

USACE & Boston Coastal Storm Risk Management Study

Dorchester Update
June 17, 2025



City of Boston
Climate Resilience

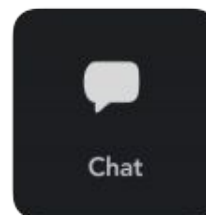
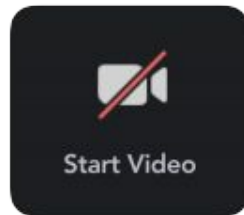
ZOOM TIPS - MEETING RECORDING

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:

<https://www.boston.gov/departments/climate-resilience/climate-ready-boston-and-army-corps-partnership>

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.



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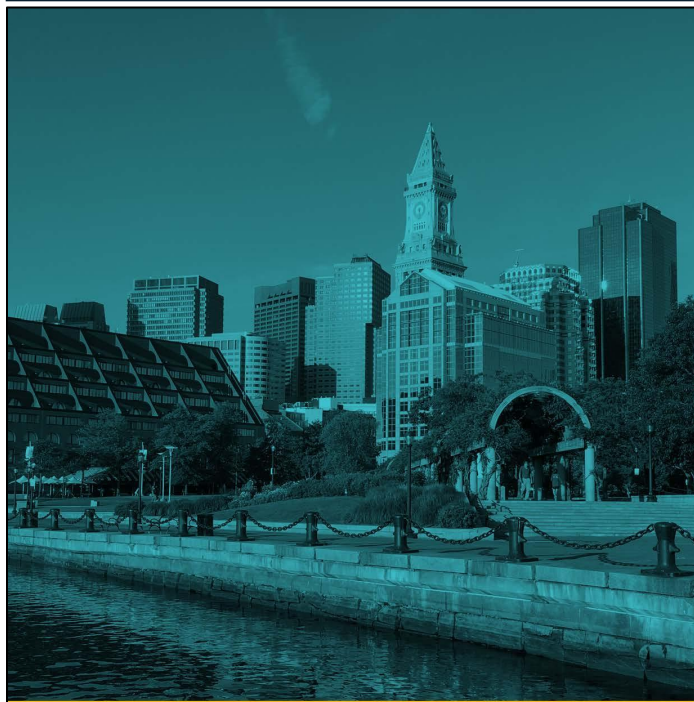
City of Boston
Climate Resilience

Goals

- *an introduction to the City and Federal teams*
- *background from "Climate Ready Boston" in Dorchester*
- *report out of USACE study steps and progress*
- *an opportunity to ask questions*
- *how to provide feedback and next steps*



CLIMATE READY BOSTON



CLIMATE **READY** BOSTON

EXECUTIVE SUMMARY

MAYOR MARTIN J. WALSH



DECEMBER 2014

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 TEMPERATURES



HEAT WAVES &
DROUGHTS

EXTREME PRECIPITATION



STORMWATER
FLOODING

SEA LEVEL RISE



COASTAL & RIVERINE
FLOODING

COASTAL STORMS



RESILIENT HARBOR VISION



DORCHESTER

SOUTH BOSTON

DOWNTOWN

EAST BOSTON



RESILIENT BOSTON HARBOR



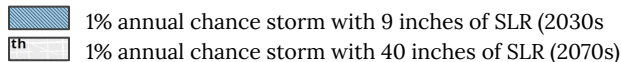
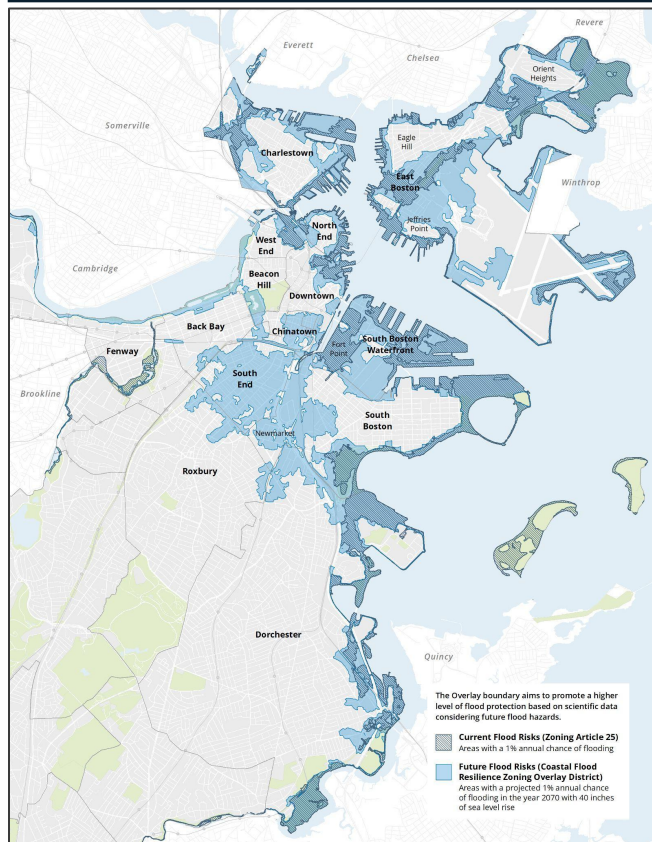
= FLOOD ADAPTED BUILDINGS



= ELEVATED LANDSCAPES

= CONNECTIONS AND ACCESS

NEIGHBORHOOD COASTAL RESILIENCE PLANS



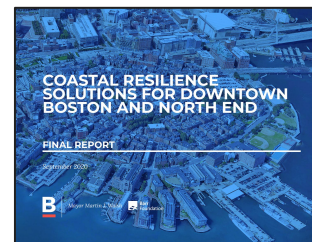
Between 2017-2022, the City completed neighborhood-level coastal resilience plans for all 47 miles of Boston's coastline.



