

# SOUTH BATTERY PARK CITY RESILIENCY

## CB1 UPDATE

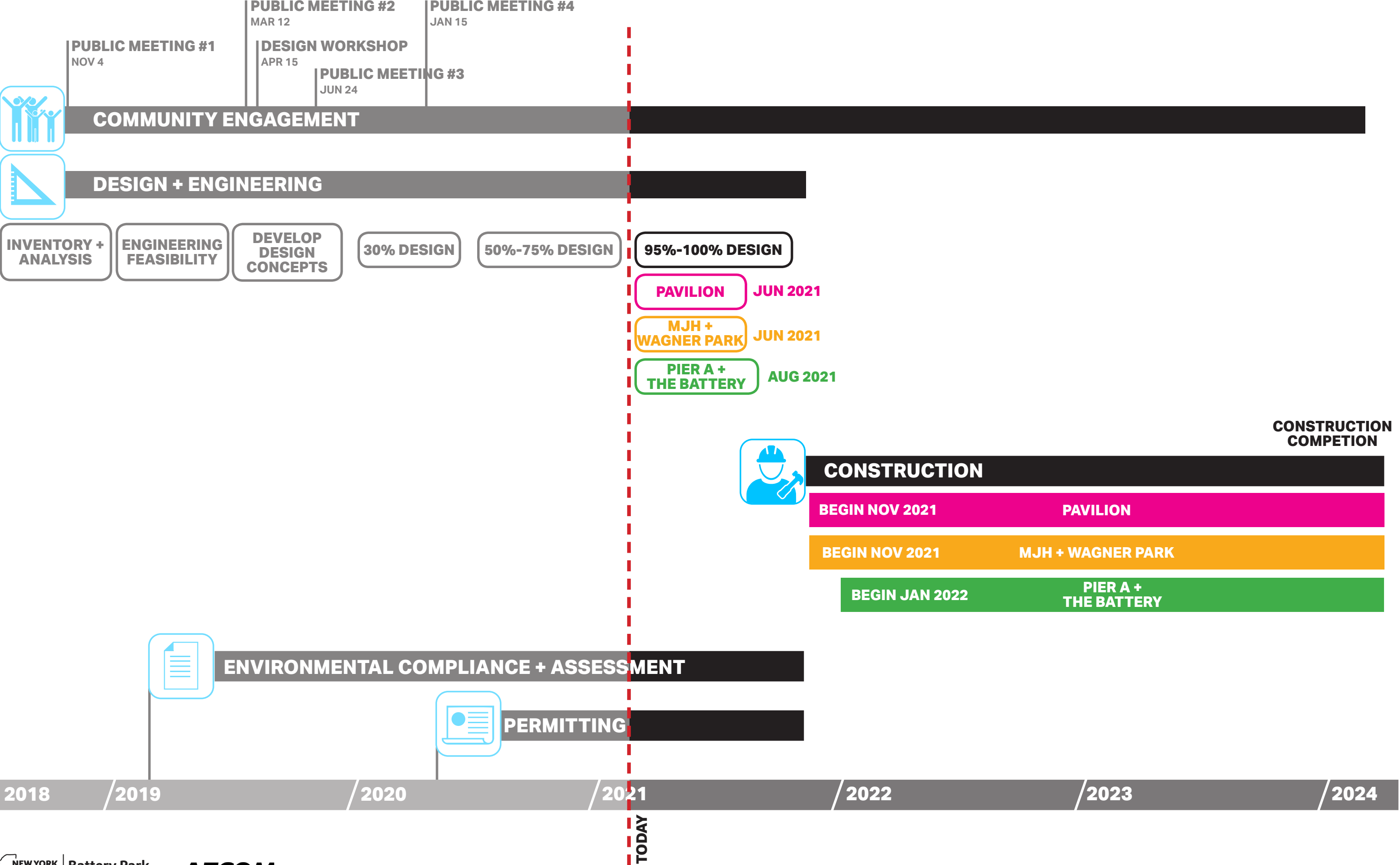
FEBRUARY 22, 2021

# AGENDA

- 1. SCHEDULE**
- 2. ENVIRONMENTAL IMPACT STATEMENT (EIS)**
- 2. SUSTAINABILITY + SITE SALVAGE**
- 3. PIER A PLAZA SITE SECURITY + BATTERY PLACE**
- 4. THE BATTERY UPDATES**
- 5. WAGNER PARK UPDATES**

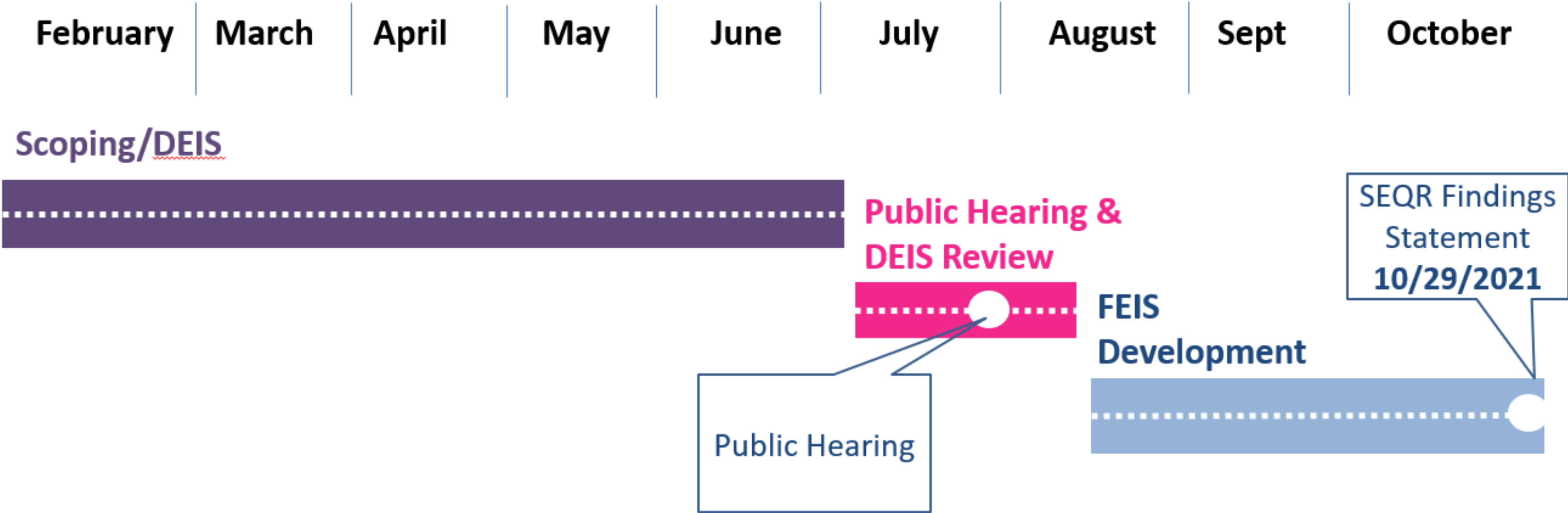


SCHEDULE



# ENVIRONMENTAL IMPACT STATEMENT (EIS)

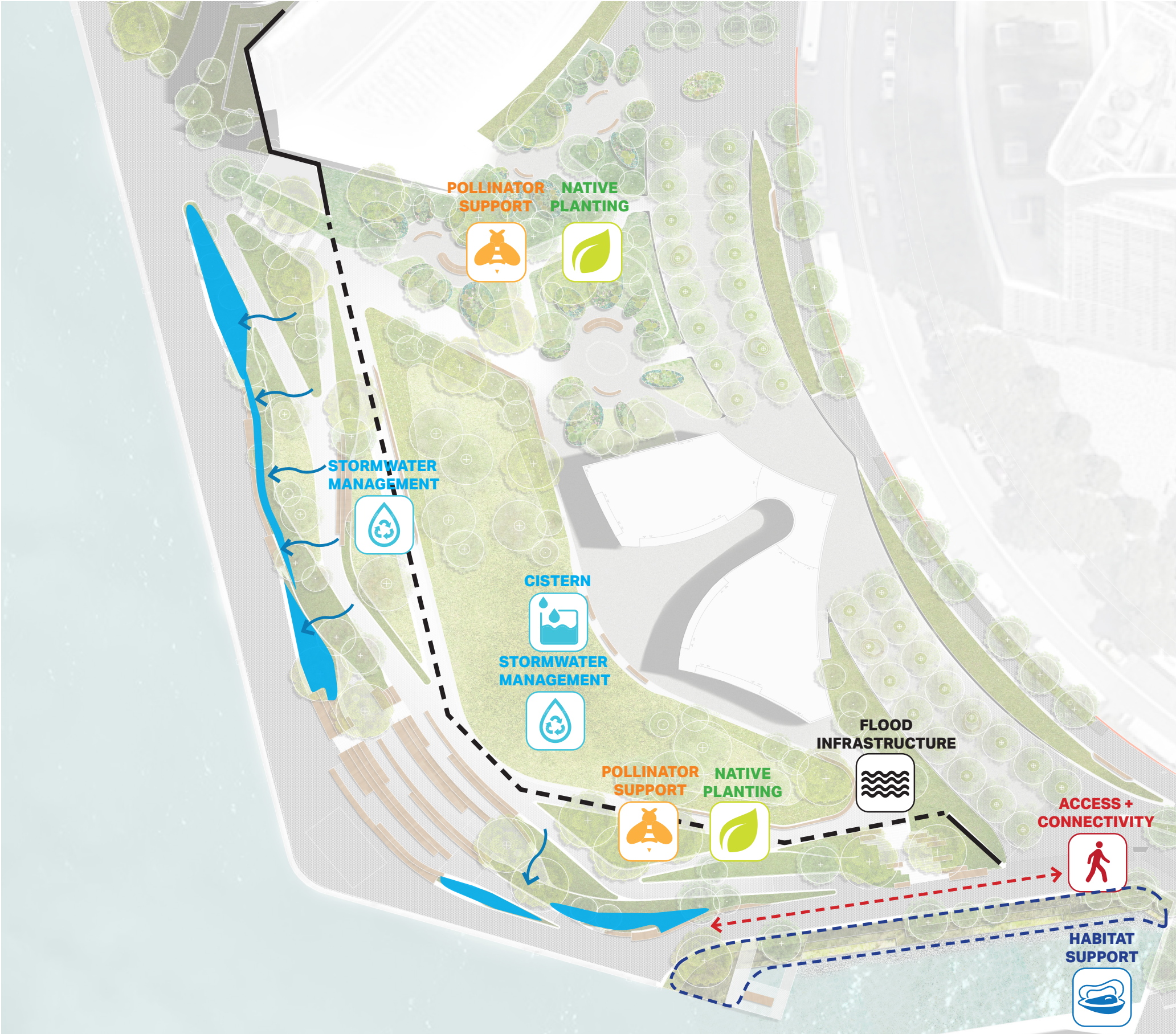
South Battery Park City Resiliency Project



# SUSTAINABILITY + SITE SALVAGE



# SUSTAINABILITY | MEASURES



## SITE STRATEGIES:

- Flood resilient, elevated park design
- Enhanced visual and physical access to water
- Increased waterfront pathway and greenway connectivity
- Stormwater management using infiltration and underground cistern
- Reduction of water consumption through subsurface irrigation at the lawn areas
- Upland riparian zone habitat and pollinator support
- Lowland and in-water habitat support at Pier A inlet
- 85% Native Planting
- Urban heat island mitigation - average pavement SRI above 29
- Environmentally-responsible construction
- Solar lighting for resilient energy sources
- Low carbon concrete
- Site salvage (plants and materials)
- Educational programming
- Community engagement + site assessments

## BUILDING STRATEGIES:

- Bird collision deterrence
- Geothermal
- Rooftop solar thermal panels
- Green roof
- Triple pane, low e-glazing
- Overhang to minimize glare and solar heat gain
- High reflectance pavement
- Low carbon concrete and interior materials
- Healthy and low-emitting materials
- Rainwater collection + reuse
- Efficient potable water fixtures
- Energy efficient lighting
- Highly insulated building envelope
- Energy recovery ventilation



# SUSTAINABILITY | CERTIFICATIONS



**BUILDING**

ZERO

CARBON  
CERTIFICATION

**SITE**

WEDG

Waterfront Edge  
Design Guidelines



# ILFI ZERO CARBON CERTIFICATION | REQUIREMENTS

## FIRST PERFORMANCE-BASED CARBON STANDARD ADDRESSING BOTH EMBODIED AND OPERATIONAL CARBON.

### OPERATIONAL CARBON:

- Net zero energy including onsite & offsite measures
- No combustion
- Achieve **25% EUI REDUCTION** from ASHRAE equivalent building
- Offset all energy use with renewable energy

### CURRENT DESIGN:

- Exceeding target, anticipating **38% EUI REDUCTION**.

### EMBODIED CARBON:

- Embodied carbon of primary foundation, structure and enclosure must be **reduced by 10%**
- Project total embodied carbon should be <500 kg CO2e/m2
- Disclose and offset the remainder of embodied carbon

### CURRENT DESIGN:

Exceeding target, anticipating **37% REDUCTION**.

Table 1. Applicable Building Materials

EMBODIED CARBON OFFSET	10% REDUCTION	PRIMARY MATERIAL ASSEMBLIES	Foundation	Footings Retaining Walls
			Structure	Framing Reinforcement Slabs + Decking
			Enclosure	Cladding Fenestration Insulation Roofing
		INTERIOR MATERIAL ASSEMBLIES	Finishes	Ceilings Floors Walls + Partitions
			Partitions	Fenestration Framing Insulation
		ADDITIONAL ASSEMBLIES (OPTIONAL TO INCLUDE)	Interior Furnishings	Equipment Fixtures Furniture
			Building Systems	Electrical Mechanical Plumbing + Fire Protection
			Site Work	Excavation Exterior Paving Shoring + Formwork

# ILFI ZERO CARBON CERTIFICATION | LIFE CYCLE ASSESSMENT

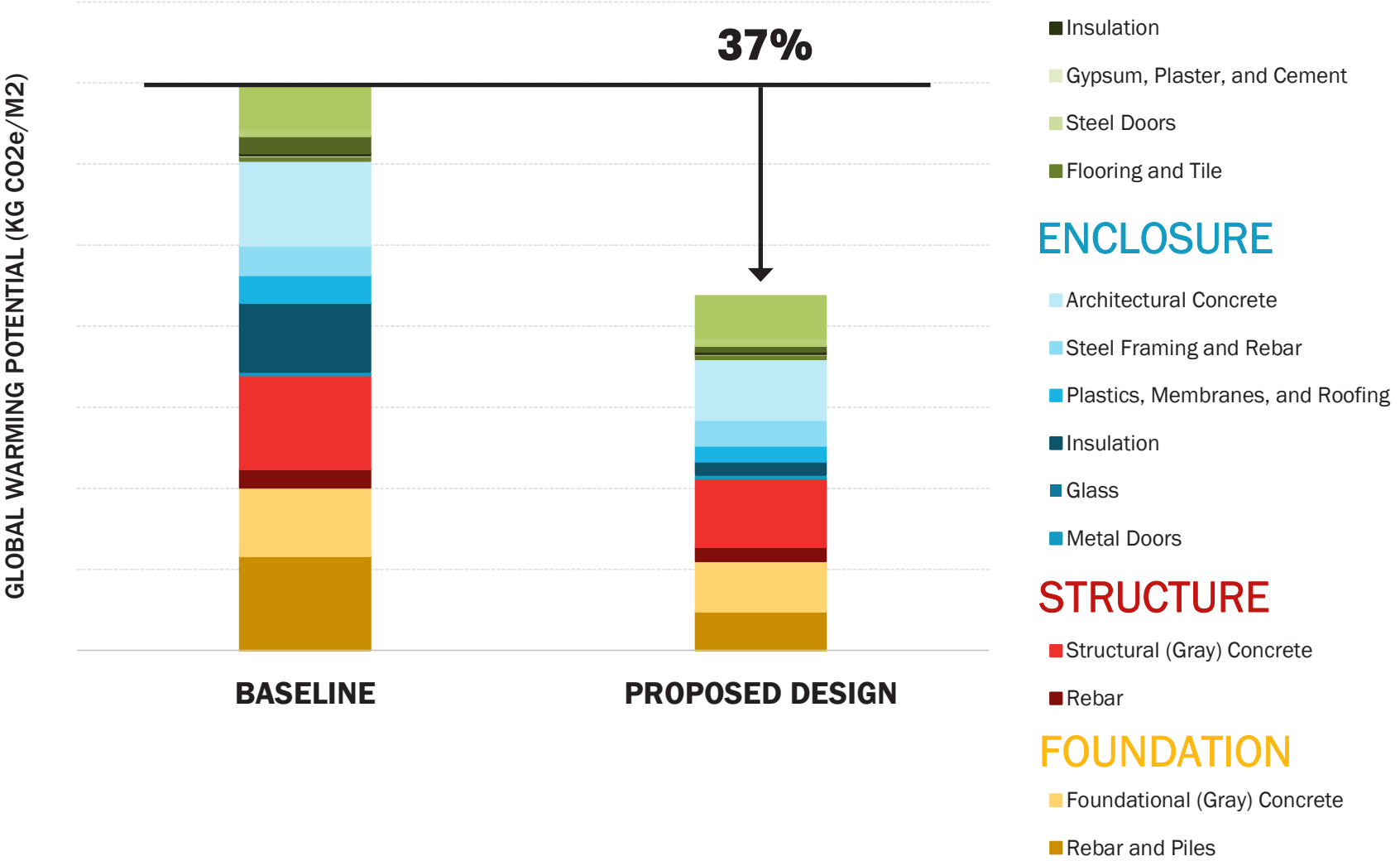
**EMBODIED CARBON:**  
**THE SUM OF ALL GREENHOUSE GAS EMISSIONS RESULTING FROM THE MINING, HARVESTING, PROCESSING, MANUFACTURING, TRANSPORTATION, AND INSTALLATION OF BUILDING MATERIALS.**

- The project is completing a **Whole Building Life Cycle Assessment** to quantify the embodied carbon associated with the building’s materials and construction
- Currently targeting a **37% REDUCTION** in embodied carbon of building materials
- The remainder of embodied carbon will be offset.

**KEY STRATEGIES:**

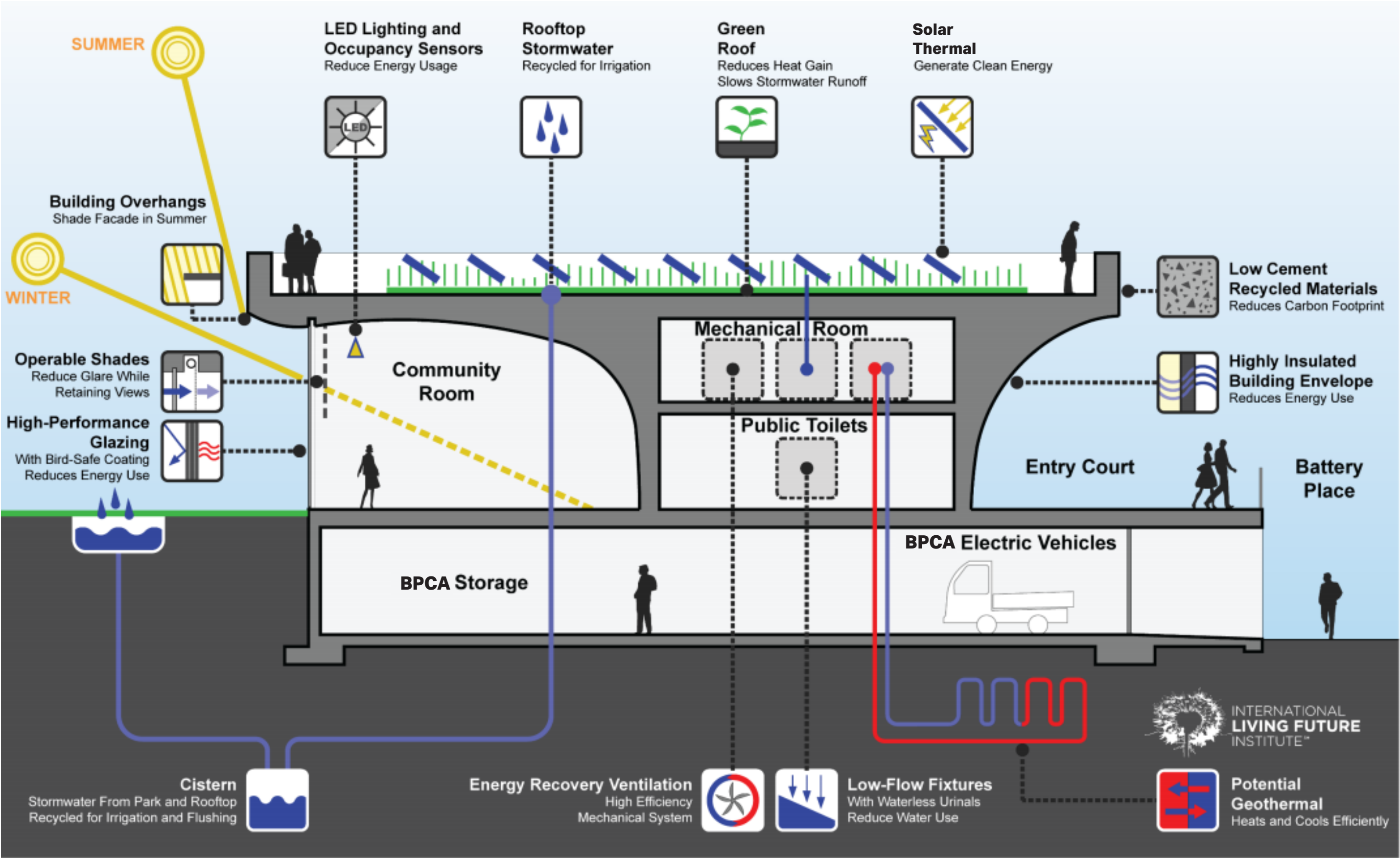
- Cement replacement in concrete applications
- Exploration of low carbon concrete technologies
- High recycled content in structural steel and rebar
- Low impact insulation substitution
- Low carbon interior finishes

**GWP/M2 REDUCTION COMPARISON**  
SOUTH BATTERY PARK RESILIENCY





SUSTAINABILITY | PAVILION



# WEDG CERTIFICATION | KEY STRATEGIES

## ENHANCING PUBLIC BENEFIT OF WATERFRONT DEVELOPMENTS THROUGH A FOCUS ON RESILIENCE, ECOLOGY, AND ACCESS.

### KEY STRATEGIES:

#### Site Assessment & Planning

- MULTI-DISCIPLINARY DESIGN TEAM
- SITE-WIDE VULNERABILITY AND ECOLOGICAL CONTEXT ASSESSMENTS
- EQUITABLE COMMUNITY ENGAGEMENT

#### Responsible Siting & Coastal Risk Reduction

- FLOOD-RESILIENT DESIGN ELEMENTS
- RESPONSIBLE SITING OF DESIGN STRUCTURES
- IMPROVED SENSORY CONNECTIONS TO WATER

#### Community Access & Connections

- QUALITY PUBLIC ACCESS AREAS
- DIVERSE PROGRAMMING AND EDUCATIONAL FEATURES
- INCREASED WATERFRONT PATHWAY AND GREENWAY CONNECTIVITY

#### Edge Resilience

- WATERFRONT EDGE SOFTENING
- NATURAL SHORELINE AT PIER A INLET
- IN-WATER HABITAT

#### Natural Resources

- SUSTAINABLE SITE FILL AND SOIL MANAGEMENT
- ENVIRONMENTALLY-RESPONSIBLE CONSTRUCTION PRACTICES
- SIGNIFICANT STORMWATER MANAGEMENT IN QUANTITY AND QUALITY
- REDUCED WATER USAGE
- URBAN HEAT ISLAND MITIGATION
- RESTORES BIODIVERSITY THROUGH NATIVE PLANTING, UPLAND RIPARIAN HABITATS, AND POLLINATOR SPECIES



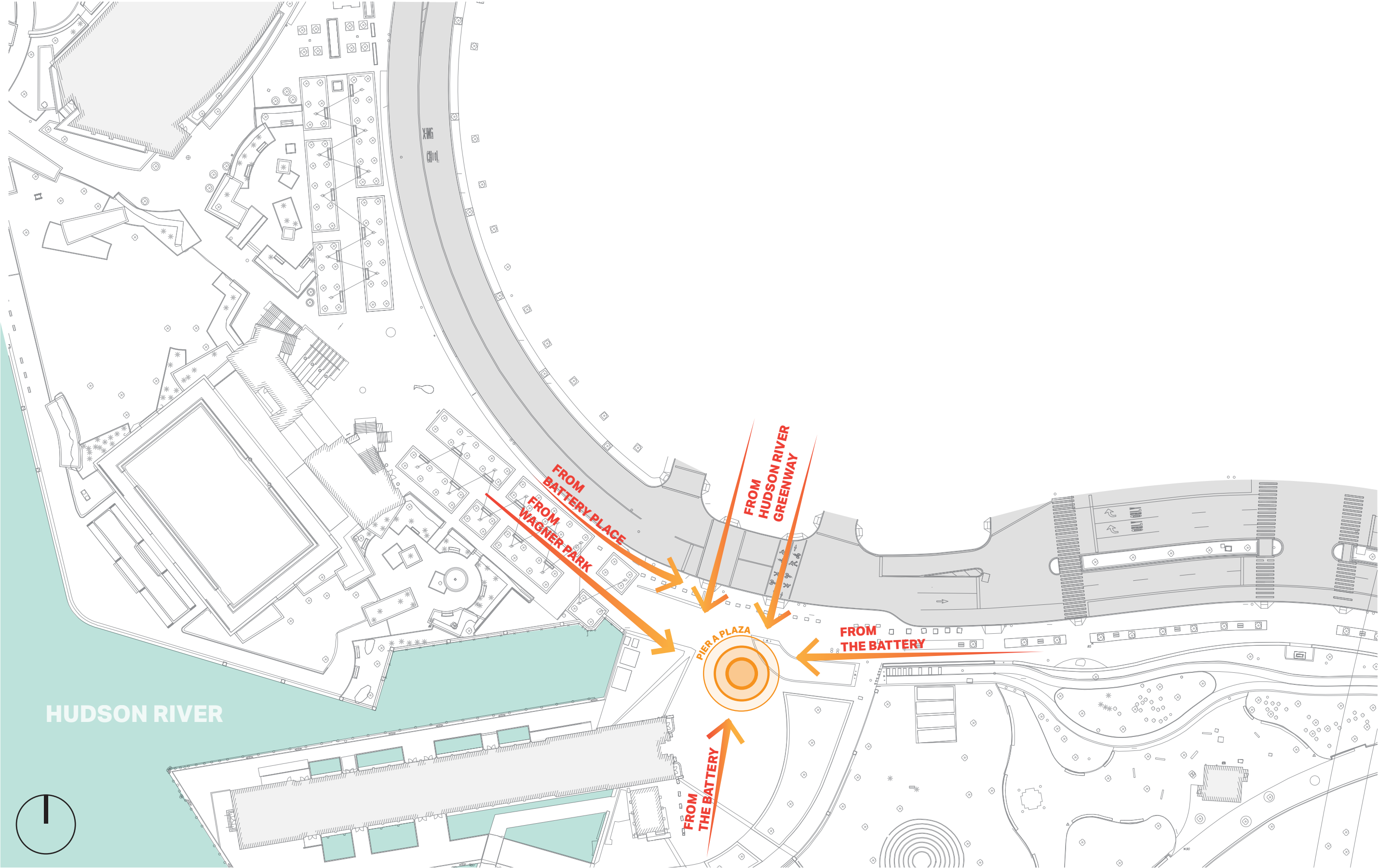
# SITE SALVAGE | AREAS OF SALVAGE STUDY



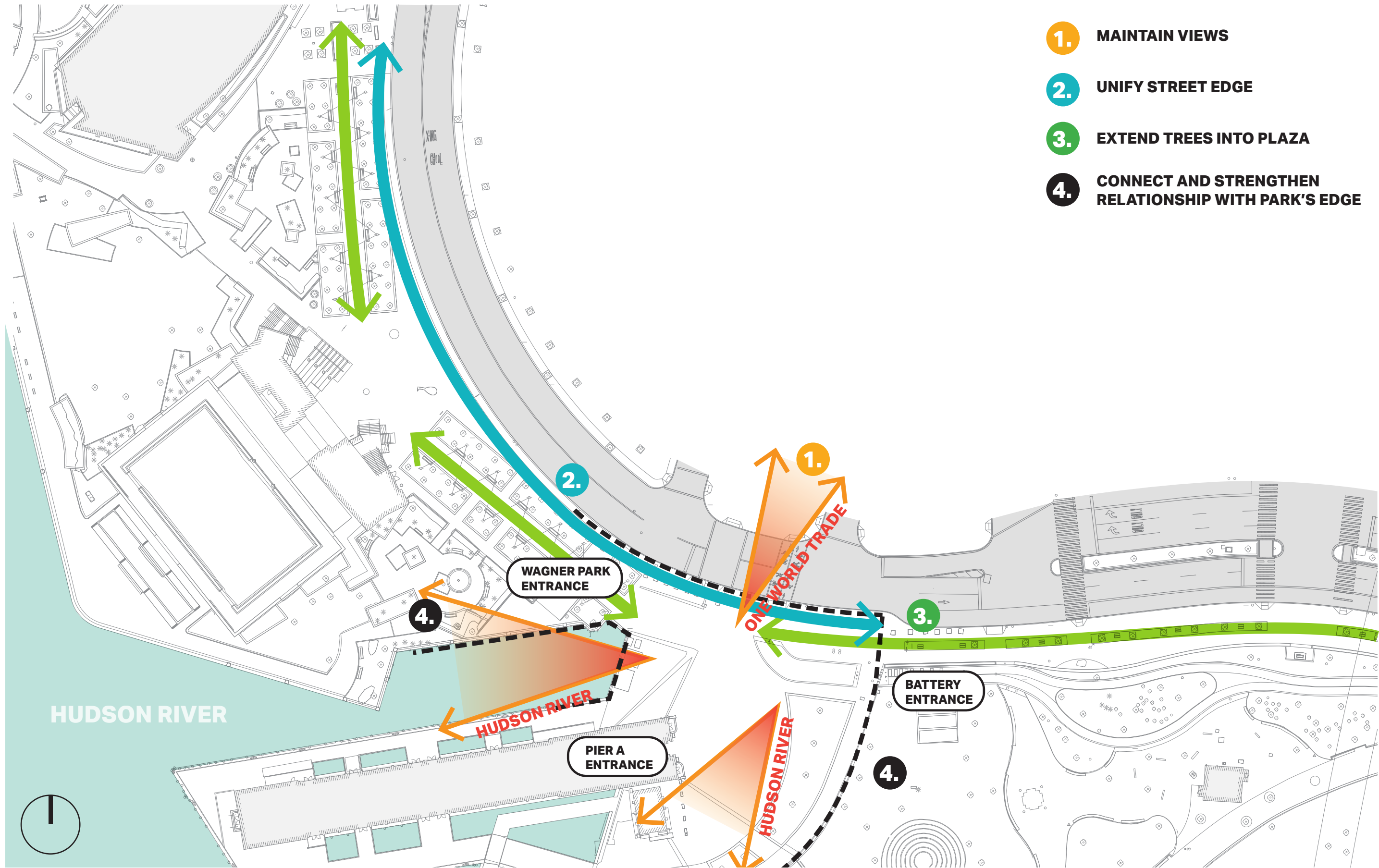
# PIER A PLAZA SITE SECURITY + BATTERY PLACE



