

Hudson River Park Advisory Council

Battery Park City Resiliency Update

June 11, 2024



**Battery Park
City Authority**



Snapshot: South & North/West BPC Resiliency

BPCA is executing a two-phase resiliency program, as part of the Lower Manhattan Coastal Resiliency Project:

- **South Battery Park City Resiliency Project:**
 - Wagner Park, Pier A Plaza, The Battery, Museum of Jewish Heritage
 - All project segments under construction
 - On-schedule for substantial completion in Spring 2025
- **North/West Battery Park City Resiliency Project:**
 - Being BPC Waterfront from South Cove to Stuyvesant HS, Route 9A, Tribeca/North Moore
 - Progressive Design-Build delivery
 - 60% design (Public Meeting 06/20/24)
 - DEIS hearing mid-September 2024
 - Construction start mid- to late-2025

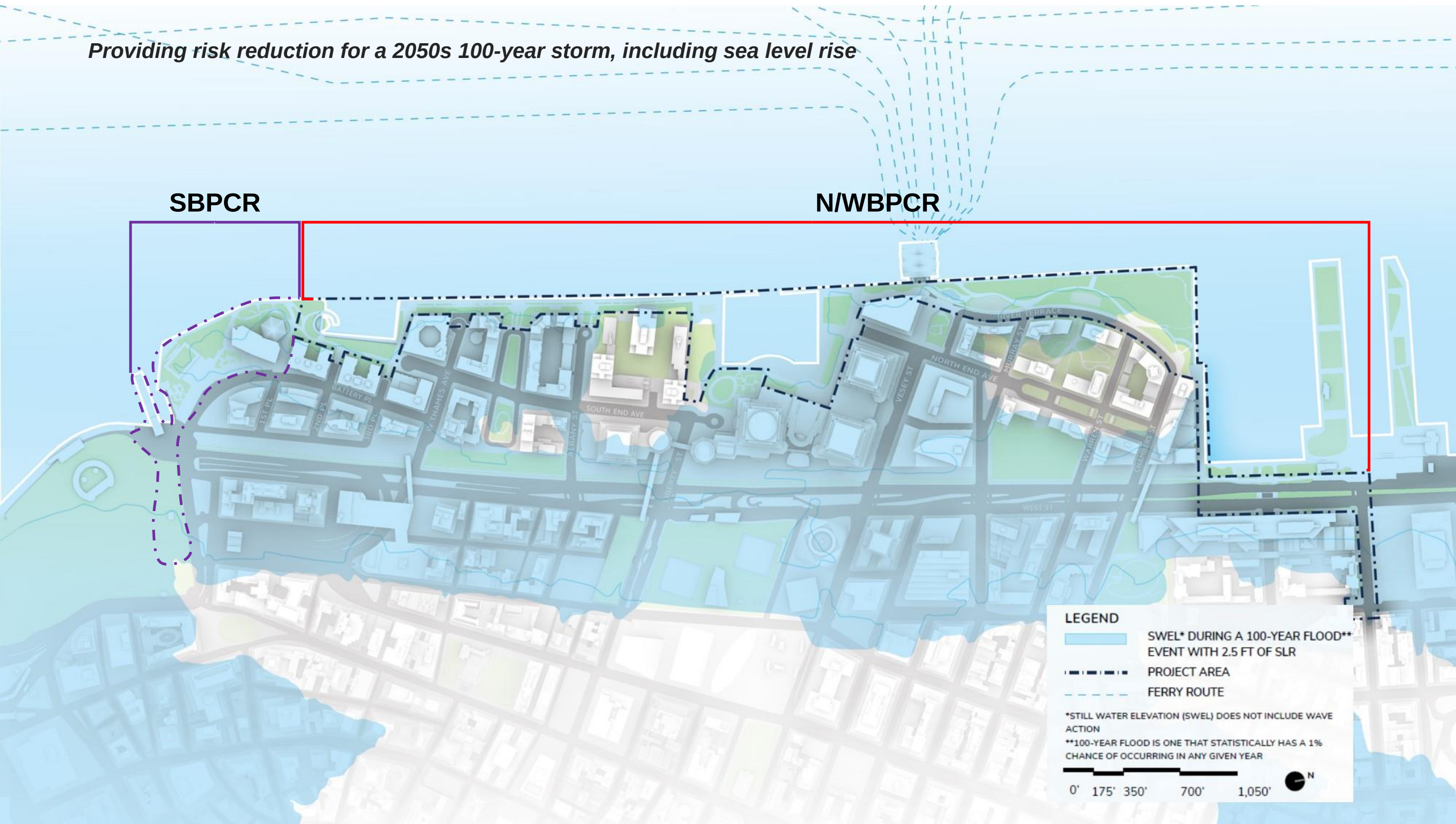


Battery Park City Resiliency: Two Interrelated Projects

Providing risk reduction for a 2050s 100-year storm, including sea level rise

SBPCR

N/WBPCR



N/W Flood Barrier Alignment



Coordination Timeline

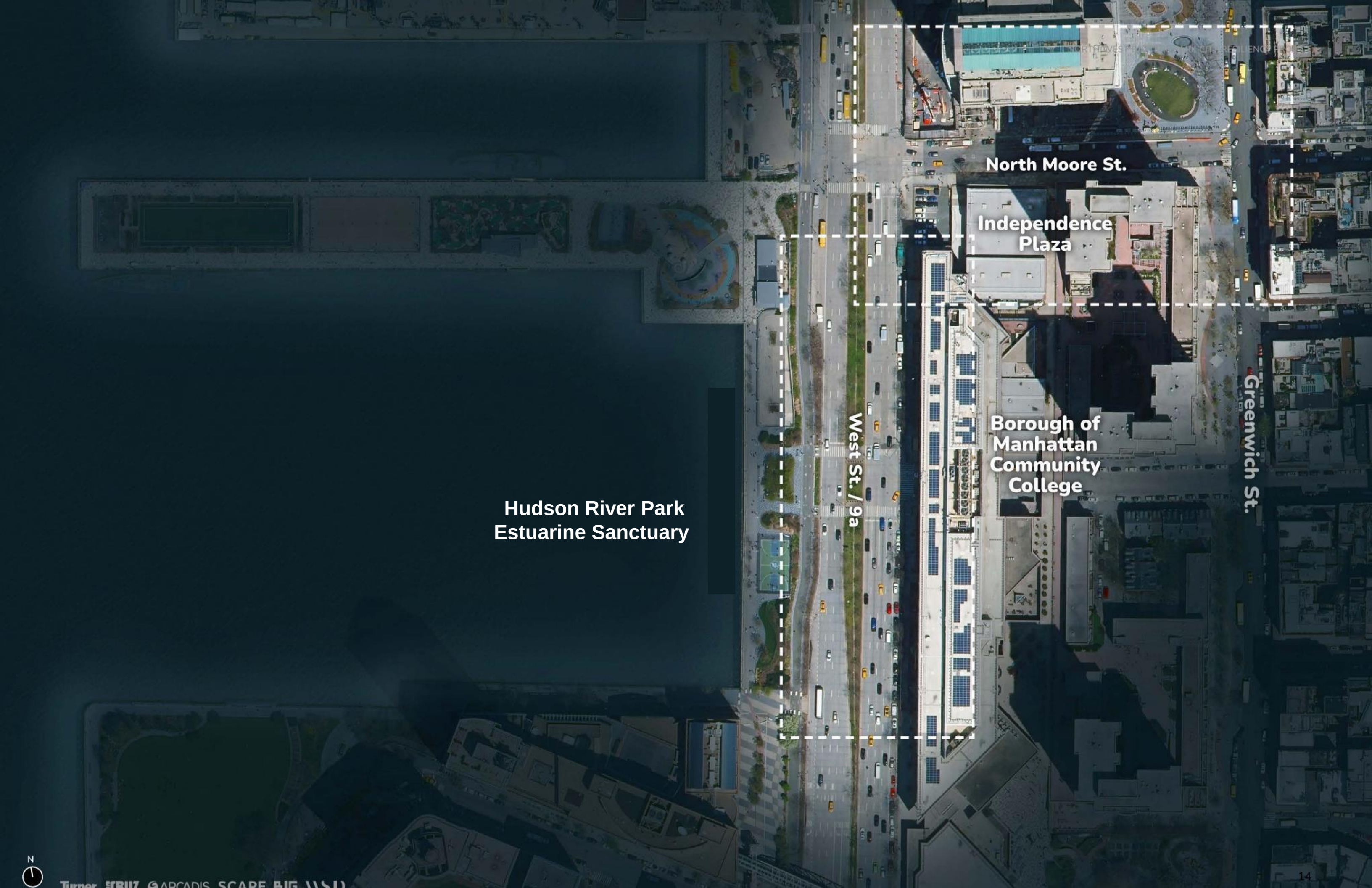
• 30% Design Documents	June 2023
• 40% Design Documents	January 2024
• 60% Design Documents	June 2024
• Construction Start	2025*

