



Eastern Avenue Climate Resilience Vision

Building community resilience, transforming the future

June 14, 2023

Project Introduction

Why a Resilient Vision for Eastern Avenue?

The City of Chelsea is developing a Resilient Vision for Eastern Avenue to make sure that this area is protected from the sea level rise and flooding that are highly likely to be worsened by Climate Change.

To address current and potential climate conditions, the City has developed a conceptual design focused on:

- Blocking future flood
- Reducing extreme heat
- Managing stormwater runoff
- Slowing traffic and improving safety
- Making the area more pedestrian-friendly

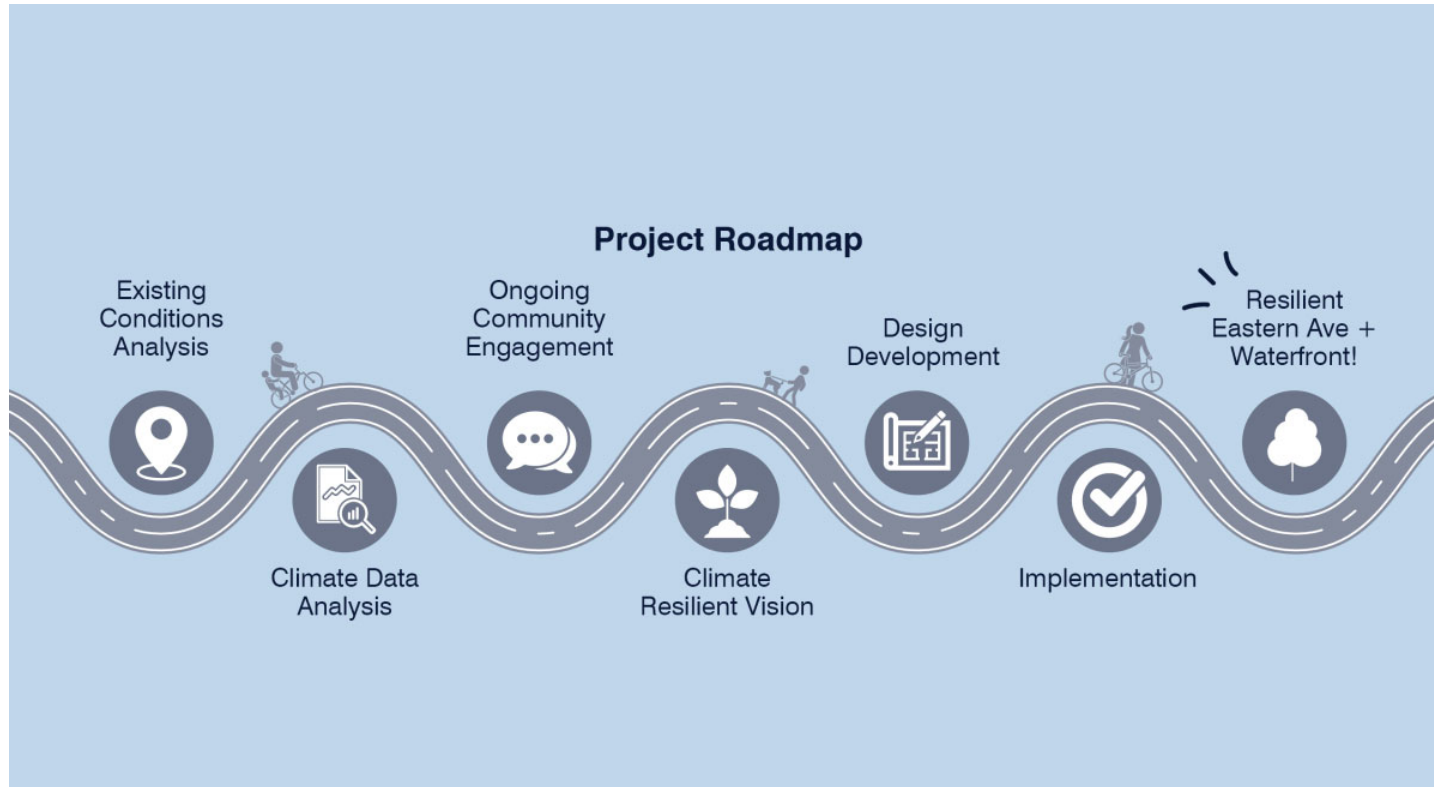


Eastern Avenue Climate Resilient Vision and Design Alternatives Development Project Area

The concepts presented in this vision are early ideas and strategies to create a more inviting and resilient neighborhood. The next phase of this project will involve further detailed design development in partnership with community members and stakeholders.



