TASK FORCE UPDATE – CB3
APRIL 12, 2017

MEETING GOALS

- Project Review
- Private Property Owners Assessment
- Project Considerations and Challenges
- Alignments and Concepts – Identify tradeoffs

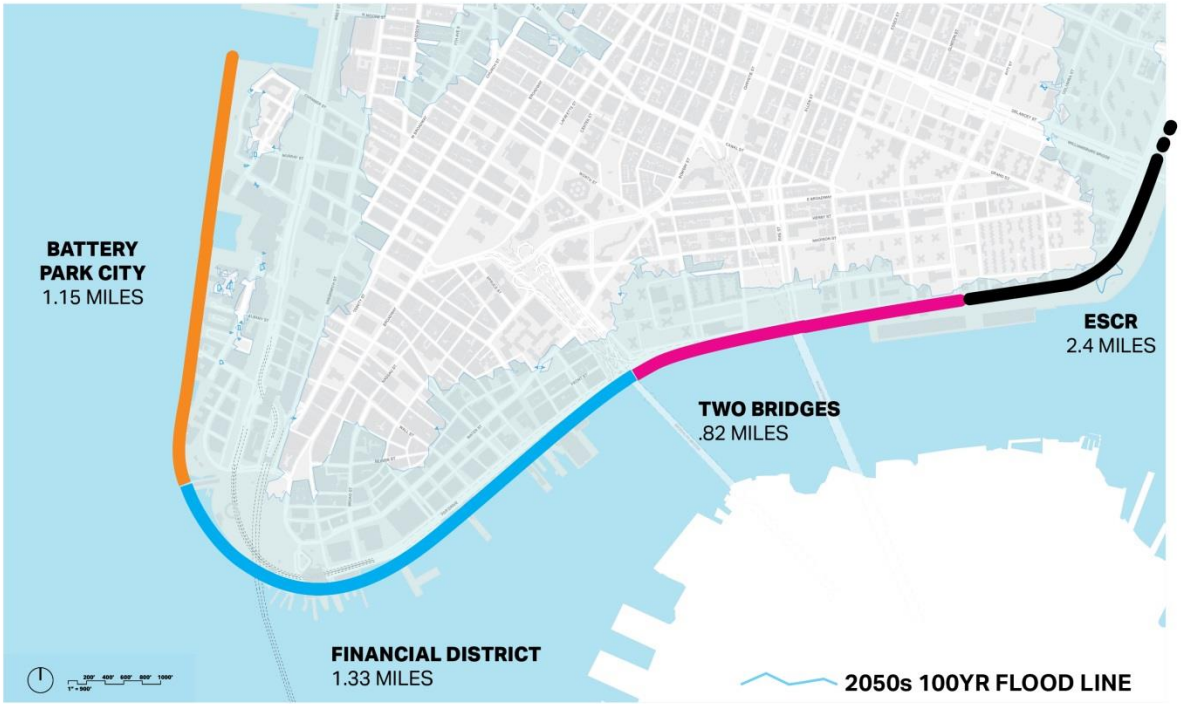
PROJECT OVERVIEW

Purpose of Study:

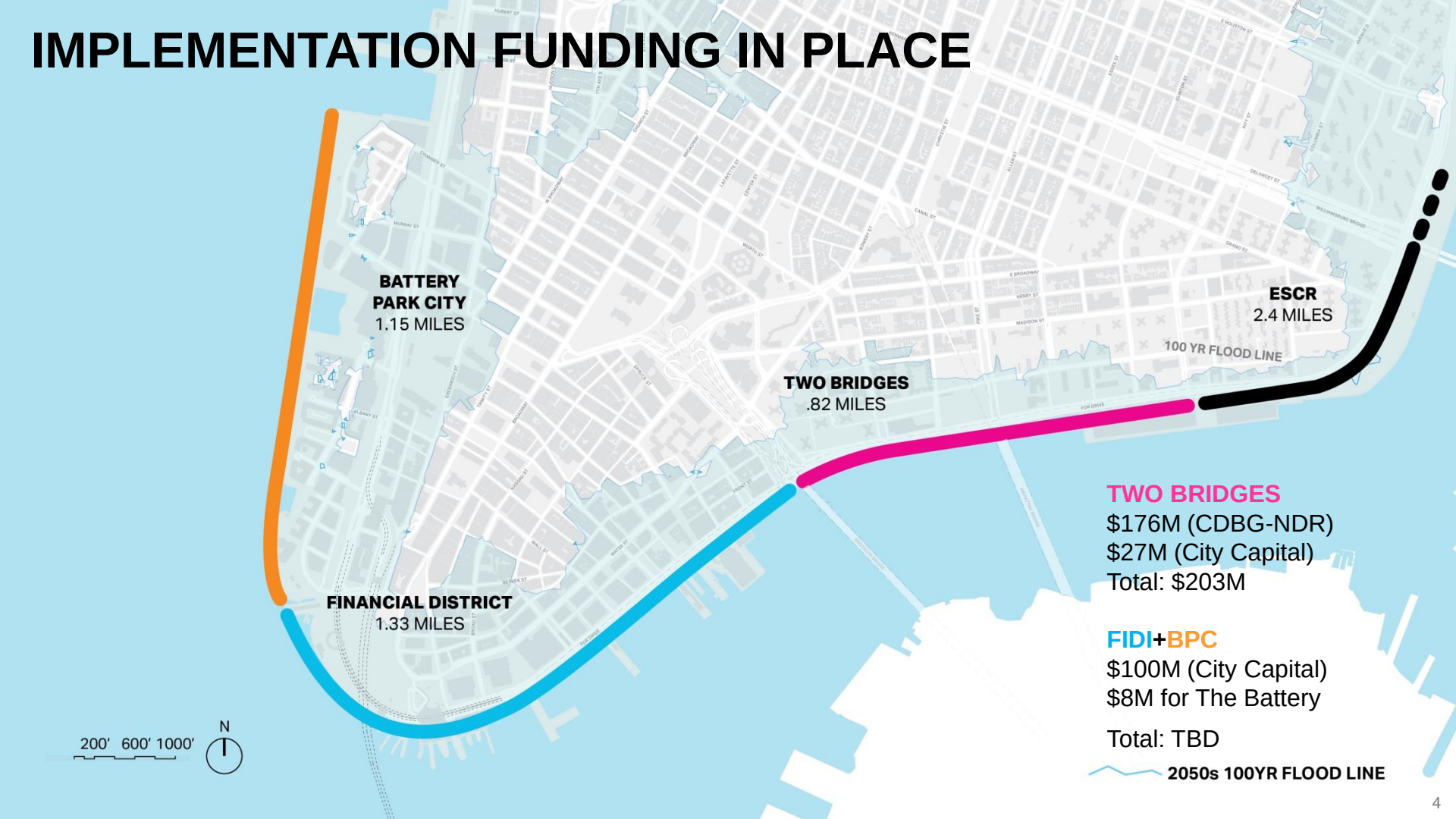
1. Develop long-term strategy and feasible concept design for all of Lower Manhattan
2. Prioritize project concepts toward implementation and conduct advanced planning when possible
3. Engage with community on core design principles and priorities

Study Funding:

+ $7.25M CDBG-DR
  ($3.75M GOSR; $3.5M NYC)



IMPLEMENTATION FUNDING IN PLACE



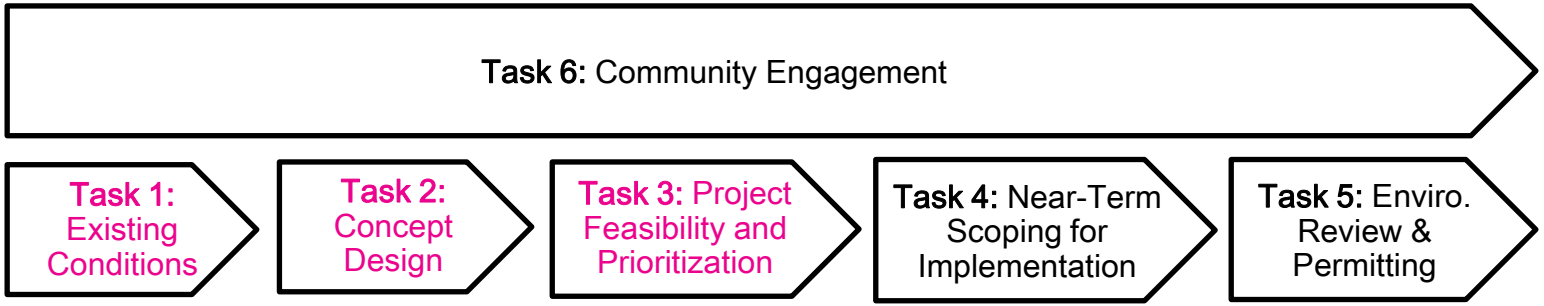
TWO BRIDGES
$176M (CDBG-NDR)
$27M (City Capital)
Total: $203M

FIDI+BPC
$100M (City Capital)
$8M for The Battery

Total: TBD

2050s 100YR FLOOD LINE

PROJECT PROCESS



SUMMER '16 TO SPRING '17

- Research previous plans & concepts
- Mapping
- Site conditions
- Assessments
- Tree survey

FALL '16 TO SPRING '17

- Hydrological mgmt Strategies
- Drainage & sewer analysis
- Economic analysis
- Regulatory framework
- Develop conceptual scenarios

WINTER '17 TO WINTER '18

- Framework to evaluate and identify priorities
- Identify required ULURP actions
- Determine project phasing
- Transportation analysis

