara y micrófono están apagados, puede participar a través de la función de chat de texto.



USACE & Boston Coastal Storm Risk Management Study

East Boston Update
September 2025



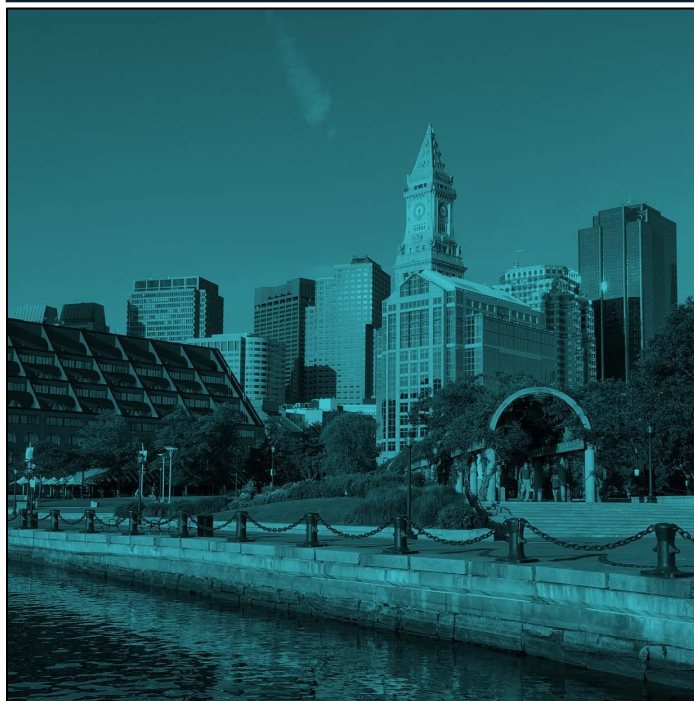
City of Boston
Climate Resilience

Goals

- Find out what the City is doing to prepare for Today's Storms
- Find out what the City is doing to prepare for storms of the next decade and beyond
- Learn about how the USACE partnership align with the ongoing Boston and Partner Projects
- Answer your questions
- Next steps on where you can provide feedback and contact us



CLIMATE READY BOSTON



CLIMATE READY BOSTON EXECUTIVE SUMMARY

MAYOR MARTIN J. WALSH



GreenRibbon

DECEMBER 2016

In 2016, the City of Boston released the *Climate Ready Boston* report, which included a comprehensive vulnerability assessment of current and projected risks associated with each of three climate hazards under a low, medium, and high greenhouse gas emissions scenario.

EXTREME TEMPERATURE



HEAT WAVES &
DROUGHT

EXTREME PRECIPITATION



STORMWATER
FLOODING

SEA LEVEL RISE



COASTAL & RIVERINE
FLOODING

COASTAL STORMS



RESILIENT HARBOR VISION



DORCHESTER

SOUTH BOSTON

DOWNTOWN

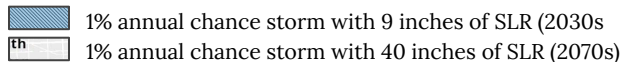
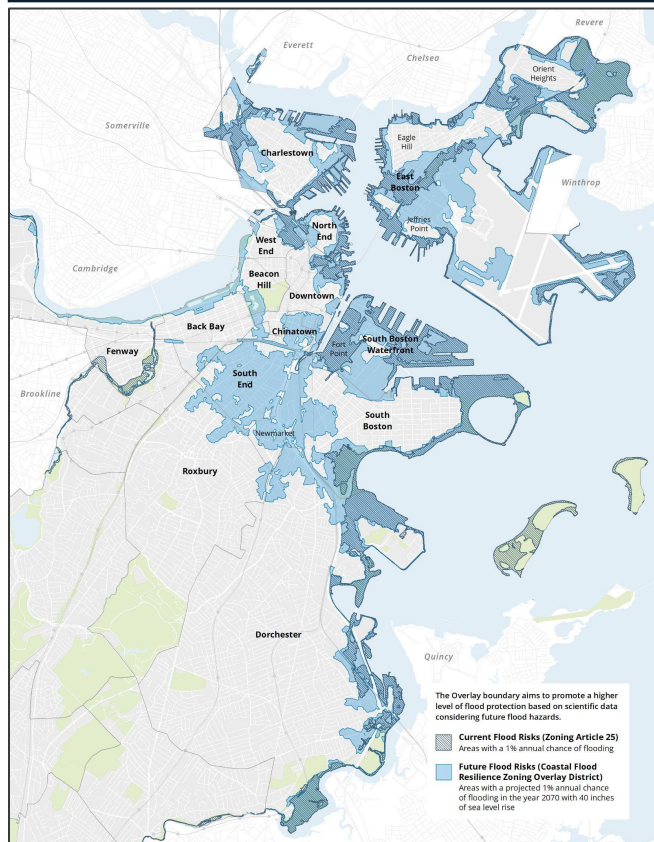
EAST BOSTON



RESILIENT BOSTON HARBOR

-  = FLOOD ADAPTED BUILDINGS
-  = ELEVATED LANDSCAPES
-  = CONNECTIONS AND ACCESS

NEIGHBORHOOD COASTAL RESILIENCE PLANS



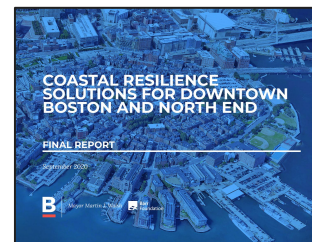
Between 2017-2022, the City completed neighborhood-level coastal resilience plans for all 47 miles of Boston's coastline.



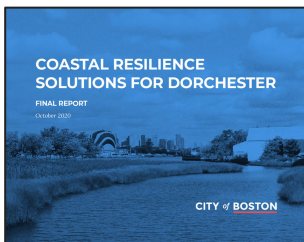
**East Boston
& Charlestown
Phase 1 (2017)**



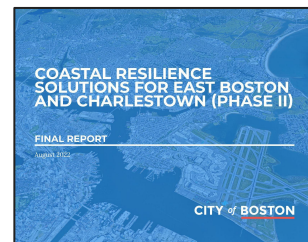
**South Boston
(2018)**



**North End &
Downtown
(2020)**

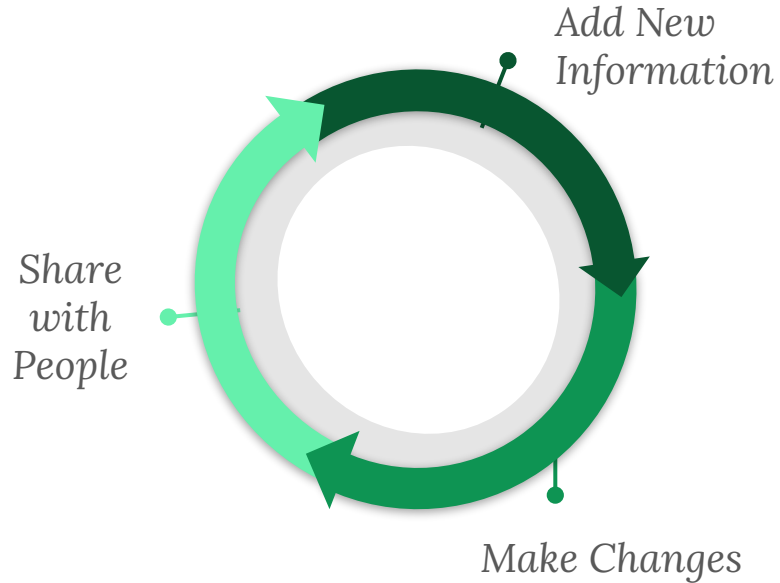


**Dorchester
(2020)**



**East Boston
& Charlestown
Phase 2 (2022)**

THE PROCESS CAN FEEL LIKE A SPIRAL STAIRCASE...



