



Welcome to our FiDi-Seaport Virtual Open House!

As you're waiting for the presentation to start, please take a moment to introduce yourself in the chat!

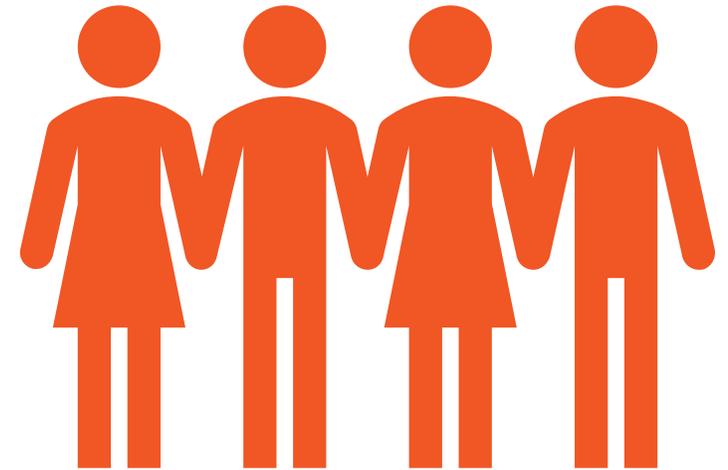
Financial District & Seaport Climate Resilience Plan

June 2021

Welcome to Zoom!

A few requests for today's event:

1. *When in a Zoom meeting, please mute yourself while others are speaking throughout the duration of the Virtual Open House. You will have time in the breakout rooms and the Q&A room to unmute and discuss.*
2. *Add questions to the chat box during presentations.*
3. *Turn on your camera if you can!*



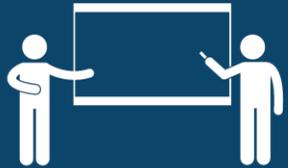
Tonight, we would like to discuss...

Welcome presentations and workshops will begin every 30 min. on the half hour.

Project Q&A will take place throughout the entire evening.

1

WELCOME



You are here!

Learn more about the project's background, hear an update on the planning process, and see what the project could look like.

2

SMALL GROUP DISCUSSIONS



We want to hear from you! Join members of the project team to workshop design opportunities.

Transportation
+ Access

Public
Space

Waterfront
Esplanade
+
Maritime
Activity

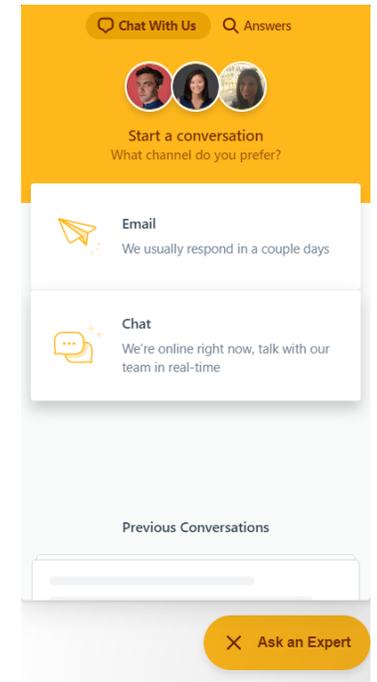
3

Q&A



Still have questions?

Join this room to ask our project leaders questions about the project and our process.

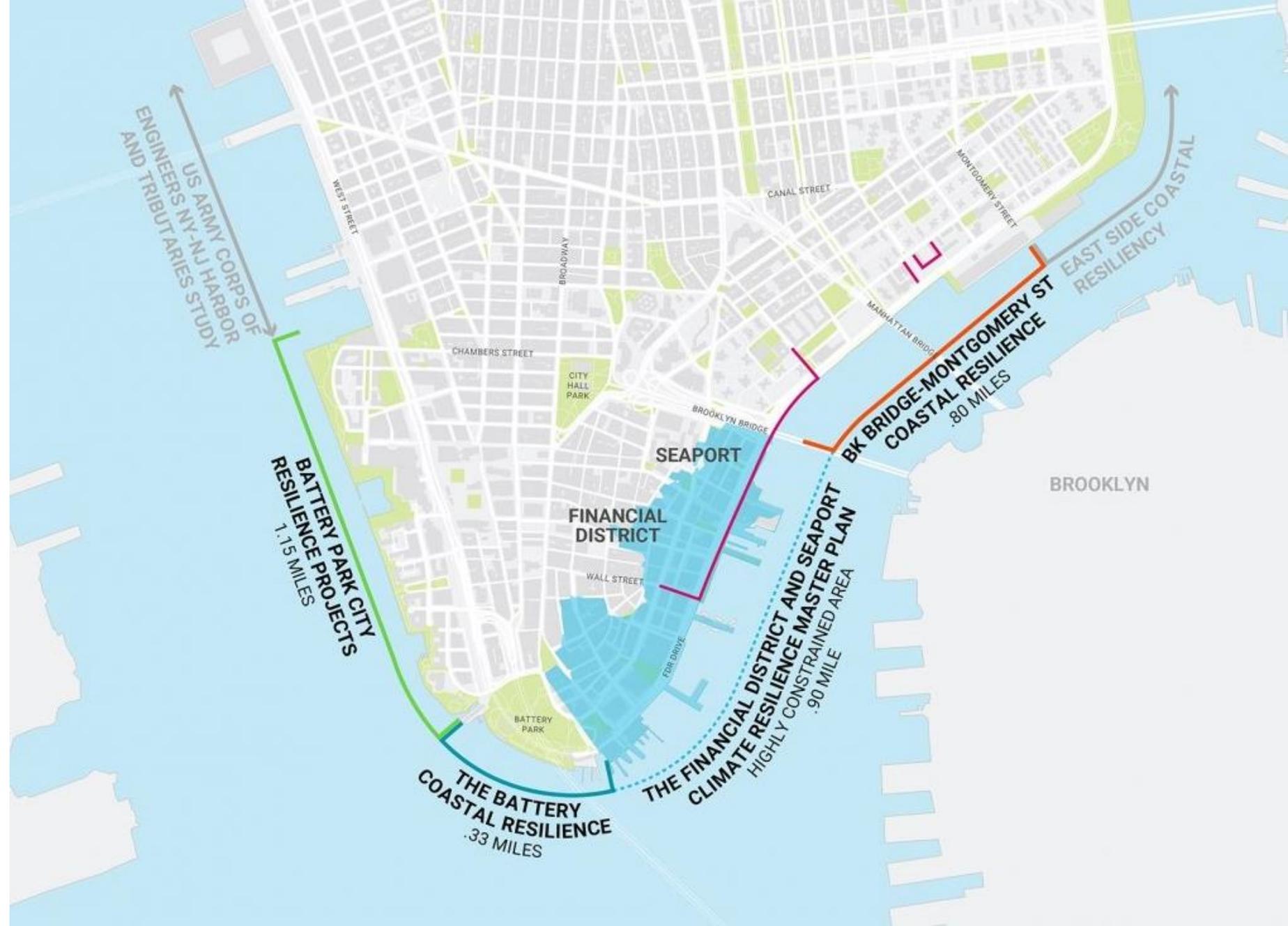


Click the 'Ask an Expert' button in the bottom right corner of the event page to chat with someone from our team at any time!

Stay in this room at the end of the presentation to be assigned to a discussion room.

What is the **FiDi-Seaport Climate Resilience Plan** and what has led us here today?

In Lower Manhattan, the City is advancing over \$800M in **climate adaptation** projects. The Financial District and Seaport Master Plan will fill the missing link.



The FiDi-Seaport Climate Resilience Plan will be a **comprehensive resilience plan** to protect the Financial District and South Street Seaport

What can we achieve by the end of this year?



Develop a conceptual design of coastal defense infrastructure and identify first phase project options.



Create a roadmap with details on implementation, financing, construction, and governance framework.



Work with regulatory agencies to identify a pathway for permitting and approvals at the city, state, and federal level.



Create a drainage strategy to manage stormwater under future sea level rise and rainfall conditions.



Build the foundation for an intergenerational coalition to carry this project forward.

Who is our **project team**?

The logo for the New York City Economic Development Corporation (NYCEDC), featuring the letters "NYC" in a bold, black, sans-serif font, followed by a thick yellow diagonal slash, and then the letters "EDC" in the same bold, black, sans-serif font.The logo for the Mayor's Office of Climate Resiliency, featuring the letters "NYC" in a bold, teal, sans-serif font, followed by the text "Mayor's Office of Climate Resiliency" in a bold, black, sans-serif font.The logo for Arcadis, featuring an orange circular icon with a white swirl inside, followed by the word "ARCADIS" in a bold, black, sans-serif font.The logo for SCAPE, featuring the word "SCAPE" in a bold, teal, sans-serif font.The logo for ONE Architecture & Urbanism, featuring the word "one" in a bold, blue, sans-serif font.

The **New York City Economic Development Corporation (NYCEDC)** and the **Mayor's Office of Climate Resiliency (MOCR)** are leading the Climate Resilience Plan in close collaboration with the NYC Departments of Transportation, City Planning, Environmental Protection, Parks & Recreation, and more.

An interdisciplinary team of experts are supporting this work, led by the Dutch engineering firm **Arcadis** and including **ONE Architecture & Urbanism** and **SCAPE Landscape Architecture**.

In **February**, we hosted our **second Open House** to share our approach to siting coastal resilience infrastructure and solicit your feedback on key project elements.

Taking down the FDR Drive viaduct should be examined

All on-land options must be exhausted before the project looks at going into the water

The community should be a partner in the planning process. Youth voices must be included.

Discussion Room #1: How do you use the waterfront open space? What is successful about the open space and needs to be preserved? Understanding this project may involve reconstruction of existing public open space, what is the primary thing you would change or improve? What are some examples of public open spaces in NYC that you consider successful? What qualities and characteristics make them successful?

Discussion Room #2: What transportation assets (e.g. ferry terminals, subway stations, highways, etc.) in the area do you use? How do you use them? What transportation assets are working that need to be preserved? Understanding this project may involve reconstructing transportation infrastructure, including changes to the FDR, what is the primary thing you would change to improve mobility in the area?

Discussion Room #3: What community resources are most important to protect? What places and spaces make the FDR-Seaport unique and need to be preserved? What is it that makes them special? What community and cultural assets and facilities are most important to you? If these assets were impacted by flooding how would it impact your life and the well-being of the community? What community services (like schools, healthcare, etc.) or cultural assets (historic landmarks, museums, etc.) are currently lacking in the area? What do you see as major needs that this project should seek to provide? Understanding this project is happening and that we must protect, preserve, and celebrate these spaces, how could this project help?

The project should embrace the maritime history of the study area and protect the uses that exist today

Project financing should be equitable. Development should be limited and be mindful of neighborhood context.

We've been engaging with you at every step of this process, and it has continually informed our analysis, design work, and development of project options.

Meeting Purpose:

- Introduce the FiDi-Seaport MP process
- Educate on climate risks and mitigations

What did we share?

- What we know about climate risks today
- What possible solutions could look like

COVID-19 PAUSE
Spring-Summer 2020

Open House #1
Feb. 2020

What did we share?