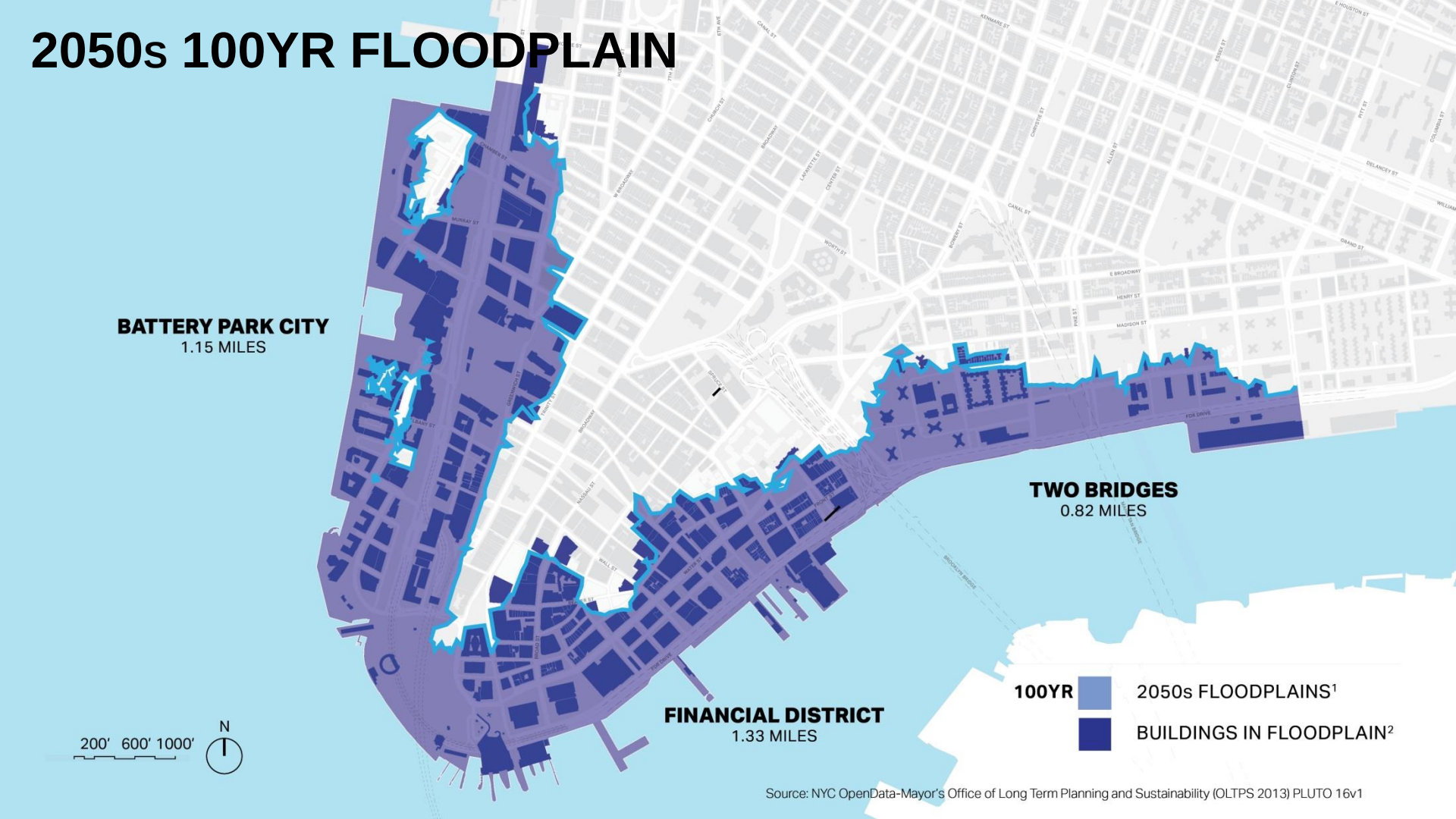
SUMMER '16 TO SPRING '18

- Surveying, geotech, sampling
- Schematic design documents
- Cost estimates

WINTER '16 TO FALL 18'

- Preparation of environmental review documents

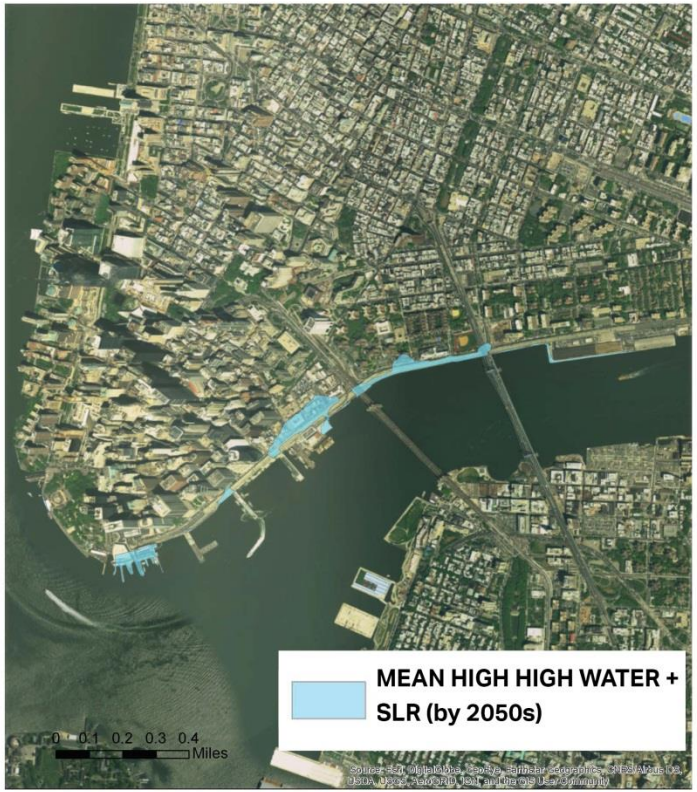
2050s 100YR FLOODPLAIN



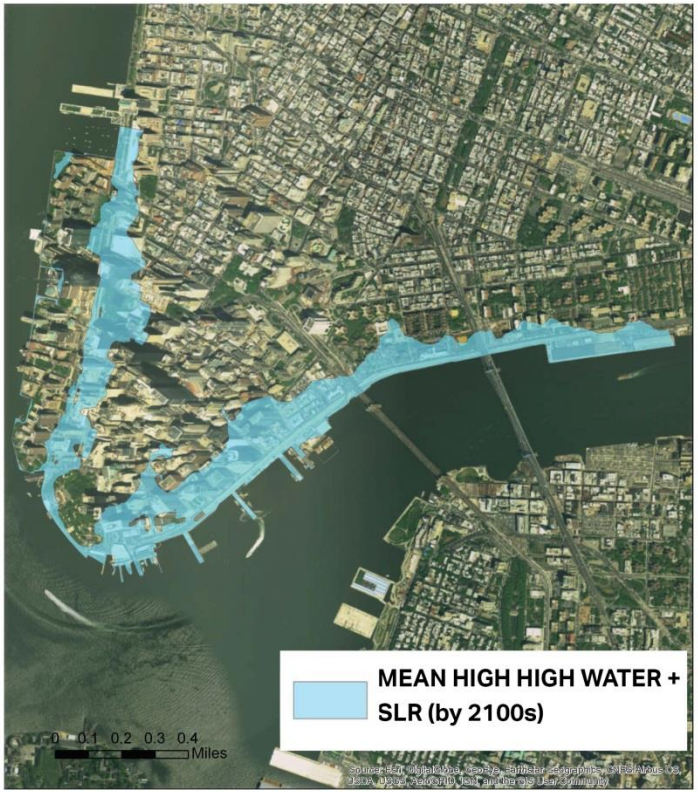
Source: NYC OpenData-Mayor's Office of Long Term Planning and Sustainability (OLTPS 2013) PLUTO 16v1