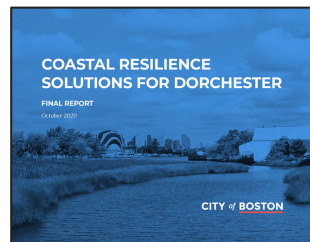
**East Boston
& Dorchester
Phase 1 (2017)**



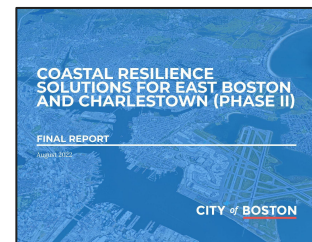
**South Boston
(2018)**



**North End &
Downtown
(2020)**

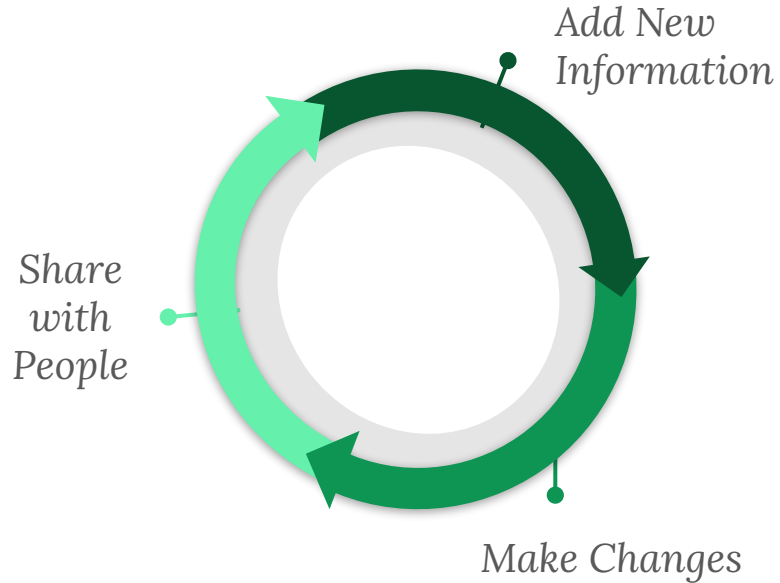


**Dorchester
(2020)**



**East Boston
& Dorchester 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!

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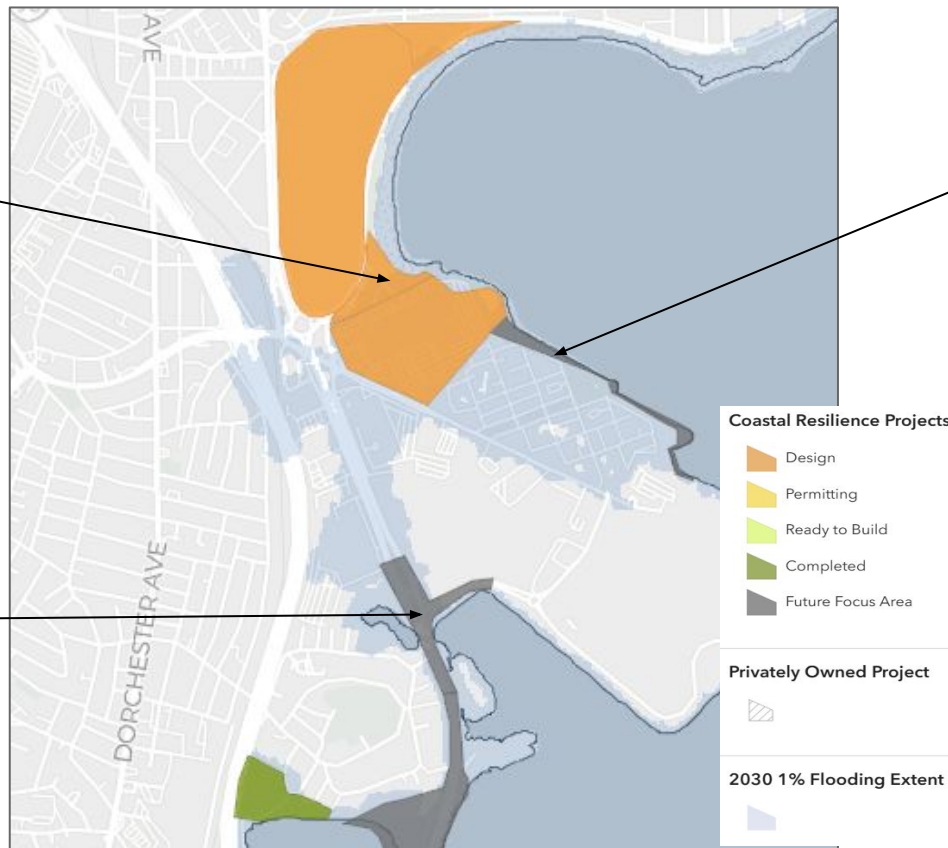
COASTAL RESILIENCE IMPLEMENTATION - DORCHESTER