Note(*) = Exact start date dependent on agency coordination and permit issuance

Project Technical Design Requirements

- **Continuous Flood Protection** from South Project to High-ground in Tribeca
- Flood Defense meets **FEMA requirements for certification**
- **2050s 100-yr storm**, including SLR
- **Passive elements preferred** over deployables
- **Minimize disturbances** to residents, businesses, public spaces
- **Coastal storm surge and rainfall**
- **Ease of maintenance and operations**
- **Maintain/improve access and circulation**
- **Integrate FBS** into current public realm
- **Adaptability**
- **Sustainable design**

Reach 1 Update



Hudson River Park
Estuarine Sanctuary

North Moore St.

Independence
Plaza

Borough of
Manhattan
Community
College

West St. / 9a

Greenwich St.



Reach 1 West St. | Design Constraints

Hudson River Park
Estuarine Sanctuary

Pier 25

Hudson River Park

Bikeway/Walkway

+7'

West St. (South-Bound)

+8'

West St. (North-Bound)

Harrison St.

Borough of Manhattan
Community College

N. Moore St.

LEGEND

-  FLOOD BARRIER SYSTEM (WALL)
-  STORM SEWER
-  WATER PIPE
-  EXISTING PLATFORM
-  EXISTING TREES
-  TREES TO BE REMOVED



Reach 1 | Existing Condition Plan

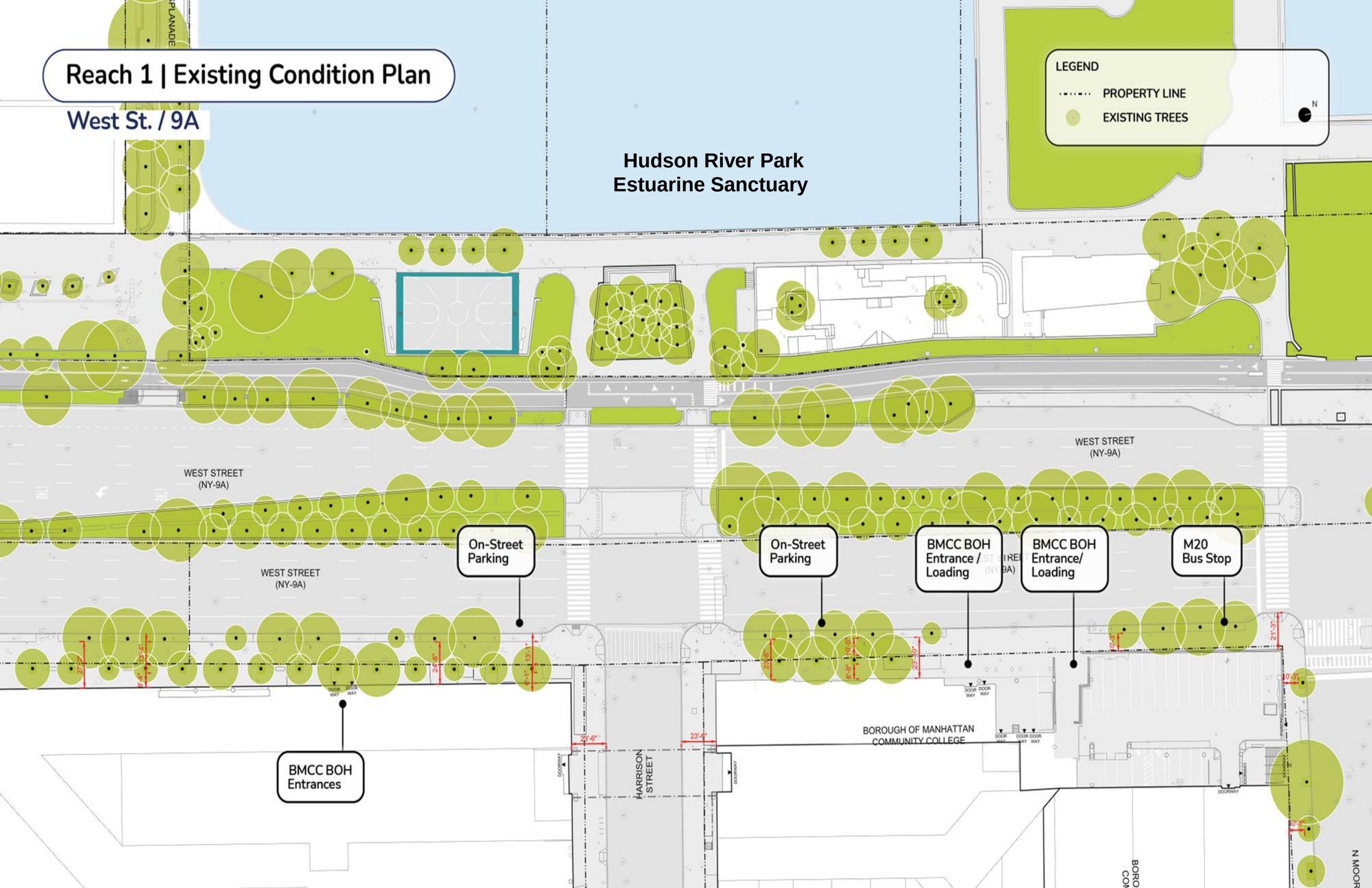
West St. / 9A

Hudson River Park
Estuarine Sanctuary

LEGEND

- PROPERTY LINE
- EXISTING TREES

N



Reach 1 West Street

**SUPERSEDED –
AS PRESENTED TO HUDSON
RIVER PARK ADVISORY COUNCIL
– JUNE 13, 2023**

Hudson River Park
Estuarine Sanctuary

Pier 25

Hudson River Park

Top of Wall:
+17.5'

Bikeway/Walkway

+7'

West St. (South-Bound)

+8'

West St. (North-Bound)

Top of Wall:
+16.5'

LEGEND

- FLOOD BARRIER SYSTEM (WALL)
- FLOOD BARRIER SYSTEM (DEPLOYABLE)
- EXISTING RELIEVING PLATFORM
- EXISTING PLATFORM EDGE
- EXISTING TREES
- NEW TREES
- LIMIT OF WORK

0' 20' 40' 100'



* Area Under Review

Turner | CRUZ | ARCADIS | SCAPE | BIG | WSP

Harrison St.