FUTURE TIDAL + SLR INUNDATION

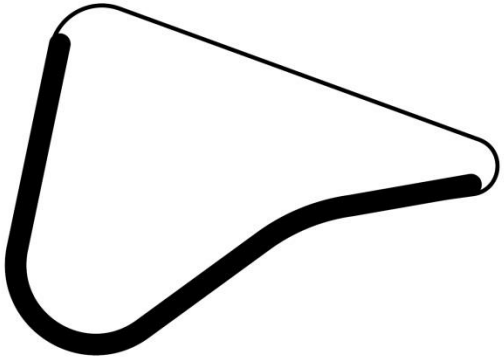
2050



2100

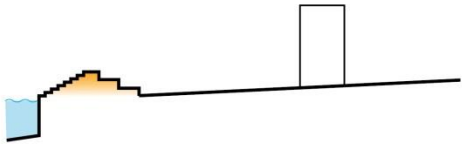


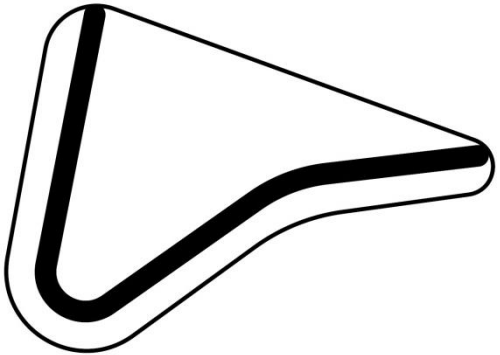
ALIGNMENT METHODOLOGY



EDGE

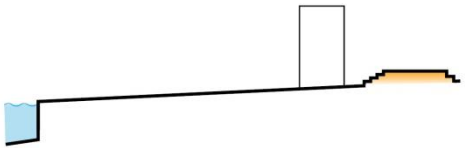
~95 % PROJECT AREA PROTECTED

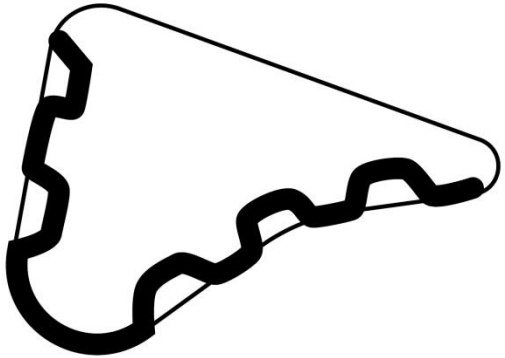




UPLAND

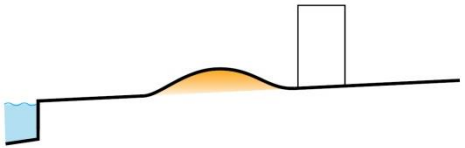
~75 % PROJECT AREA PROTECTED



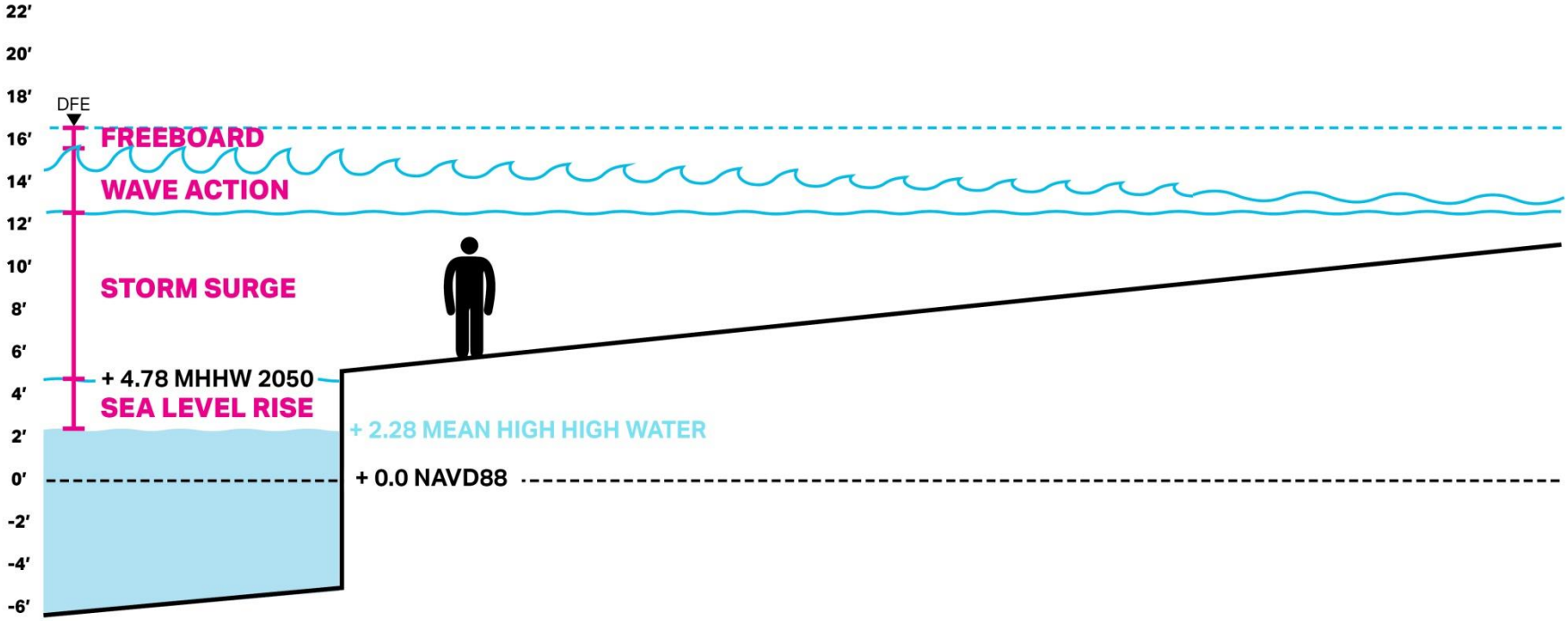


HYBRID

~85 % PROJECT AREA PROTECTED



DESIGN FLOOD ELEVATION - COMPONENTS

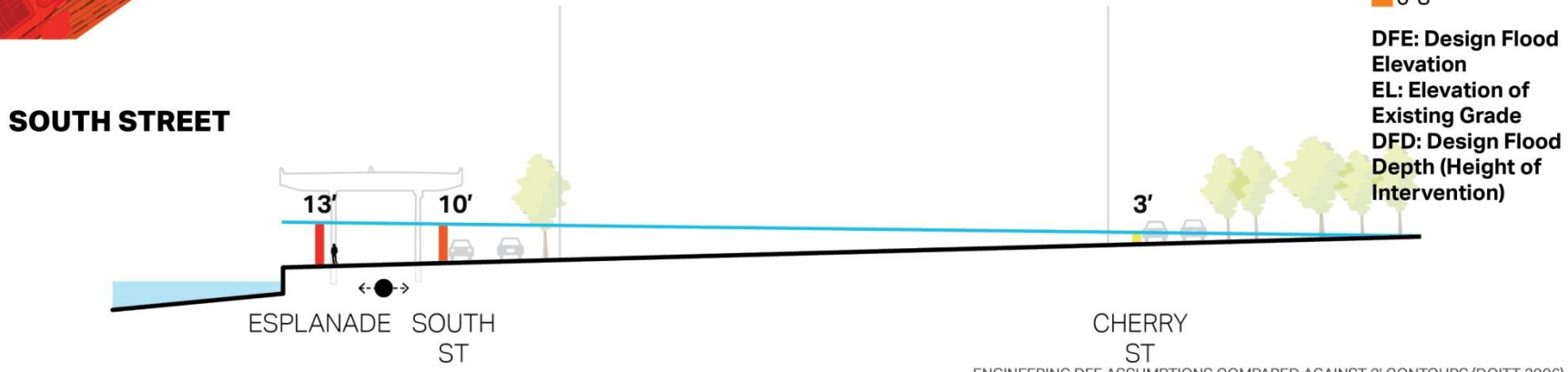


VERTICAL DATUM NAVD88

A SIGNIFICANT INTERVENTION

HEIGHT ANALYSIS | TWO BRIDGES

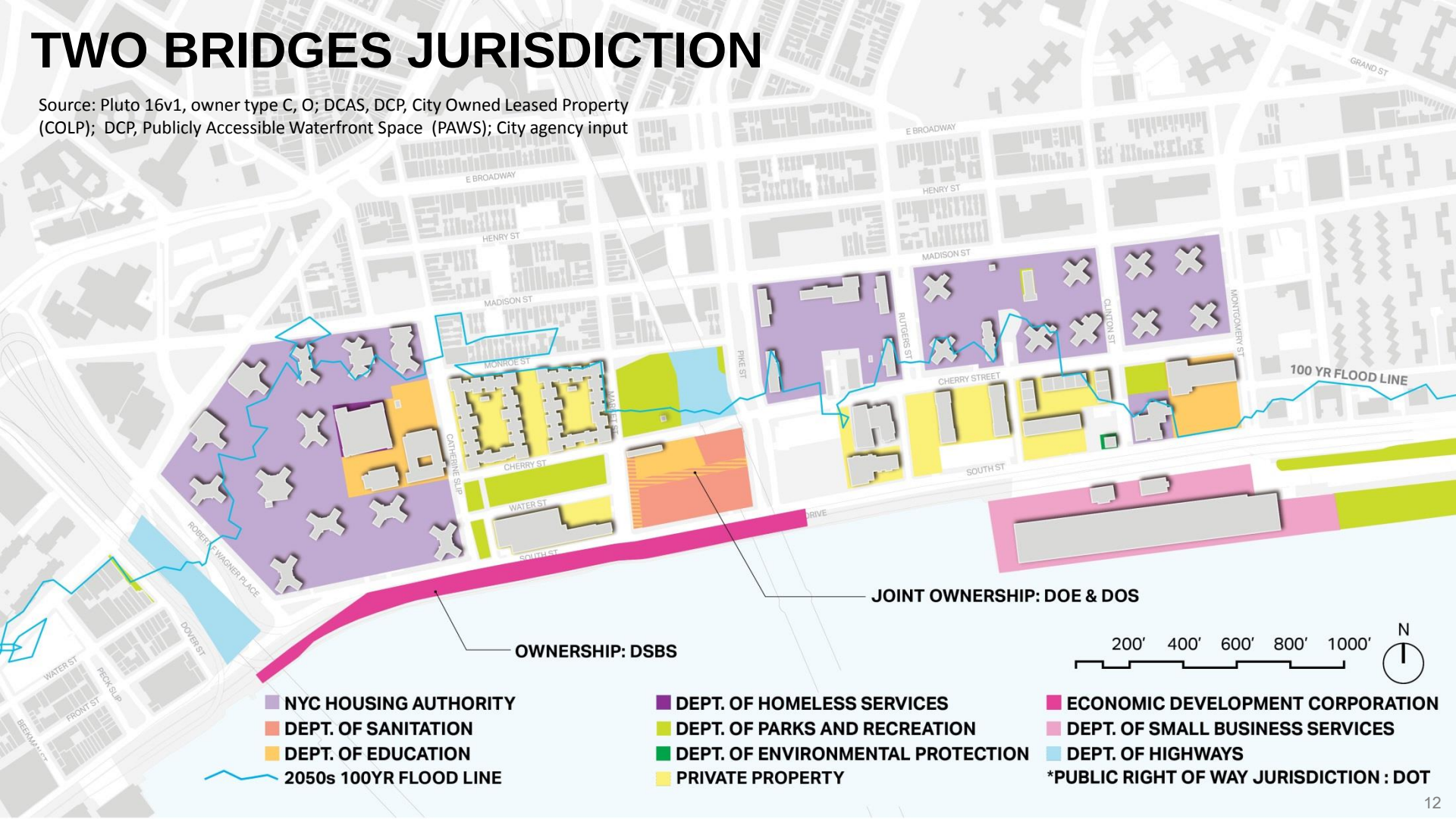
2050s 100 YEAR FLOOD



ENGINEERING DFE ASSUMPTIONS COMPARED AGAINST 2′ CONTOURS (DOITT 2006)

TWO BRIDGES JURISDICTION

Source: Pluto 16v1, owner type C, O; DCAS, DCP, City Owned Leased Property (COLP); DCP, Publicly Accessible Waterfront Space (PAWS); City agency input