# A CENTRAL DESTINATION

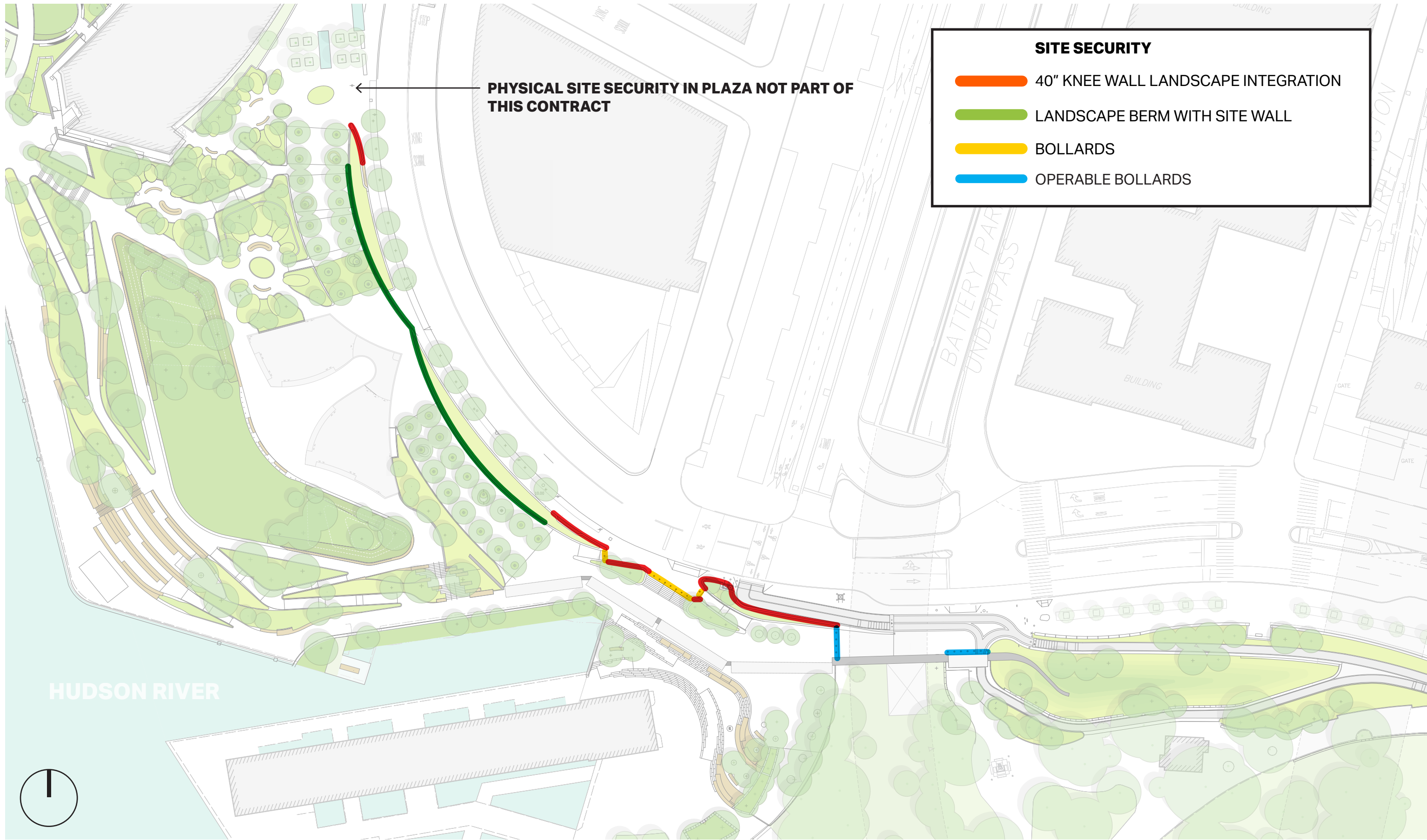


# DESIGN PRINCIPLES

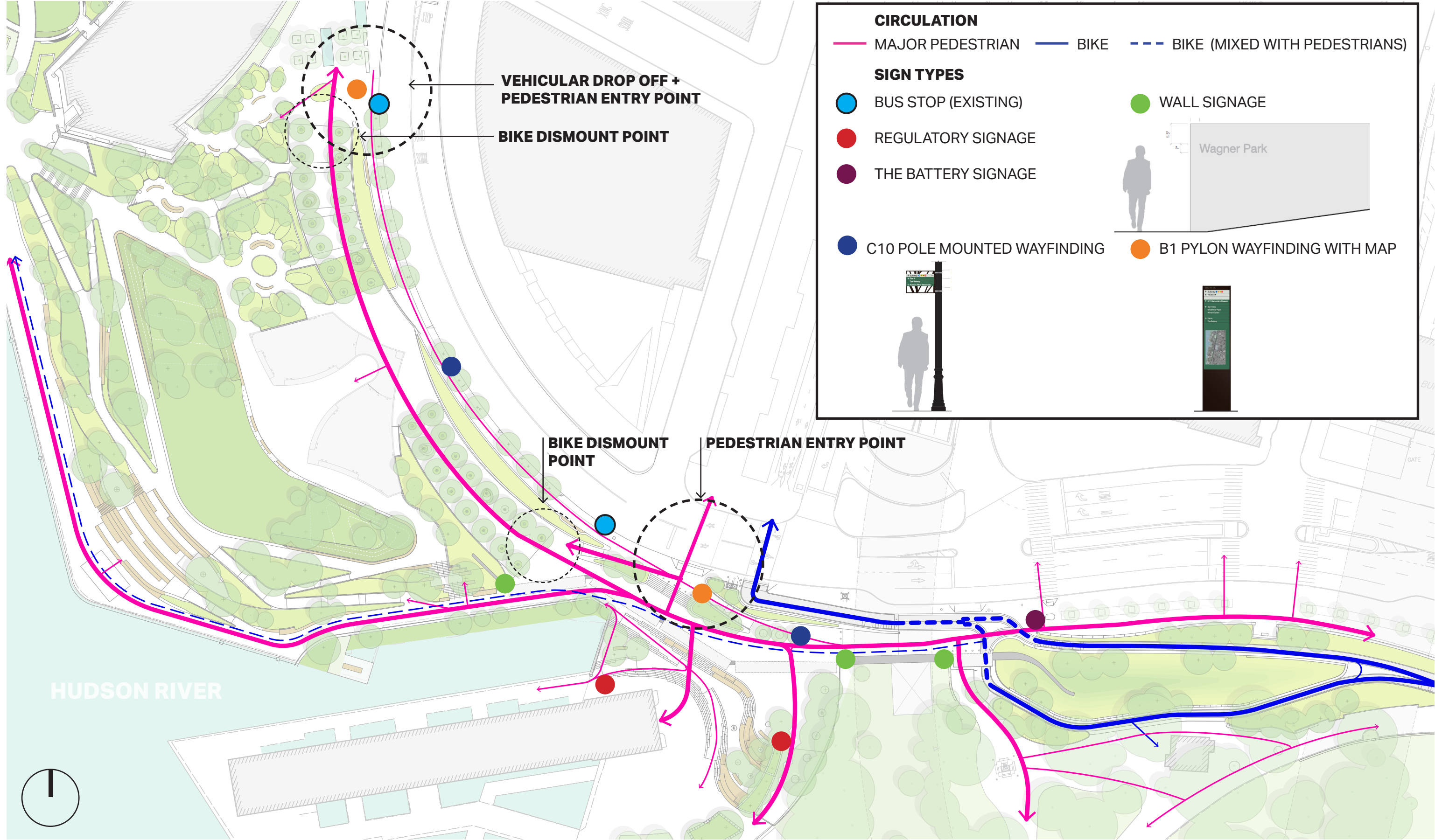




# PIER A PLAZA + BATTERY PL | SITE SECURITY

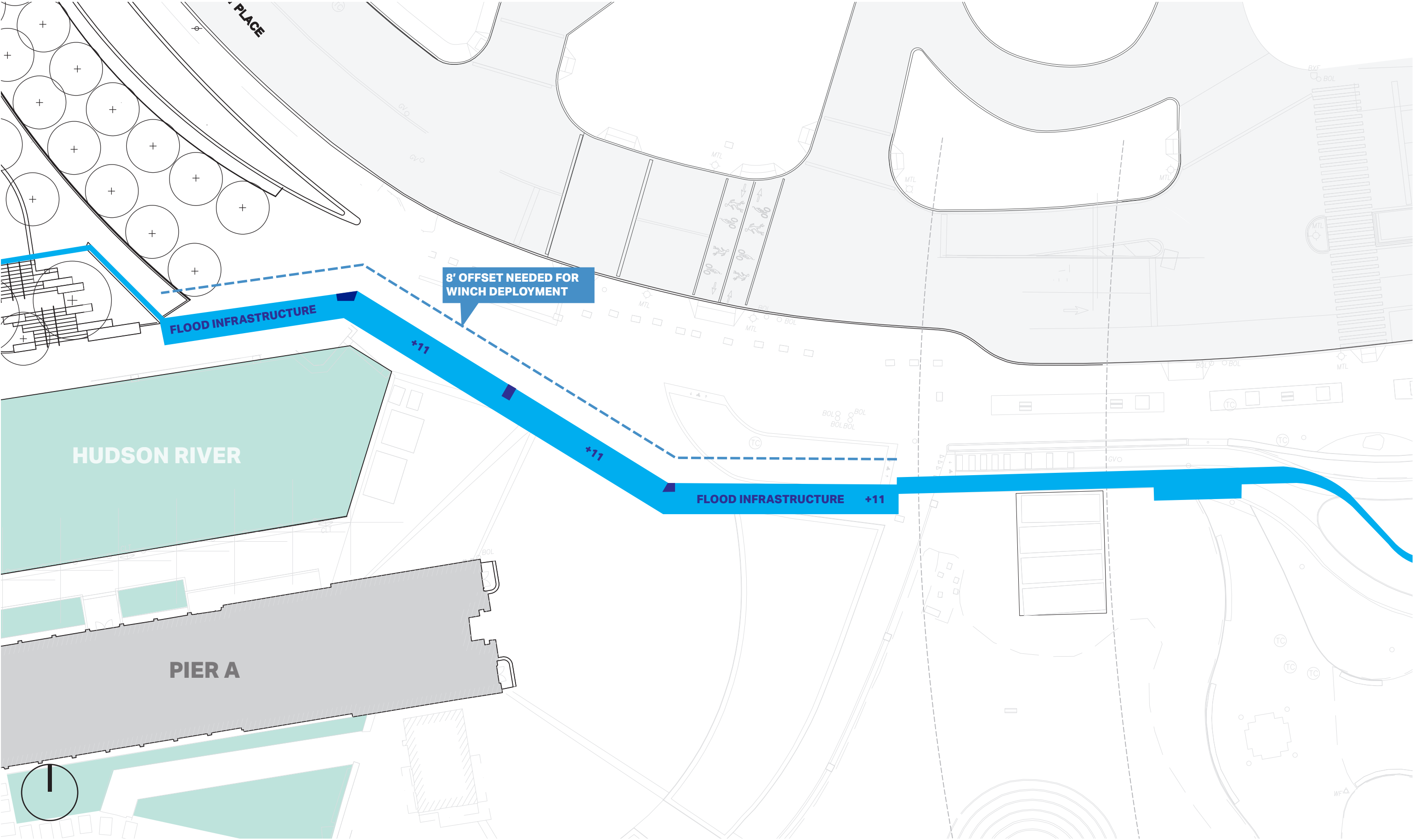


# PIER A PLAZA + BATTERY PL | CIRCULATION + WAYFINDING

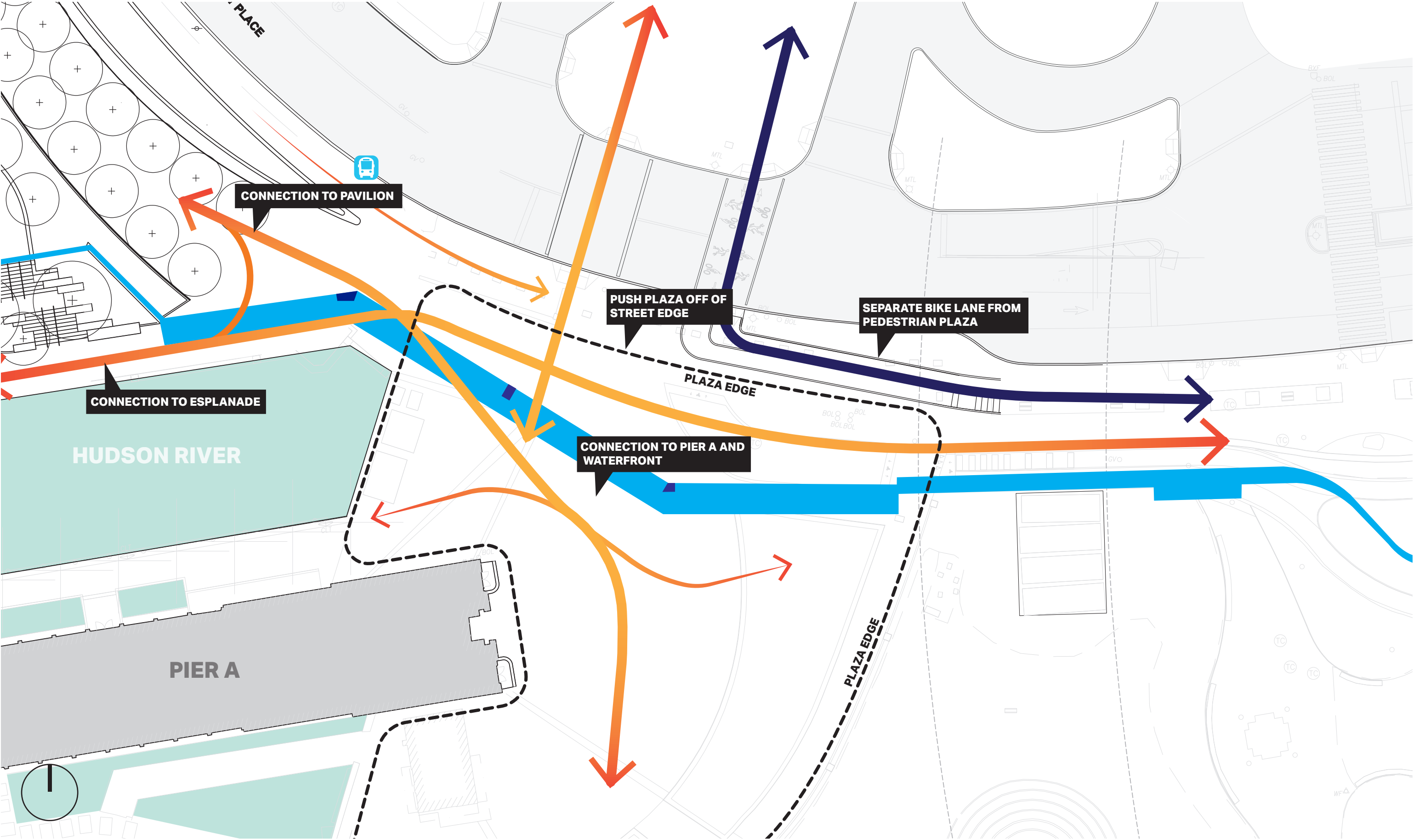




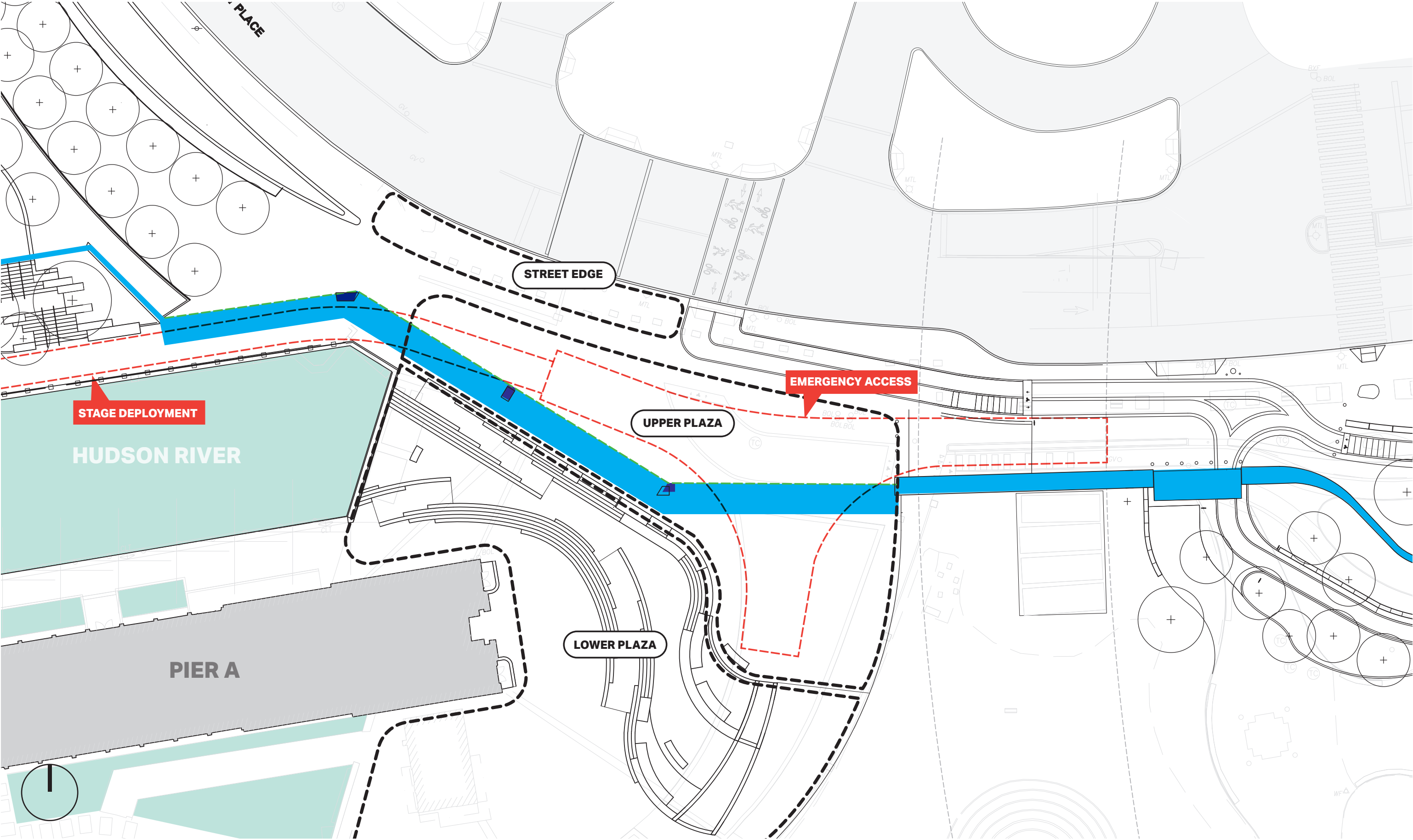
# FLIP UP DEPLOYABLE ALIGNMENT



# ACCESS + CONNECTIONS

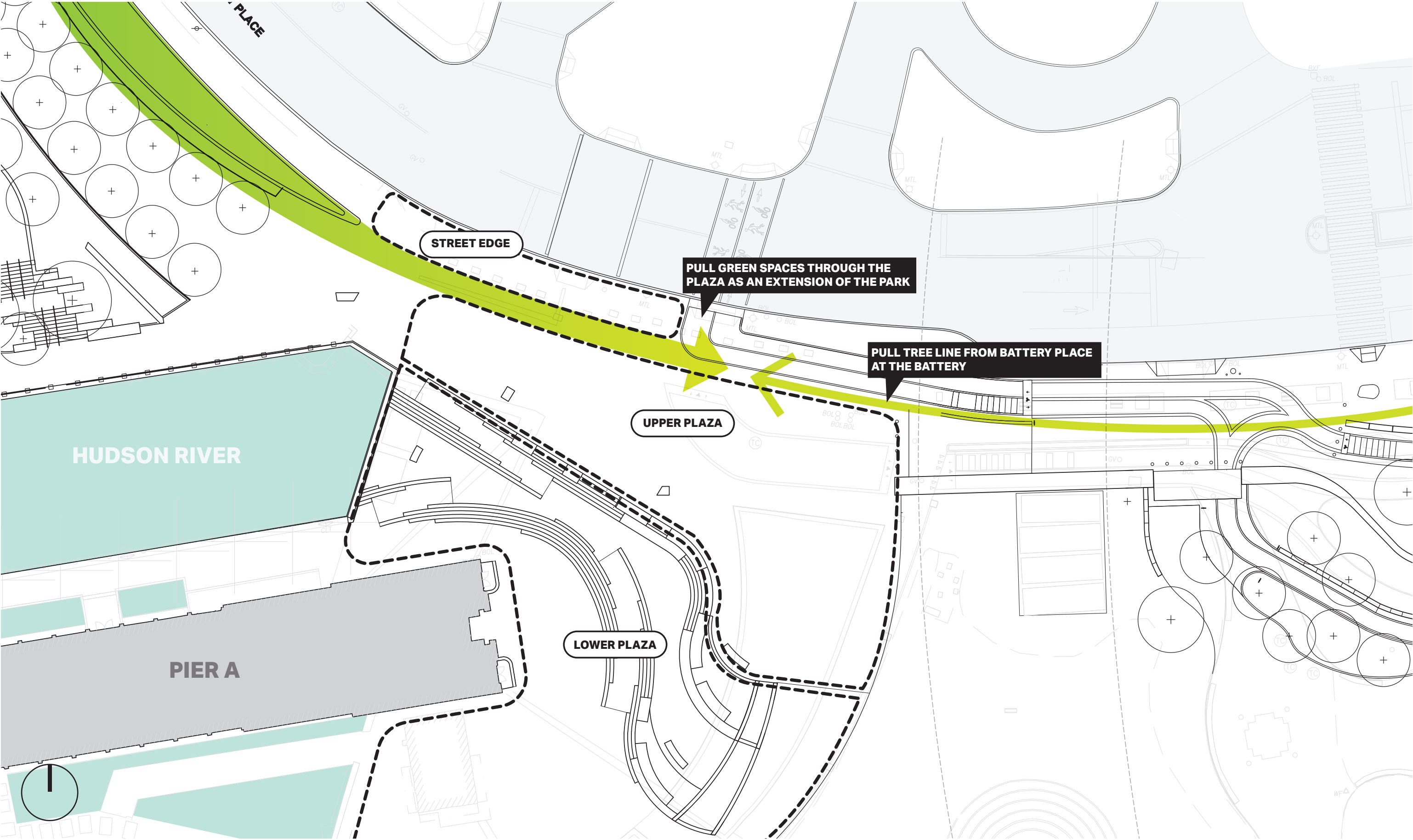


# SPATIAL DEFINITION

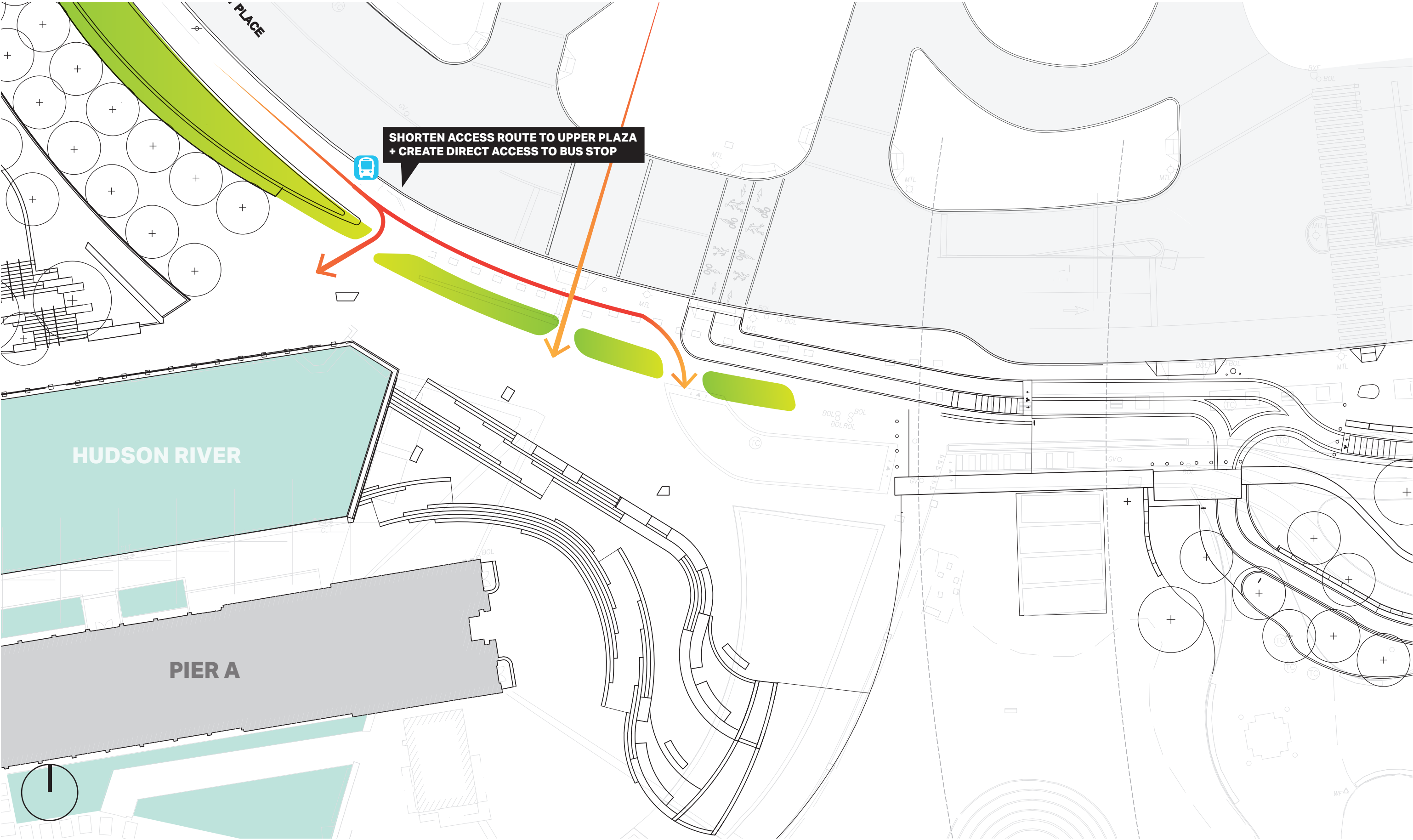




# AN EXTENSION OF THE PARKS



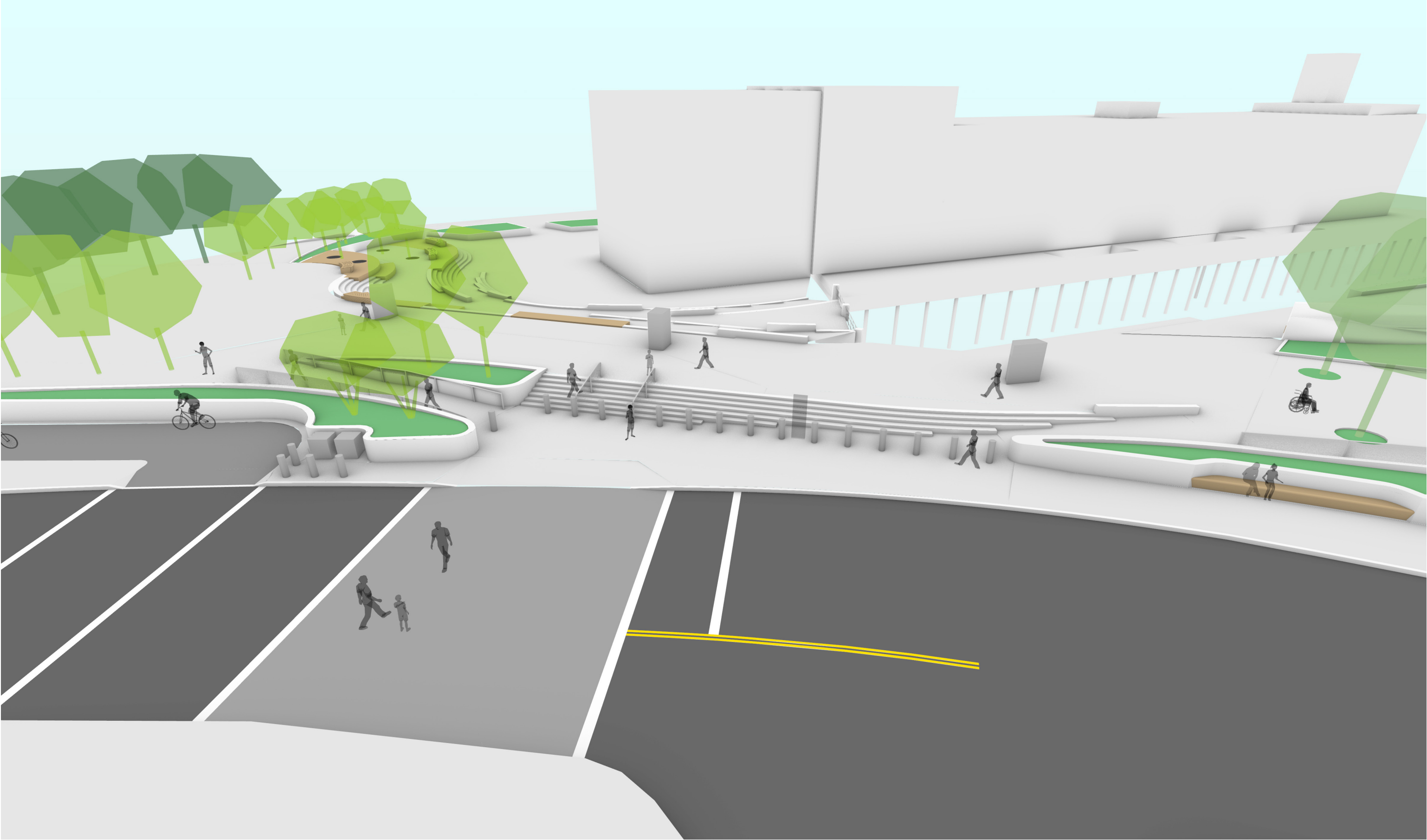
# ACCESS FROM THE STREET





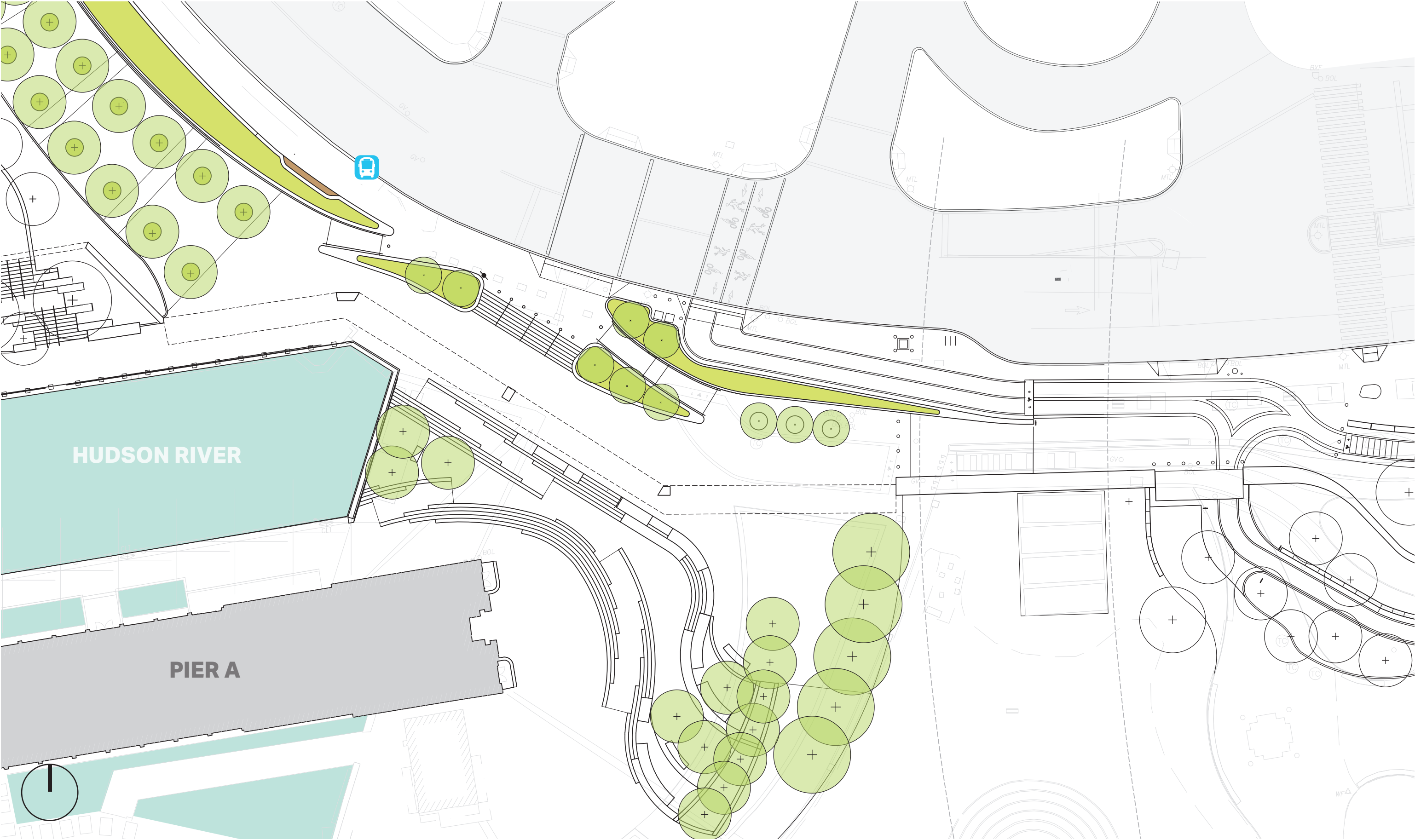
This architectural site plan illustrates a waterfront development project. The plan features a large, light blue area labeled "HUDSON RIVER" on the left. Adjacent to the river is a long, grey rectangular structure labeled "PIER A". To the right of Pier A, a series of green circles with black outlines and a central crosshair represent trees, arranged in a curved line. Further right, a long, narrow, light green area represents a landscaped promenade or walkway, bordered by a dark green line. The plan includes various streets and pathways, with labels such as "GVO", "MTL", "BOL", "TC", and "WF" indicating specific locations or landmarks. A blue icon of a train or tram is visible near the top center, suggesting a transit station. The overall layout shows a mix of natural elements (river, trees), built infrastructure (pier, walkway), and transportation (transit station, streets).