Eastern Avenue Today vs. Eastern Avenue with Climate Resilience Vision



Community Engagement

Approximately 30 people attended the community open house, which was a bilingual (English and Spanish) open house held at the Chelsea Public Library on March 21st, 2023. Participants provided invaluable insight into what the community hopes to accomplish through this project. Some of the main takeaways are below:

- Participants were excited about more green space and parks (and stressed the need for public bathrooms).
- Participants were enthusiastic about the possibility of bike and pedestrian infrastructure at Eastern Avenue.
- Of the strategies presented, participants were most enthusiastic about trees and waterfront green space.
- Other strategies that participants liked were rain gardens, bioswales (street plantings that drain stormwater in an environmentally friendly way), public art, and pathways & overlooks at the waterfront.

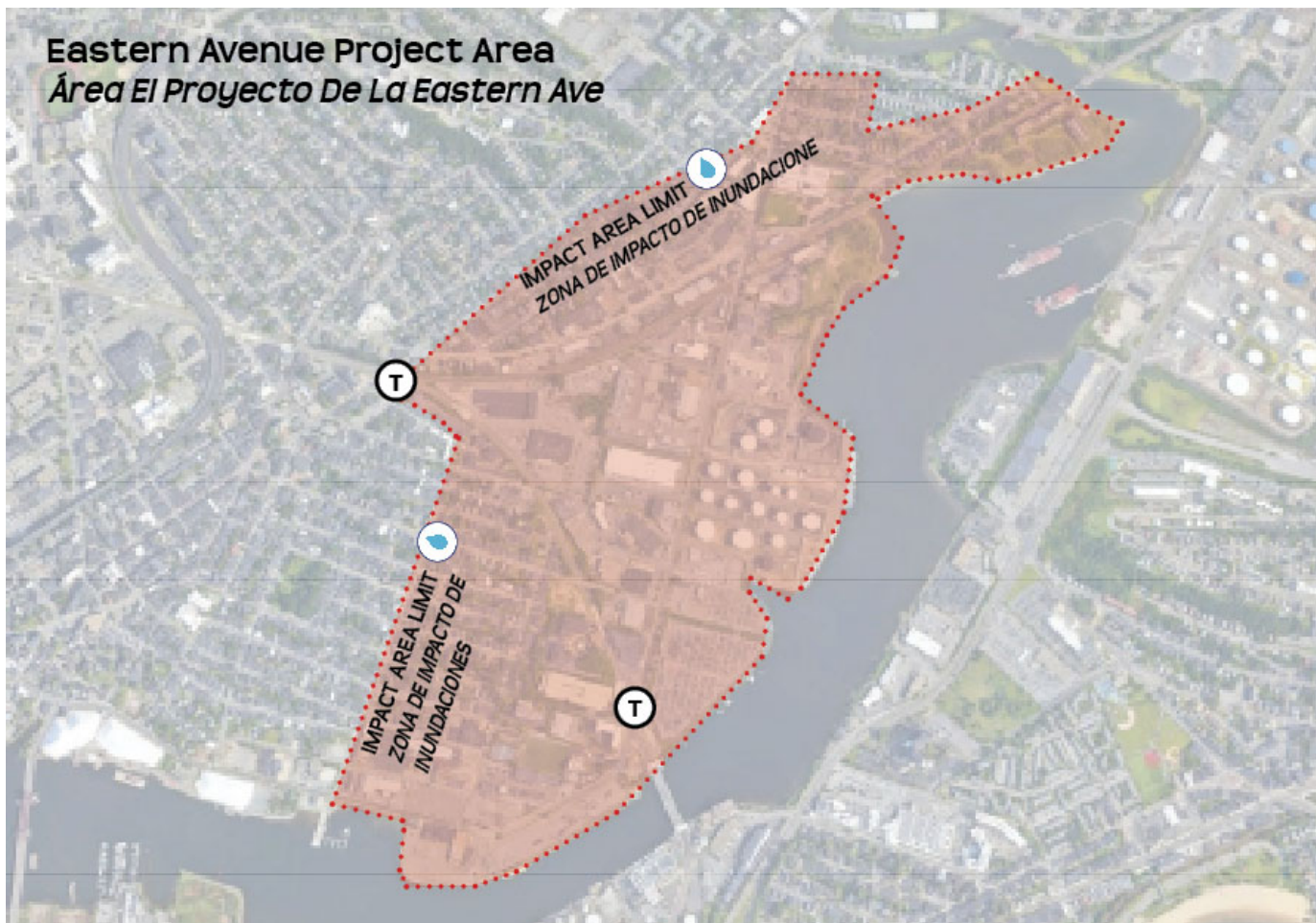


Eastern Avenue Project Area

Eastern Avenue Project Area
Área El Proyecto De La Eastern Ave

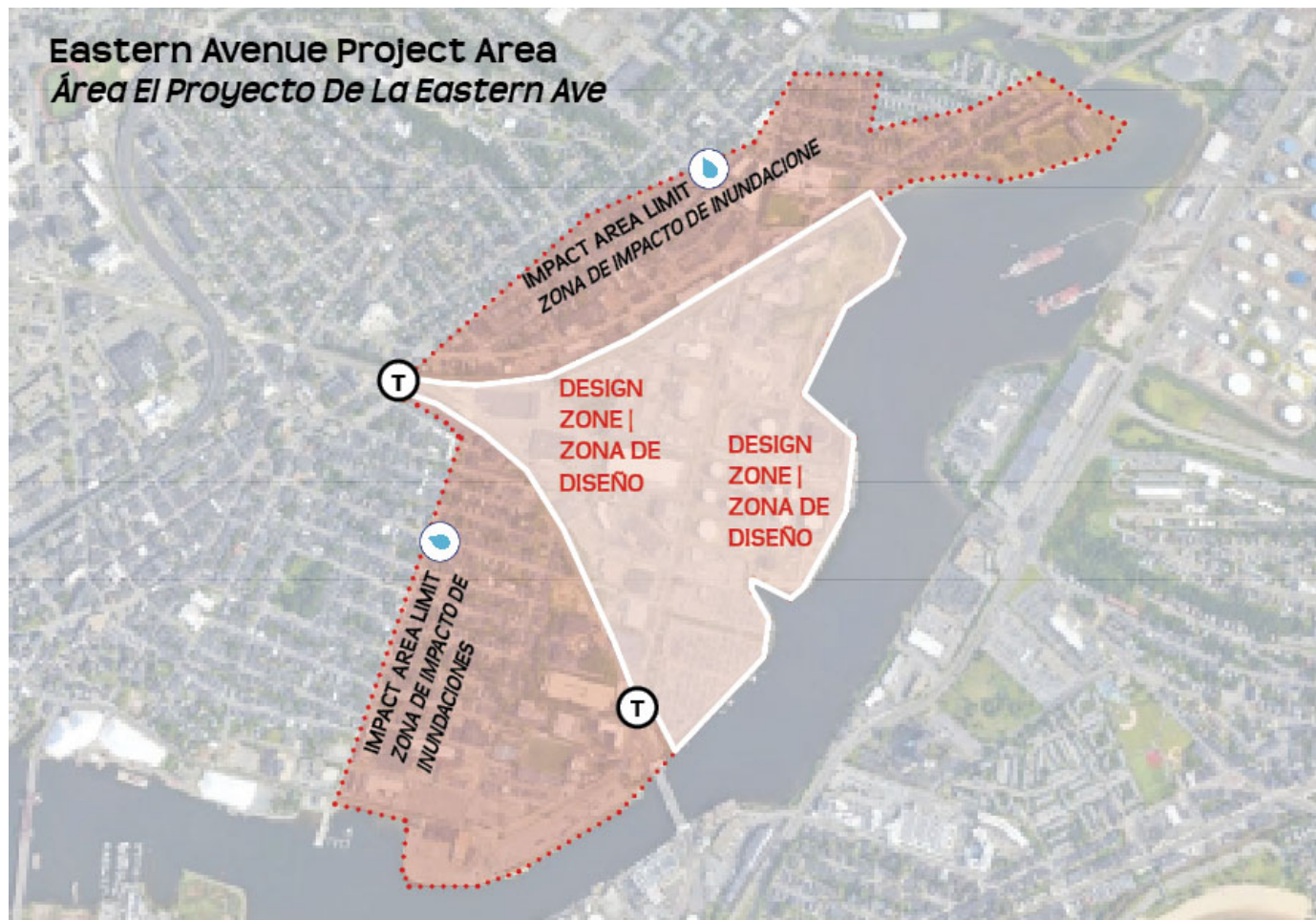


Eastern Avenue



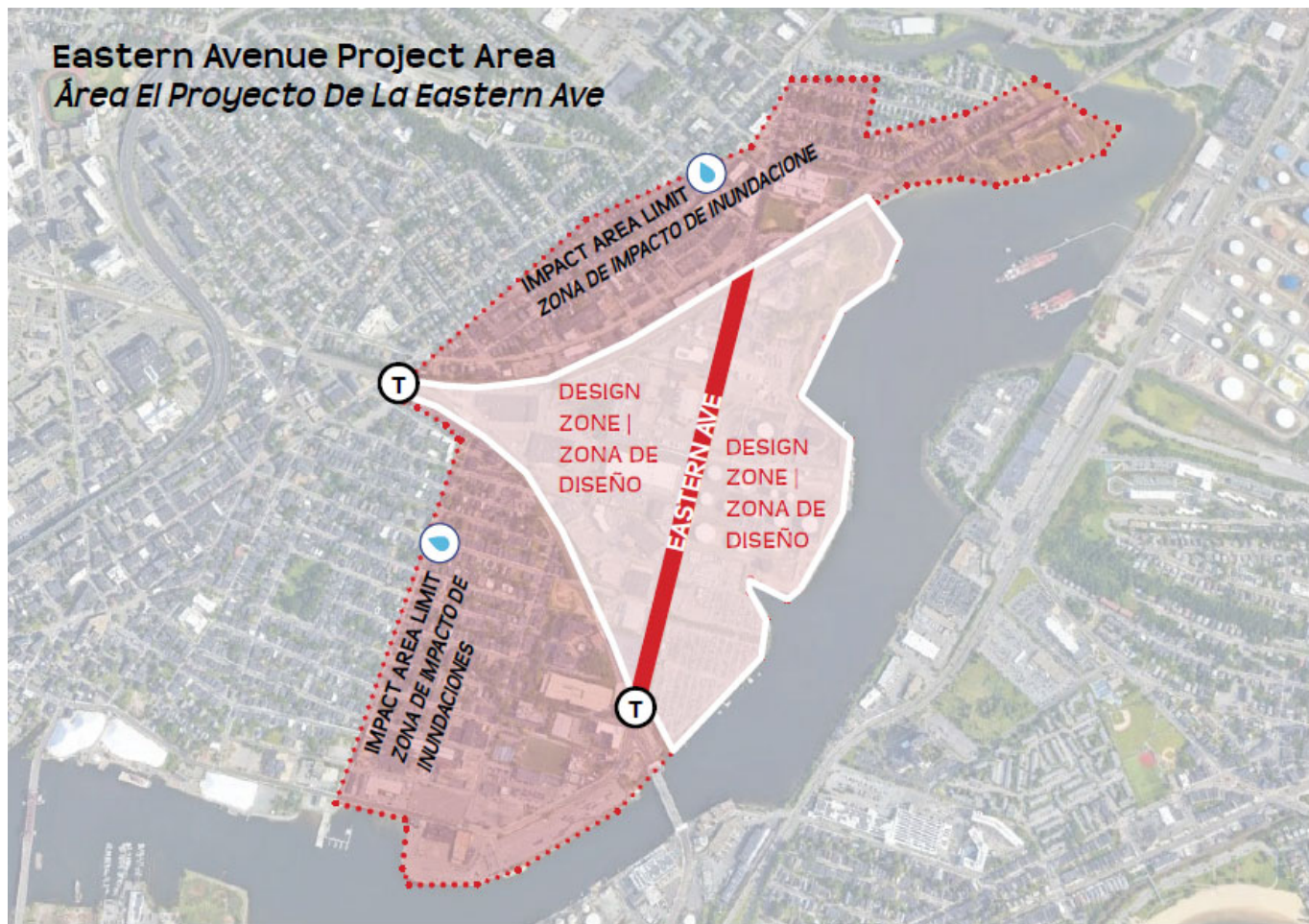
Eastern Avenue Project Area with Impact Area Limit

Impact Area: Area where flooding is projected to occur over the next several decades