**Moakley Park &
Moakley Connectors**
Design in progress



Morrissey Boulevard
*MassDOT and DCR
Awaiting Next Steps*



Harbor Point Harborwalk
Future Focus Area

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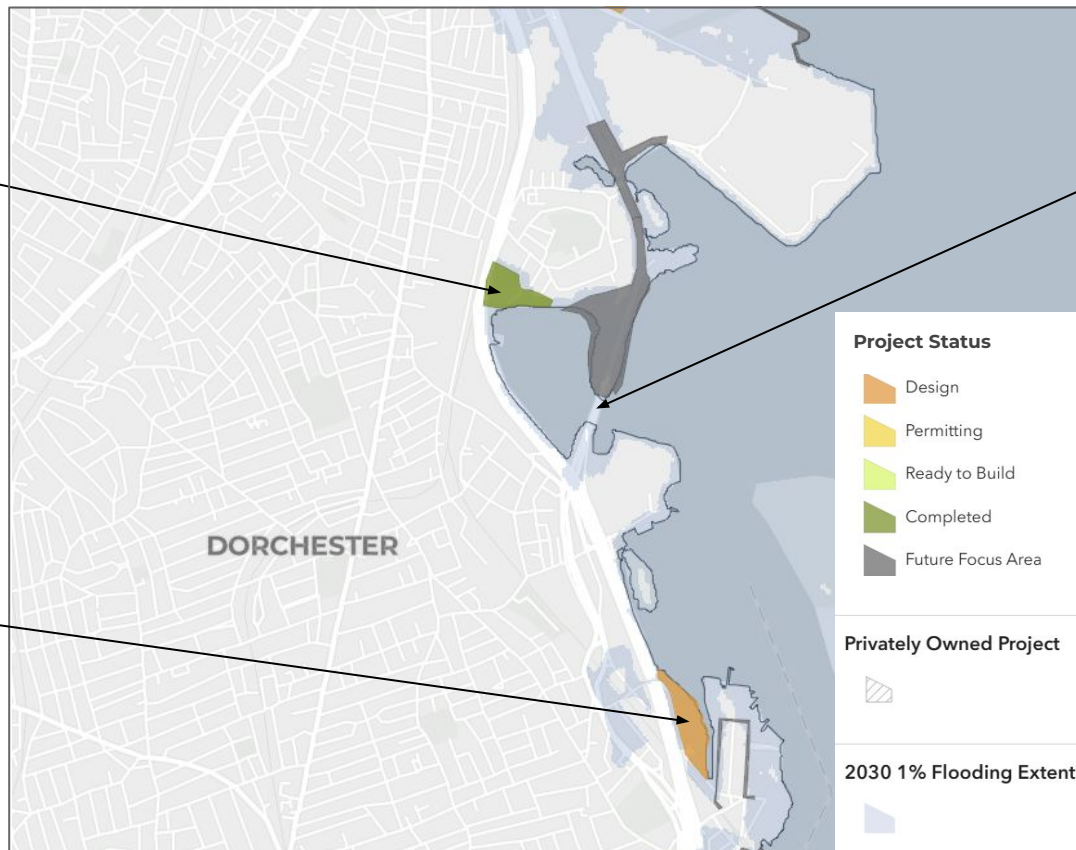
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McConnell Park
Constructed in 2022



Tenean Beach
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*MassDOT and DCR
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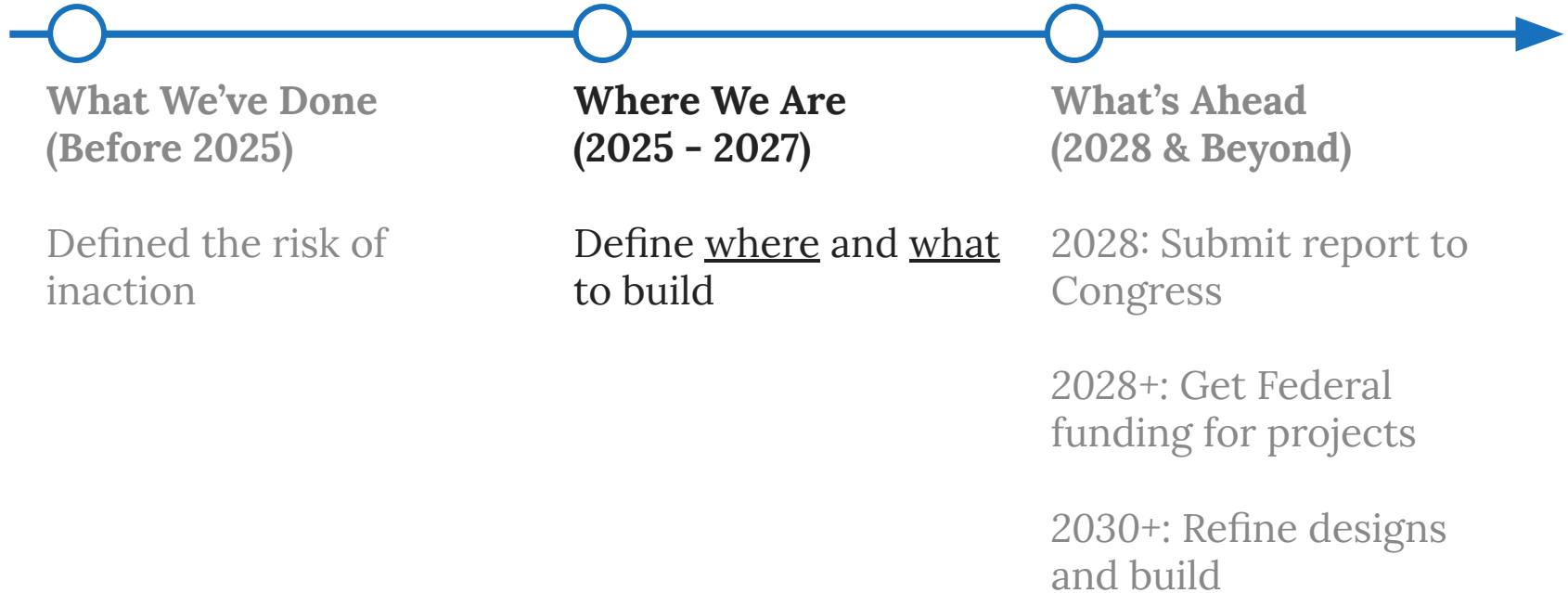
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WHY NOW AND WHY USACE?

- 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



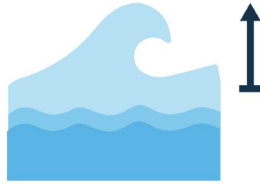
HOW DOES USACE DEFINE COASTAL STORM RISK?

