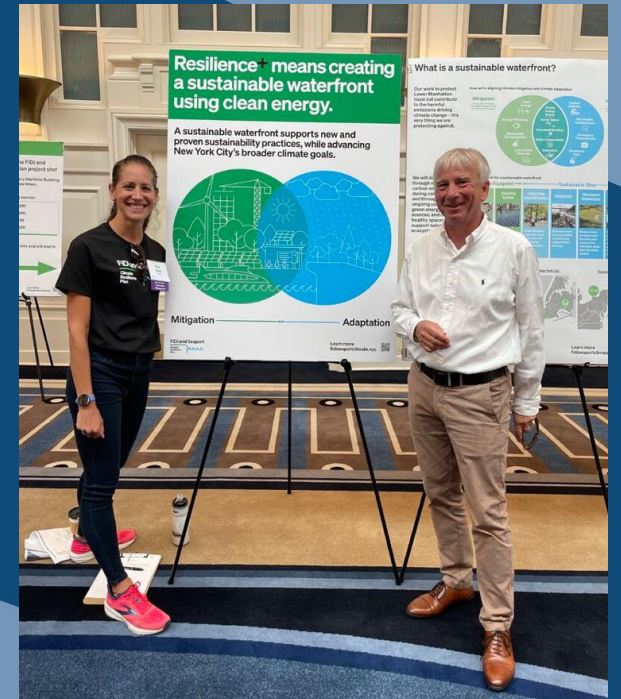


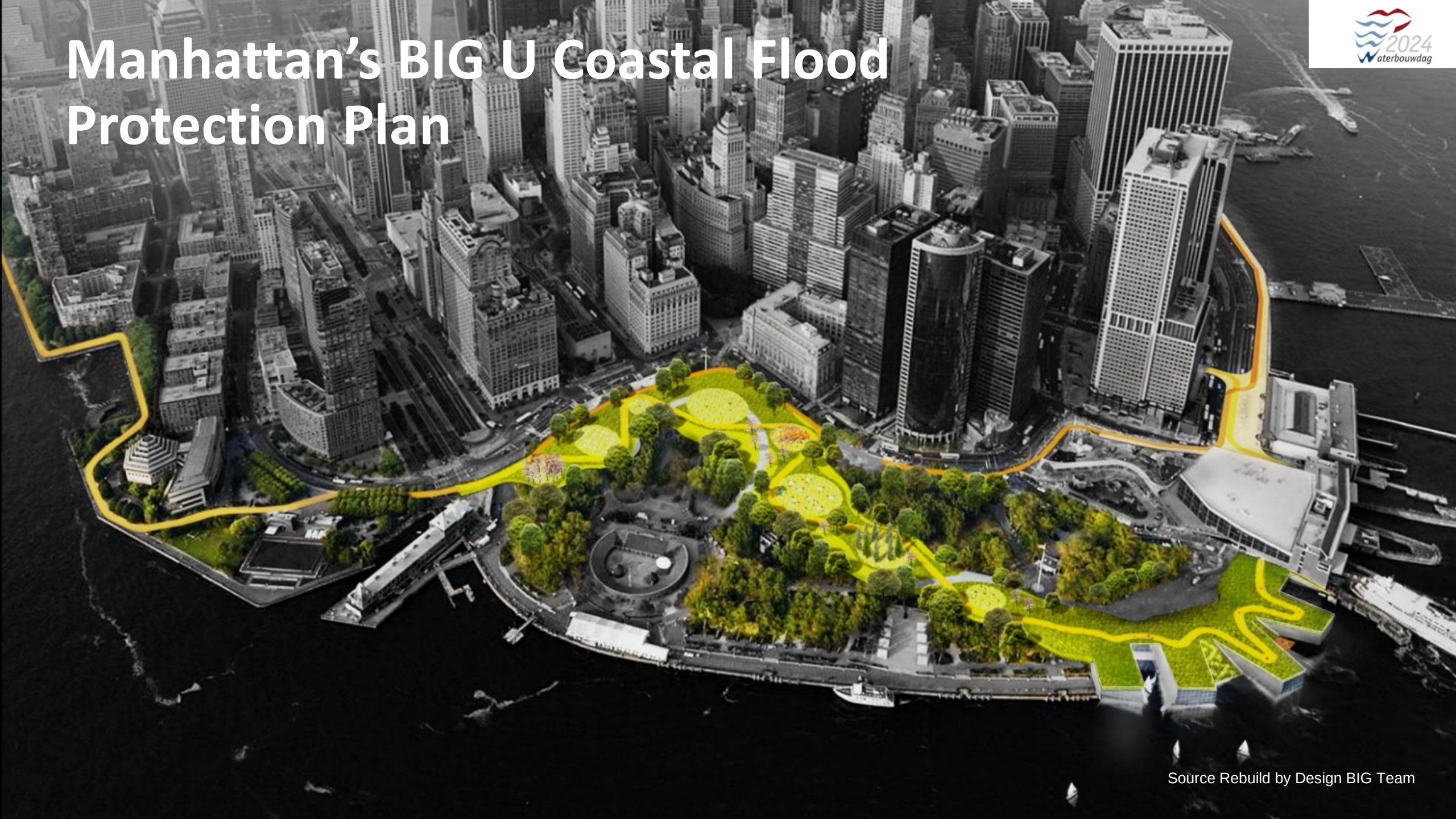
The BIG U: Hoogwaterbescherming voor Manhattan