SITE SECURITY | INITIAL STUDY



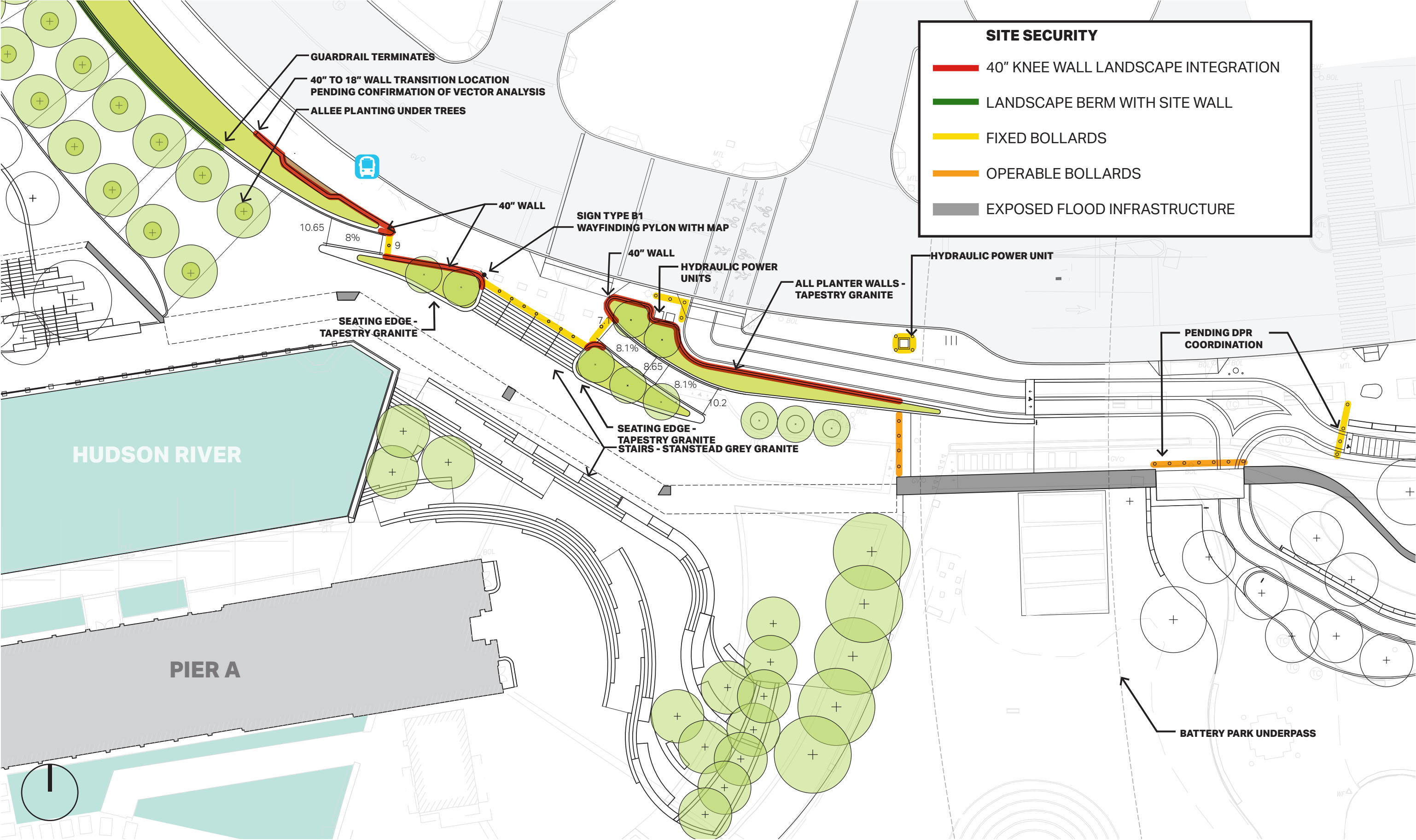


# SITE SECURITY | PREFERRED DESIGN



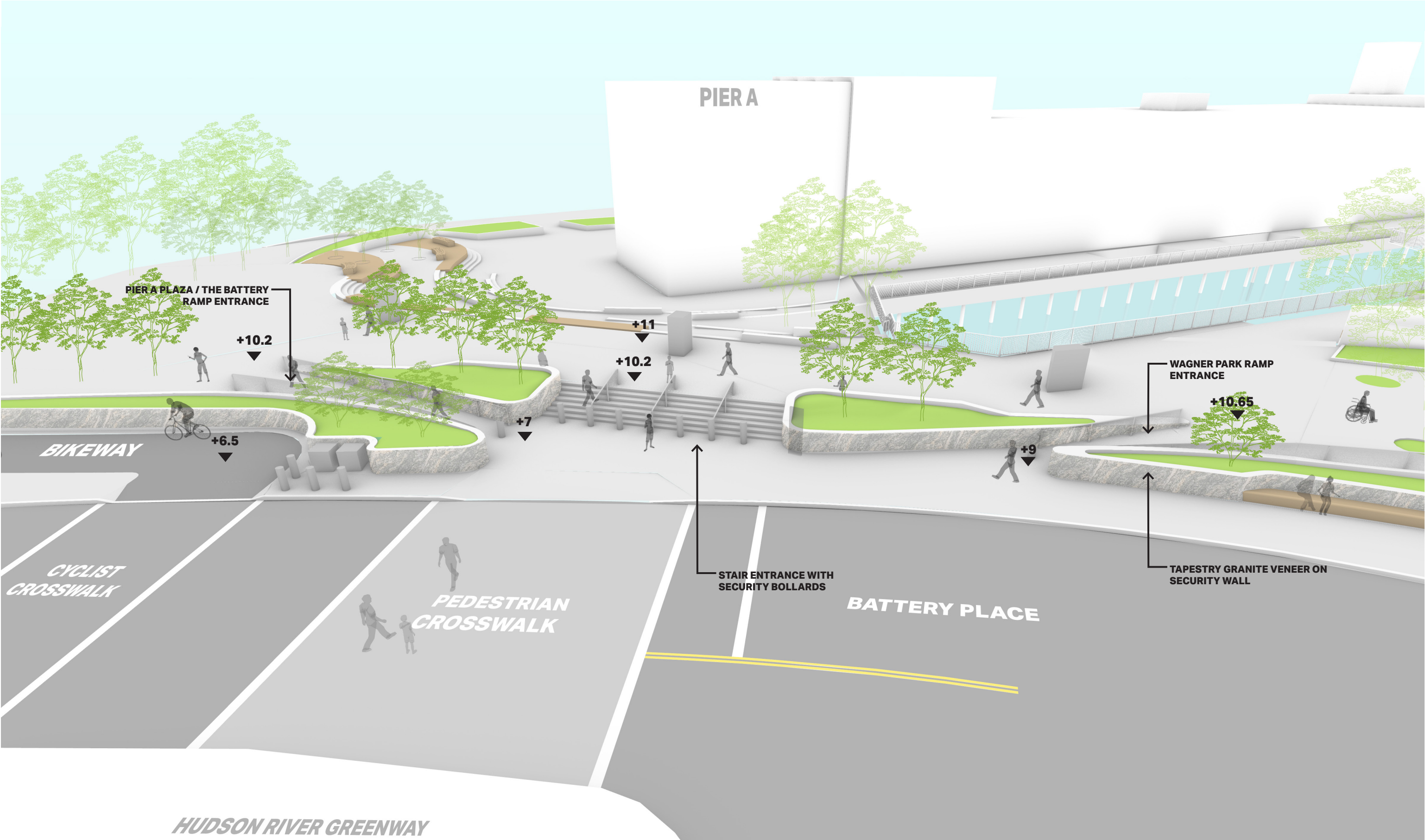


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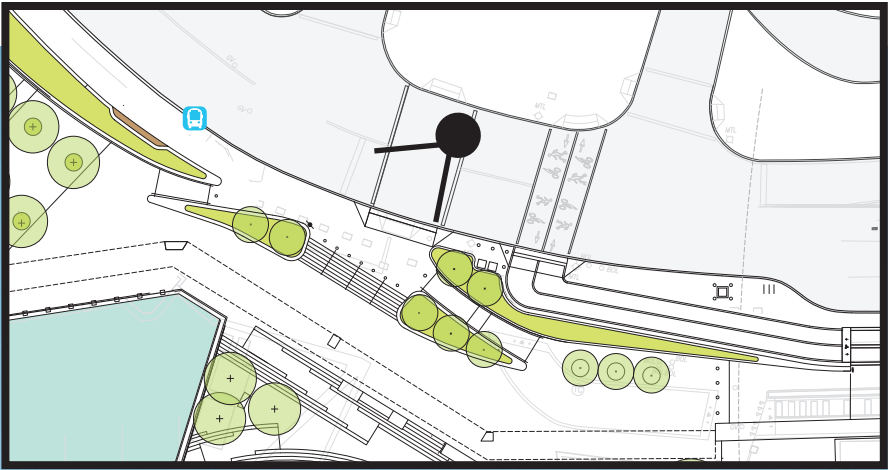




SITE SECURITY | PREFERRED DESIGN





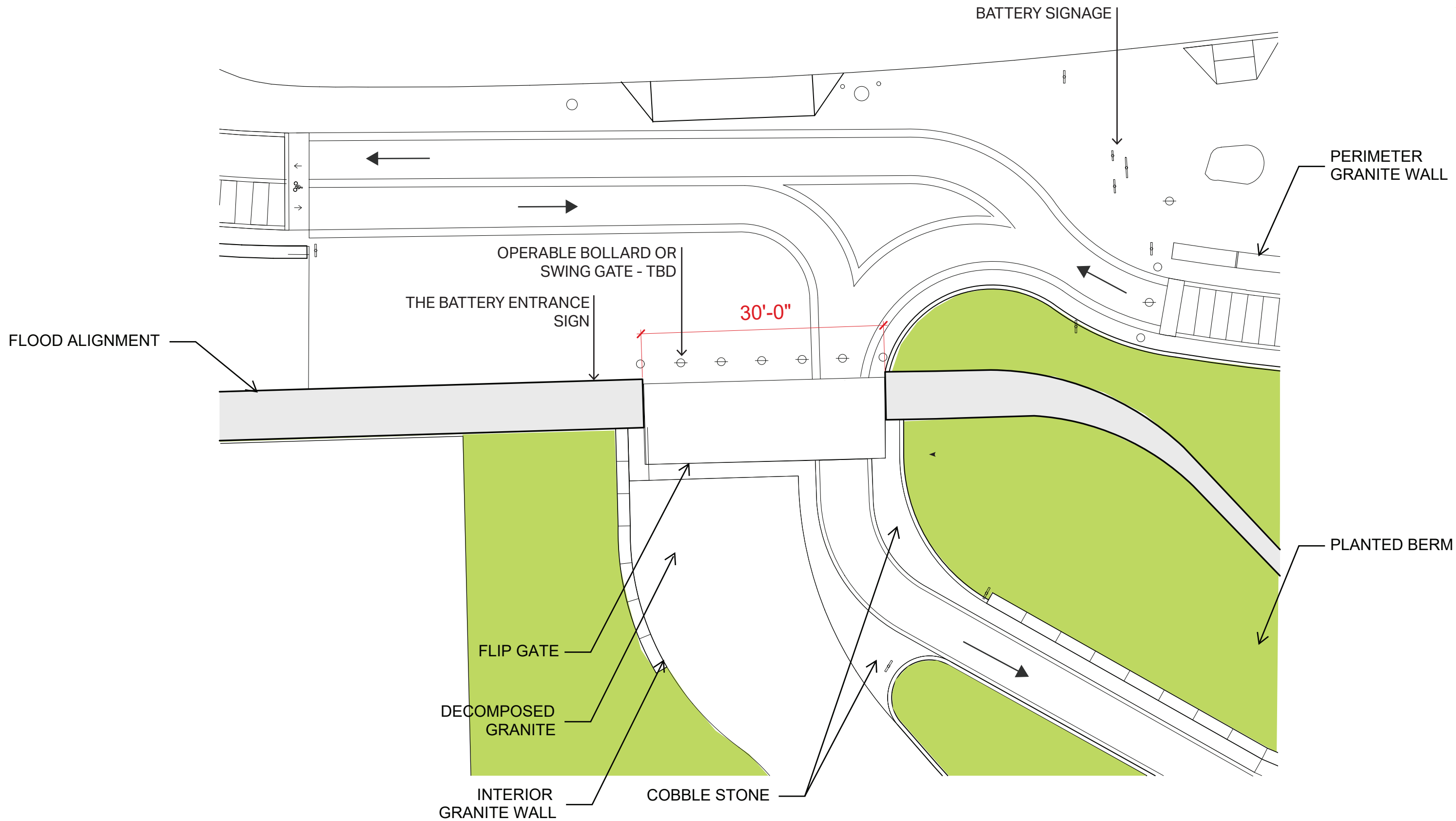




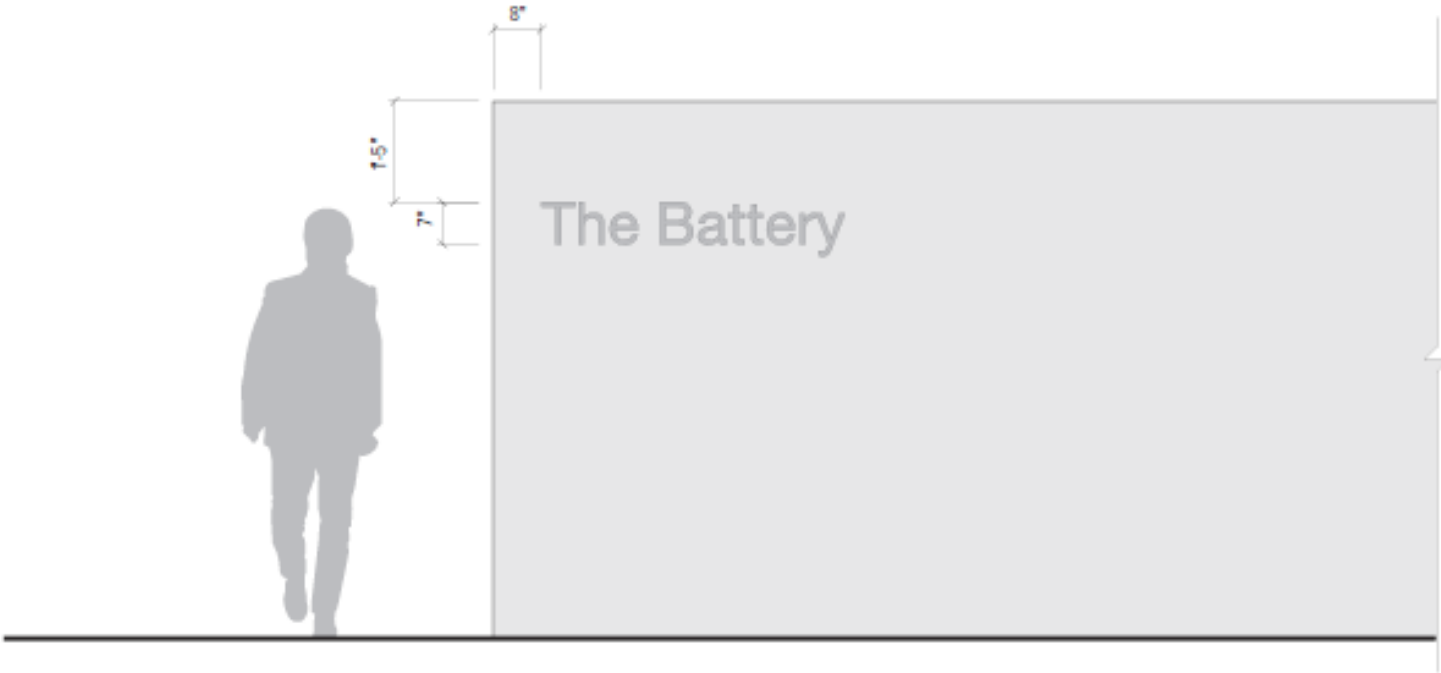
THE BATTERY | ENTRANCE



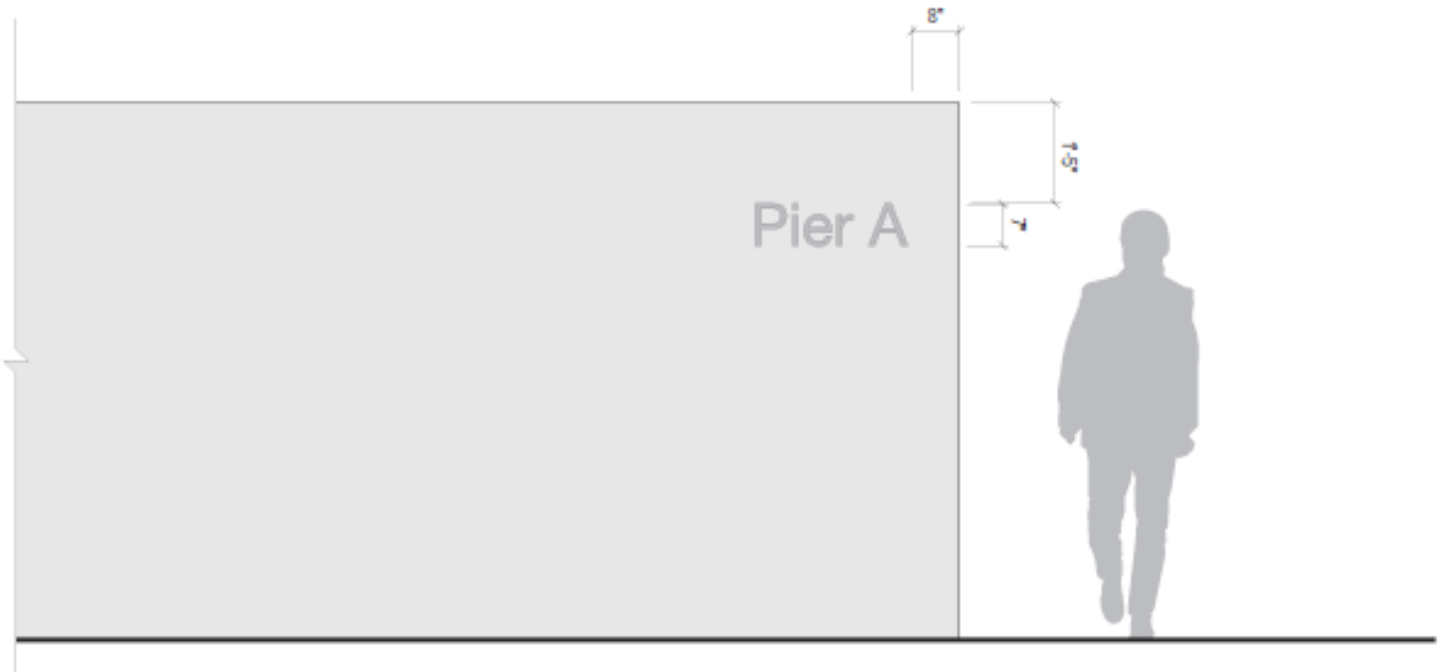
THE BATTERY | UPDATED DESIGN



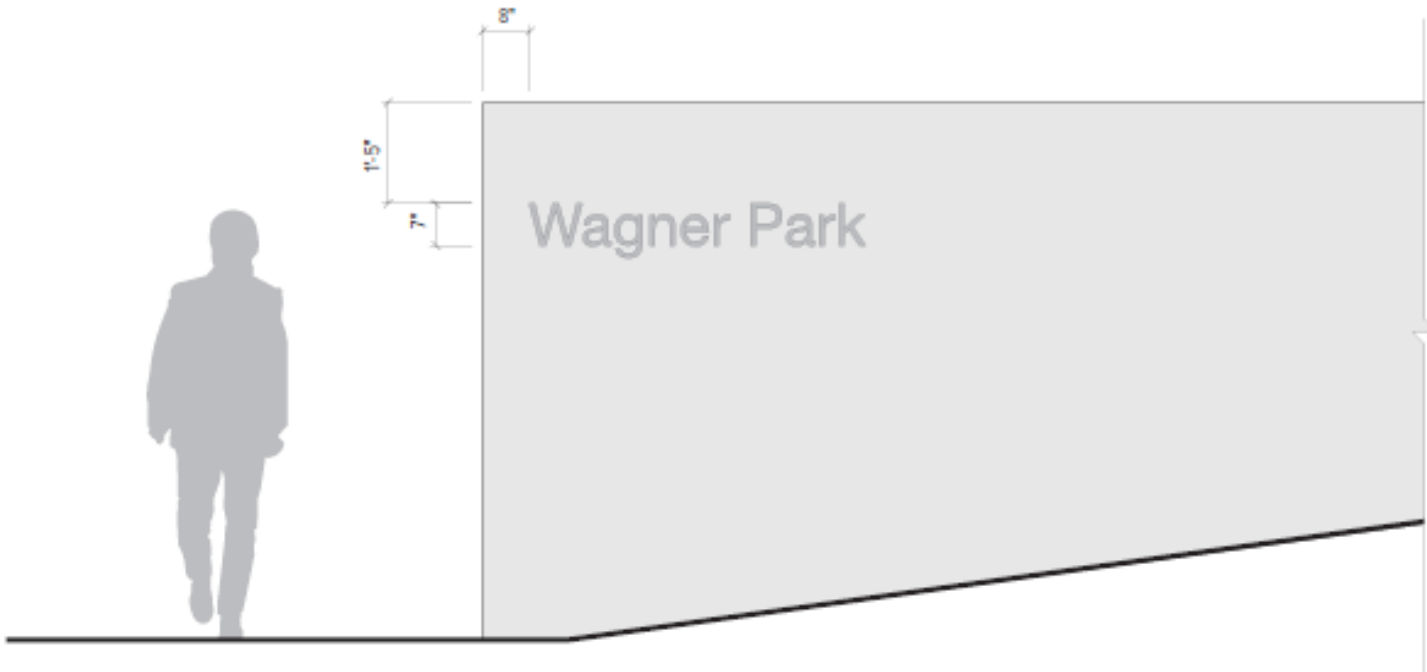
# ENTRANCE SIGNAGE



**1** Elevation – The Battery Wall  
3/8" = 1'-0"



**2** Elevation – Pier A Plaza Wall  
3/8" = 1'-0"



**3** Elevation – Wagner Park Wall  
3/8" = 1'-0"



ENTRANCE SIGNAGE | MATERIALITY PRECEDENTS



Domino Park, Brooklyn



Domino Park (Detail), Brooklyn



NYC Police Memorial, Battery Park City



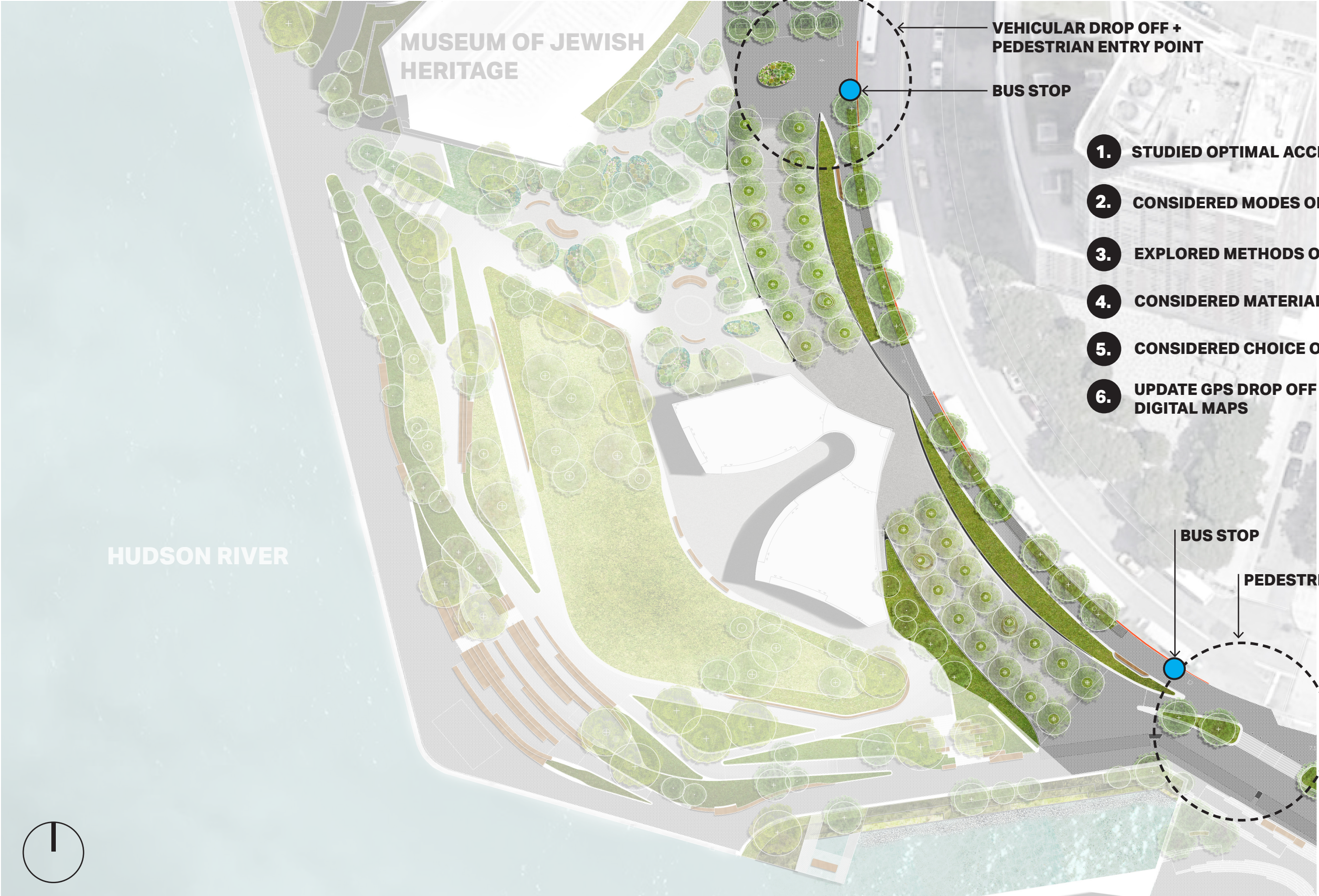
Four Freedoms State Park, Roosevelt Island



Harvard Plaza, Cambridge MA



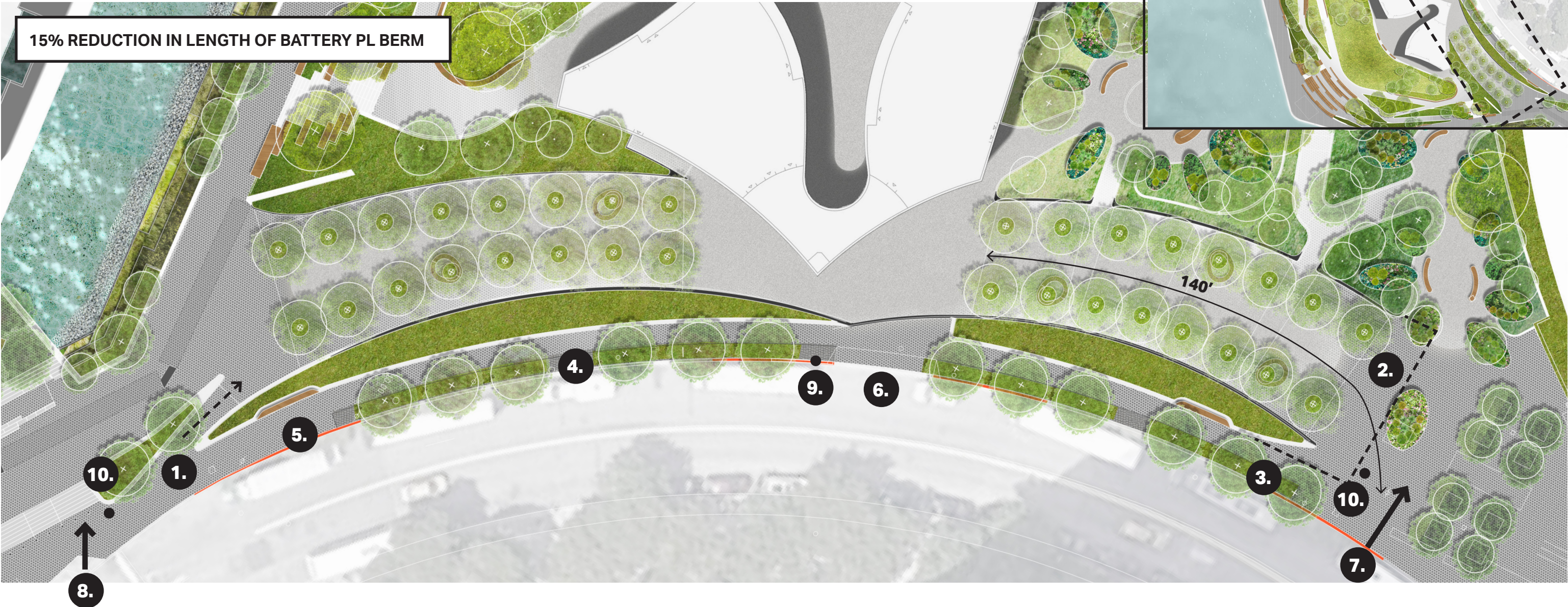
# BATTERY PLACE | WAYFINDING CONSIDERATIONS



- 1. STUDIED OPTIMAL ACCESS POINT LOCATIONS
- 2. CONSIDERED MODES OF TRANSPORTATION
- 3. EXPLORED METHODS OF WAYFINDING
- 4. CONSIDERED MATERIALITY
- 5. CONSIDERED CHOICE OF PLANTING PALETTE
- 6. UPDATE GPS DROP OFF POINT LINKED TO DIGITAL MAPS