Construction,
Operation and
Maintenance

Final Design
and Permitting

Preliminary
Design

Conceptual Plan

Vision



COASTAL FLOODING IN BOSTON IN 2018 AND 2022



Flooding from during Winter Storm Riley in Boston's North End
(Source: Matt Conti, Winter, 2018)



Flooding along the Mary Ellen Welch Greenway in East Boston
(Source: Lisa A. DiFrisco, Winter 2018)



Flooding beneath the Evelyn Moakley Bridge in South Boston's Fort Point Channel
(Source: Alison Brizius, December 2022)



Man kayaks along surface streets near Lewis Mall in East Boston
(Source: Steve Holt, Winter 2018)



Flooding along the Harborwalk in the Charlestown Navy Yard
(Source: Gerry Angoff, Winter 2018)



Flooding along the Harborwalk in Downtown Boston
(Source: Alison Brizius, December 2022)

COASTAL RESILIENCE IMPLEMENTATION: THREE CONCURRENT STRATEGIES

TODAY'S STORMS

Key Goal:
Strengthen our response
to today's flooding

How?

Educate residents about emergency preparedness, strengthen protocols for preparing for and responding to extreme weather, and operationalize deployable barriers

Key City Agencies:

Office of Emergency Management
Office of Climate Resilience

THIS DECADE'S STORMS

Key Goal:
Address 2030 flood
pathways

How?

Advance near-term priority projects identified in coastal resilience plans from conceptual design to construction

Key City Agencies:

Office of Climate Resilience
Planning Department
Parks & Recreation Department

BEYOND 2030

Key Goal:
Transform our 47 miles
of coastline

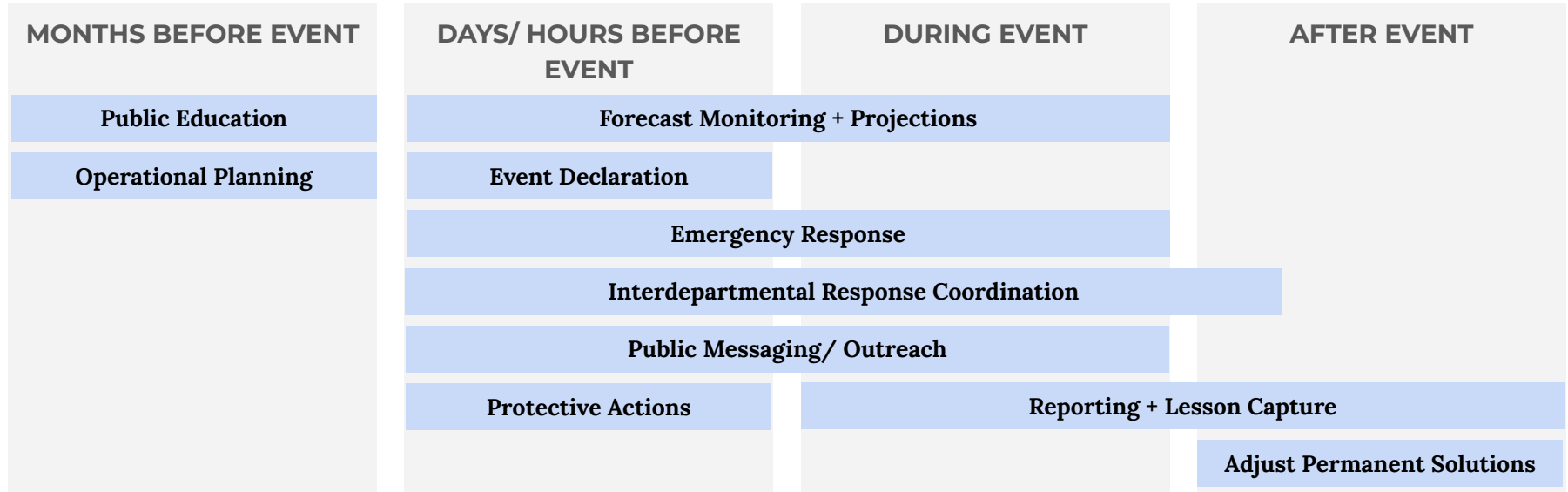
How?

Through an ongoing partnership with the U.S. Army Corps of Engineers, advance mid- and long-term priority projects from conceptual design to construction

Key City Agencies:

Office of Climate Resilience,
Planning Department,
Boston Water & Sewer
Commission, and many more!

TODAY'S STORMS

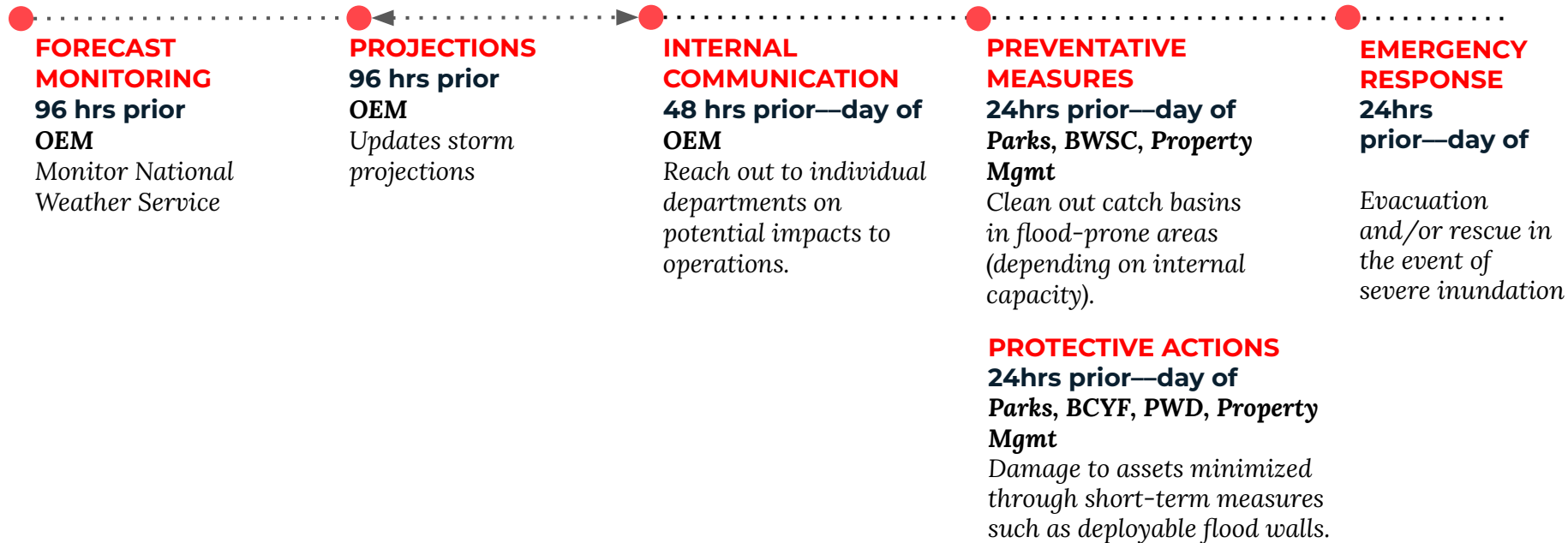


EDUCATION AND OUTREACH

- “Know Your Zone”
 - Raise awareness of evacuation zones
 - Inform residents of their specific hurricane evacuation routes
 - Encourage residents to plan and prepare for evacuation scenarios
- Ready Boston Field Day/ Deployables Day (October 09, 2025)
 - Free Demonstration and Resource Fair at City Hall Plaza
 - See Deployables in action (private + City deployables)