**Piet Dircke - Global Advisor Climate Adaptation
Arcadis**

**Roni Deitz - Global Director Climate Adaptation
Arcadis**



Manhattan's BIG U Coastal Flood Protection Plan



Manhattan's BIG U Coastal Flood Protection Plan

Promoting resiliency post-Sandy through innovative planning and design

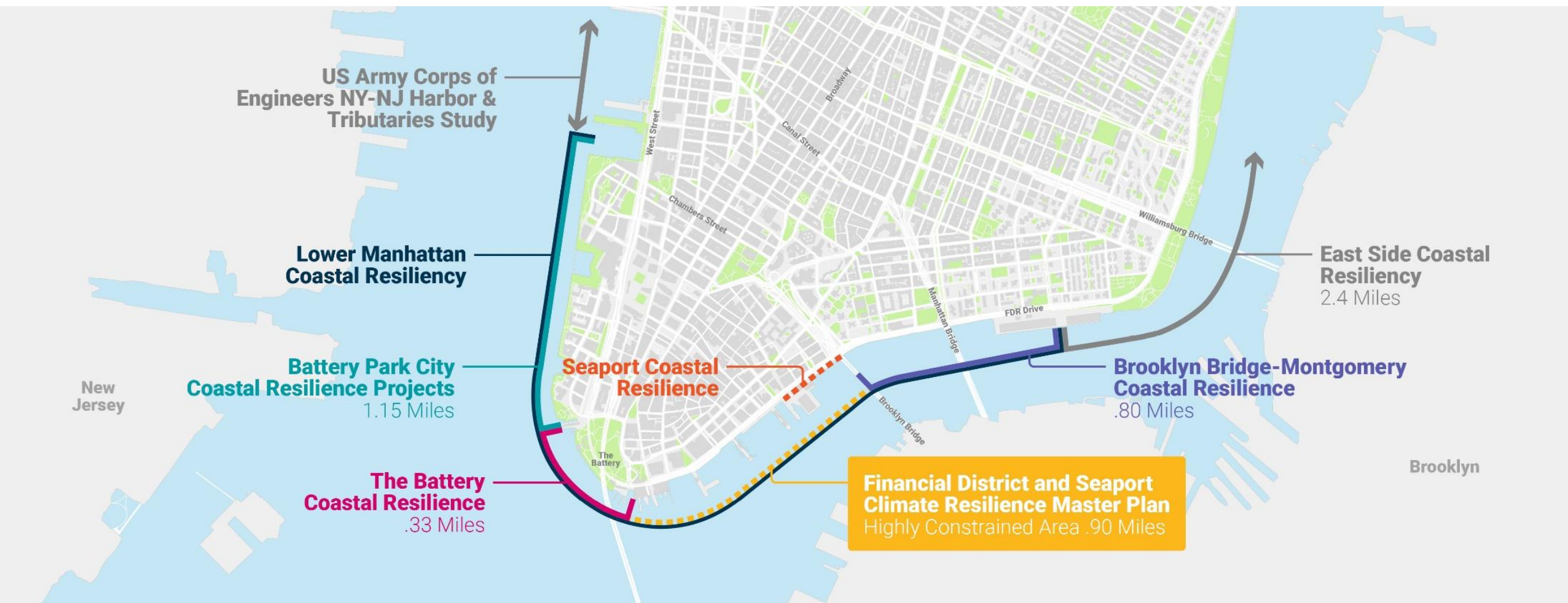


REBUILD BY DESIGN



An initiative of the President's
Hurricane Sandy Task Force

This Master Plan is part of a broader City-led strategy to protect Lower Manhattan, for which the City, State, and Federal governments have committed over \$1.7B in capital investments for climate adaptation projects. A detailed plan for FiDi-Seaport is critical for filling the last remaining gap.

