



East Side Coastal Resiliency Project

March 19, 2015

A STRONGER,
MORE RESILIENT
NEW YORK



The City of New York

AGENDA

What will we discuss tonight?

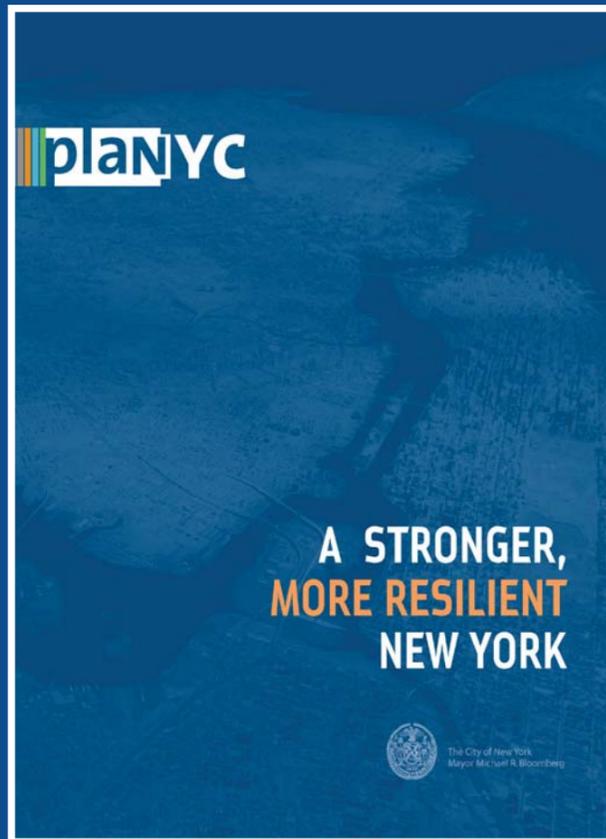
- **Overview**
- **Design and Public Engagement**
- **Current Progress**
- **Next Steps**
- **Q & A**

- **Overview**

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A STRONGER, MORE RESILIENT NEW YORK

The City's 257 initiatives comprise a comprehensive, citywide plan to reduce the risk of extreme weather and climate change



- Strengthen Coastal Defenses
- Upgrade Buildings
- Protect Infrastructure and Services
- Make Neighborhoods Safer and More Vibrant

**Coastal Protection Initiative 21:
Install an integrated flood protection system in Lower Manhattan,
including the Lower East Side**

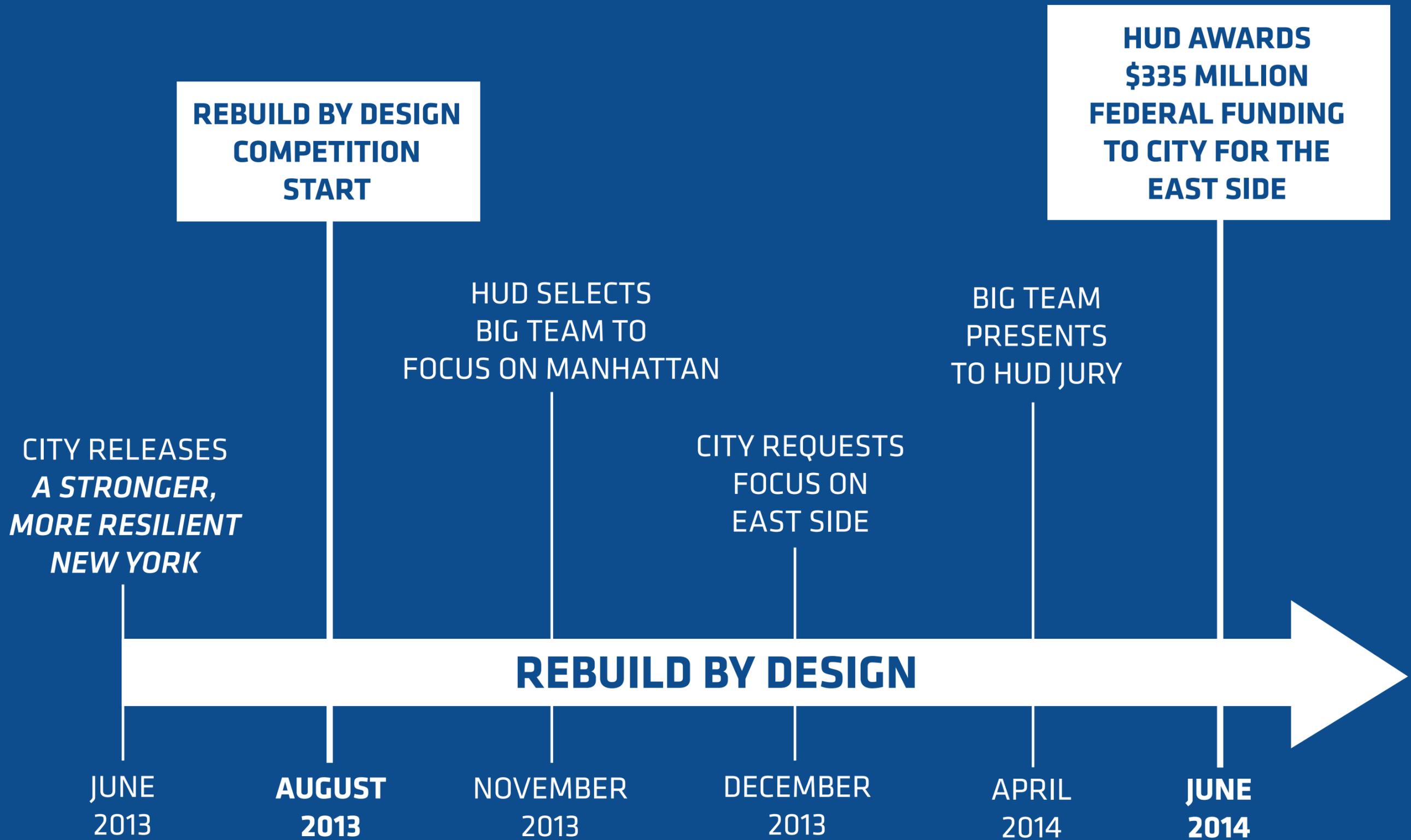
REBUILD BY DESIGN COMPETITION

The RBD proposal focused on flood protection for the East Side of Manhattan



COMPETITION TIMELINE

RBD was a 9-month ideas competition administered by HUD



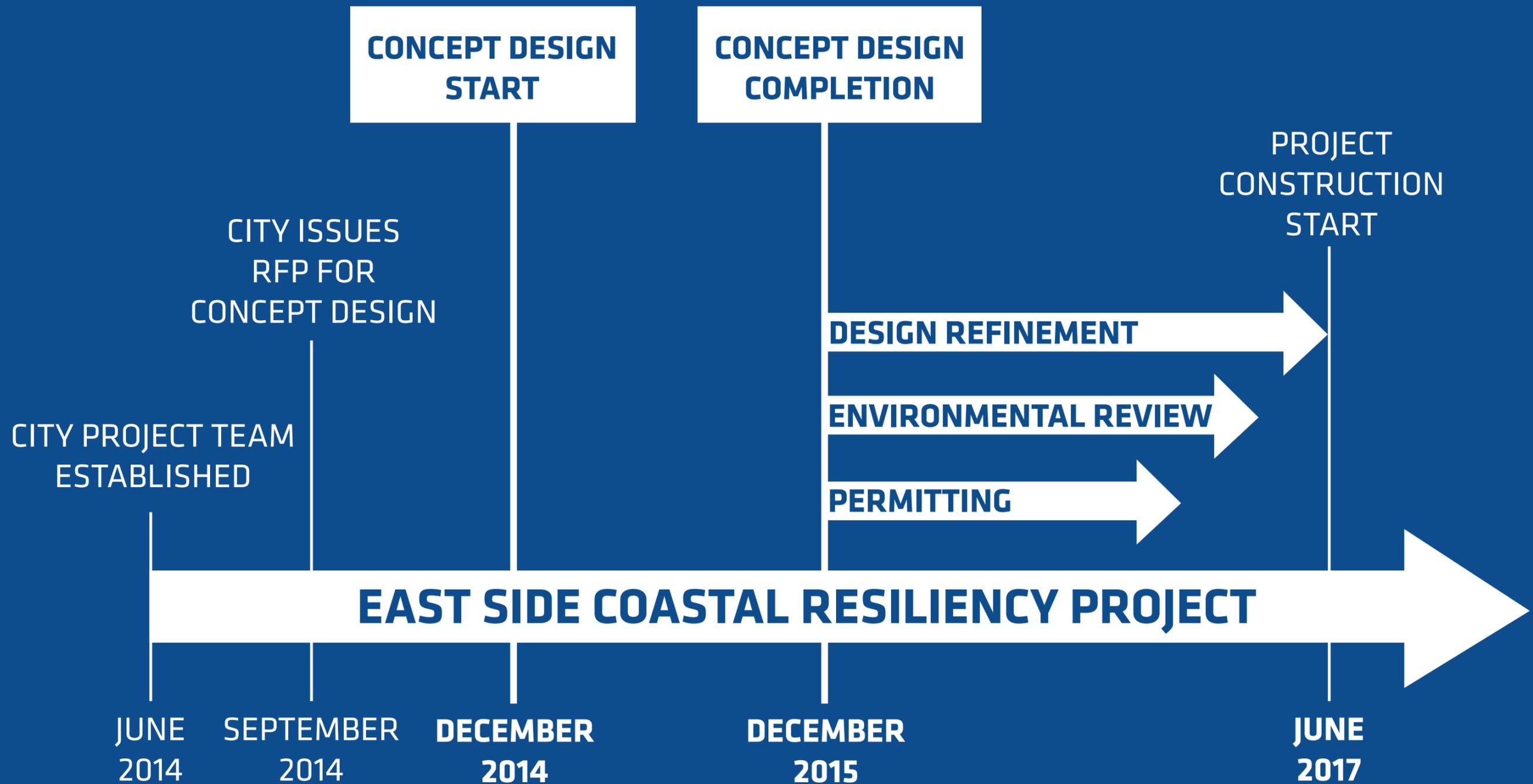
PROJECT LOCATION

The City received HUD funding for the area from E. 23rd St. to Montgomery St. and we are using City and State funds to advance planning south of Montgomery St.