# BATTERY PLACE | DESIGN REFINEMENT





# BATTERY PLACE | DESIGN REFINEMENT



BATTERY PLACE | WAYFINDING + GUIDANCE



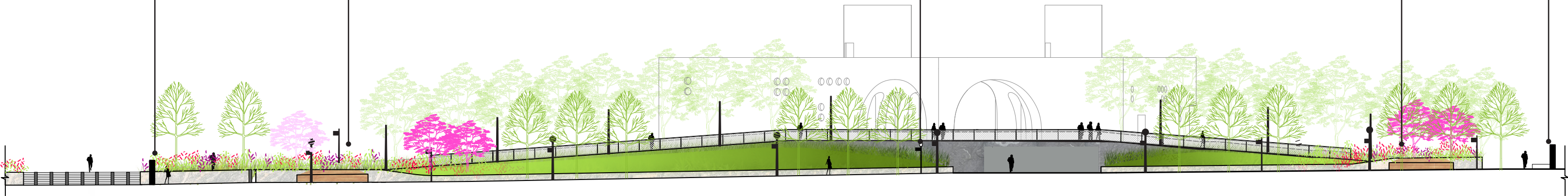
SIGN TYPE B1  
PYLON WAYFINDING WITH MAP

SIGN TYPE B1  
PYLON WAYFINDING WITH MAP

PLANTING SCHEME CREATES  
INVITING SPACES

SIGN TYPE C10  
POLE MOUNTED WAYFINDING

PLANTING SCHEME CREATES  
INVITING SPACES



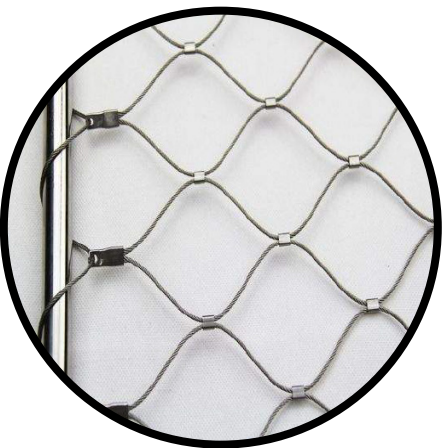


# BATTERY PLACE | MATERIALITY

**THERMALLY MODIFIED ASH**  
SEATING ELEMENTS



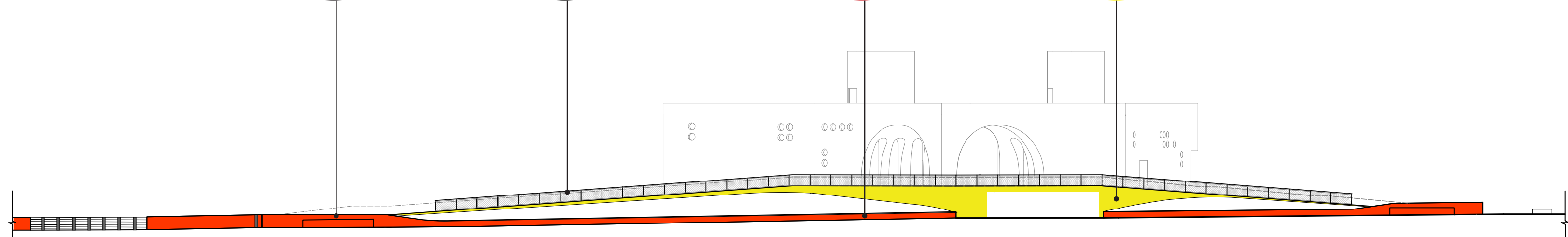
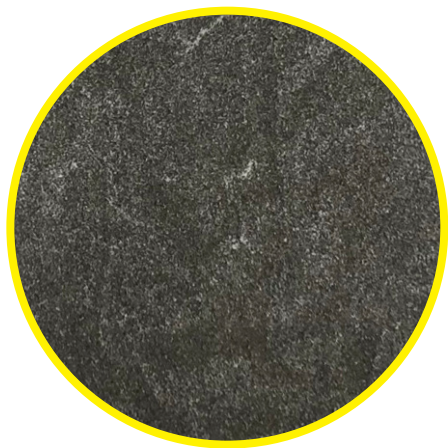
**STAINLESS STEEL W/ XTEND MESH**  
GUARDRAIL



**TAPESTRY STONE**  
SIDEWALK SITE WALL

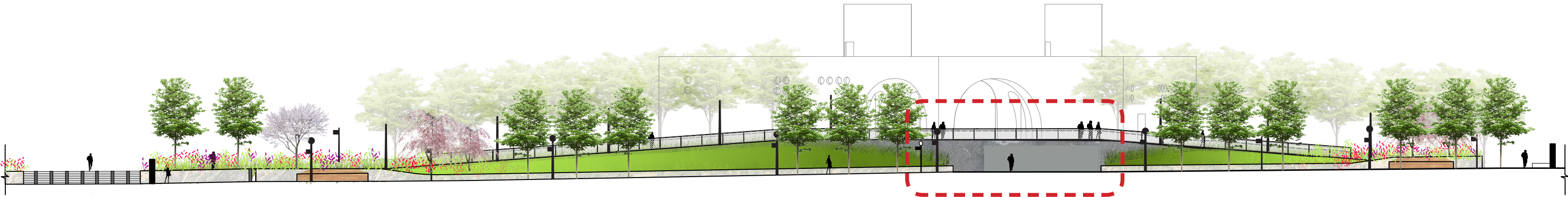
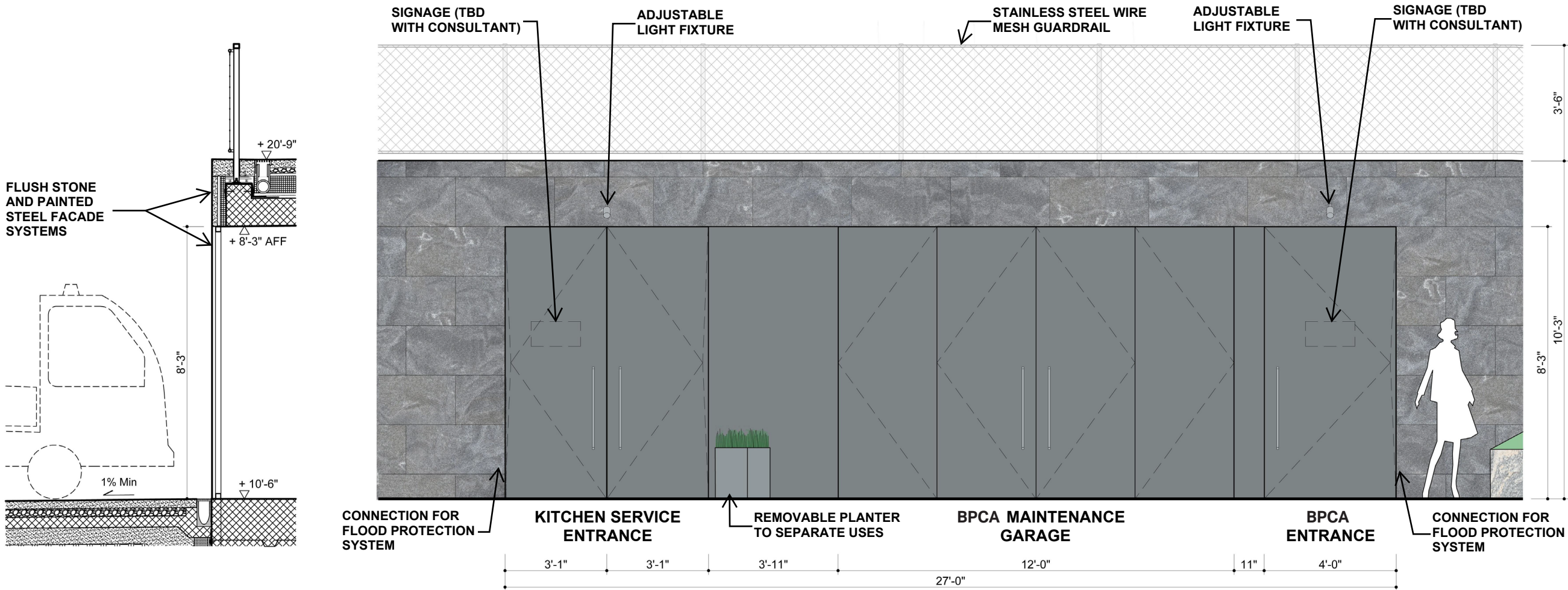


**JET MIST STONE**  
BERM WALL



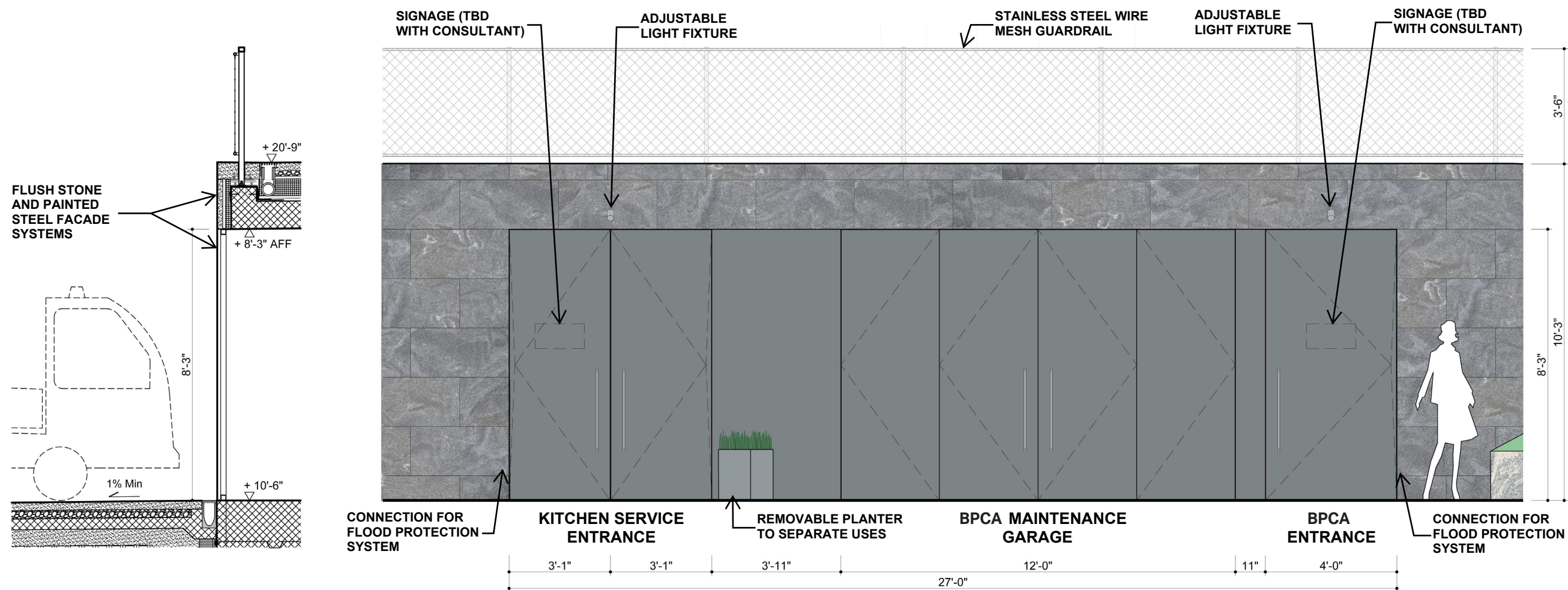


BATTERY PLACE | SERVICE ENTRANCE





# BATTERY PLACE | SERVICE ENTRANCE



JET MIST  
GRANITE



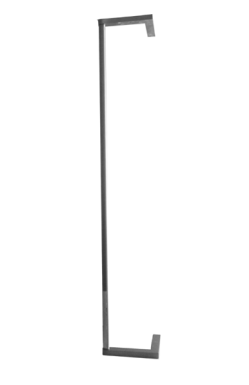
RAL 7011  
PAINTED STEEL  
WITH SIGNAGE (TBD)



DEPLOYABLE  
FLOOD PROTECTION  
SYSTEM



ADJUSTABLE  
LIGHT FIXTURES



STAINLESS STEEL  
WIRE DOOR PULLS



TOURNESOL RECTANGULAR PLANTERS











# WAGNER PARK UPDATES



WAGNER PARK | FINAL DESIGN



- 1. PICNIC LAWNS
- 2. EVENT TERRACE SHADE
- 3. MAINTENANCE AREA
- 4. PIER A INLET

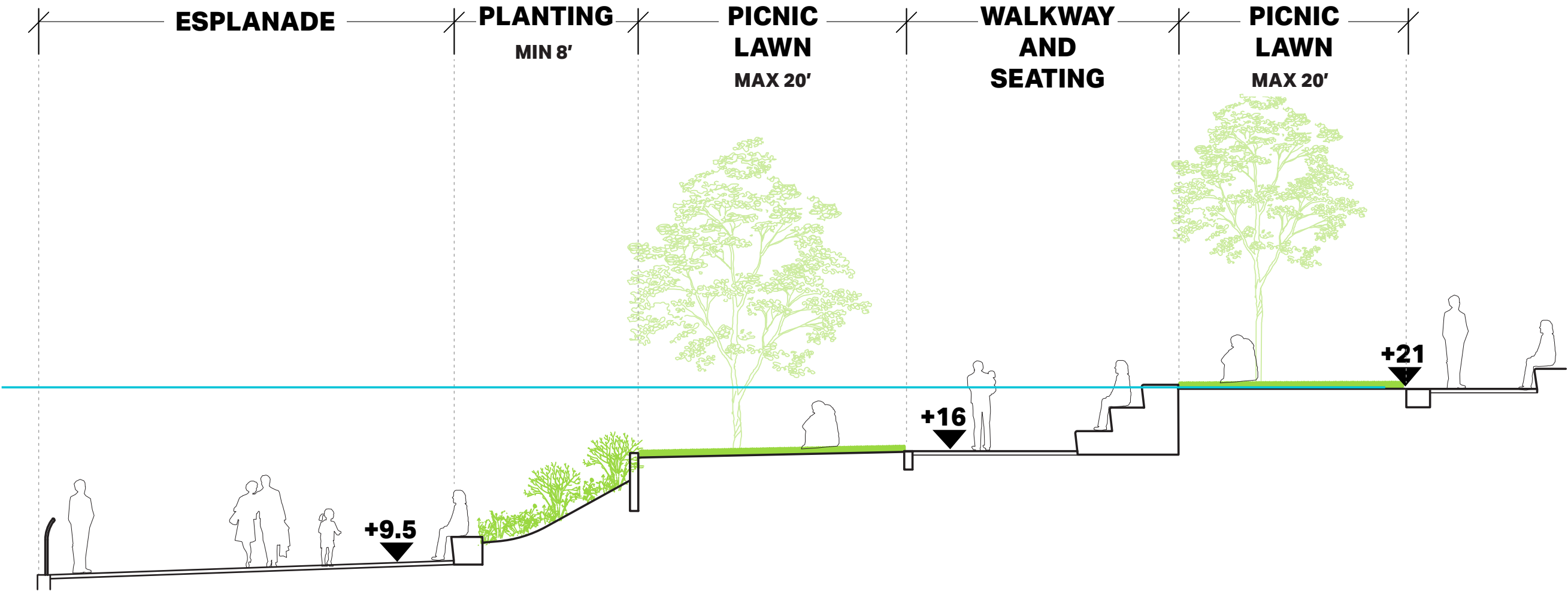
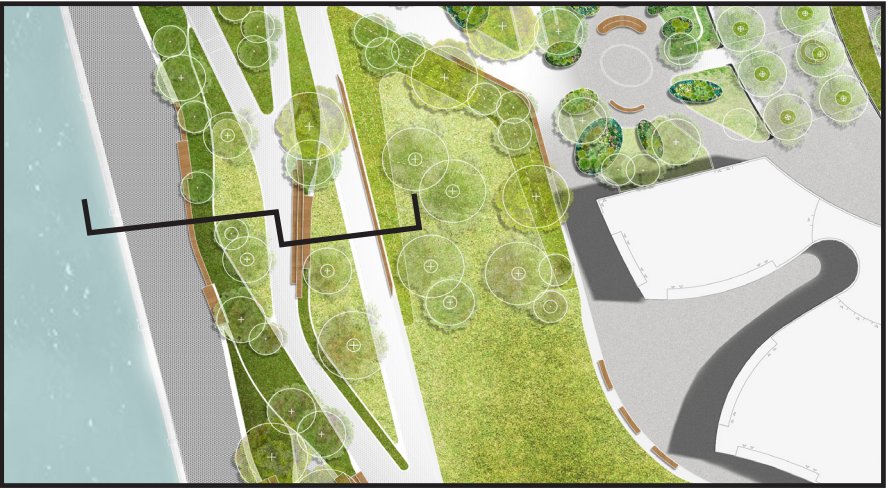


WAGNER PARK | PICNIC LAWNS





# WAGNER PARK | PICNIC LAWNS

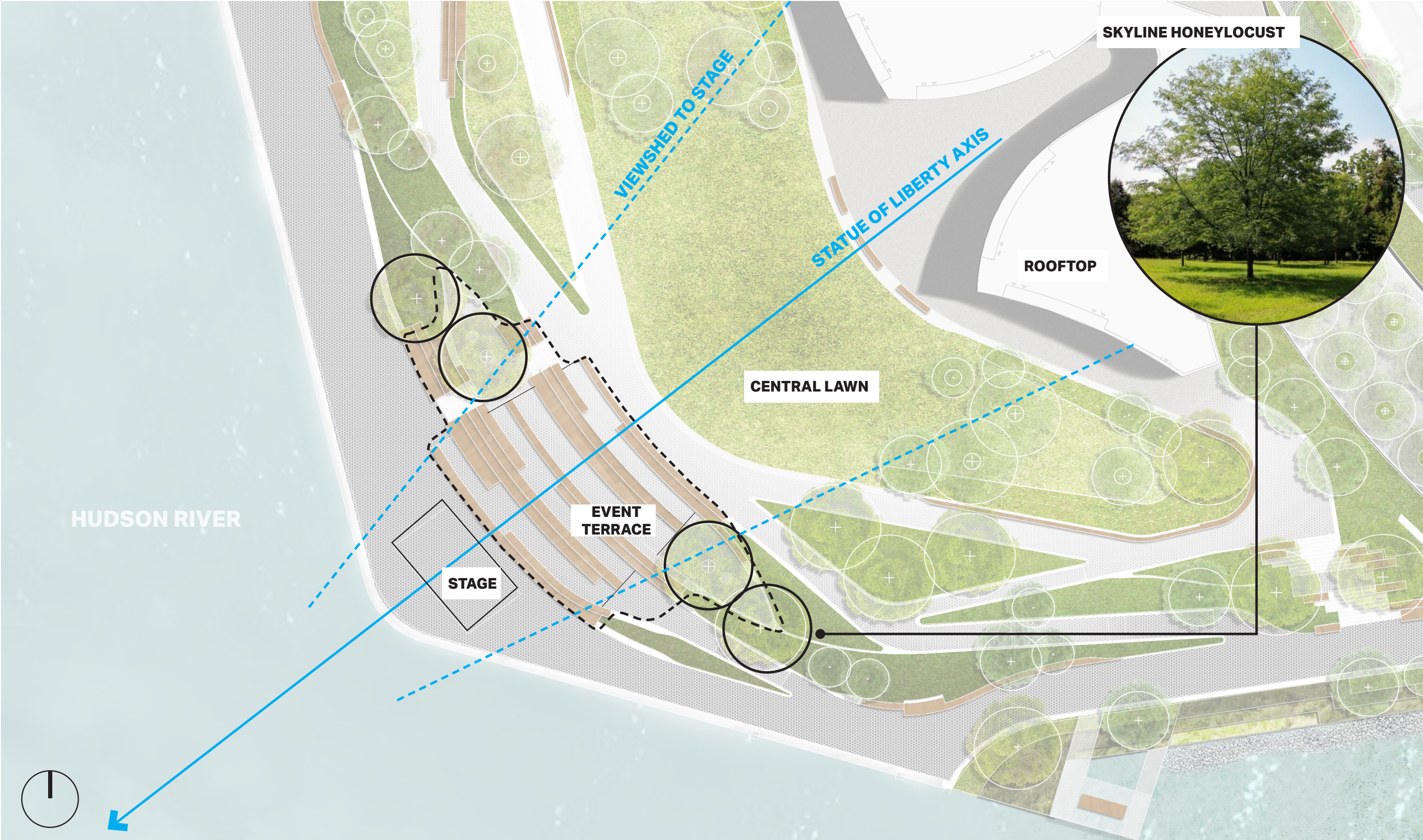






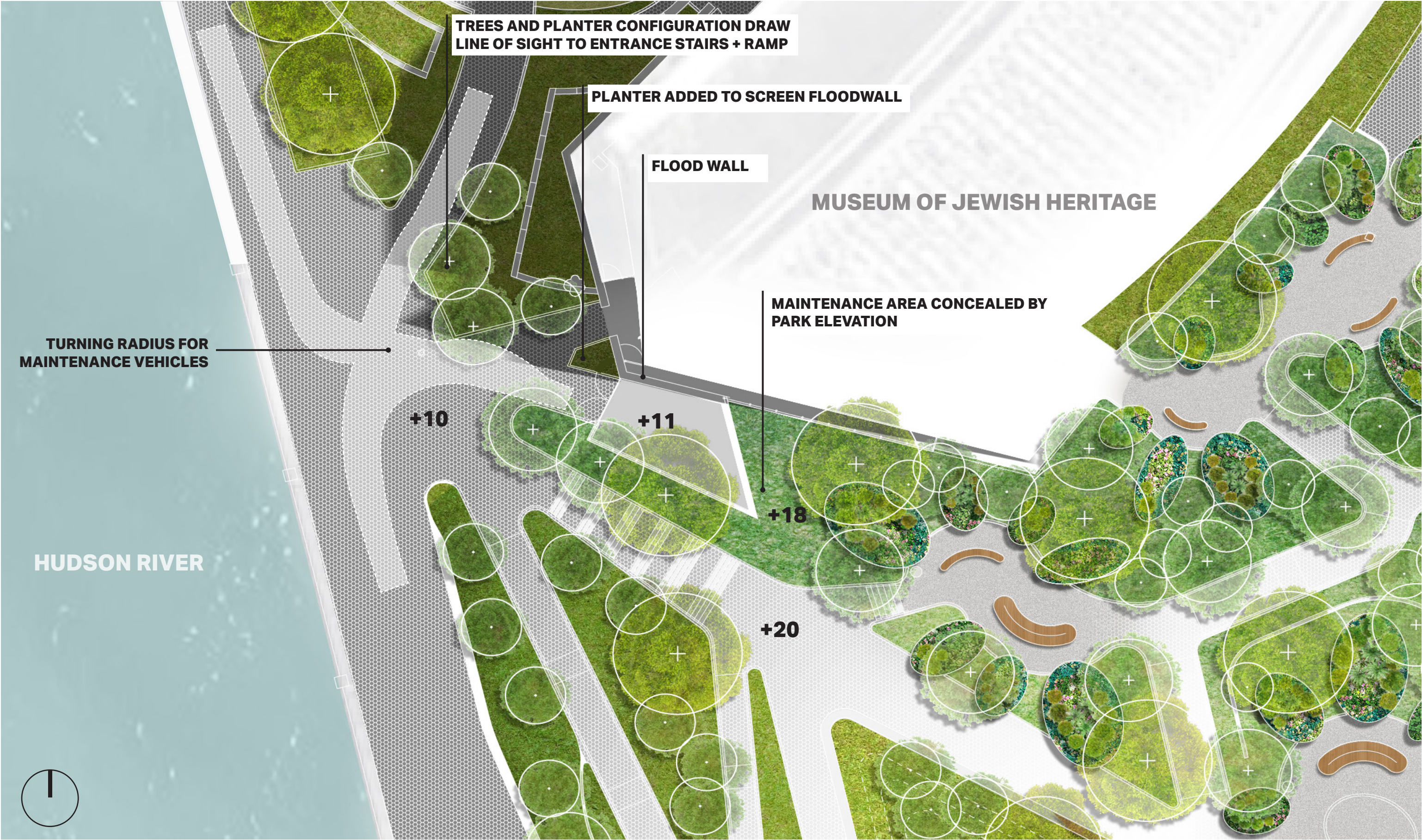


WAGNER PARK | EVENT TERRACE SHADE





WAGNER PARK | MAINTENANCE AREA





WAGNER PARK | MAINTENANCE AREA



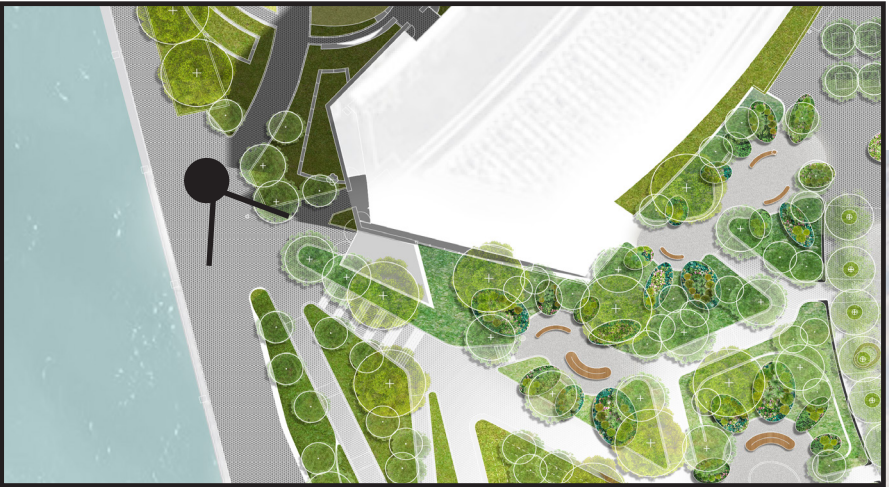
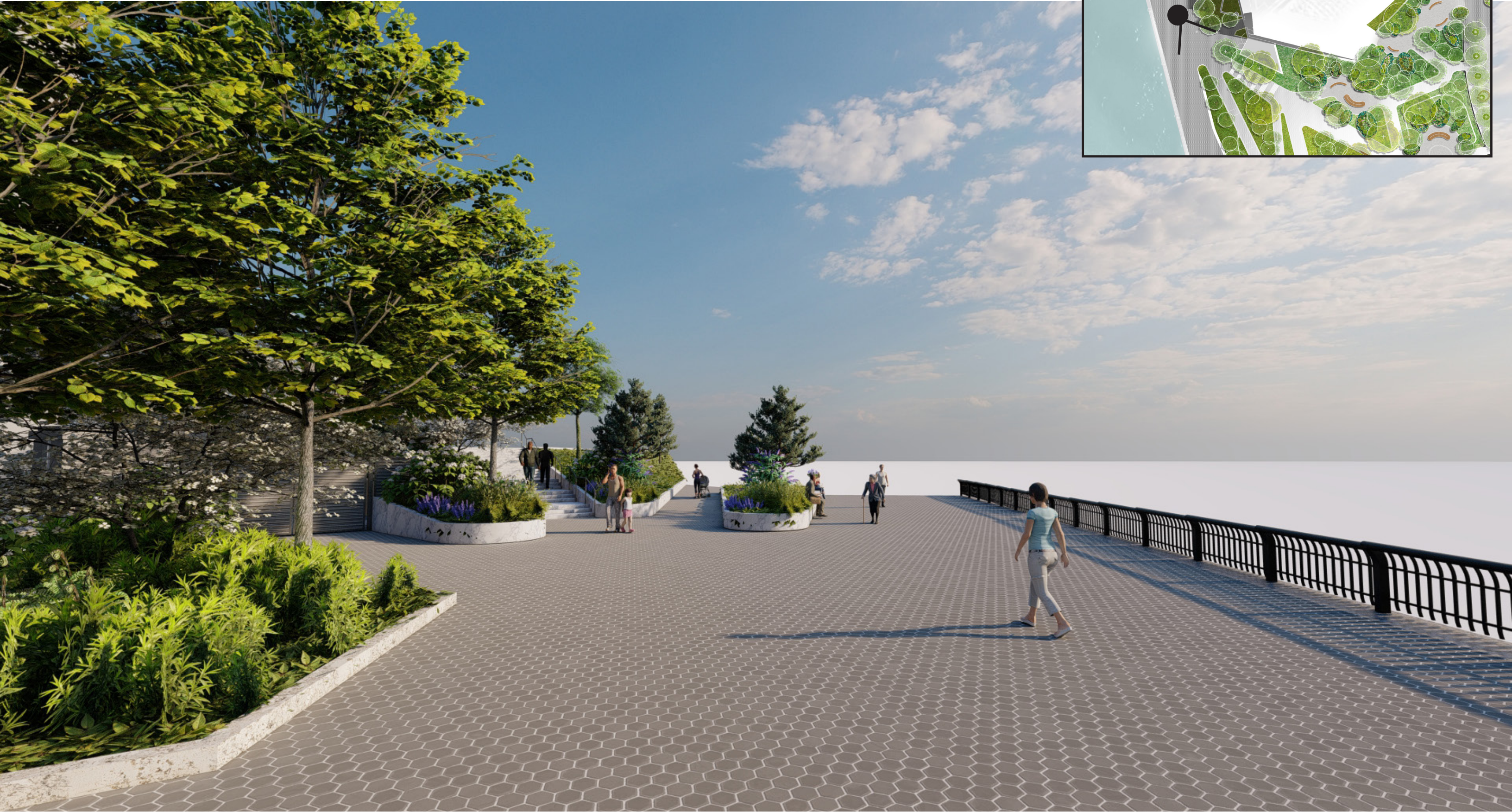


