

Wagner Park

Battery Park City Authority

June 20, 2017



Resiliency: Continuous Flood Barrier



Battery Park City Authority: Wagner Park

CONCEPT DESIGN: 3 ALIGNMENTS



EDGE

LEVERAGES WATERFRONT
~95% PROJECT AREA PROTECTED



UPLAND

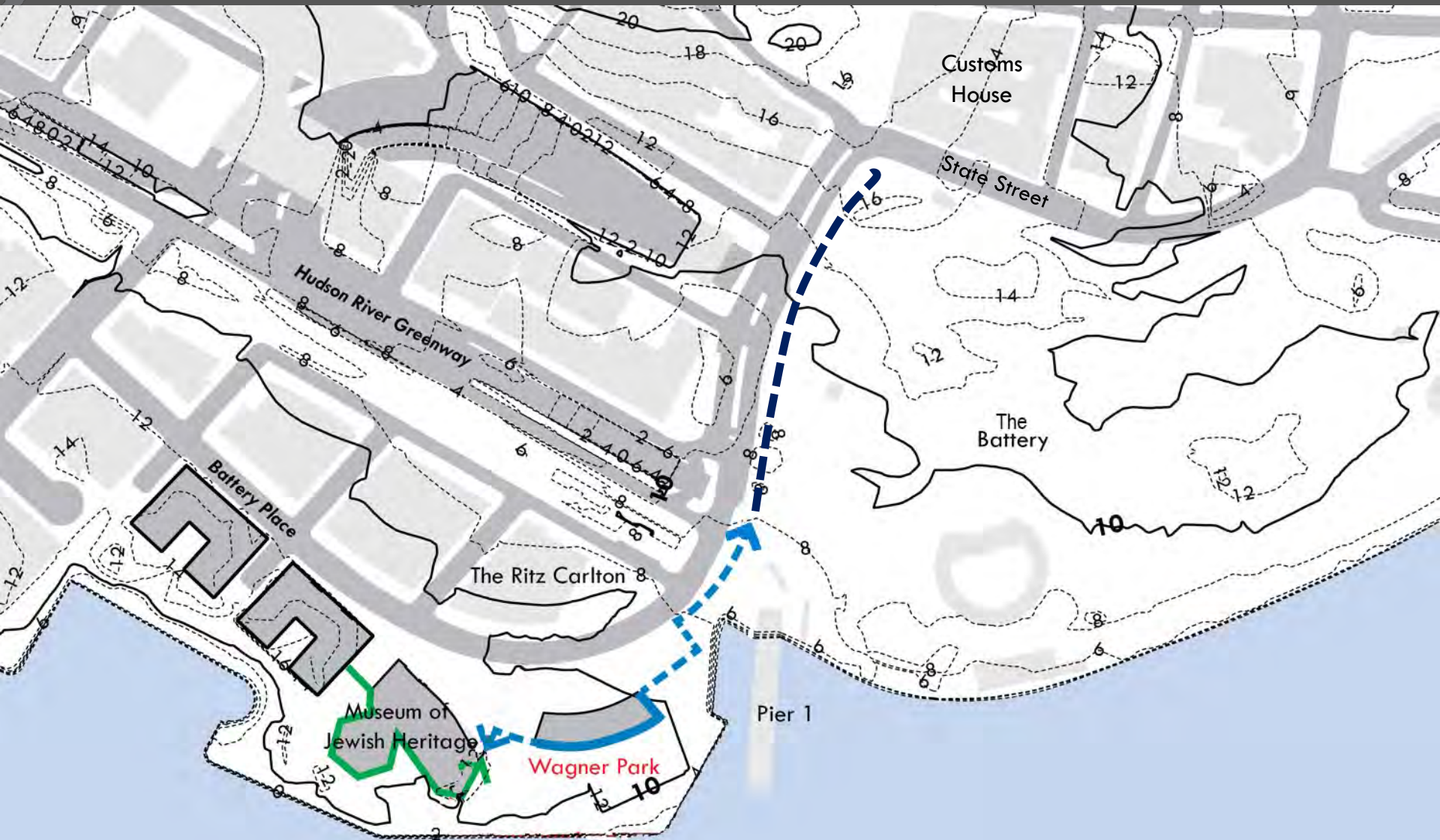
LEVERAGES PUBLIC RIGHT OF WAY
~75% PROJECT AREA PROTECTED



HYBRID

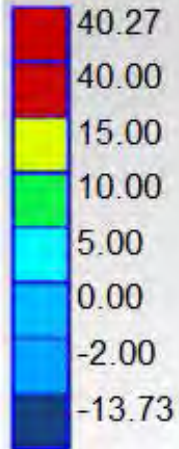
LEVERAGES EXISTING OPEN SPACE
~85% PROJECT AREA PROTECTED

Flood Barrier Coordination w/ Lower Manhattan Coastal Resiliency



Lower Manhattan Overview: Site Analysis

Elevations (ft)



Lower Manhattan Overview: Site Analysis

Elevations (ft)



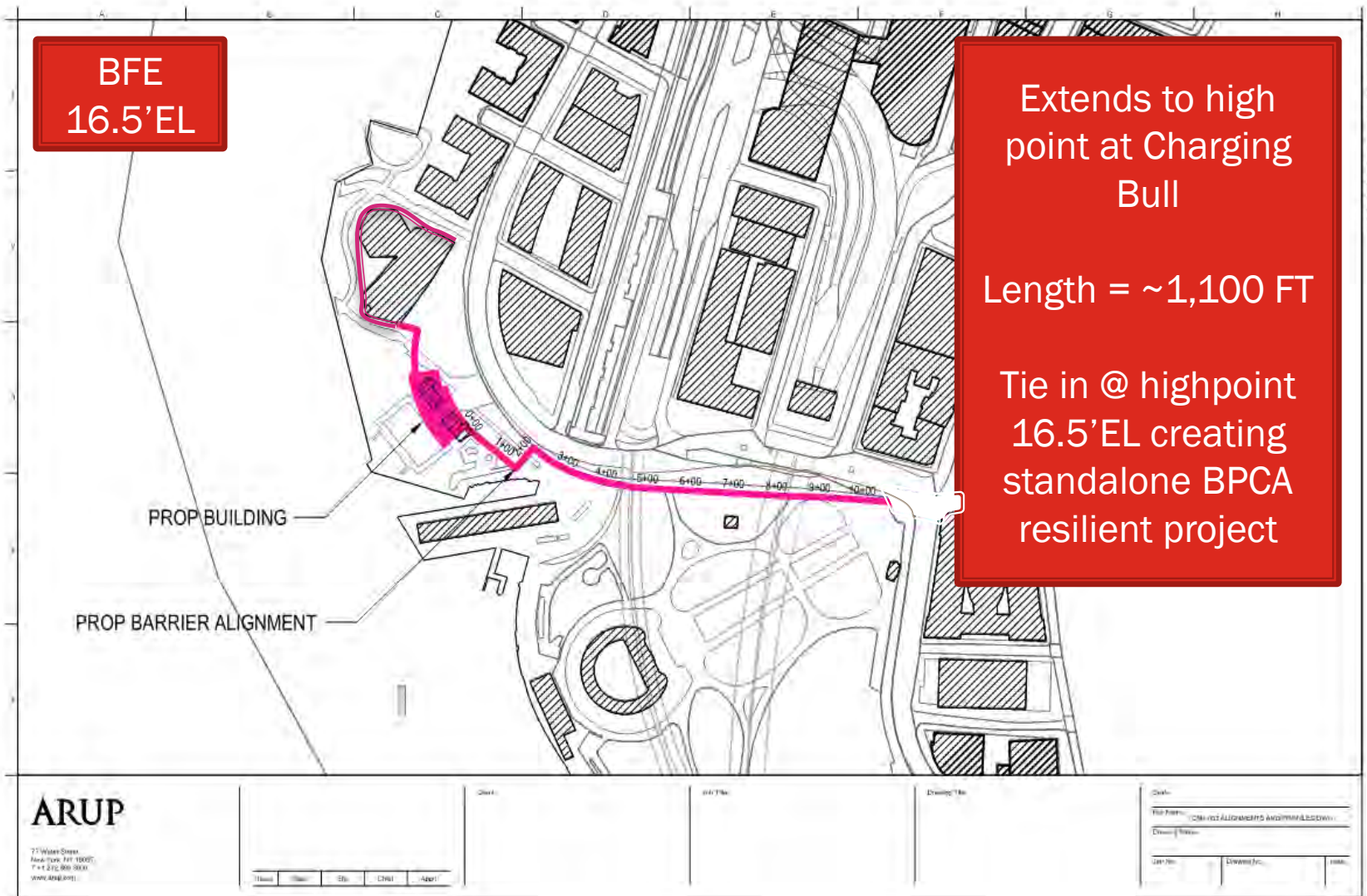
High Points

- Rector Park (~15 ft)
- Charging Bull (~18 ft)

Low Points

- Battery Park Underpass (~ -10 ft)
- Hugh L Carey Tunnel (~ -10 ft)
- West St / Route 9A Acts as channel (~4 – 8 ft)