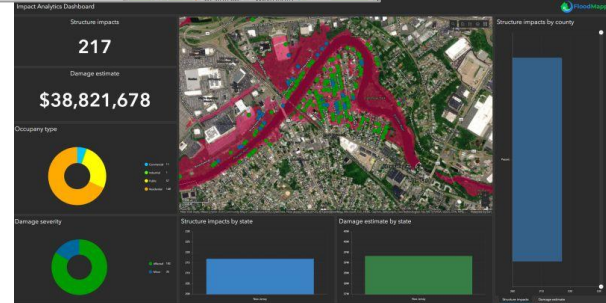
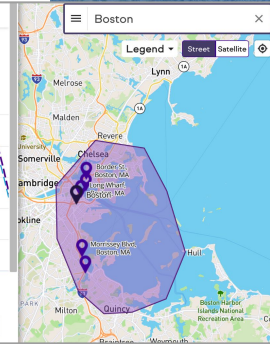
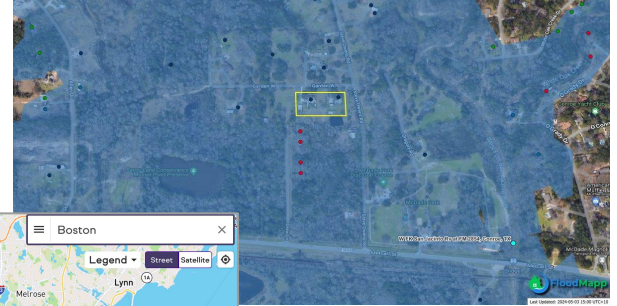
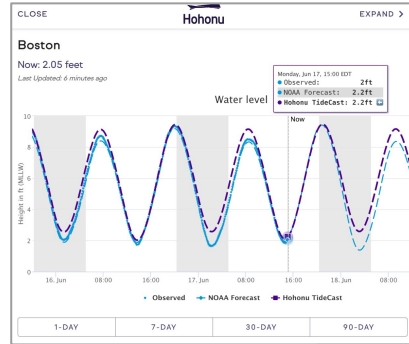


STORM RESPONSE



IMPROVING THE RESPONSE CYCLE

- Expanding the City's network of flood sensors
- Developing tools for:
 - Emergency response
 - Damage assessment
 - Recovery efforts



COASTAL RESILIENCE IMPLEMENTATION: THREE CONCURRENT STRATEGIES

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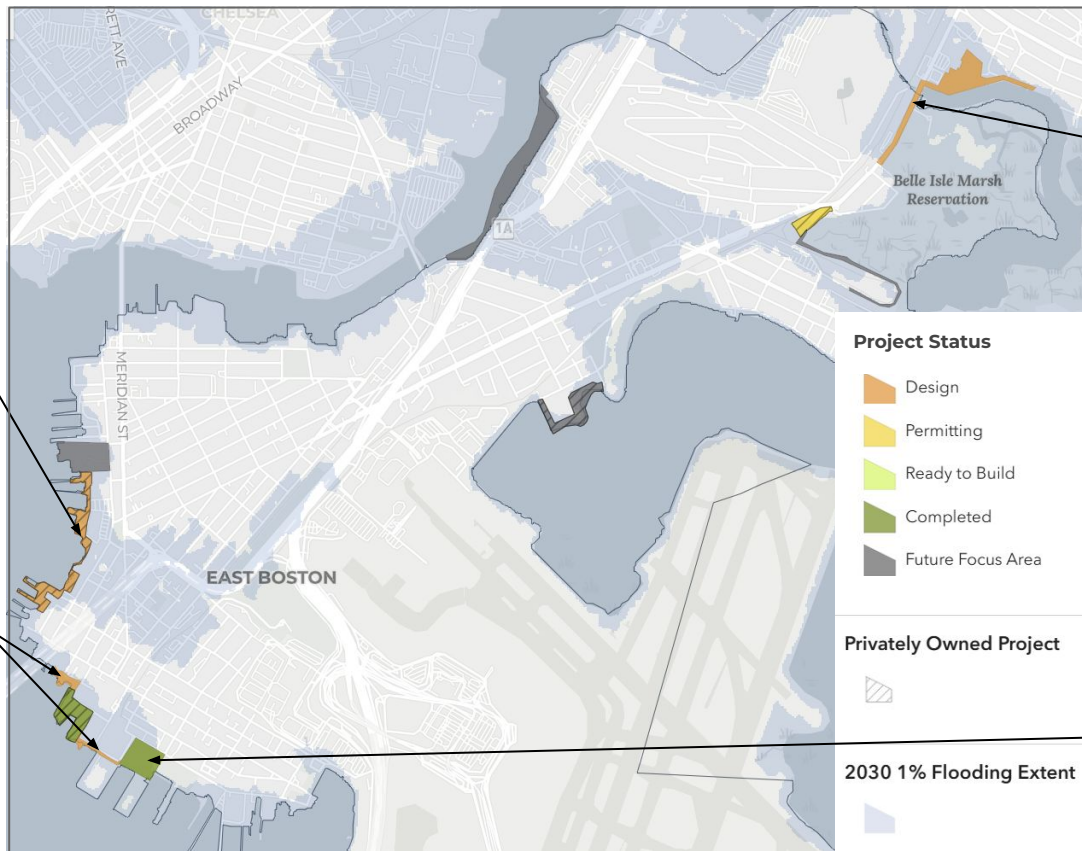
COASTAL RESILIENCE IMPLEMENTATION - EAST BOSTON



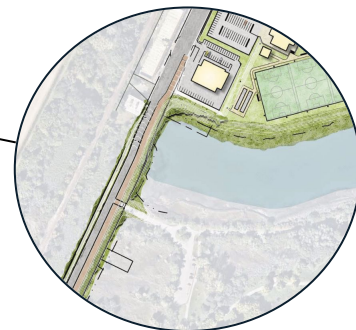
Border Street
Design in progress



Lewis Mall & Carlton Wharf
Design in progress



The map displays extents of flooding produced from the Massachusetts Coast Flood Risk Model (MC-FRM), which is the Commonwealth of Massachusetts' adopted flood projection model. The flooding shown accounts a 1% annual chance storm with 2030 sea level rise projections.