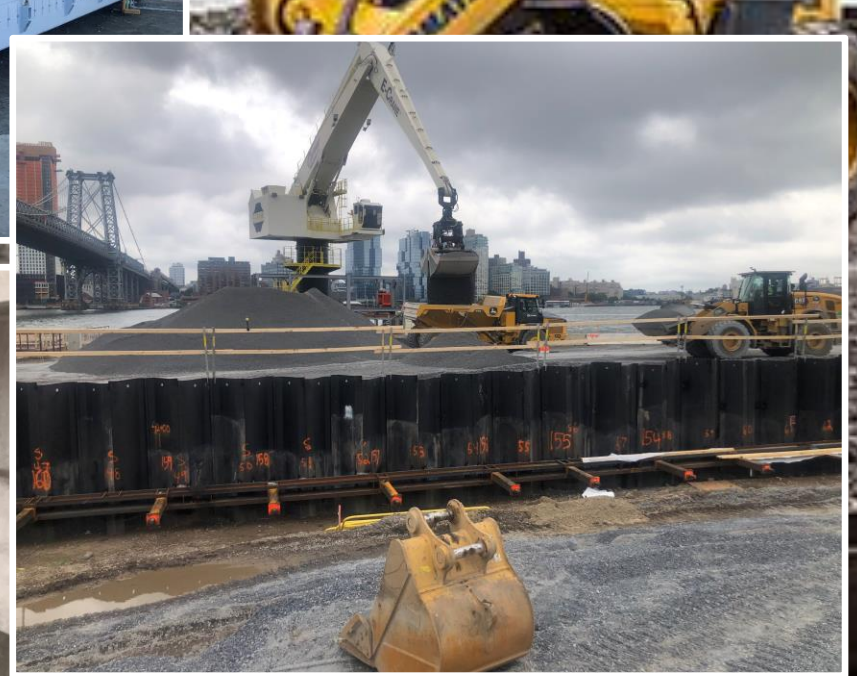
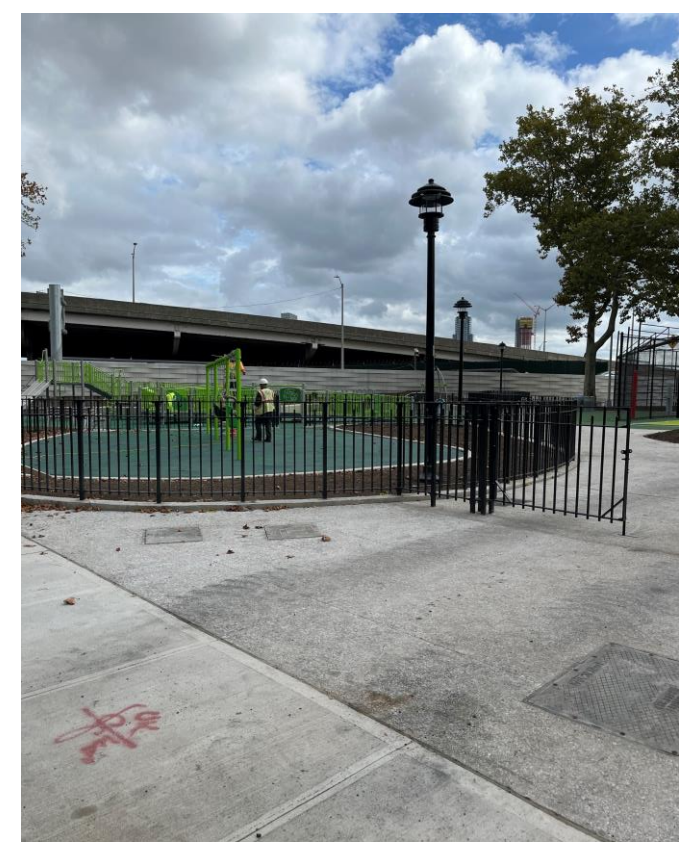
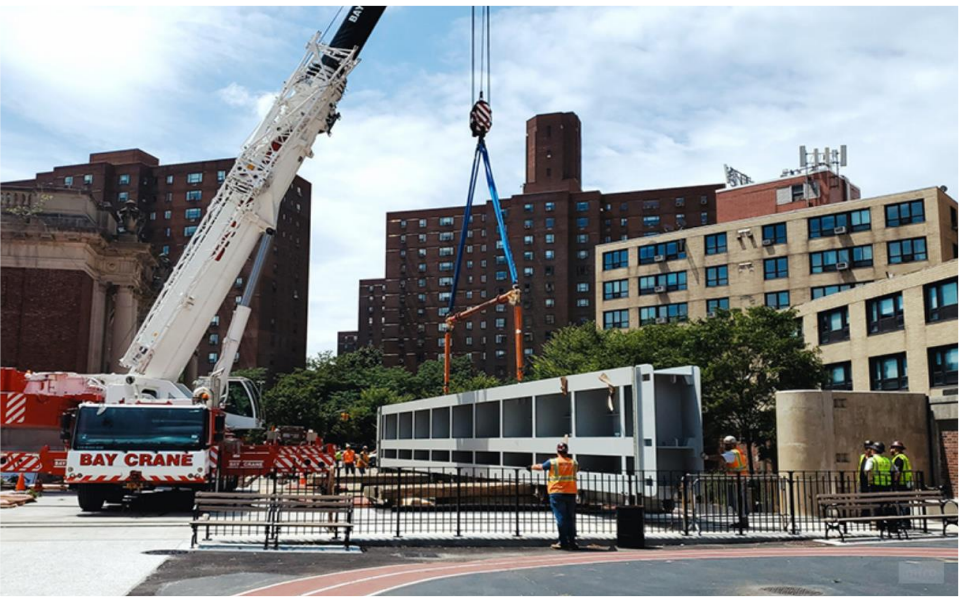