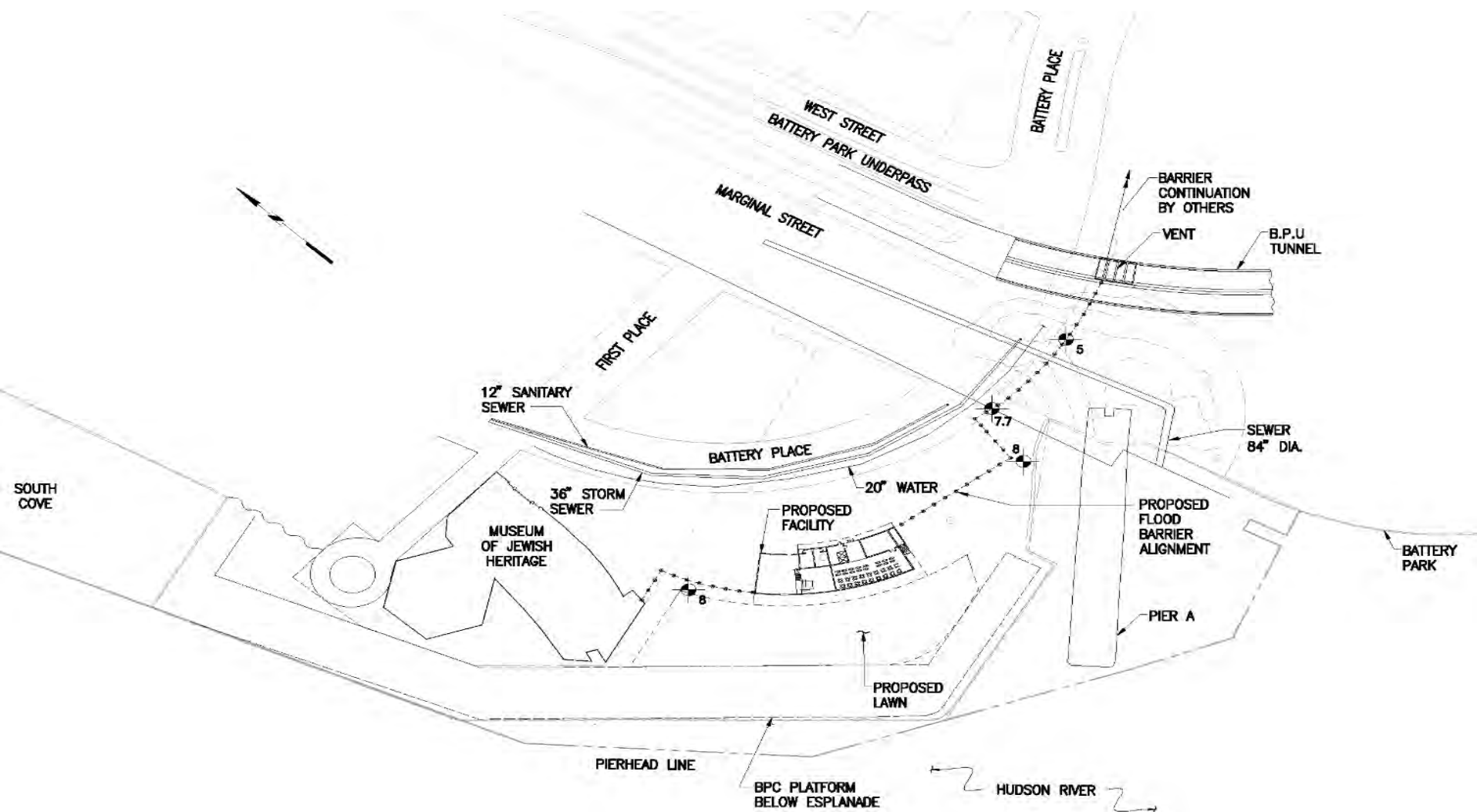
Proposed Barrier Alignment



A photograph of a construction or industrial site. In the foreground, a worker wearing a white hard hat and a high-visibility yellow and orange safety vest stands on a concrete platform. Behind them is a large, light-colored concrete wall. A crane is lifting a large, dark metal structure, possibly a gate or a piece of machinery, from the wall. The background shows a city skyline under a hazy sky.

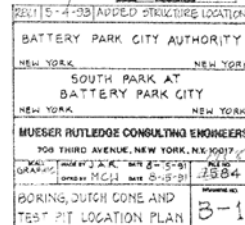
Wagner Park Operable Flood Protection Barrier Subsurface Study

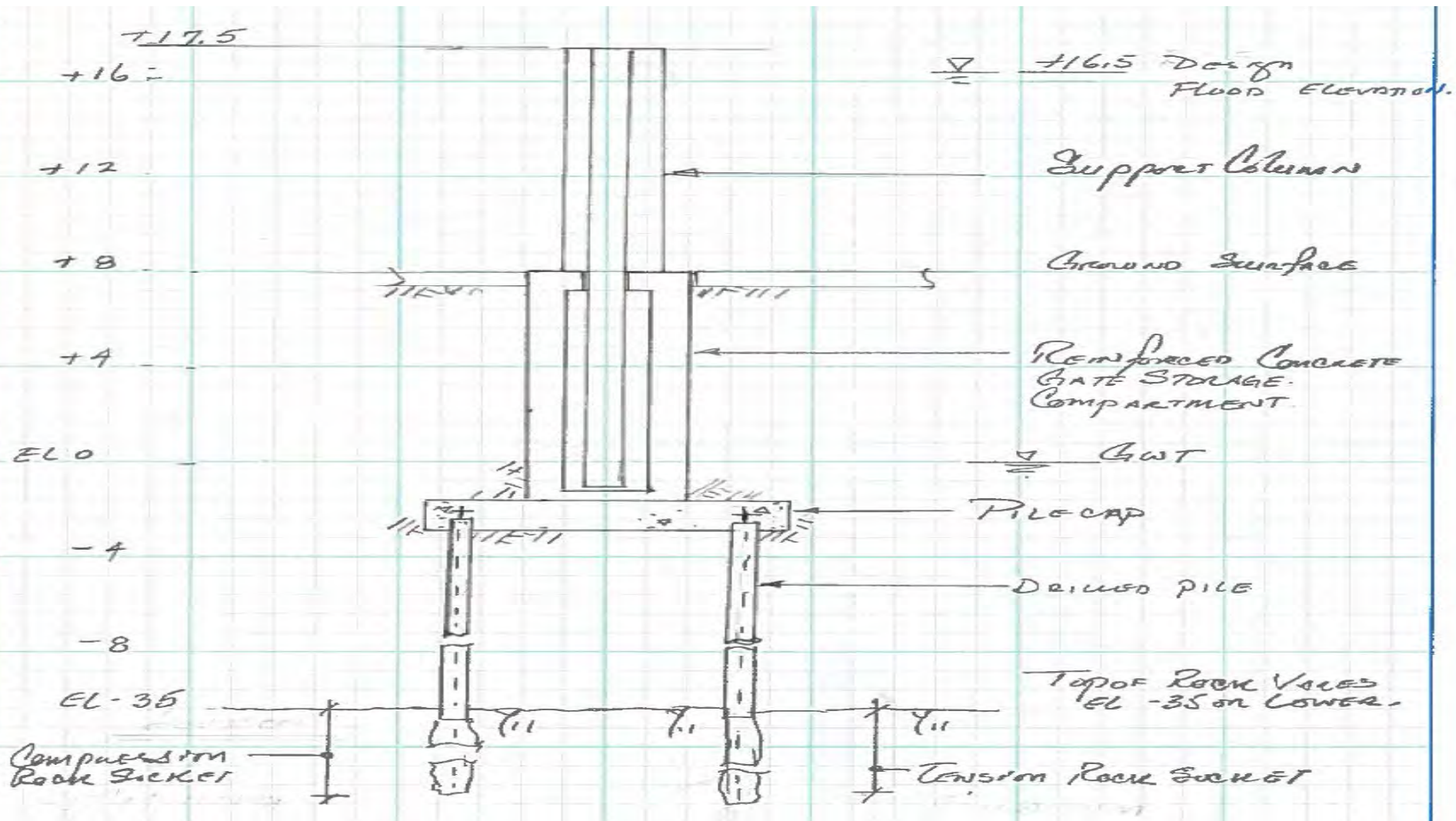
Wagner Park



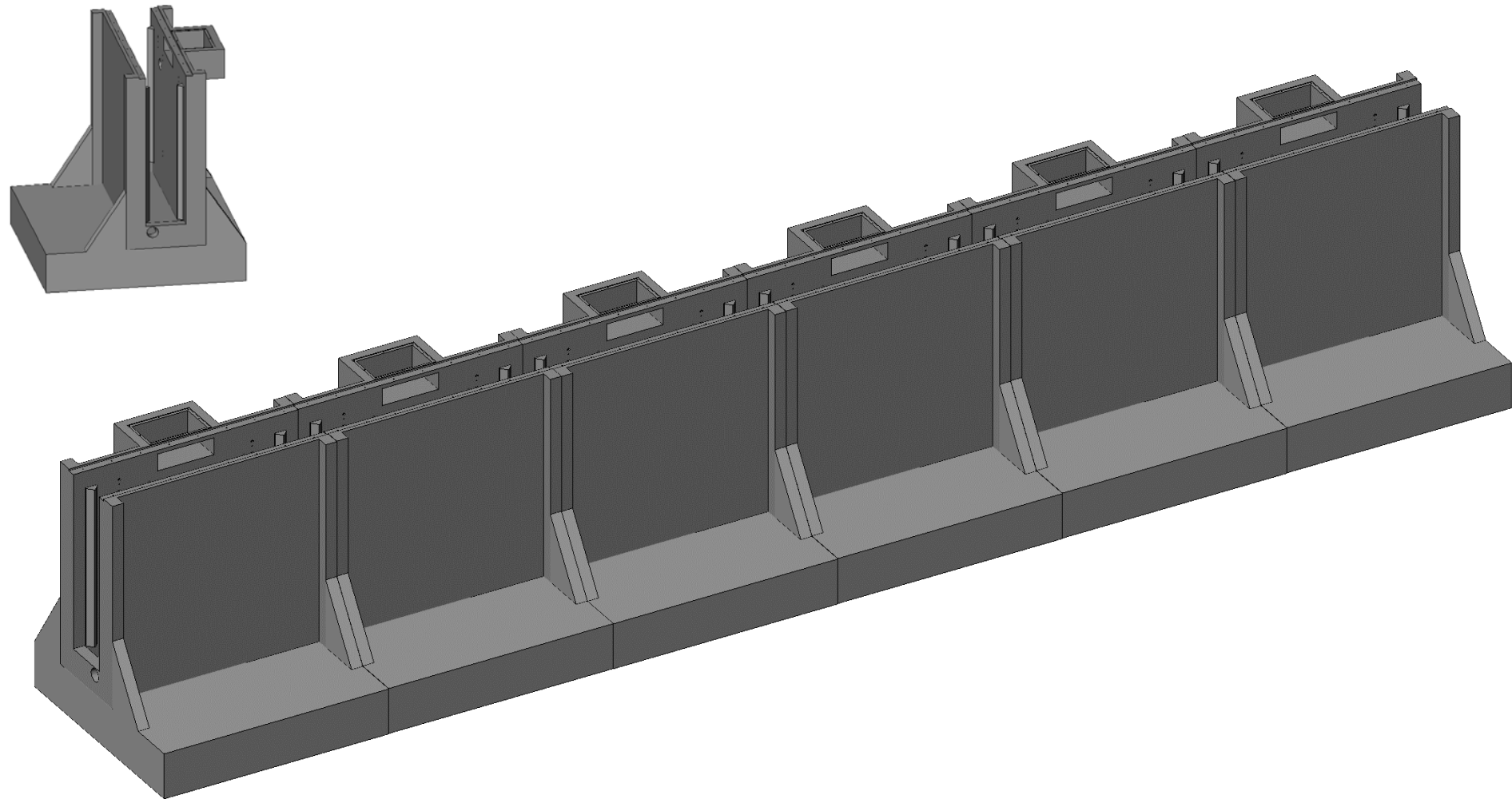
1. BASE PLAN IS FROM A 1990 SITE SURVEY BY EARL B. LOVELL - S.P. BEIGHER, INC. WITH FINAL REVISIONS MARCH 26, 1991.
2. ELEVATIONS SHOWN REFER TO BOROUGH PRESIDENT OF MANHATTAN DATUM WHICH IS 2.75 FEET ABOVE MEAN SEA LEVEL AT SANDY HOOK, NEW JERSEY (NGVD).
3. AS DRILLED BORING, DUTCH CONE, AND TEST PITS TP-5 THROUGH TP-12 LOCATIONS AND ELEVATIONS WERE SURVEYED BY HOWARD F. GREENSPAN ASSOCIATES. LOCATIONS AND ELEVATIONS OF TP-1 THROUGH TP-4 ARE APPROXIMATE.
4. BORINGS AND DUTCH CONE PENETRATION TESTS WERE PERFORMED IN JULY AND AUGUST, 1991 BY WARREN GEORGE, INC. UNDER THE CONTINUOUS INSPECTION OF MRCE.
5. TEST PITS WERE PERFORMED IN MAY AND JULY 1991. TEST PITS WITH A POST-SCRIPT H WERE PERFORMED FOR HORTICULTURAL TESTING AND WERE INSPECTED BY OTHERS. TEST PITS WITH DENSITY TESTING WERE INSPECTED BY MRCE.