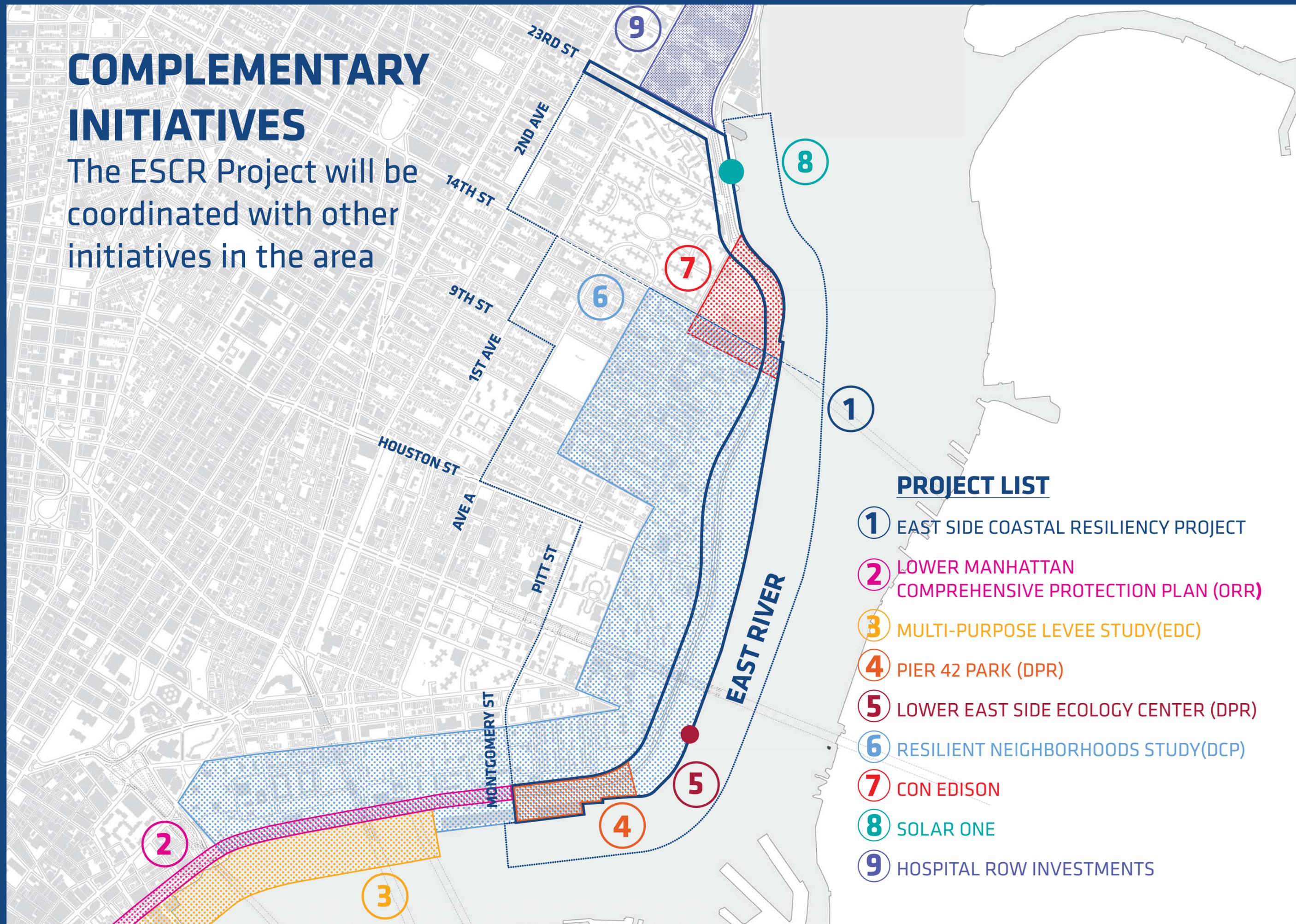
PROJECT TIMELINE

The ESCR Project is on an ambitious timeline, with construction anticipated in 2017



COMPLEMENTARY INITIATIVES

The ESCR Project will be coordinated with other initiatives in the area

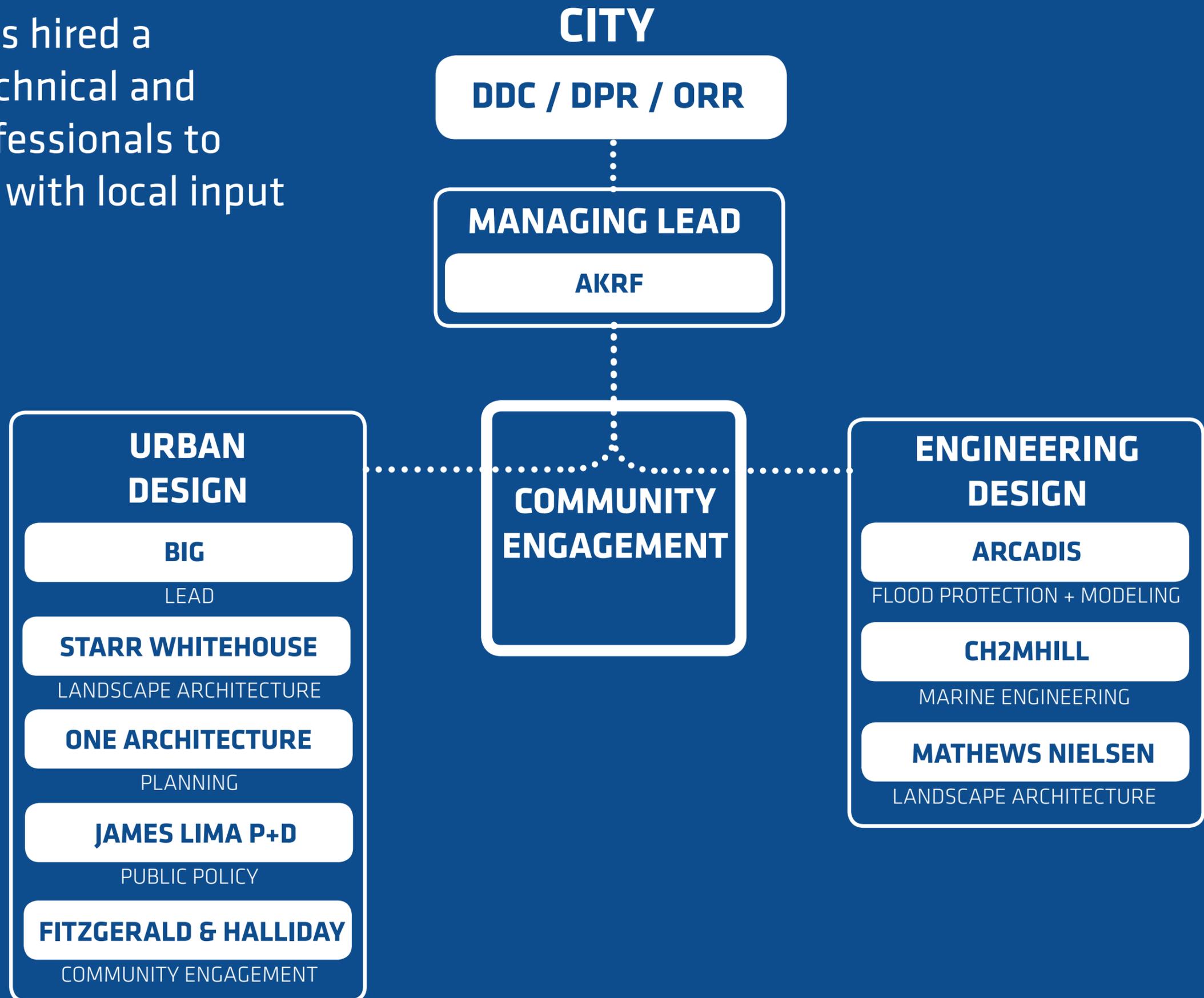


PROJECT LIST

- ① EAST SIDE COASTAL RESILIENCY PROJECT
- ② LOWER MANHATTAN COMPREHENSIVE PROTECTION PLAN (ORR)
- ③ MULTI-PURPOSE LEVEE STUDY(EDC)
- ④ PIER 42 PARK (DPR)
- ⑤ LOWER EAST SIDE ECOLOGY CENTER (DPR)
- ⑥ RESILIENT NEIGHBORHOODS STUDY(DCP)
- ⑦ CON EDISON
- ⑧ SOLAR ONE
- ⑨ HOSPITAL ROW INVESTMENTS

TEAM STRUCTURE

The city has hired a team of technical and design professionals to coordinate with local input



COMMUNITY ENGAGEMENT GOALS

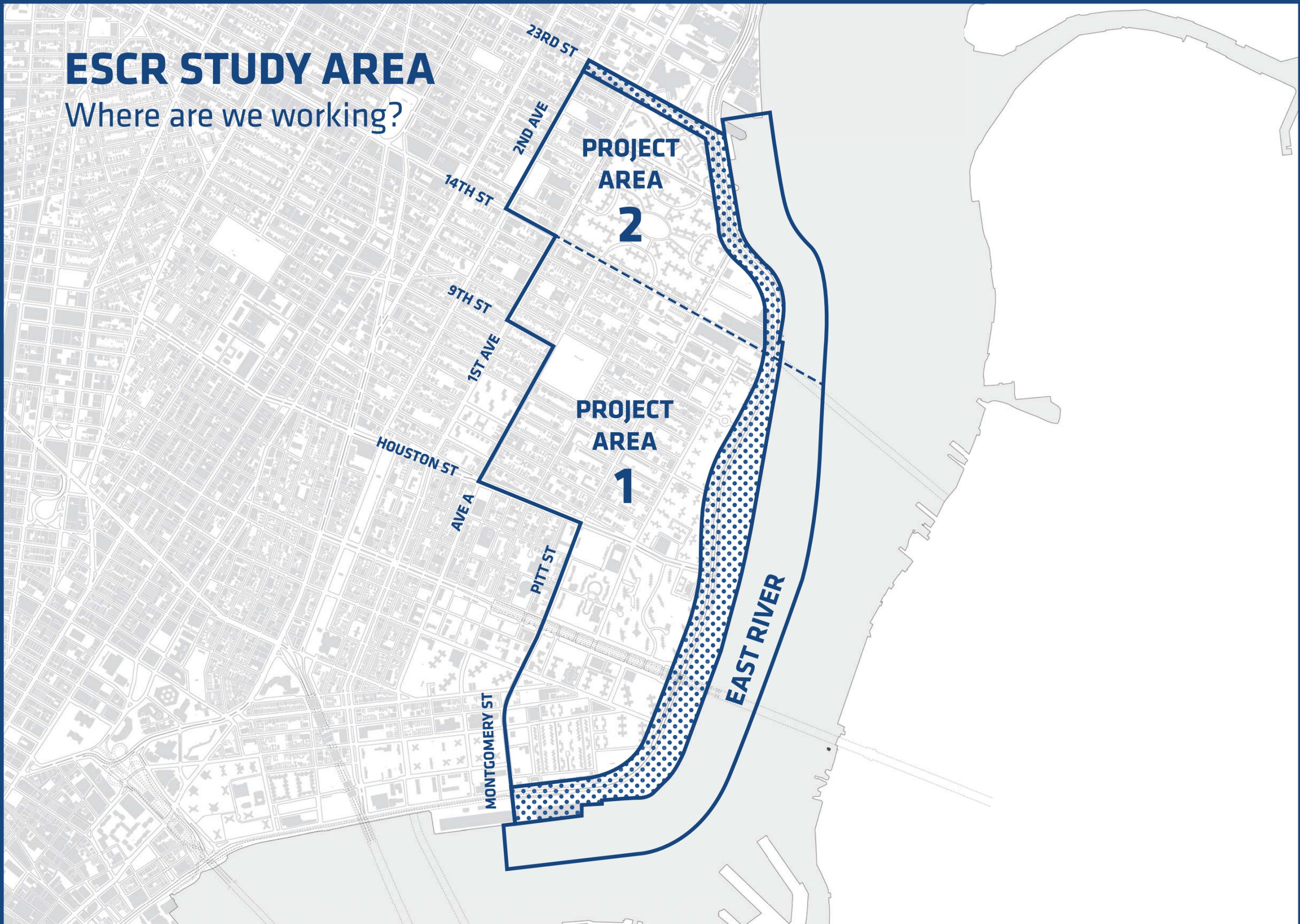
Working with East Side residents and stakeholders is important to the ESCR project

- Listen to input from East Side residents
- Collaborate on design options with East Side community
- Explore opportunities and trade-offs together