ESCR East Side Coastal Resiliency



**Multipurpose flood protection:
connecting the community to
the waterfront and providing a
more investable solution**

ESCR Lower Manhattan uitvoering



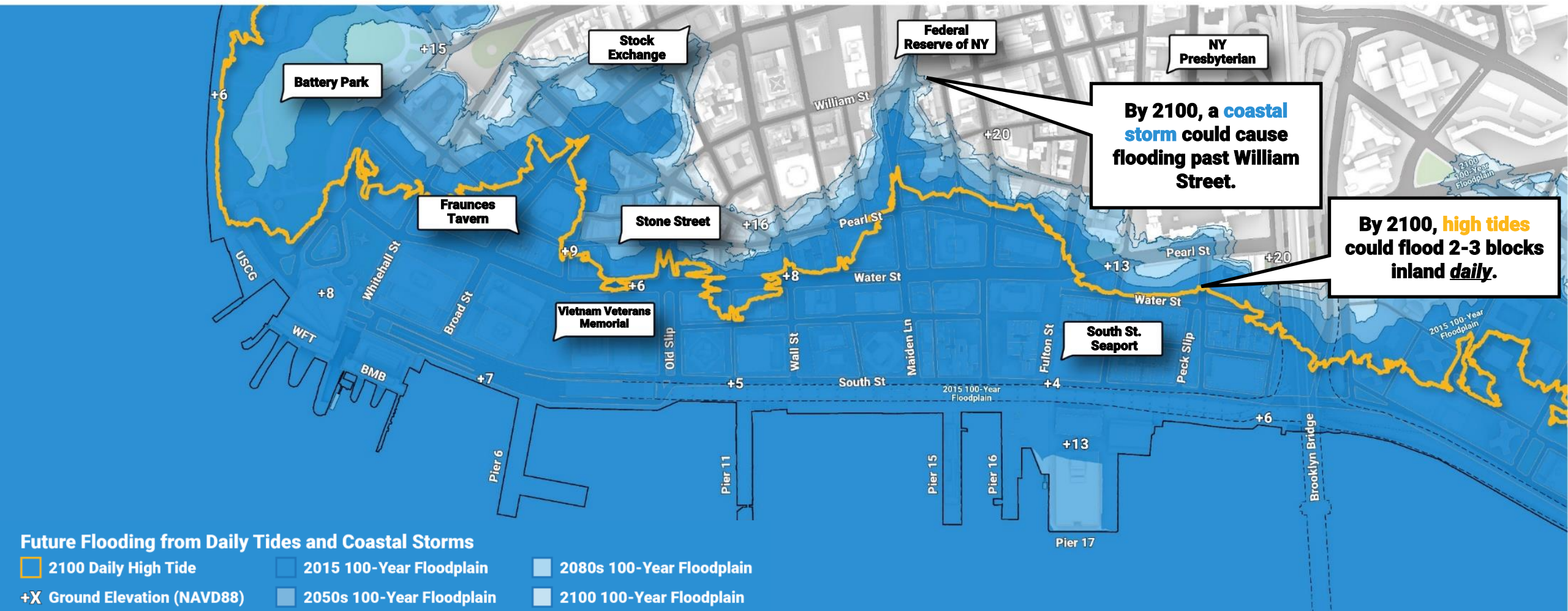


Financial District & Seaport



8

The Master Plan will protect the Financial District & Seaport from two types of climate risks – **daily tidal flooding** and **coastal storms**.



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

19 of 28 subway lines

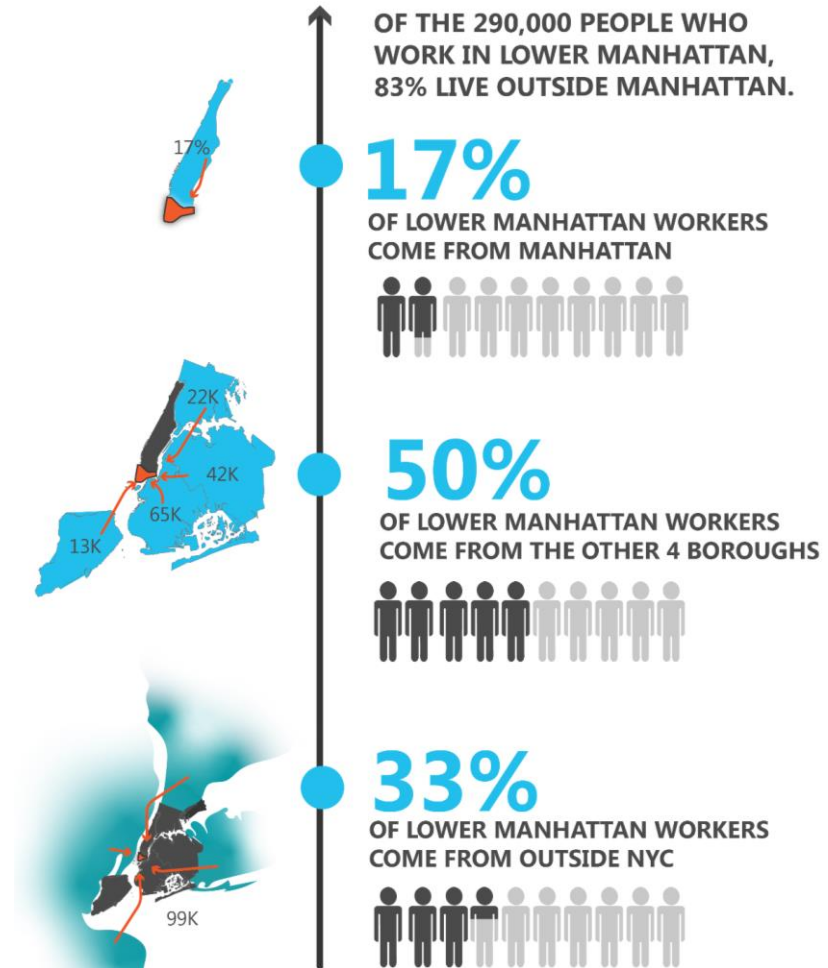
More than two-thirds of the city's subway lines and 26 ferry lines route through Lower Manhattan.

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.