- Developed dedicated project website
- Published updated engagement plan

Ecology & Coastal
Defense Workshop

Open House #2
Feb. 2021

Envisioning a 21st
Century Waterfront
March 2021

Funding & Financing
Workshop
April 2021

Open House #3
June 2021

Open House #4
Fall 2021

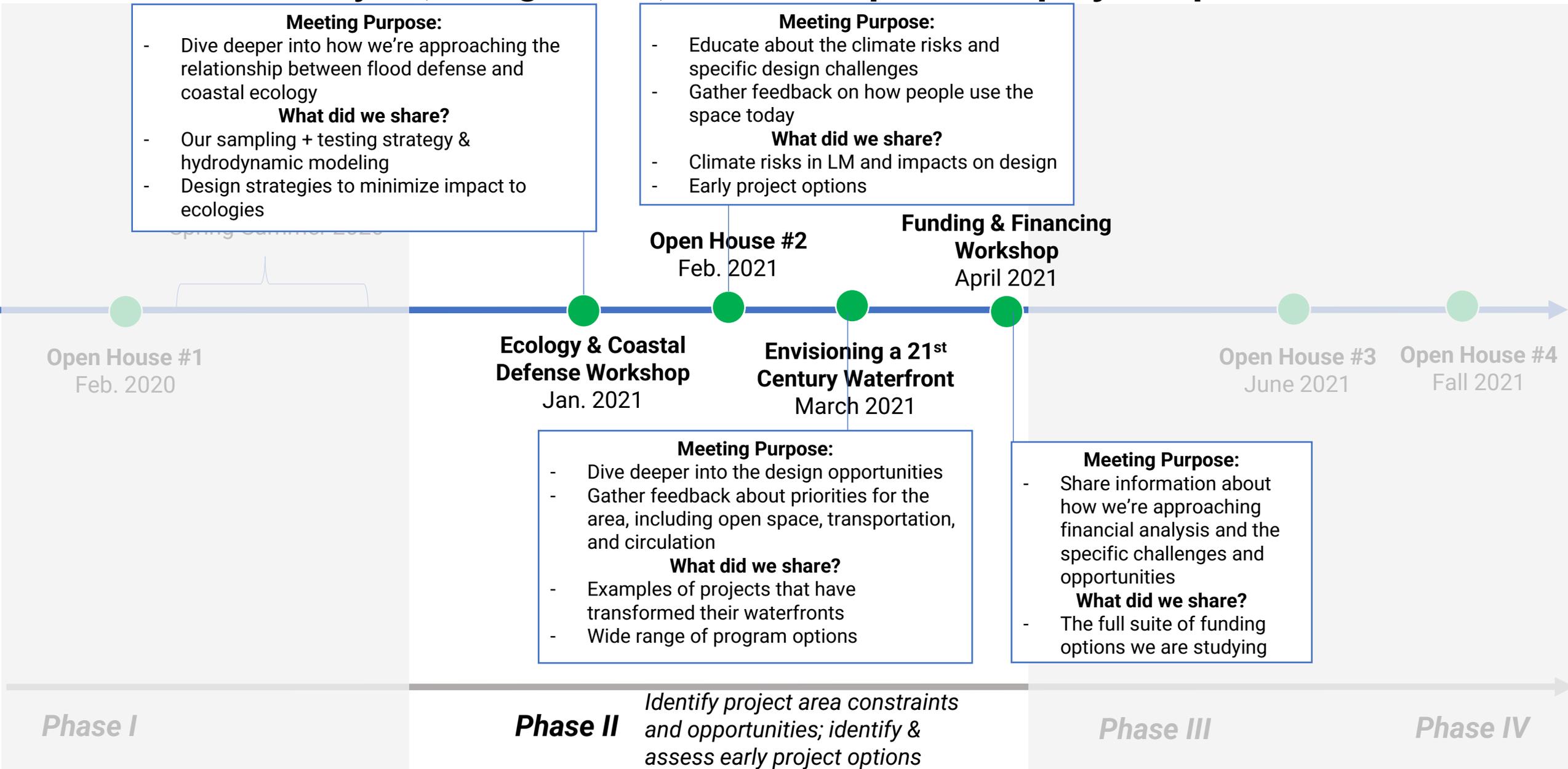
Phase I Assess existing conditions, develop guiding principles, begin key analyses

Phase II

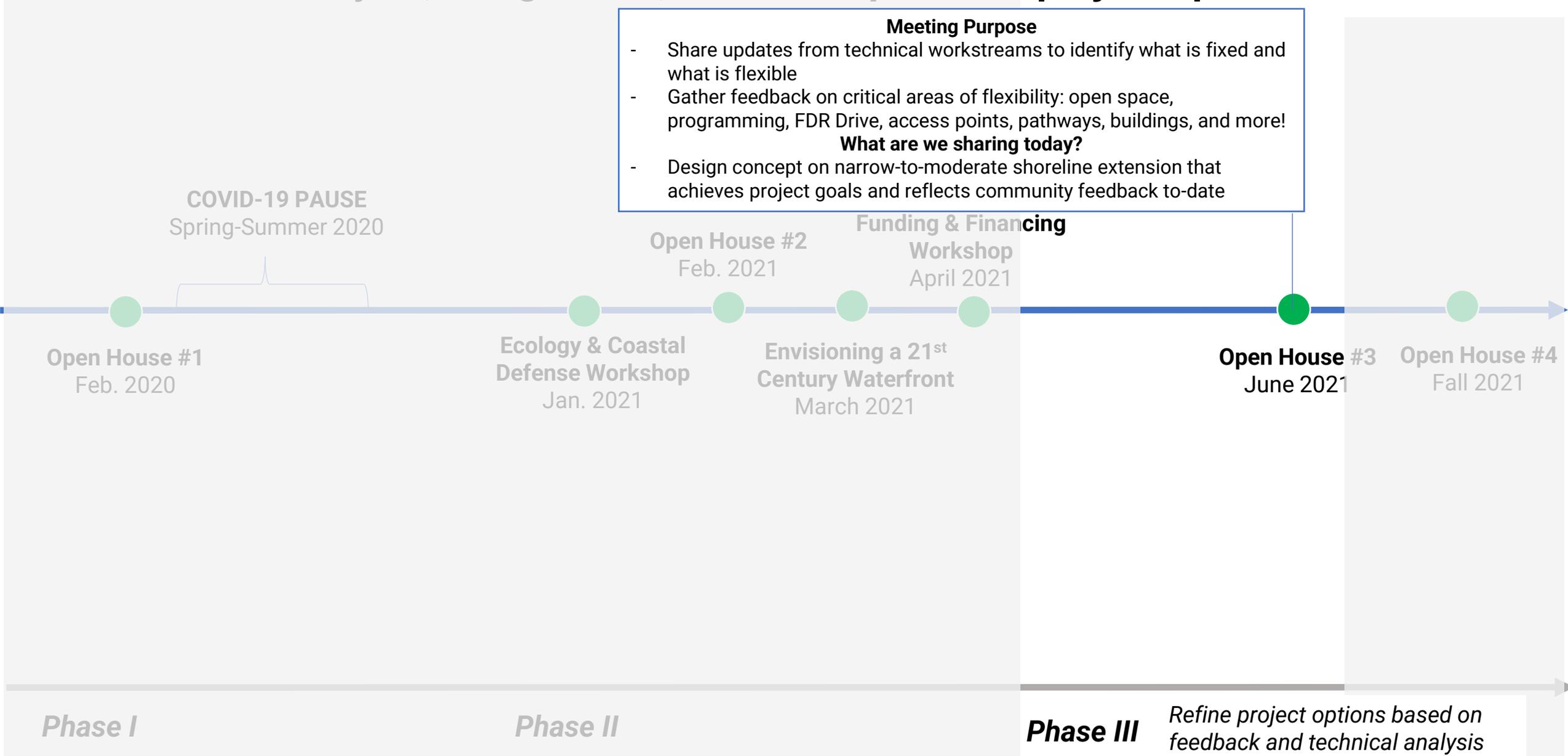
Phase III

Phase IV

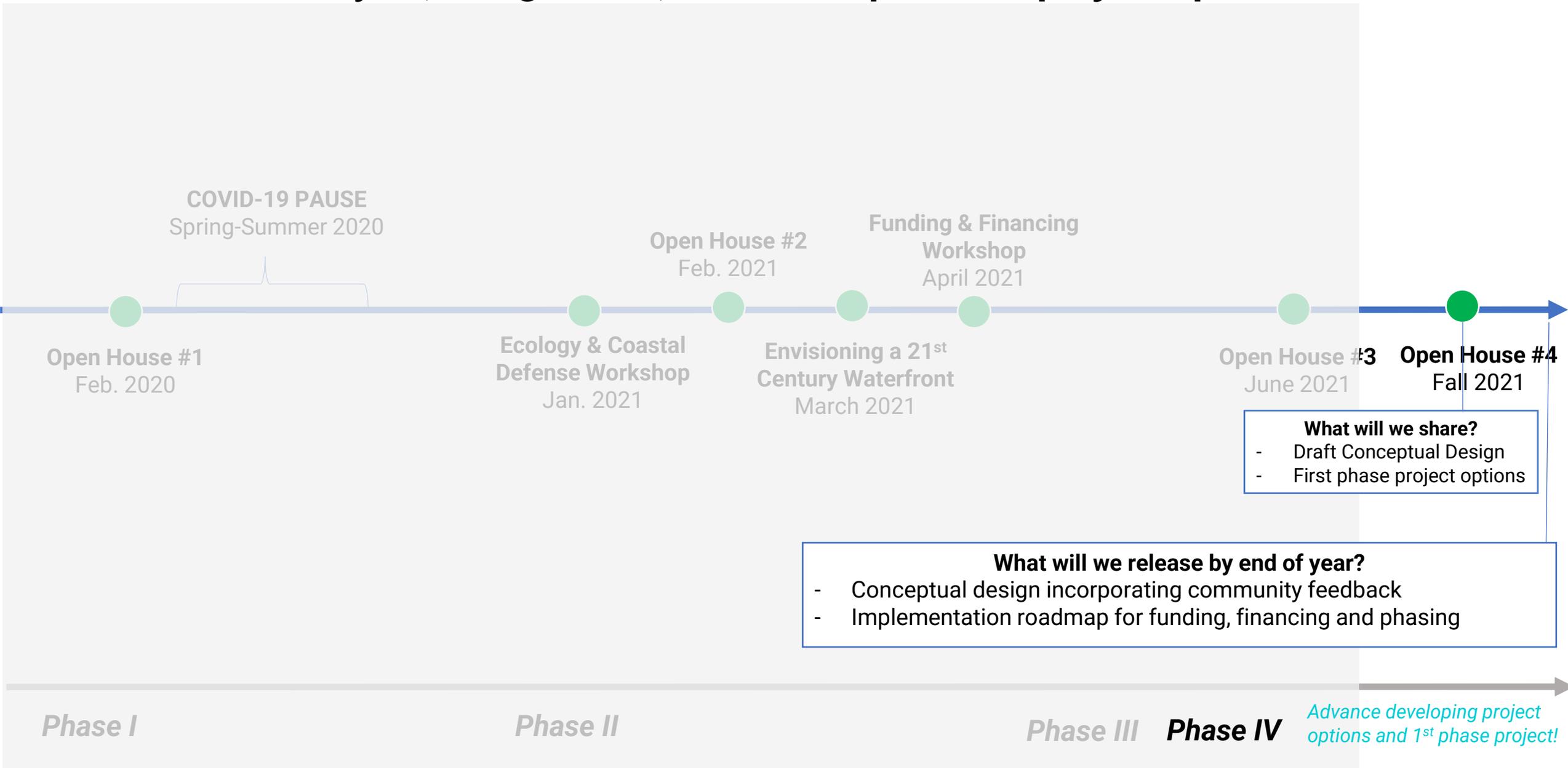
We've been engaging with you at every step of this process, and it has continually informed our analysis, design work, and development of project options.



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What risks does Lower Manhattan face and why do we need **coastal resilience infrastructure**?

Climate change isn't coming; **it's here.**



Daily tidal flooding combined with sea level rise is bringing **higher** water levels along the coast, causing more flooding in low-lying areas.



Coastal storms are **increasing** in frequency and intensity, bringing the impact of surge to our front doors.