PRIVATE PROPERTY OWNER INTERVIEWS

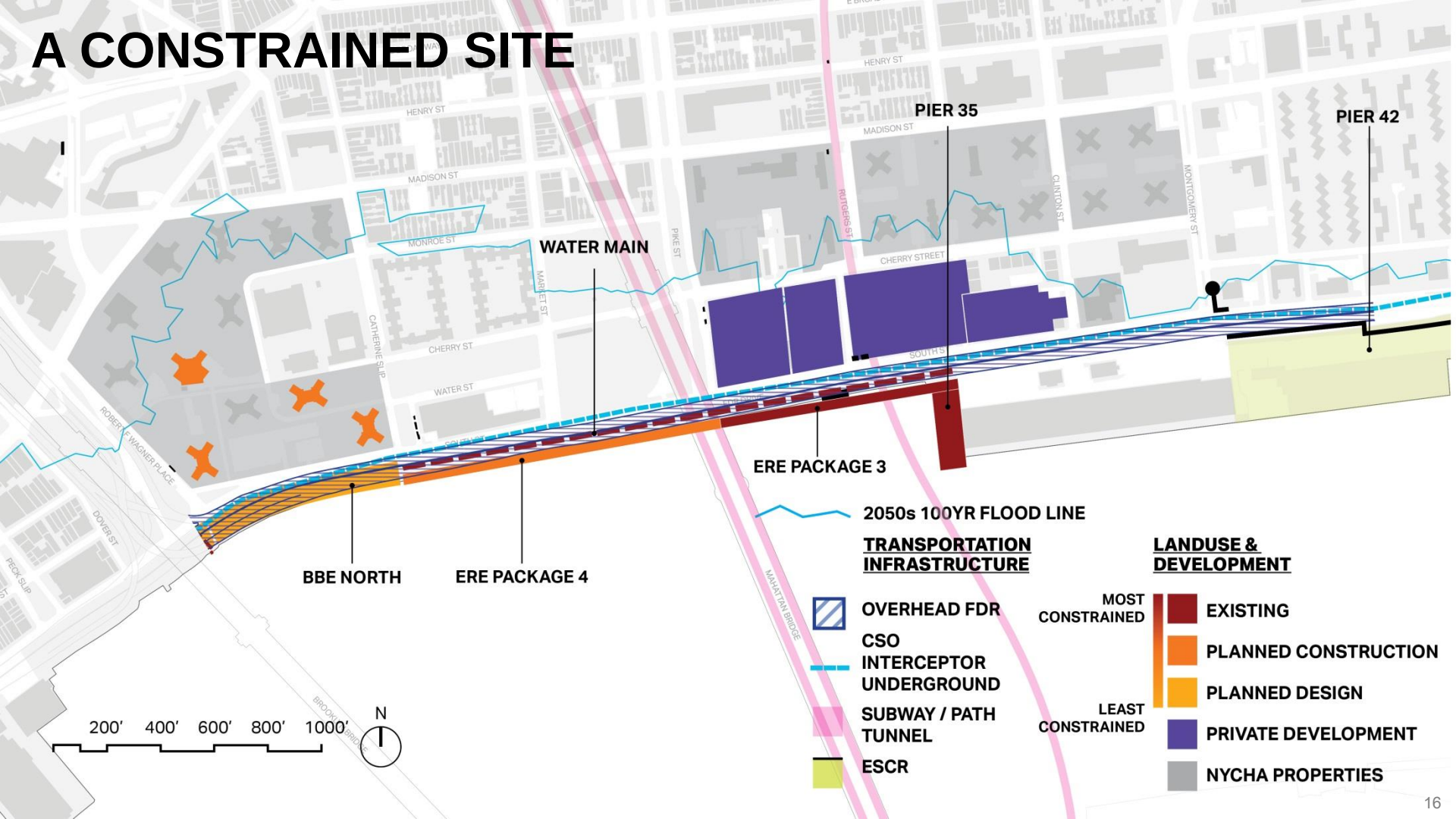
- LMCR Project team identified 27 privately-owned properties across the Financial District and Two Bridges neighborhoods
- The average recovery period for buildings to be fully operational for tenants was 3-5 months.
- The average water-level of flooding at the lobby level of the building was 4-5ft.
- The total amount of capital put into protection across the properties was $114,000,000

PRIVATE PROPERTY OWNER INTERVIEWS

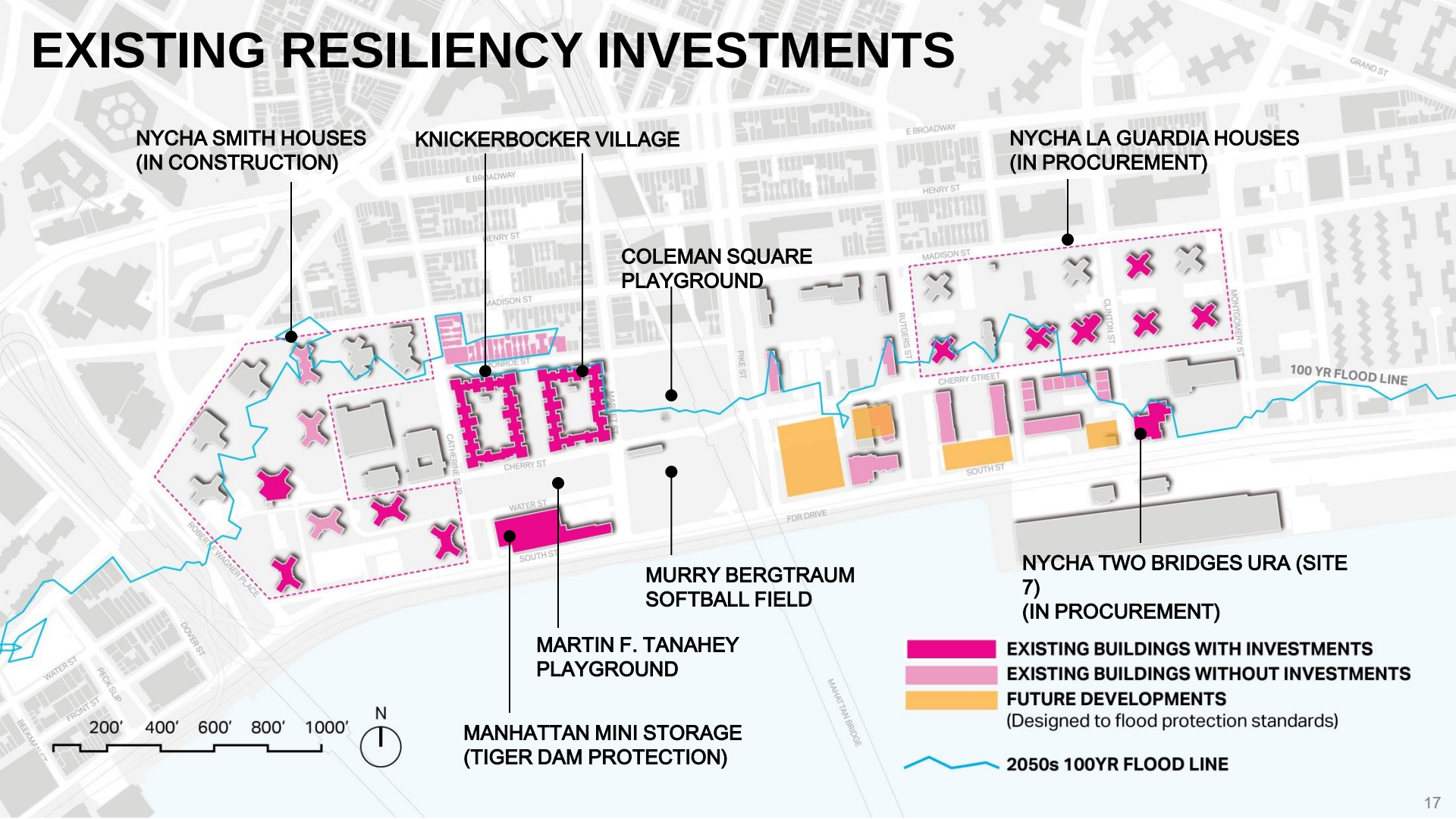
- 67% of properties have relocated mechanical equipment such as electrical and cooling systems to a higher floor
- 69% of properties interviewed had implemented or planned flood protection.
- Average Height of Protection = 6ft 10in
- Average time to deploy protection is between 9-17 hours

CAPITAL PROJECTS

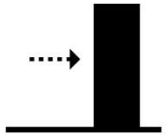
A CONSTRAINED SITE



EXISTING RESILIENCY INVESTMENTS



DESIGN CONSIDERATIONS

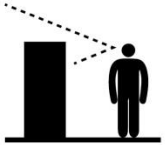


RELIABILITY

Design Flood Height
Passive/Deployable
Wave Attenuation
Stormwater Management

URBAN BENEFITS

Waterfront Access
Placemaking
Safety
Community Amenities
Ecology
Transportation Improvements



VISUAL & PHYSICAL IMPACT

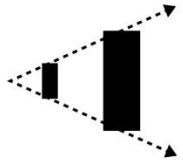
Height
Footprint
Design

ASSETS PROTECTED

Location of Protection
Critical Infrastructure
Property at Risk

FEASIBILITY

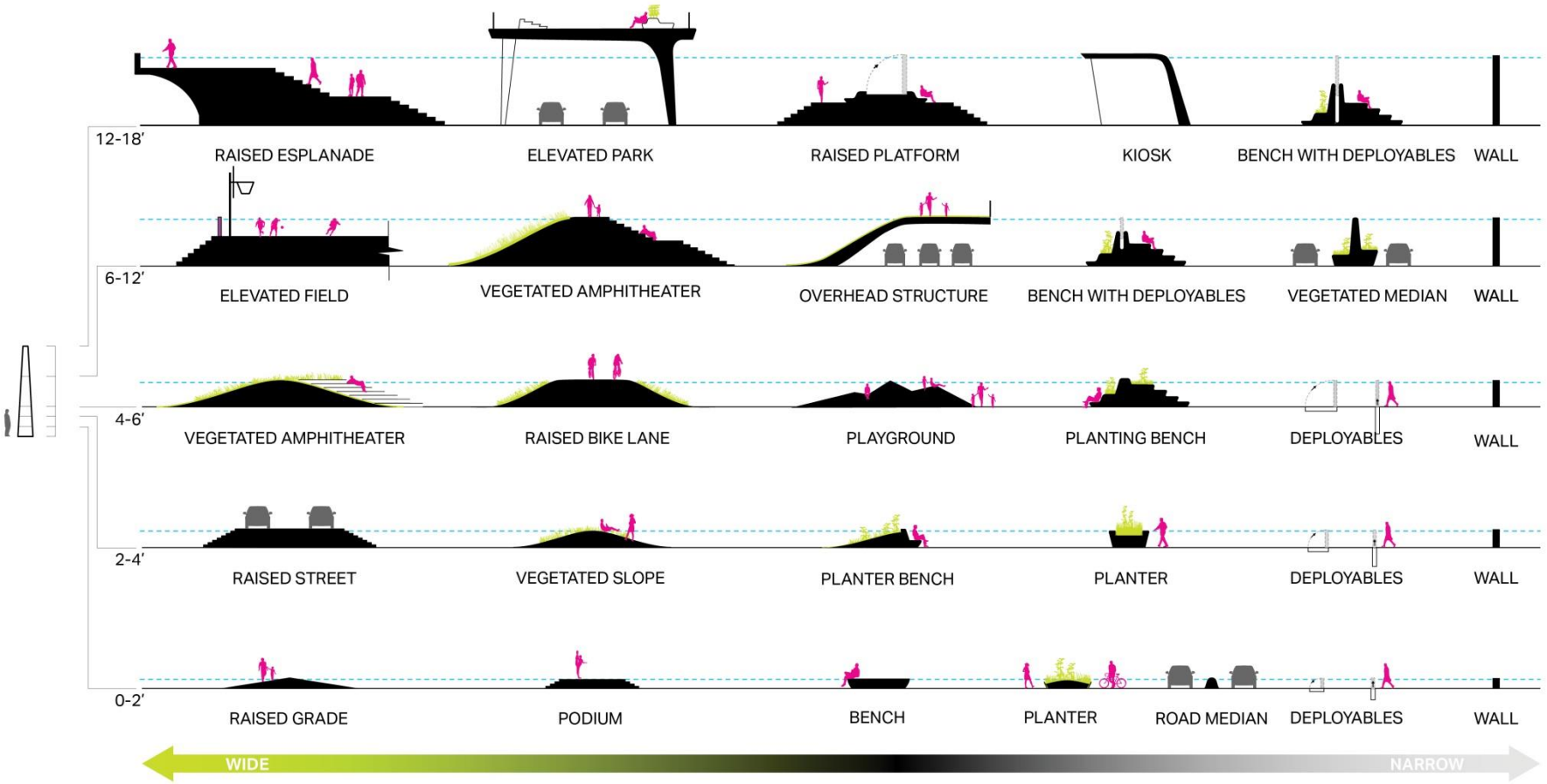
Cost
Constructibility
Ownership/Siting
Transportation Disruption
Regulatory Approvals
Operations and Maintenance
Speed of Implementation
FEMA Certification