Borough of Manhattan
Community College

Reach 1 | Proposed Plan

West St. / 9A

JUNE 2024

Hudson River Park
Estuarine Sanctuary

LEGEND

FLOOD BARRIER SYSTEM (WALL)

FLOOD BARRIER SYSTEM (DEPLOYABLE)

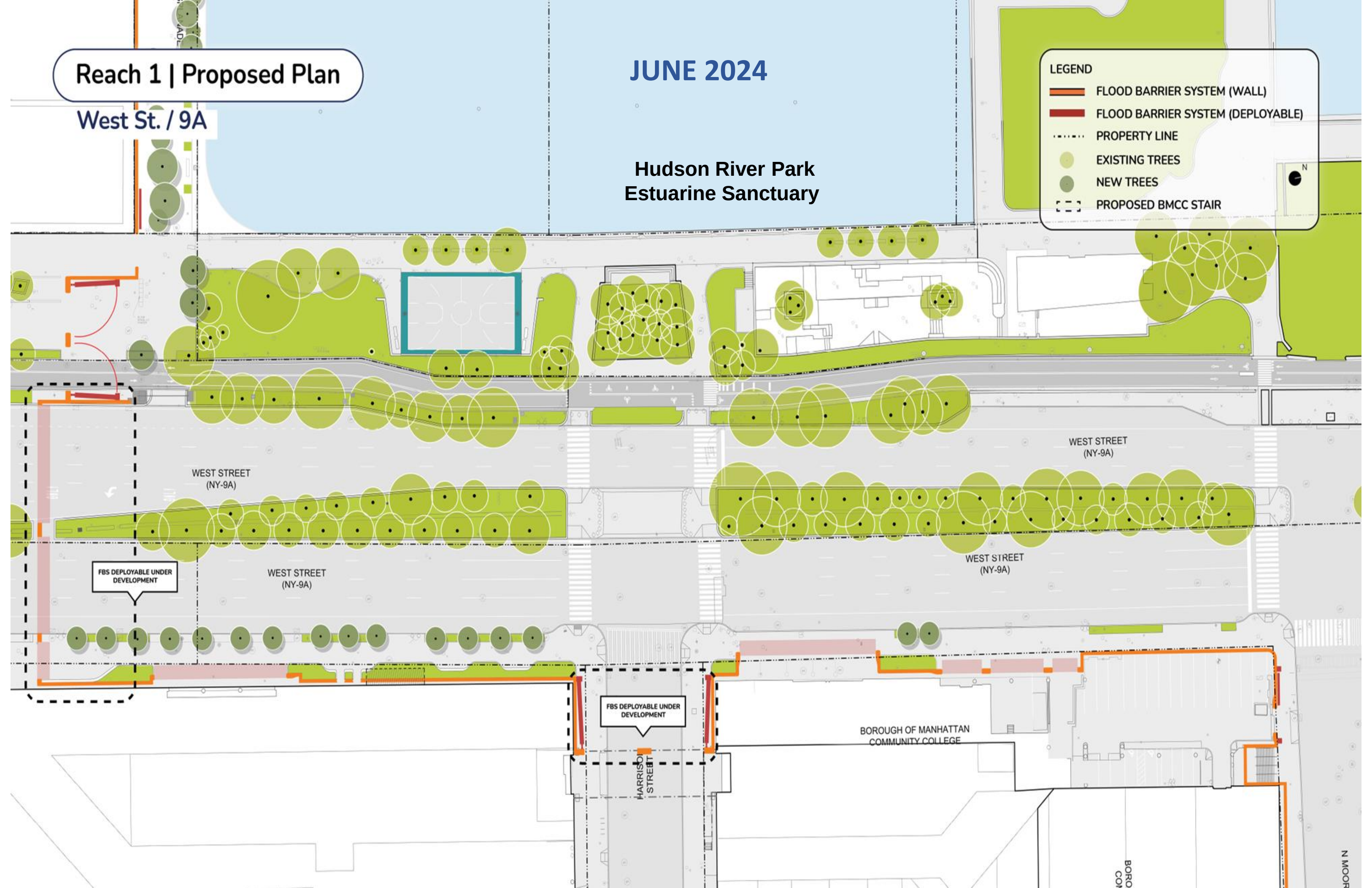
PROPERTY LINE

EXISTING TREES

NEW TREES

PROPOSED BMCC STAIR

N



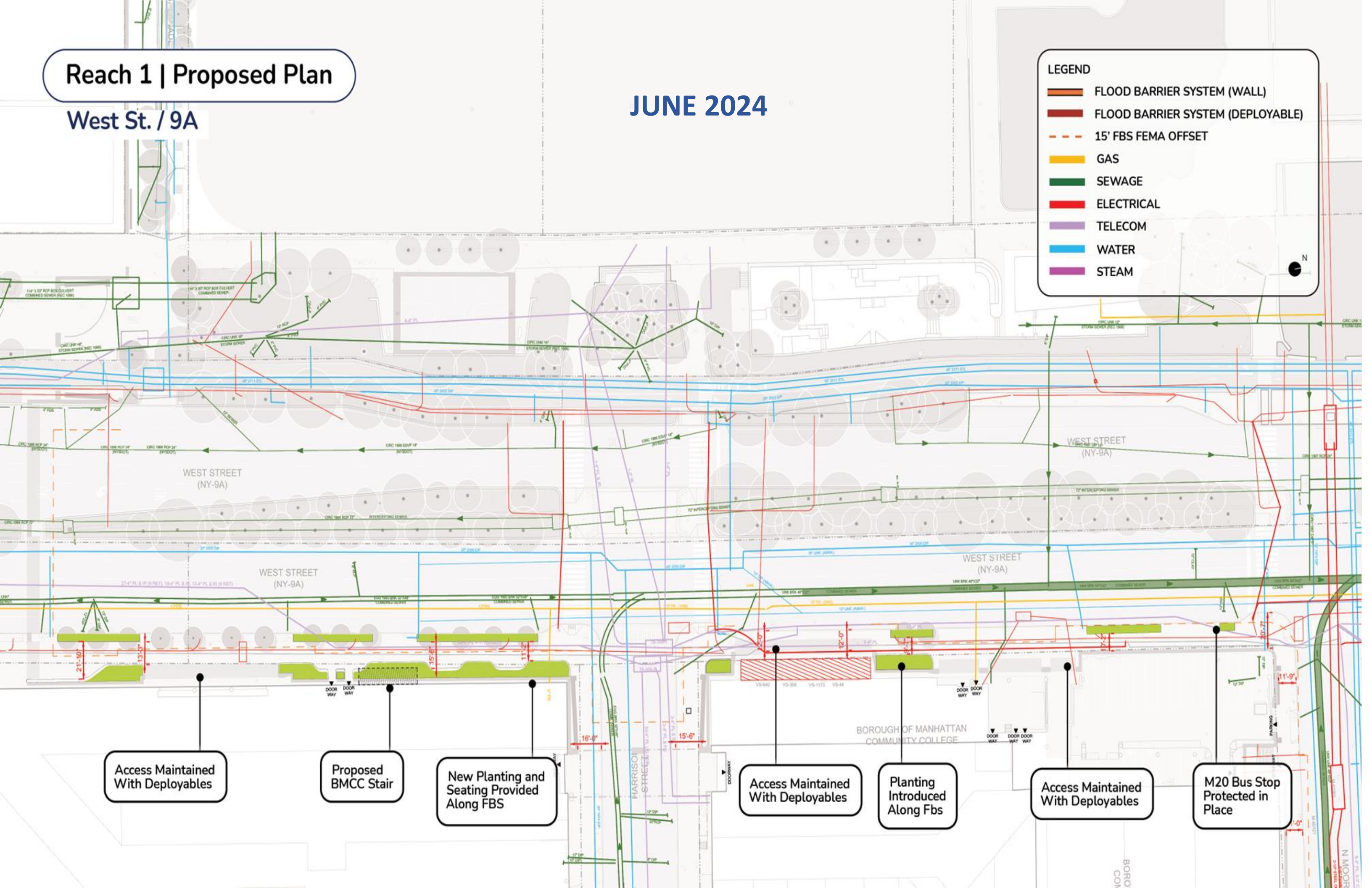
Reach 1 | Proposed Plan

West St. / 9A

JUNE 2024

LEGEND

- FLOOD BARRIER SYSTEM (WALL)
- FLOOD BARRIER SYSTEM (DEPLOYABLE)
- 15' FBS FEMA OFFSET
- GAS
- SEWAGE
- ELECTRICAL
- TELECOM
- WATER
- STEAM



Updates from 30% to 60% Set

- **Alignment moved from west side of Route 9A**
- **Crossing of Rt 9A moved further south**
- **Floodwall at exterior of BMCC buildings**
