

# East Side Coastal Resiliency

CB3 Parks Committee  
30 Delancey Street (BRC Senior Services Center)

December 12, 2019





# **PRESENTATION AGENDA**

**PROJECT BACKGROUND**

**SITE DESIGN UPDATE: PROJECT AREA 1**

**FLOODWALL SIGNAGE**

**PARK MATERIALS & PLANTING**

**ENVISION SUSTAINABILITY RATING SYSTEM**

**PROJECT SCHEDULE**





**PROVIDE FLOOD PROTECTION**





# PROJECT BACKGROUND

## PROJECT GOALS & ORIGIN

**Provide a reliable, integrated flood protection system; minimize use of closure structures.**

**Improve waterfront open spaces and access.**

**Achieve implementation milestones and project funding allocations as established by HUD.**

**Respond quickly to the urgent need for increased flood protection and resiliency.**





# WHAT WE'VE HEARD

- **DESIGN PHASE**

- Signage design and neighborhood identity
- Contextually appropriate design for buildings
- Skateboard deterrent
- Waterplay Feature
- Amphitheater design and canopy
- Emergency access: Houston St. and Colears Hook Bridge
- Additional BBQ areas in East River Park
- Tree plantings and shade
- Planted vs hardscape surface (permeable vs impermeable)
- Active vs passive space

- **CONSTRUCTION PHASE**

- Fireboat House
- Accommodating LESEC
- Activate Waterside Pier and Pier 42 deck
- Mitigation strategies for interim rec and district amenities
- Phased construction timeline
- Spring-Summer 2020 construction work
- Noise and dust mitigation during construction
- Outreach and social media during construction



An aerial photograph of a coastal area, likely a beach or park, with a teal overlay. The image shows a wide expanse of sand, some vegetation, and a body of water in the background. The text is centered over the image.