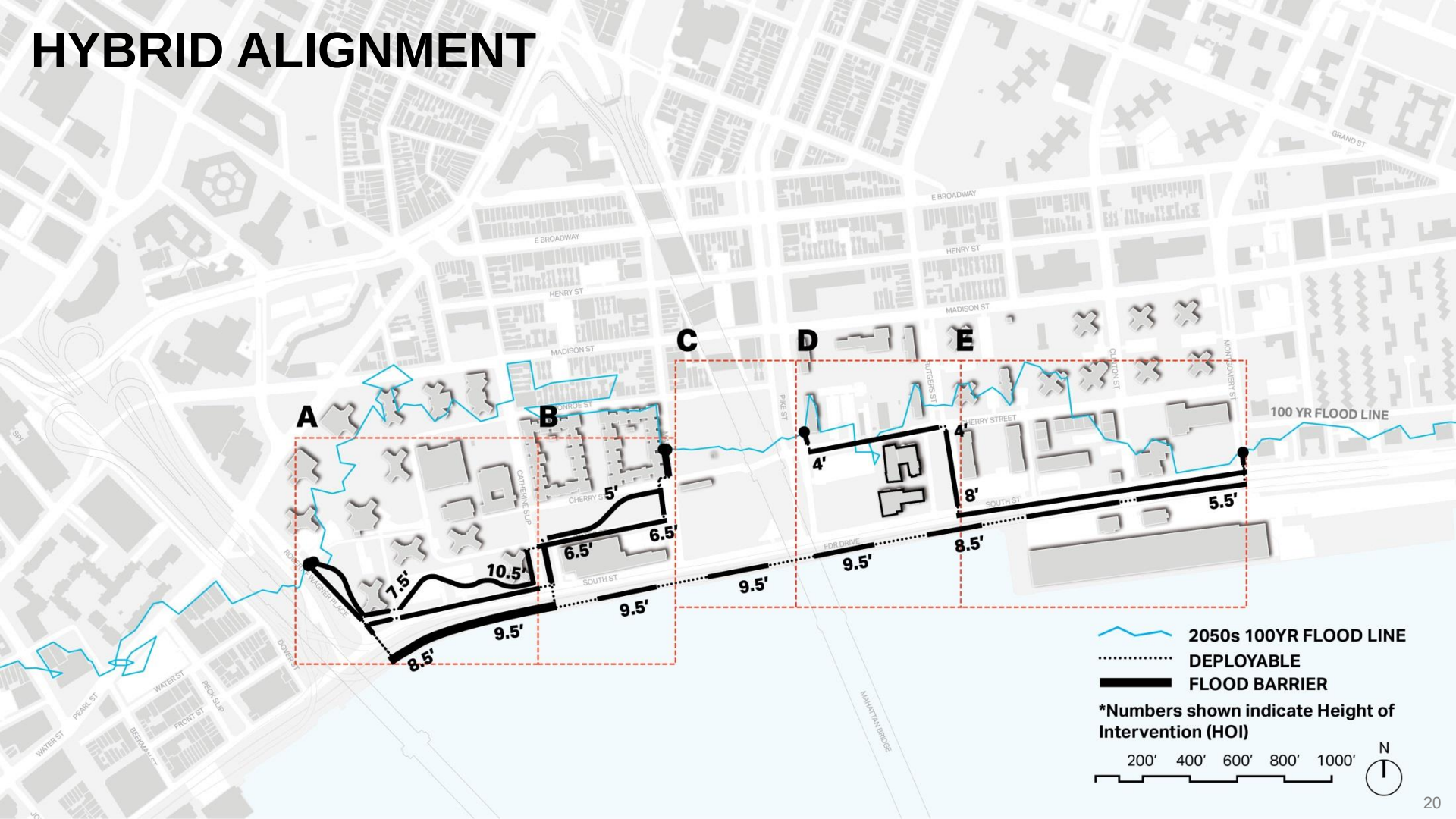
FUTURE-FLEXIBLE

Phasing
Long-term Vision
Future-proofing
Climate Change Adaptation
Future Urban Needs

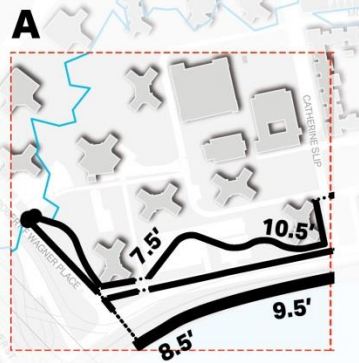
INFRASTRUCTURE TOOLKIT



HYBRID ALIGNMENT



HYBRID ALIGNMENT – REACH A



100 YR FLOOD LINE

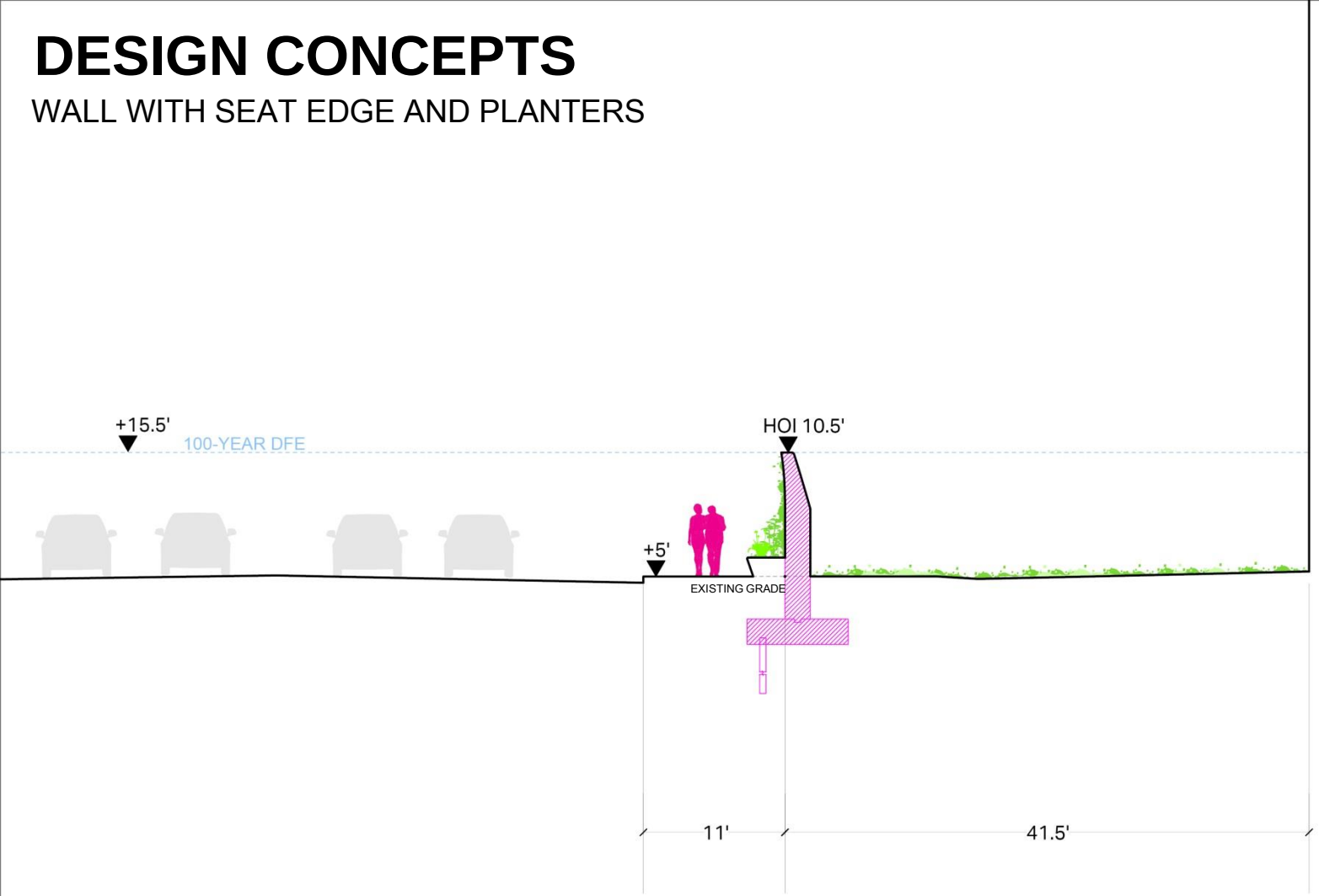
2050s 100YR FLOOD LINE
DEPLOYABLE
FLOOD BARRIER
*Numbers shown indicate Height of Intervention (HOI)

200' 400' 600' 800' 1000'