- **Deployable crossing of Harrison Street**
- **Design/coordination re BMCC frontage & access/egress**
- **Coordination with NYSDOT and NYCDOT regarding deployable for Route 9A crossing**
- **Accommodation of utilities and infrastructure**
- **Development of wall profile and materiality**

West St. 9a | Axonometric

Proposed

Planting Along Street Edge Provides Protected Pedestrian Experience

New Planters and Seating integrated Along FBS

Wall Height: 9.5'

FBS Runs Along BMCC Perimeter

FBS Wall

Wall Height: 9.6'

+ 8.66

+ 8.4

Borough of Manhattan Community College

Harrison St.

West St.

West St.

Bikeway/Walkway

N. Moore St.

West St. 9a | View looking South

Proposed

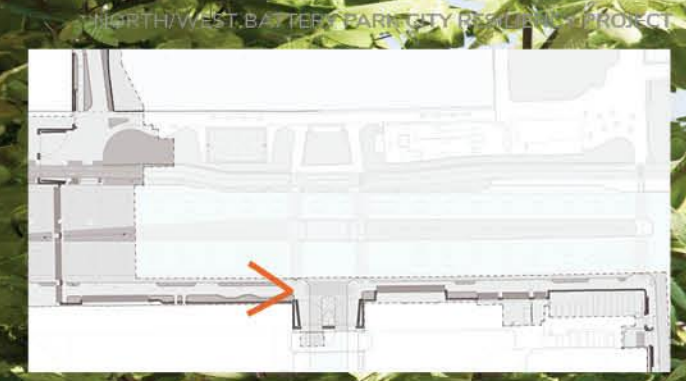
FBS Wall

Wall Height:
9.5'