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:



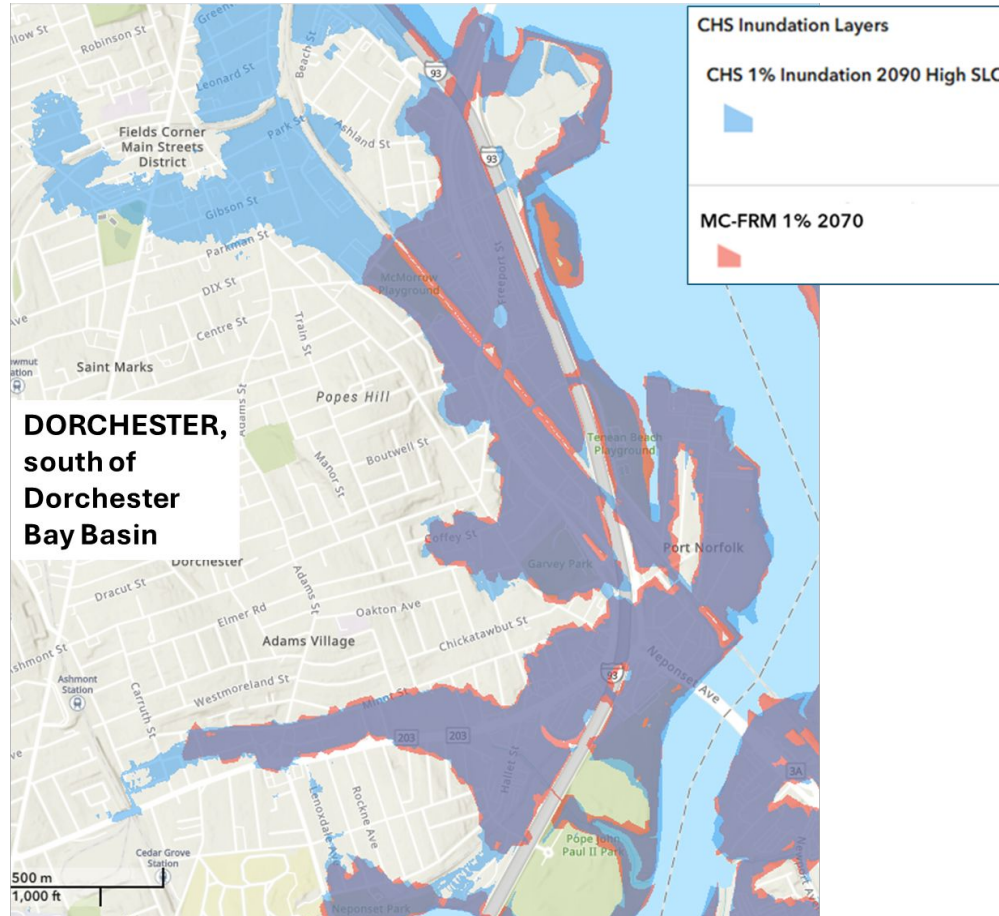
FLOOD PATHWAY

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





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



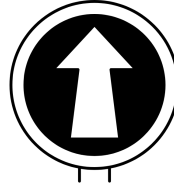
US Army Corps
of Engineers



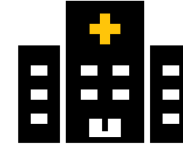
HOW DOES USACE DEFINE “FEDERAL INTEREST”?