N

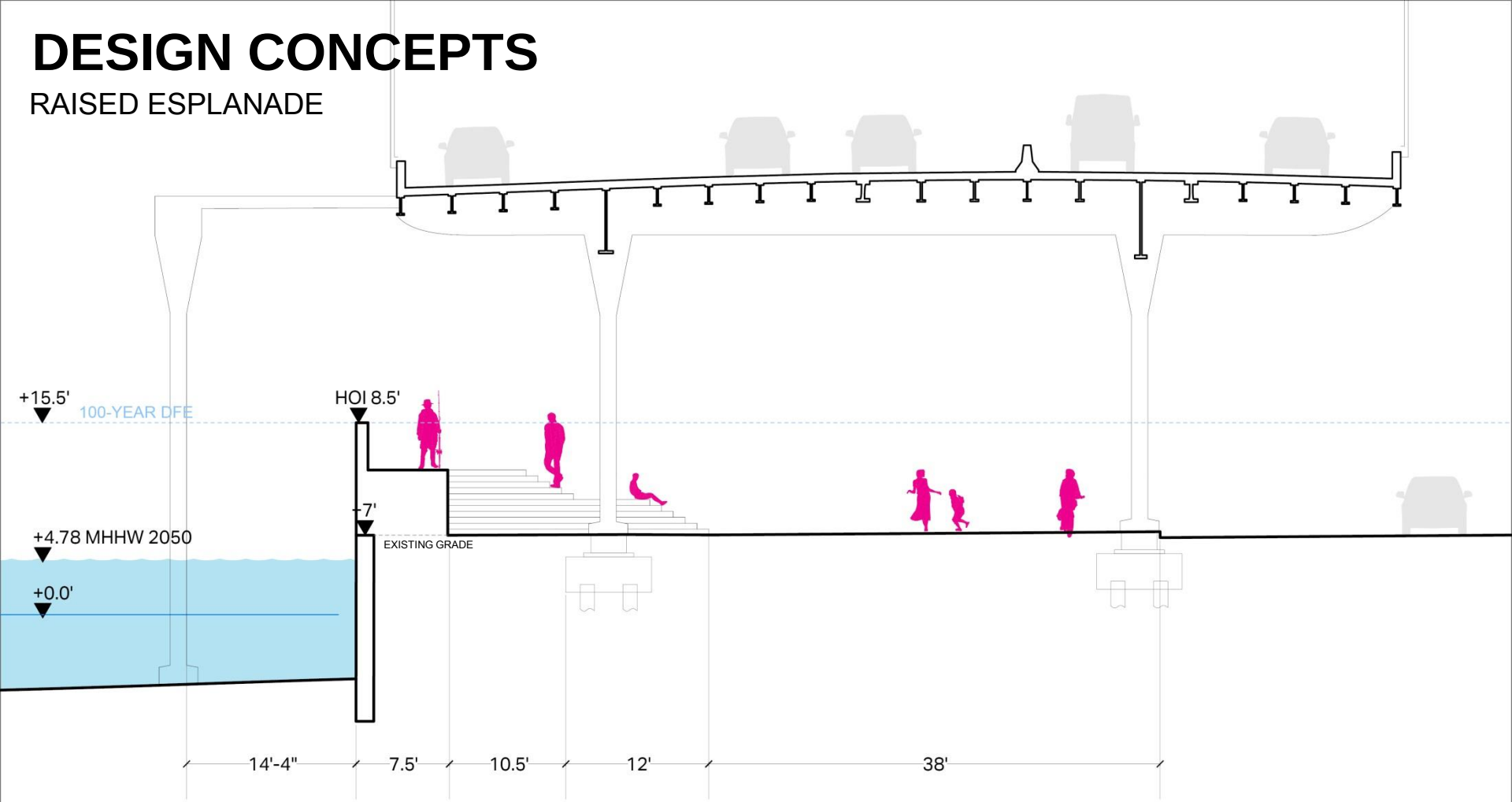
DESIGN CONCEPTS

WALL WITH SEAT EDGE AND PLANTERS



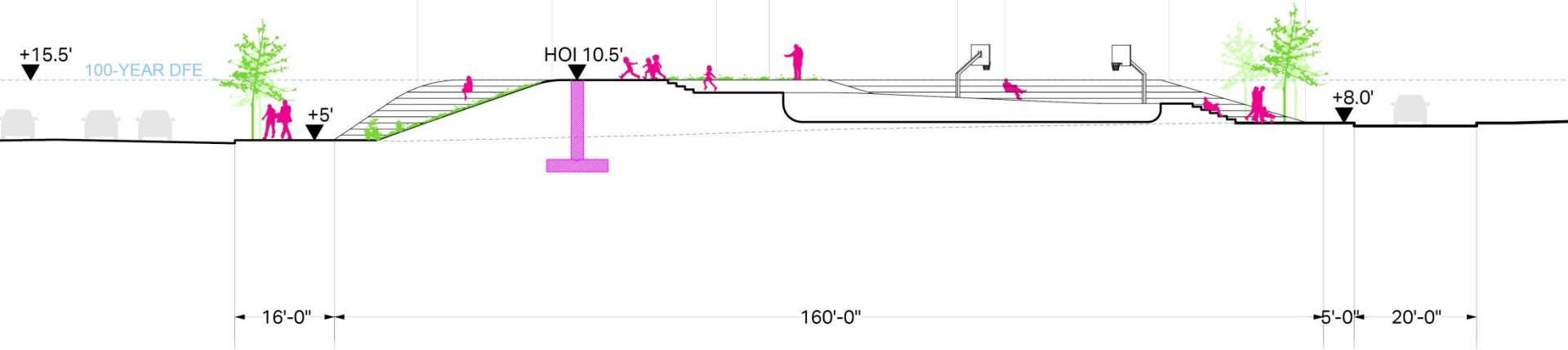
DESIGN CONCEPTS

RAISED ESPLANADE

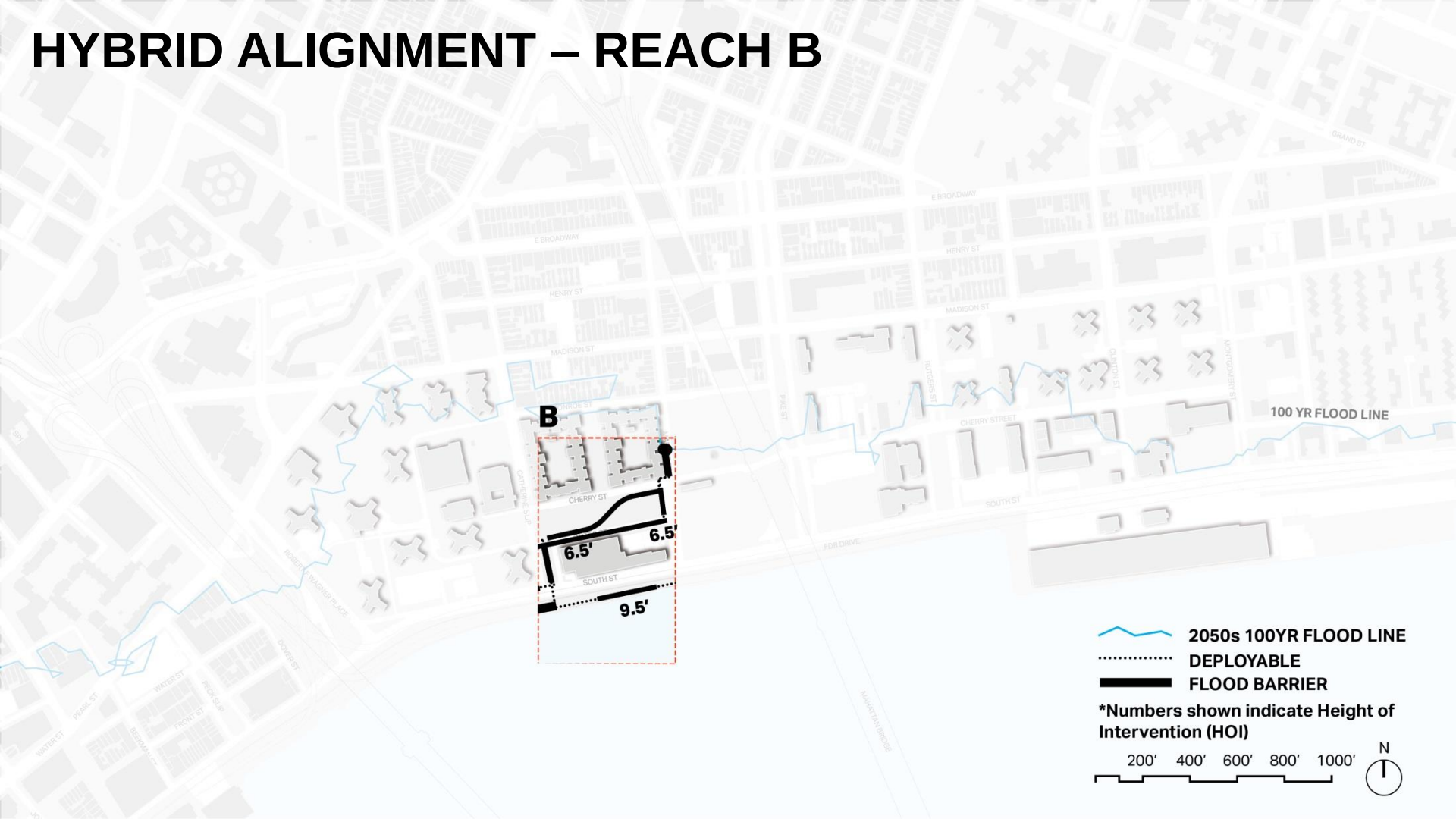


DESIGN CONCEPTS

DOUBLE-SIDED BERM