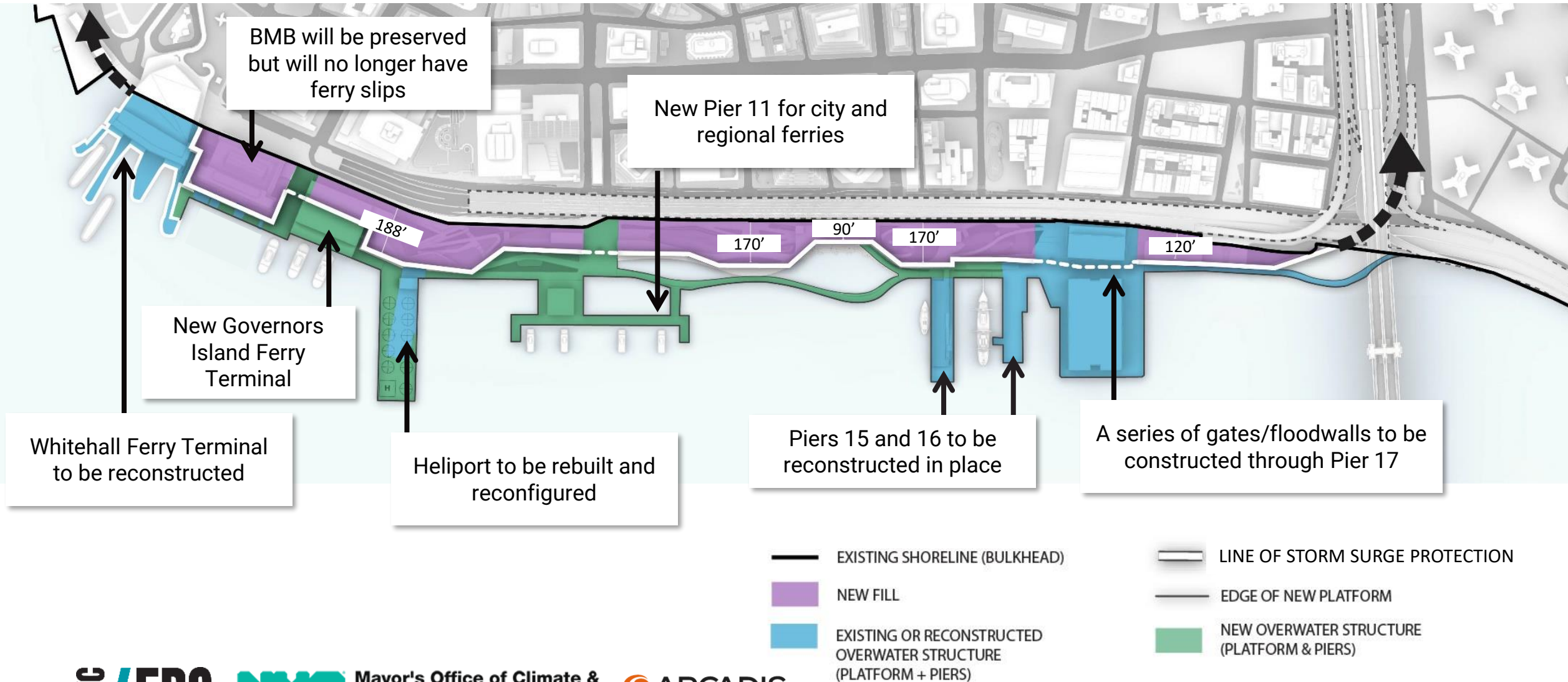
1-in-10 jobs

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)