Extreme precipitation is occurring **more frequently**, stressing our sewer system and flooding our streets.

Protecting Lower Manhattan means ensuring all New Yorkers continue to have access to the **jobs, subways, and infrastructure that are in this central hub.**

19 of 28 subway lines

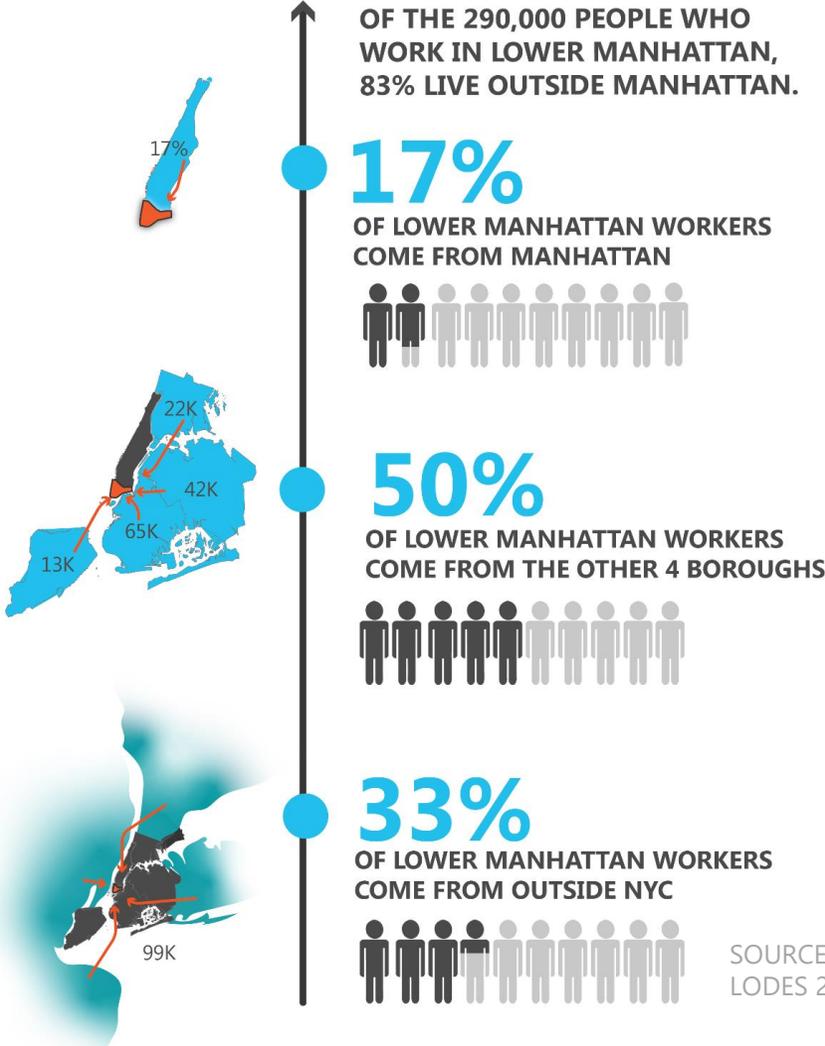
More than two-thirds of the city's subway lines and 26 ferry lines route through Lower Manhattan.

512,000 riders per day

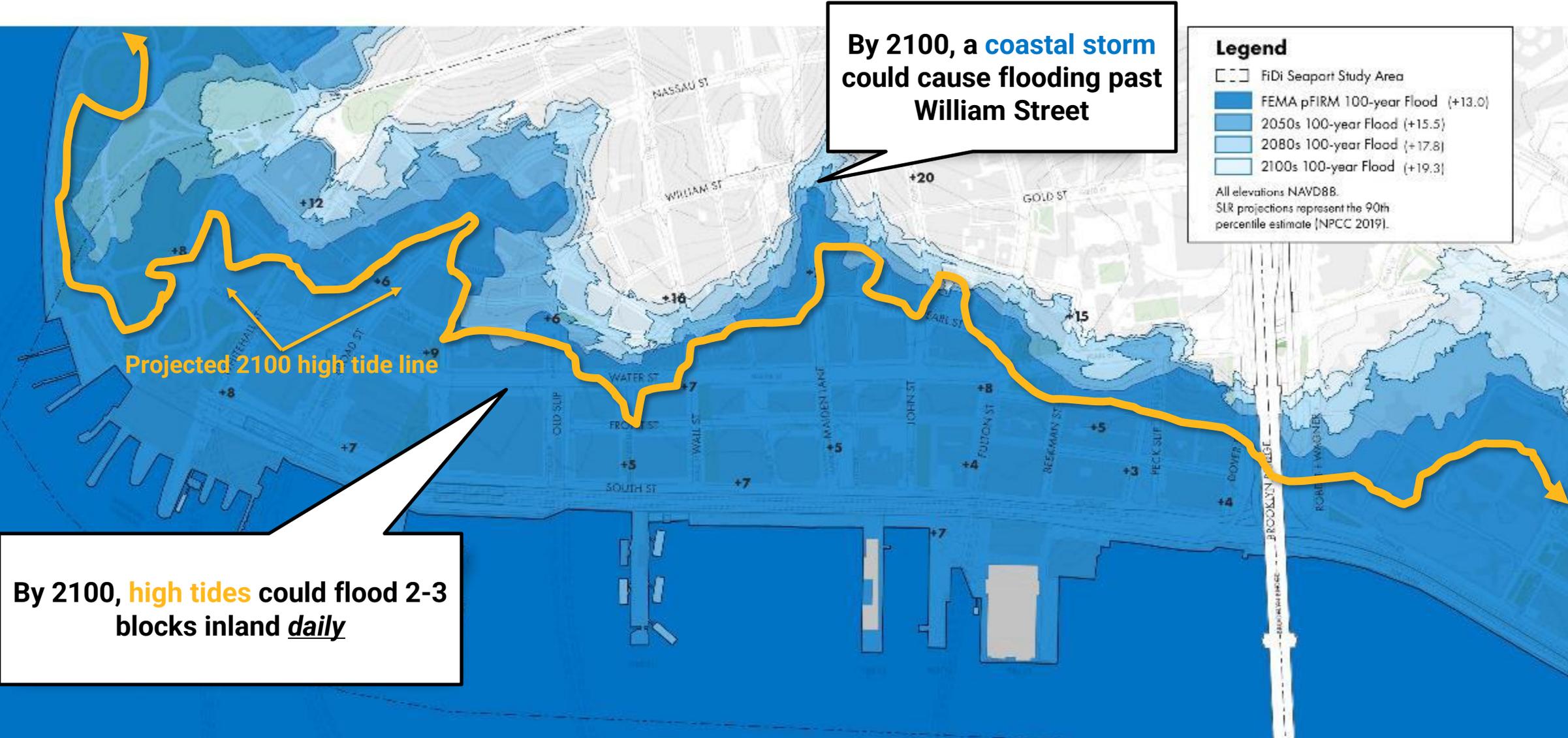
Each day, 372,000 subway riders, 47,000 PATH riders, and 93,000 ferry riders use transportation in Lower Manhattan.

1-in-10 jobs

10 percent of all jobs in New York City are located in Lower Manhattan. This results in \$74 billion in annual GDP (8% of the City's total)



We need to protect FiDi-Seaport from two types of climate risks – daily tidal flooding and coastal storms.



How are we approaching the **design** of the project?

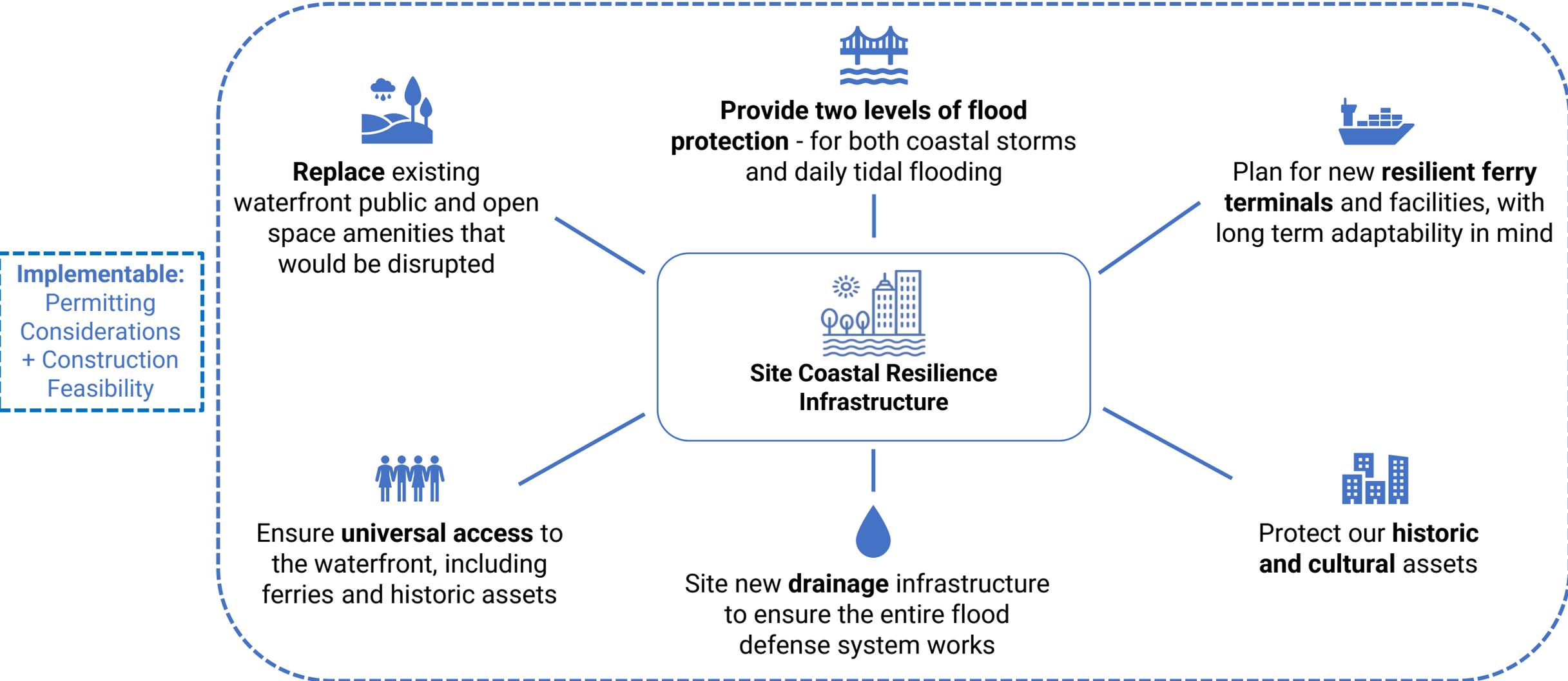
We need two levels of protection from daily tidal flooding and coastal storms.