Eastern Avenue Project Area with Design Zone

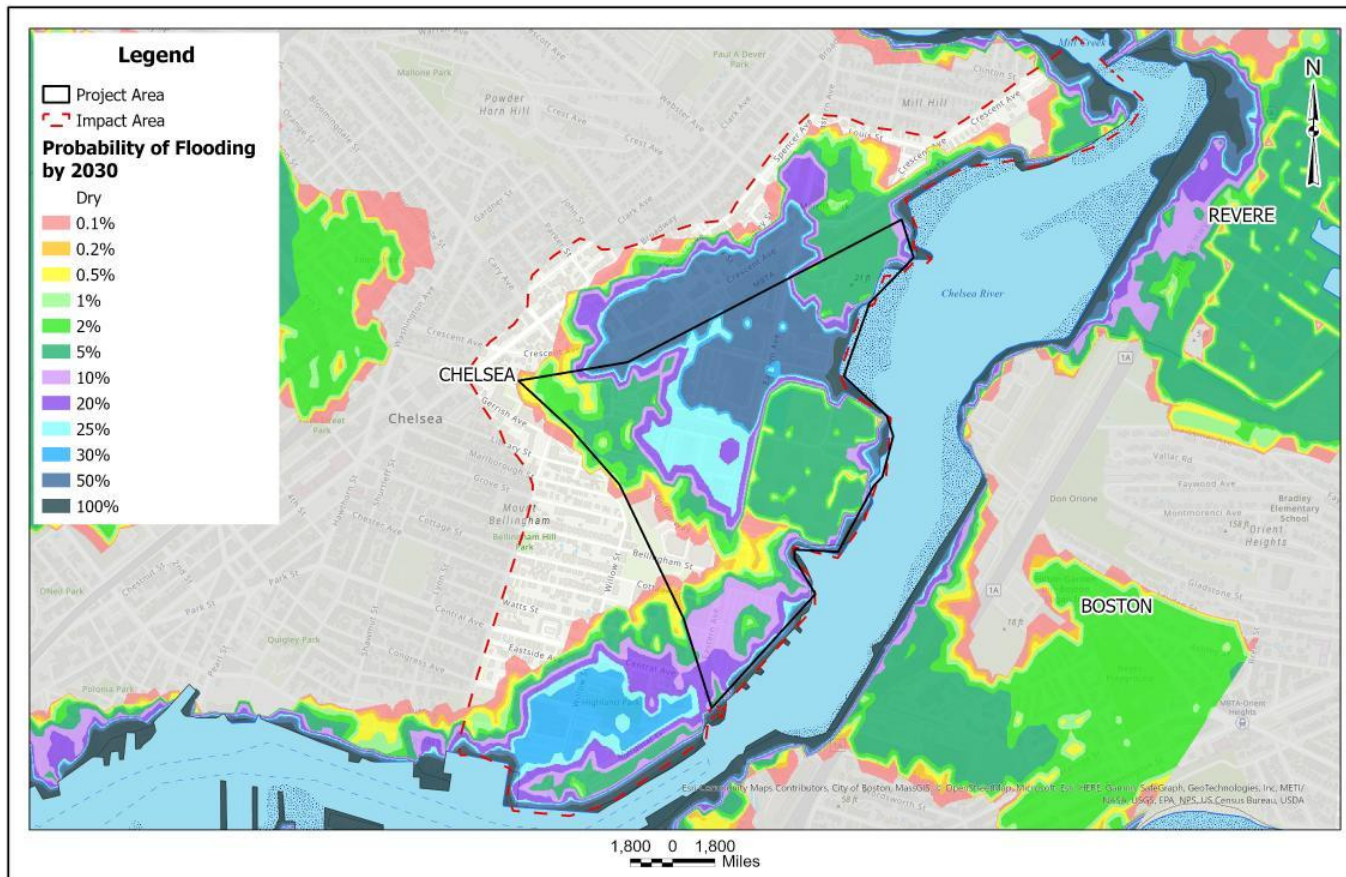
Design Zone: Location of design concepts and where they will be most effective at mitigating flooding.