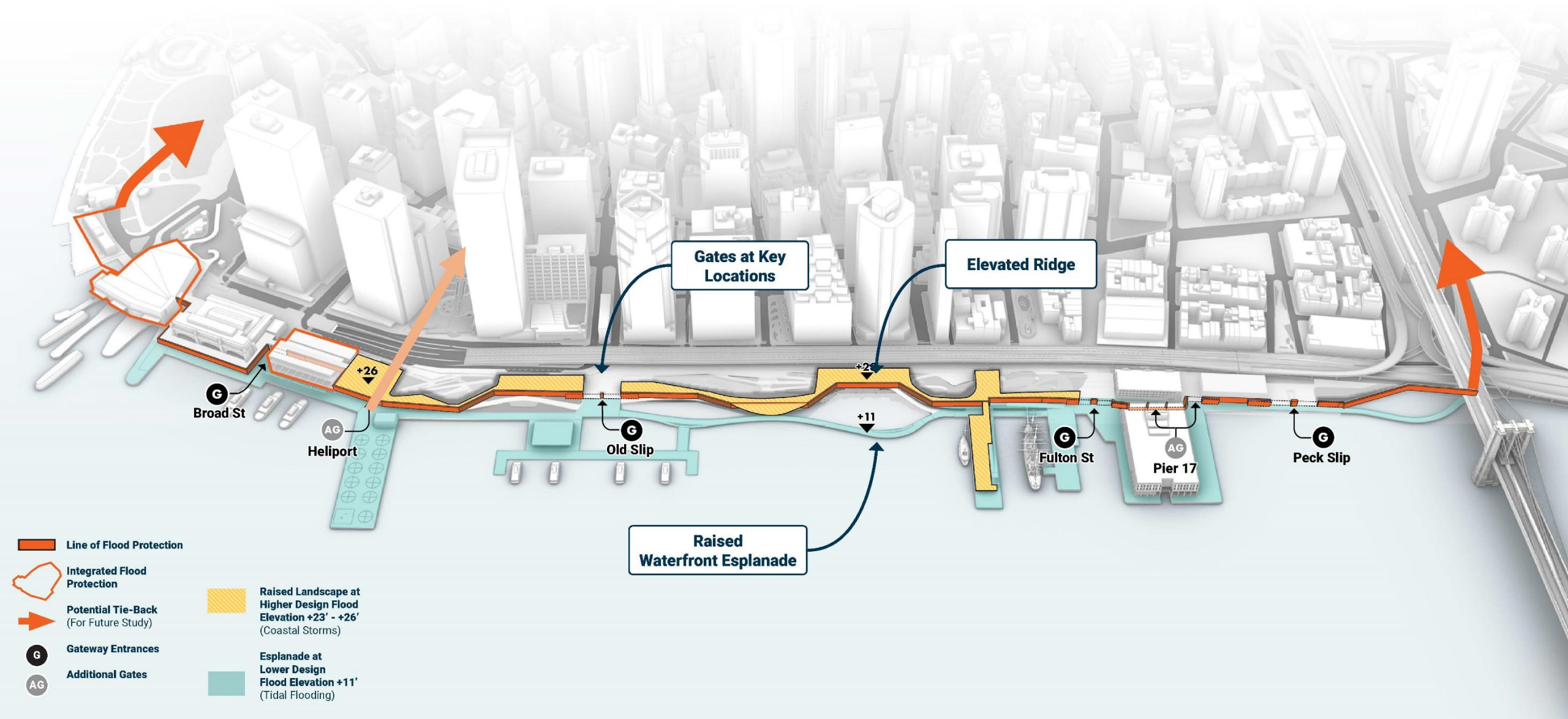


SOURCE: U.S. Census, LODES 2017

This plan proposes to extend the Manhattan shoreline and reconstruct maritime facilities over the next 15-20 years.



Integrating Flood Defense Infrastructure

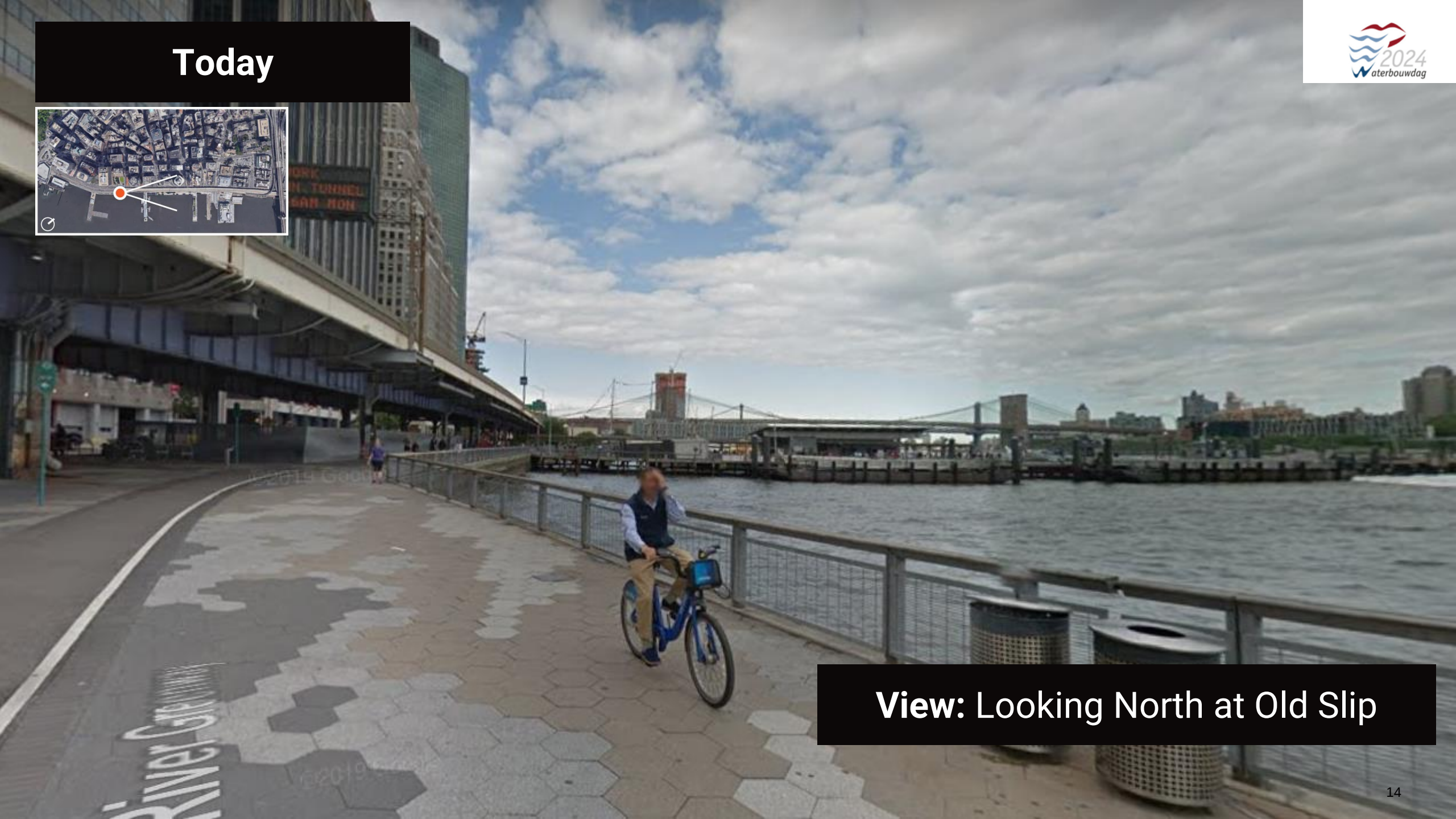
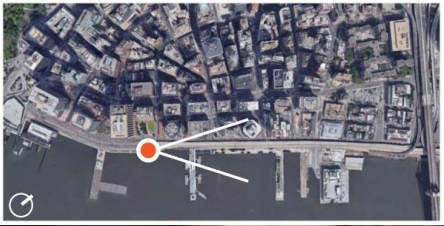