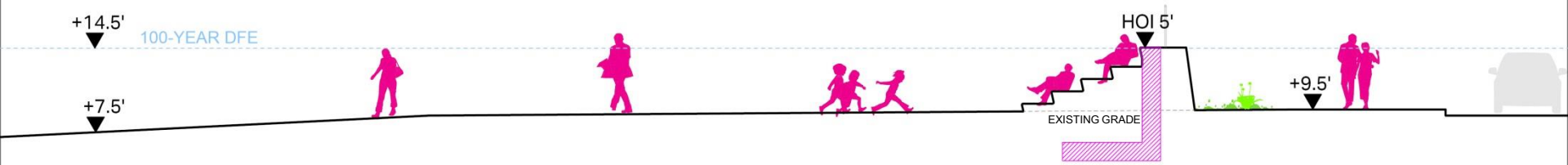


HYBRID ALIGNMENT – REACH B



DESIGN CONCEPTS

BLEACHER SEATING



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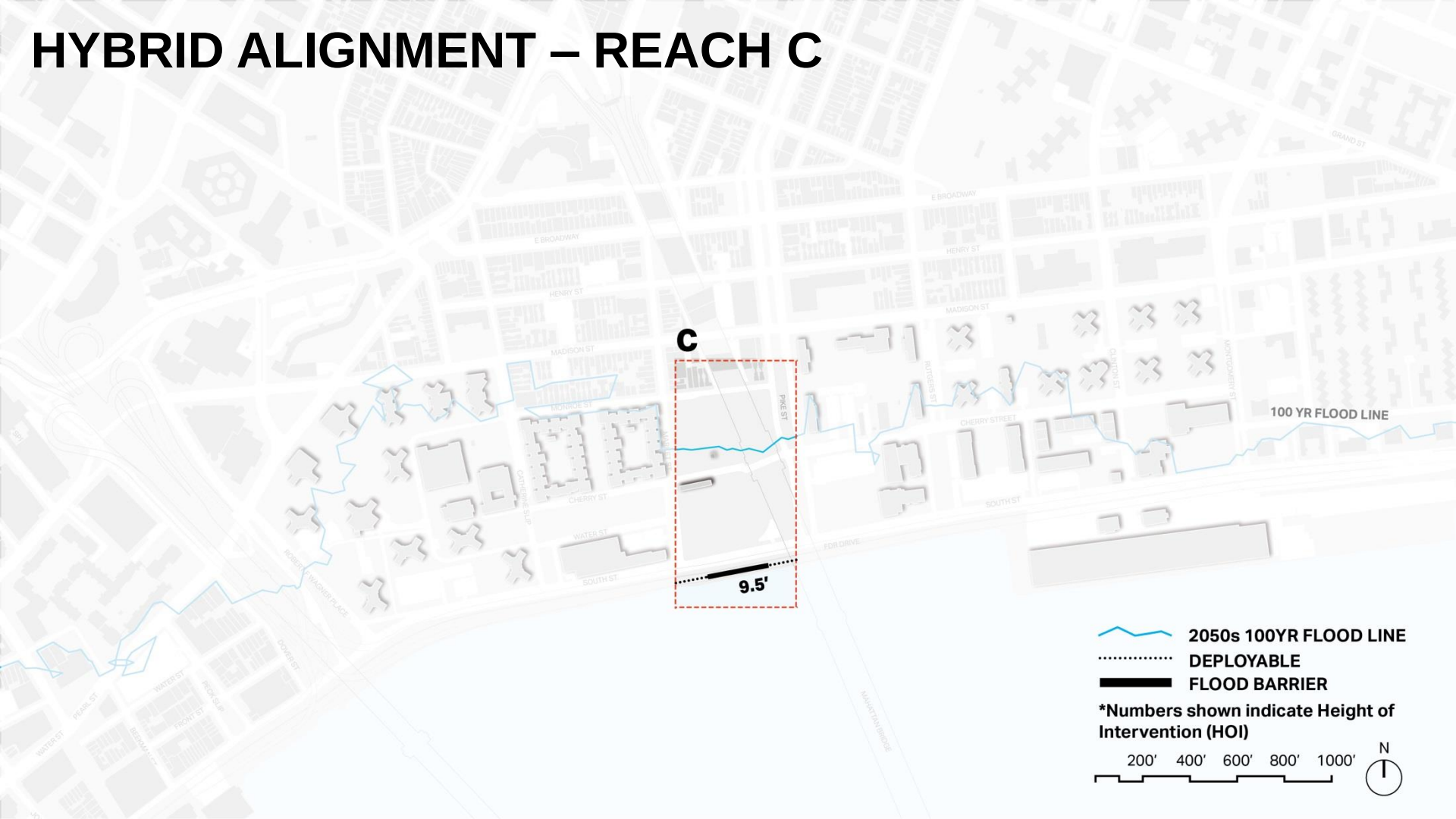
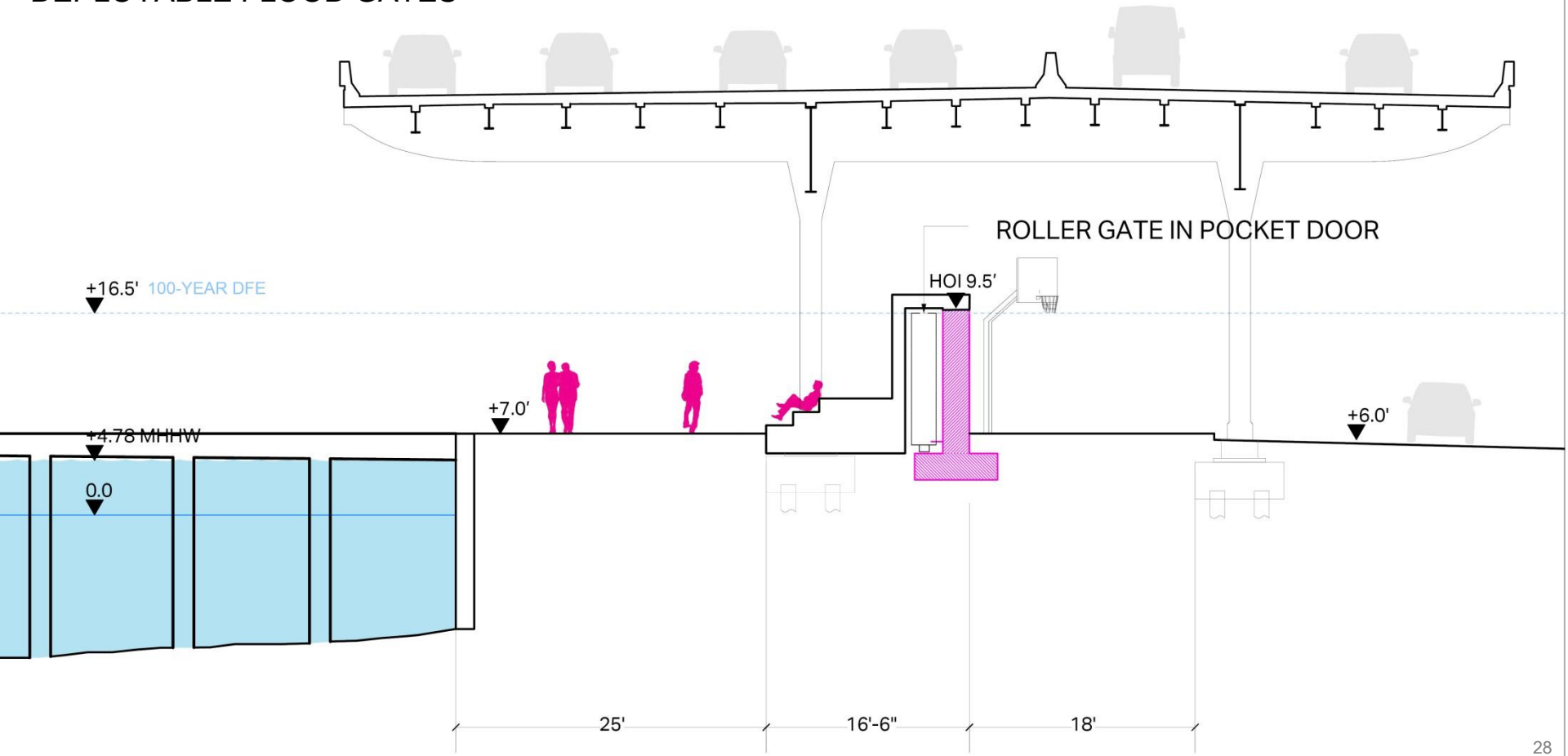