- - 3-1/2" DIAMETER DRY SAMPLE BORING
- - 3-1/2" DIAMETER UNDISTURBED SAMPLE BORING
- ▲ - DUTCH CONE TEST
- - TEST PIT WITH DENSITY TESTING
- - TEST PIT INSPECTED BY CHARLES STRAUB -
HORTICULTURAL CONSULTANT

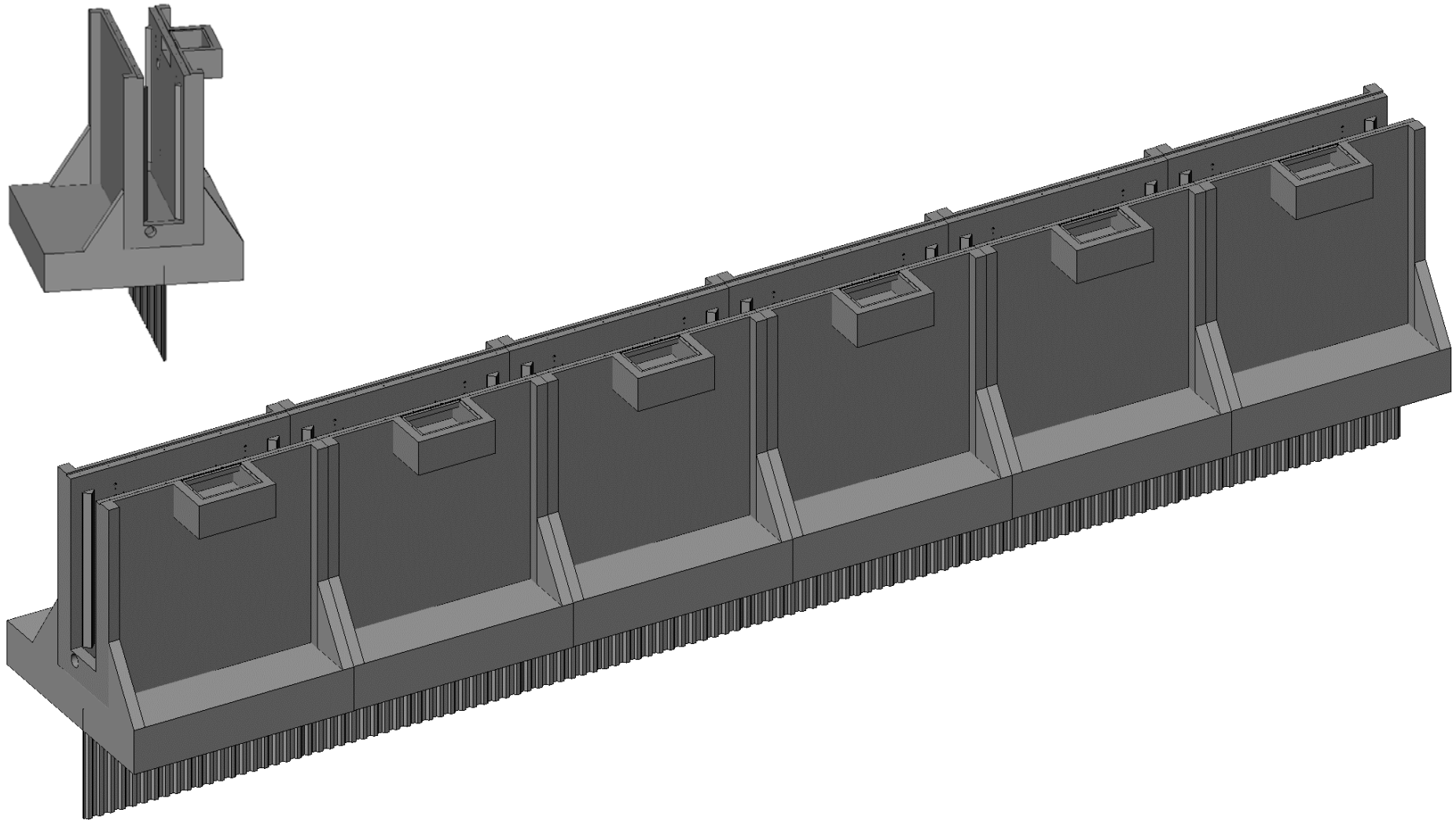




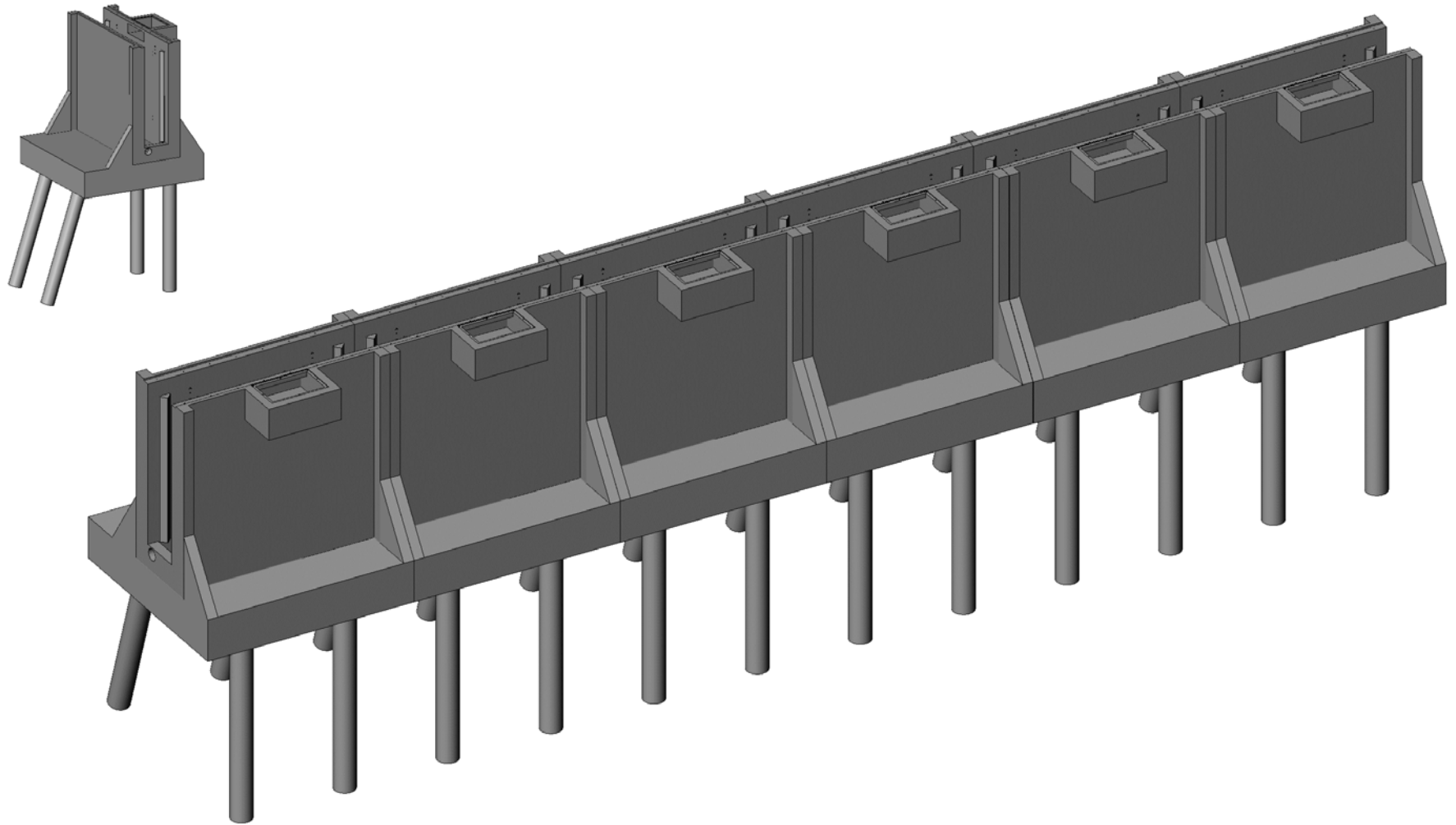
Foundation base assembly with toe and heel