# WAGNER PARK | MAINTENANCE AREA





WAGNER PARK | MAINTENANCE AREA





WAGNER PARK | PIER A INLET

UPLAND PLANTING  
ELEVATION +9



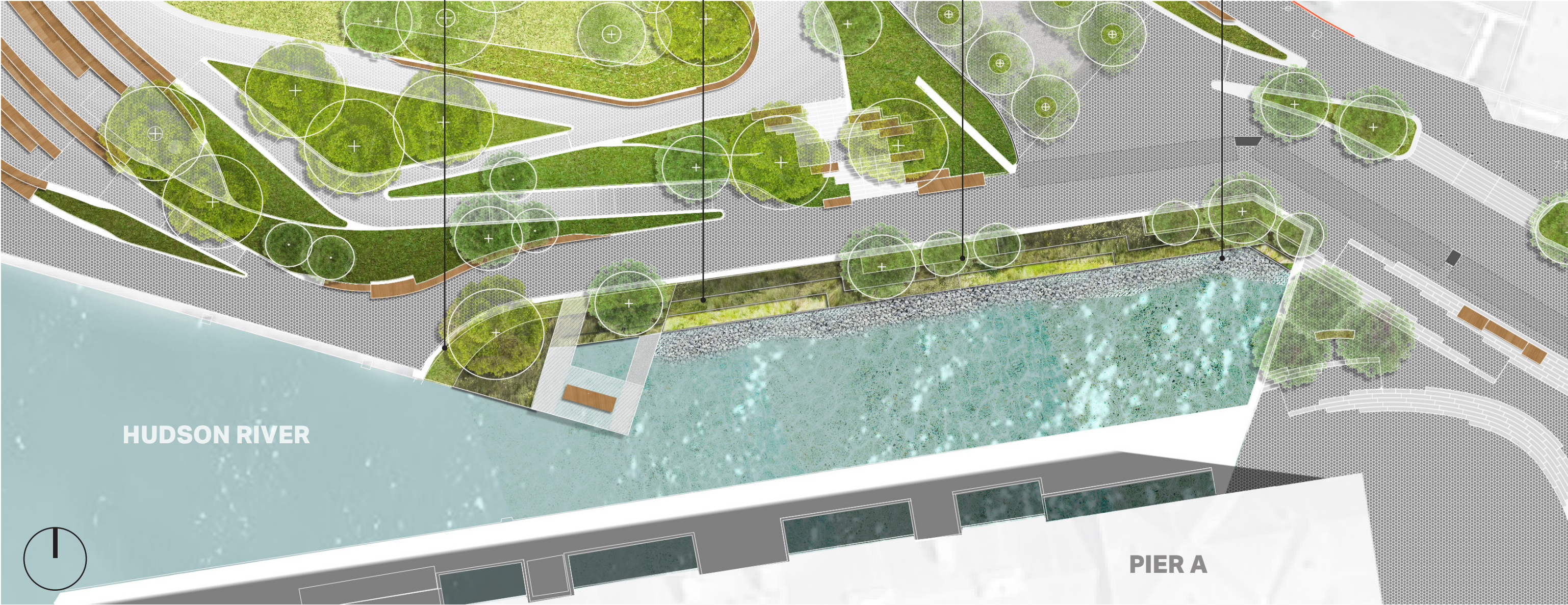
TIDAL PLANTING  
ELEVATION +6



HABITAT SHELF  
ELEVATION +3 OR 4.5

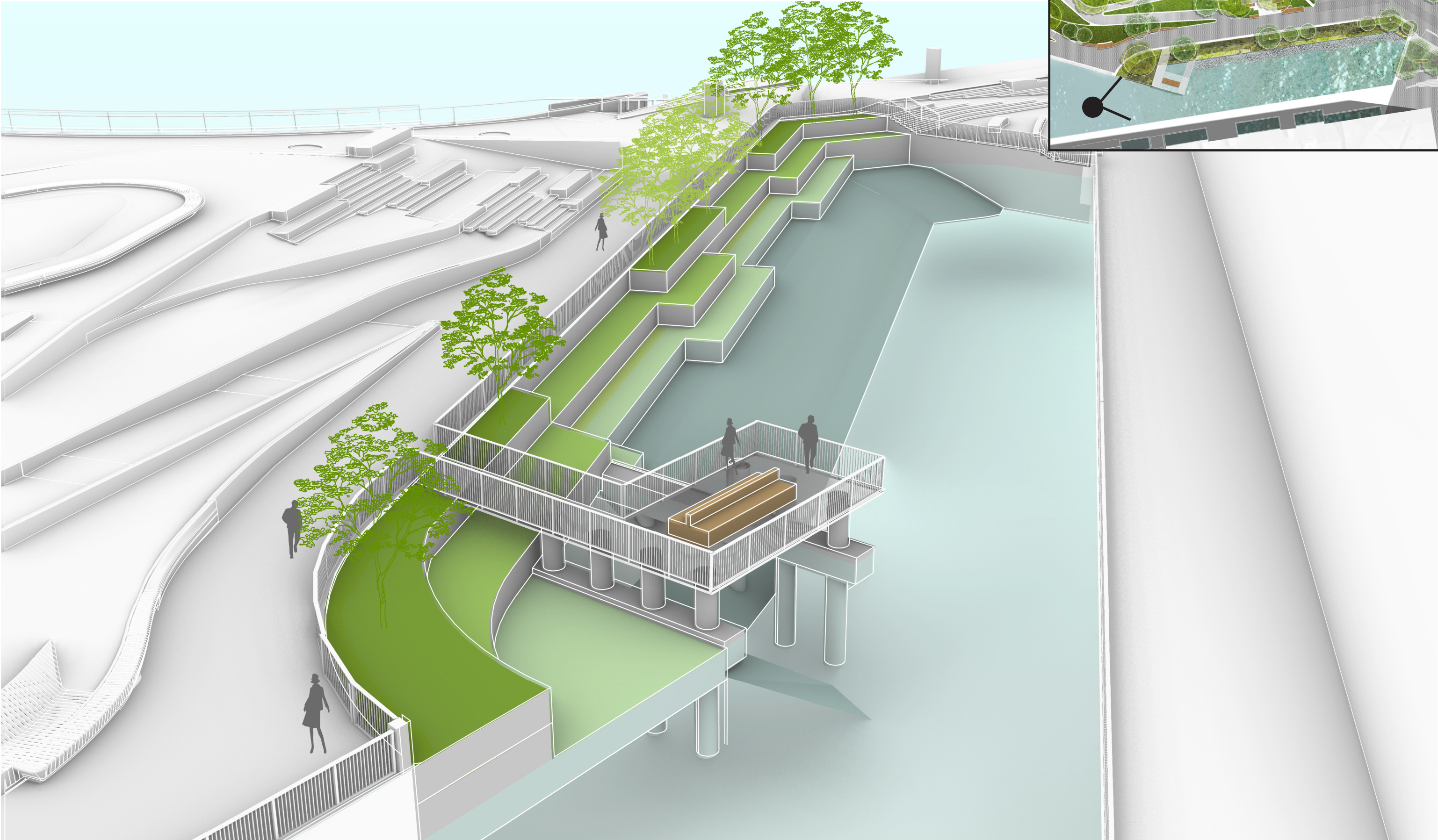


REEF HABITAT  
ELEVATION +1.5





WAGNER PARK | PIER A INLET

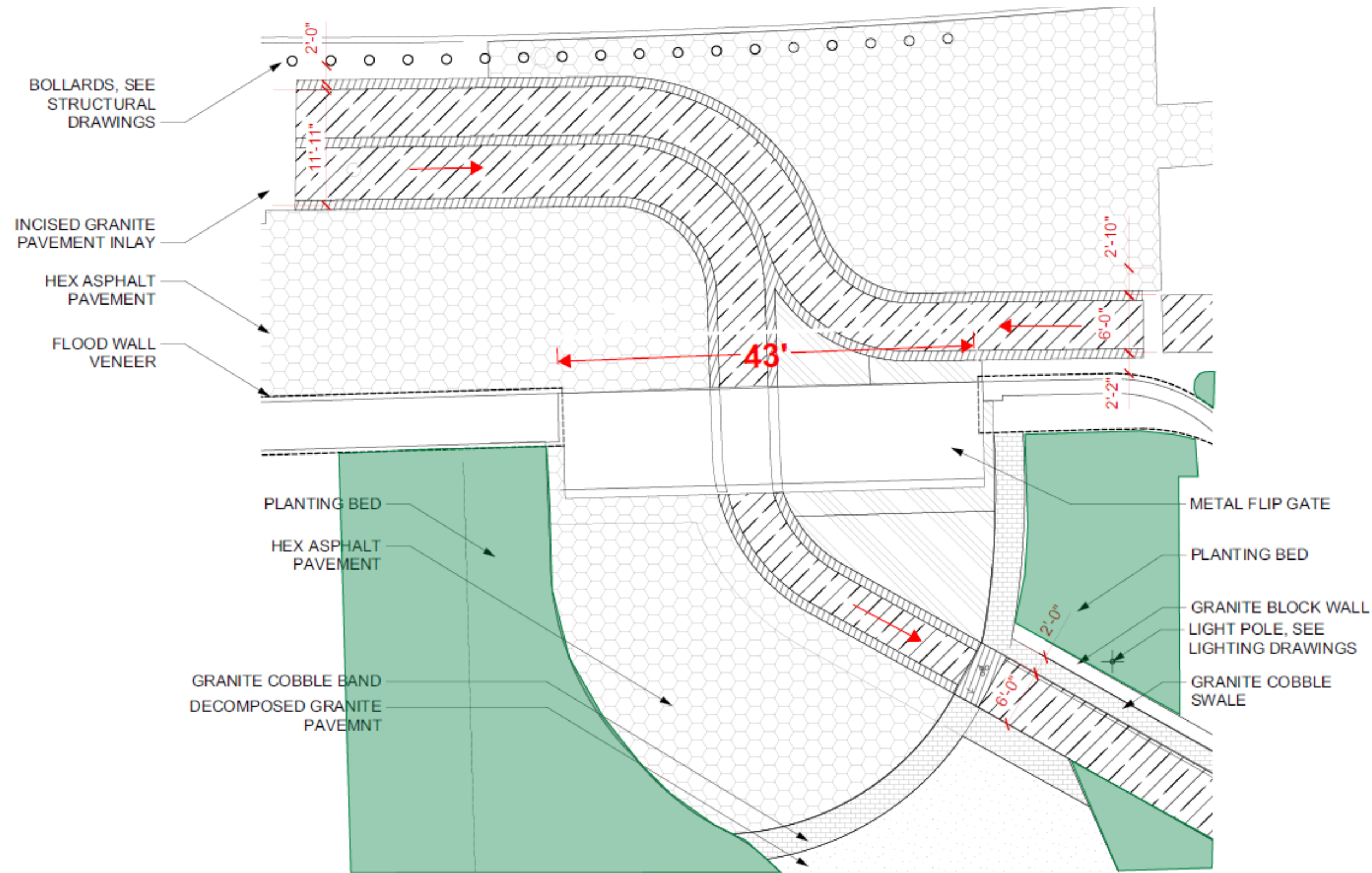




# APPENDIX

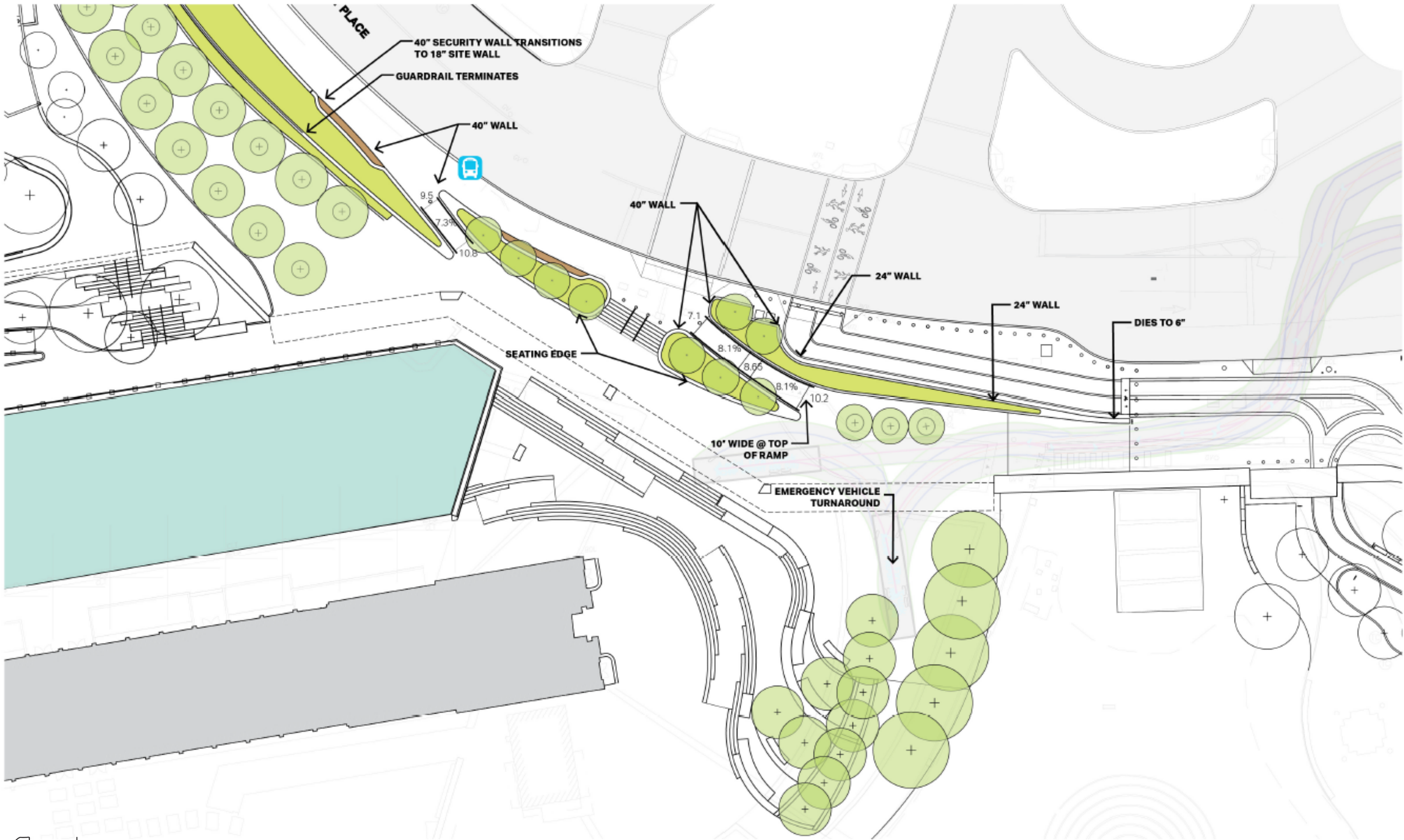


# THE BATTERY | PREVIOUS DESIGN





# SITE SECURITY | ADDITIONAL STUDY





# WHAT YOU TOLD US

JUNE 24 (PUBLIC MEETING)

**VIEWS**

**UNIVERSAL ACCESSIBILITY**

**MAXIMIZE GREENSPACE**

**PARK RESTROOMS**

**OPEN LAWN**

**GARDEN ROOMS / INTIMATE SPACES**

**SUSTAINABILITY**

**FLEXIBLE PROGRAMMING**

**COMMUNITY EVENTS/  
OUTDOOR CLASSROOMS**

# WHAT YOU TOLD US

OCT 3 (CB1 ENVIRONMENTAL)

**ALTERNATE OPTIONS FOR  
PIER A PLAZA**

**FURTHER DEVELOPMENT OF  
DEPLOYABLES**

**FURTHER DEVELOPMENT OF  
POST/COLUMNS**

**REFINEMENT OF BERM FLOOD  
WALL / PLANT PALETTE**

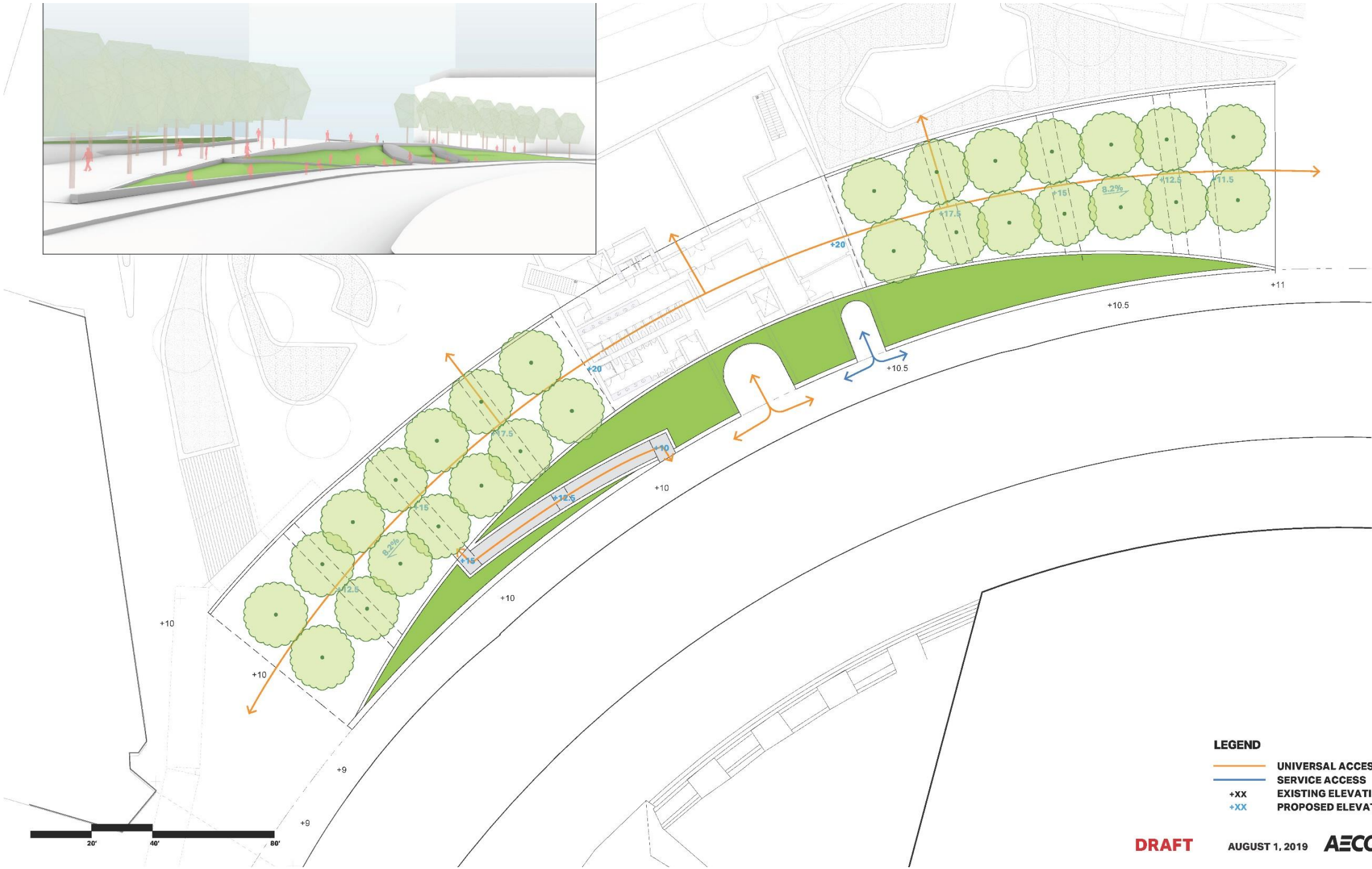
**ENHANCED CIRCULATION  
CONSIDERATIONS**