Illustrated View of Looking North near Vietnam Veterans Memorial Plaza

Accessible slopes and stairs provide ease of access to the waterfront at key corridors

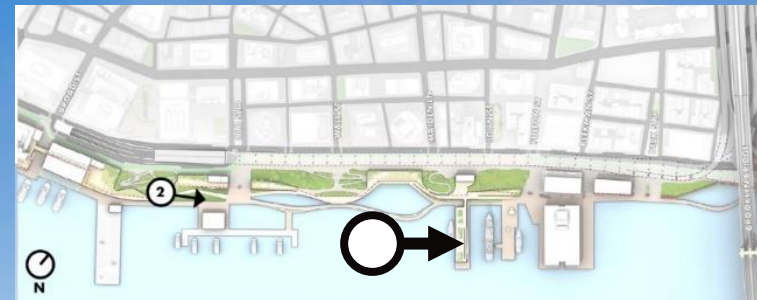


Today



View: Looking North at Old Slip

Illustration of Facing North from the Upper Walkway



Universally-accessible
connections to the
waterfront

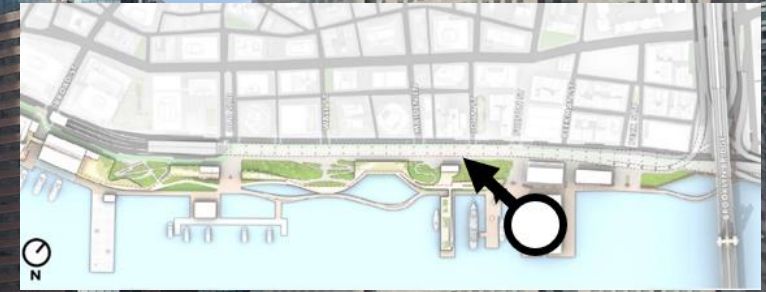
New resilient ferry
terminals

Illustrated View from Top of Pier 17 (Facing South)

15-18-foot buried floodwalls protect against coastal storms.

Shoreline raised 3-5 feet protects against daily tidal flooding.

Floodgates in select locations close before coastal storms.



NYC/EDC

NYC

Mayor's Office of Climate & Environmental Justice

ARCADIS





Financial District and Seaport Climate Resilience Master Plan

NYC / EDC **NYC** Mayor's Office of Climate &
Environmental Justice

ARCADIS

Illustration of a Protected FiDi and Seaport during a Coastal Storm

Floodgates previously stored out of view are deployed before a storm

Open space, playgrounds, and community-serving buildings are protected

Ferries, boats, and ships are safely moved outside the area

The esplanade is designed using materials that can withstand flooding during storms