Borough of Manhattan
Community College

New Planters and
Precast Concrete
Seating integrated
Along FBS

Planting Along Street
Edge Provides Protected
Pedestrian Experience



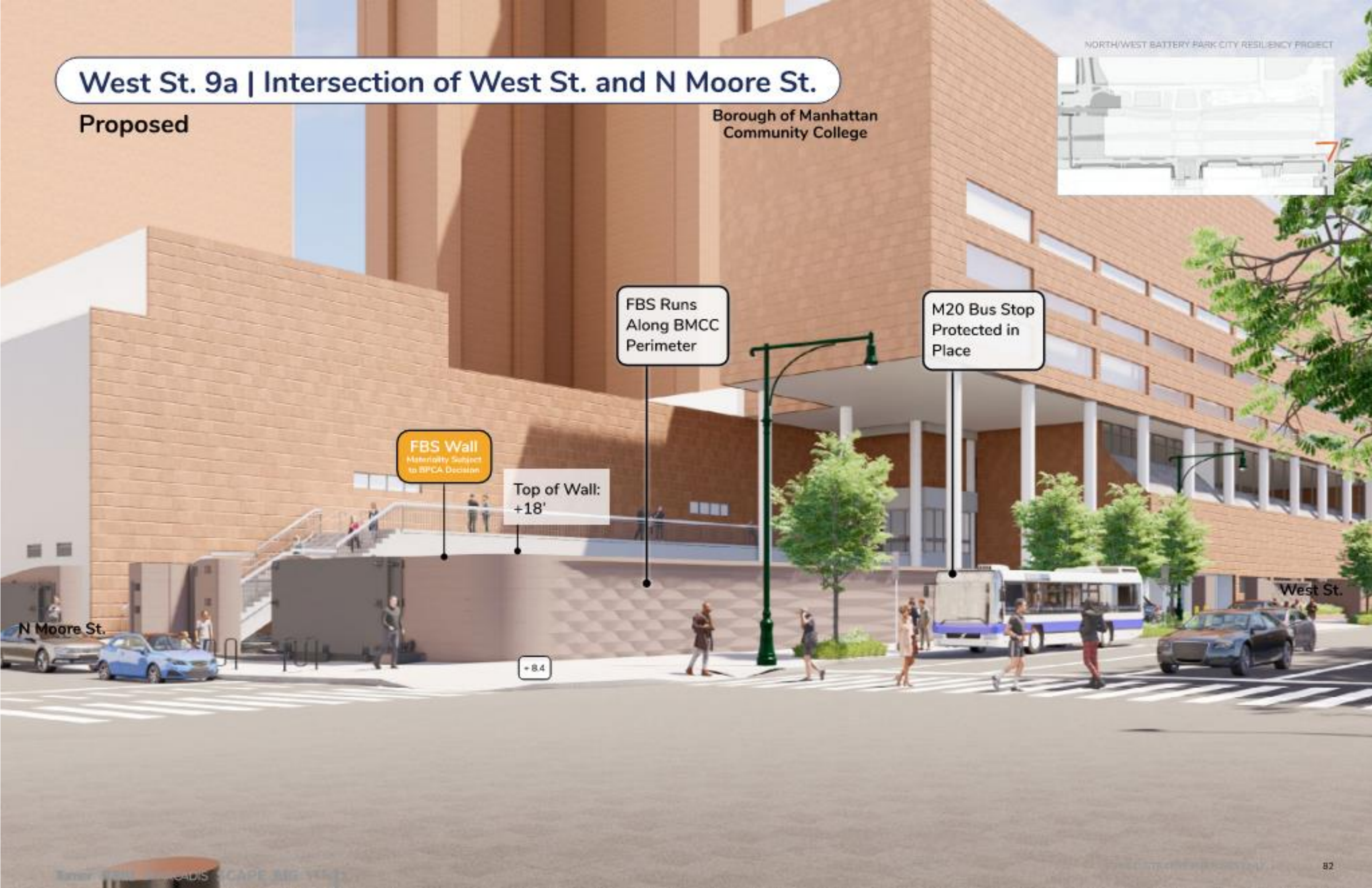
+ 8.5

West St.

West St. 9a | Intersection of West St. and N Moore St.

Proposed

Borough of Manhattan
Community College



FBS Wall
Materiality Subject
to BPCA Decision

Top of Wall:
+18'

FBS Runs
Along BMCC
Perimeter

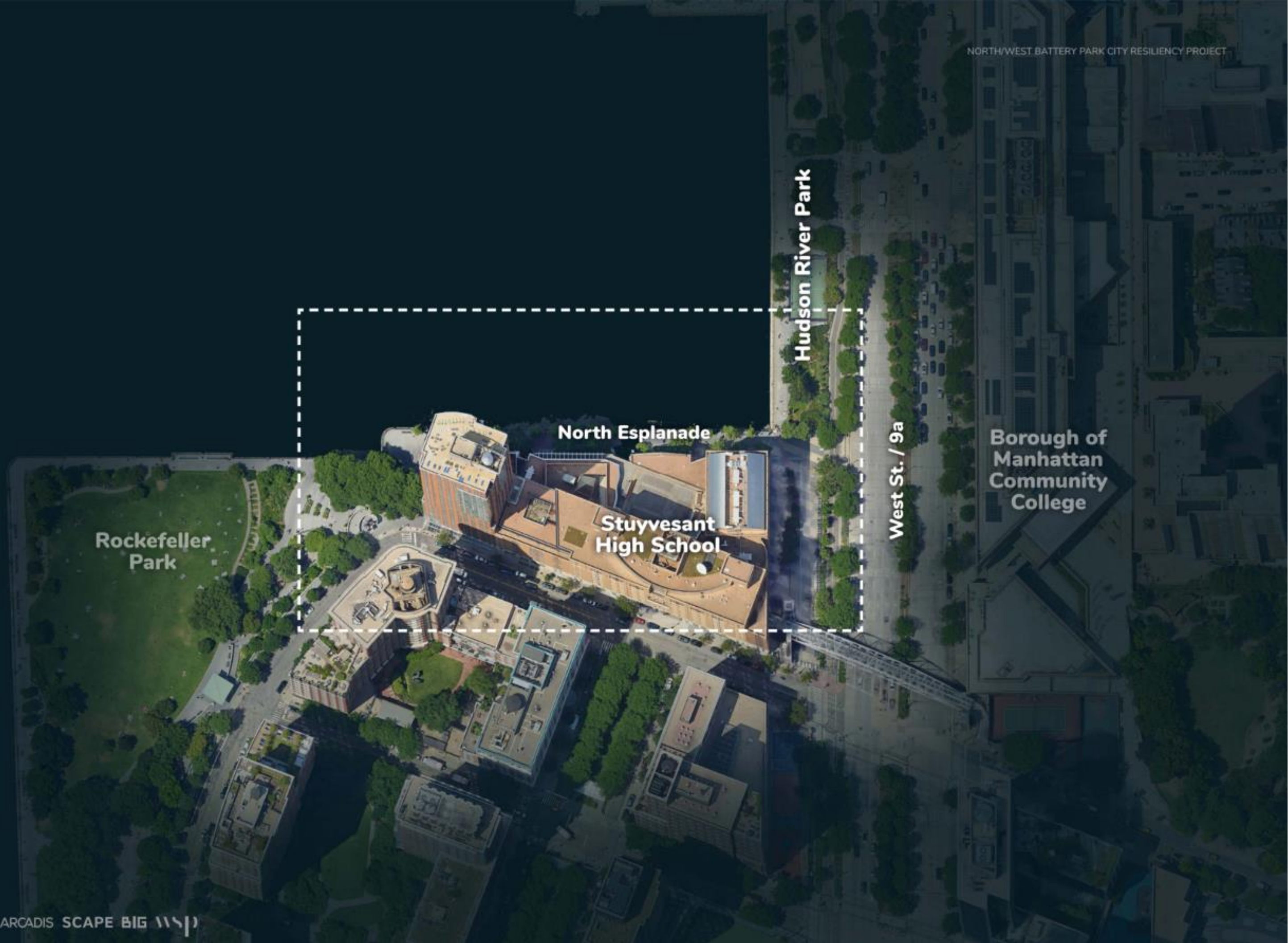
M20 Bus Stop
Protected in
Place

West St.

N Moore St.