# **SITE DESIGN UPDATE: PROJECT AREA 1**



# PROJECT AREA 1

## SITE DESIGN





# MONTGOMERY ST. TIE-BACK

ROLLER GATE OPEN





# MONTGOMERY ST. TIE-BACK

ROLLER GATE CLOSED





# MANHATTAN GREENWAY

RENDERING





# PIER 42 MAINTENANCE AREA

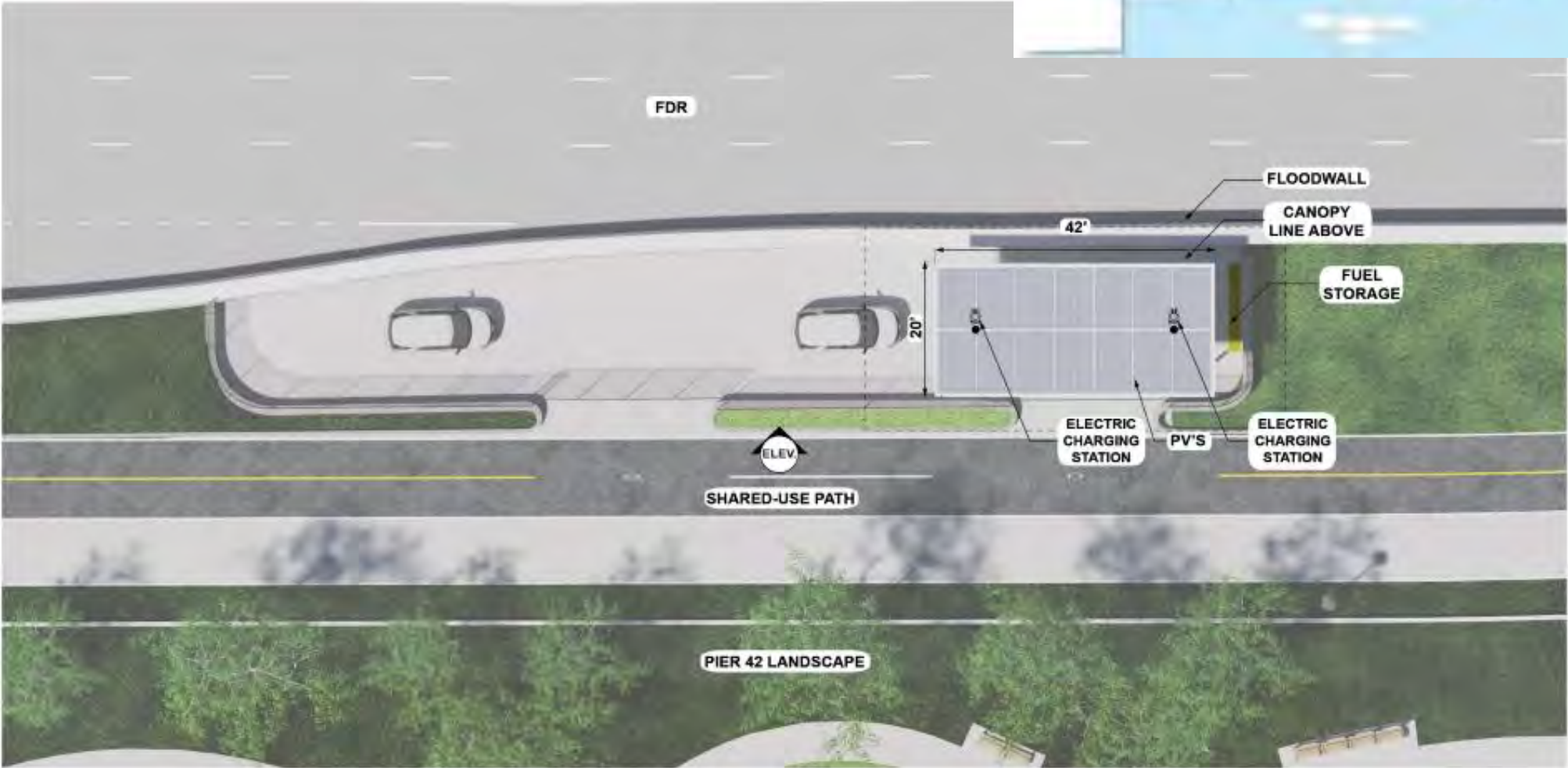
RENDERING



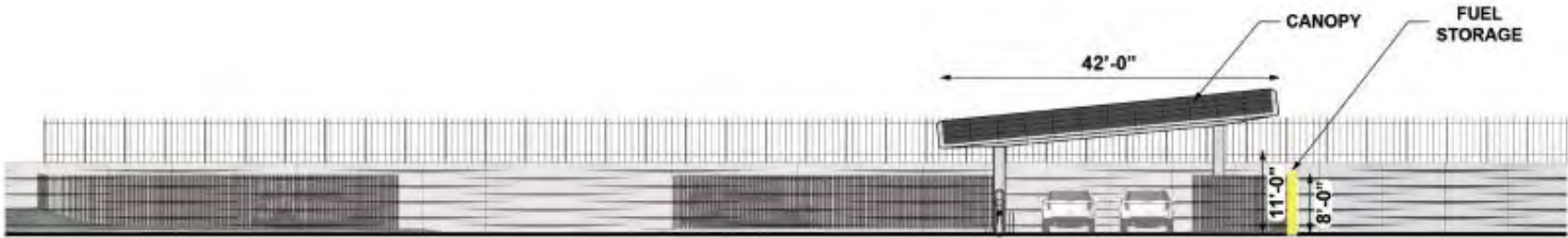


# PIER 42 MAINTENANCE AREA

SITE PLAN & ELEVATION



Pier 42 Maintenance Area Plan



Pier 42 Maintenance Area Elevation



# SOUTH GATE BUILDING

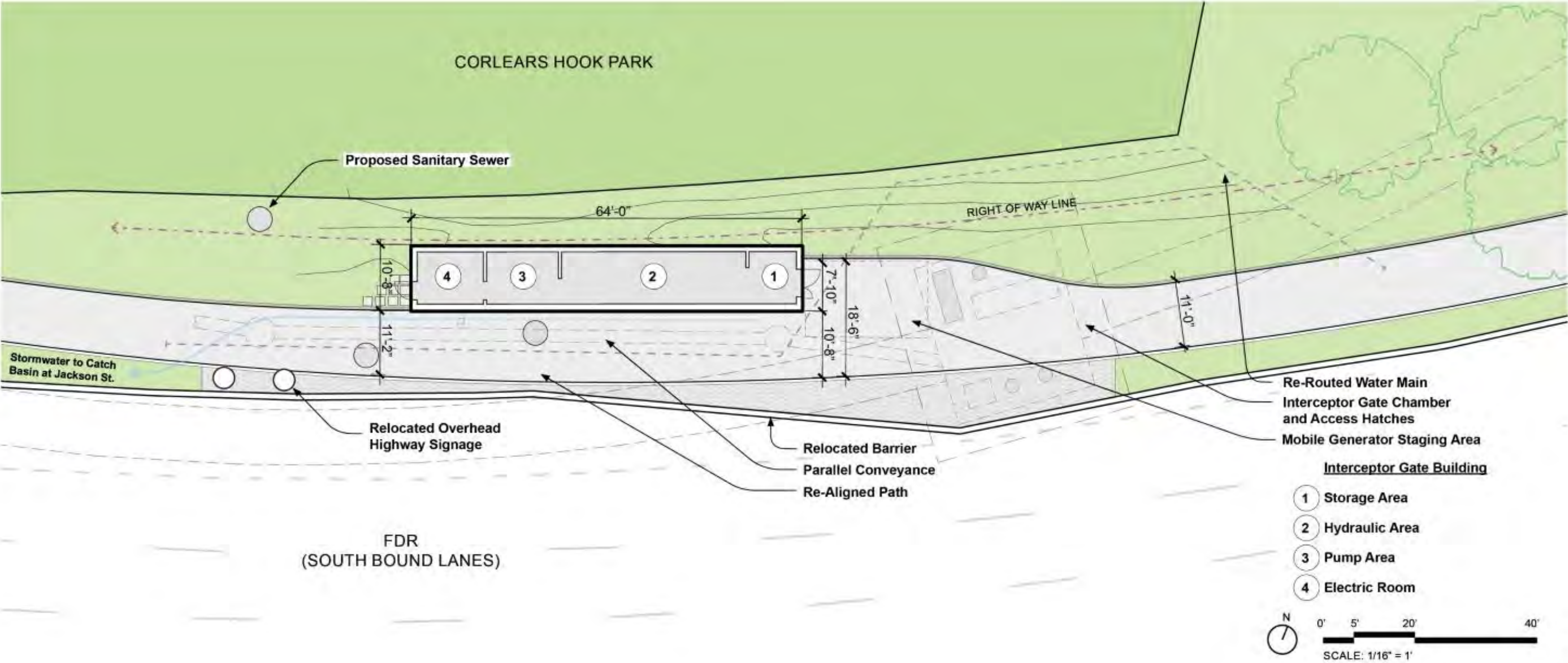
AERIAL VIEW





# SOUTH GATE BUILDING

SITE PLAN





# INTERCEPTOR GATE BUILDING

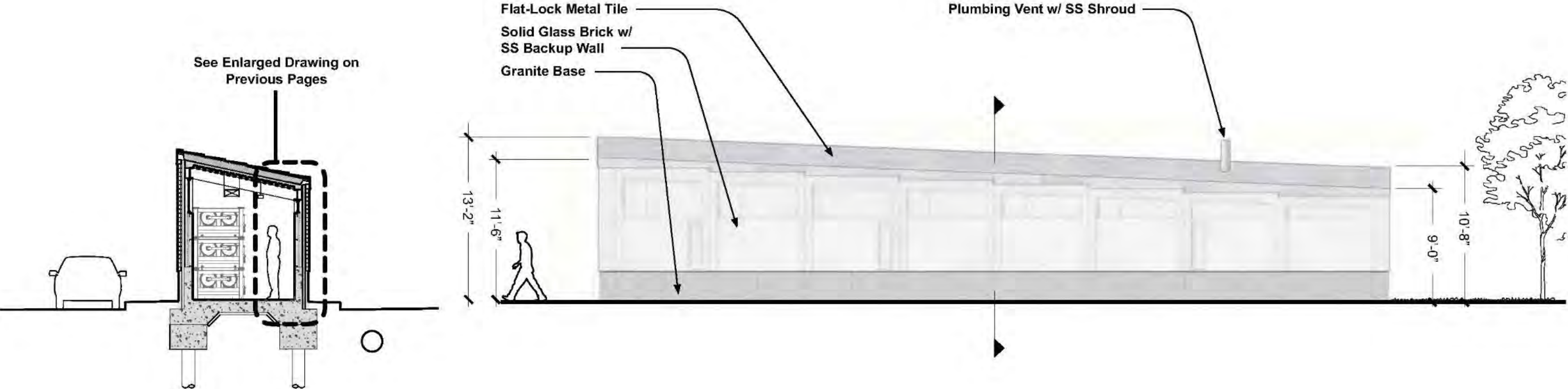
VIEW FROM NORTHWEST





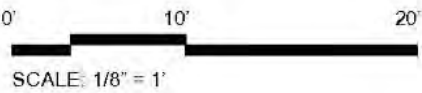