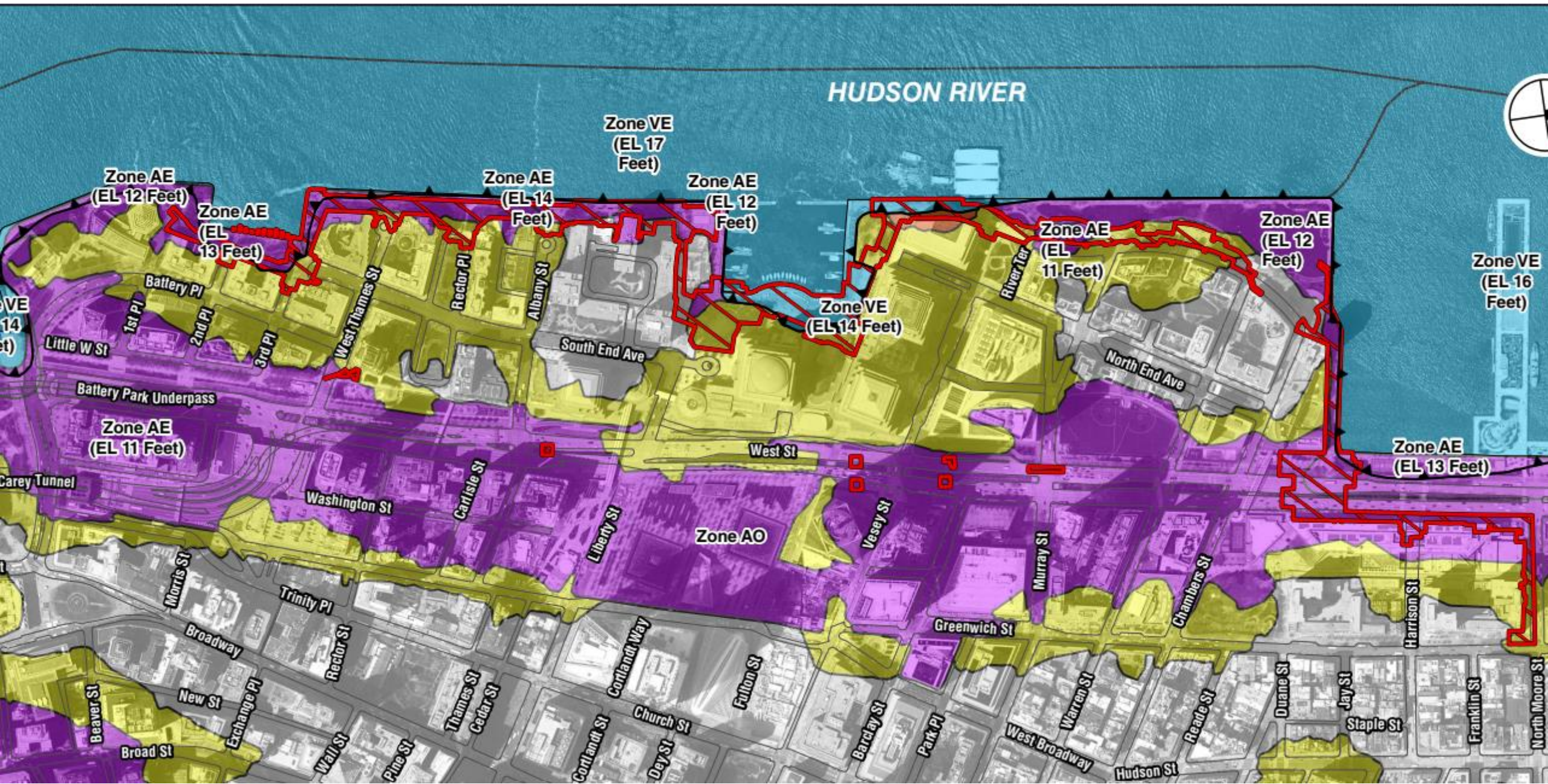
Battery Park City Coastal Resilience



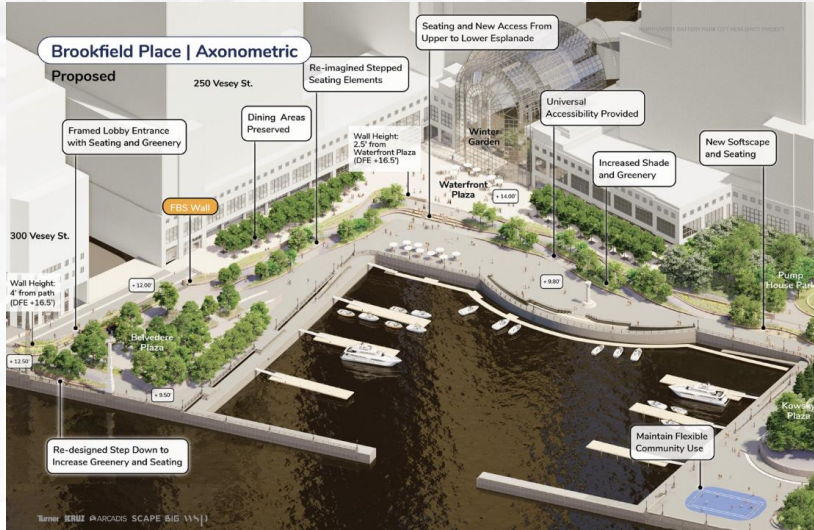
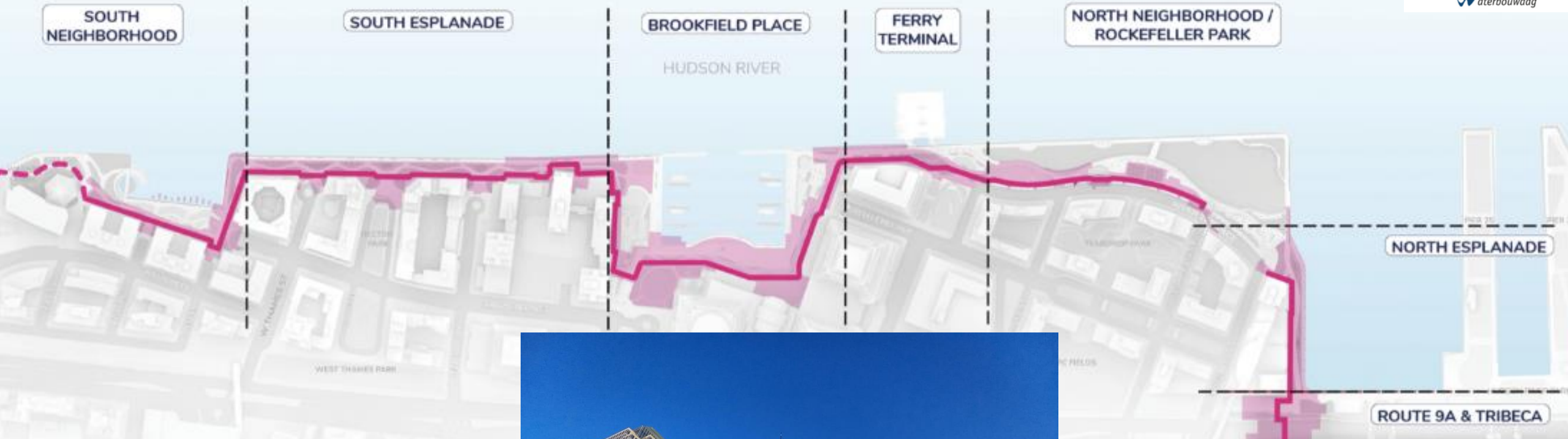
Battery Park City Coastal Resilience



Battery Park City Coastal Resilience



Battery Park City Coastal Resilience



En dan nu Roni Deitz!