Bennington Street & Fredericks Park
Design in progress



Piers Park II
Construction complete in 2023

COASTAL RESILIENCE IMPLEMENTATION: THREE CONCURRENT STRATEGIES

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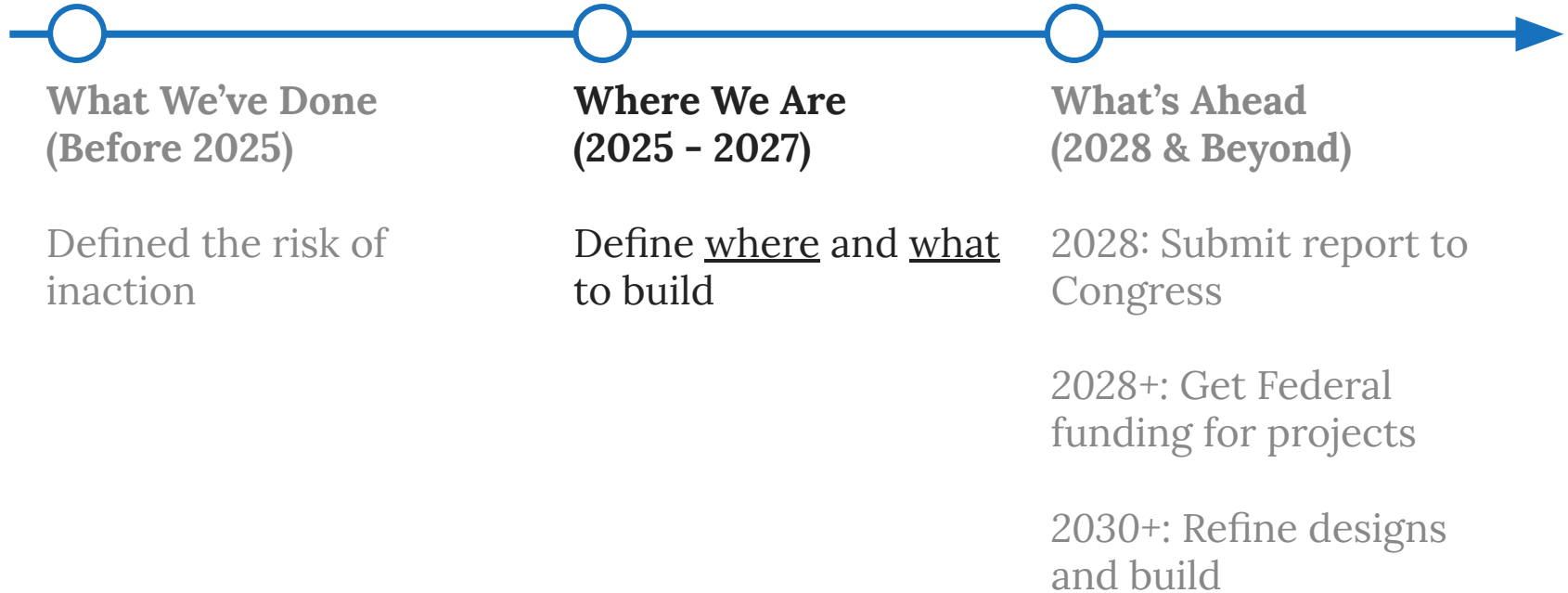
Office of Climate Resilience,
Planning Department,
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WHY NOW AND WHY USACE?

- USACE has a specific charge for proposing coastal resilience solutions that are **effective in mitigating risk to the Federal Interest**;
 - We have shared interest in **protecting homes, critical infrastructure, and evacuation corridors**;
- USACE **follows a specific process** in designing, evaluating and selecting projects.
 - They can provide **up to 65% of the cost** to build these structures.



WHERE ARE WE IN THE USACE PROCESS?



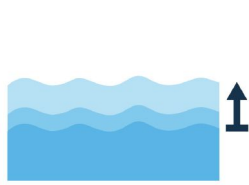
CSRM Process:

Coastal Storm Risk Analysis and Management 101



HOW DOES USACE DEFINE COASTAL STORM RISK?

COASTAL HAZARDS:



SEA LEVEL CHANGE

Permanent rise in ocean level relative to land



STORM SURGE

Temporary rise in ocean level during a storm event



WAVE ACTION & EROSION

Gradual reduction in the coastline as waves carry away sediment

CLOSING LONG-TERM FLOOD PATHWAYS:



FLOOD PATHWAY

Impacts inland areas when water enters through a low-lying area on the waterfront



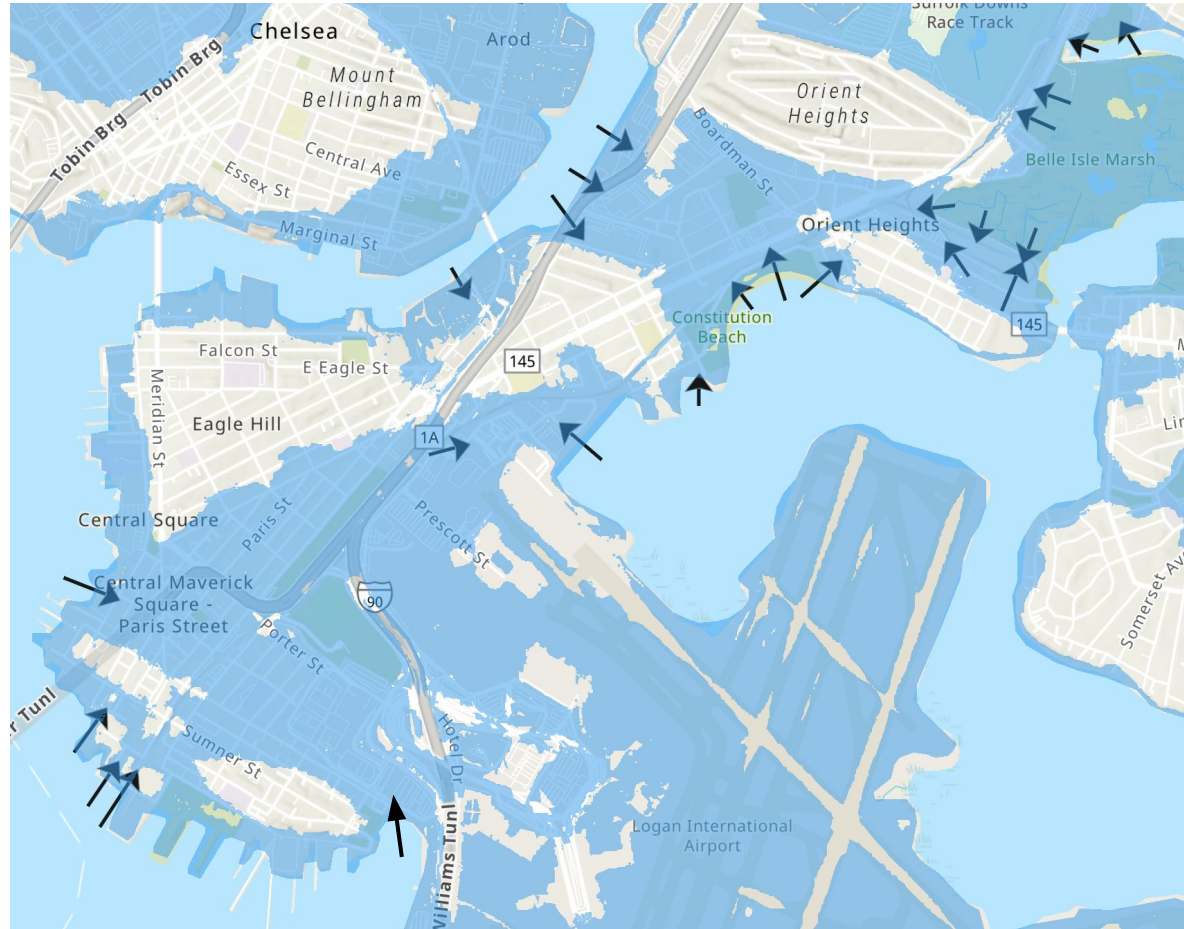
U.S. ARMY



US Army Corps
of Engineers



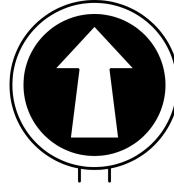
COASTAL STORM RISK MANAGEMENT: HOW IS THIS DIFFERENT FROM CLIMATE READY BOSTON?



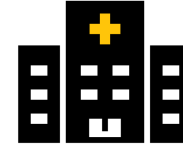
HOW DOES USACE DEFINE “FEDERAL INTEREST”?