Coastal Storms (+18ft above esplanade)

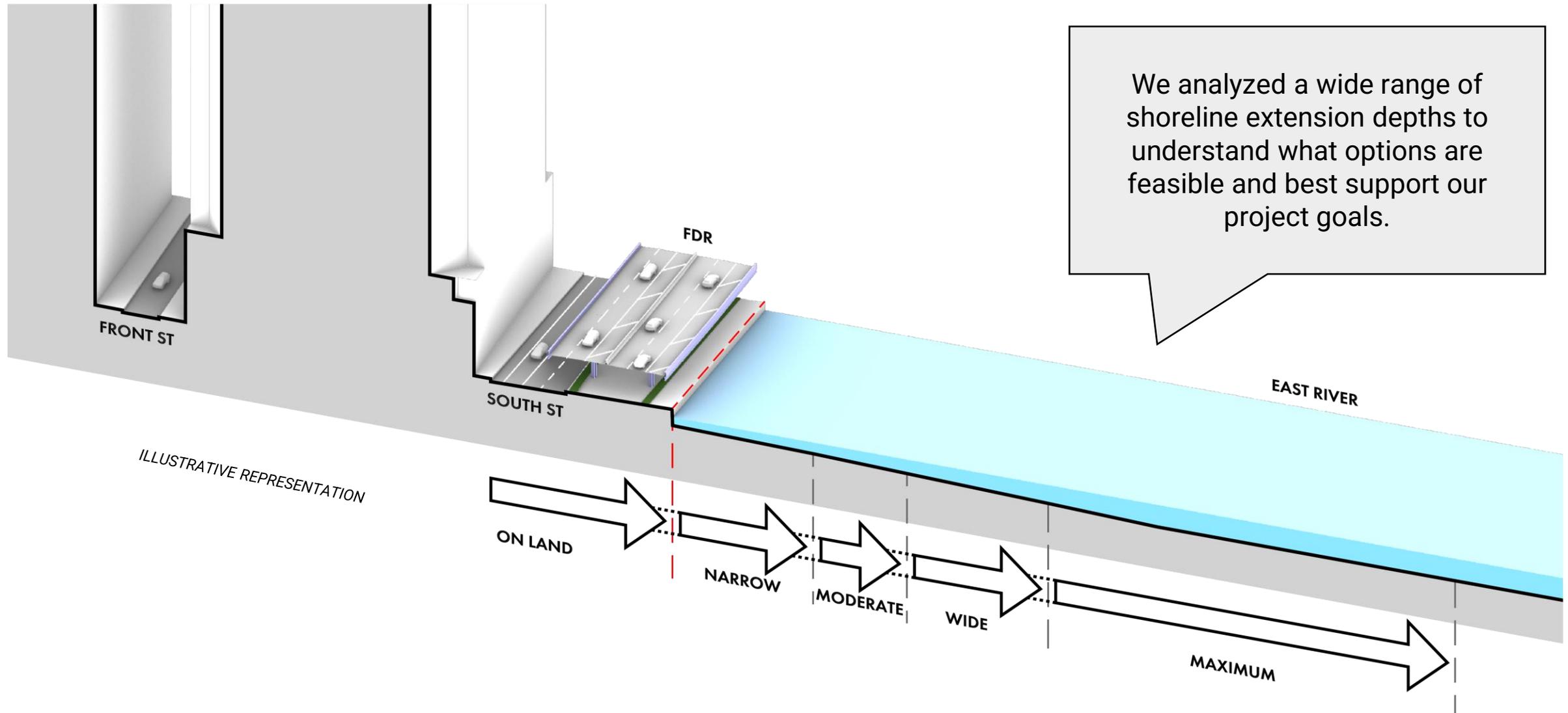
Daily Tidal Flooding (+3.5ft above esplanade)

View: Looking North at Old Slip

Our project needs to site **coastal resilience infrastructure** while considering additional project goals.



At our last Open House, **we shared a range of options we're studying.** Since then, we've explored both **on-land and in-water options** across the study area.



We learned that an entirely on-land option and a maximum shoreline extension are not feasible. Now, we're examining where the **middle ground** is that achieves key project goals while limiting fill.

✓ **Narrow to moderate extension**

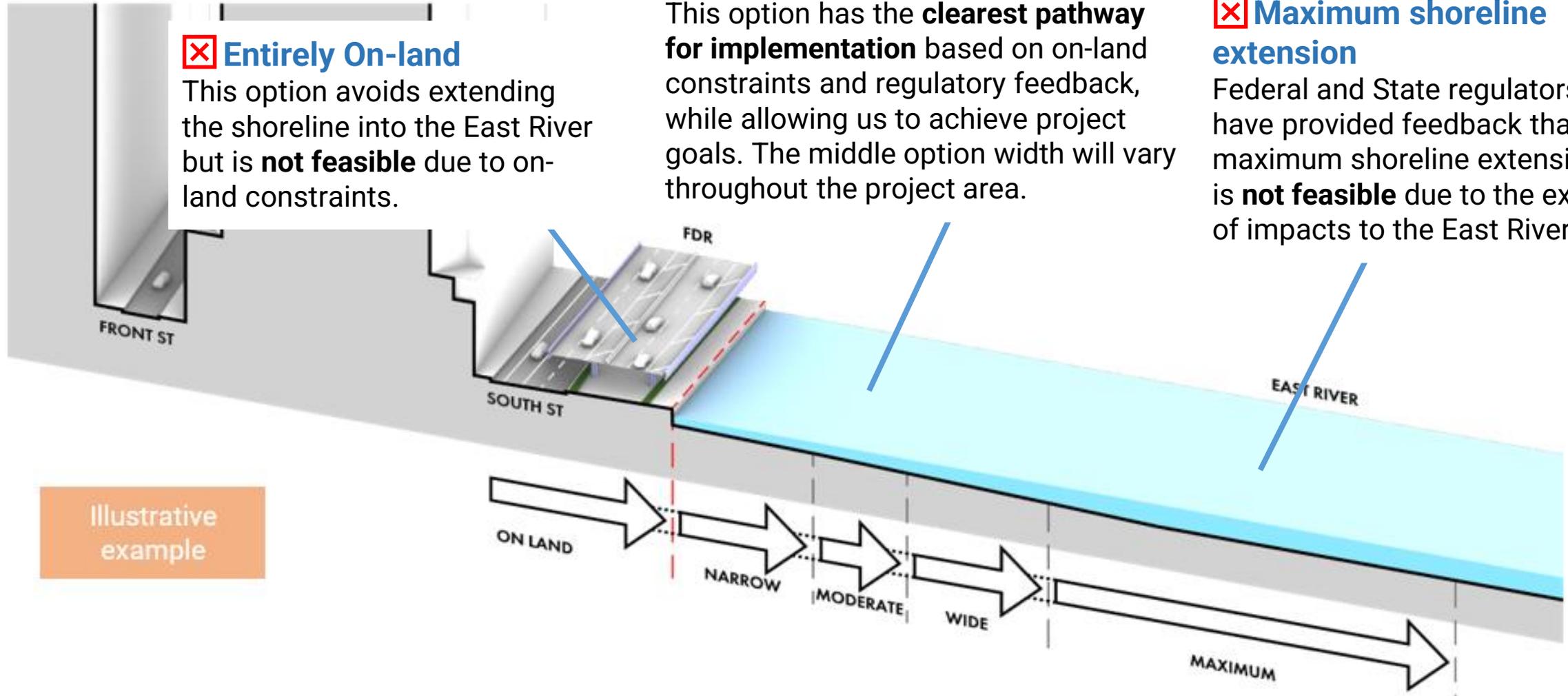
This option has the **clearest pathway for implementation** based on on-land constraints and regulatory feedback, while allowing us to achieve project goals. The middle option width will vary throughout the project area.

✗ **Maximum shoreline extension**

Federal and State regulators have provided feedback that a maximum shoreline extension is **not feasible** due to the extent of impacts to the East River.

✗ **Entirely On-land**

This option avoids extending the shoreline into the East River but is **not feasible** due to on-land constraints.

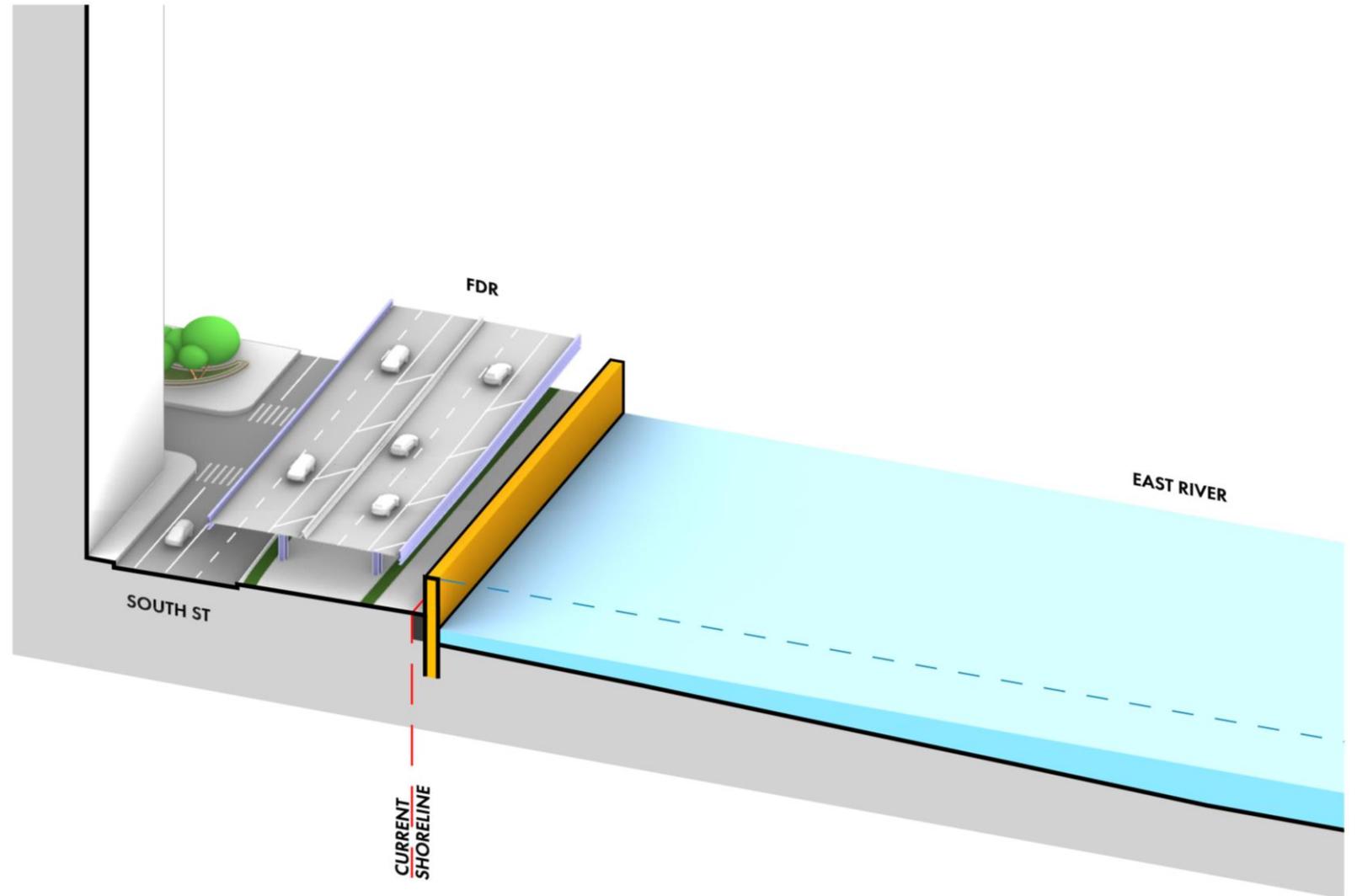


Illustrative example

Knowing what is feasible, how do we **build a shoreline extension that meets our project goals?**