DESIGN CONCEPTS

DEPLOYABLE FLOOD GATES



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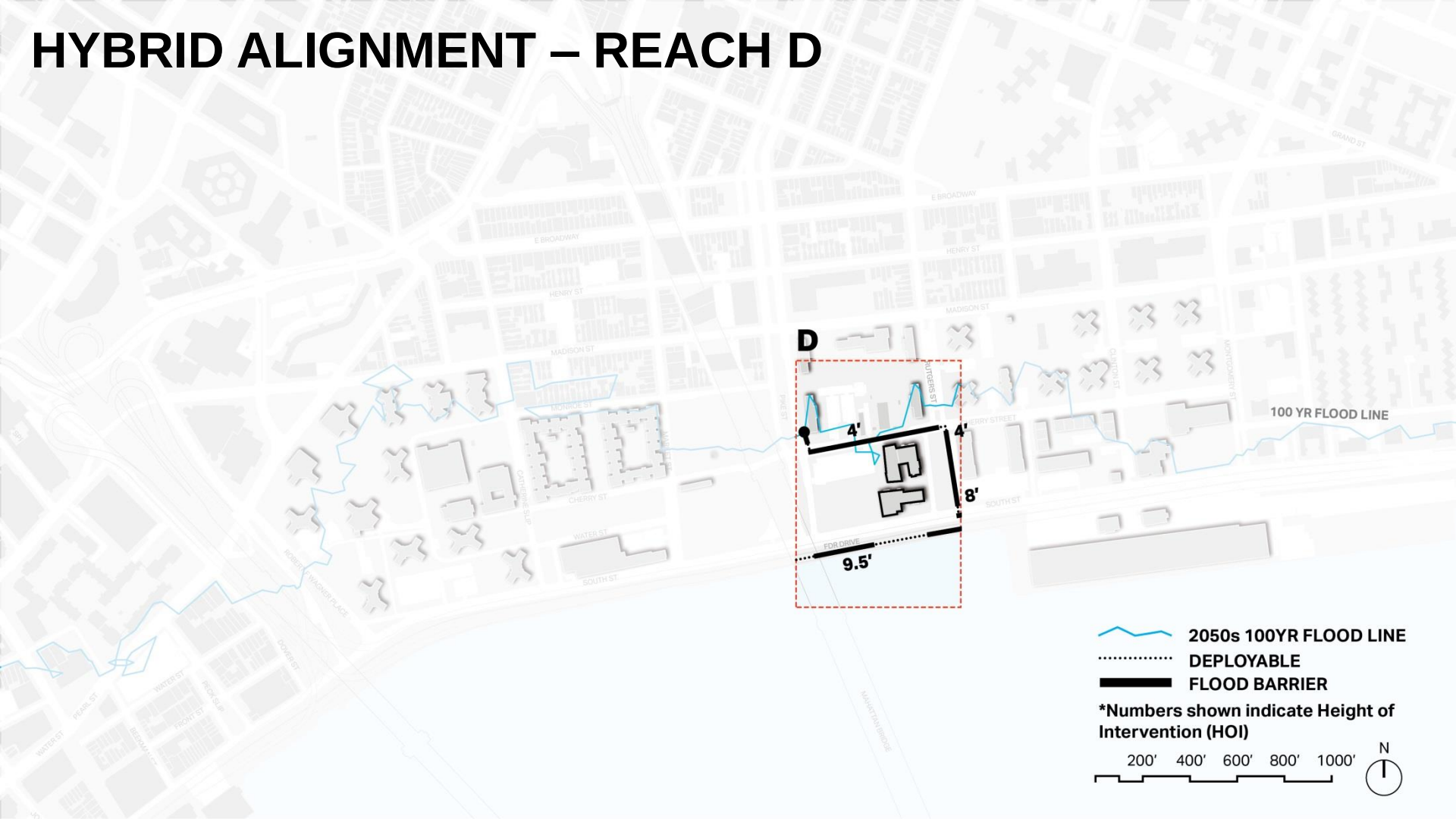
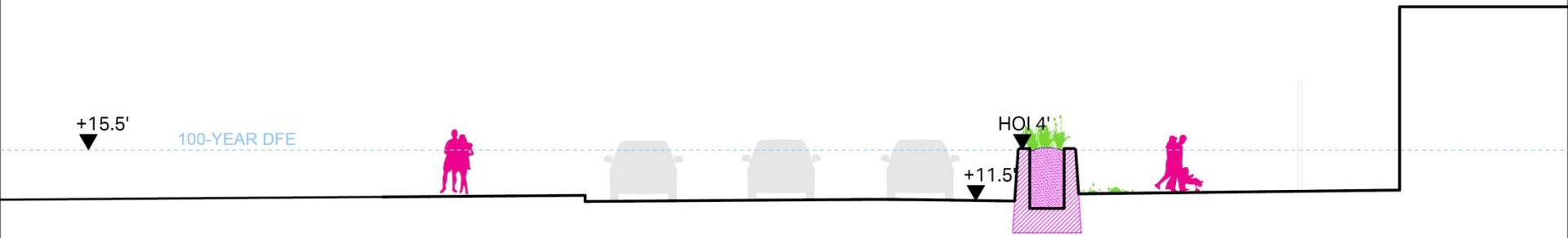


DESIGN CONCEPTS

PLANTED MEDIAN



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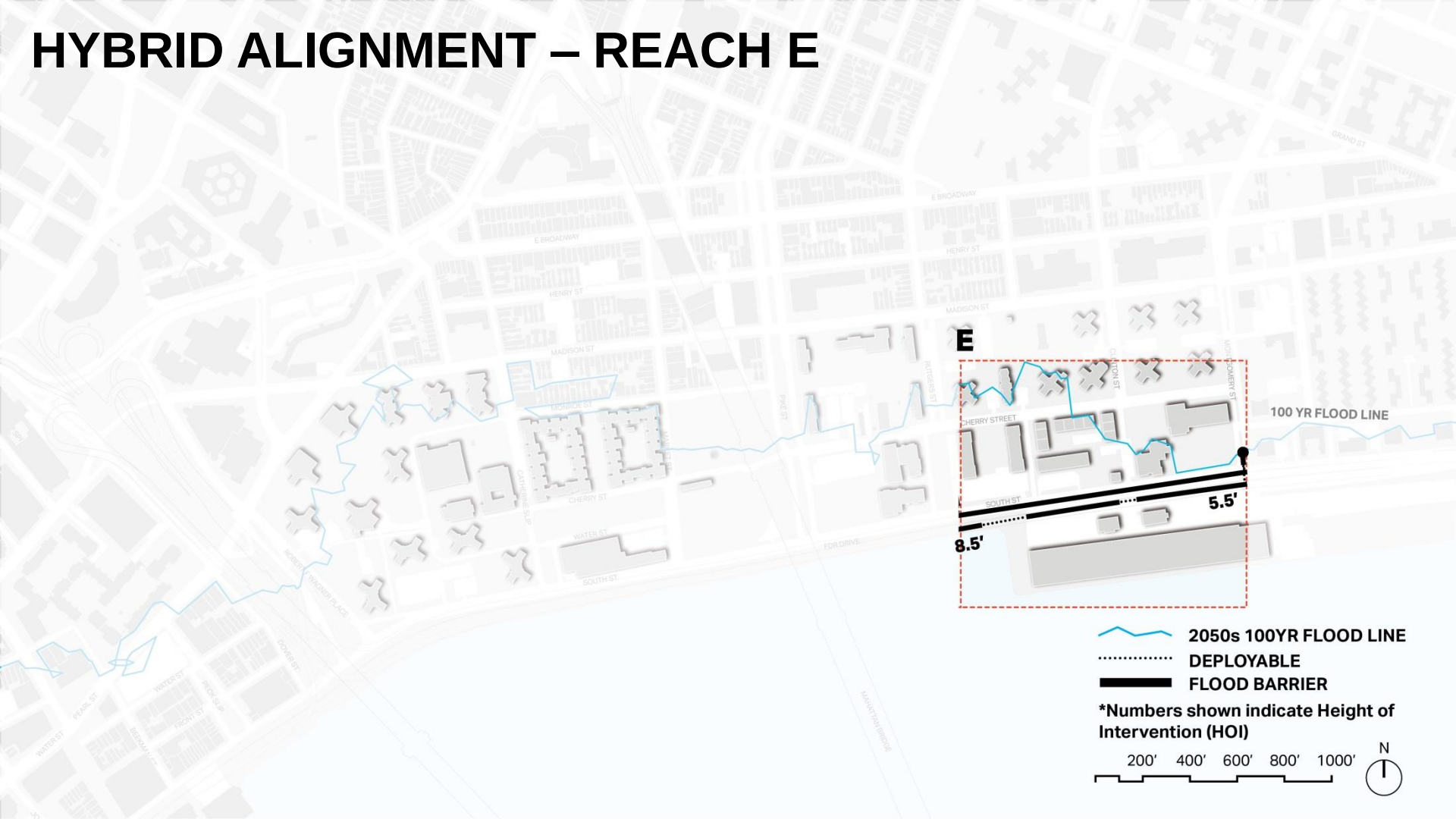
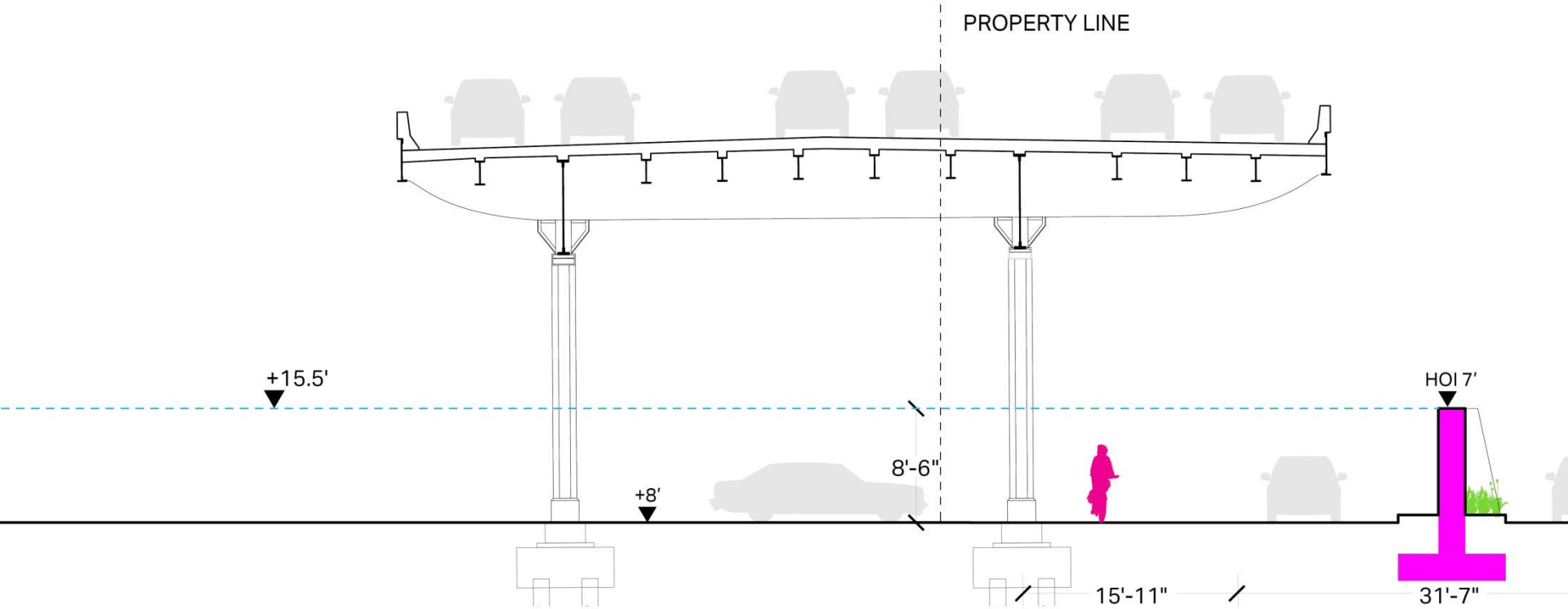


DESIGN CONCEPTS

SOUTH STREET MEDIAN



NEXT STEPS

- Incorporate coastal model to inform alignment and drainage
- Further evaluate land use and environmental review timelines
- Develop preliminary cost estimates
- Narrow potential alignments

FUTURE MILESTONES

- May 24th Workshop (concepts)

  Rutgers Community Center
  200 Madison St.
  6:30-8 PM

- Fall ‘17 TF/ Public Workshop (select alternative)
- Winter ‘18 (refine alternative/final design)
- Summer/Fall ‘18 – Finish Study