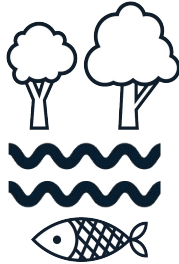
Protection of
Housing



Protection of
Evacuation Corridors



Protection of Critical
Infrastructure



Protection of Natural
Resources



Protection of the People



Protection of Critical
Transportation



U.S. ARMY

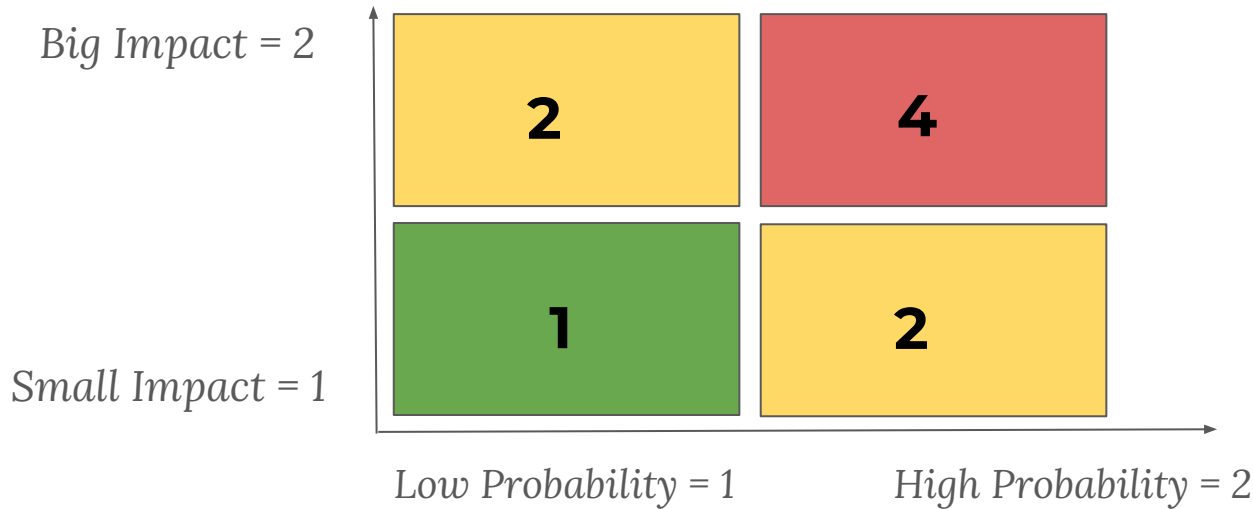


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of Engineers



HOW DOES USACE MANAGE STORM RISK?

- Storm Risk is the possibility of a bad storm happening in a specific area
 - Level of Probability multiplied by Level of Impact



HOW DOES USACE ADDRESS STORM RISK? PICK THE RIGHT TOOL



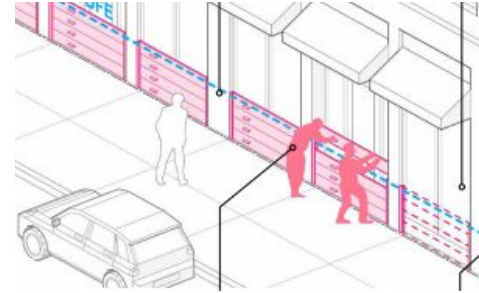
1st Drawer: PROTECT

Structural



2nd Drawer: ADAPT or ACCOMMODATE

Non-Structural, Physical



3rd Drawer: MANAGE

Non-Structural, Non-Physical

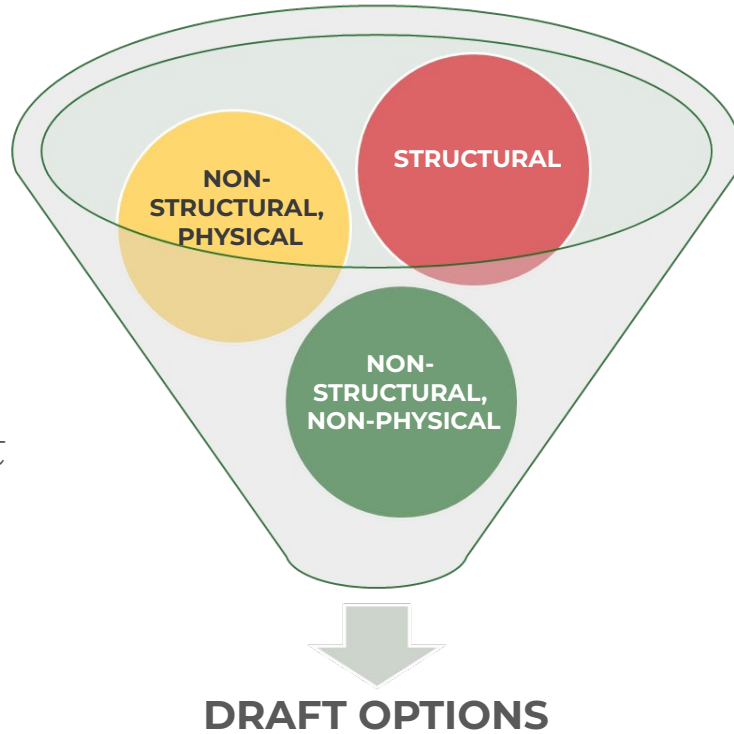


**US Army Corps
of Engineers**



HOW DOES USACE SELECT TOOLS FOR BOSTON?

- *What provides maximum protection?*
- *What is possible to build?*
- *What is the best fit for East Boston?*