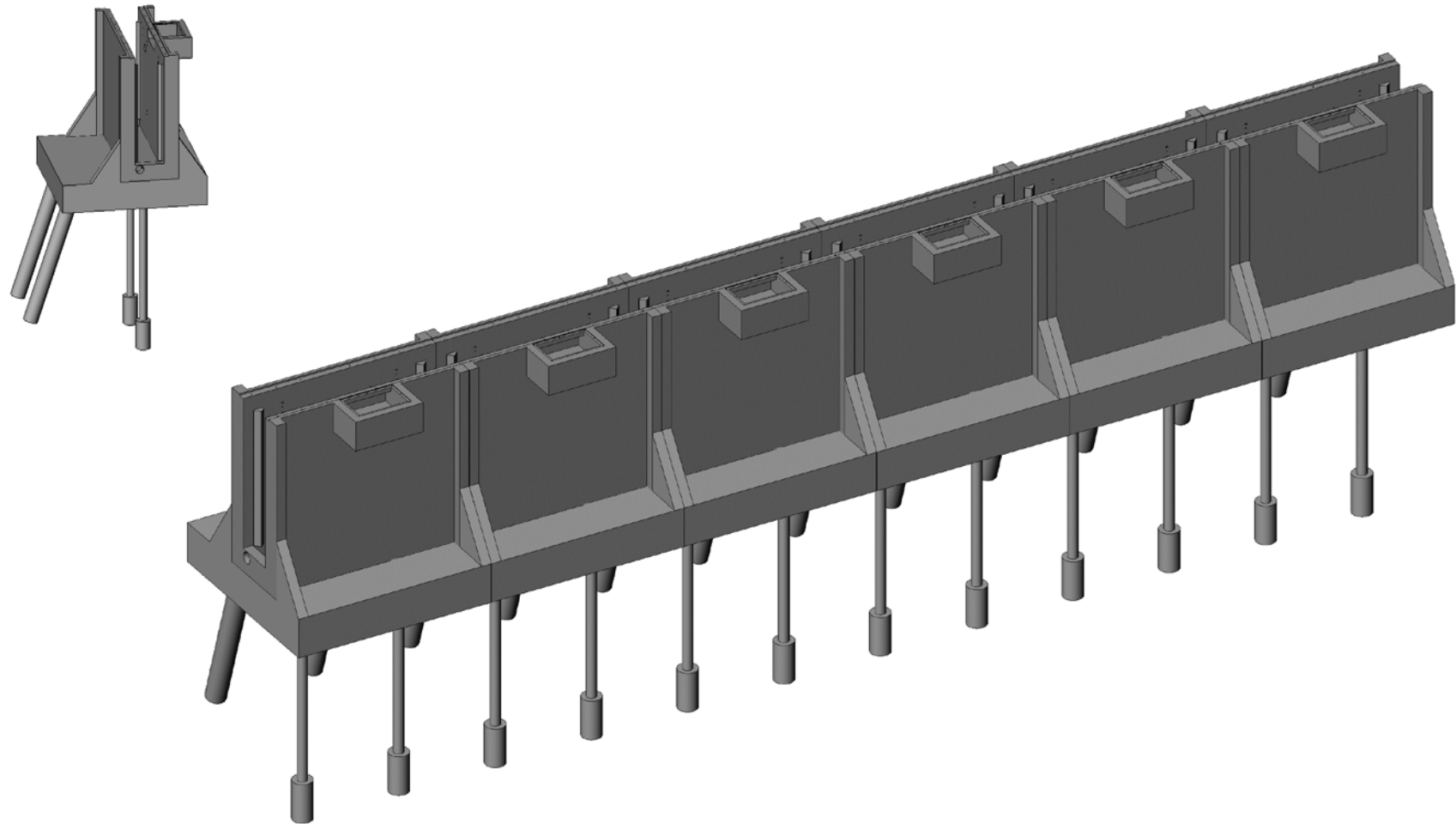
Foundation base assembly with sheet piles



Foundation base assembly with straight and batter piles



Foundation base assembly, with batter piles and rock anchors



Pavilion Remedial Action Assessment



- Floor below target protection elevation
- Building envelop not resilient (design elements, materials, openings, etc.), and would not accommodate built-in resiliency measures
- Flood barrier would need to built around the building, rather than becoming part of it.
- Due to harshness of marine environment, extensive repairs and/or upgrades, over and above typical maintenance, are currently required and will continue to be required on a frequent basis
- Upfront repair/remediation cost, plus code-required upgrades, plus atypical maintenance costs over a 20-year horizon, would be expected to run between \$11 million and \$15 million
- Cost of repair/remediation approaches the cost of comparable new construction

Even with necessary repairs and code-required upgrades:

- New flood barrier would be required to be built around the structure.
- BPCA parks maintenance/storage space would be inadequate for current/projected needs.
- No flexible space would be available for BPCA auxiliary needs such as security outpost or site office,
- Food and beverage space would still be undersized and inadequate for current or enhanced restaurant operations.
- Underground cistern beneath structure for storage of storm water would not be accommodated.

Efflorescence at west elevation façade, northern structure



Delaminating brick masonry façade at southern structure stairway



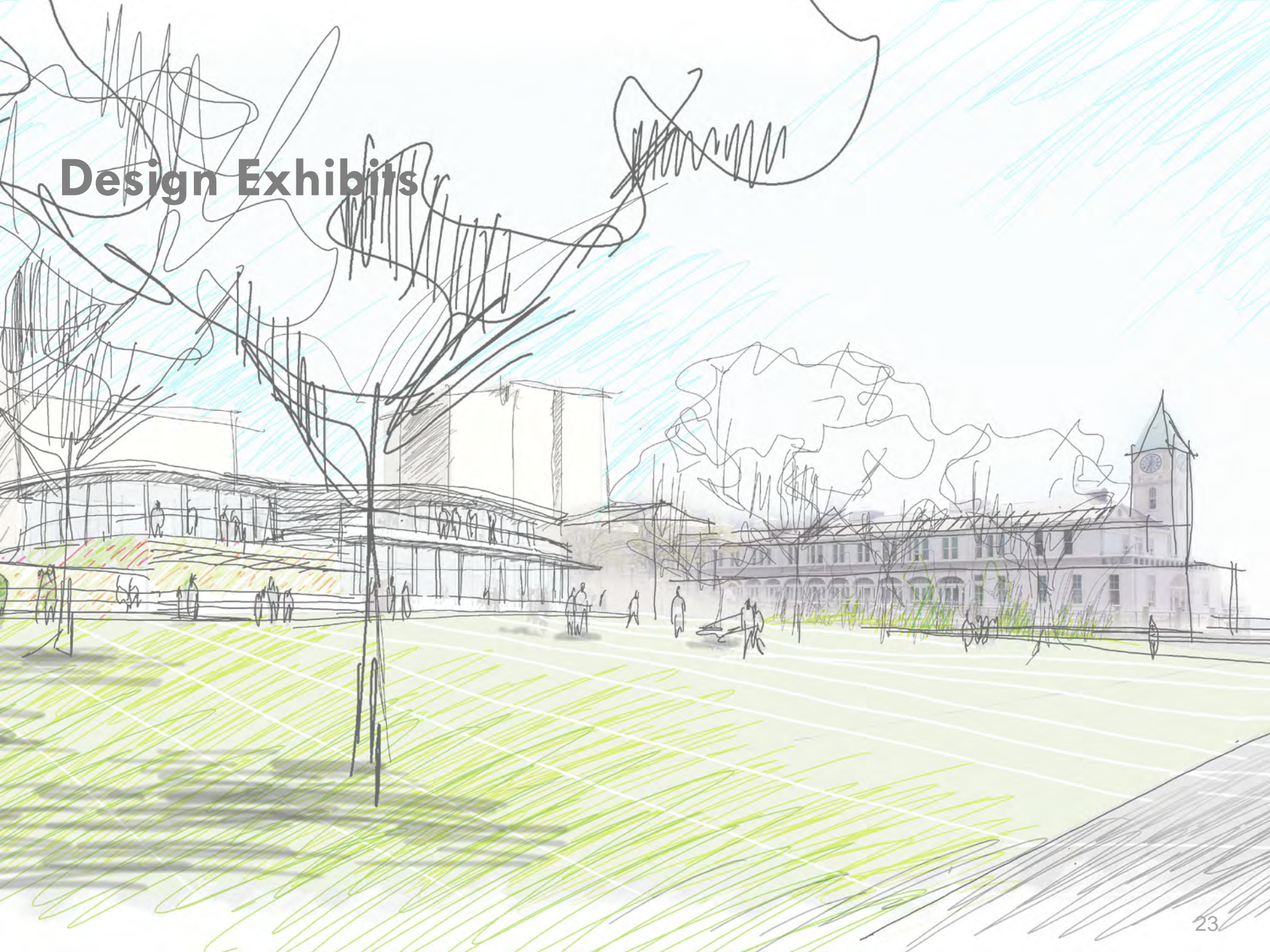
Typical detail of stainless steel/brick masonry arch w/ expansion joint



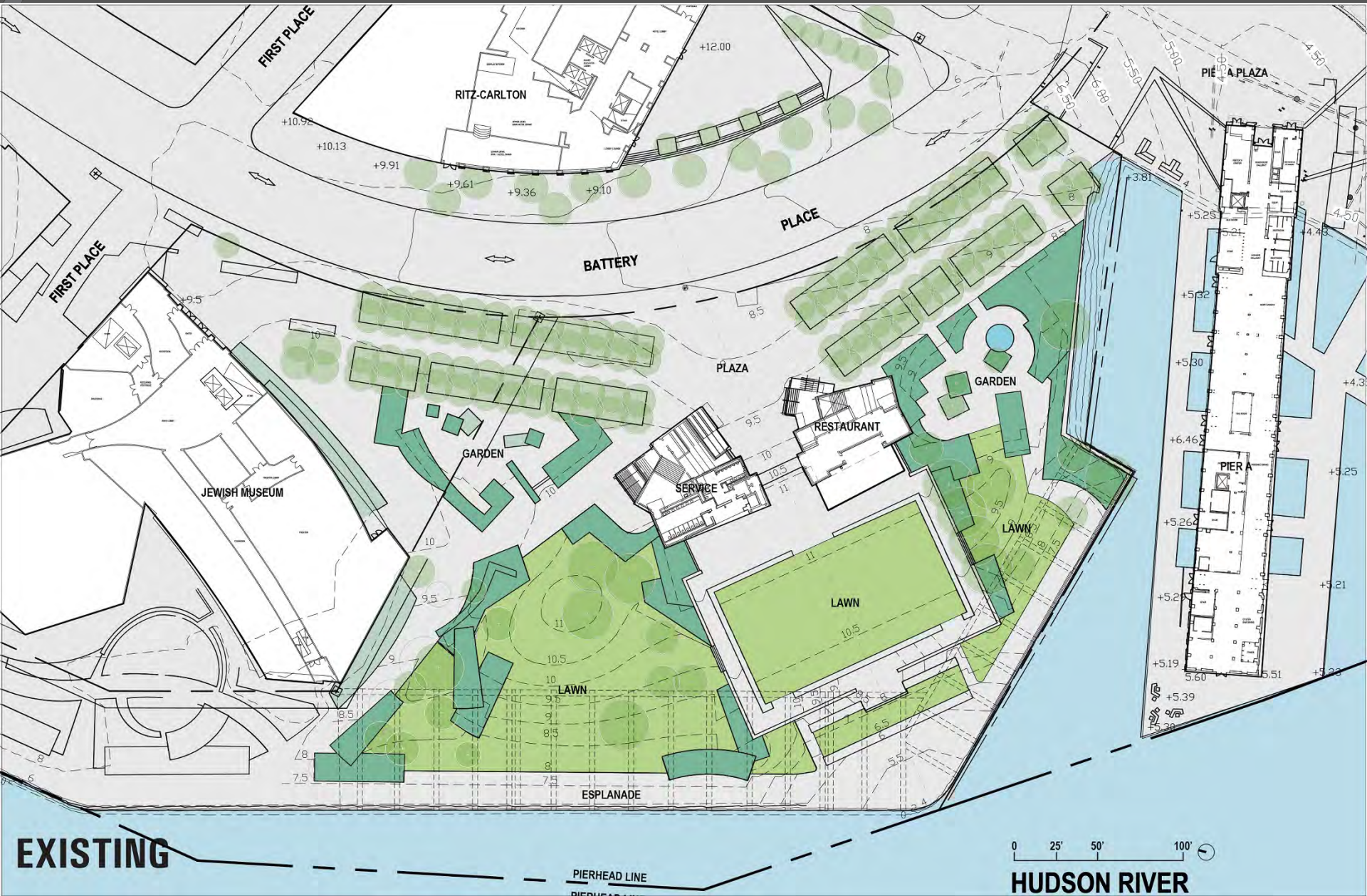
Example of brick paver settlement resulting in wide cracks at sloped walkway, west side