+8.4

Reach 2 Update



Rockefeller
Park

North Esplanade

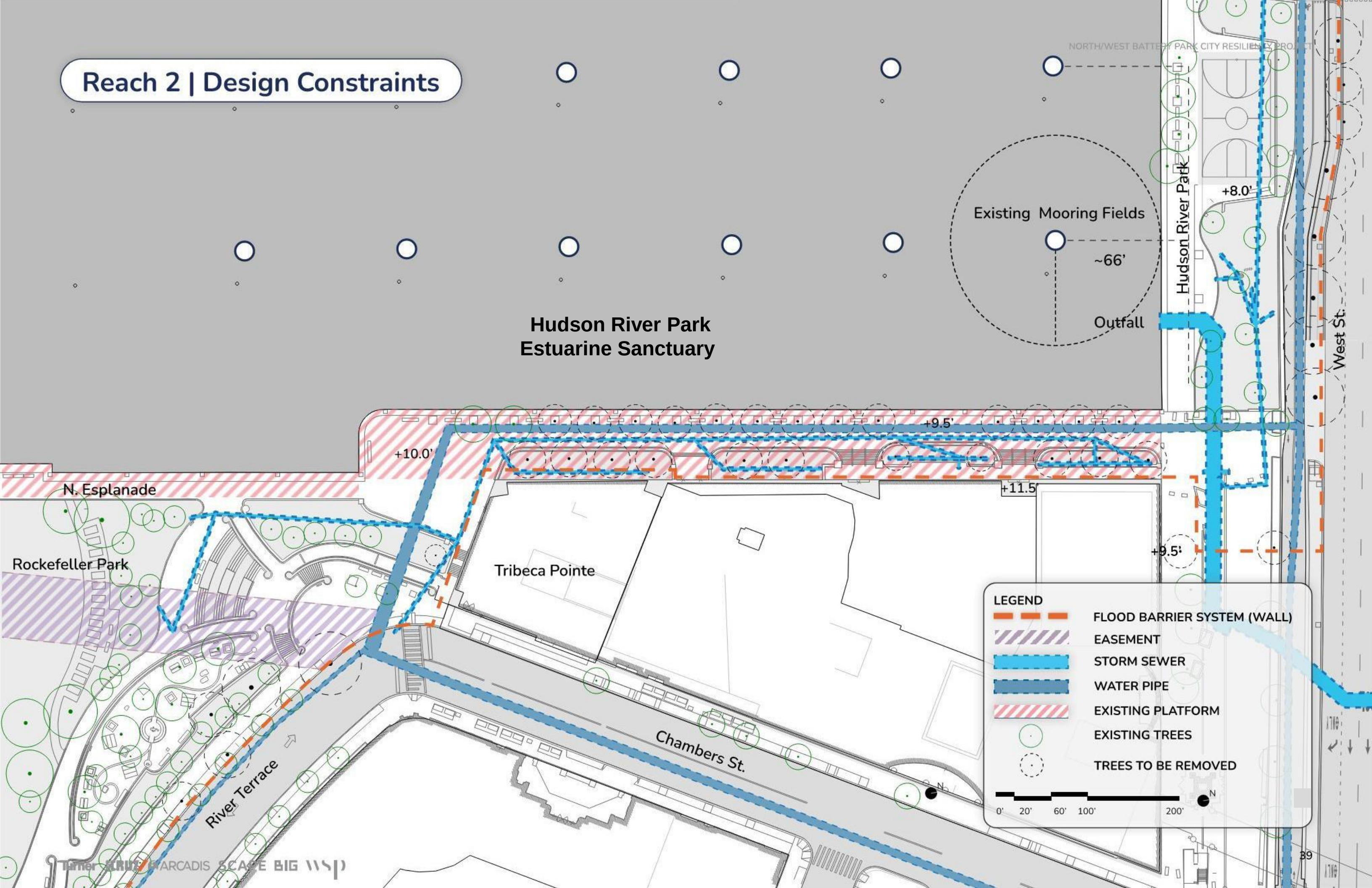
Stuyvesant
High School

Hudson River Park

West St. / 9a

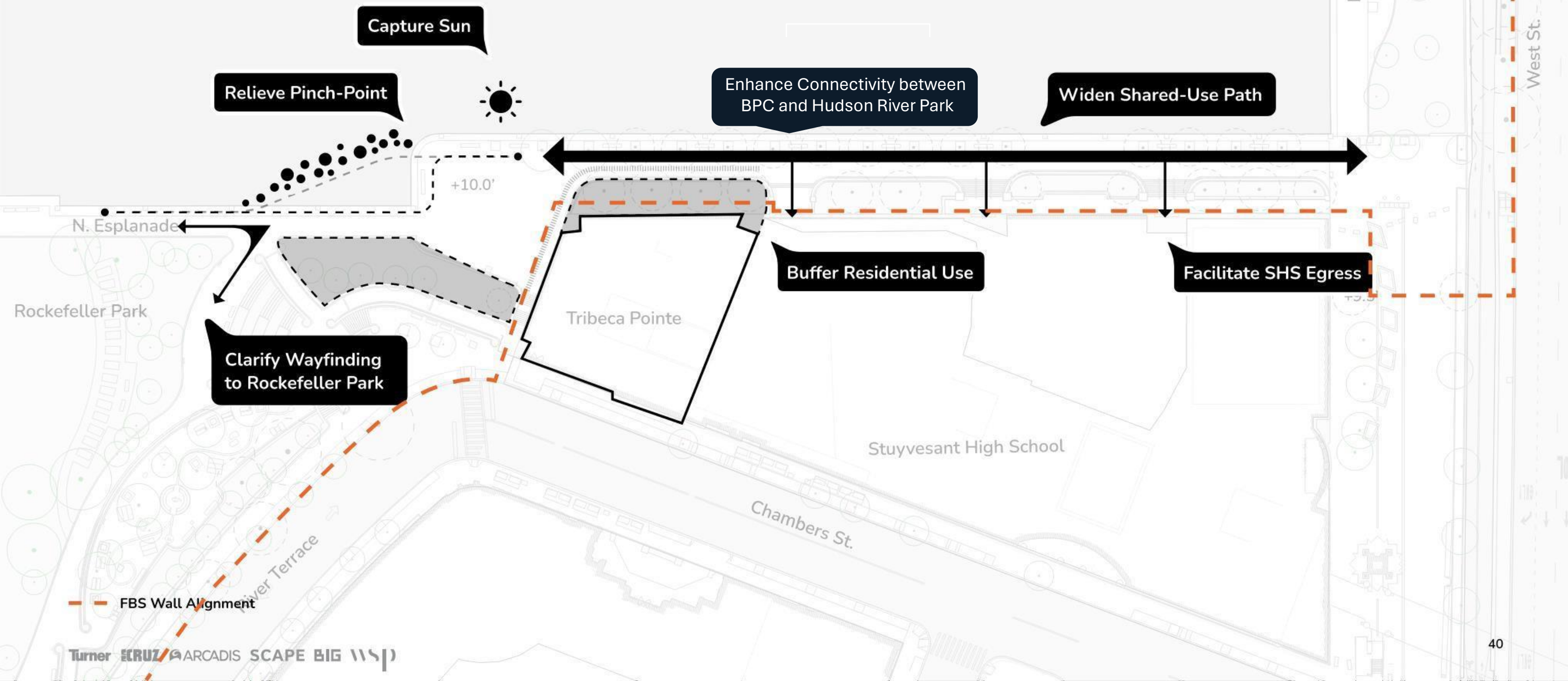
Borough of
Manhattan
Community
College

Reach 2 | Design Constraints



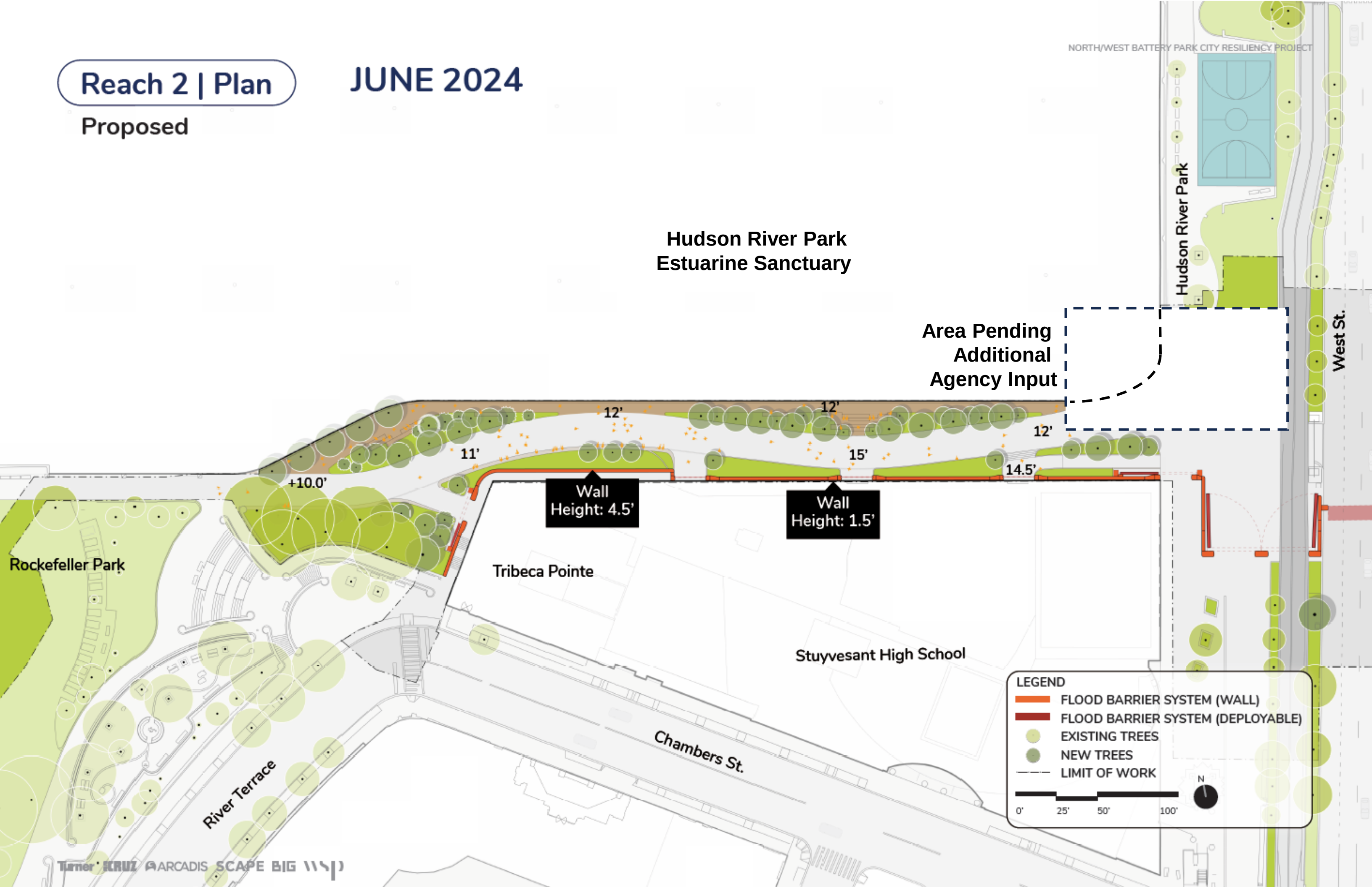
Reach 2 | Design Opportunities

Hudson River Park Estuarine Sanctuary



Hudson River Park
Estuarine Sanctuary

Area Pending
Additional
Agency Input