- Overview
- **Design and Public Engagement**
- Current Progress
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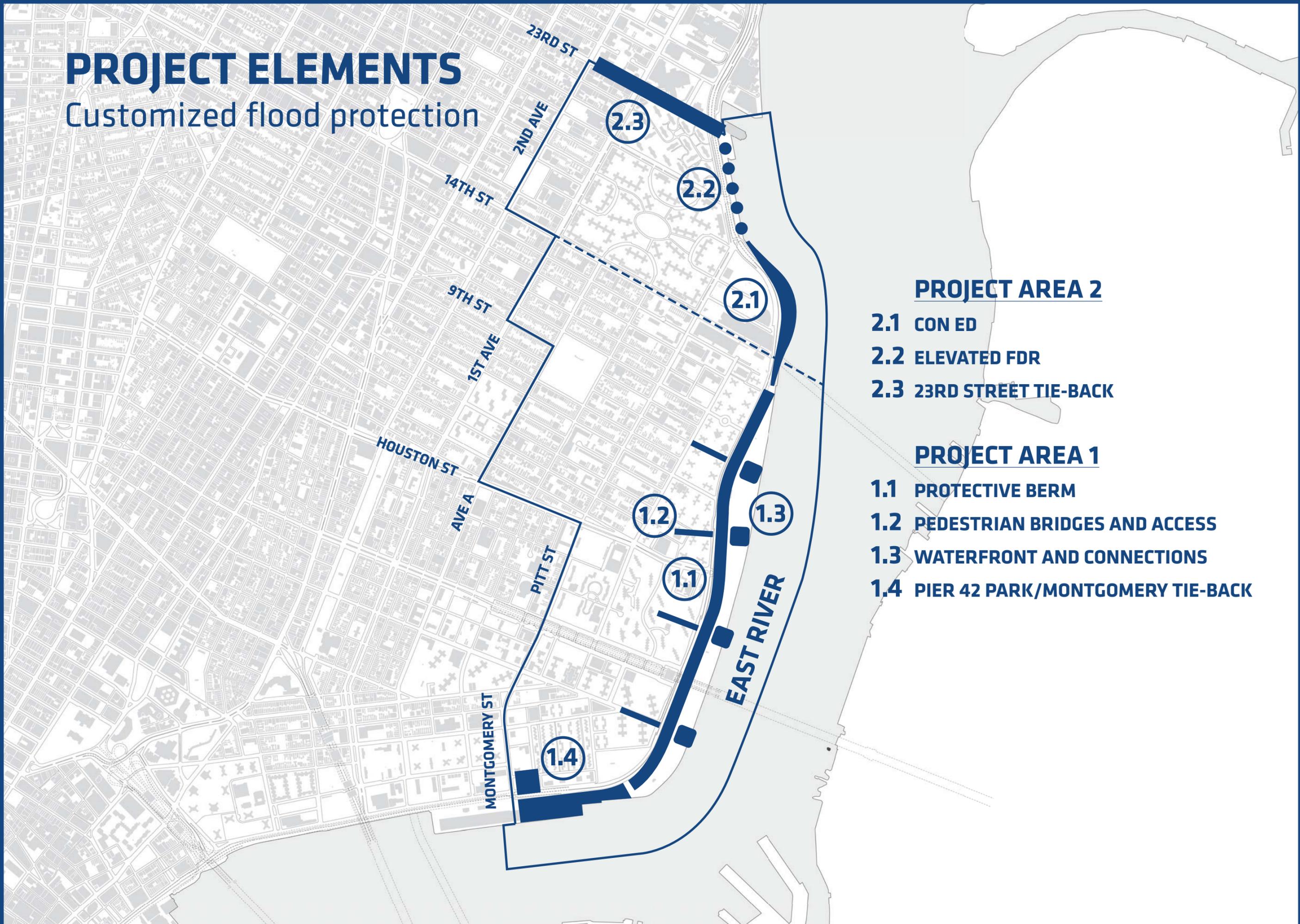
ESCR STUDY AREA

Where are we working?



PROJECT ELEMENTS

Customized flood protection



PROJECT AREA 2

- 2.1 CON ED
- 2.2 ELEVATED FDR
- 2.3 23RD STREET TIE-BACK

PROJECT AREA 1

- 1.1 PROTECTIVE BERM
- 1.2 PEDESTRIAN BRIDGES AND ACCESS
- 1.3 WATERFRONT AND CONNECTIONS
- 1.4 PIER 42 PARK/MONTGOMERY TIE-BACK

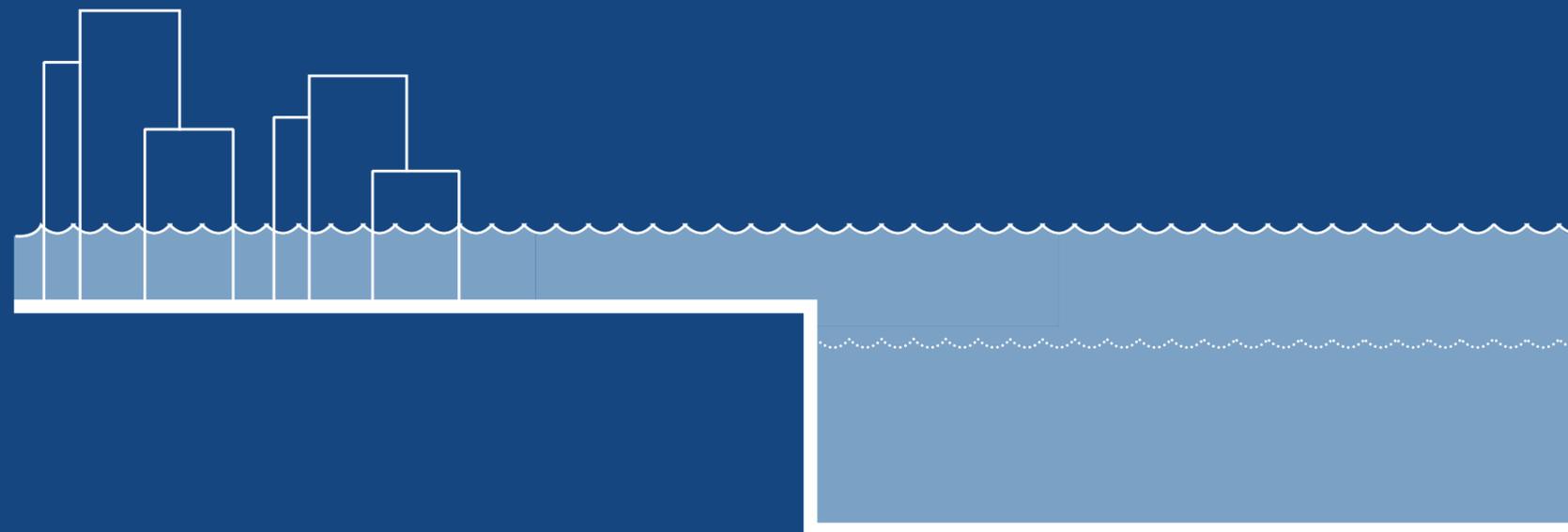
WHAT HAPPENED DURING SANDY?

Normal River Conditions



WHAT HAPPENED DURING SANDY?