Design Exhibits



Existing Plan



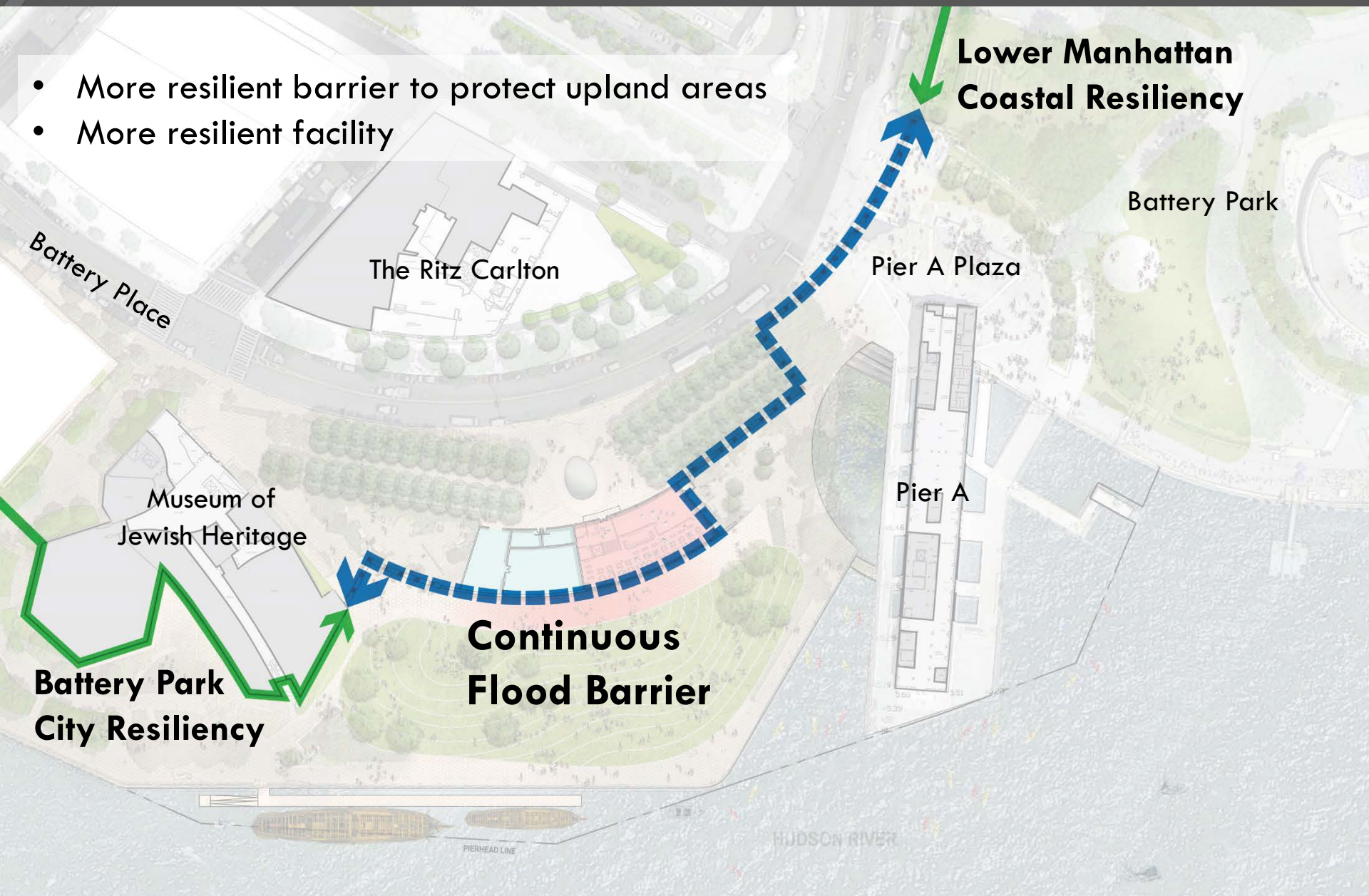
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- ***Use the property to provide resiliency protection for upland areas.***
 - Improve the park, for use by BPC residents.
 - Improve maintenance and support facilities.
 - Extend the Esplanade thru to Pier A and the Battery.
 - Provide better opportunity for food and beverage.

Conceptual Site Plan



New Park Pavilion Design Principles: Resiliency

- More resilient barrier to protect upland areas
- More resilient facility



Footprint Comparison

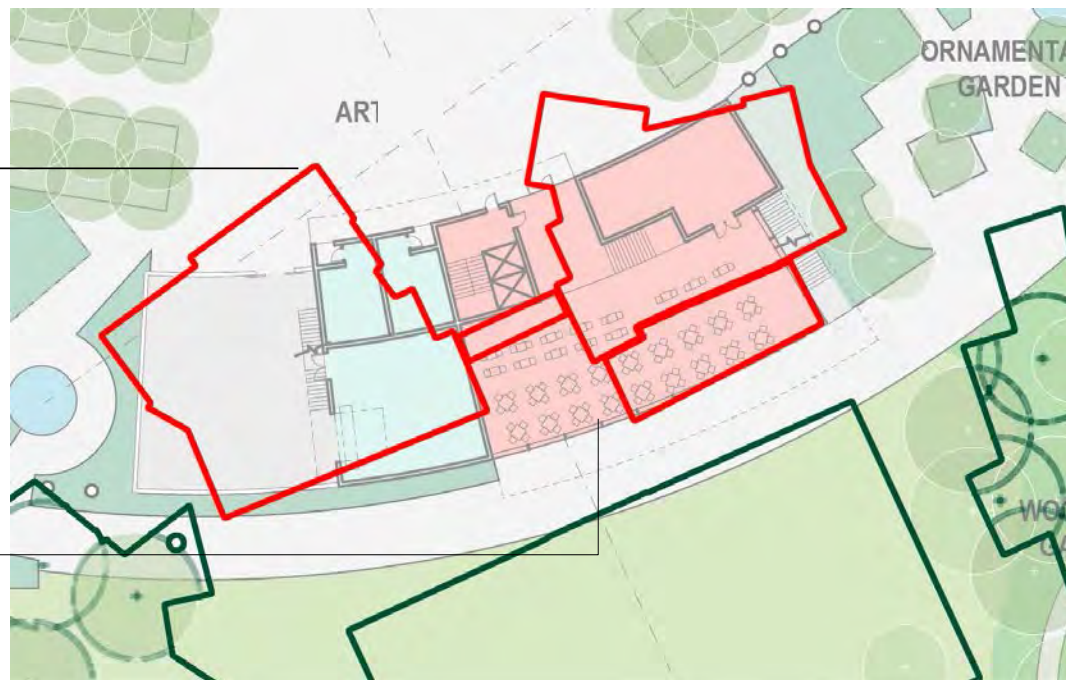


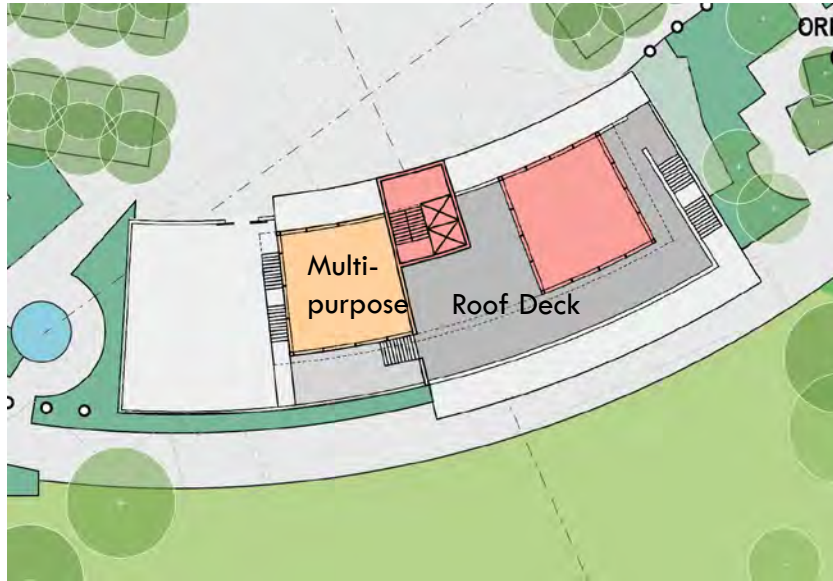
Program: Existing and Proposed

Program	Existing Usable Area	Proposed Usable Area
Restaurant	3,450 sf	5,000 sf (Ground floor) 1,200 sf (Second floor)
Maintenance/Auxiliary	2,100 sf (partial ht space)	1,100 sf (full ht space)
Restrooms	1,310 sf	900 sf
Community Room	-----	1,200 sf
Roof Deck	3,126 sf	3,200 sf (public) 1,400 sf (restaurant)
Steps and landings	3,968 sf	
Service Yard (Uncovered)	960 sf	3,000 sf
Total	14,914 sf	17,000 sf