Eastern Avenue Project Area

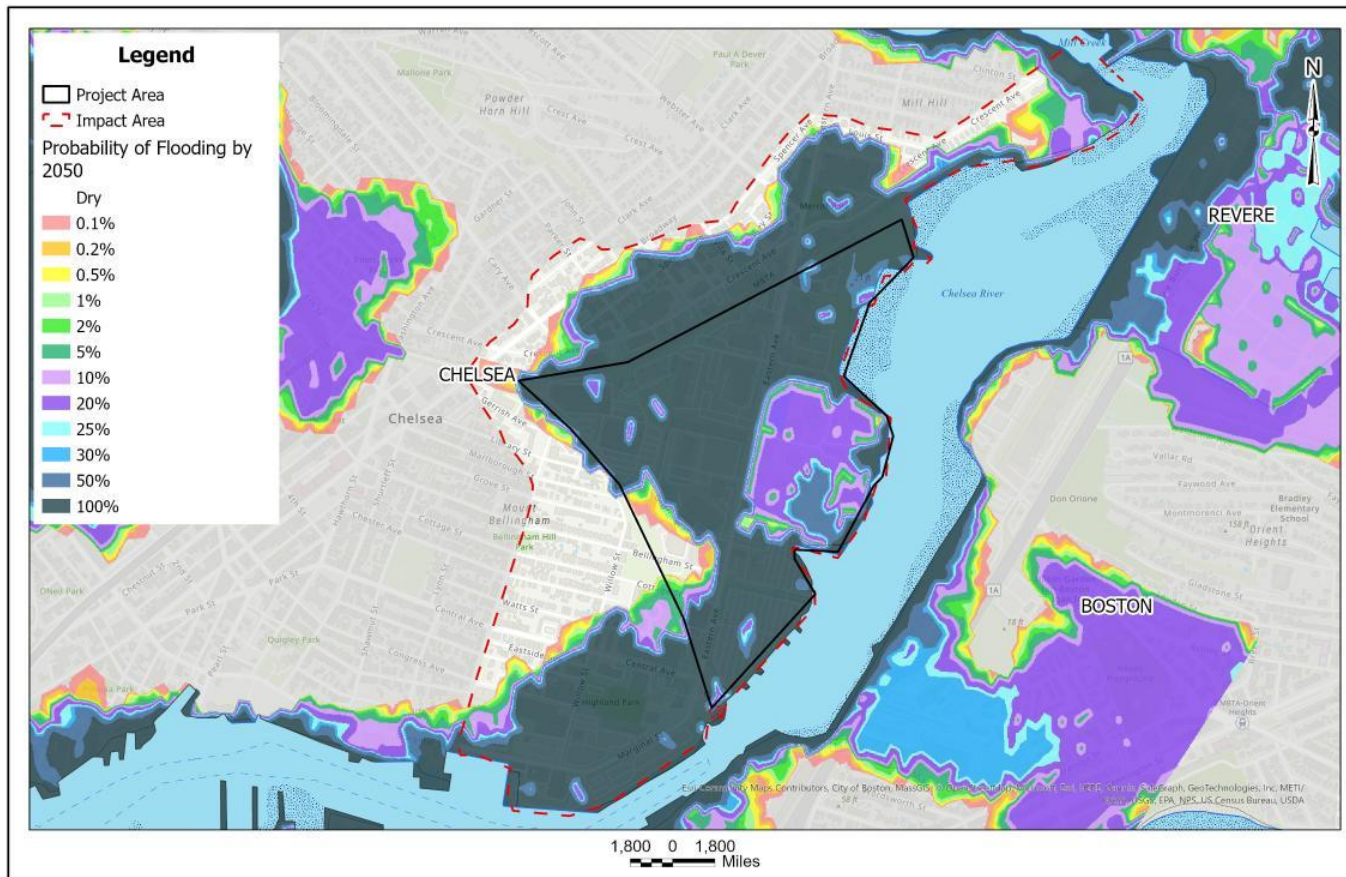
Climate Change Projections

The Eastern Avenue study area is vulnerable to current and future sea level rise/storm surge, extreme precipitation, and extreme heat.



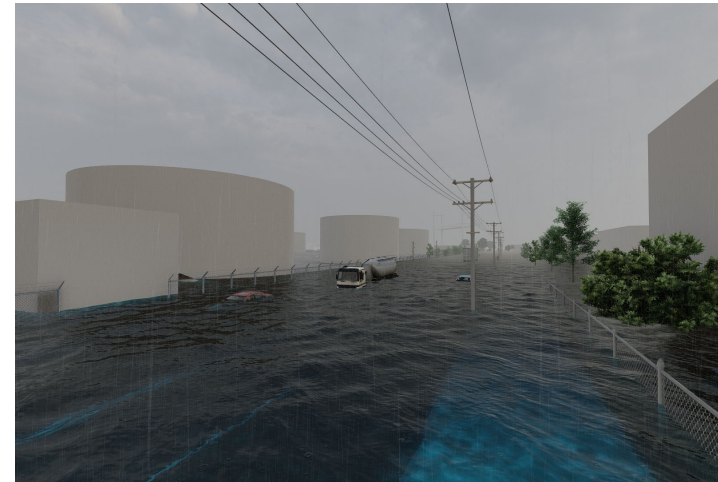
Probability of Flooding by 2030

Today, the probability of flooding is primarily restricted to the immediate area along Chelsea Creek. Flooding is still relatively manageable.



Probability of Flooding by 2050

As climate change worsens and sea levels rise, the likelihood of inundation extends further inland with nearly a 100% chance of flooding along the waterfront each year.



Potential Conditions Under Climate Change in 2070 with No Action - Street Level

Existing Conditions

This diagram is a summary of the existing conditions that are relevant to the Project Area and Impact Area. It combines the areas that are expected to flood in the future with information on greenspace, property owner, utility, transportation, and resilience projects in development.