Pause for Questions

Coastal Storm Risk Analysis and Management 101



REFRESHER: CLIMATE READY BOSTON TOOLS

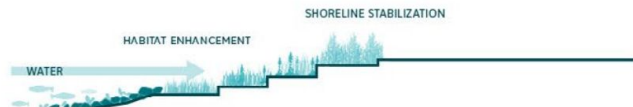
RAISED HARBORWALK / RAISED PARK SPACE



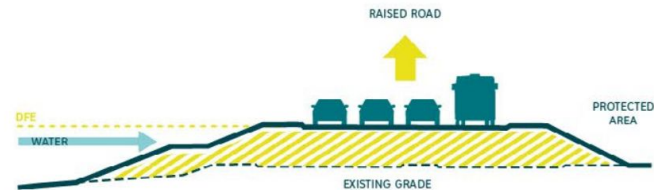
RAISED BERMS AND DUNES



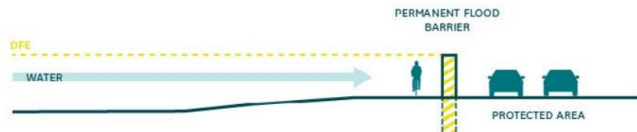
NATURE-BASED SOLUTIONS



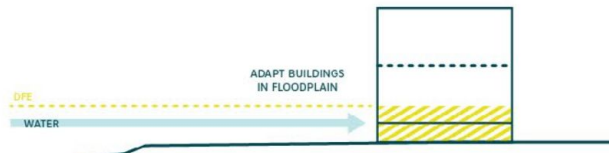
RAISED ROADWAYS / MEDIAN FLOODWALLS



VERTICAL FLOODWALLS



ADAPTED BUILDINGS AND STRUCTURES

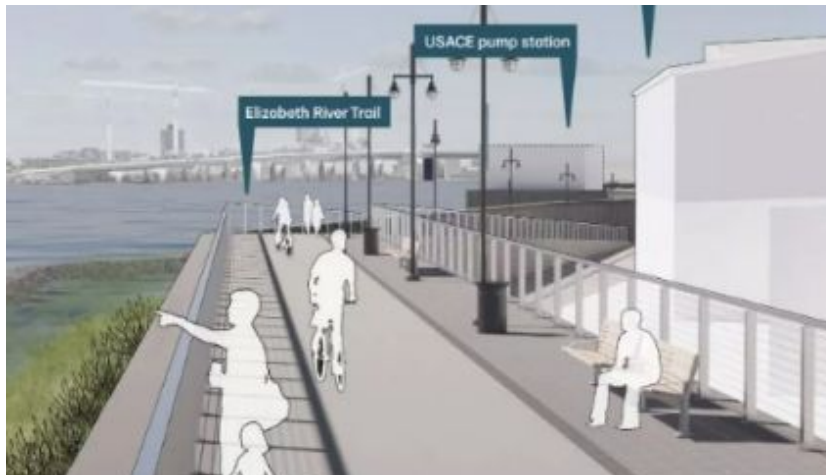


EXAMPLES OF USACE APPLICATIONS

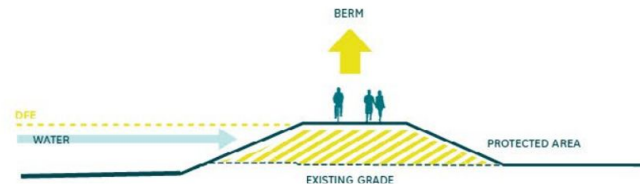
RAISED HARBORWALK / RAISED PARK SPACE



USACE Example: Norfolk, VA



RAISED BERMS AND DUNES



USACE Example: New Bedford, MA

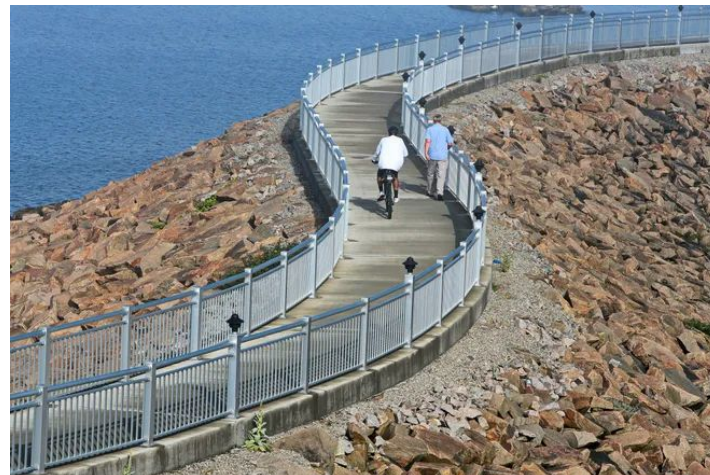


Photo Credit: Peter Pereira, The Standard-Times

EXAMPLES OF USACE APPLICATIONS

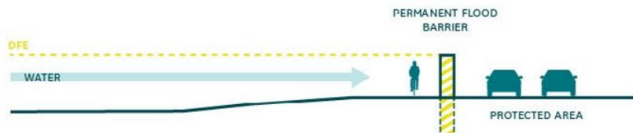


USACE Example: Norfolk, VA



USACE Example: Long Island, NY

VERTICAL FLOODWALLS



ADAPTED BUILDINGS AND STRUCTURES



Preliminary Locations:

Draft Alignments for East Boston



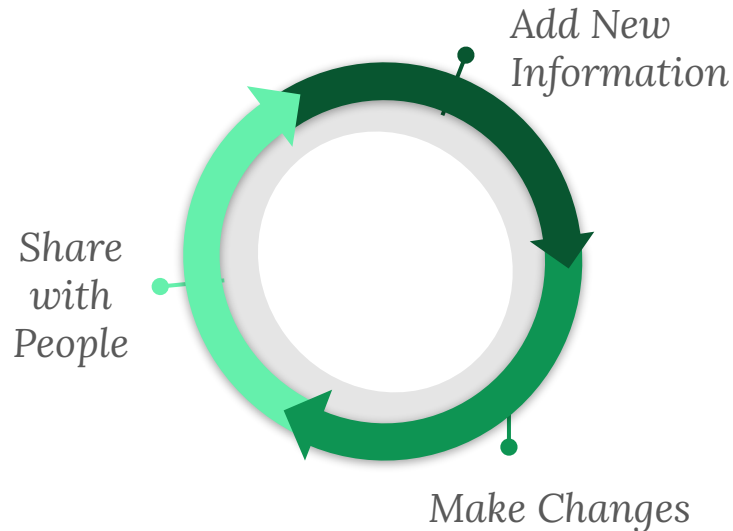
HOW YOU CAN HELP TODAY:

- *Ask us questions*
- *Share your concerns*
- *Help us answer these questions:*
 - *Did we miss any areas with coastal risk?*
 - *Did we miss any areas we need to protect?*
 - *What is important to you that we know about the tools or the locations for draft USACE structures?*
 - *How can we make the process more accessible to you?*



WHAT WE WILL DO NEXT:

- Give you answers, as best as we can
- Send you these presentation slides
- Meet you in person to hear more about your concerns and questions
- Report back with a second presentation later this year (Fall 2025)



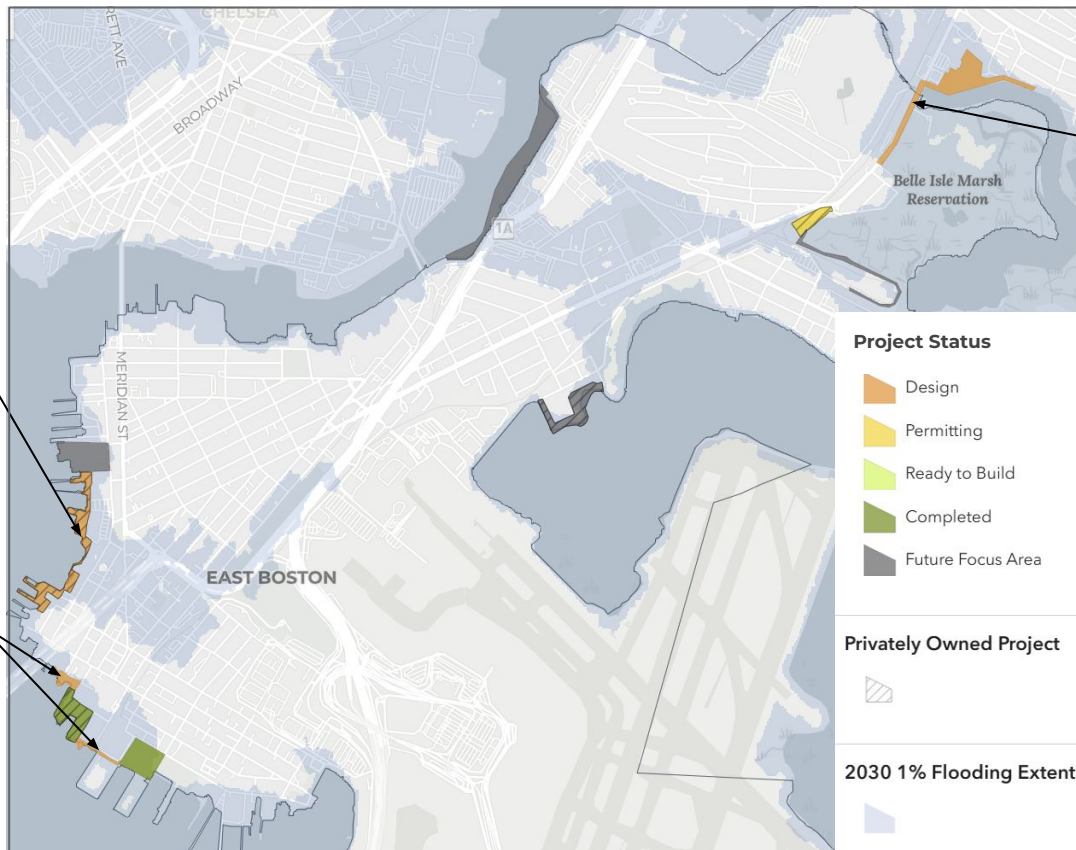
REMINDER: COASTAL RESILIENCE IMPLEMENTATION IN PROGRESS



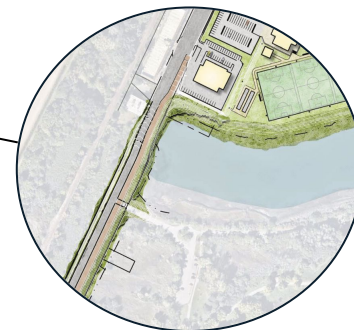
Border Street
Design in progress



Lewis Mall & Carlton Wharf
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Bennington Street & Fredericks Park
Design in progress

EAST BOSTON STRUCTURAL LOCATIONS OVERVIEW



1. Route 1A
2. Connection to Boston & Revere Project:
Bennington St. and
Frederick's Park & Orient Heights
3. Constitution Beach
4. Wood Island
5. Jeffries Point
6. Connection to Boston Project:
Resilient East Boston
7. Connection to Boston Project:
Border St.