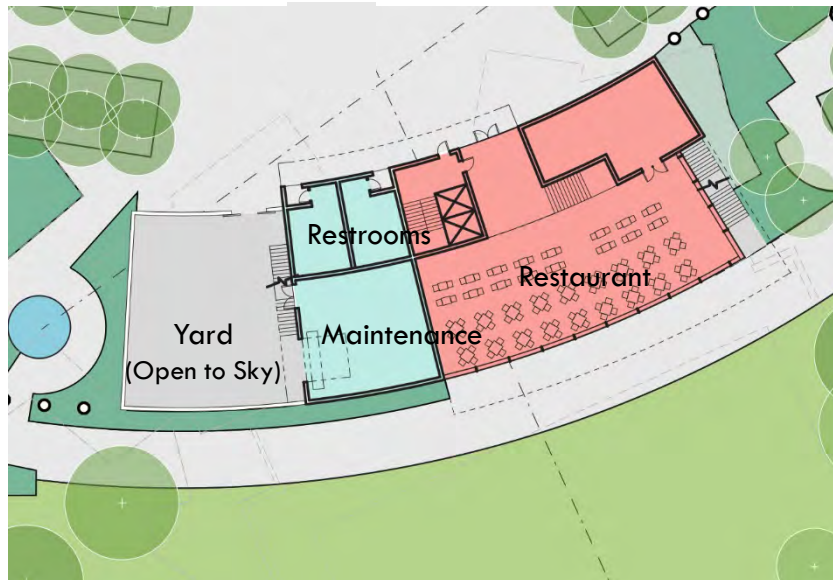
Footprint of
existing Pavilion

Footprint of
Proposed Pavilion



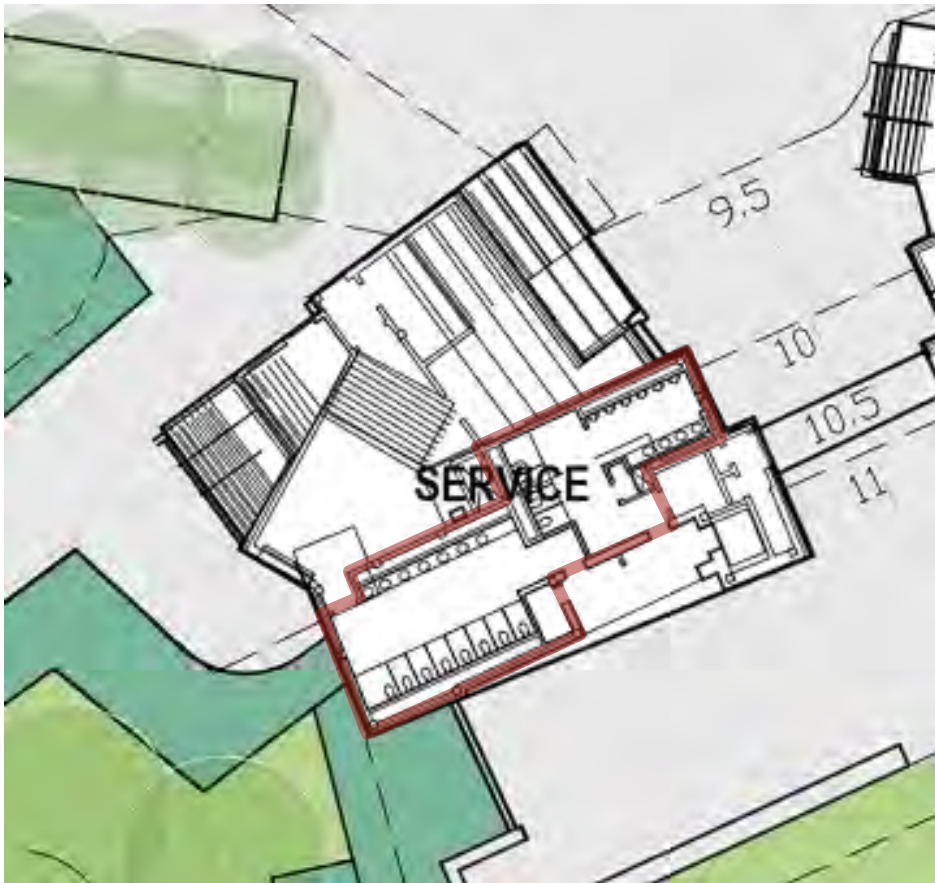


Community Room:	1,200 sf
Public Roof deck:	3,200 sf
Restaurant:	1,200 sf
Restaurant Roof deck:	1,400 sf



Restroom:	900 sf
Maintenance:	1,100 sf
Restaurant:	5,000 sf
Yard:	3,000 sf

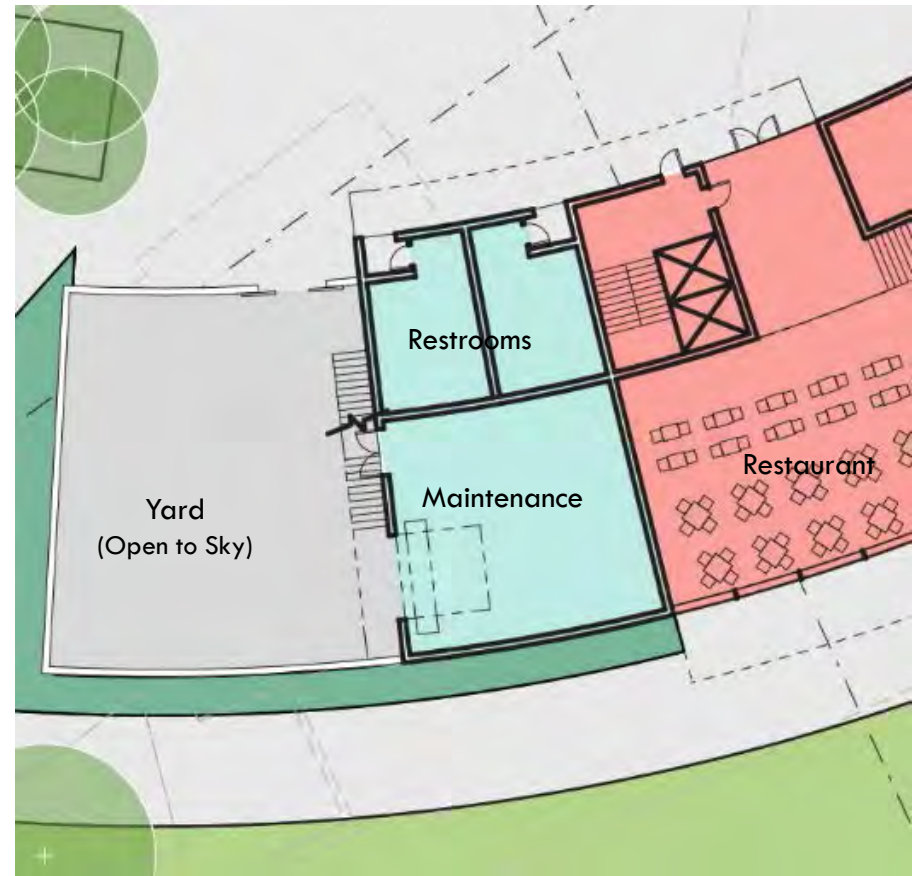
Existing Public Restrooms Fixture Count:



Existing

15 fixtures total

Gross Area: 1,310 gross sf

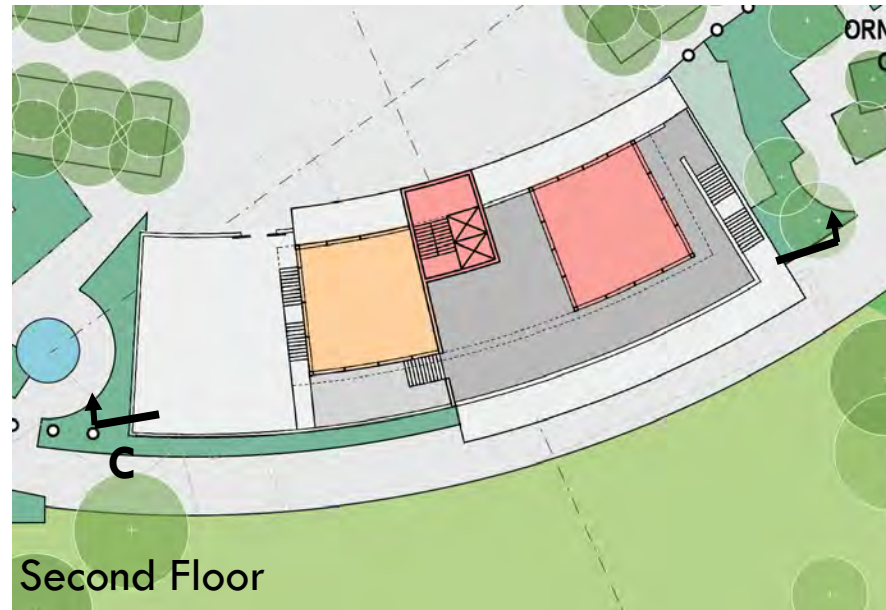
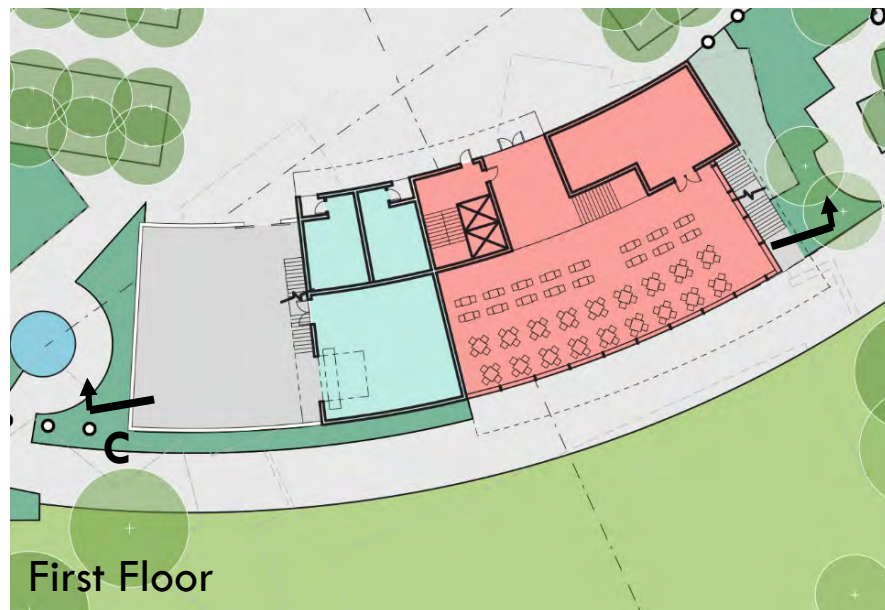