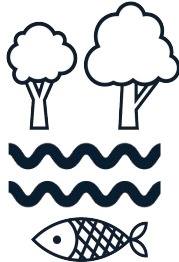
Protection of
Housing



Protection of
Evacuation Corridors



Protection of Critical
Infrastructure



Protection of Natural
Resources



Protection of People



Protection of Critical
Transportation



U.S. ARMY

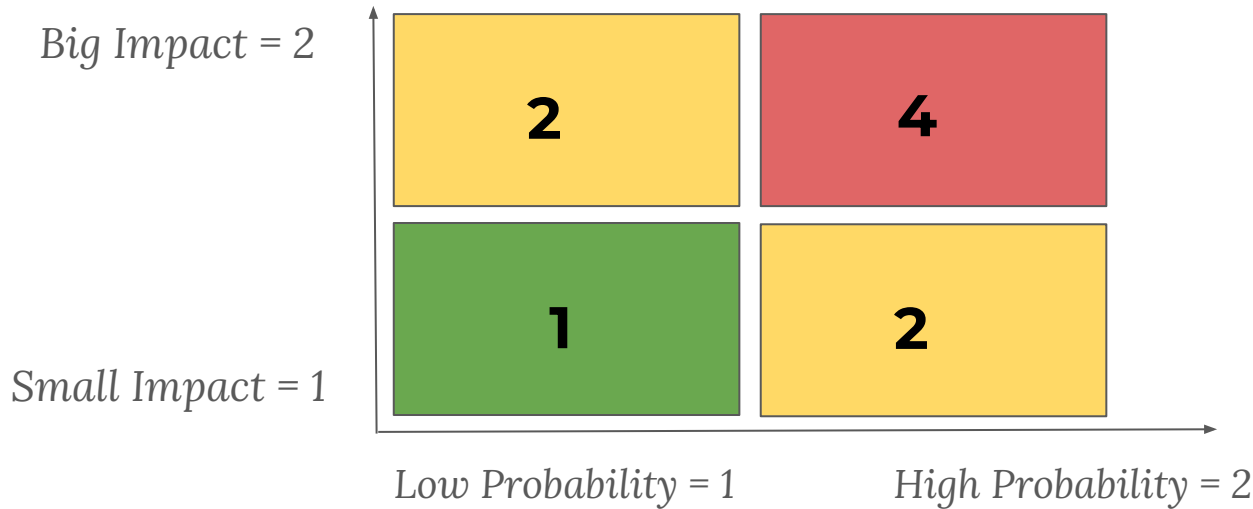


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of Engineers



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



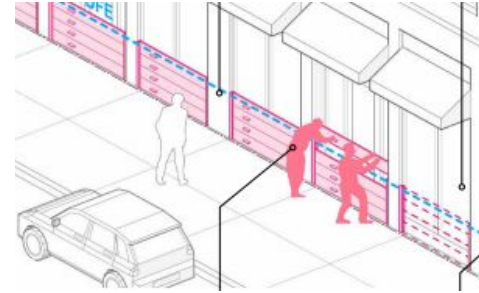
1st Drawer: PROTECT

Structural



2nd Drawer: ADAPT or ACCOMMODATE

Non-Structural, Physical



3rd Drawer: MANAGE

Non-Structural, Non-Physical

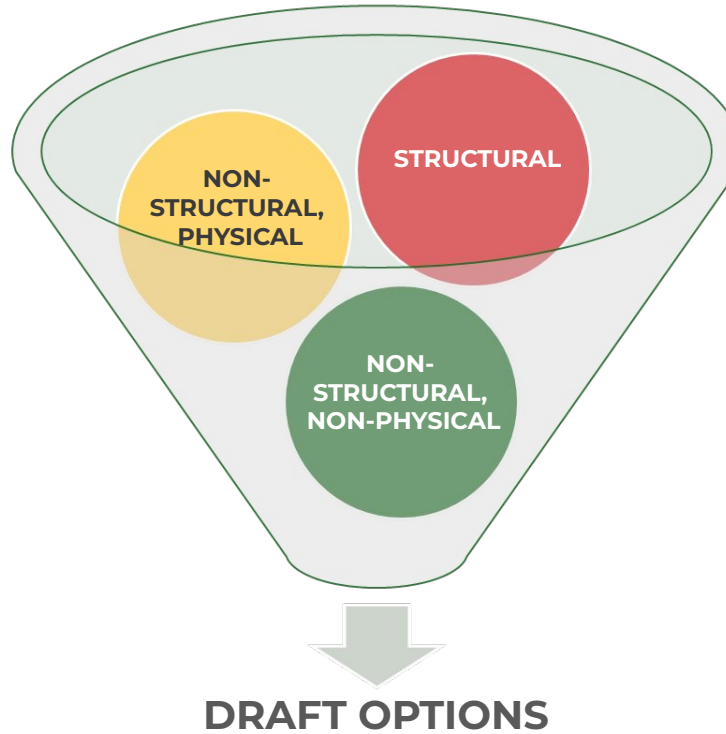


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HOW DOES USACE SELECT TOOLS FOR BOSTON?

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

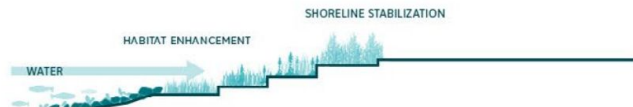


REFRESHER: CLIMATE READY BOSTON TOOLS

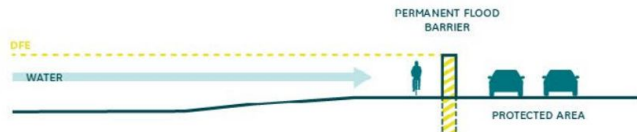
RAISED HARBORWALK / RAISED PARK SPACE



NATURE-BASED SOLUTIONS



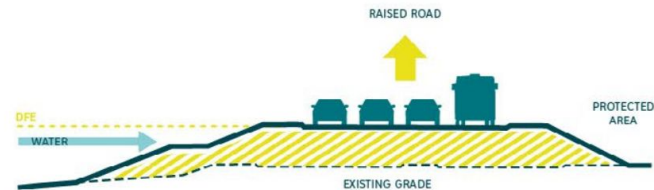
VERTICAL FLOODWALLS



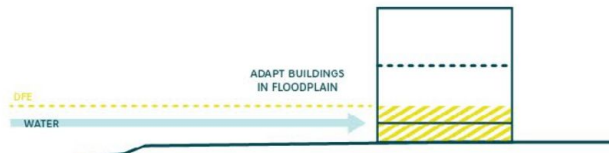
RAISED BERMS AND DUNES



RAISED ROADWAYS / MEDIAN FLOODWALLS



ADAPTED BUILDINGS AND STRUCTURES

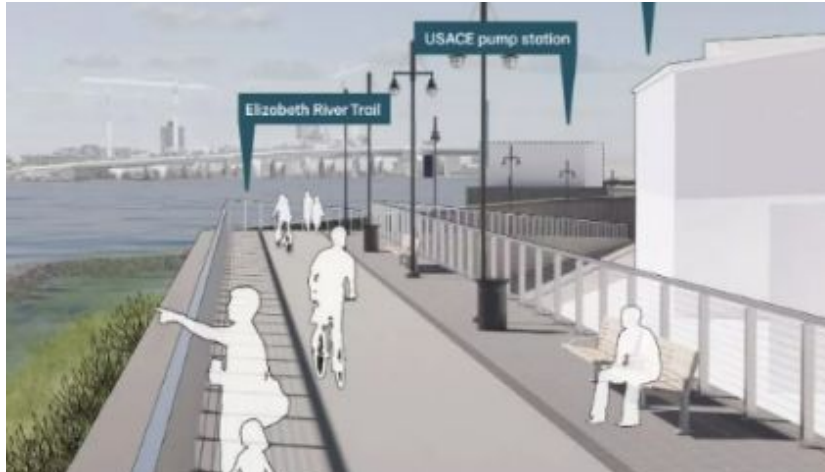


EXAMPLES OF USACE APPLICATIONS

RAISED HARBORWALK / RAISED PARK SPACE



USACE Example: Norfolk, VA



RAISED BERMS AND DUNES



USACE Example: New Bedford, MA

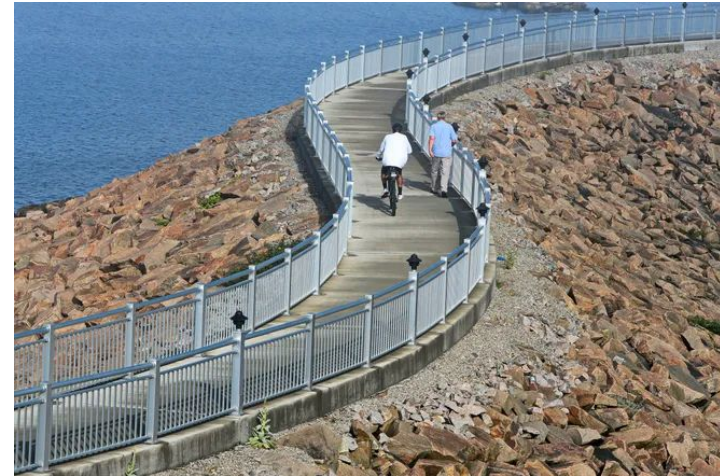


Photo Credit: Peter Pereira, The Standard-Times

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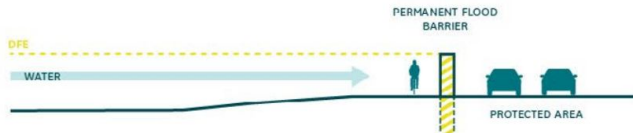