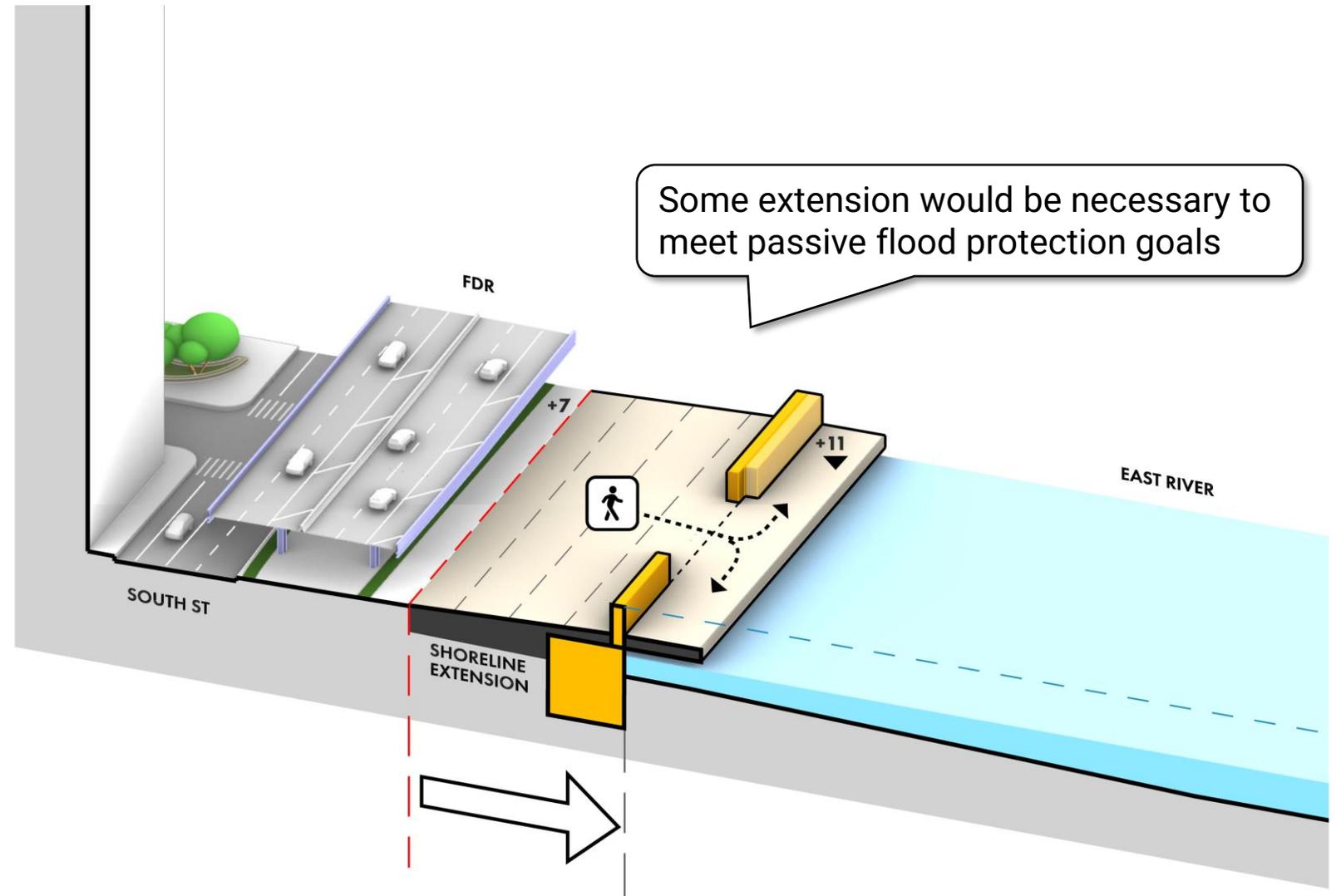
1) We need to build our coastal defense **without walling off the city.**

- While constructing a wall along the existing bulkhead line would provide constant flood protection for Lower Manhattan, it would **not** meet other project goals, including:
 - Provide the necessary space needed to site new **drainage** infrastructure
 - Maintain **public access to the waterfront**, including the ferry terminals and other waterborne functions that are at the water's edge
- In addition, a wall at the water's edge would create an **unsafe condition** beneath the FDR Drive, with poorly lit corridors and unhealthy air quality.



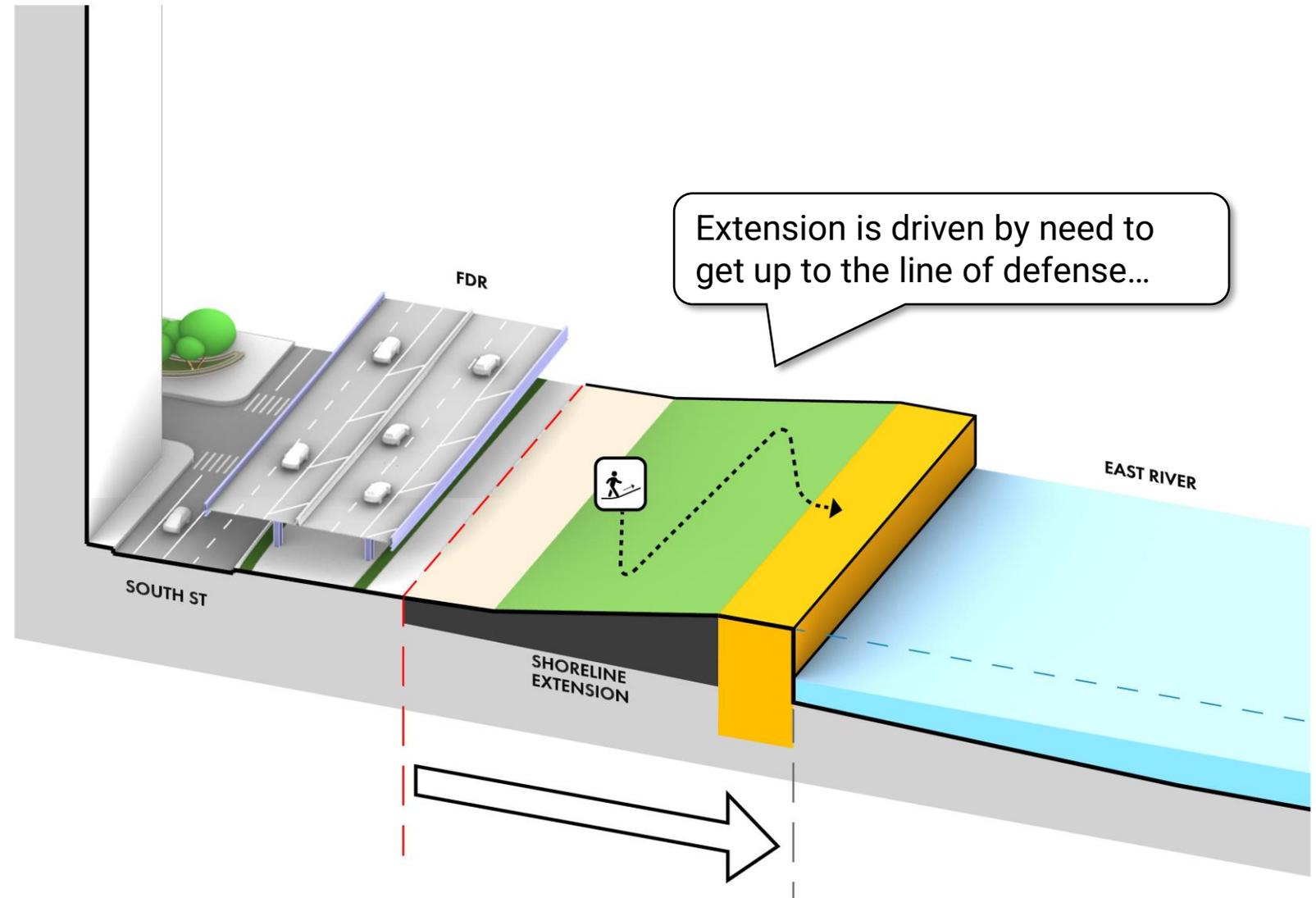
2) Our options cannot **predominantly rely on gates to prevent flooding.**

- FiDi-Seaport has larger waves compared to neighboring projects due to its location relative to the NY Harbor. Larger waves, as well as lower ground elevations make **deployable measures – like gates – less suitable** for our project area.
- In addition, the area is vulnerable to **future daily tidal flooding**; therefore, we need to design to a constant “passive” level of flood protection that is always there
- As a result, gates must be used **sparingly** and in concert with passive measures to ensure a reliable, operable, and maintainable coastal defense system



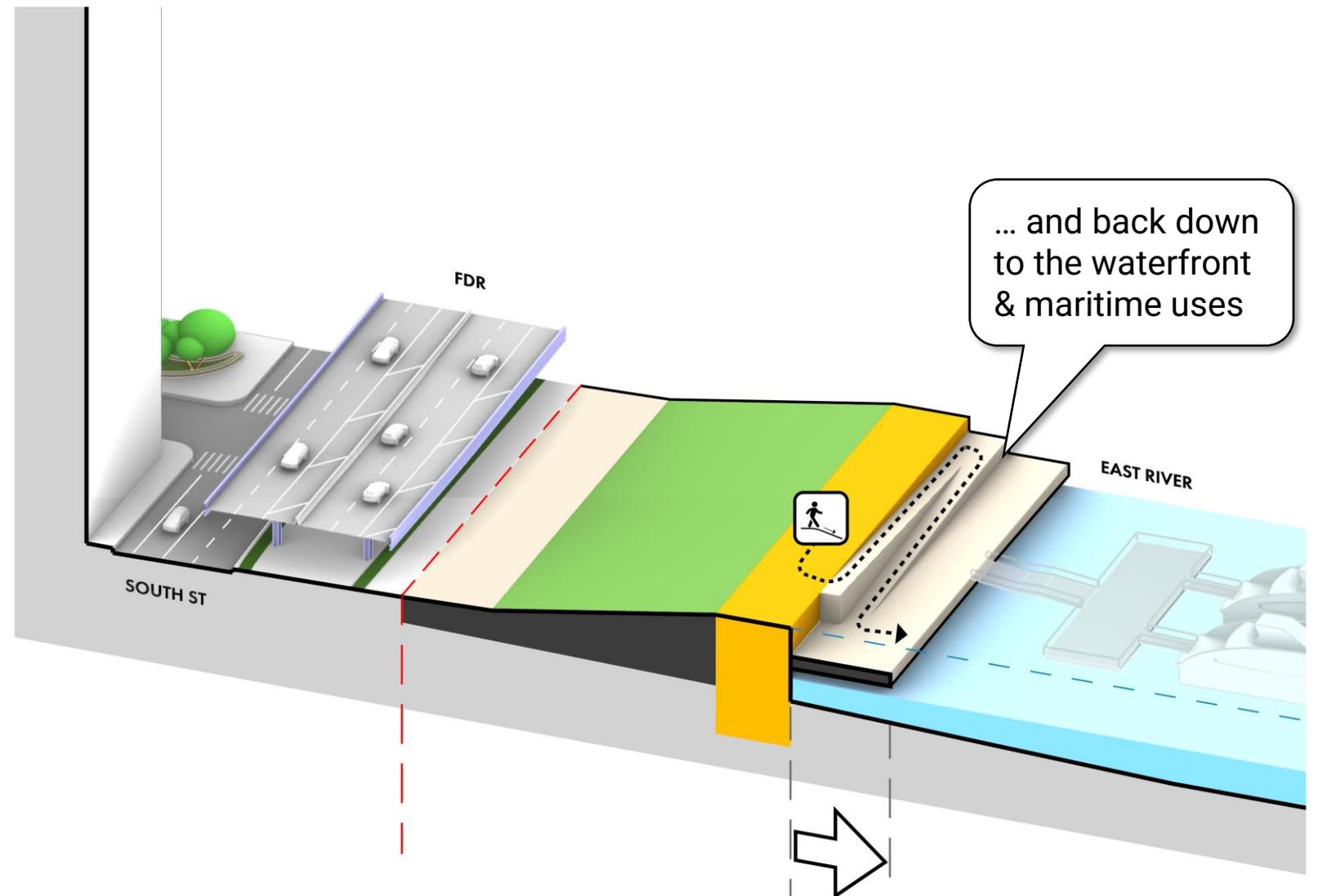
3) To achieve the project's goals, we propose to **extend the shoreline** of Lower Manhattan into the East River.