Storm Surge Flooding



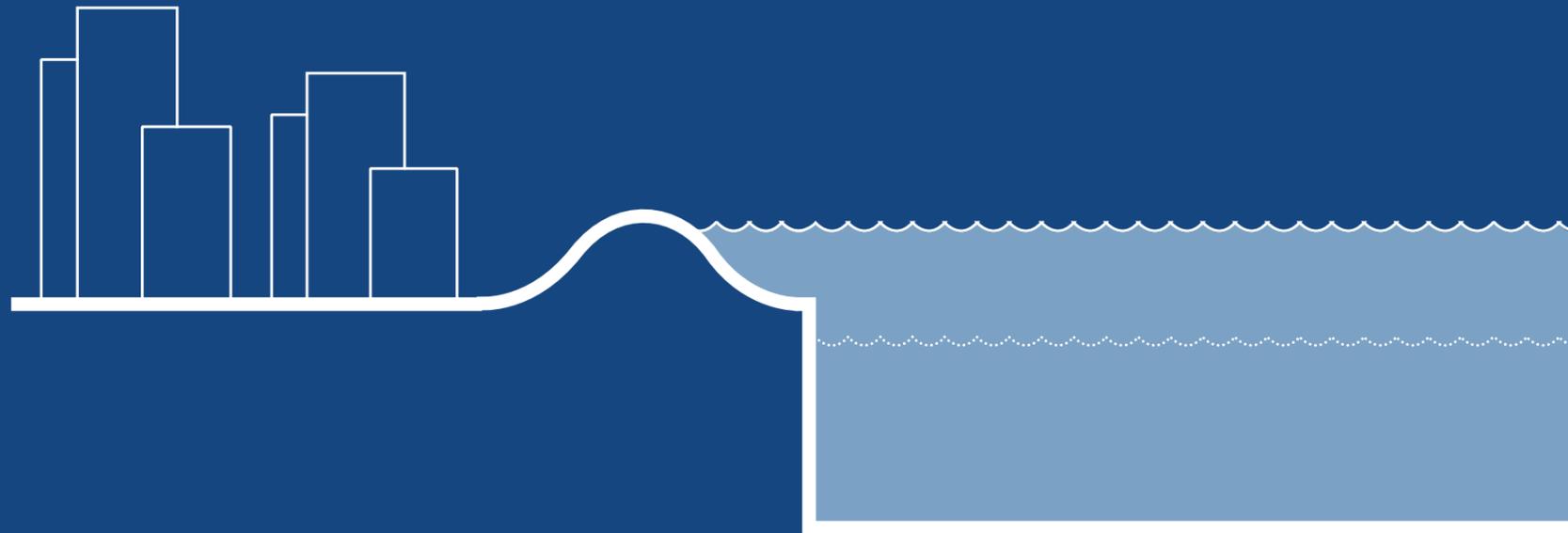
BERM / LEVEE

Normal River Conditions



BERM / LEVEE

Storm Surge Flooding



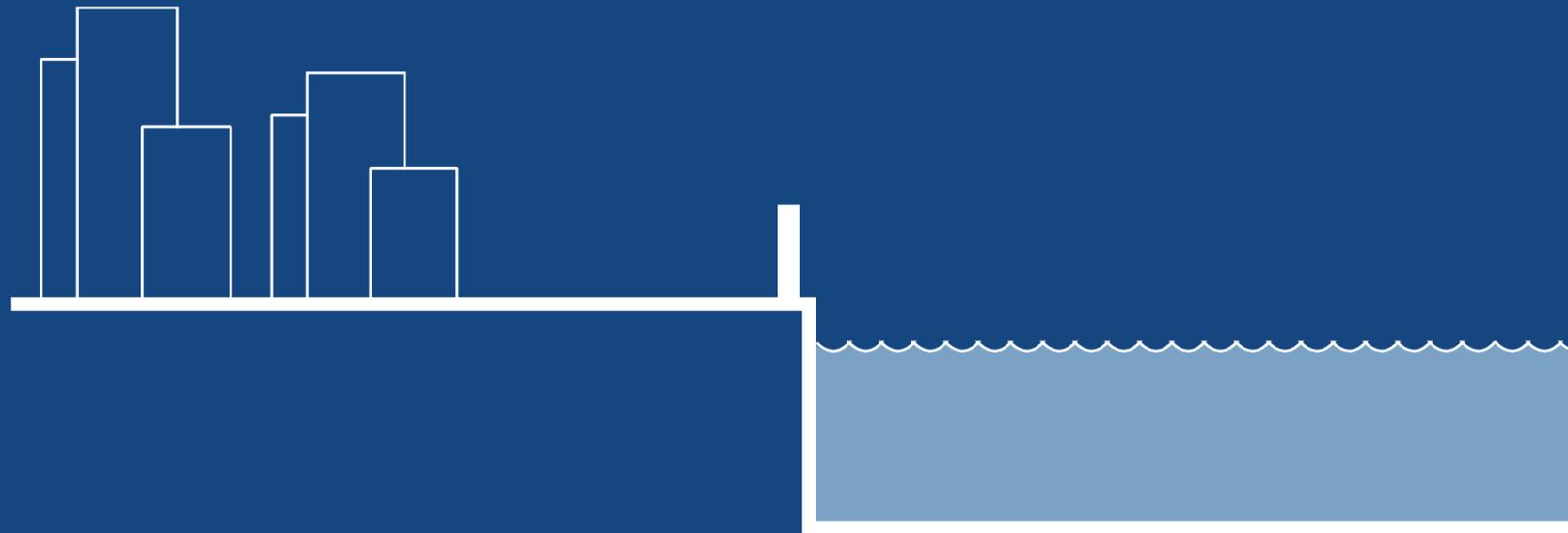
BERM / LEVEE

Scheveningen, Netherlands



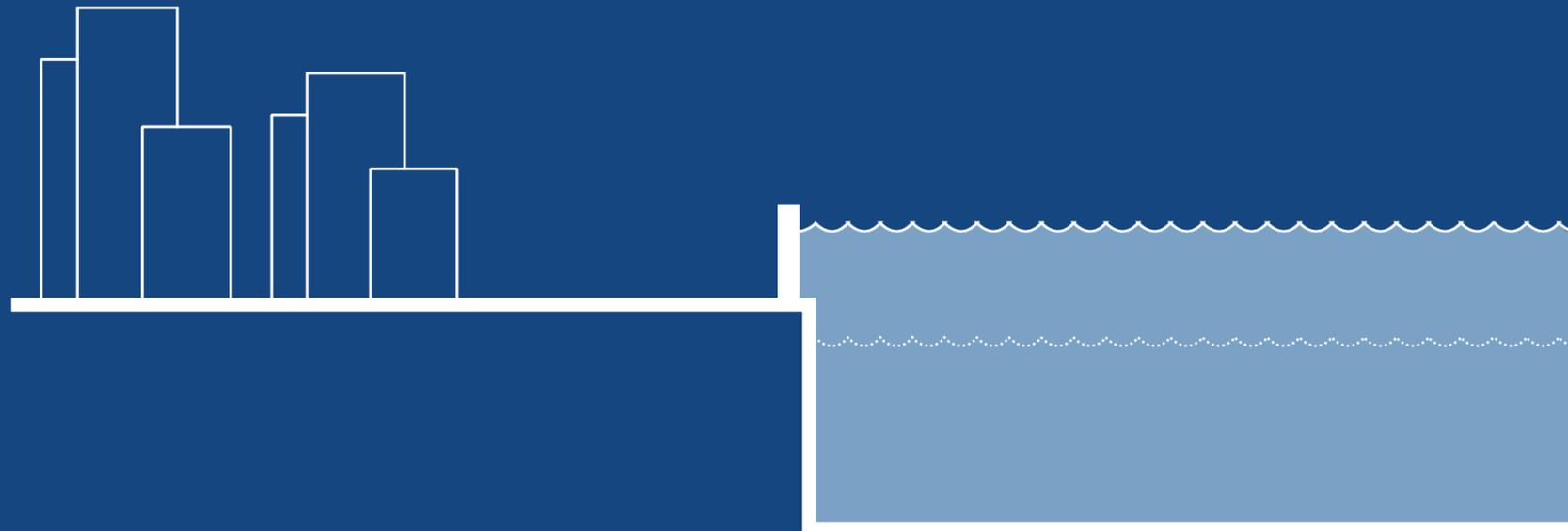
FLOOD WALL

Normal River Conditions



FLOOD WALL

Storm Surge Flooding



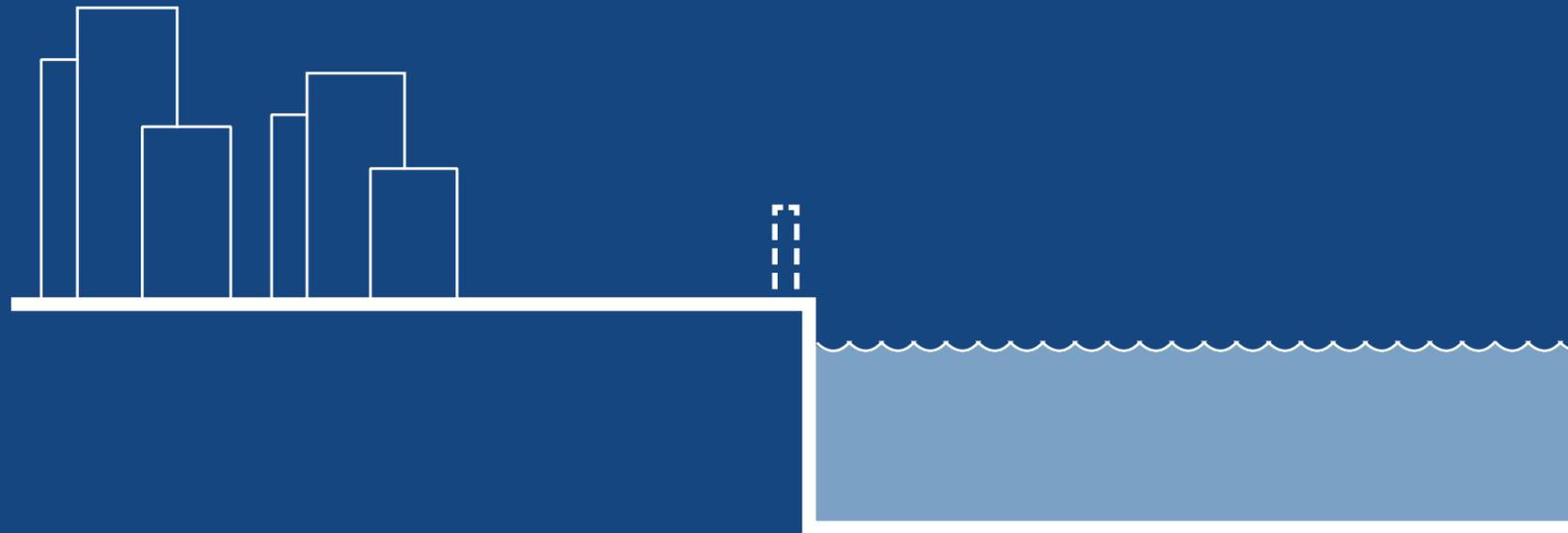
FLOOD WALL

Bad Neustadt, Germany



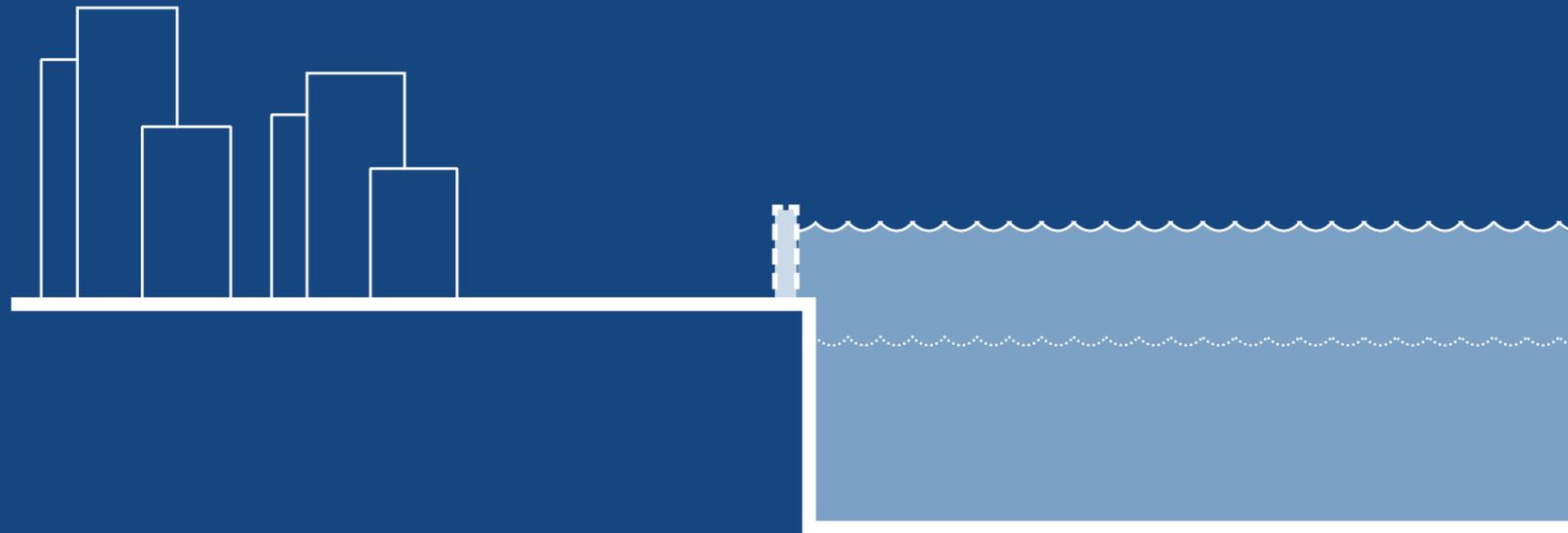
DEPLOYABLE

Normal River Conditions



DEPLOYABLE

Storm Surge Flooding



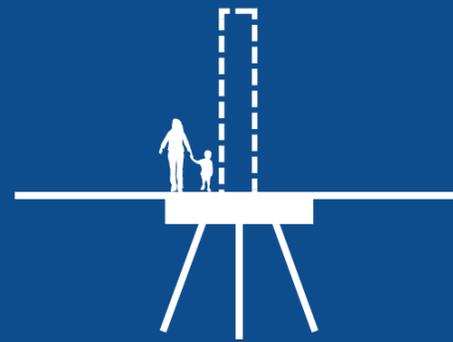
DEPLOYABLE

Bewdley, UK

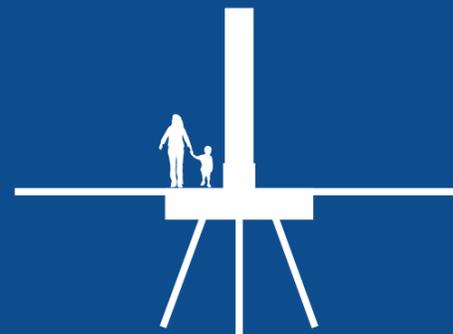