Constraints

Opportunities

Road for industrial trucks
trees and vegetation
Railroad tracks
water pollution from sewers
Mix of sensitive existing infrastructure
Pedestrian infrastructure

Street

Reduction of

Industrial activity and regulations
connectivity (esp. with the SilverLine)

Bike

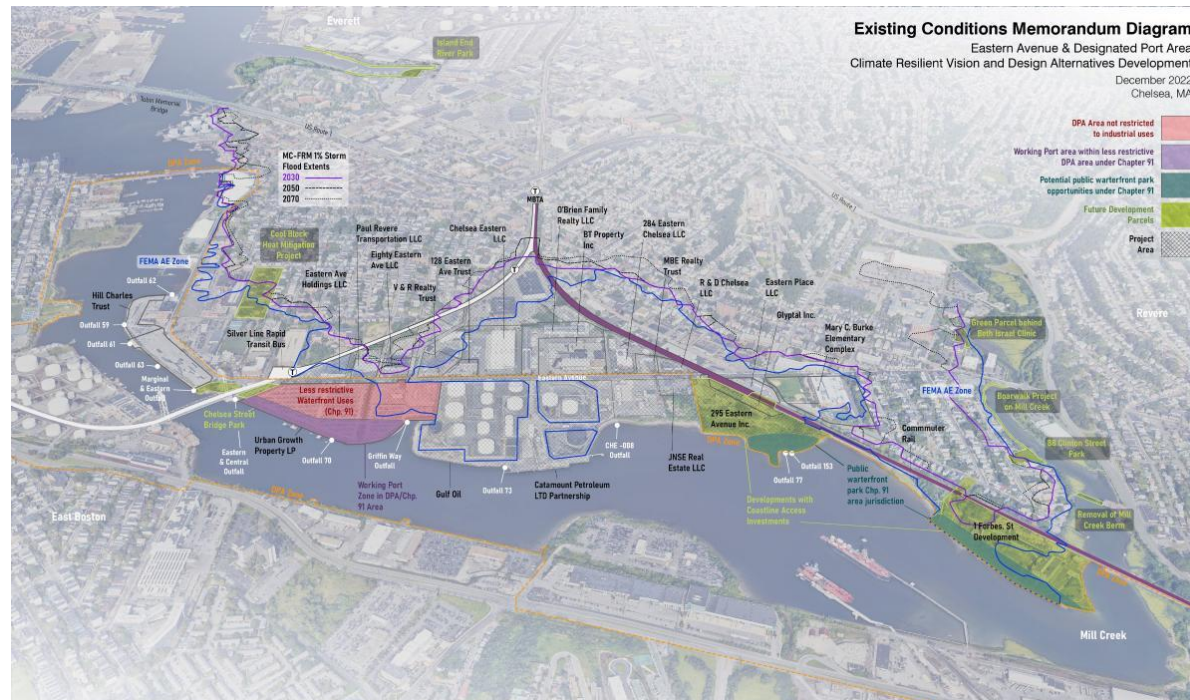
Lack of access to waterfront

Green space and parks

Water pollution from sewers during

storms

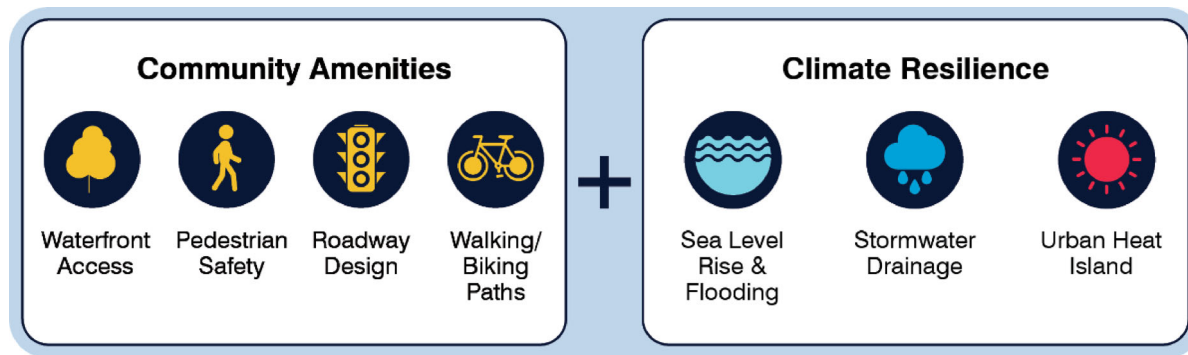
Waterfront access



Resilient Vision

Two vision concepts have been proposed to block flooding along Eastern Avenue for the future. The first concept is intended to