**MATERIALITY & AESTHETICS**



# BATTERY PLACE | STUDY 1

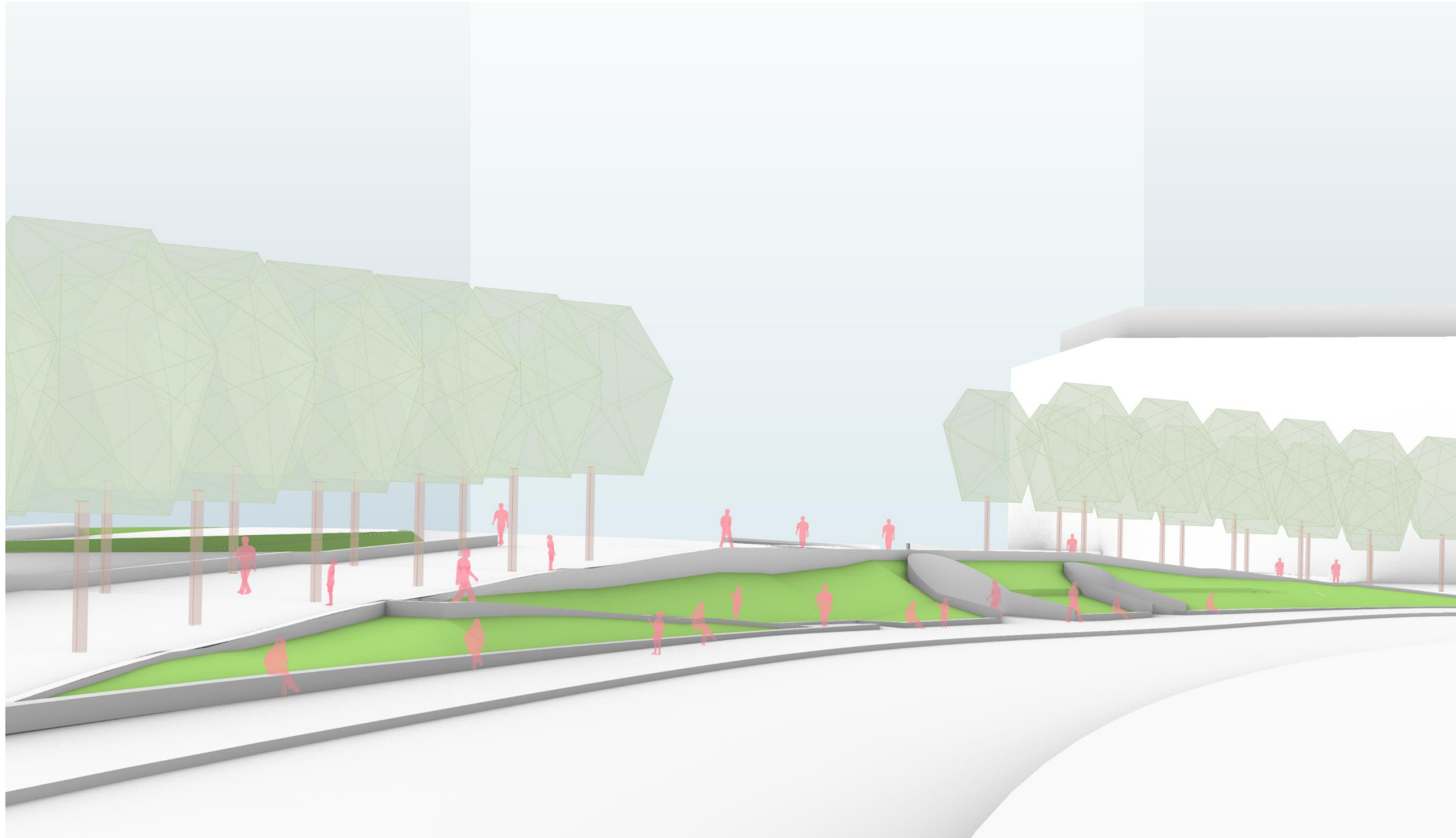
DRAFT INTERNAL STUDY





# BATTERY PLACE | STUDY 1

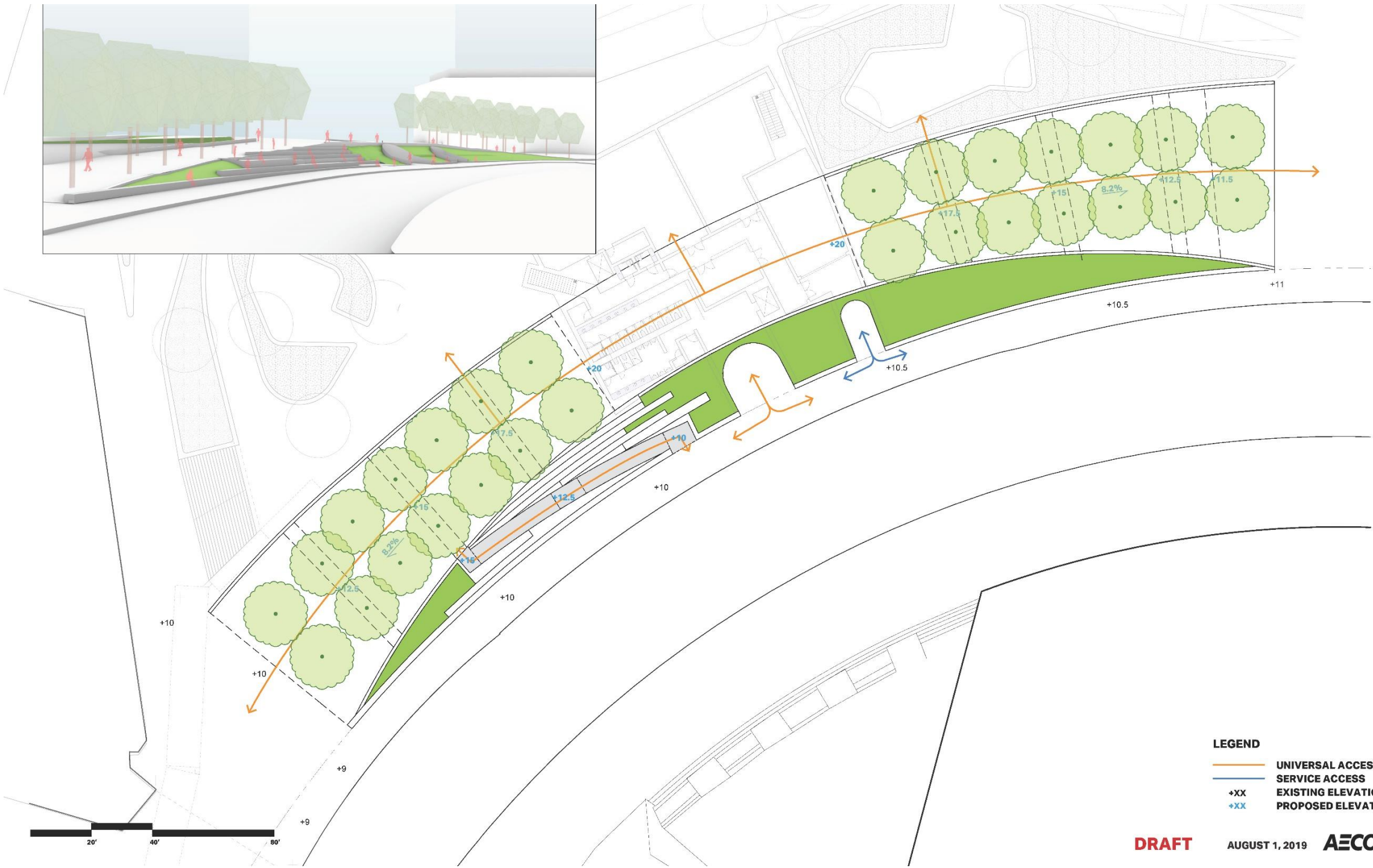
DRAFT INTERNAL STUDY





# BATTERY PLACE | STUDY 2

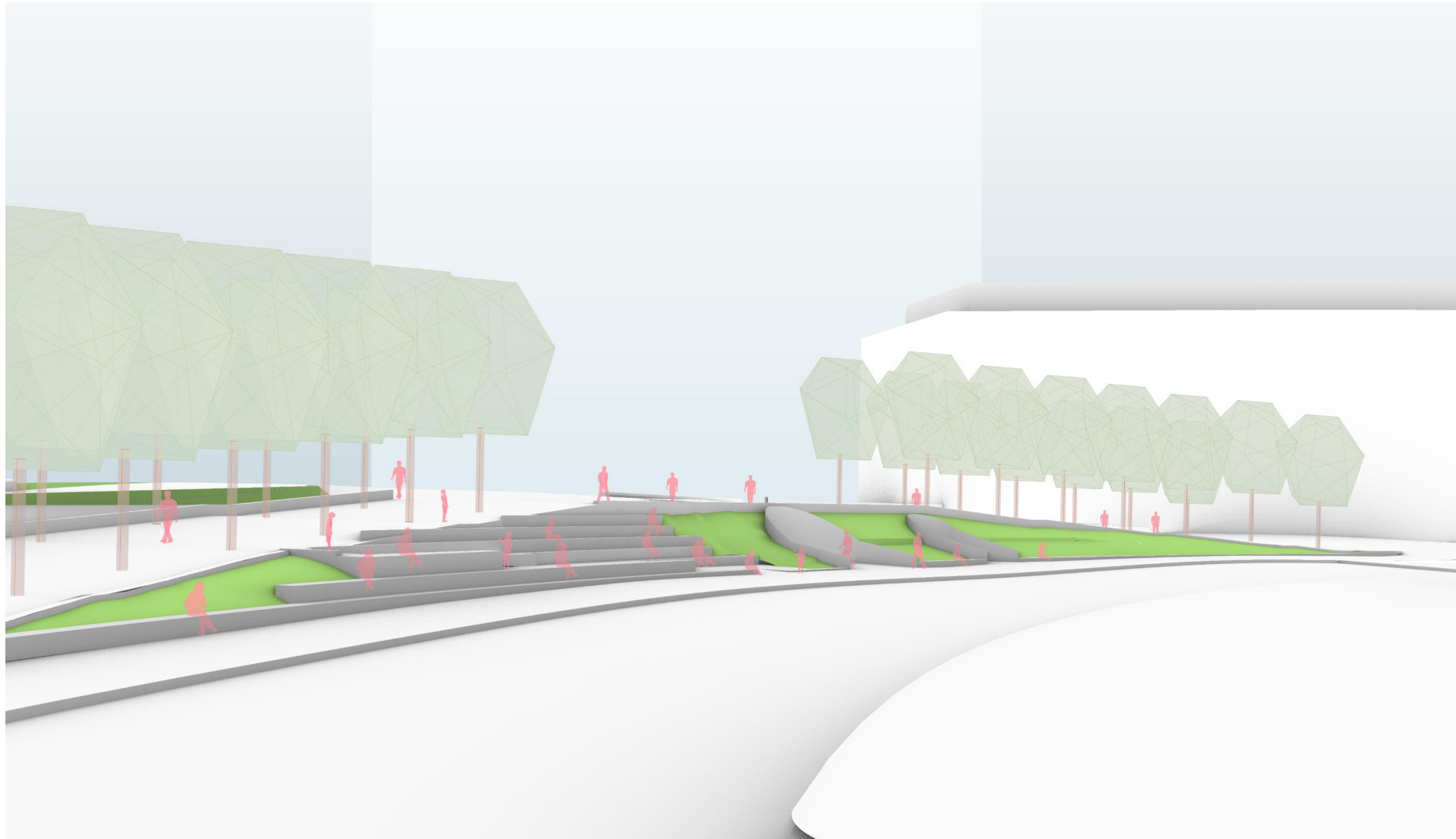
DRAFT INTERNAL STUDY



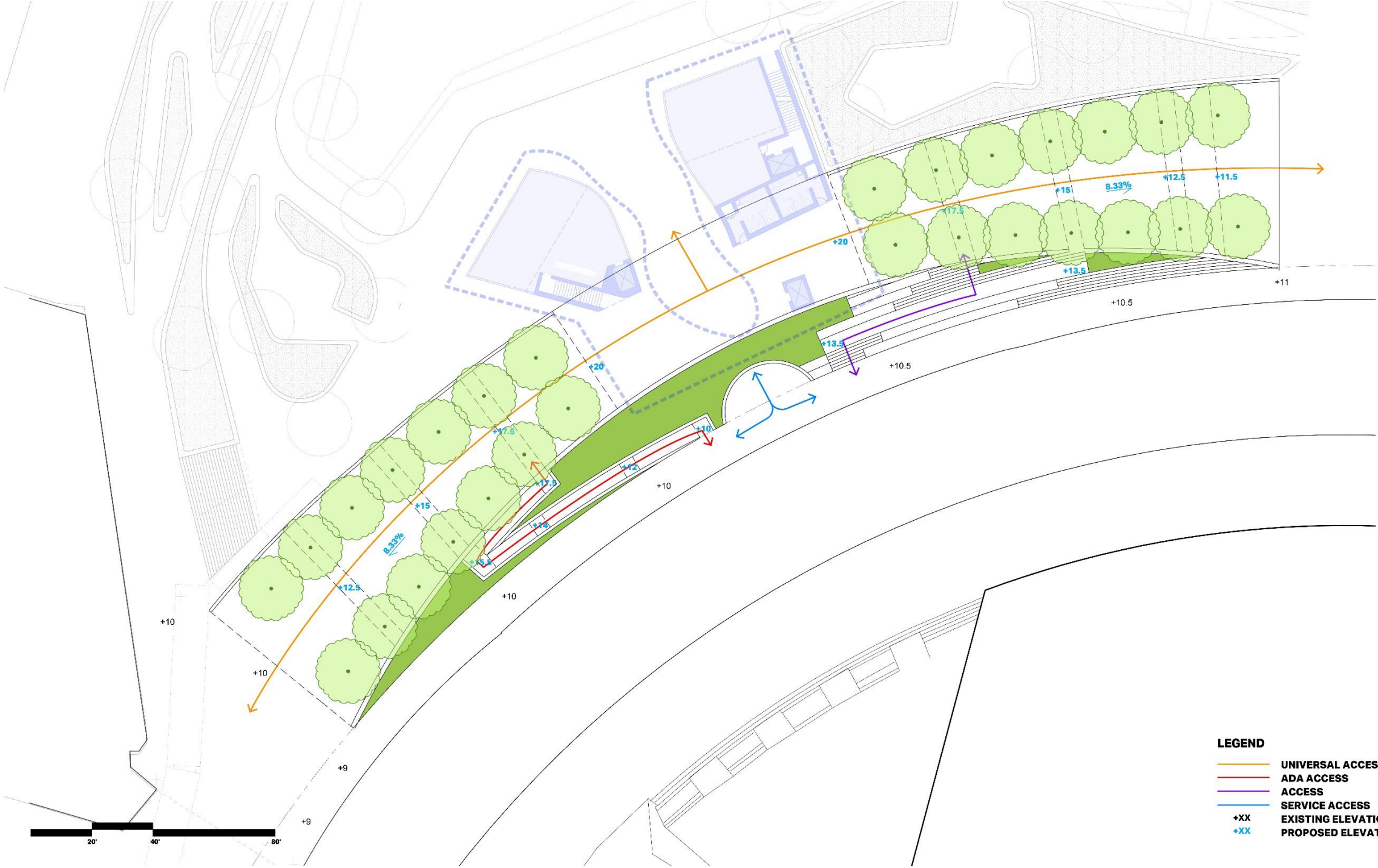


# BATTERY PLACE | STUDY 2

DRAFT INTERNAL STUDY







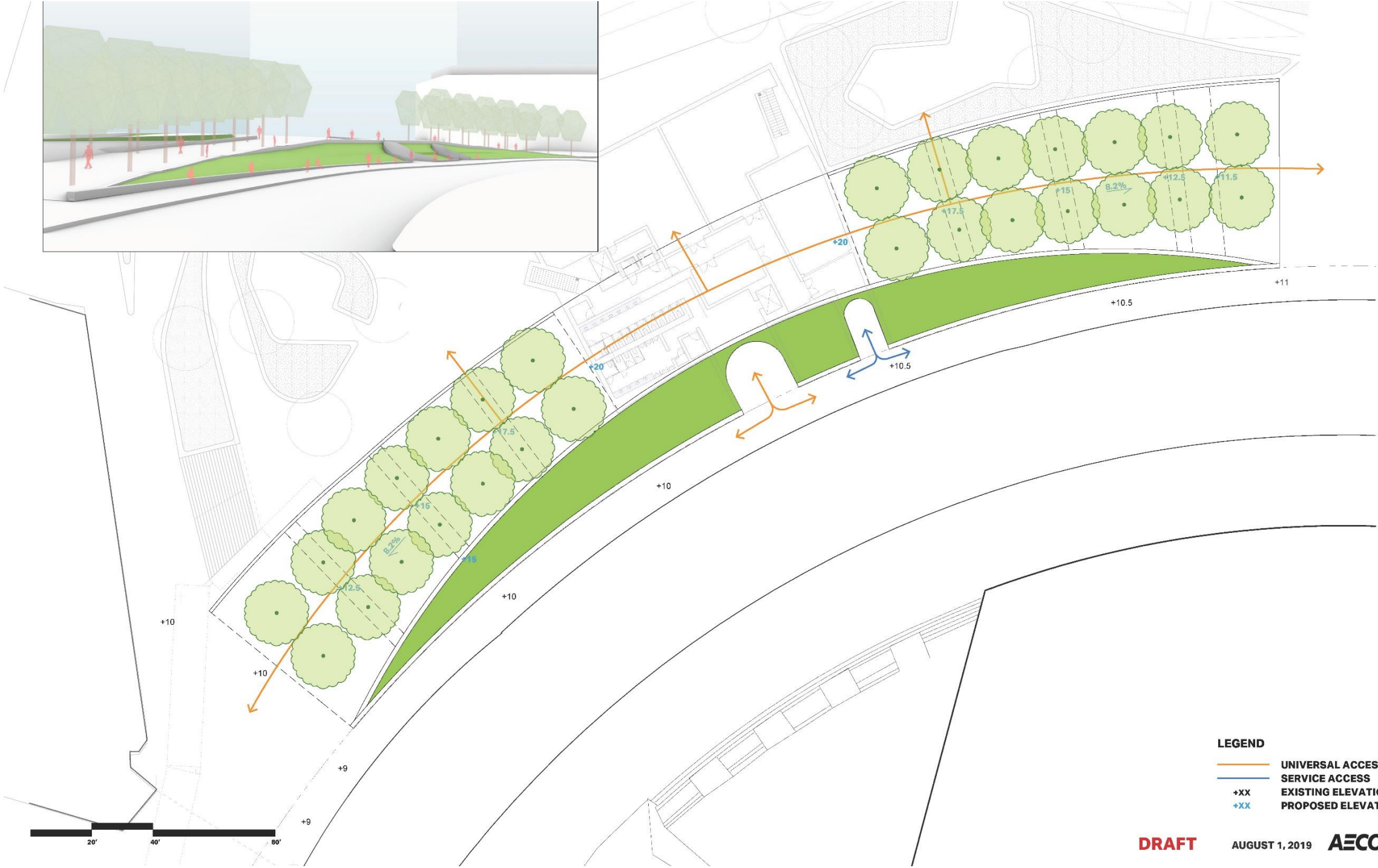
**LEGEND**

- UNIVERSAL ACCESS
- ADA ACCESS
- ACCESS
- SERVICE ACCESS
- +XX EXISTING ELEVATION
- +XX PROPOSED ELEVATION



# BATTERY PLACE | STUDY 4

DRAFT INTERNAL STUDY

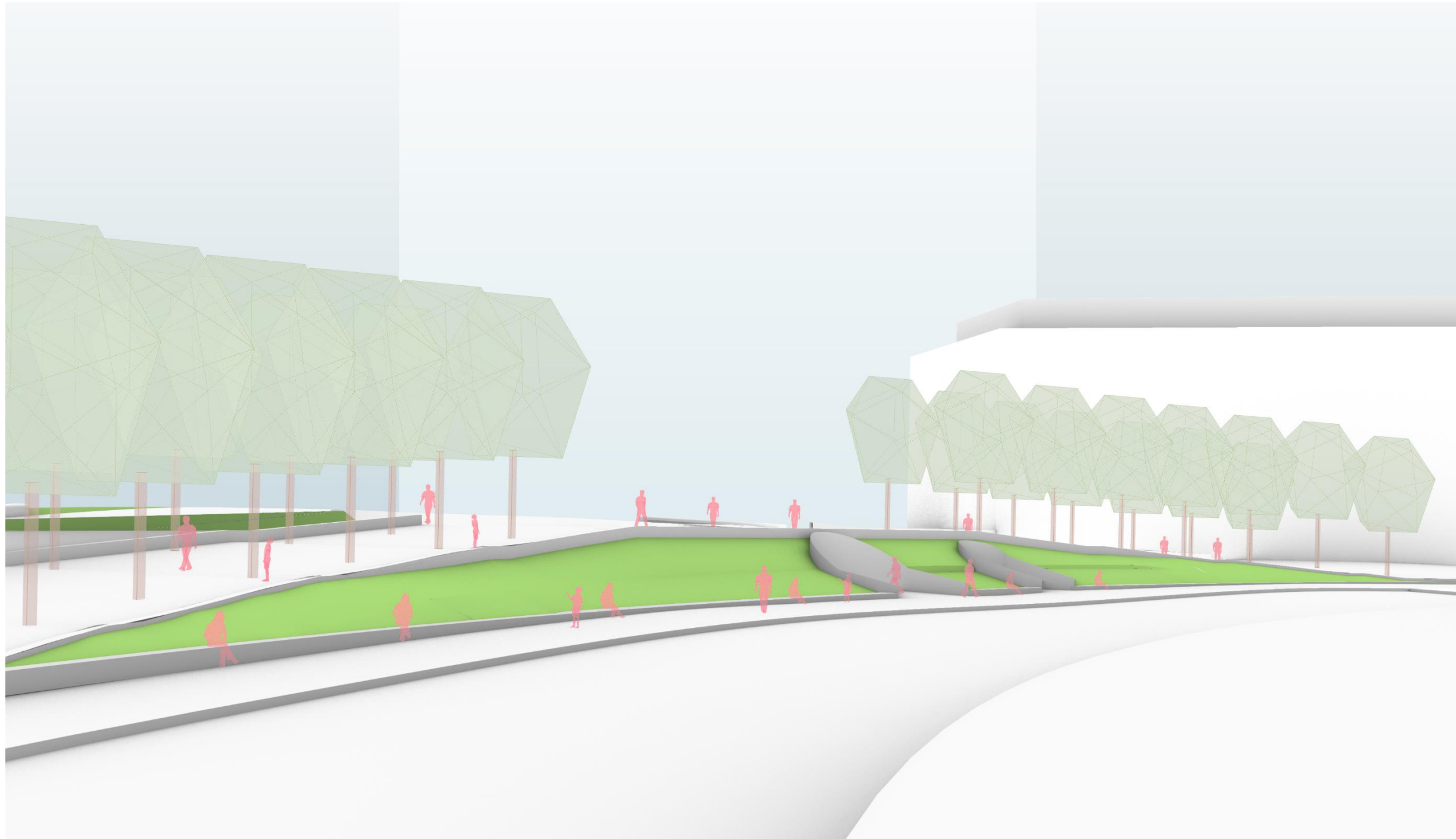


DRAFT AUGUST 1, 2019 AECOM



# BATTERY PLACE | STUDY 4

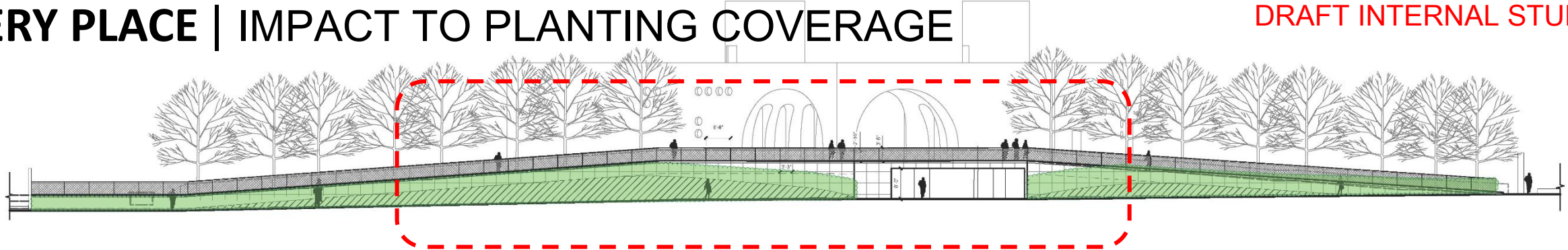
DRAFT INTERNAL STUDY



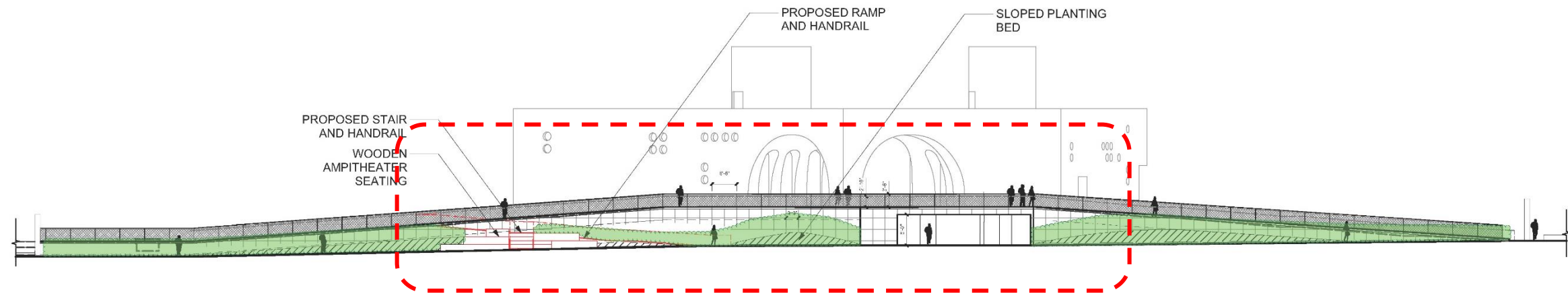


# BATTERY PLACE | IMPACT TO PLANTING COVERAGE

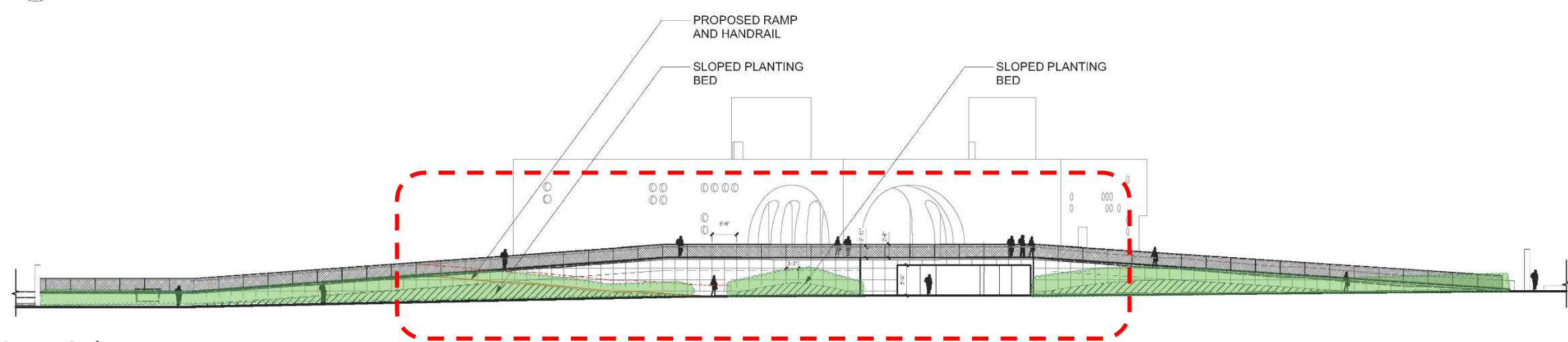
DRAFT INTERNAL STUDY



3 CURRENT BATTERY PLACE ELEVATION  
SCALE: 1/16" = 1'-0"



2 BATTERY PLACE ELEVATION WITH ADDITIONAL RAMP AND STAIRS CONNECTING PARK TO SIDEWALK  
SCALE: 1/16" = 1'-0"



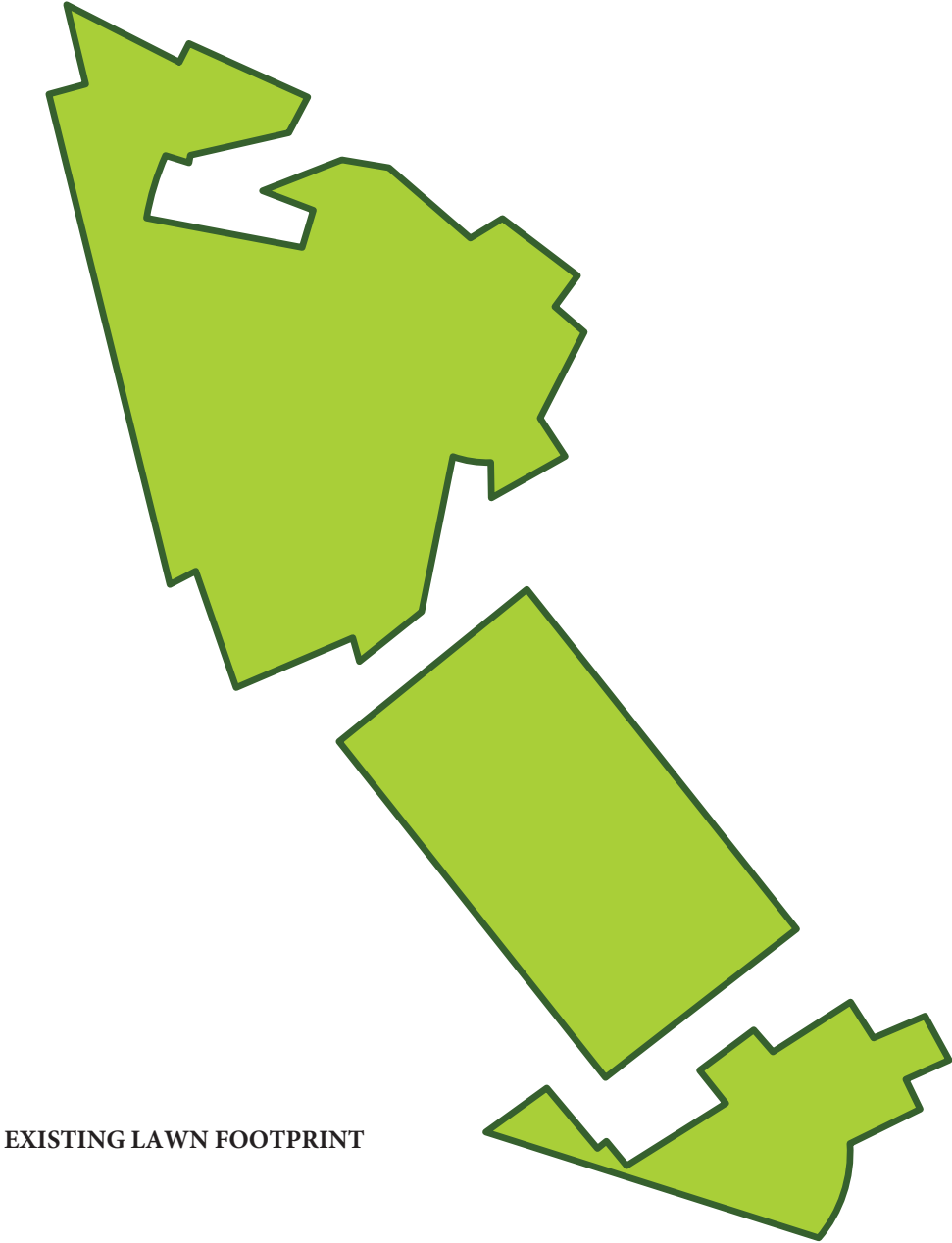


# WAGNER PARK | LAWN SCALE

## EXISTING

**TOTAL LAWN**  
33,700 SF

**OTHER GARDEN TYPES**  
30,500 SF



EXISTING LAWN FOOTPRINT

## PROPOSED

**TOTAL LAWN**  
21,500 SF

**OTHER GARDEN TYPES**  
32,000 SF

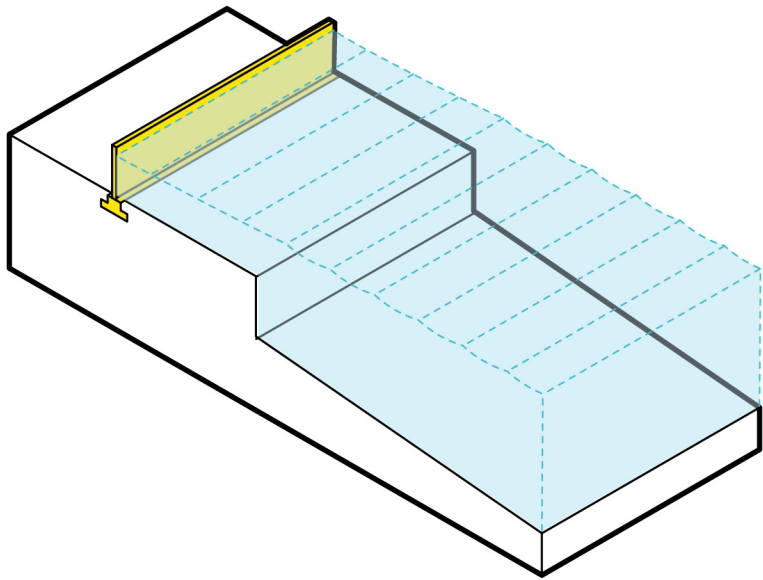
- ORNAMENTAL GARDENS**  
12,450 SF
- PERFORMATIVE GARDENS**  
11,720 SF
- MISCELLANEOUS PLANTING**  
7,830 SF



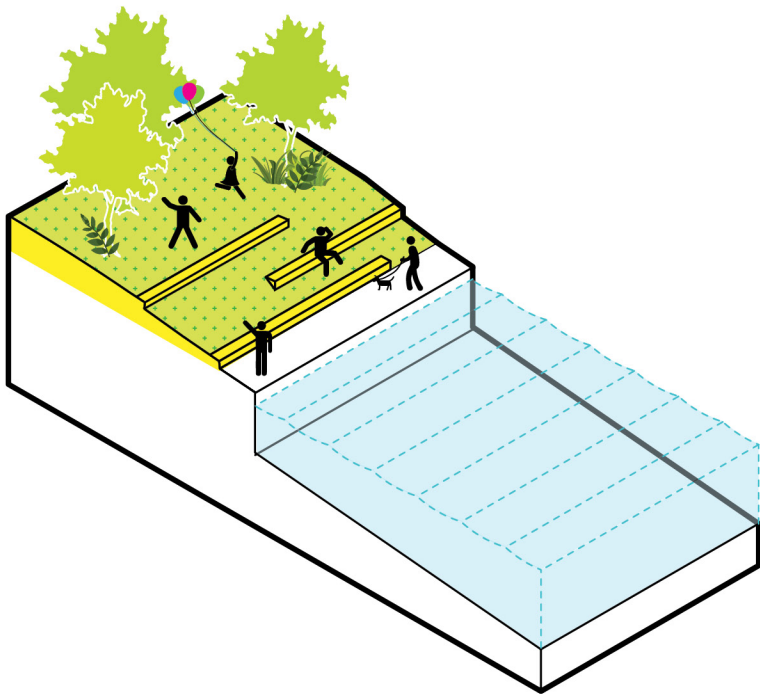
PROPOSED LAWN FOOTPRINT



# PROJECT PRIORITIES



RESILIENCY MEASURES



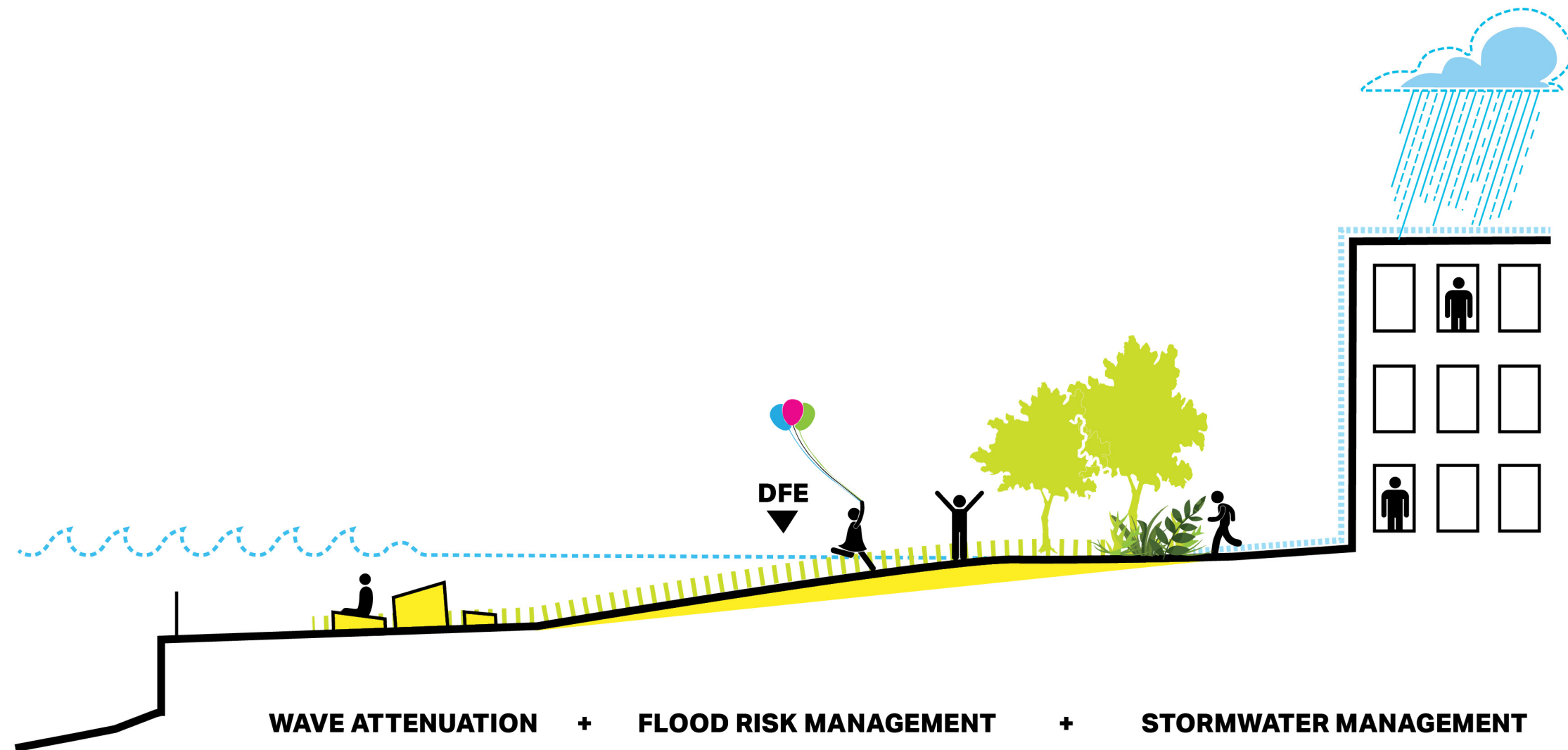
PUBLIC BENEFIT



**MULTI-PURPOSE  
PERFORMANCE**



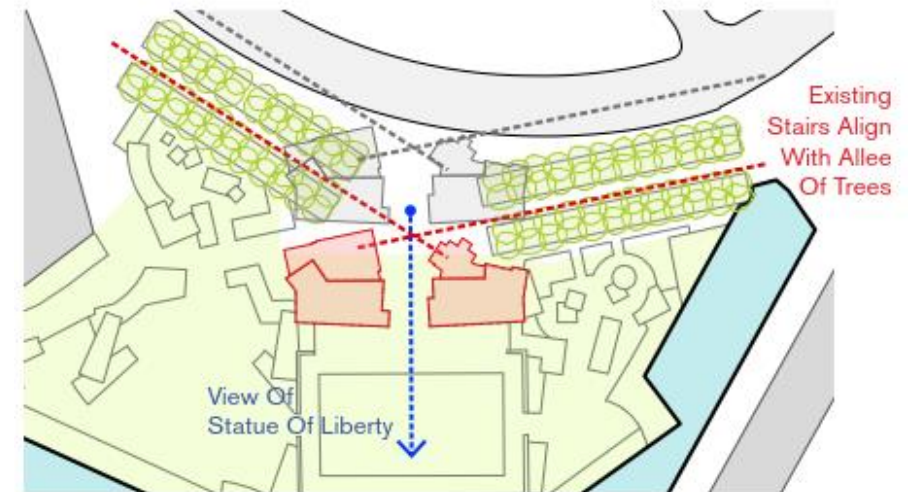
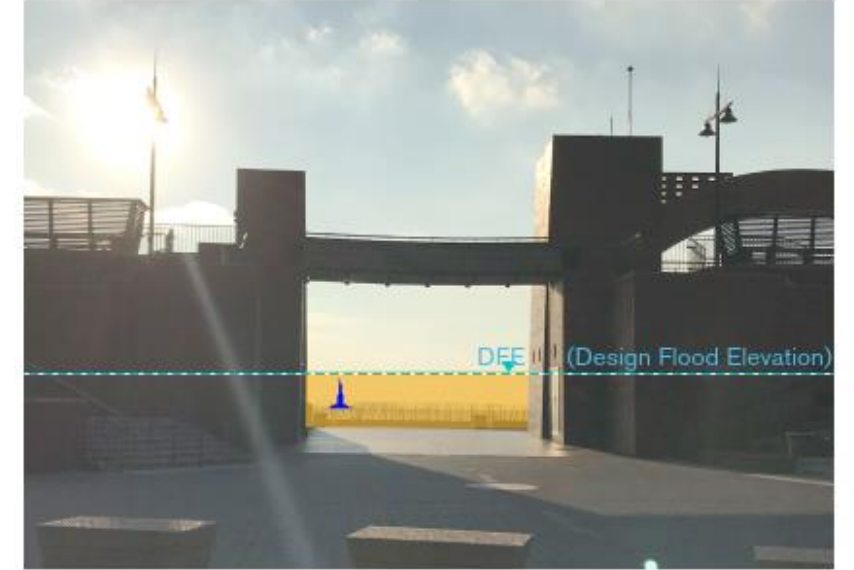
## RESILIENT COMMUNITY SPACE





# BUILDING CONSIDERATIONS

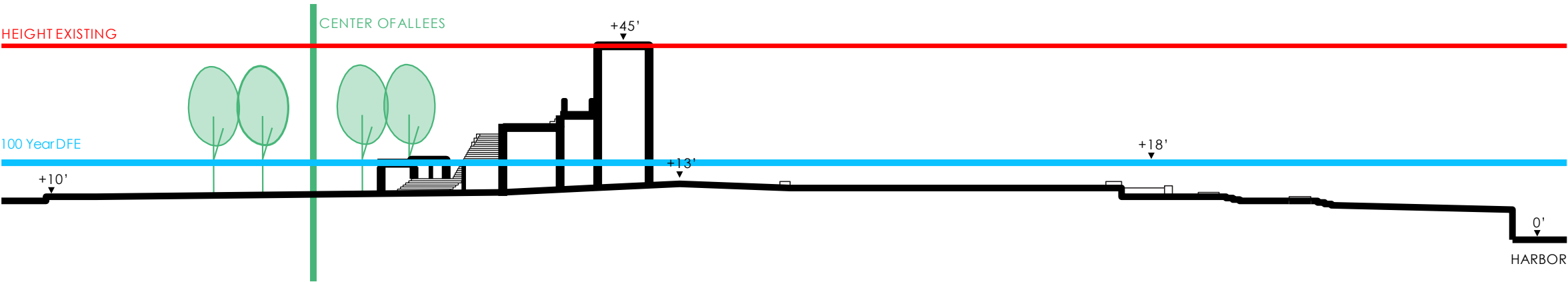
		INITIAL COST	ONGOING MAINTENANCE COST	MAXIMIZE PROTECTED LAWN	BUILDING RELATIONSHIP TO LANDSCAPE	FRAMED VIEW TO STATUE OF LIBERTY
1.	REPAIR EXISTING BUILDING IN EXISTING LOCATION	\$\$	\$\$\$	NO	BELOW DFE	BLOCKED BY FLOOD ALIGNMENT
2.	REMEDiate EXISTING BUILDING IN EXISTING LOCATION	\$\$\$	\$\$	NO	BELOW DFE	BLOCKED BY FLOOD ALIGNMENT
3.	BUILD NEW BUILDING					
A	REPLICATE EXISTING DESIGN AT HIGHER ELEVATION	\$\$\$	\$\$	NO	STAIRS NO LONGER CONNECT TO STREET LEVEL	YES
B	REPLICATE EXISTING DESIGN CLOSER TO STREET	\$\$\$	\$\$	YES	STAIRS NO LONGER ALIGN WITH ALLEE OF TREES	BLOCKED BY FLOOD ALIGNMENT
C	BUILD NEW DESIGN CLOSER TO STREET	\$\$\$	\$	YES	FULLY INTEGRATED	POSSIBLE
4.	NO BUILDING	\$	—	YES	—	OPEN VIEW