TYPES OF FLOOD PROTECTION

The options for resiliency have different degrees of reliability



DEPLOYABLE



FLOOD WALL



BERM / LEVEE

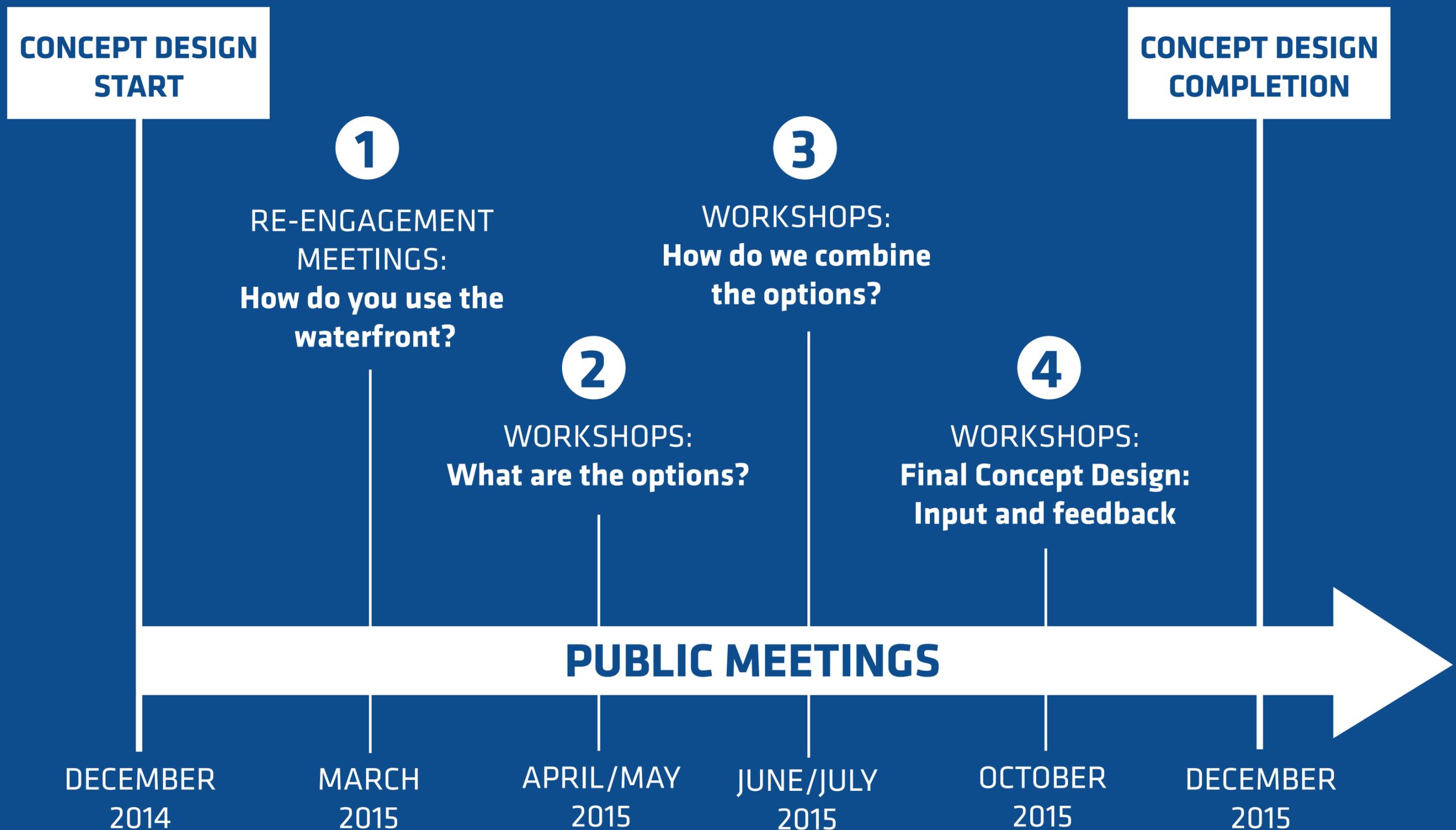
SOCIAL INFRASTRUCTURE

Resiliency infrastructure can double as infrastructure for people



COMMUNITY ENGAGEMENT TIMELINE

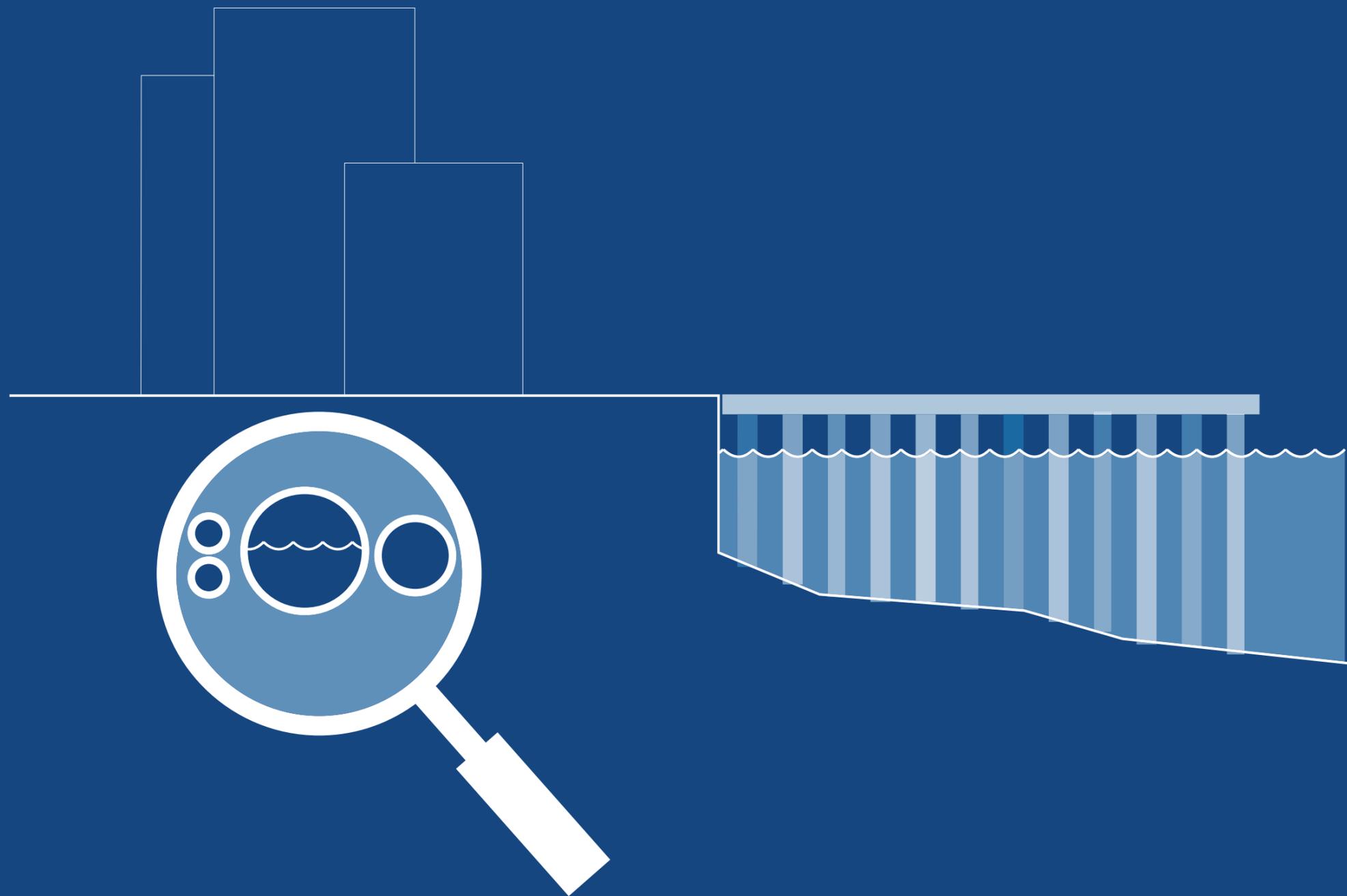
Meetings with East Side residents and stakeholders throughout the year



- Overview
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- **Current Progress**
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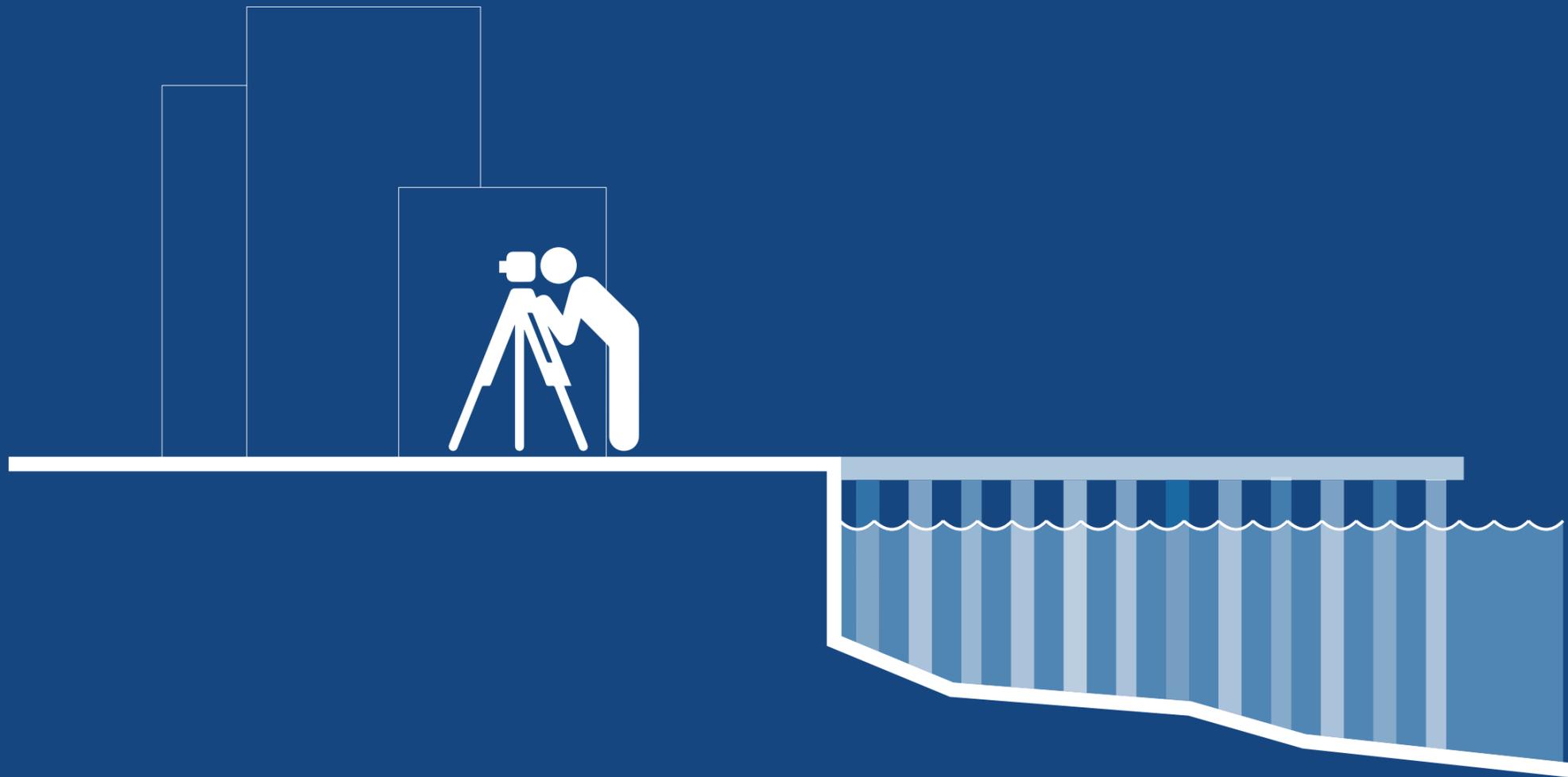
INVESTIGATING BELOW GROUND