- While siting the coastal defense, we need to maintain **universal access to the water** - meaning that everyone, regardless of ability or age, can access and participate in public life
- Space is needed to allow for the appropriate slopes and grade changes to ensure **access for all** to get up and over the design flood elevation
- Space is also needed to provide **emergency and maintenance access** (vehicular) to the flood defense, maritime uses, & water
- Within this space there are also opportunities to site **drainage infrastructure**, capture **stormwater run-off**, and replace **existing open space**

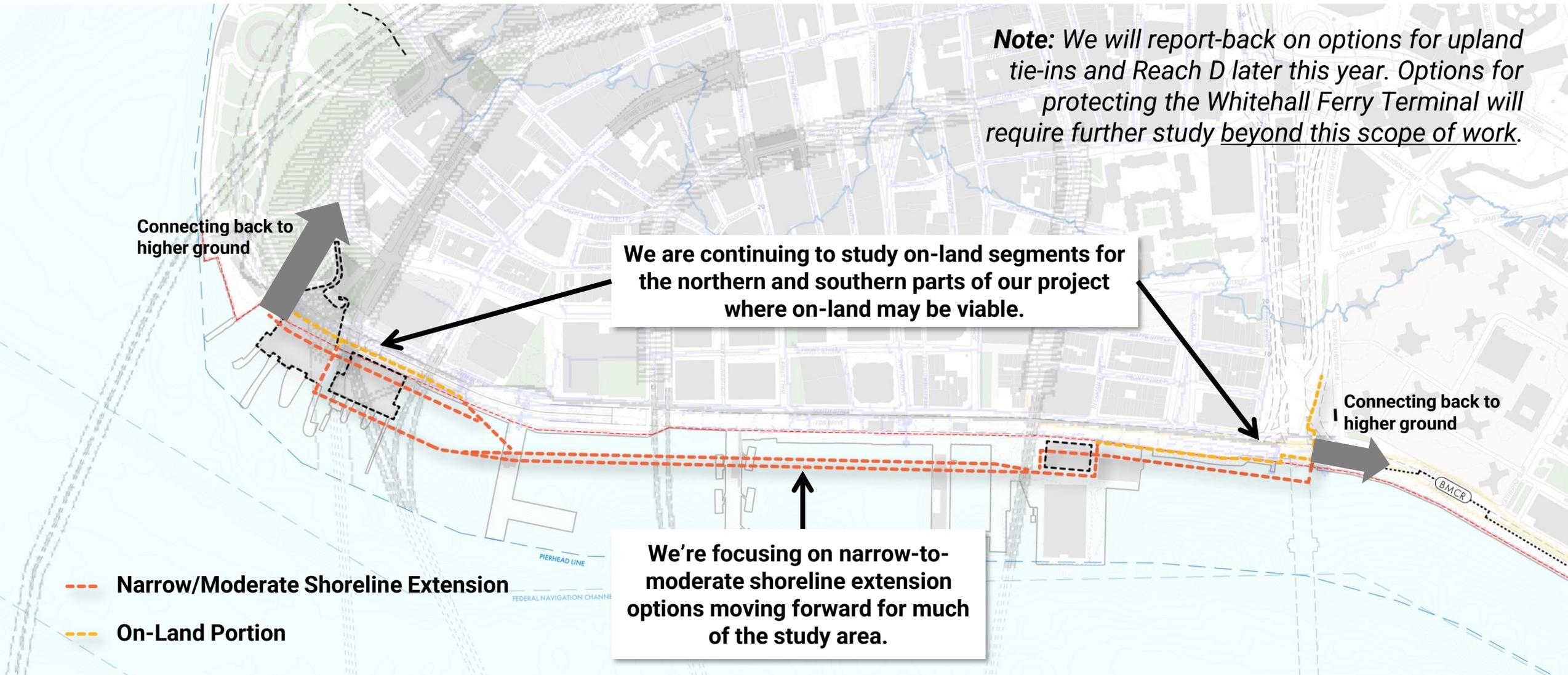


4) This includes a **multilevel waterfront** to meet site access needs, as well as space to connect to maritime uses and a publicly accessible waterfront

- We also need to accommodate **universal access** from the design flood elevation to the water's edge through a lower tier esplanade that is outboard of the flood protection (i.e., floodable in a storm)
- At the water's edge, we need to:
 - Plan for **both current and future maritime uses**, acknowledging their unique functions as well as their vulnerability to sea level rise and storms
 - Provide a **continuous waterfront esplanade** in keeping with the East River Esplanade plan, with access to these maritime functions



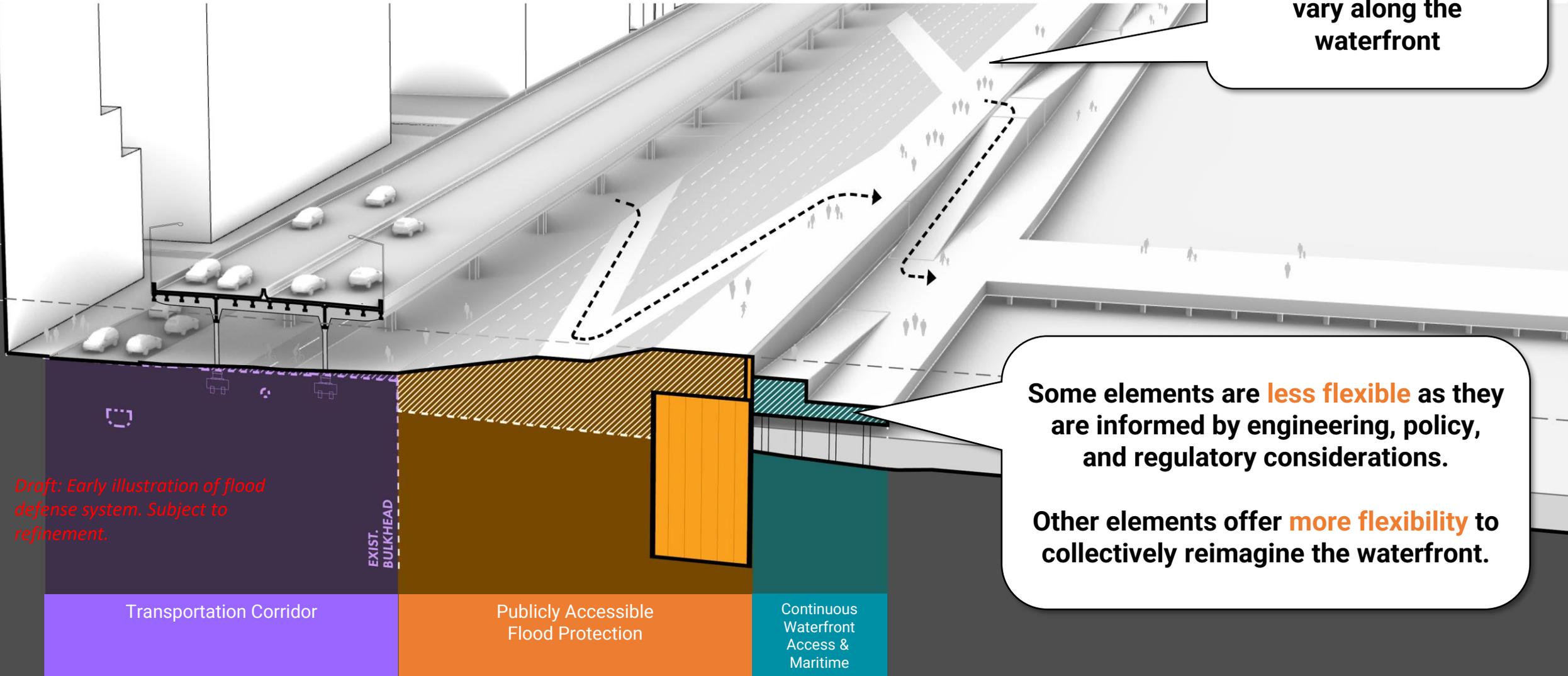
We have narrowed our options to only those that we have learned **meet our project goals and are feasible.**



What could a **resilient waterfront** look like?

Our design must get people **up to and down from** the flood protection, from the upland neighborhood back down to the waterfront.

Design conditions will vary along the waterfront



While the flood protection is fixed, there are many **design opportunities** along the waterfront that we can begin to collectively shape today.



Transportation + Access

If we keep FDR Drive viaduct in place, what can we do to improve the quality of space under the viaduct?

Is there community interest in taking down the FDR Viaduct with an at-grade roadway as part of this project?

Where should we prioritize access to the waterfront?



Public Space

What existing amenities are most important to maintain?

What types of new amenities should we prioritize?

What kinds of experiences should we create along our access paths up to, over and down from the flood defense?

Where are new buildings desirable? Not desirable?

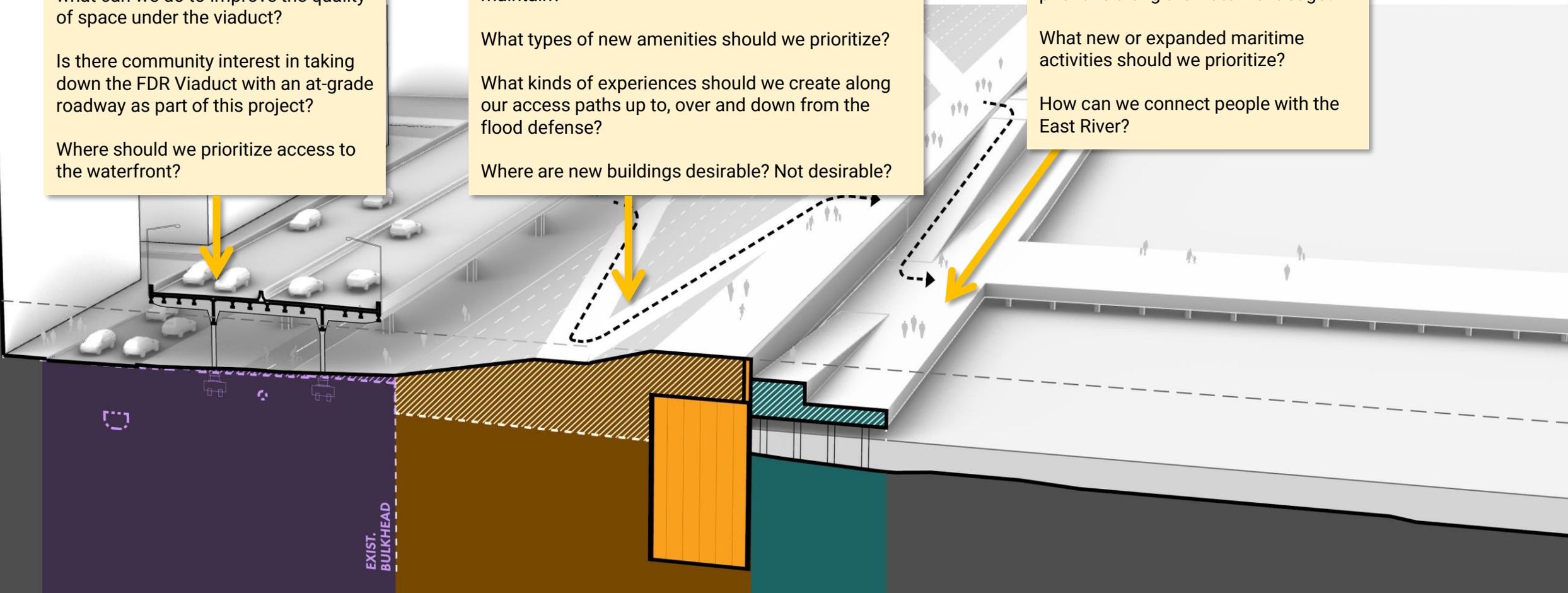


Waterfront + Maritime

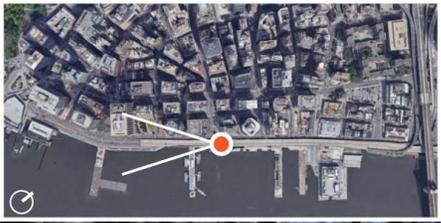
What kinds of activities should we prioritize along the waterfront edge?