USACE Example: Norfolk, VA



USACE Example: Long Island, NY

VERTICAL FLOODWALLS



ADAPTED BUILDINGS AND STRUCTURES



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?*



How to Provide Feedback:



Come to Office Hours

VIRTUAL, EVERY FRIDAY

Friday, June 20

10 am - 12pm

<https://calendar.app.google/qScfkdc9zqMwxB3n6>



Submit comments online

STUDY FEEDBACK FORM



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Make an appointment

**VIRTUAL
(WITH CITY AND CORPS)**



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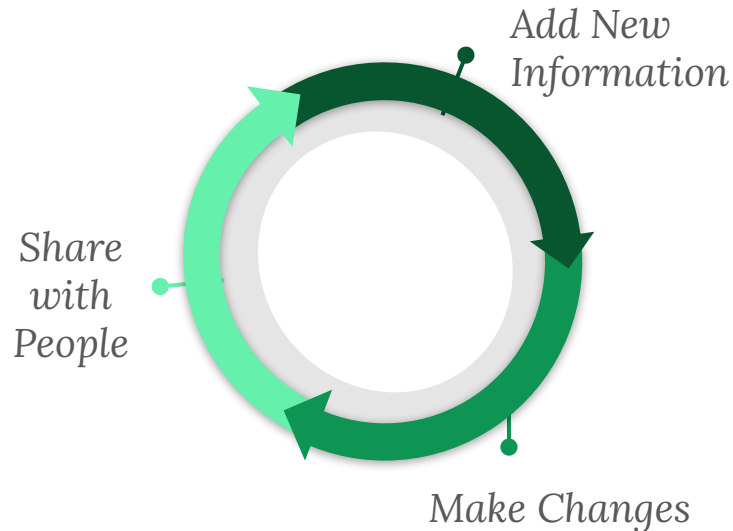


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of Engineers



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)



Preliminary Locations:

Draft Alignments for Dorchester



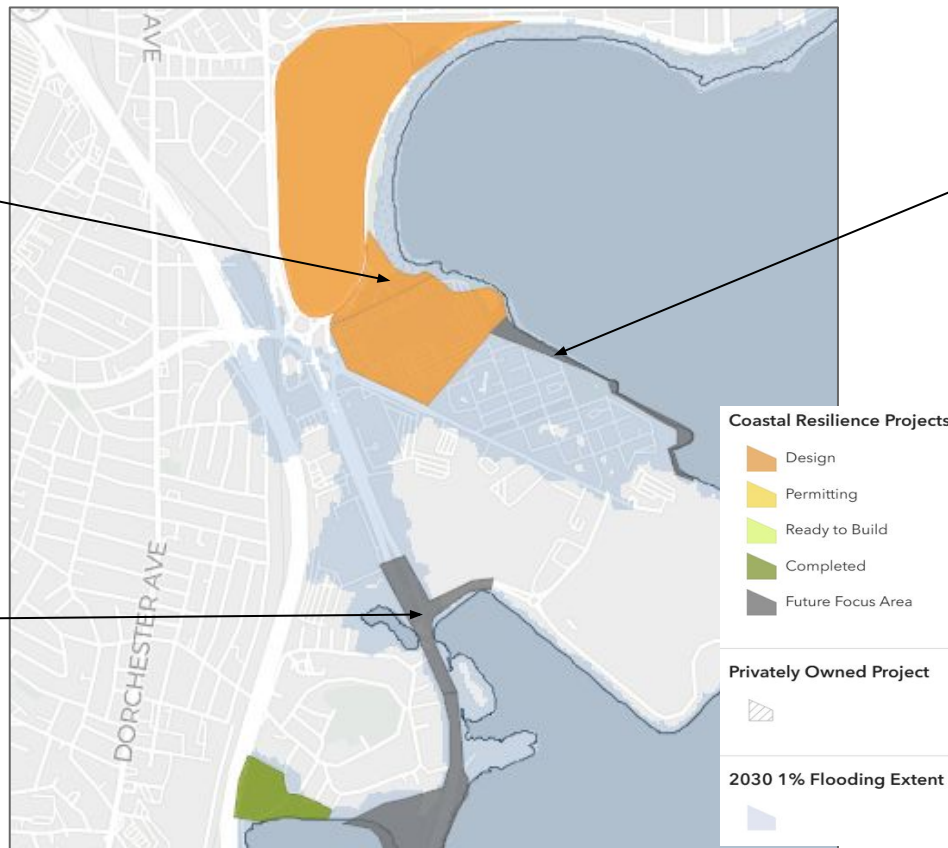
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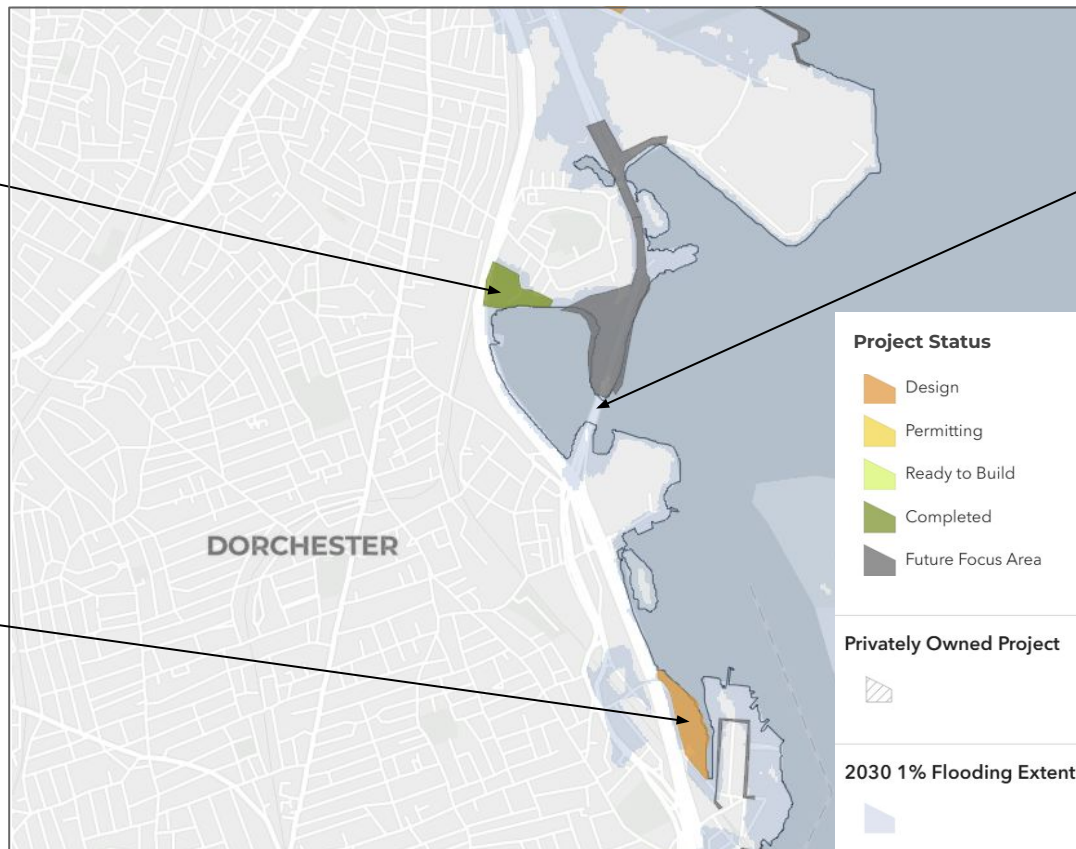
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McConnell Park
Constructed in 2022