PRELIMINARY DRAFT ALIGNMENTS 1 - 4



LEGEND

CHS Inundation Layers

CHS 1% Inundation 2090 High SLC



Flood Pathways



5. Jeffries Point



LEGEND

CHS Inundation Layers

CHS 1% Inundation 2090 High SLC



Flood Pathways



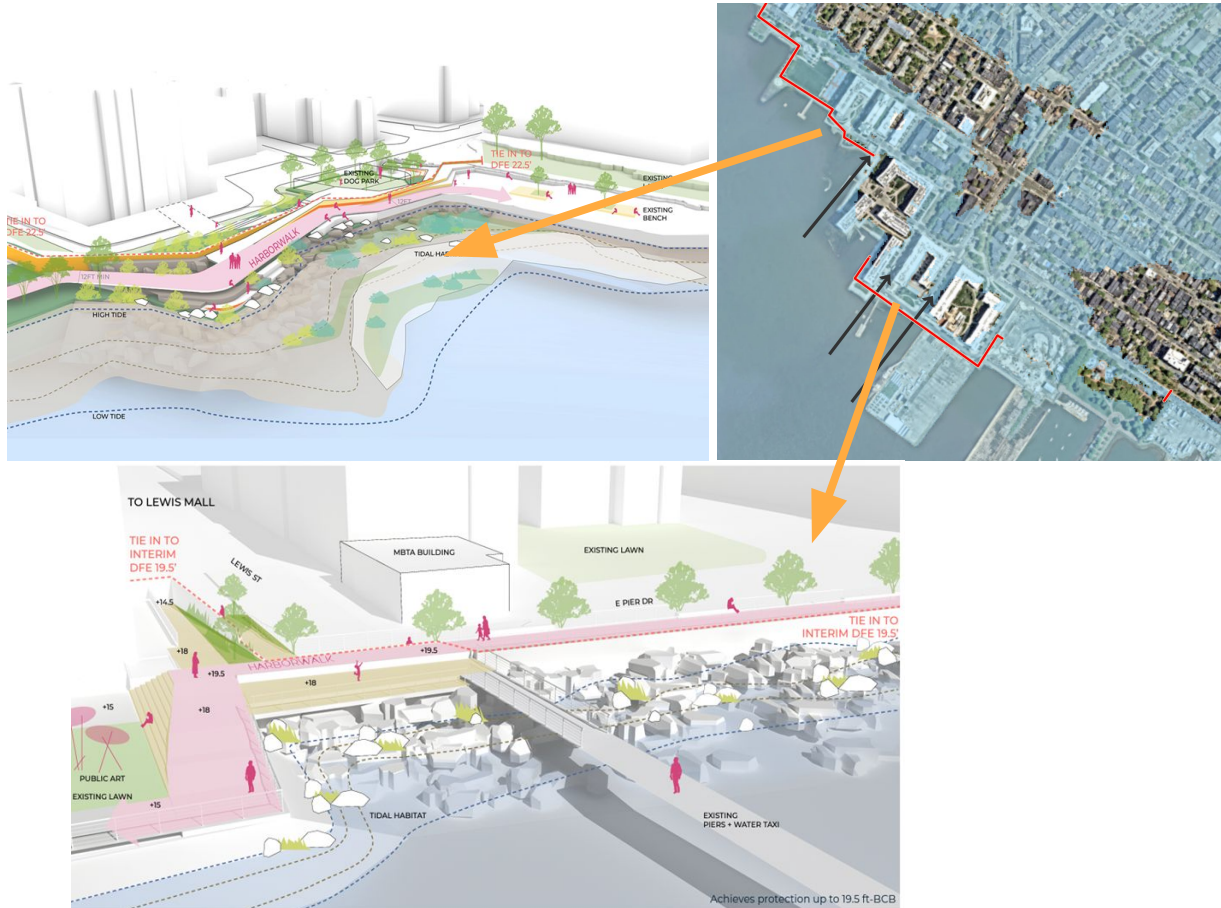
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of Engineers



6. Connection to Boston Lewis Mall/Carlton Wharf Project



LEGEND

CHS Inundation Layers

CHS 1% Inundation 2090 High SLC



Flood Pathways



7. Connection to Boston Border St. Project



LEGEND

CHS Inundation Layers

CHS 1% Inundation 2090 High SLC



Flood Pathways



US Army Corps
of Engineers



Summary

- *Long Term Projects to Address Long Term Risk*
- *Current Focus on Getting Questions on Process and Areas of Focus*
- *Subsequent Feedback on Designs (and construction alternatives)*



How to Provide Feedback:

boston.gov/usace-study



Submit Comments Online



Book an Appointment with us



U.S. ARMY



US Army Corps
of Engineers.