What new or expanded maritime activities should we prioritize?

How can we connect people with the East River?

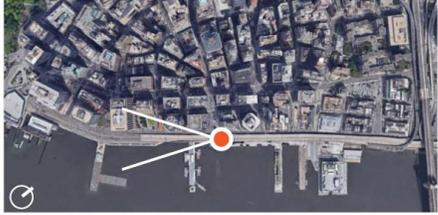


Today



View: Looking South at Wall Street

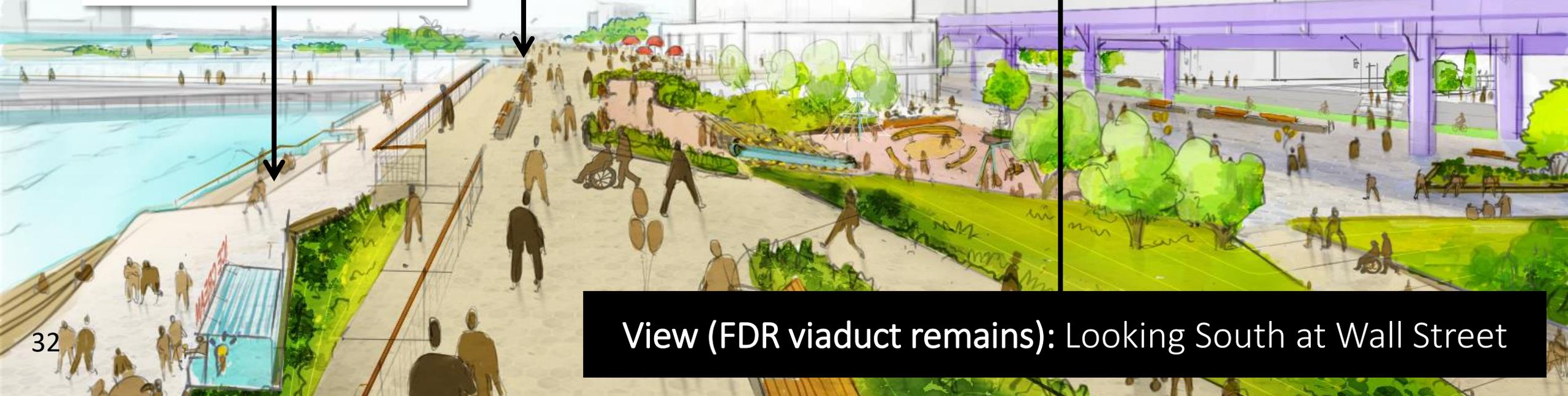
Future Opportunity: What's driven by technical constraints?



Upper line of defense
must protect against
coastal storms

Lower esplanade must provide
constant protection from tidal
flooding.

Space needed to
navigate grade-
change



View (FDR viaduct remains): Looking South at Wall Street

Future Opportunity: Where do we have flexibility?



 **Design Opportunity**

Should there be buildings? If so, where and what scale?

 **Design Opportunity**

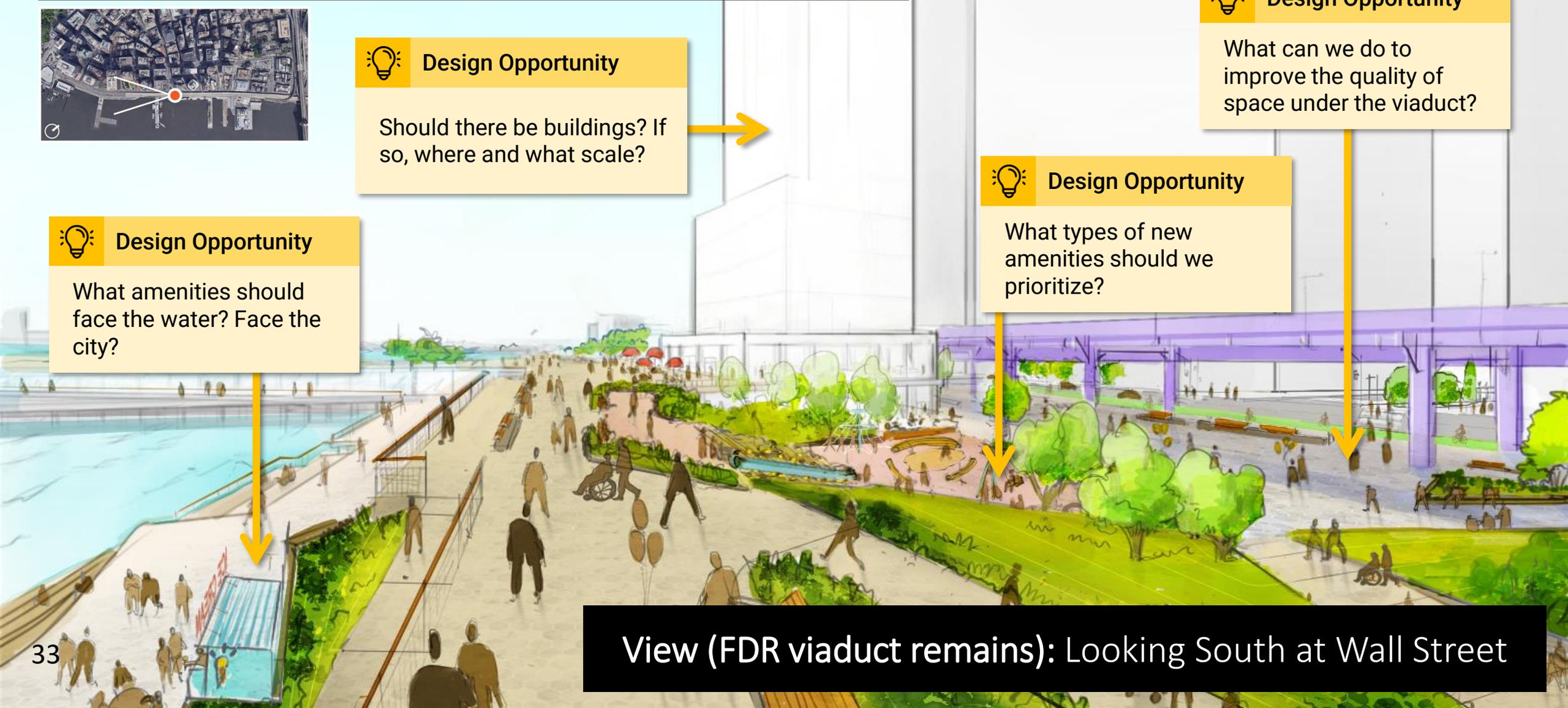
What amenities should face the water? Face the city?

 **Design Opportunity**

What types of new amenities should we prioritize?

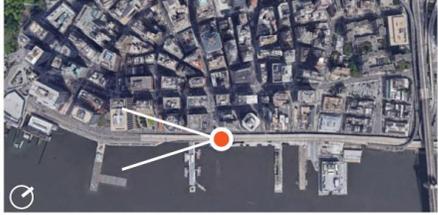
 **Design Opportunity**

What can we do to improve the quality of space under the viaduct?



View (FDR viaduct remains): Looking South at Wall Street

Future Opportunity: Where do we have flexibility?



DRAFT ILLUSTRATIVE SKETCH



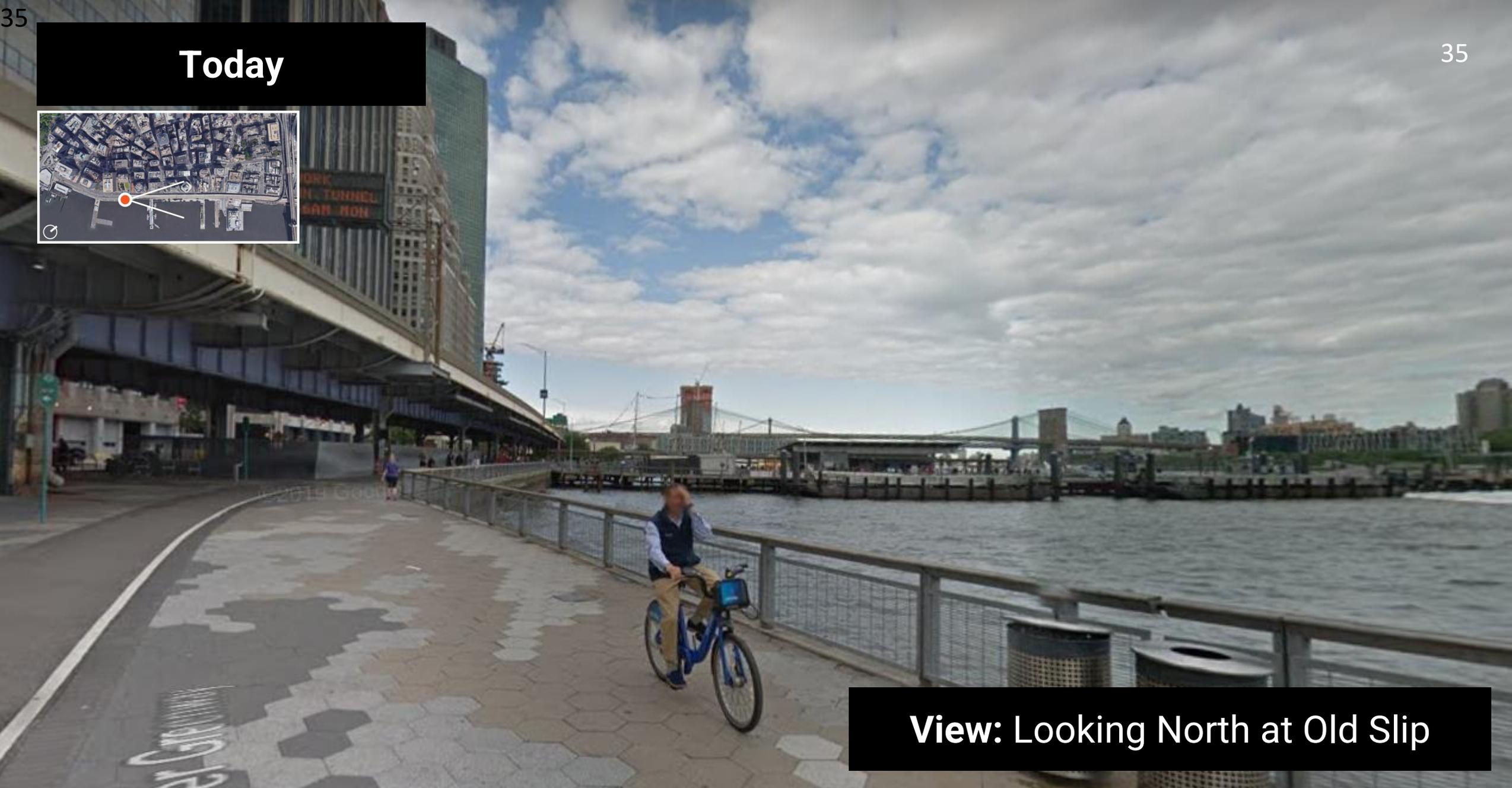
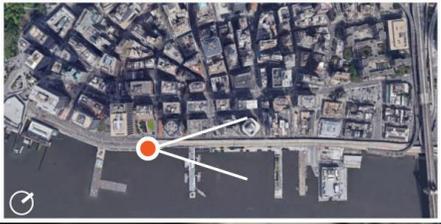
Design Opportunity

Is there interest in replacing the FDR Drive viaduct with an at-grade boulevard as part of this project?