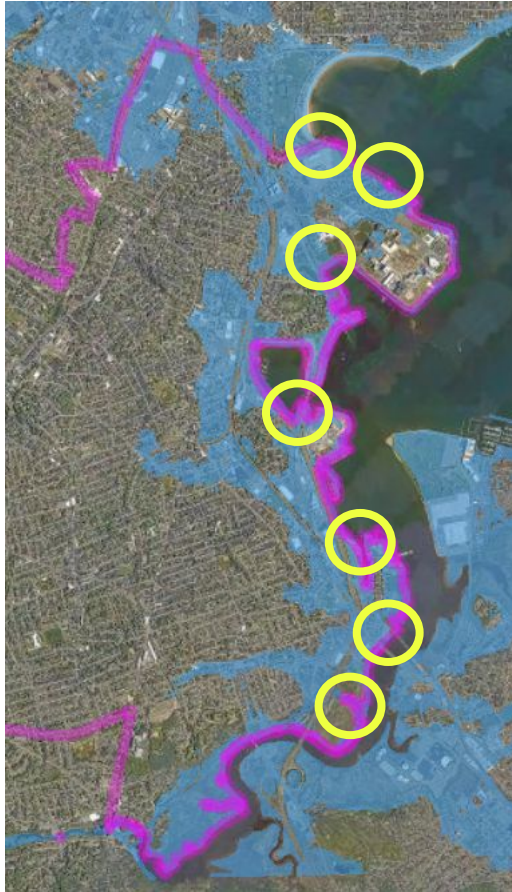
Tenean Beach
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Beades Bridge
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DORCHESTER OVERVIEW



1. Moakley Park Southern Connector
2. Harbor Point Harborwalk
3. Pattens Cove
4. Morrissey Boulevard (Mid-Section)
5. Tenean Beach
6. Neponset Bridge
7. Davenport Creek



1. MOAKLEY PARK SOUTHERN CONNECTOR AND 2. HARBOR POINT HARBORWALK



LEGEND

CHS Inundation Layers

CHS 1% Inundation 2090 High SLC



Flood Pathways



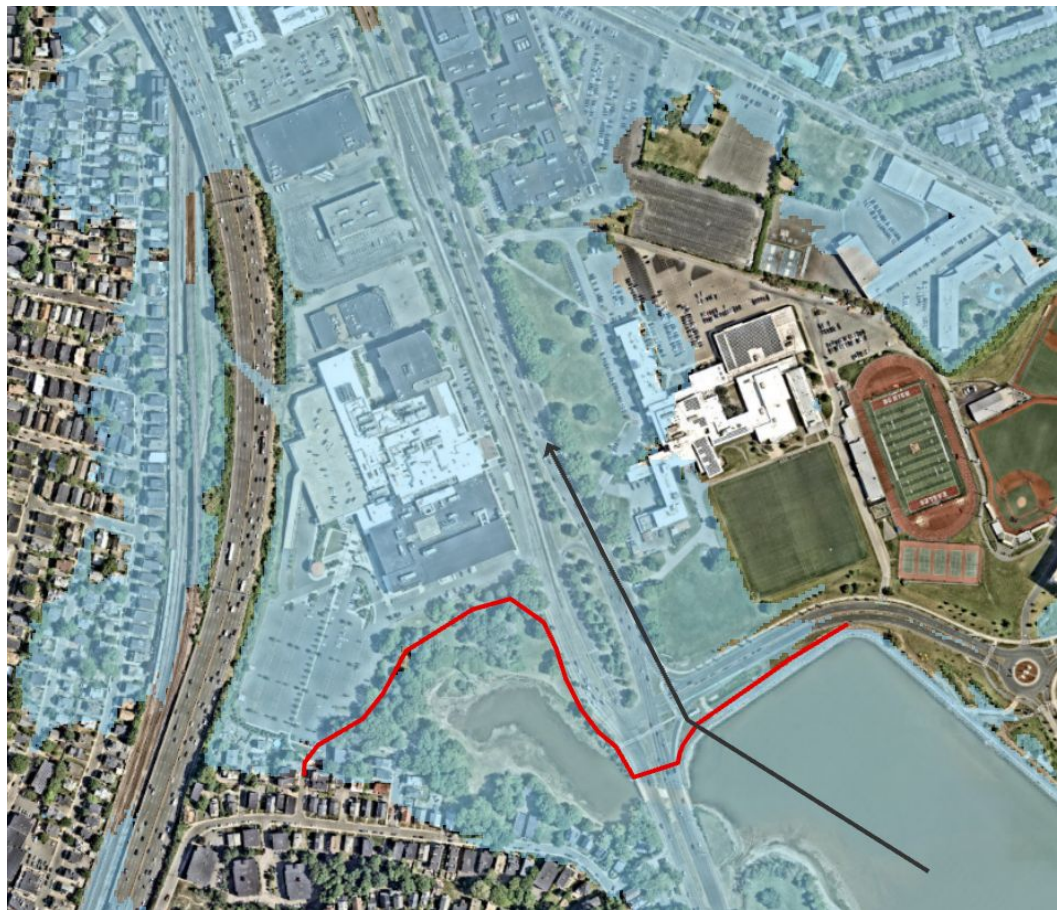
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3. PATTENS COVE