August 2014 - July 2015



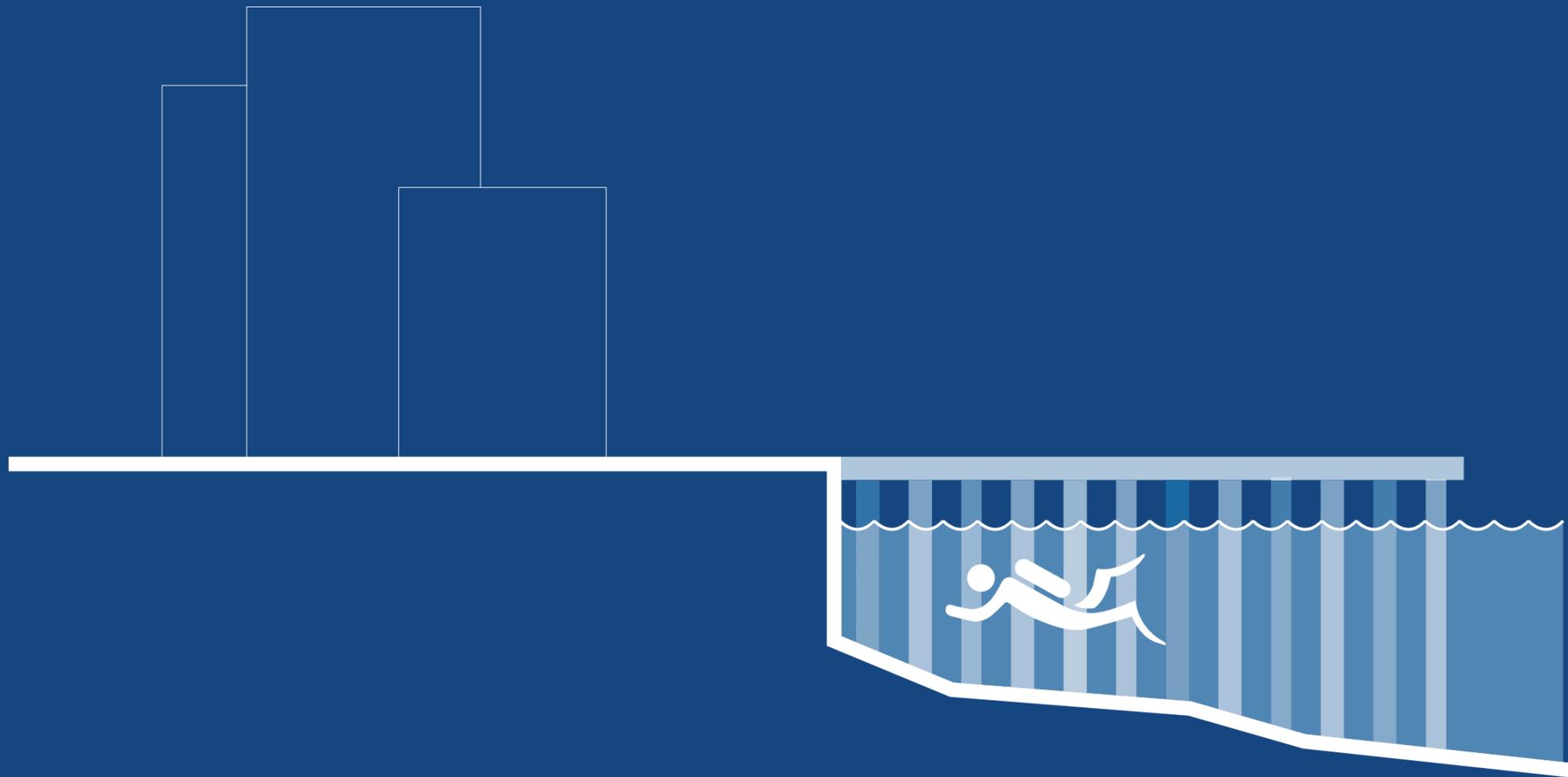
SURVEYING THE LAND

September 2014 - March 2015



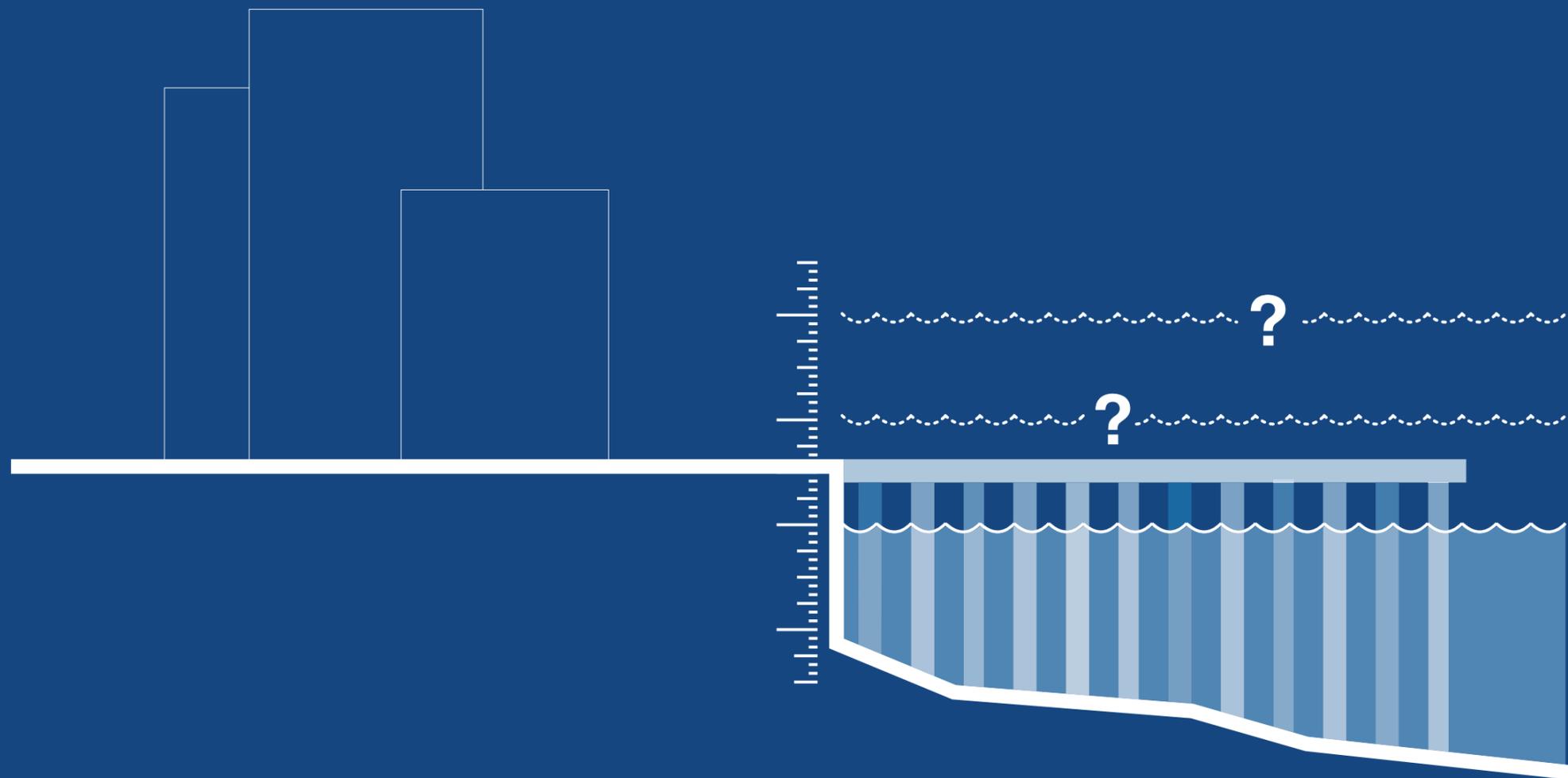
INSPECTING WATERFRONT STRUCTURES

January - March 2015



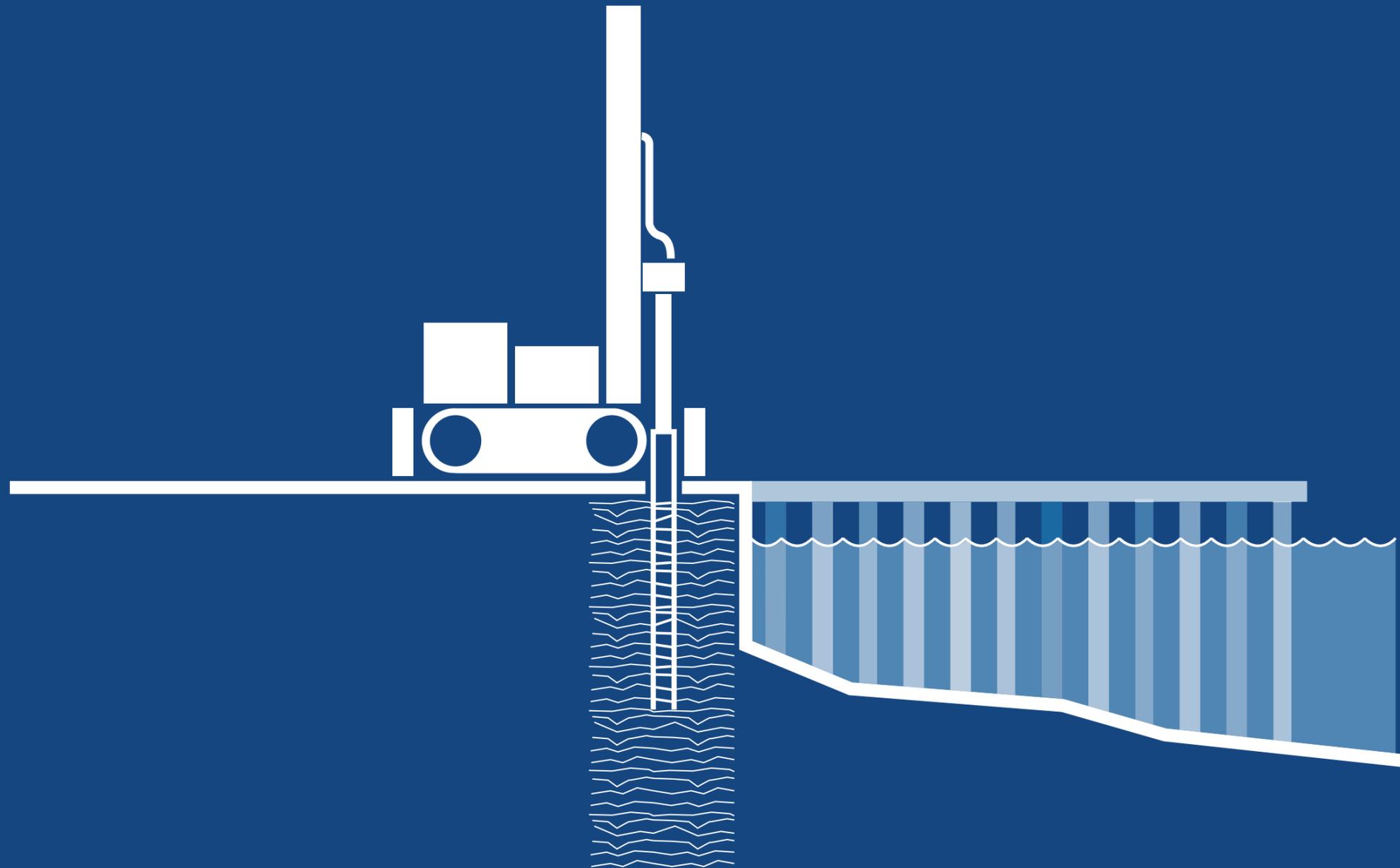
EXAMINING FLOOD RISK AND WATER FLOW

January - July 2015



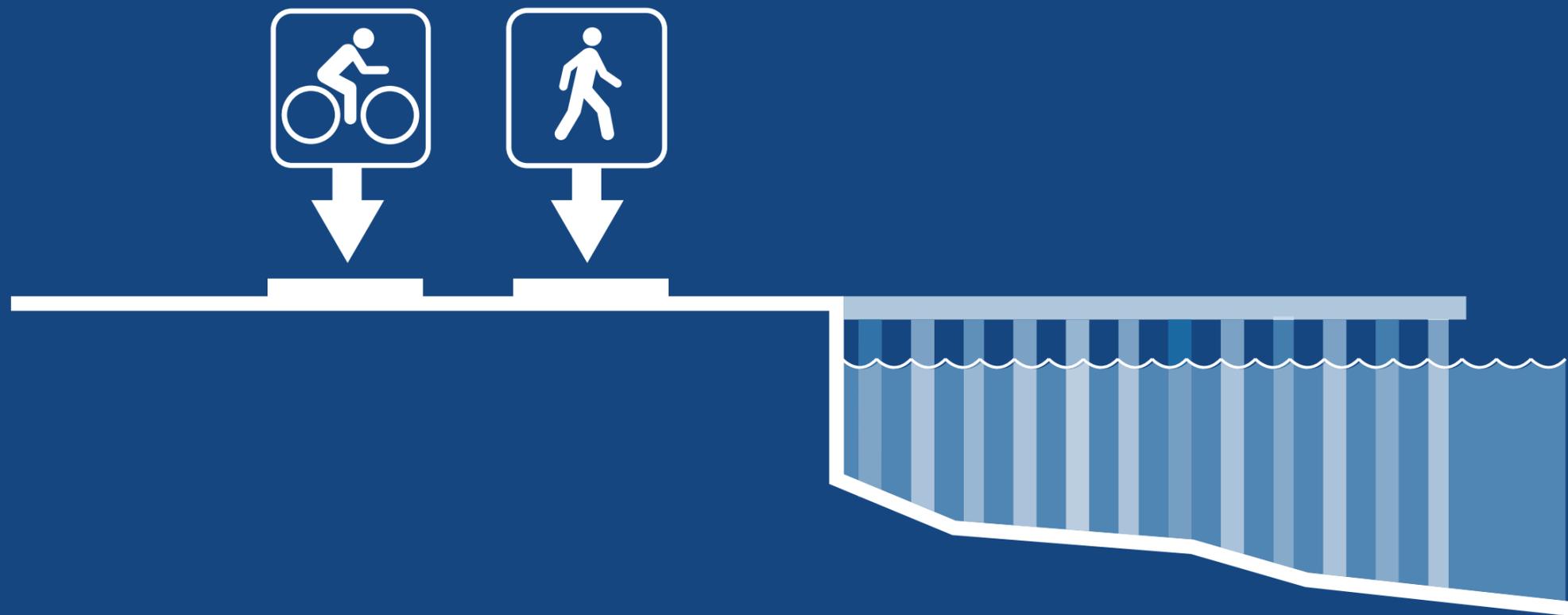
TESTING THE SOIL

January - July 2015



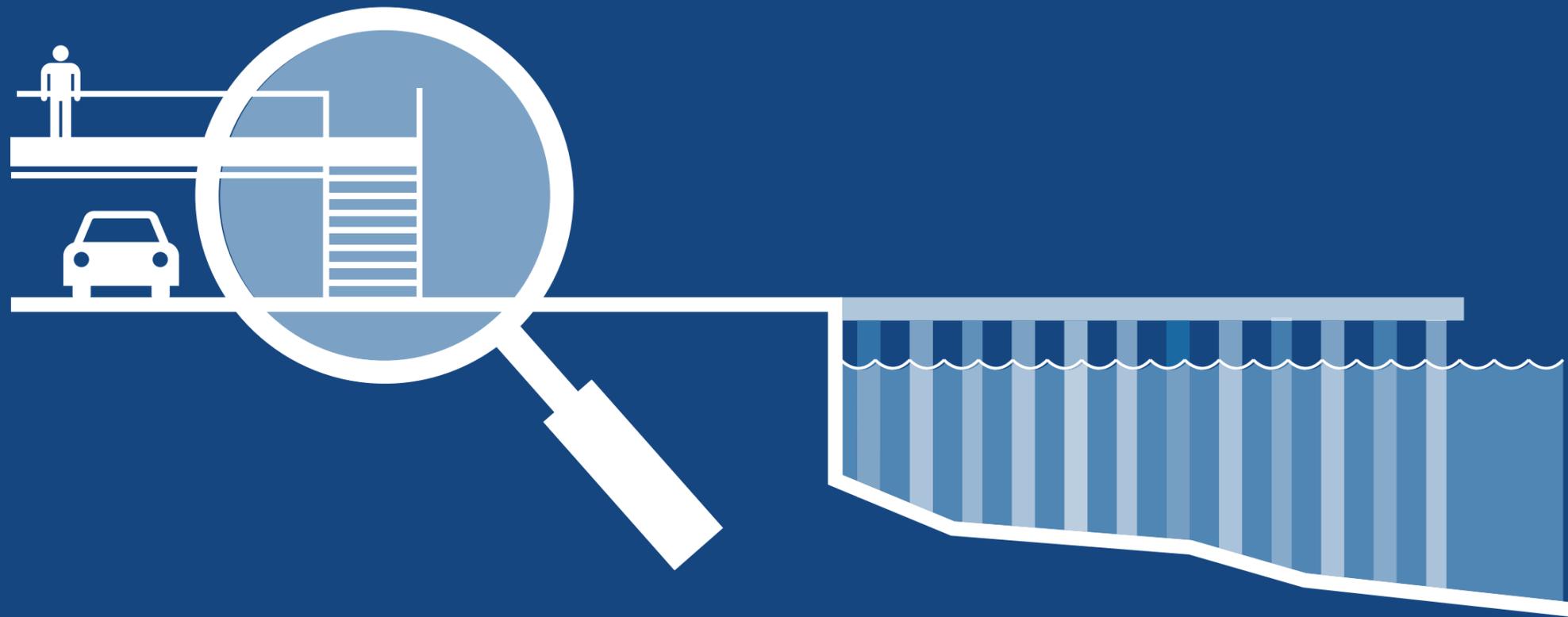
STUDYING PEDESTRIAN AND BICYCLE USAGE

January - July 2015



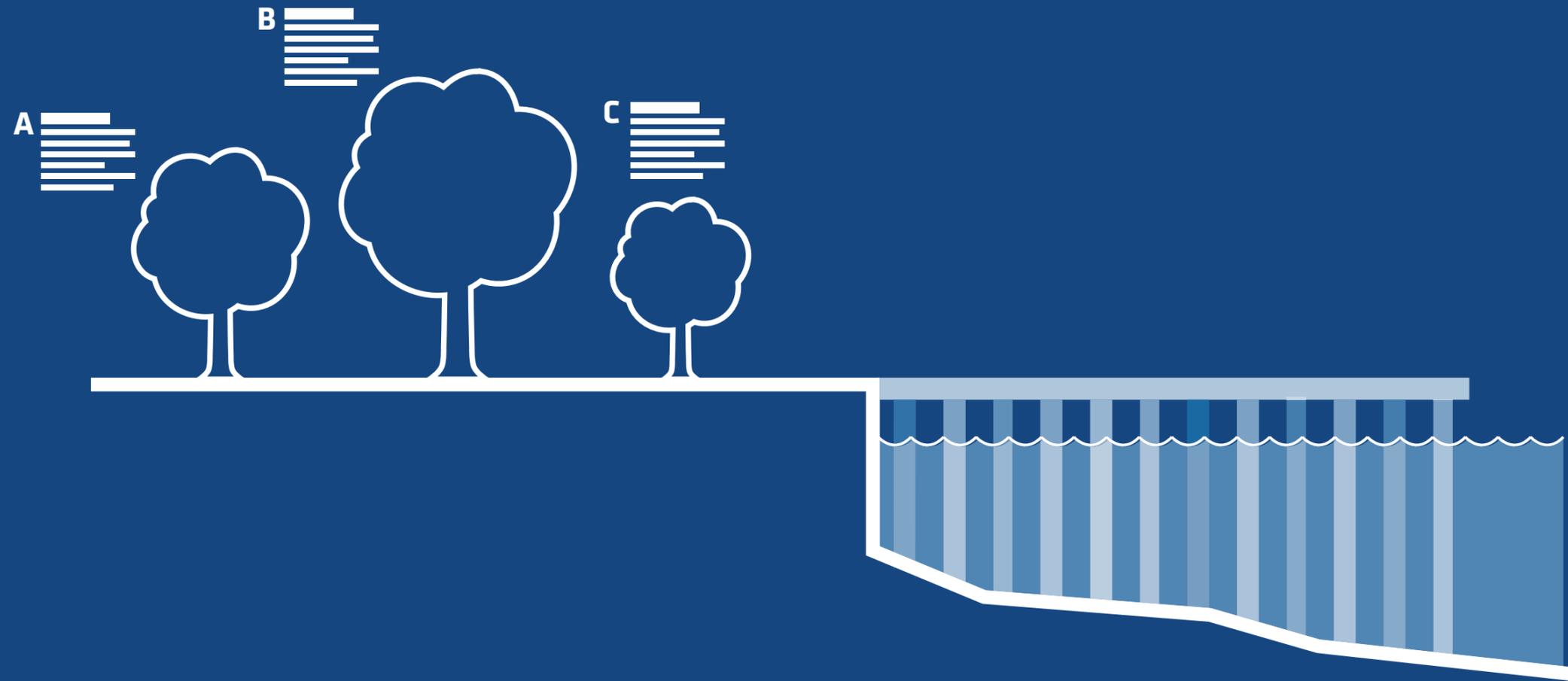
INSPECTING BRIDGES

January - July 2015



MAKING AN INVENTORY OF EXISTING TREES

January - July 2015



REVIEWING AND LEARNING FROM EXISTING STUDIES

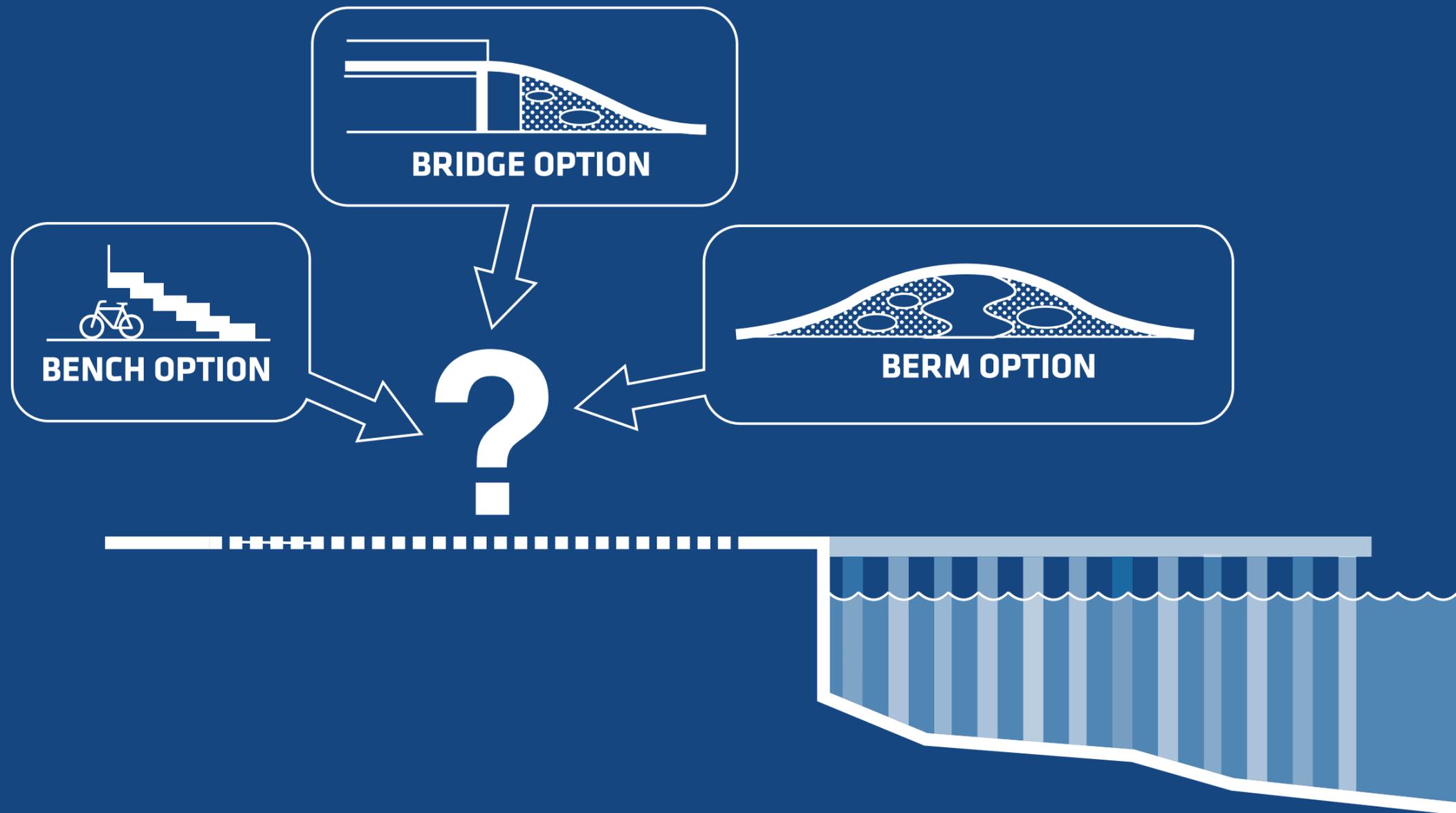
December 2014 - July 2015



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DEVELOPING DESIGN OPTIONS

March - December 2015



EVALUATION CRITERIA

There are many factors to consider when assessing resiliency options