Proposed

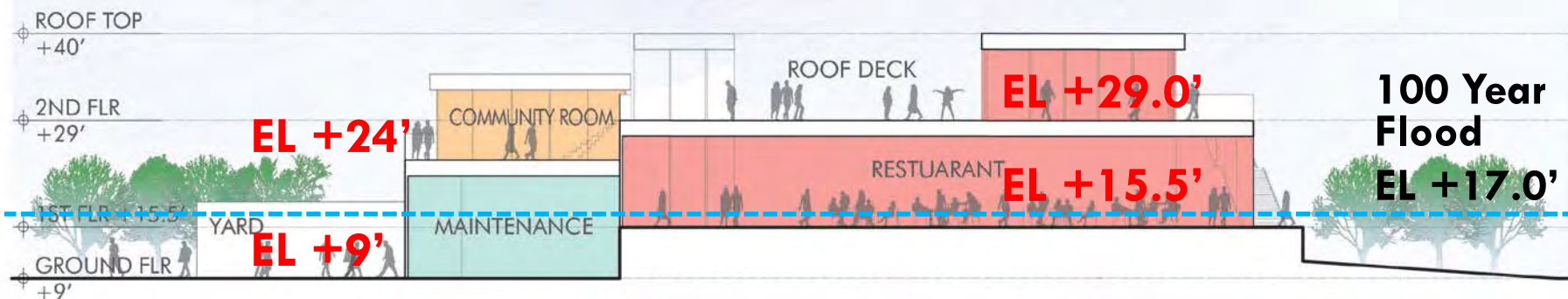
15 fixtures total:

Recommended Gross Area: 900 to 1,000 gross sf

Longitudinal Section



SECTION C



Use of Parkland Comparison

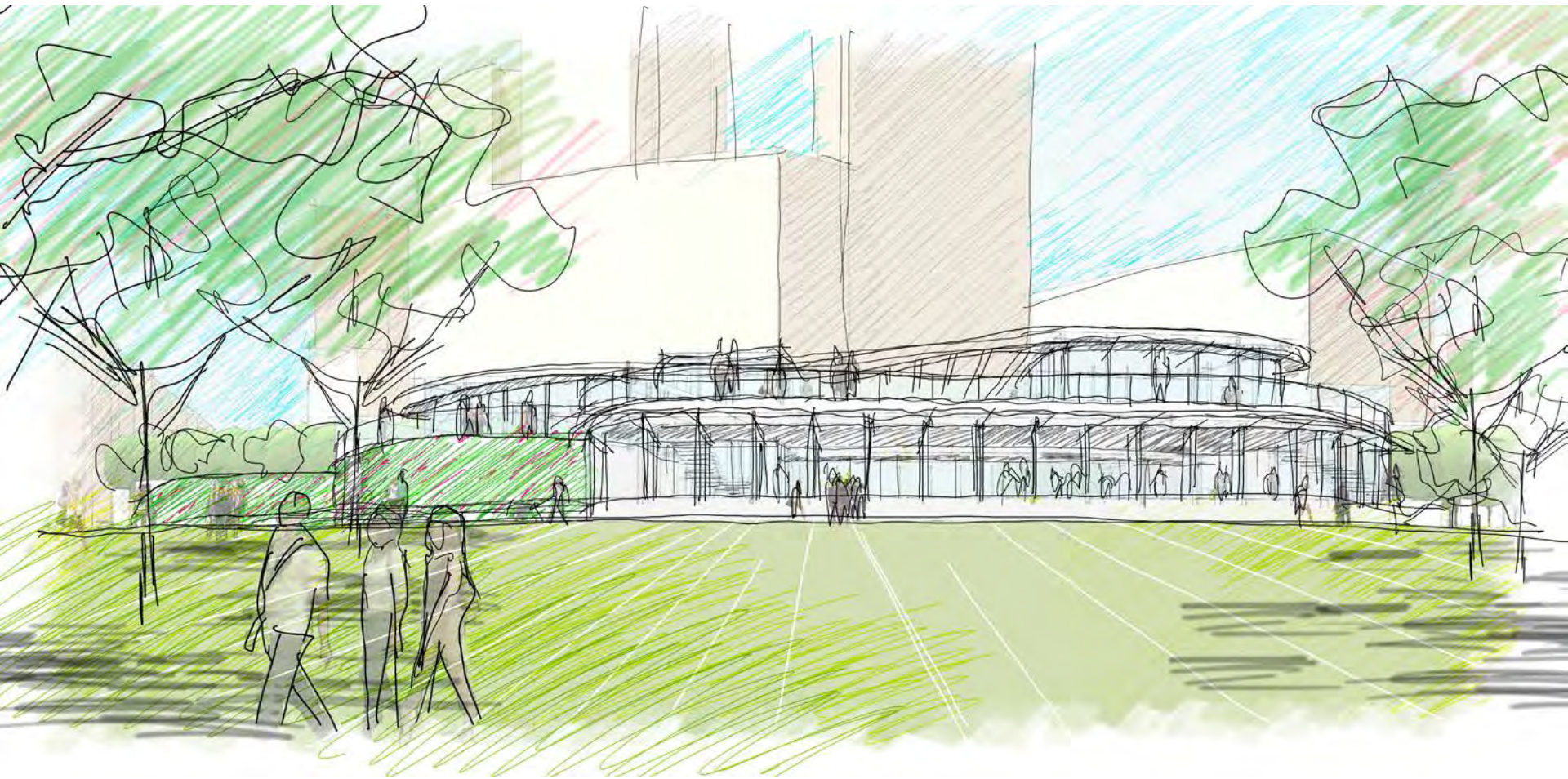


EXISTING

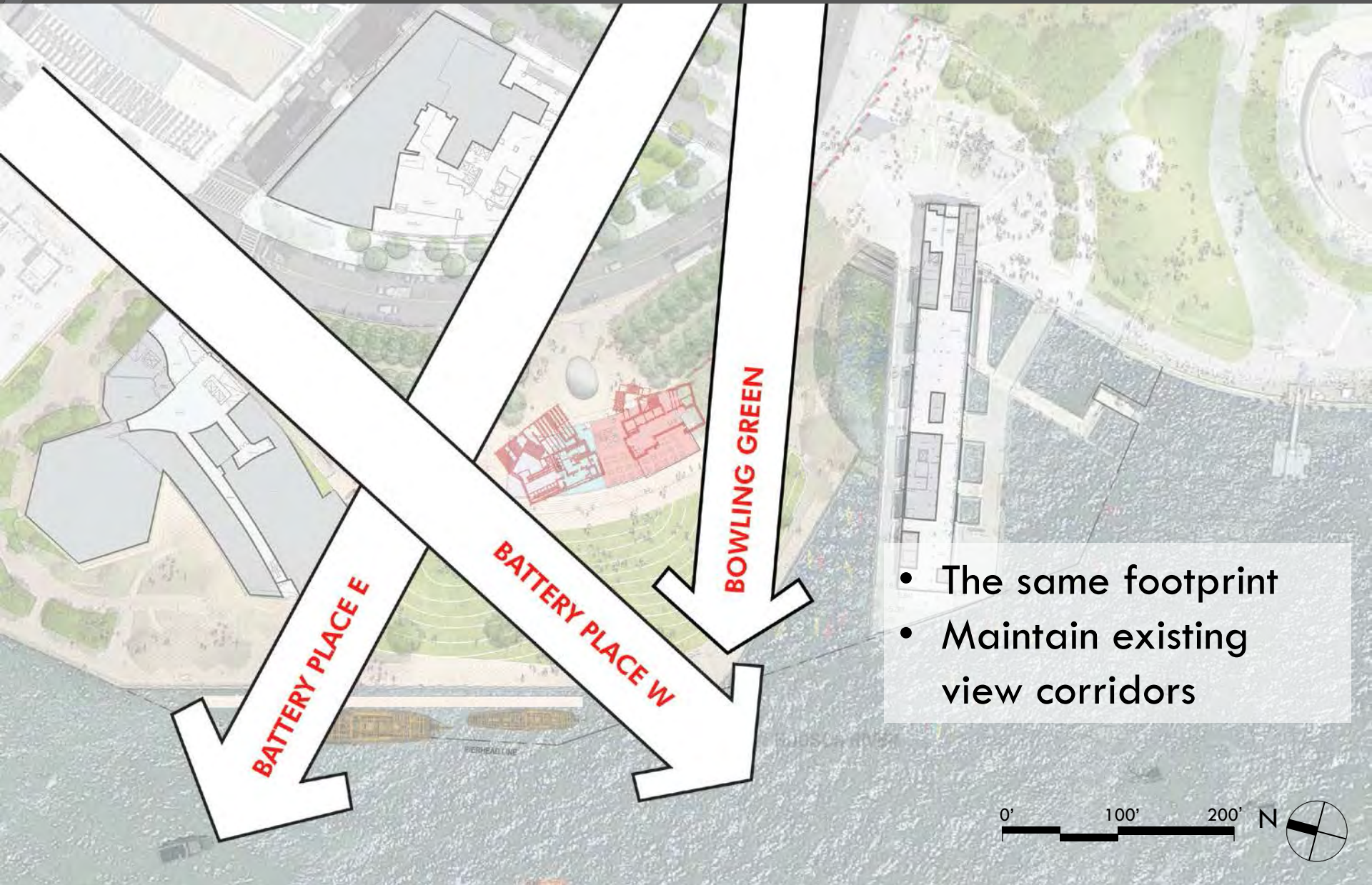
Ornamental Gardens:	8,800 sf
Lawn:	34,400 sf
Hardscape:	30,200 sf