Stuyvesant
High School

t Extension

Hudson River Park
Estuarine Sanctuary

(Under
Development)

Hudson River Park

Bikeway/Walkway

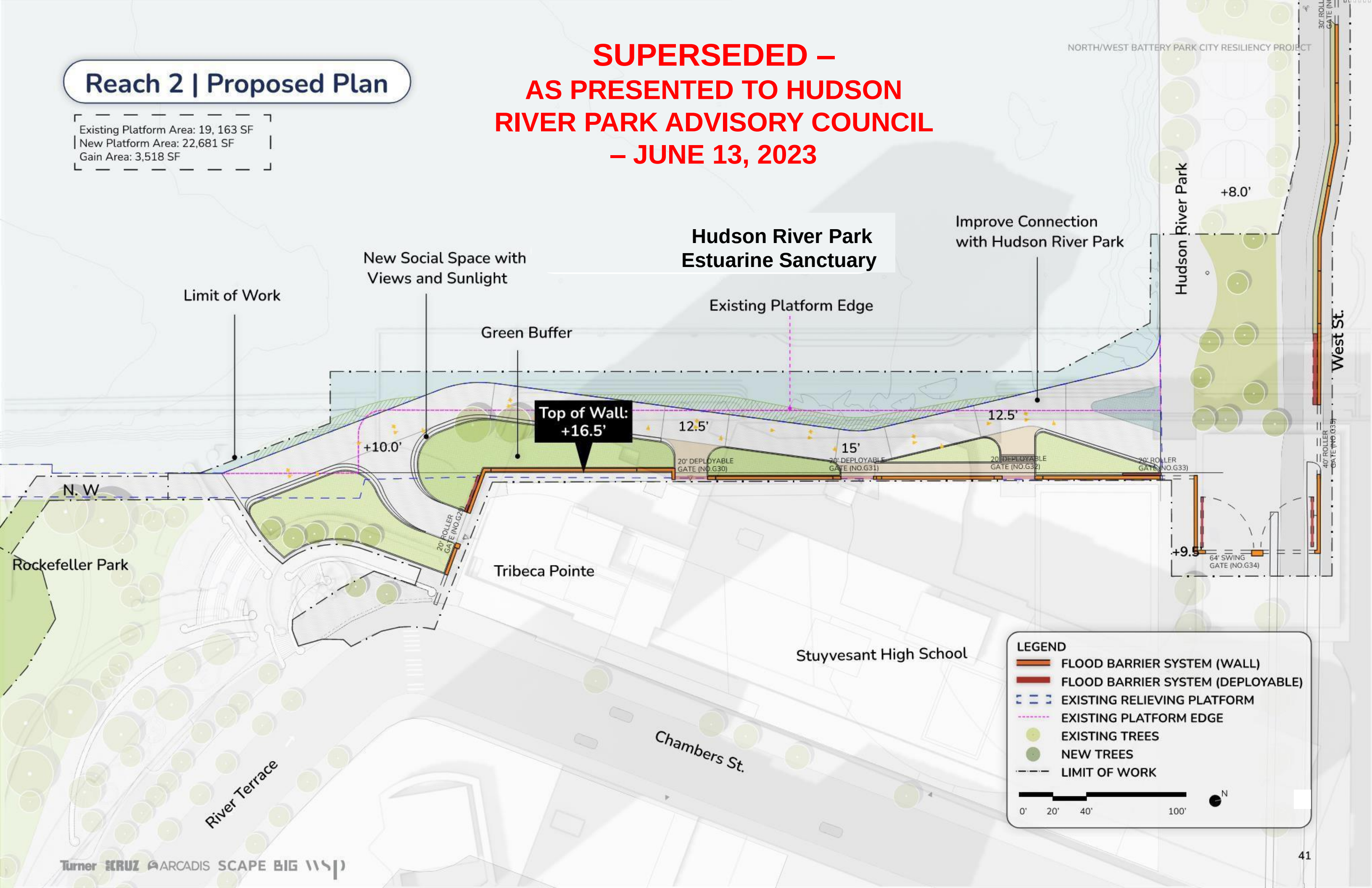
9A - South Route

Reach 2 | Proposed Plan

Existing Platform Area: 19, 163 SF
New Platform Area: 22,681 SF
Gain Area: 3,518 SF

**SUPERSEDED –
AS PRESENTED TO HUDSON
RIVER PARK ADVISORY COUNCIL
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NORTH/WEST BATTERY PARK CITY RESILIENCY PROJECT