View (FDR viaduct removed): Looking South at Wall Street

Today



View: Looking North at Old Slip

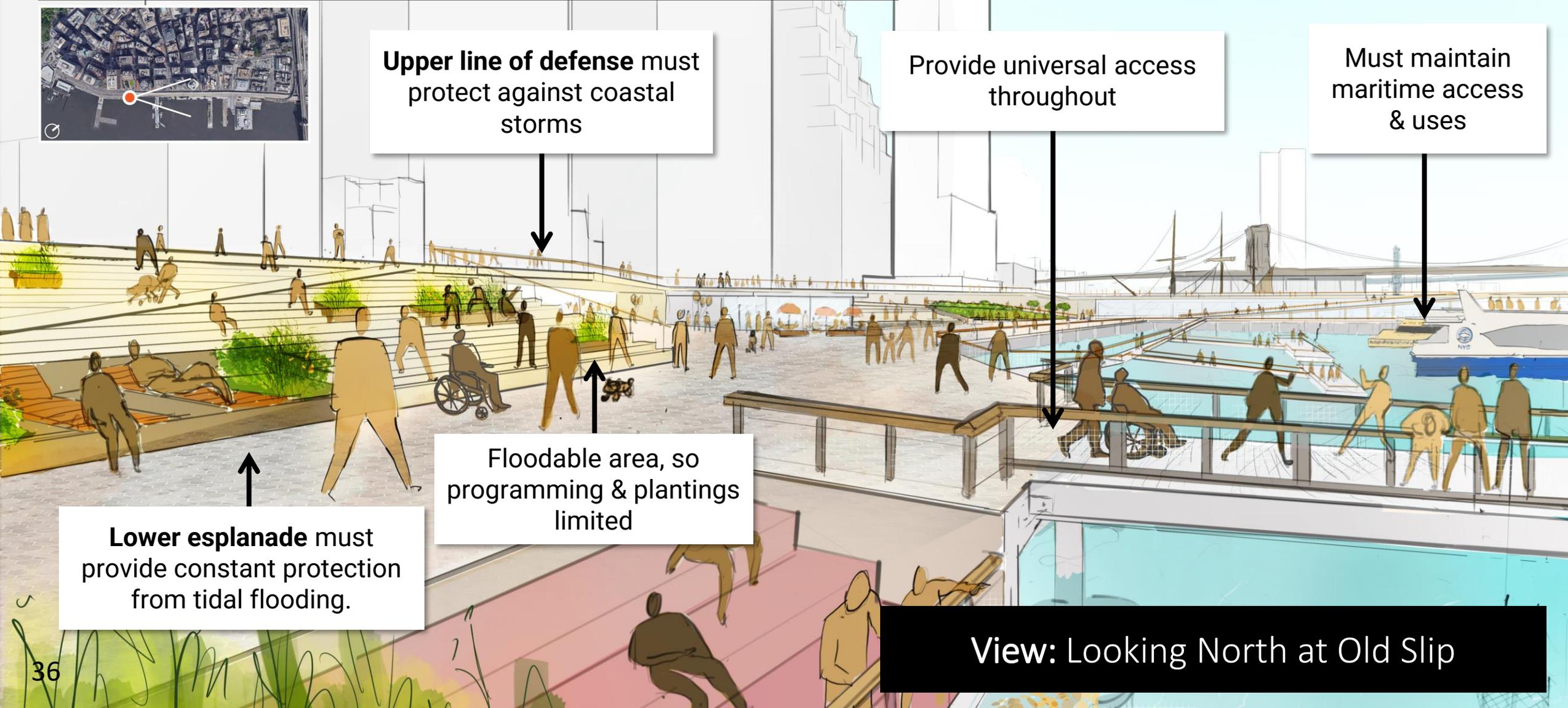
Example: What's driven by technical constraints?



Upper line of defense must protect against coastal storms

Provide universal access throughout

Must maintain maritime access & uses



Lower esplanade must provide constant protection from tidal flooding.

Floodable area, so programming & plantings limited

View: Looking North at Old Slip

Future Opportunity: Where do we have flexibility?



 **Design Opportunity**

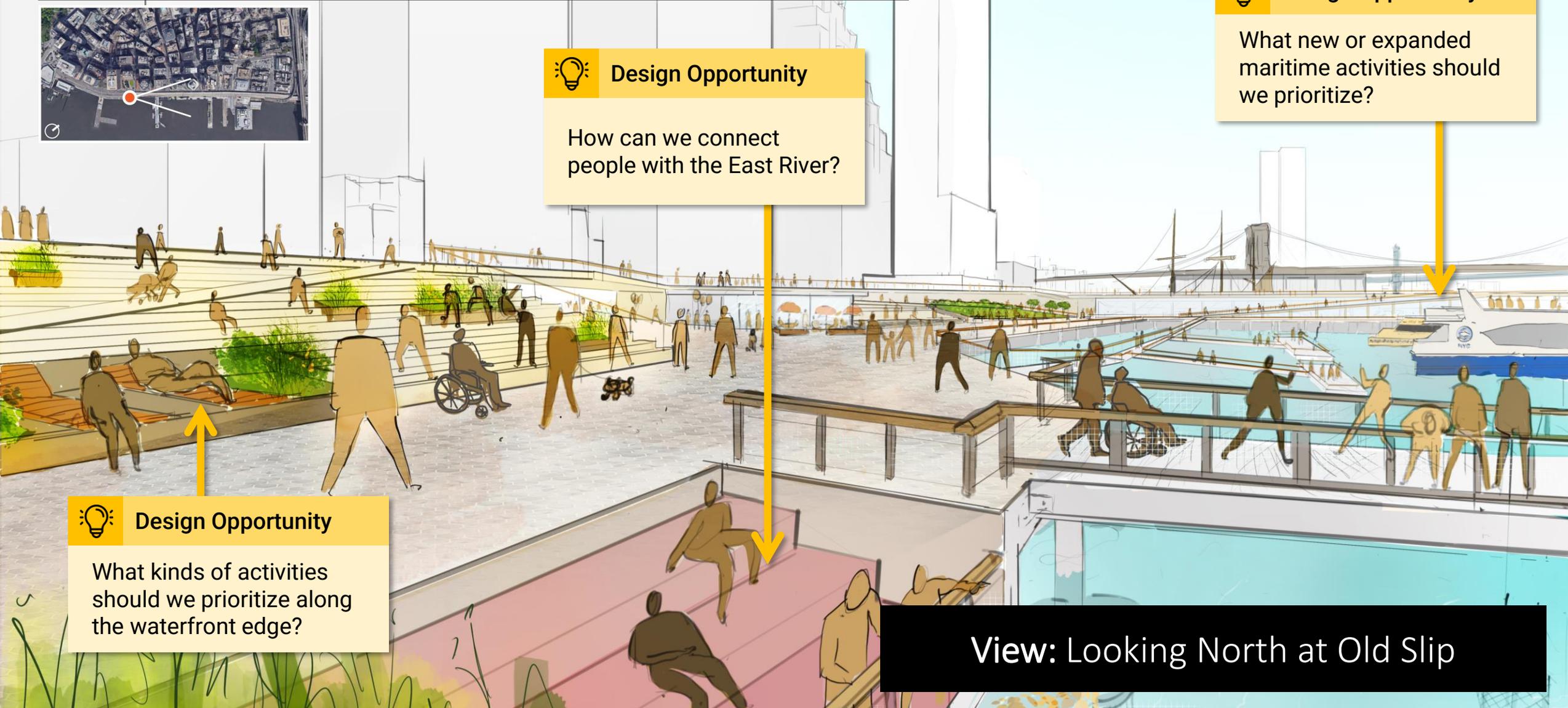
How can we connect people with the East River?

 **Design Opportunity**

What new or expanded maritime activities should we prioritize?

 **Design Opportunity**

What kinds of activities should we prioritize along the waterfront edge?



View: Looking North at Old Slip

Why are we here and what would we like to discuss with you this evening?

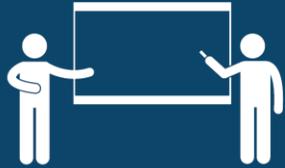
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WELCOME



You are here!

Learn more about the climate risks Lower Manhattan faces, what the FiDi-Seaport Climate Resilience Plan is and where the project team is in the planning process.

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SMALL GROUP DISCUSSIONS



We want to hear from you! Join members of the project team to workshop design opportunities.

Transportation
+ Access

Public
Space

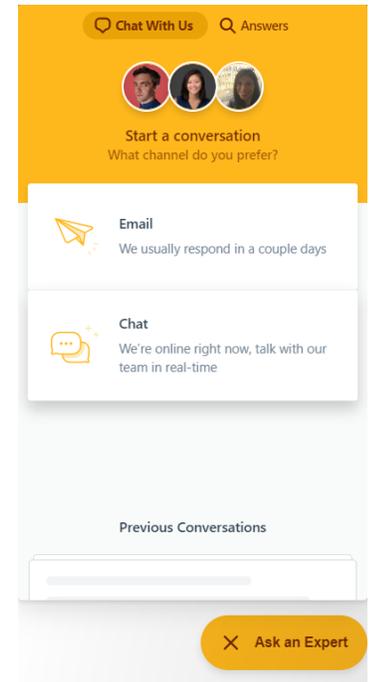
Waterfront
Esplanade
+
Maritime
Activity

3



Still have questions?

Want more information on our approach to flood defense in the FiDi-Seaport area? Join here to speak with member of the project team



Click the 'Ask an Expert' button in the bottom right corner of the event page to chat with someone from our team at any time!

What should I expect in the **discussion rooms** and how will my feedback be used?

1

After the presentation, we will break you up into smaller groups to discuss design opportunities with our team.

2

Tell your facilitator what topics you want to focus on today.

3

You will have 45 minutes for discussion. We will send a 5-minute notice before ending.

4

You are free to move back to the presentation or on to the Q&A room at anytime.

Ground rules for an inclusive discussion:

1. Please raise your hand before you speak and wait for your facilitator to call on you.
2. If you have already spoken, please give others in your group an opportunity to speak before speaking again.
3. If you have a comment or question while others are speaking, please drop it in the chat. Your facilitator will respond as soon as possible.



Our team of **experts** are available to answer any specific questions you may have!



Joe Marrone, PE
Arcadis

Engineering and Design



Nick Irza, PE
Arcadis

**Hydrodynamics &
Modelling**



Justin Krebs
AKRF

Ecology & Sampling



Travis Bunt
ONE

Design Integration



Alex Burkhardt
SCAPE

Design Integration



Roni Deitz, PE
Arcadis

**Project Manager
Q&A Moderator**

**Click the 'Ask an Expert'
button in the bottom right
corner of the event page to
chat with someone from our
team at any time!**

How can you stay involved?

- 1. Continue the conversation online:** Explore our engagement portal to learn more about other aspects of this project and share your feedback through interactive features (<https://fidiseaportclimate.nyc/>)
- 2. Ask an Expert:** Using our website, submit questions and comments to our team of engineers, urban planners, designers, and more!
- 3. Fall Open House:** We plan to share more details on our design concept and we look forward to your feedback!
- 4. Stay in touch!** Sign up for our email newsletter to stay up-to-date on our website!

Time for Discussion!

We will now automatically assign you to a breakout room for a smaller-group discussion with our project team.