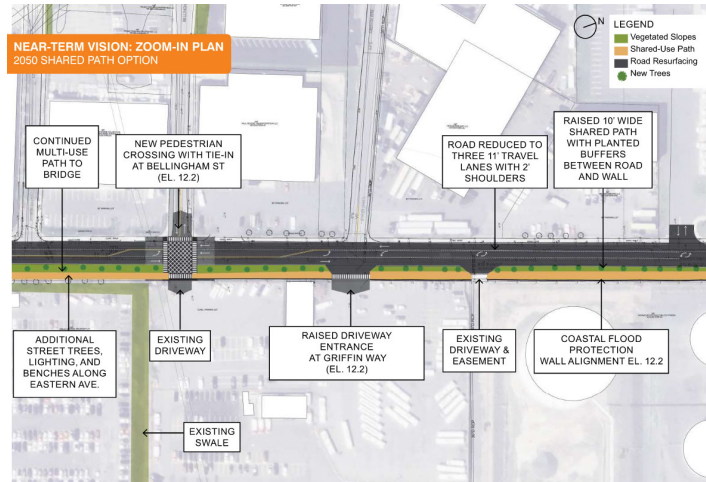
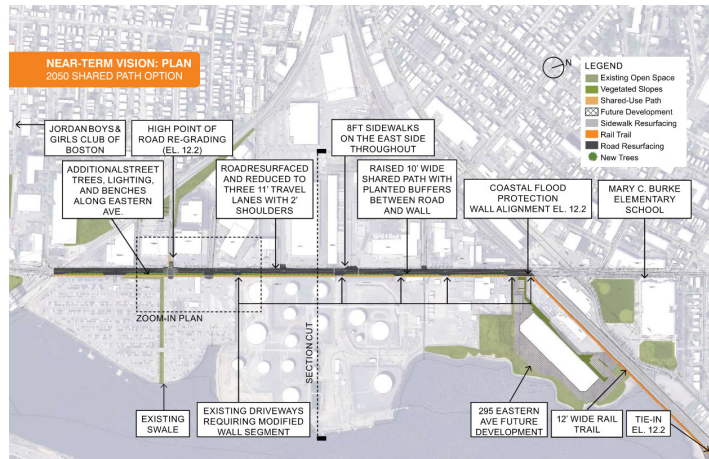
block flooding based on the 2050 climate change projections. The second is intended to block flooding based on the 2070 projections.



Design Goal: Combine community amenities with climate resilience.

2050 Near-Term Vision

The near-term vision aims to block flooding while also creating safe spaces for pedestrians, cyclists, and drivers. This project combines the need for pedestrian infrastructure with flood protection. The design concept proposes a vegetated flood barrier berm that has a shared walking and biking path on it. This design also includes more trees, vegetation, and traffic reconfiguration.



Move the slider to the right to see the zoomed out plan and left to see the zoomed in plan



2070 Long-Term Vision

This long-term vision concept builds on the short-term by raising the flood protection to a higher level and adding a public waterfront access element to the project. This concept proposes a waterfront berm and green space that are high enough to block flooding. On top of this berm, there would be a riverwalk, pedestrian pathway, bike paths, and publicly accessible open space. There would also be additional trees and vegetation planted along the waterfront and along Eastern Avenue.



Move the slider to the right to see the zoomed out plan and left to see the zoomed in plan



Tell Us Where You've Seen Flooding

Provide your thoughts for what can happen in the next phase!

The map below helps us identify areas that are already experiencing flooding. Drag the blue marker to any portions of the area that you have seen flooding. You can also type in a street address to pinpoint an exact location. Feel free to add any pictures

of flooding you've experienced and click submit when you're finished.



ArcGIS Survey123

Acknowledgements

StoryMap created by Weston & Sampson
Inc.



Community Partners

Municipal Vulnerability Preparedness (MVP) ...

Learn more about our Climate MVP program that supports cities and towns as they build resilience to...

<https://www.mass.gov/municipal-vulnerability-preparedness-mvp-program>

Mystic River Watershed Association | MyRWA | Boston

A greater-Boston based environmental organization that works to protect our water, restore important habitat, build climate resiliency, transform...

<https://mysticriver.org/>

GreenRoots, Inc.

Working for environmental justice and improved quality of life

<https://www.greenrootschelsea.org/>

Funding

This project is made possible thanks to the Municipal Vulnerability Preparedness Program. [Click here](#) to learn more.