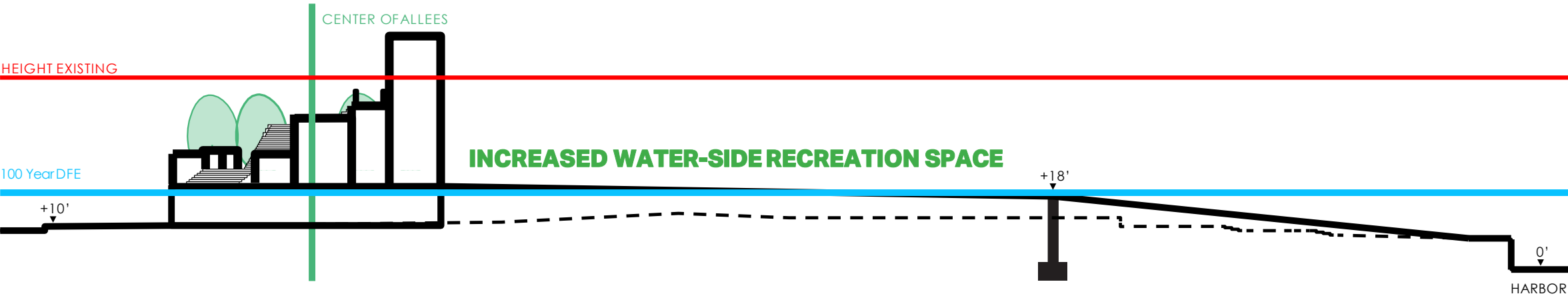


# INITIAL STUDY | REPLICATE AND RELOCATE A SITE-SPECIFIC BUILDING

## EXISTING

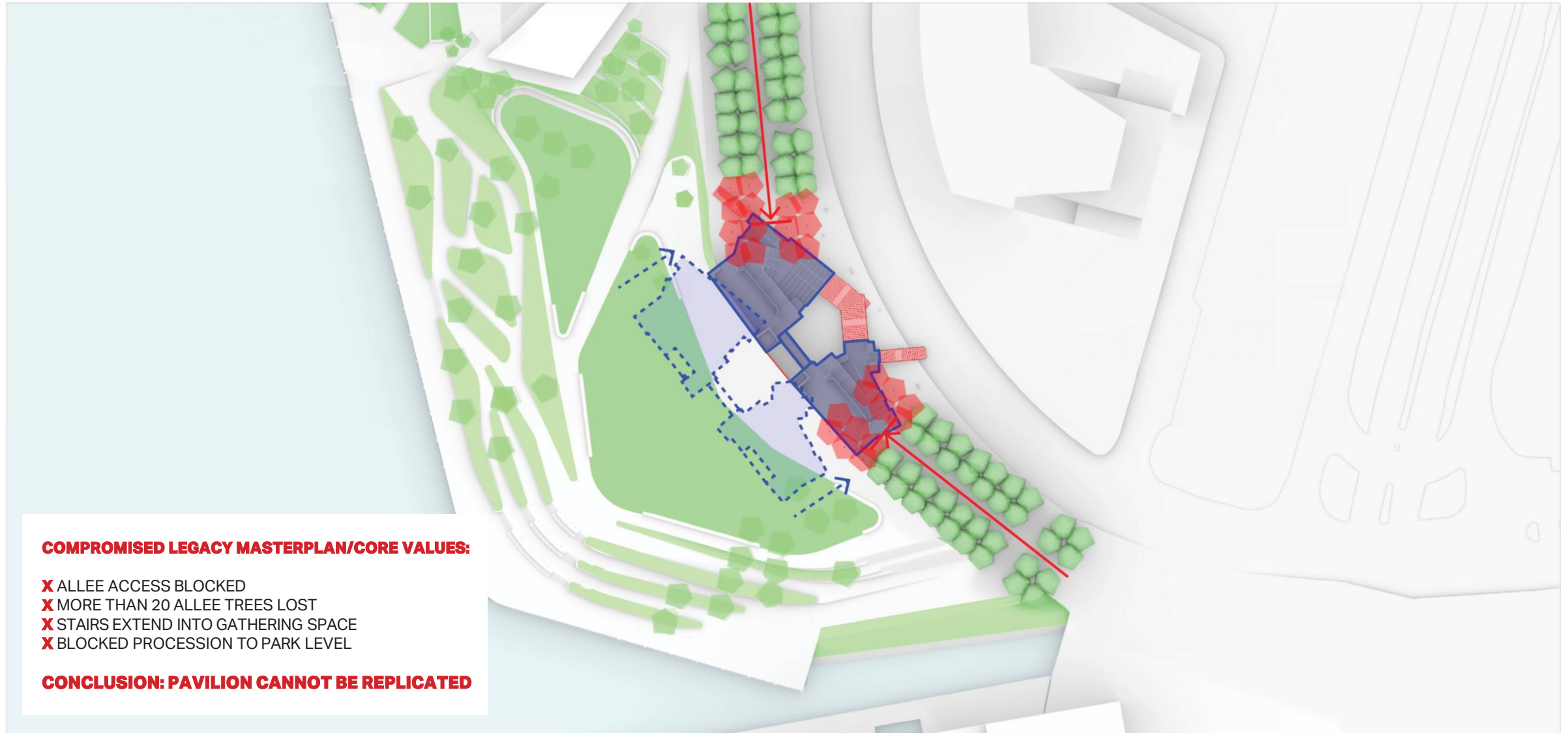


## PAVILION REPLICATED AT HIGHER ELEVATION





# INITIAL STUDY | REPLICATE AND RELOCATE A SITE-SPECIFIC BUILDING





# INITIAL STUDY | REPLICATE AND RELOCATE A SITE-SPECIFIC BUILDING

## COMPROMISED LEGACY MASTERPLAN/CORE VALUES:

- ✗ ALLEE ACCESS BLOCKED
- ✗ MORE THAN 20 ALLEE TREES LOST
- ✗ STAIRS EXTEND INTO GATHERING SPACE
- ✗ BLOCKED PROCESSION TO PARK LEVEL

## CONCLUSION: PAVILION CANNOT BE REPLICATED



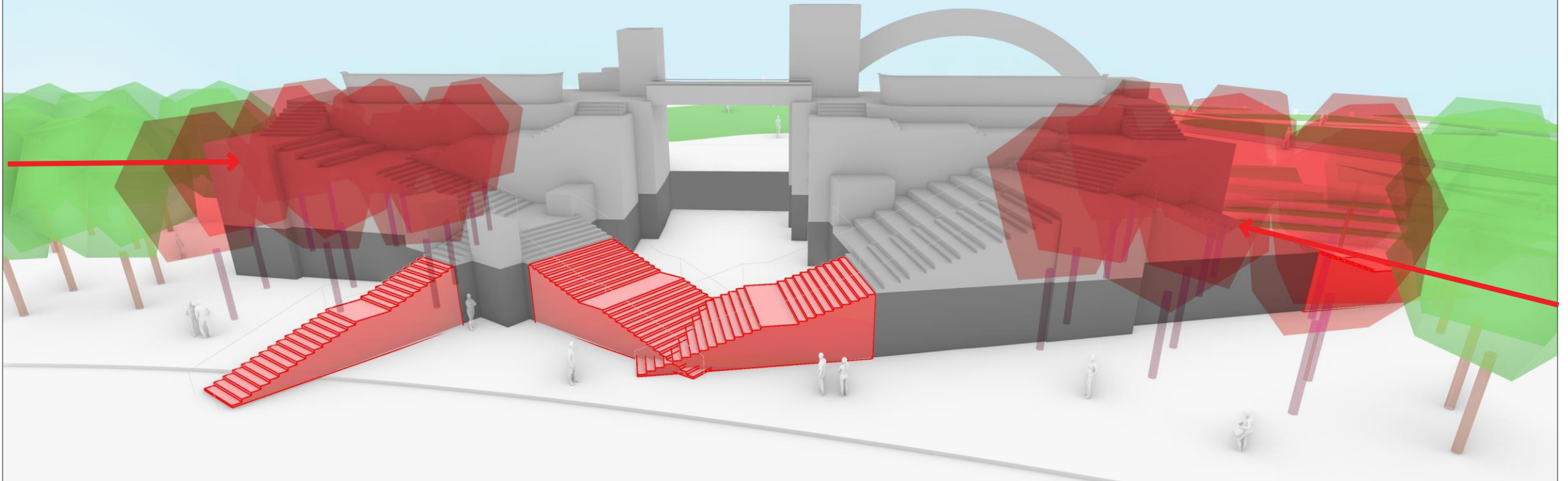


# INITIAL STUDY | CONFLICTS WITH ORIGINAL DESIGN INTENT

## COMPROMISED LEGACY MASTERPLAN/CORE VALUES:

- ✗ ALLEE ACCESS BLOCKED
- ✗ MORE THAN 20 ALLEE TREES LOST
- ✗ STAIRS EXTEND INTO GATHERING SPACE
- ✗ BLOCKED PROCESSION TO PARK LEVEL

## CONCLUSION: PAVILION CANNOT BE REPLICATED





# **5 KEY DESIGN PRINCIPLES:**

**1. MAXIMIZE PROTECTED AREA**

**2. MAXIMIZE PUBLIC SPACE**

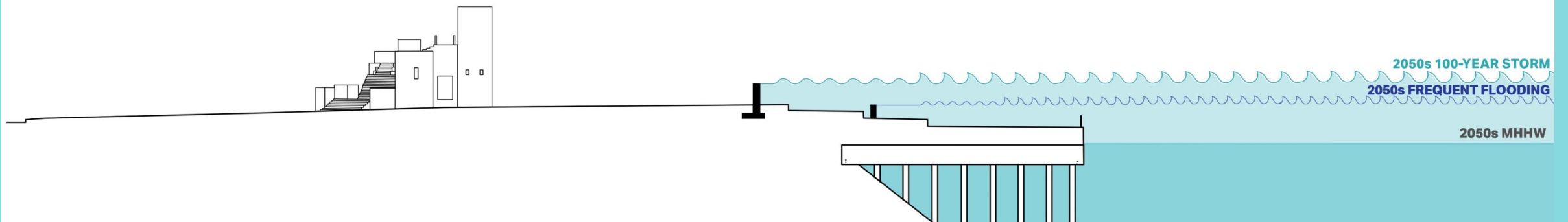
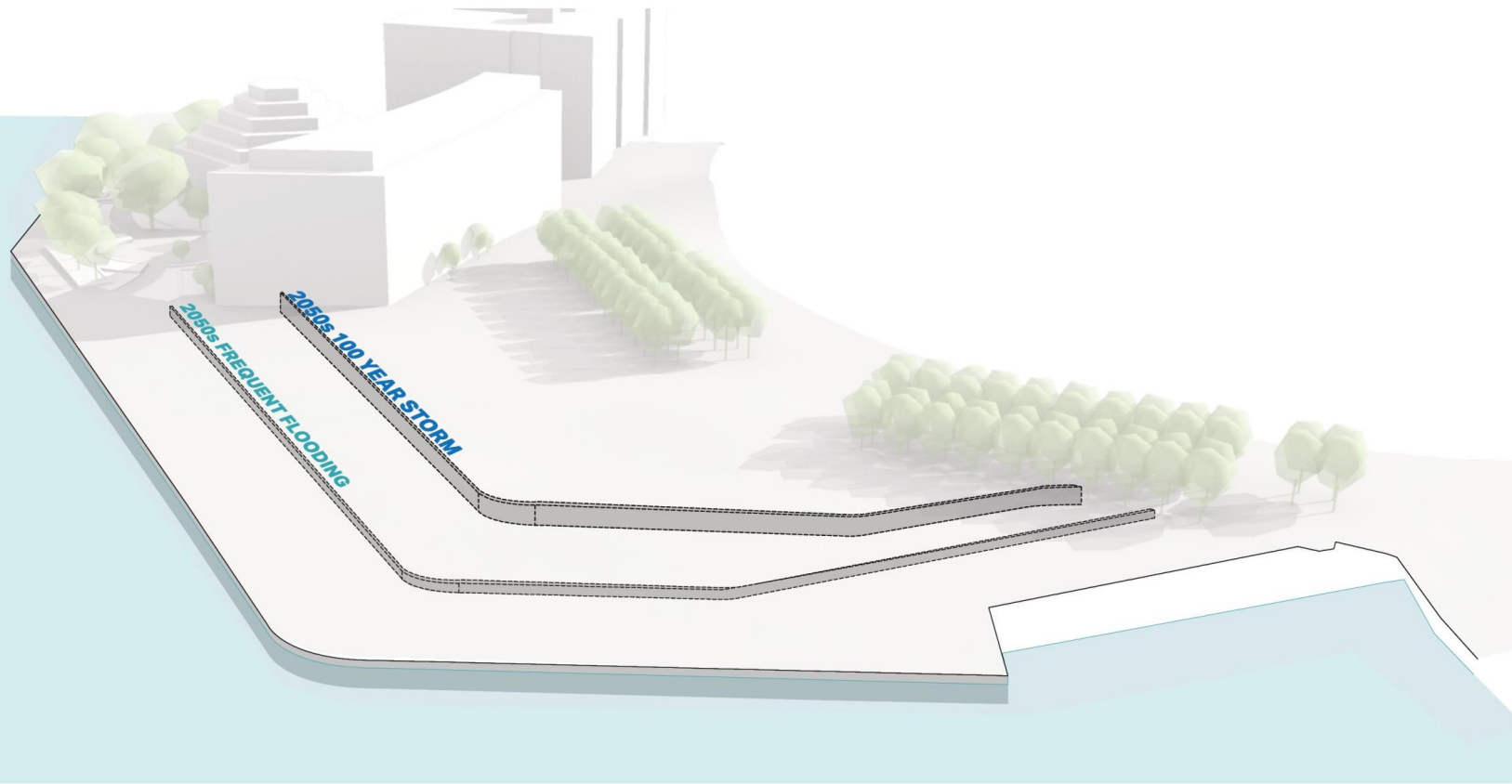
**3. MAINTAIN DESIGN LEGACY**

**4. MAINTAIN VIEWS AND ACCESS TO WATERFRONT**

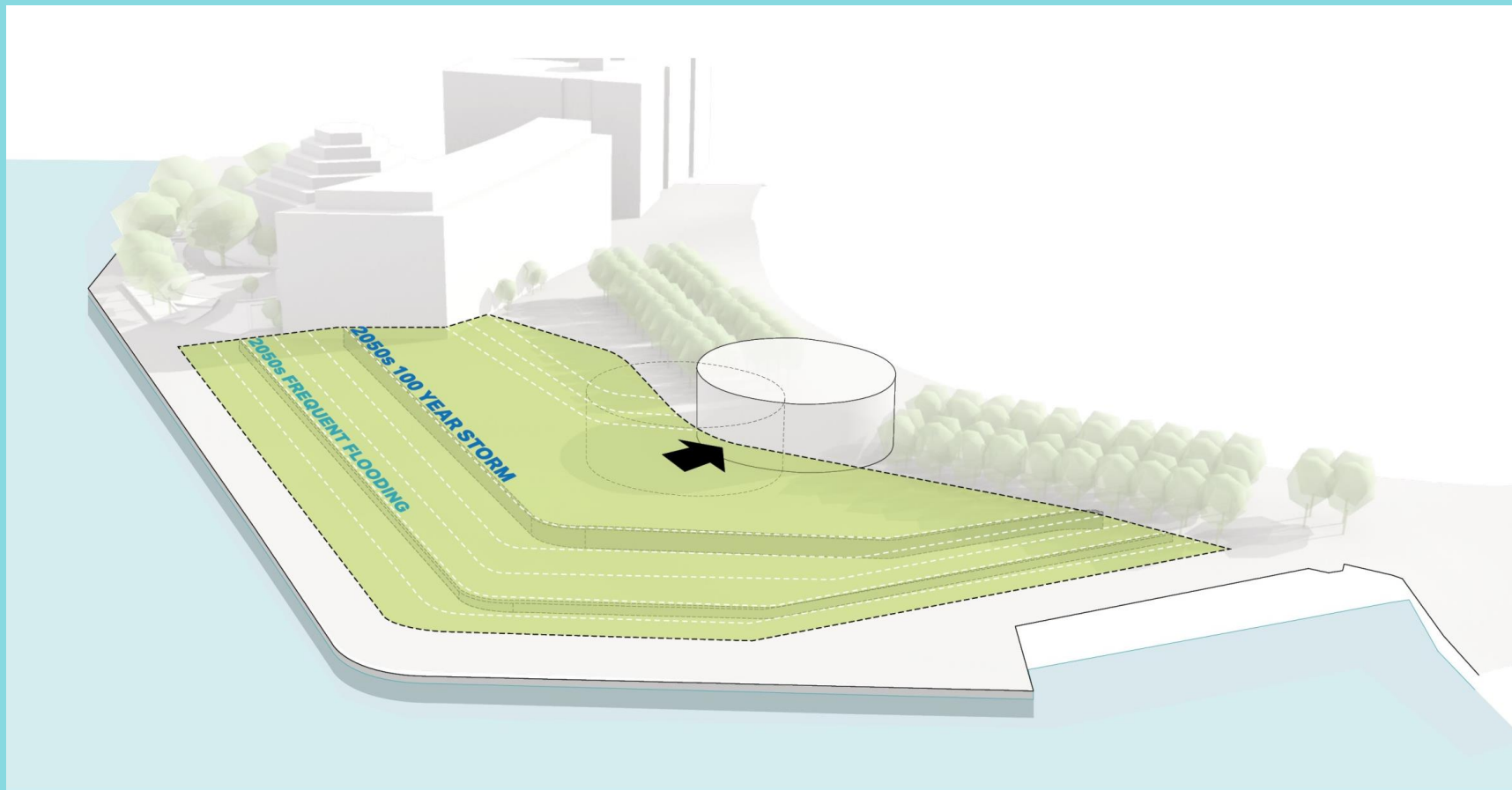
**5. CREATE AN ADAPTABLE SITE**



# 1 MAXIMIZE PROTECTED AREA

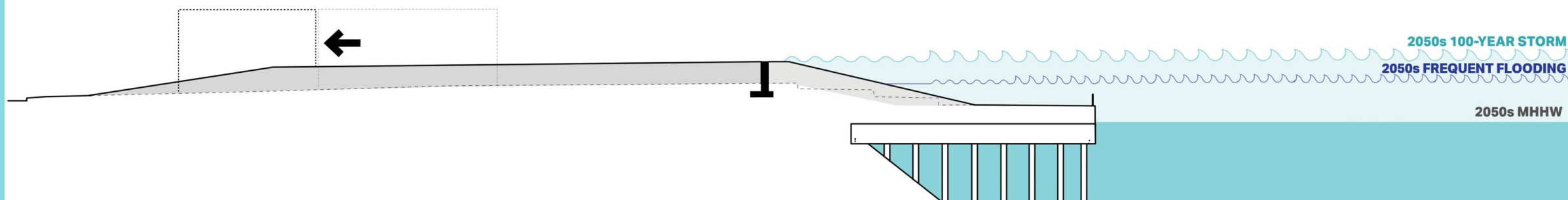




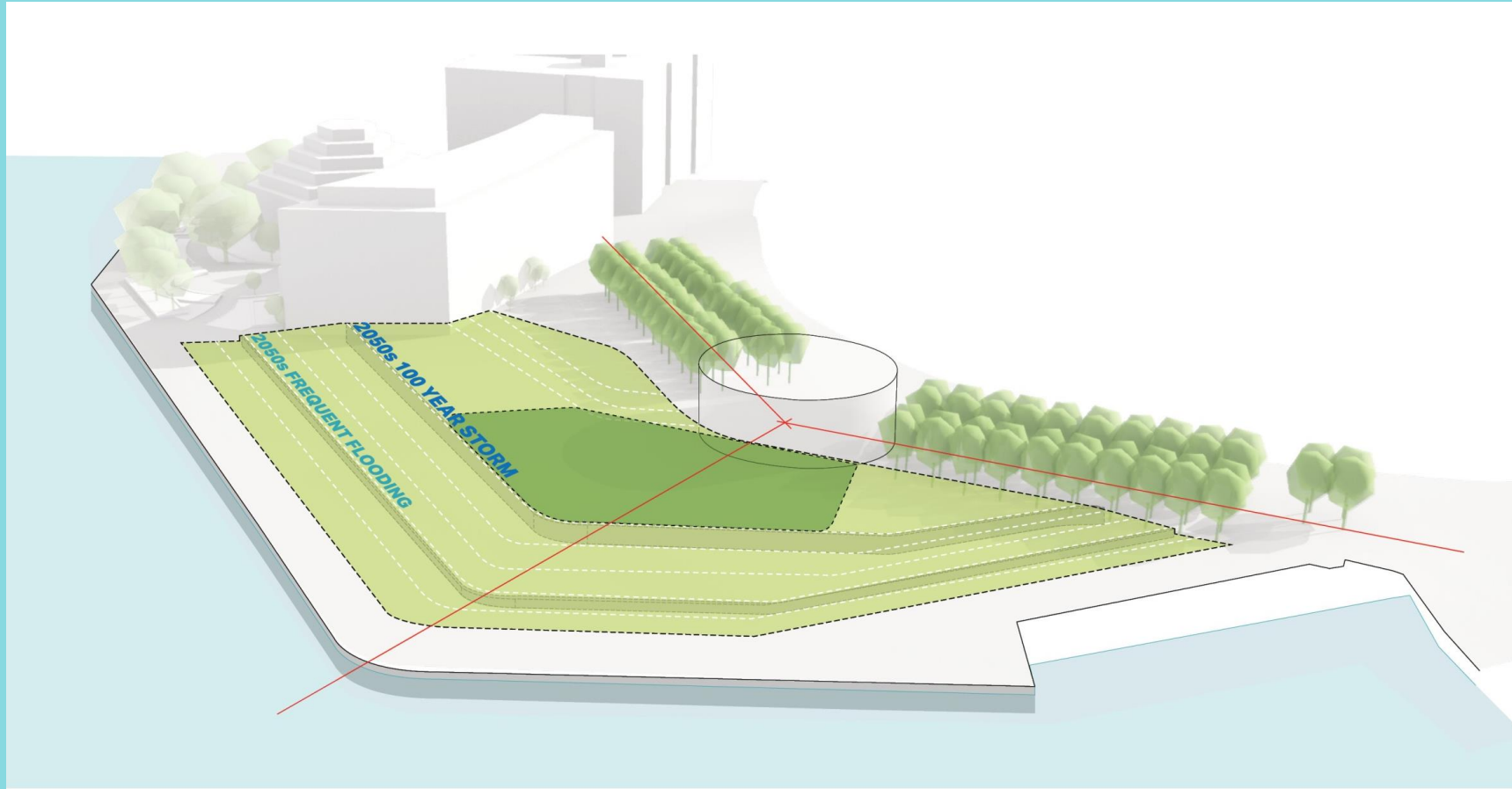


**1 MAXIMIZE PROTECTED AREA**

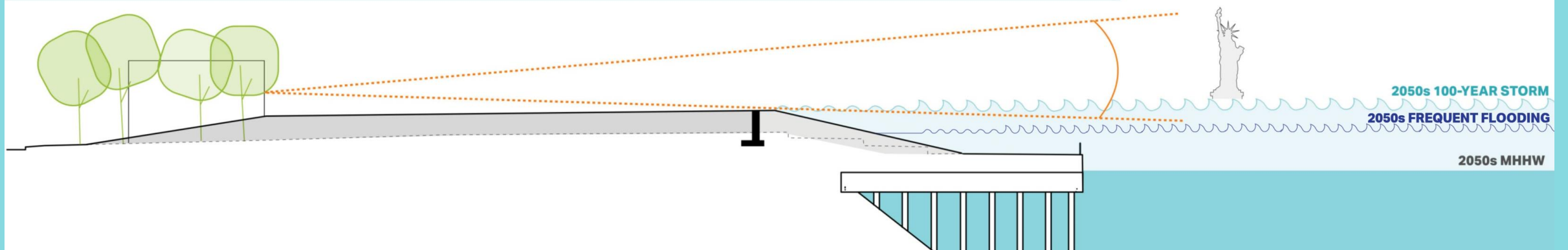
**2 MAXIMIZE PUBLIC SPACE**



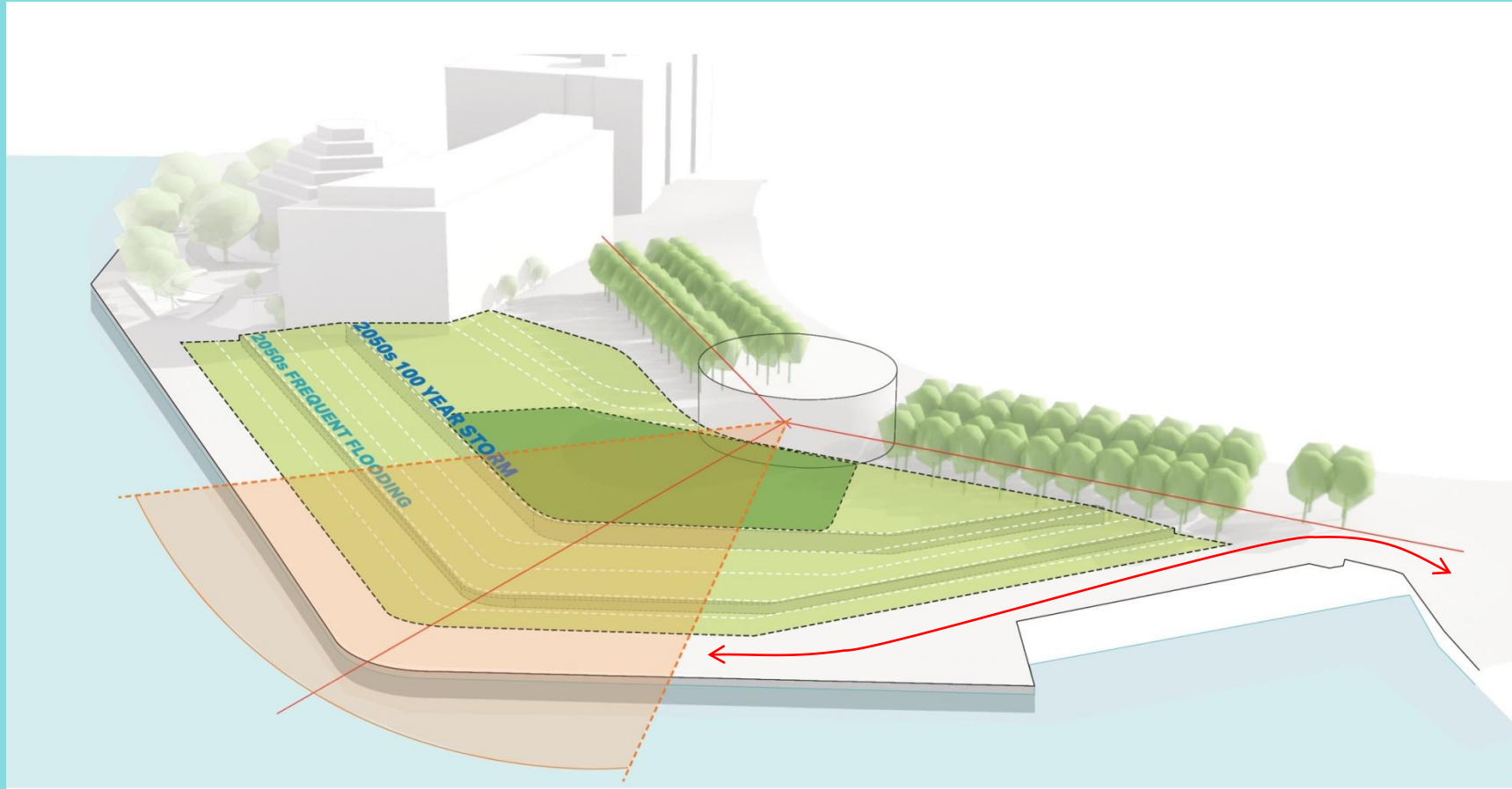




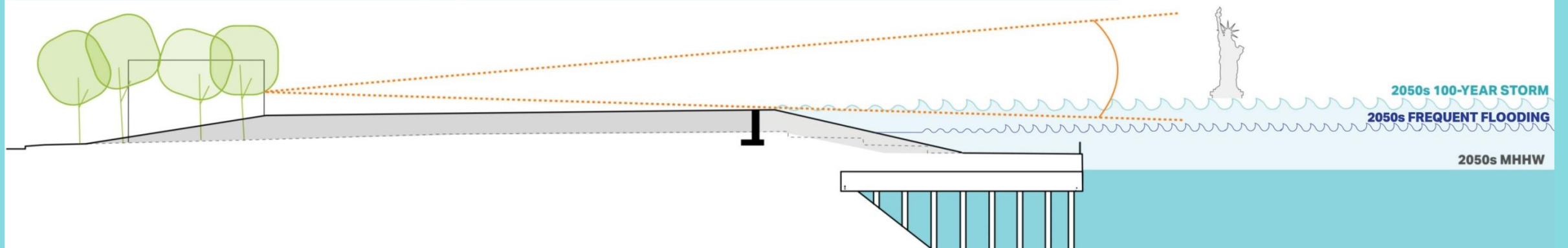
- 1 MAXIMIZE PROTECTED AREA**
- 2 MAXIMIZE PUBLIC SPACE**
- 3 MAINTAIN DESIGN LEGACY**







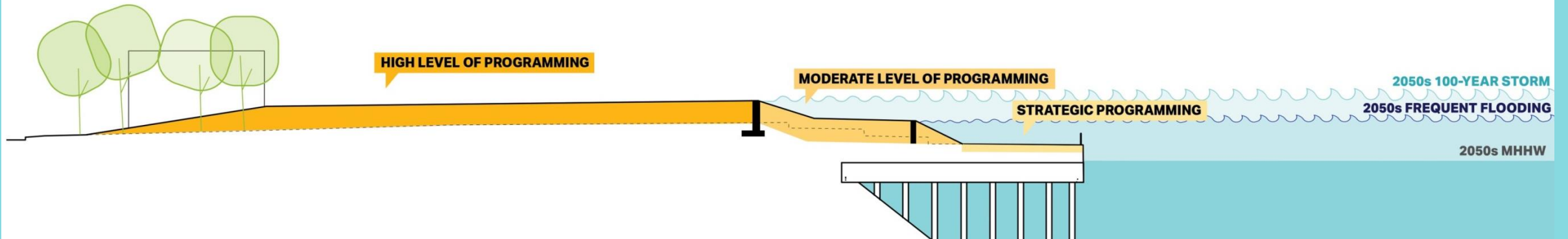
- 1 MAXIMIZE PROTECTED AREA**
- 2 MAXIMIZE PUBLIC SPACE**
- 3 MAINTAIN DESIGN LEGACY**
- 4 MAINTAIN VIEWS AND ACCESS TO WATERFRONT**