RELIABILITY



URBAN DESIGN



**CONSTRUCTIBILITY
and
COST**



**ENVIRONMENTAL
IMPACTS**



**TIME
and
PERMITTING**

ONGOING PUBLIC ENGAGEMENT

Workshops like tonight's are just one way to participate in the ESCR project

**STAKEHOLDER
MEETINGS**

**TASKFORCE
MEETINGS**

**COMMUNITY
WORKSHOPS**

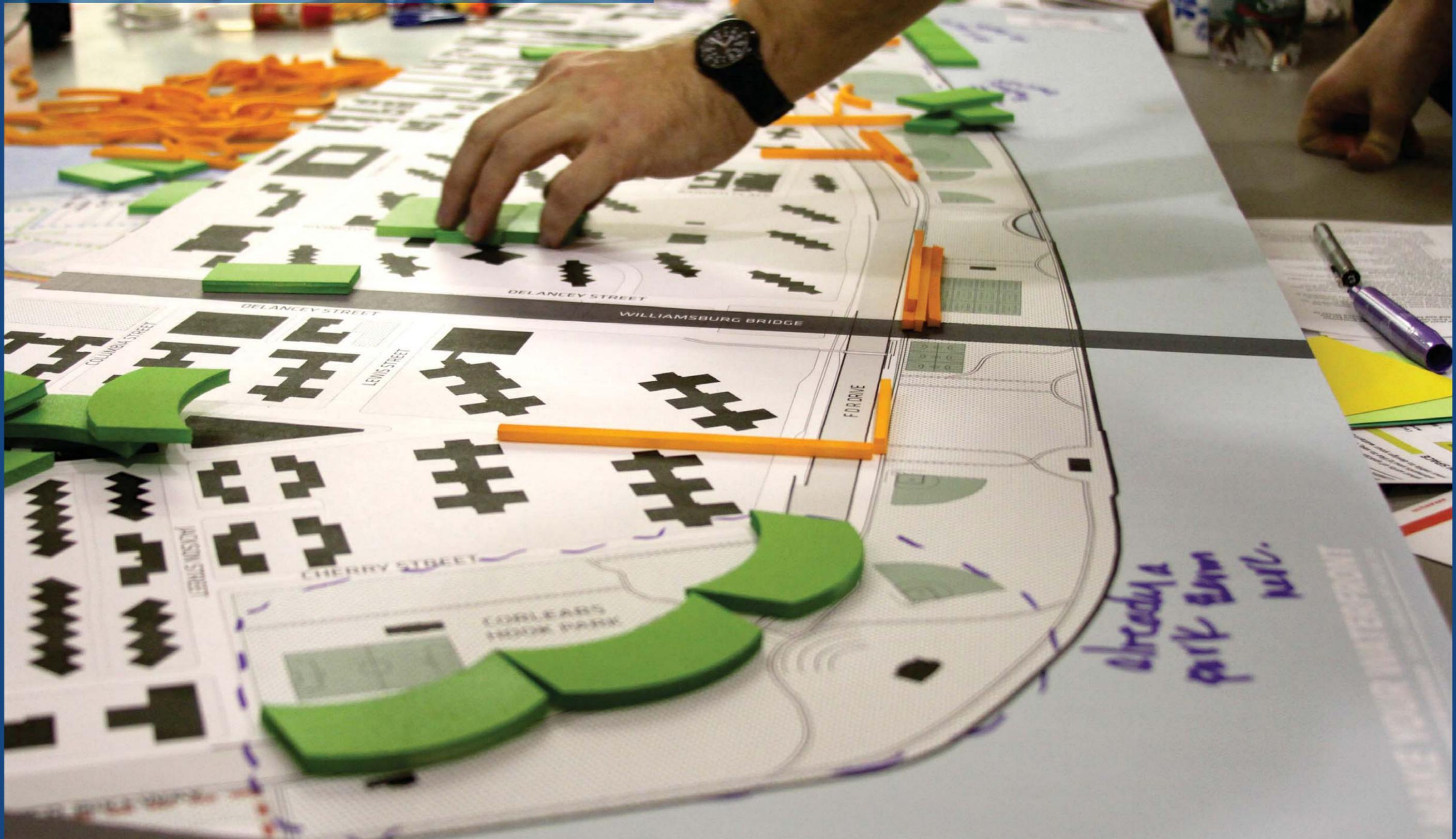
WORKSHOPS

Designing with the Community



WORKSHOPS

Designing with the Community



KEY ISSUES IDENTIFIED BY COMMUNITY DURING RBD

PEDESTRIAN BRIDGE CONNECTIONS

- Locations
- Bridge Design

BIKEWAY/WALKWAY

- Narrow Segments
- Emergency and Maintenance Access

WATERFRONT VIEW CORRIDORS

- Height and Width of Flood Protection Elements
- Look and Feel

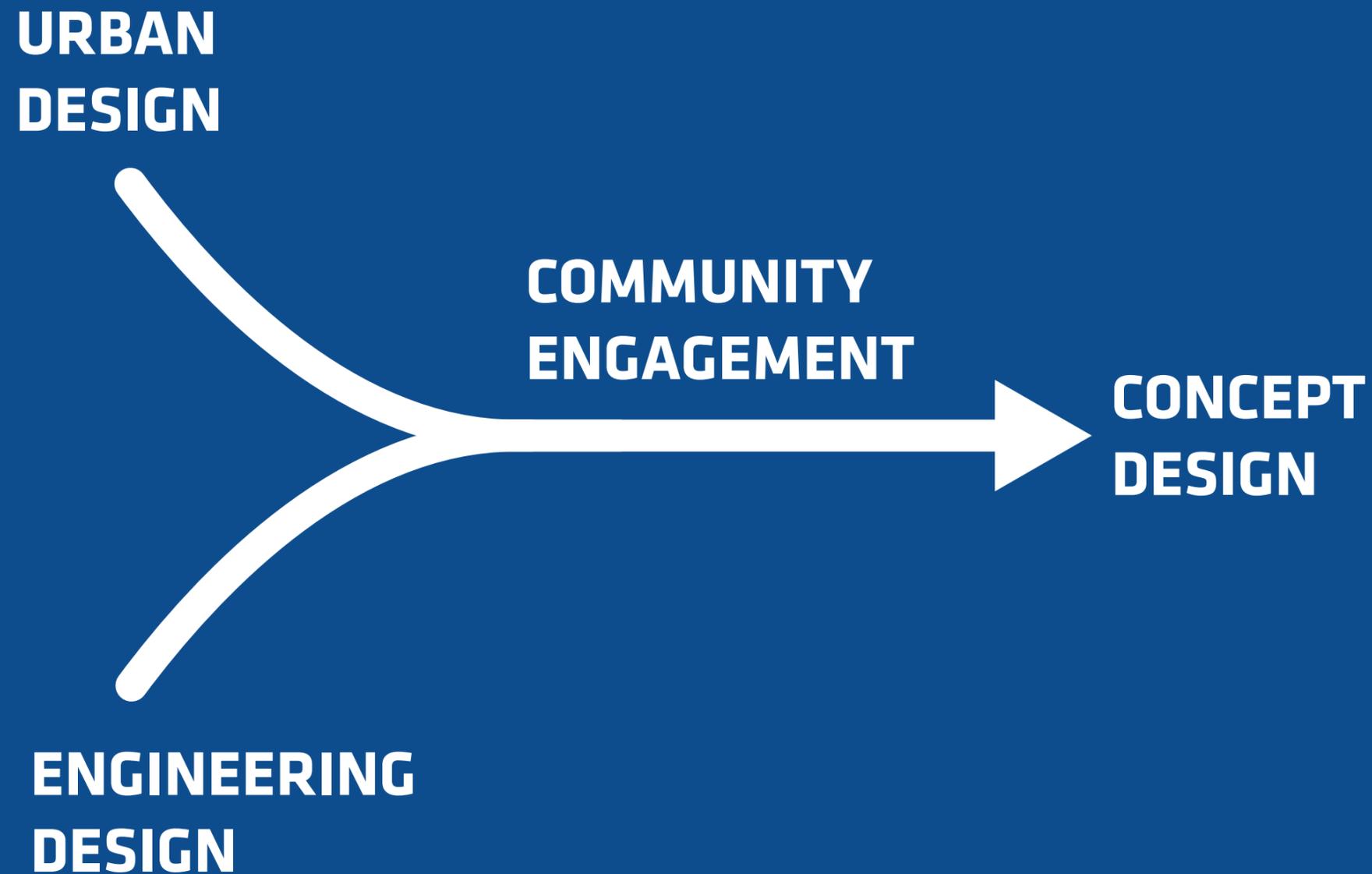
PARK ECOLOGY

- Plants & Trees
- Upland Connections

NEW ISSUES...

COLLABORATION

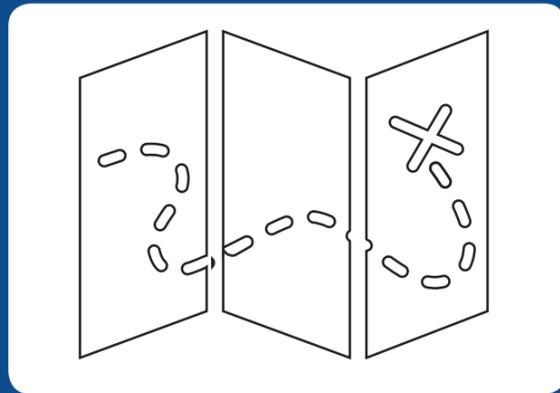
Local knowledge with technical expertise leads to one concept design for the project