Question and Answer Session



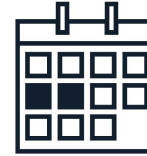
City of Boston
Climate Resilience

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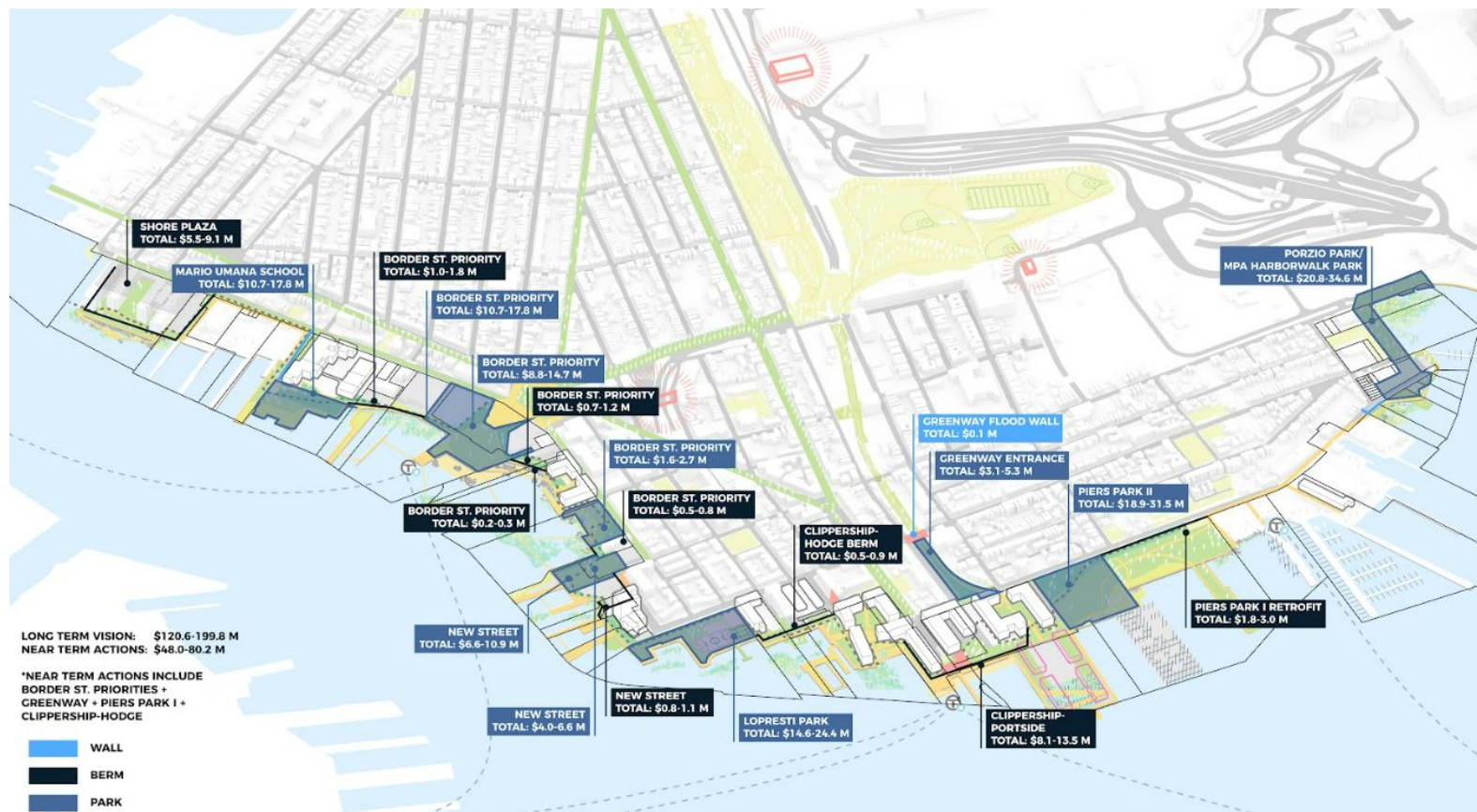
US Army Corps
of Engineers.





B

REFRESHER: CLIMATE READY BOSTON RECOMMENDATIONS



Costs from Phase 1 East Boston and Charlestown Resilience Solutions Report, 2017. Costs not updated/do not reflect USACE progress to date.

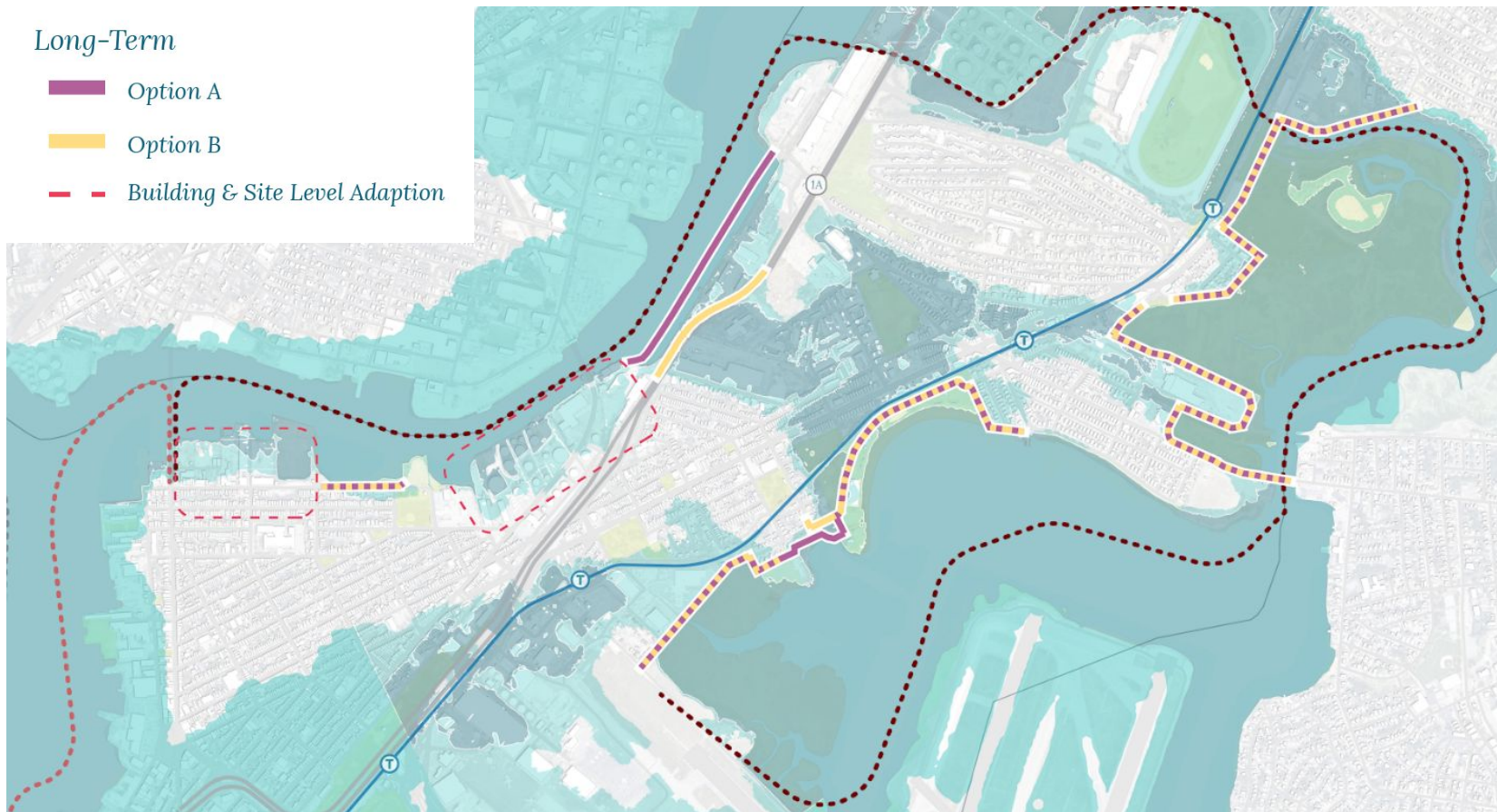
REFRESHER: CLIMATE READY BOSTON RECOMMENDATIONS

Long-Term

Option A

Option B

Building & Site Level Adaption



USACE TOOLKIT CROSSWALK

IF (EXISTING CONDITION)	THEN (APPLICABLE SOLUTION)	Example
<i>Harborwalk on Piers</i>	<i>Raised Harborwalk</i>	<i>Wharf District</i>
<i>Building on Piers</i>	<i>Fill Below Pier/New Seawall at Pier Edge/Floating Structure</i>	<i>Commercial Wharf, Burroughs Wharf</i>
<i>Open Space at Waterfront</i>	<i>Elevated Parks and Open Spaces</i>	<i>Christopher Columbus Park, Langone Park & Puopolo Playground</i>



US Army Corps
of Engineers



USACE TOOLKIT CROSSWALK

IF (EXISTING CONDITION)	THEN (APPLICABLE SOLUTION)	Example
<i>Building at Bulkhead Wall</i>	<i>Waterproof Ground Floor/Constructed Land + New Bulkhead/Raised Building (Wooden)</i>	<i>Custom House, Union Wharf</i>
<i>Building Setback from Bulkhead >12 feet</i>	<i>Elevated Edge/Social Space</i>	<i>Lewis Wharf & Pilot House</i>
<i>Roadway Setback from Bulkhead >12 feet</i>	<i>Elevated Edge/Social Space</i>	<i>Between Wharves</i>
<i>Marine Transportation</i>	<i>Marine Access</i>	<i>Long Wharf</i>