LEGEND

CHS Inundation Layers

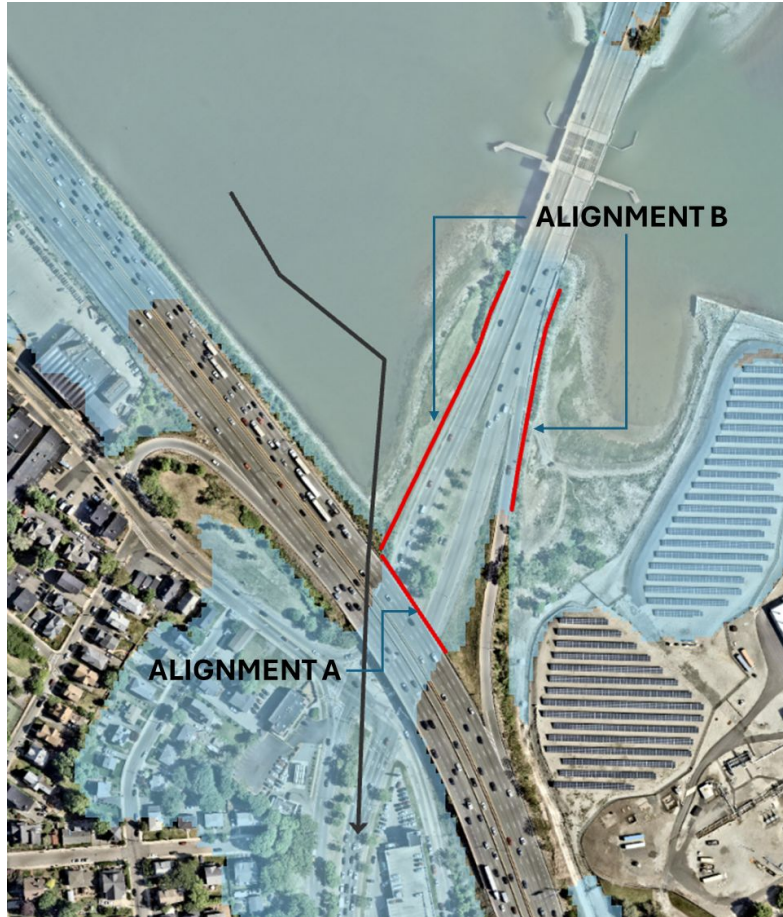
CHS 1% Inundation 2090 High SLC



Flood Pathways



4. MORRISSEY BOULEVARD (MID-SECTION)



LEGEND

CHS Inundation Layers

CHS 1% Inundation 2090 High SLC



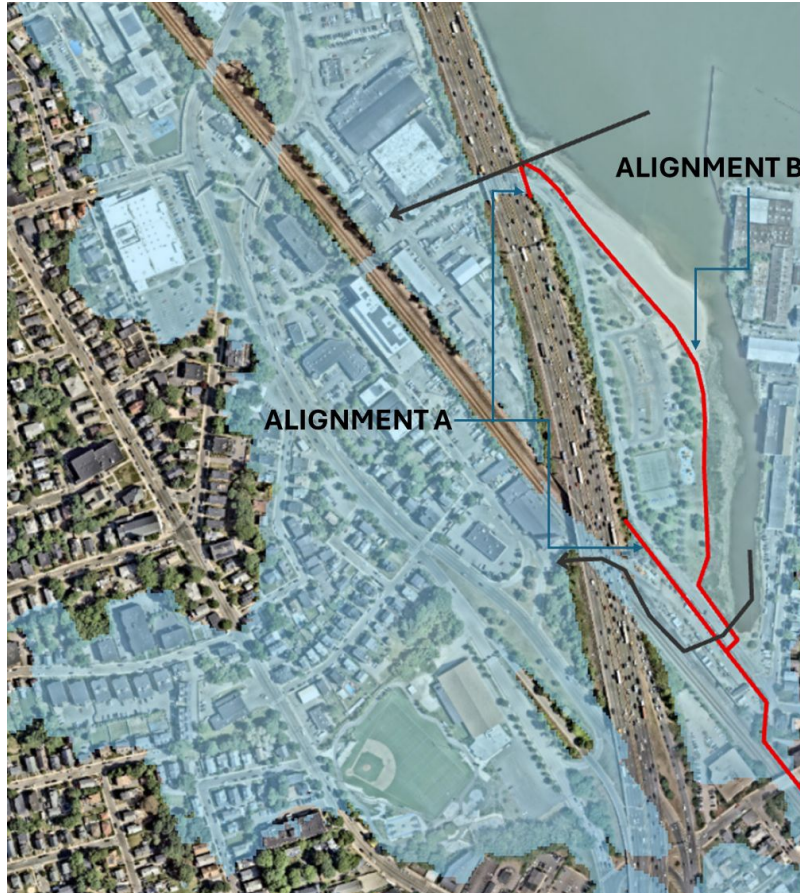
Flood Pathways



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5. TENEAN BEACH



LEGEND

CHS Inundation Layers

CHS 1% Inundation 2090 High SLC



Flood Pathways



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PORT NORFOLK



LEGEND

CHS Inundation Layers

CHS 1% Inundation 2090 High SLC



Flood Pathways



6. NEPONSET BRIDGE AND 7. DAVENPORT CREEK

LEGEND

CHS Inundation Layers

CHS 1% Inundation 2090 High SLC



Flood Pathways



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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)*



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Question and Answer Session



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