PROPOSED

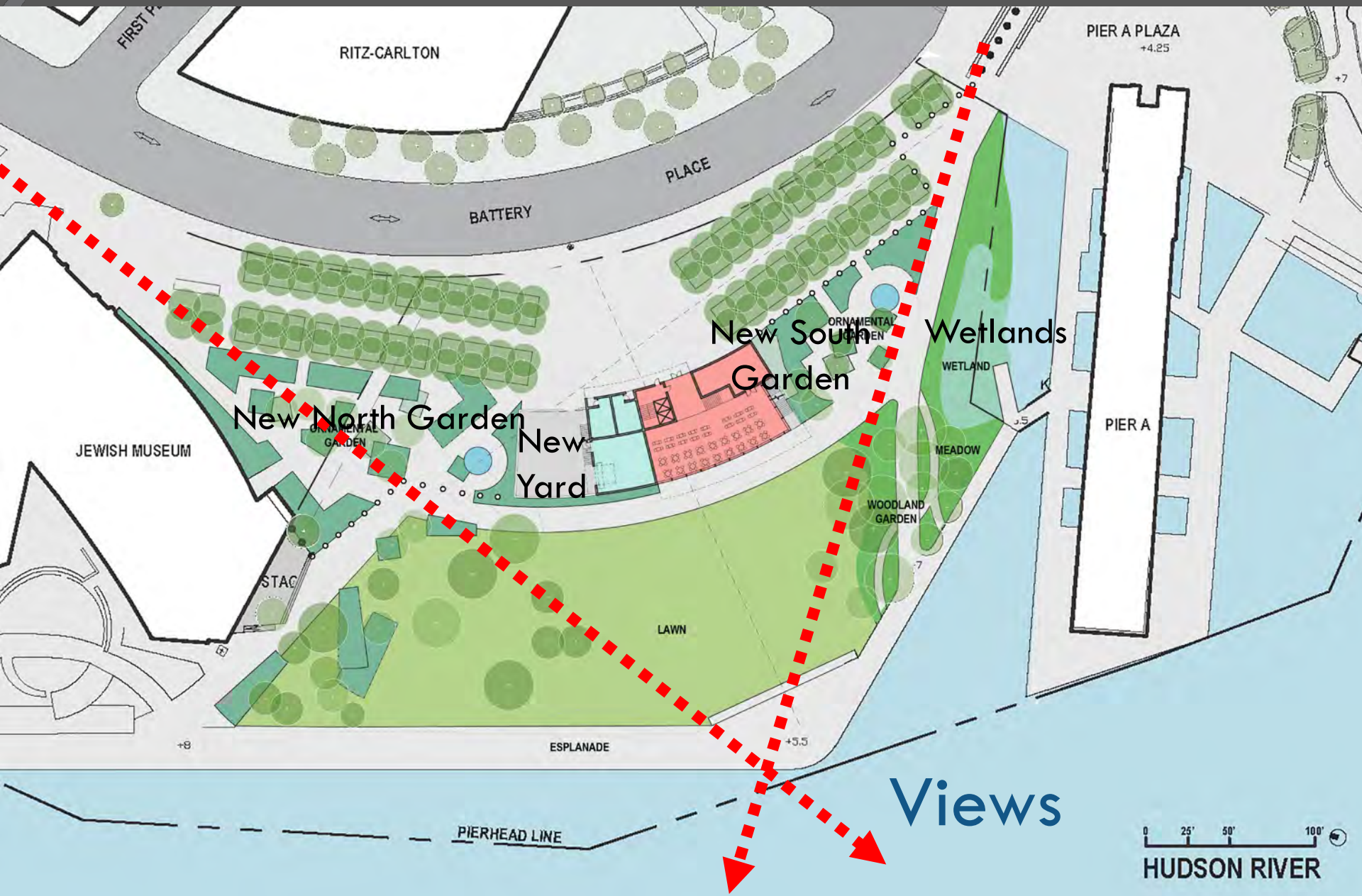
Ornamental Gardens:	11,600 sf (+2,800 sf)
Lawn:	39,500 sf (+5,100sf)
Hardscape:	24,900 sf (-5,300 sf)
Wetlands and Woodlands:	11,500 sf (+11,500sf)



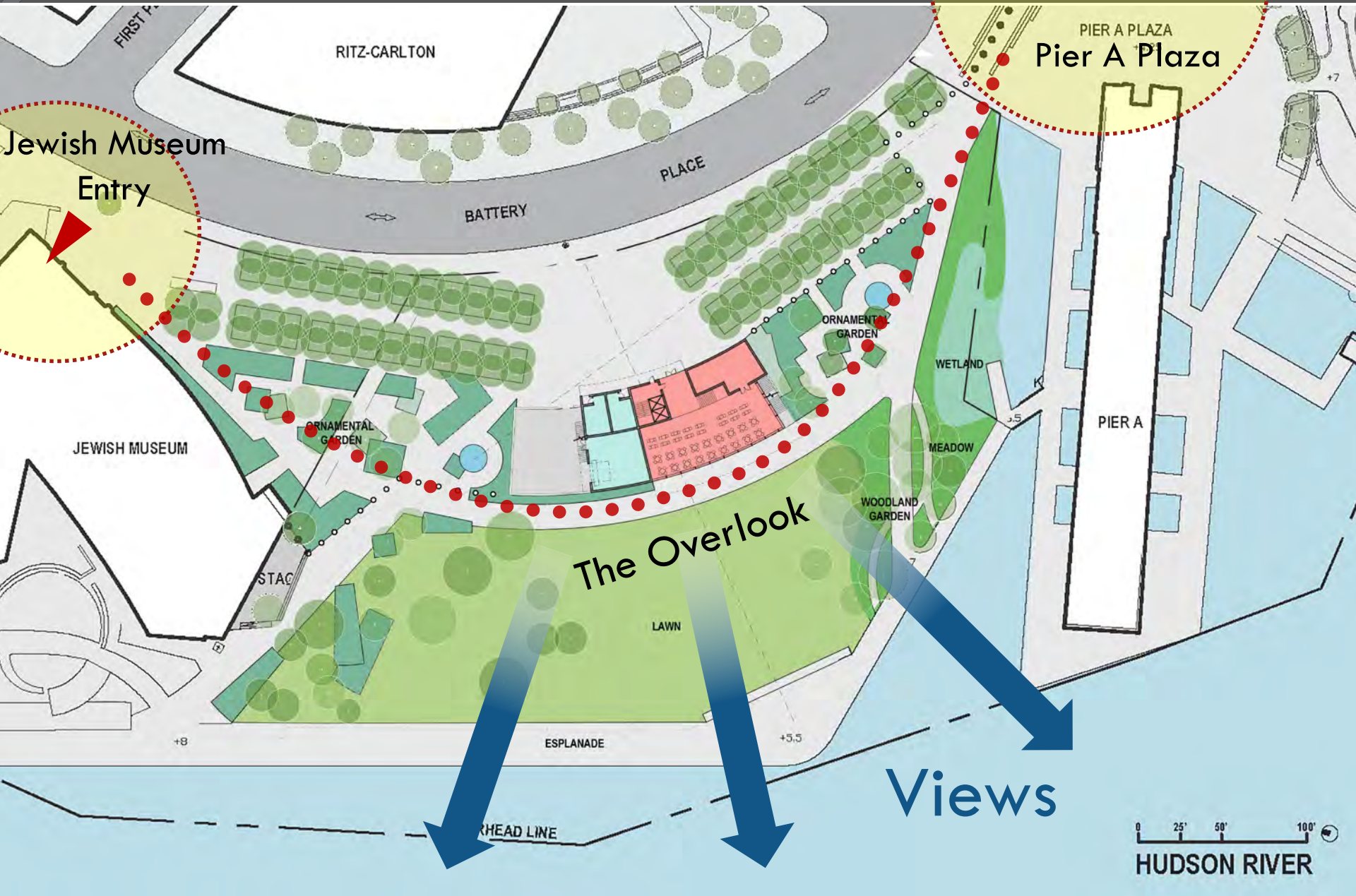
New Park Pavilion Design Principles



Park Entrance Perspective



Curving Overlook and Destinations



Deployable Columns – Georgetown Harbor



Battery Park City Authority: Wagner Park

Columns as Civic Design



Battery Park City Authority: Wagner Park



Columns as Civic Design



View looking South



View looking North along Overlook

Statue of
Liberty



Wetlands

North
Garden

View looking North from Battery Place

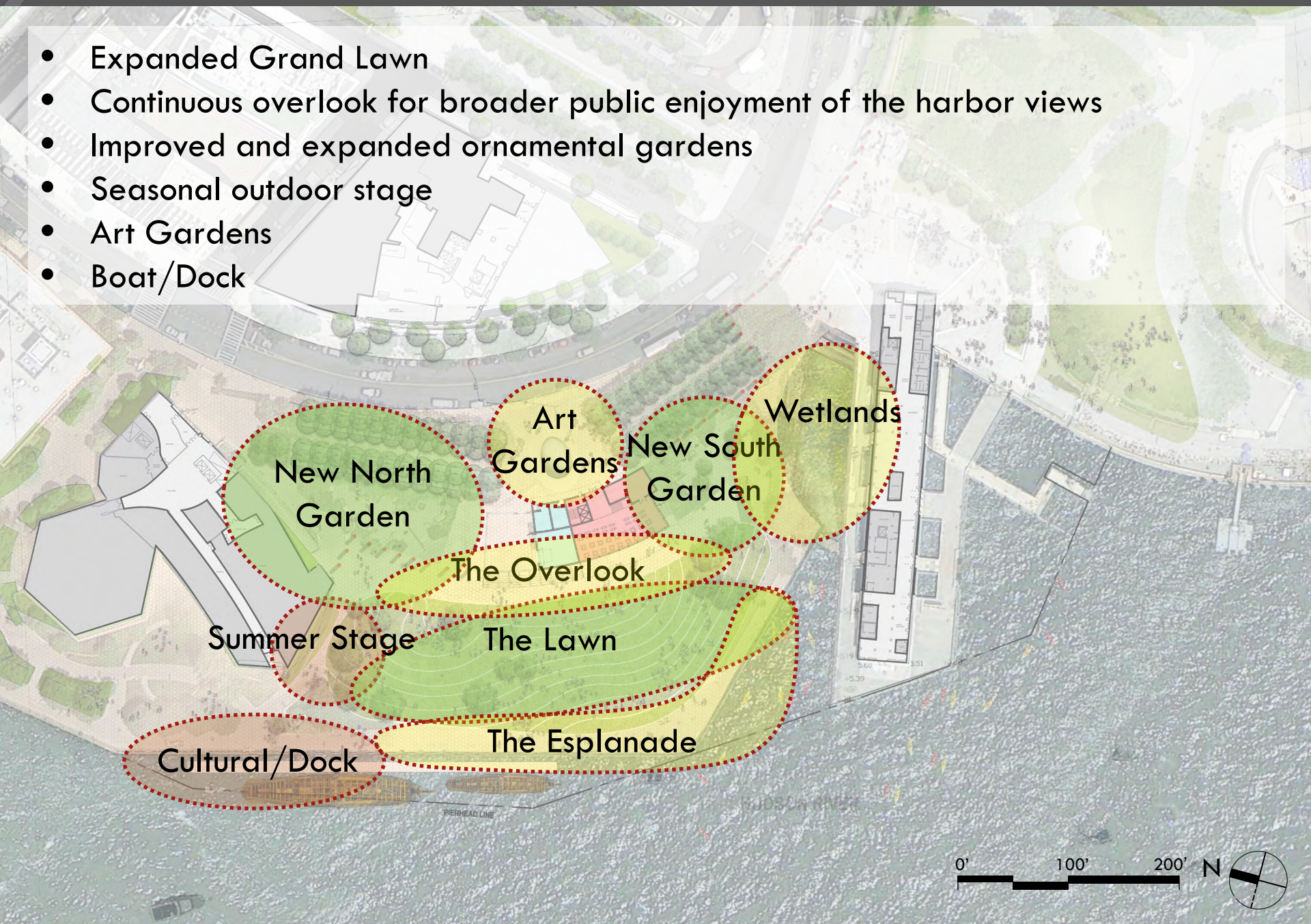


Pier A Plaza Grading Concept



A Series of Places

- Expanded Grand Lawn
- Continuous overlook for broader public enjoyment of the harbor views
- Improved and expanded ornamental gardens
- Seasonal outdoor stage
- Art Gardens
- Boat/Dock



Thank You