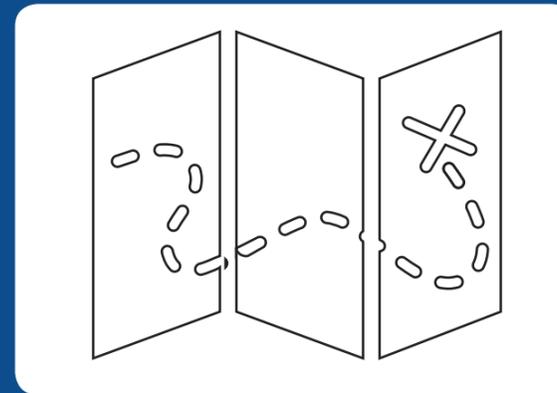
HANDS-ON ACTIVITY: HOW DO YOU USE THE WATERFRONT?

MAP YOUR NEIGHBORHOOD!

**EAST RIVER PARK /
PROJECT AREA 1**

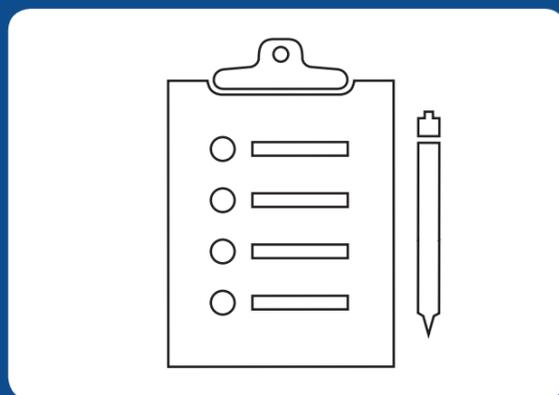


**STUYVESANT COVE PARK /
PROJECT AREA 2**



SHARE YOUR THOUGHTS!

SURVEY



NEXT STEPS

**SIGN IN AT THE FRONT DESK
TO STAY IN TOUCH AND HEAR
ABOUT UPCOMING MEETINGS AND
ANNOUNCEMENTS!**

FOR MORE INFORMATION ABOUT
THE EAST SIDE COASTAL RESILIENCY PROJECT EMAIL US AT:

nycresiliency@cityhall.nyc.gov

THIS MEETING WILL BE REPEATED:

MARCH 23rd
AT WASHINGTON IRVING HIGH SCHOOL
40 IRVING PLACE

TELL YOUR FRIENDS!



THE NEXT COMMUNITY TASKFORCE MEETING WILL BE HELD:

APRIL 7th
UNIVERSITY SETTLEMENT CORNERSTONE
CAMPOS PLAZA
611 EAST 13TH ST.

HOPE TO SEE YOU THERE!



EAST RIVER PARK

Circa 1935



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QUESTIONS / DISCUSSION



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