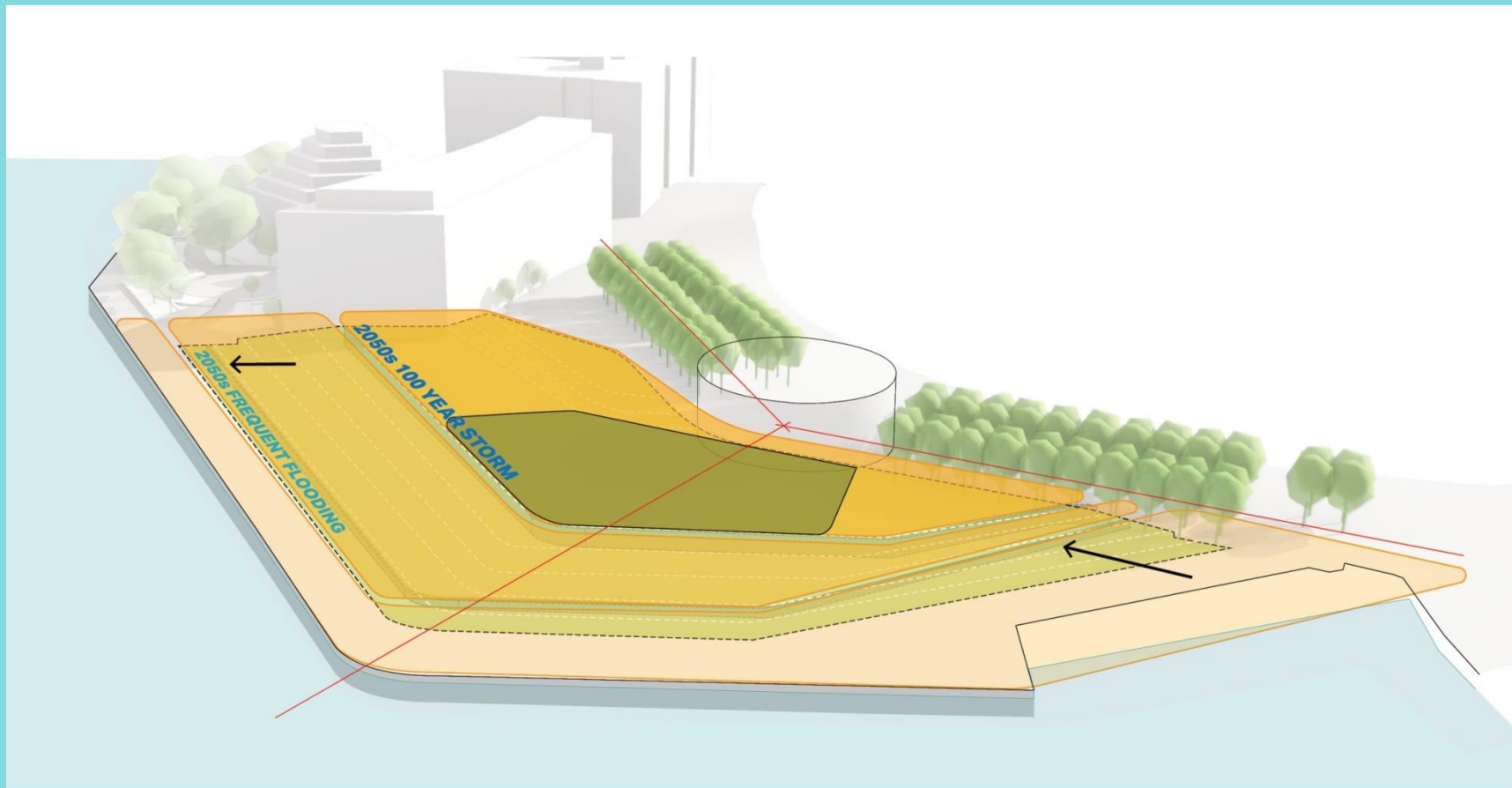




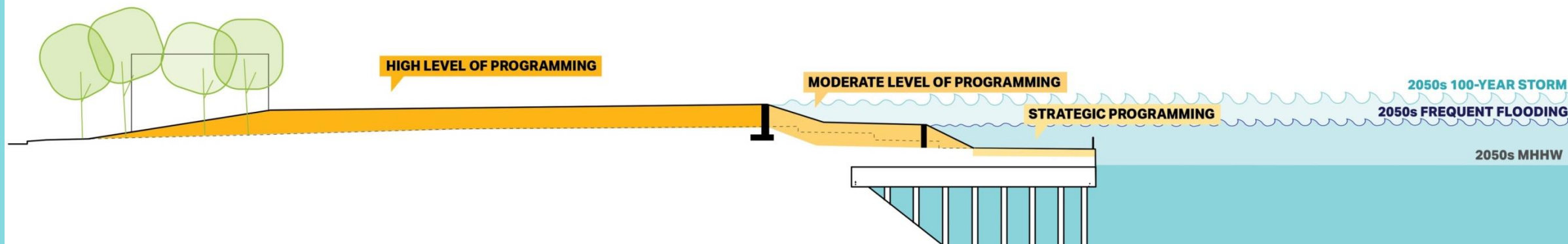
- 1 MAXIMIZE PROTECTED AREA**
- 2 MAXIMIZE PUBLIC SPACE**
- 3 MAINTAIN DESIGN LEGACY**
- 4 MAINTAIN VIEWS AND ACCESS TO WATERFRONT**
- 5 CREATE AN ADAPTABLE SITE**



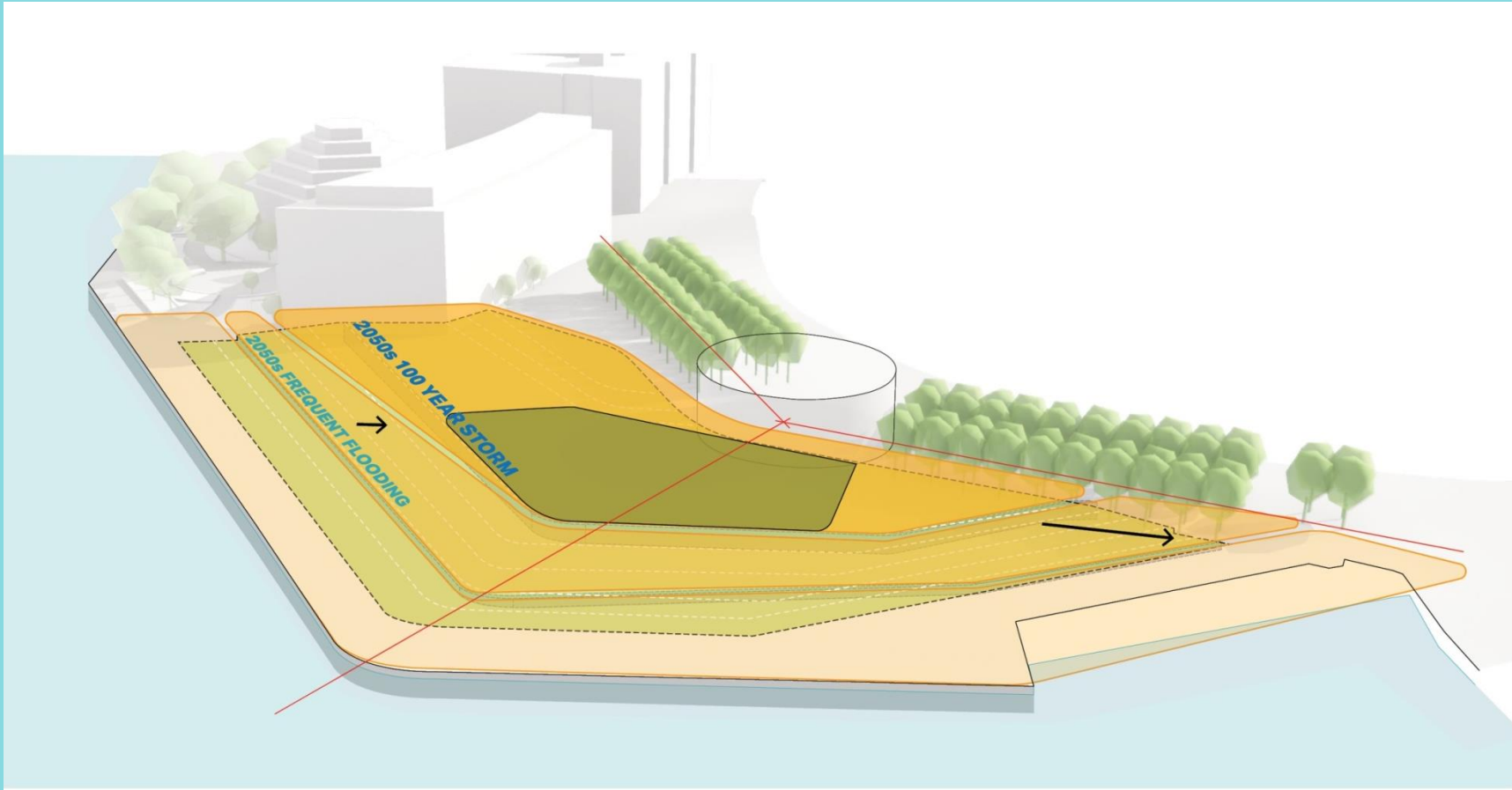




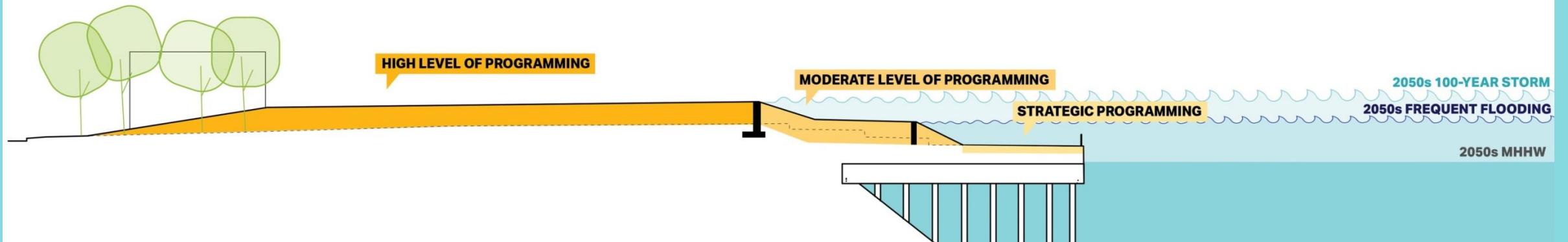
- 1 MAXIMIZE PROTECTED AREA**
- 2 MAXIMIZE PUBLIC SPACE**
- 3 MAINTAIN DESIGN LEGACY**
- 4 MAINTAIN VIEWS AND ACCESS TO WATERFRONT**
- 5 CREATE AN ADAPTABLE SITE**







- 1 MAXIMIZE PROTECTED AREA**
- 2 MAXIMIZE PUBLIC SPACE**
- 3 MAINTAIN DESIGN LEGACY**
- 4 MAINTAIN VIEWS AND ACCESS TO WATERFRONT**
- 5 CREATE AN ADAPTABLE SITE**



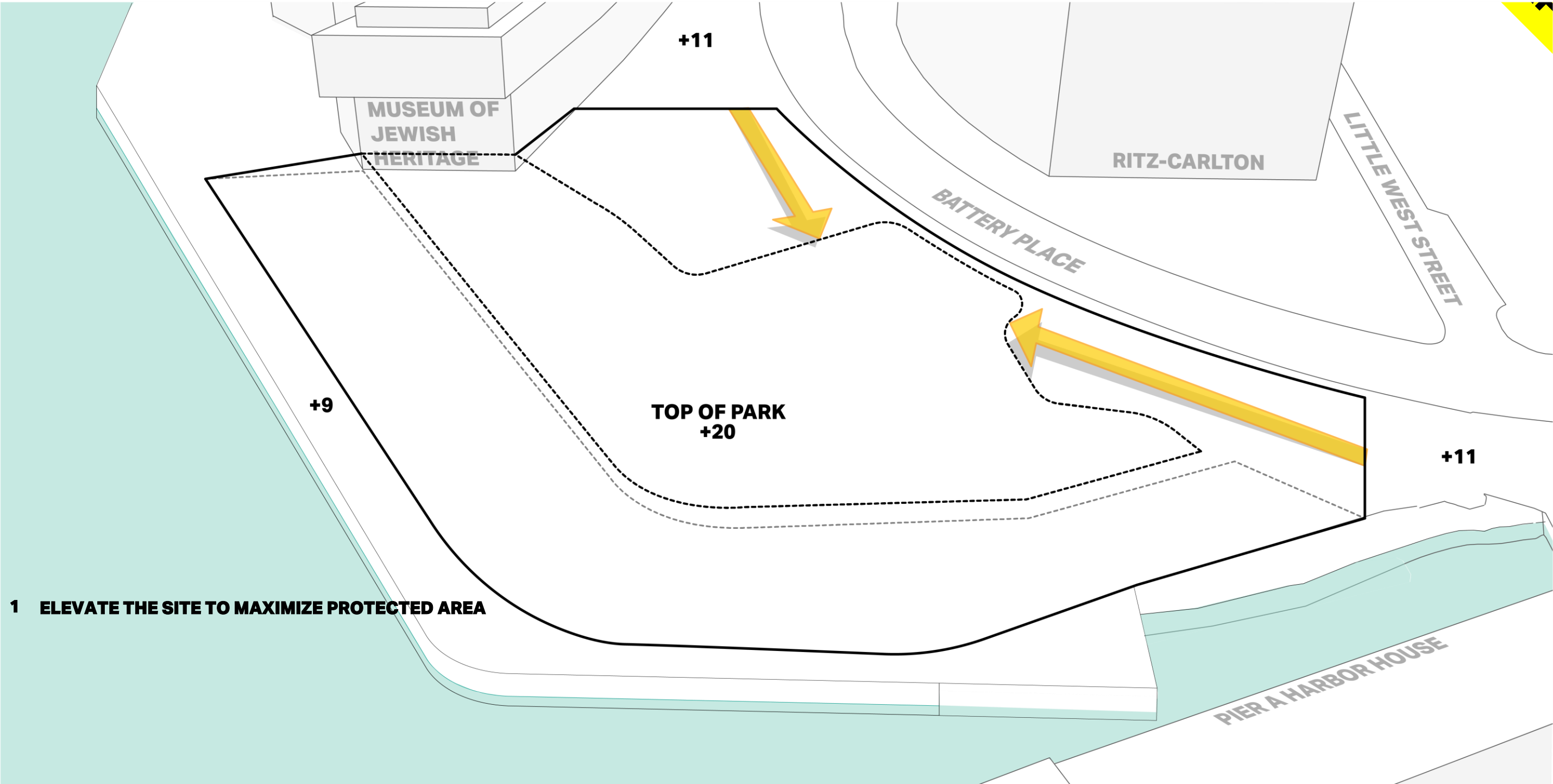


# WAGNER PARK | DESIGN PRINCIPLES



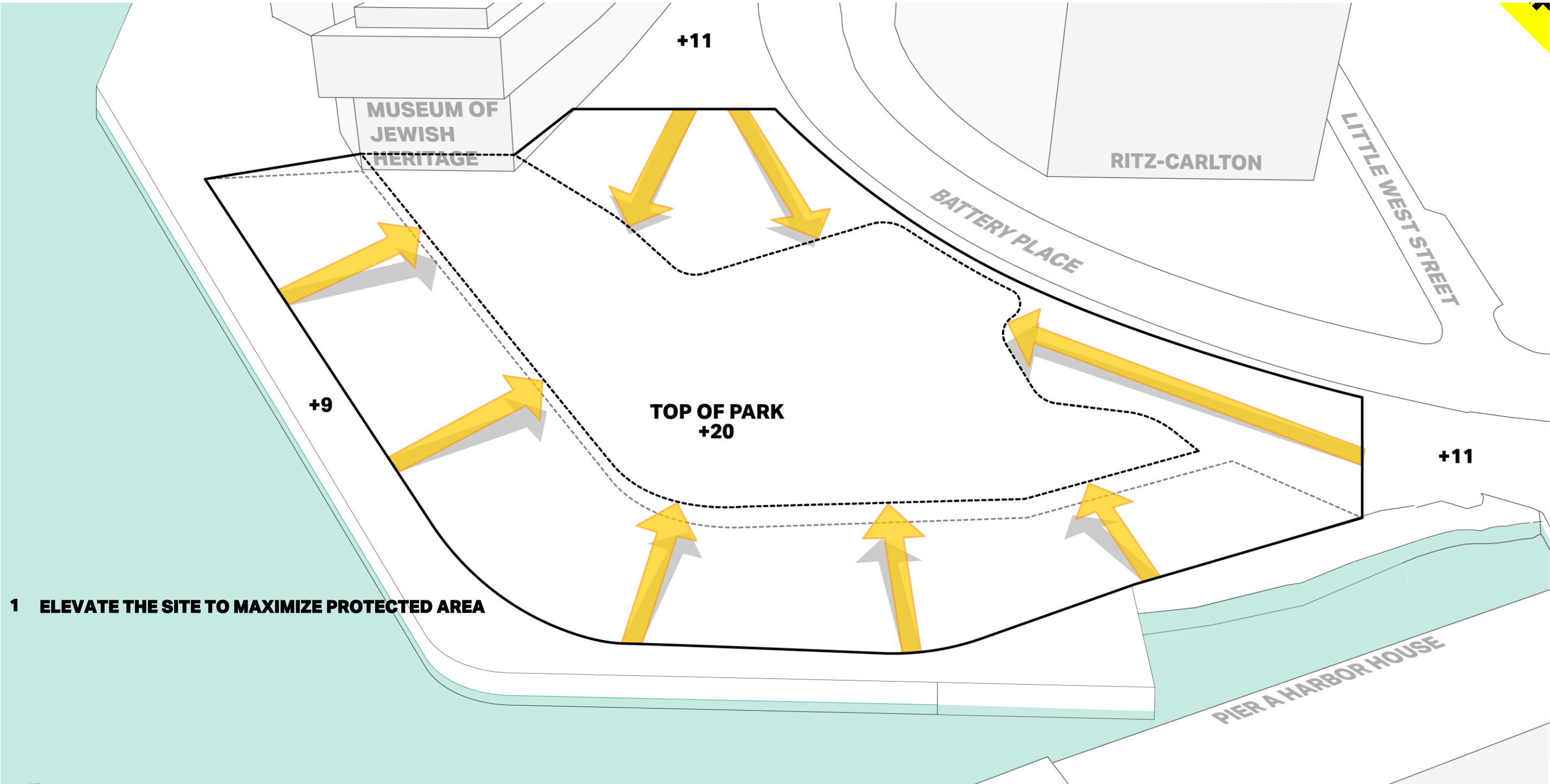


# WAGNER PARK | DESIGN PRINCIPLES





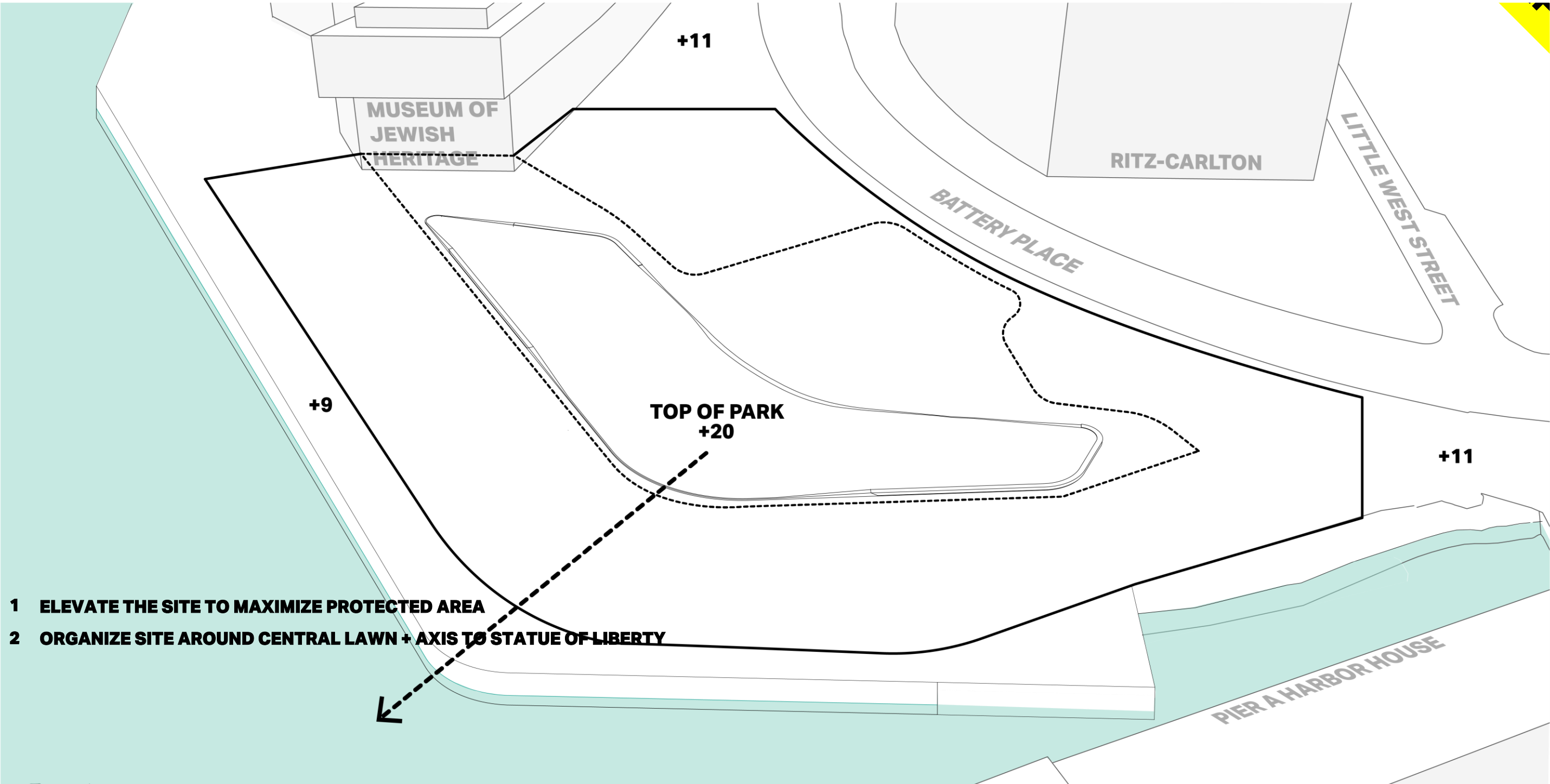
# WAGNER PARK | DESIGN PRINCIPLES



**1 ELEVATE THE SITE TO MAXIMIZE PROTECTED AREA**



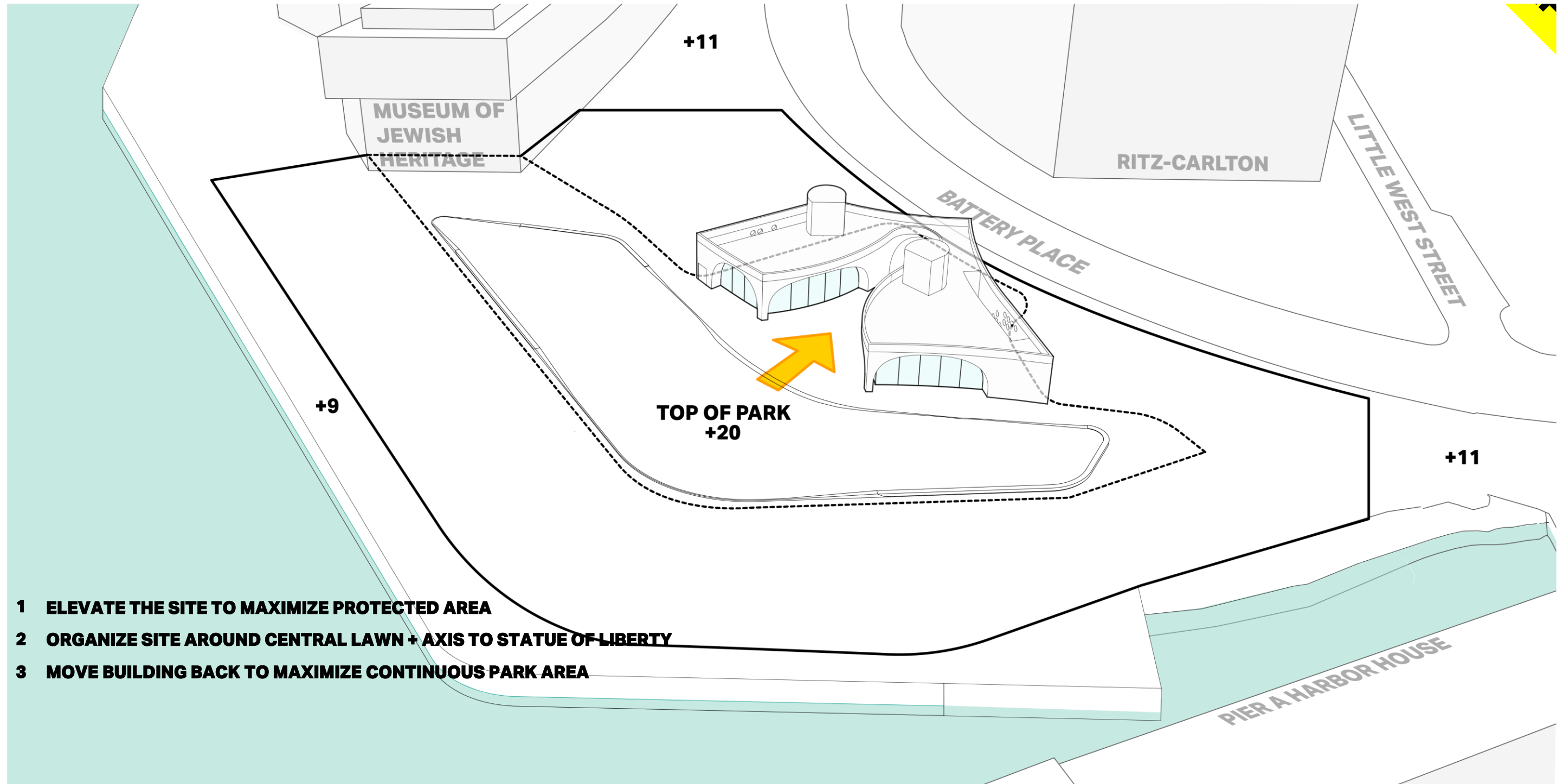
# WAGNER PARK | DESIGN PRINCIPLES



- 1 ELEVATE THE SITE TO MAXIMIZE PROTECTED AREA
- 2 ORGANIZE SITE AROUND CENTRAL LAWN + AXIS TO STATUE OF LIBERTY

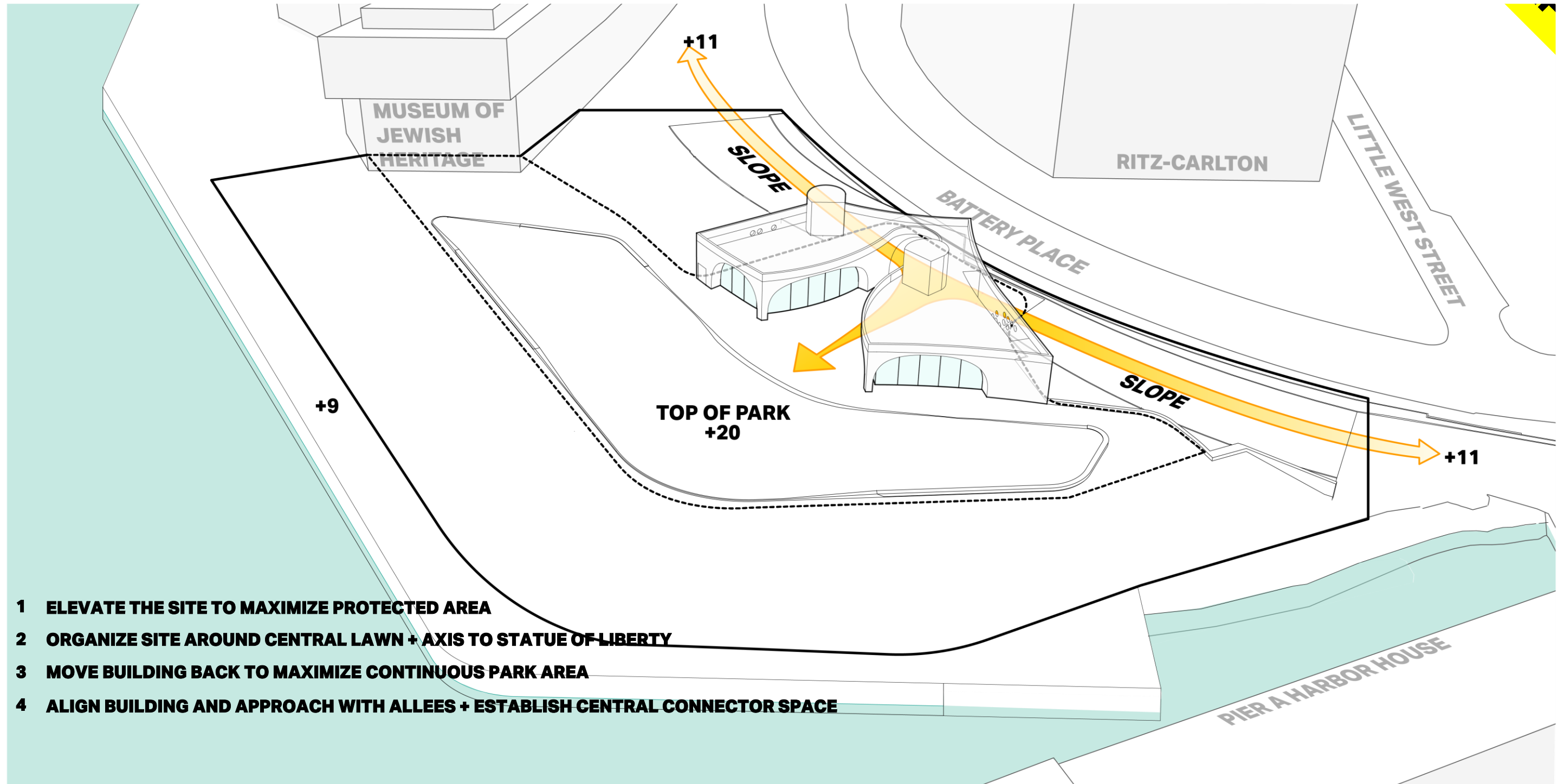


# WAGNER PARK | DESIGN PRINCIPLES



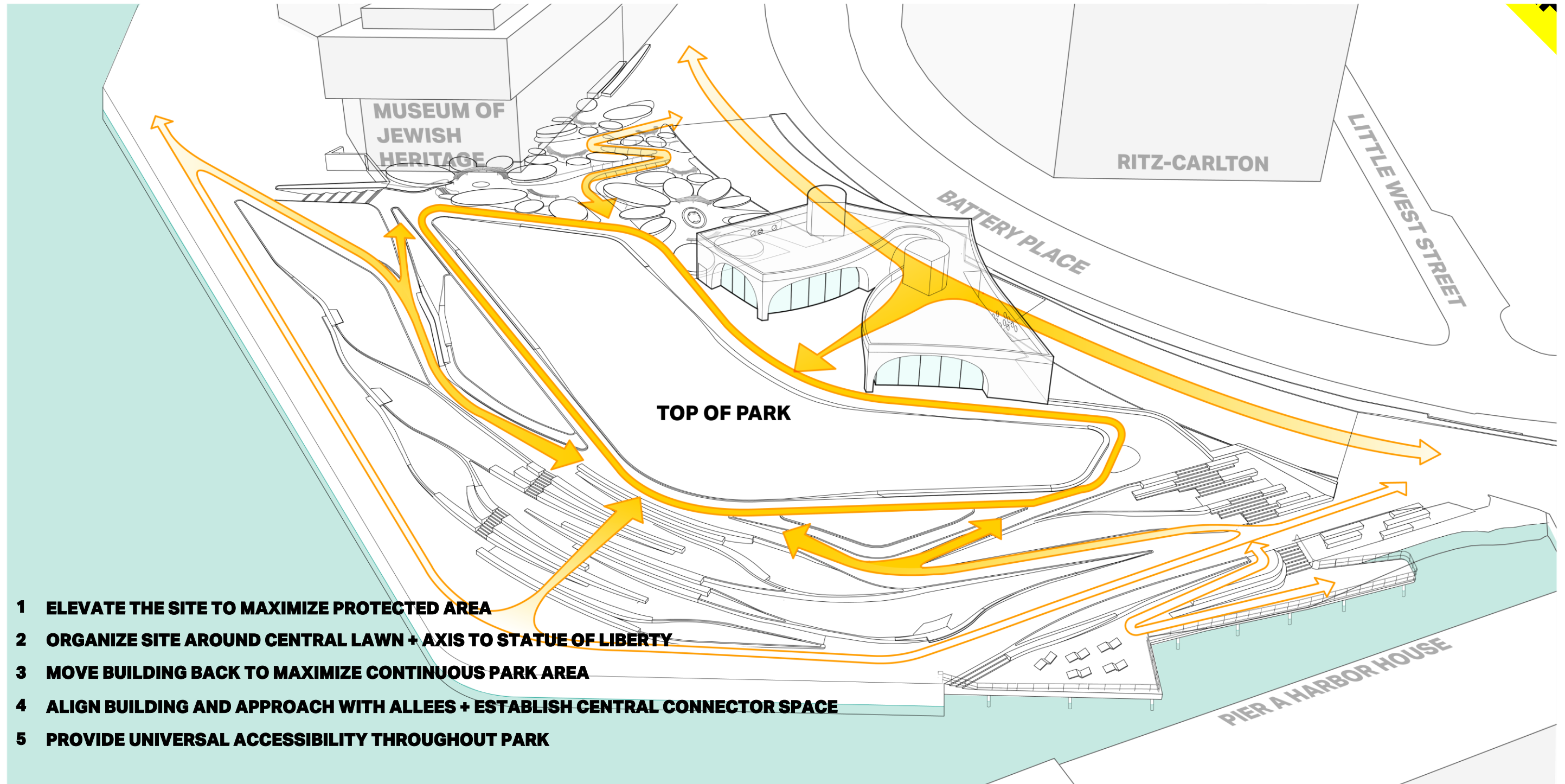


# WAGNER PARK | DESIGN PRINCIPLES





# WAGNER PARK | DESIGN PRINCIPLES





# WAGNER PARK | DESIGN PRINCIPLES