Reach 2 | Axonometric

Proposed

Improved Connection
with Hudson River Park

Stuyvesant
High School

Tribeca Pointe

(Under
Development)

Enhanced
Privacy Buffers

FBS Wall

Wall Height:
4.5'

+ 12.00'

New Seating with
Waterfront Views

Widened
Shared-Use Path

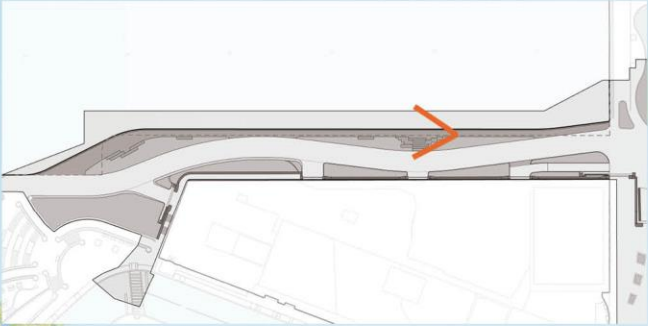
In Water
Habitat

+ 10.00'

New Seating with
Waterfront Views

Updates from 30% to 60% Set

- **Streamlined geometry of North Esplanade edge**
- **Focus on Improved connection with Hudson River Park**
- **Bi-level walkway along North Esplanade**



Reach 2 | View from Esplanade

Proposed

Overlook and
Access to Waterfront

New Seating at
Waterfront Edge

New Planting
and Trees

+ 12'

Reach 2 | View Towards Rockefeller Park

Proposed



Enhanced
Privacy Buffer

New Seating with
Waterfront Views

Widened
Pedestrian Path

+ 12.00'

Enhanced Planting
and Shading

Ongoing Agency Coordination

- **HRPK**
- **NYS DOT**
- **NYC DOT**
- **NYC DEP**
- **NYC SBS**
- **USACE**
- **NYSDEC**
- **Other Projects**

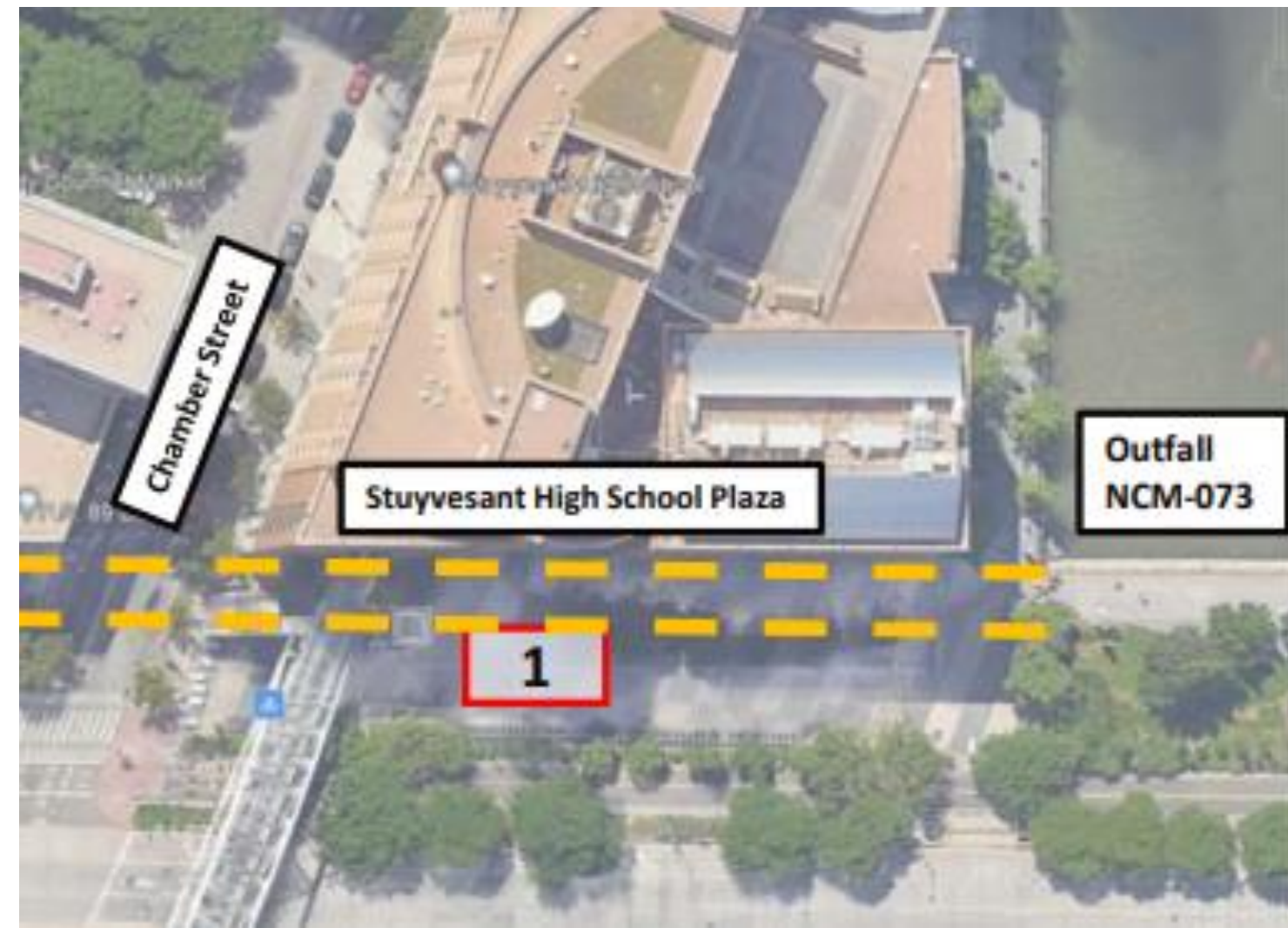
Pump Station (separate design timeline)

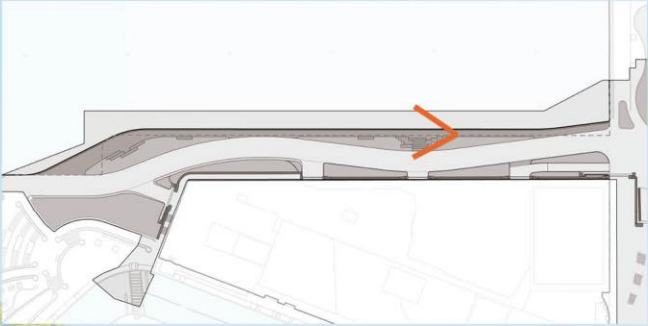
Two main drainage objectives:

- **1. Isolate the protected area** such that floodwater is prevented from entering through existing sewer connections during coastal storm surges.
- **2. Manage interior flooding** within the project's protected area associated with a coincident coastal storm surge and rainfall event to minimize interior flooding.

Most pump station infrastructure expected to be below-grade.

Separate design timeline to be provided.





Reach 2 | View from Esplanade

Proposed

Overlook and
Access to Waterfront

New Seating at
Waterfront Edge

New Planting
and Trees

Thank you!

+ 12'