# INTERCEPTOR GATE BUILDING

SECTION AND ELEVATION



1. CROSS SECTION

2. NORTH ELEVATION





# INTERCEPTOR GATE BUILDING

MATERIAL PALETTE



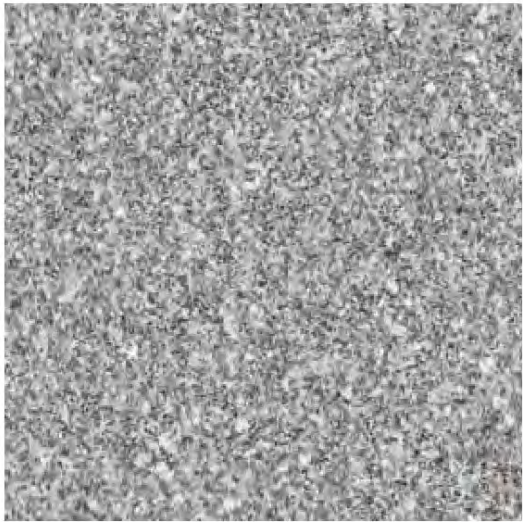
DETAIL ELEVATION



2 **SOLID GLASS BRICK**  
Facade



1 **FLAT-LOCK METAL TILE**  
Sloped Roof Assembly



4 **Barre Grey Granite**  
Stone Base



3 **STAINLESS STEEL**  
Backup Wall & Doors



# CORLEARS HOOK TO DELANCEY ST.

AERIAL OVERVIEW





# CORLEARS HOOK BRIDGE

RENDERING





# CORLEARS HOOK BRIDGE

AERIAL VIEW





# AMPHITHEATER

AERIAL VIEW



**CORLEARS  
HOOK PARK**

**RE-CONSTRUCTED  
CORLEARS HOOK BRIDGE**

**ACCESSIBLE AREAS OF  
HARDSCAPE INTERSPERSED  
WITH FLEXIBLE LAWN AREAS**

**BACKED SEATING**

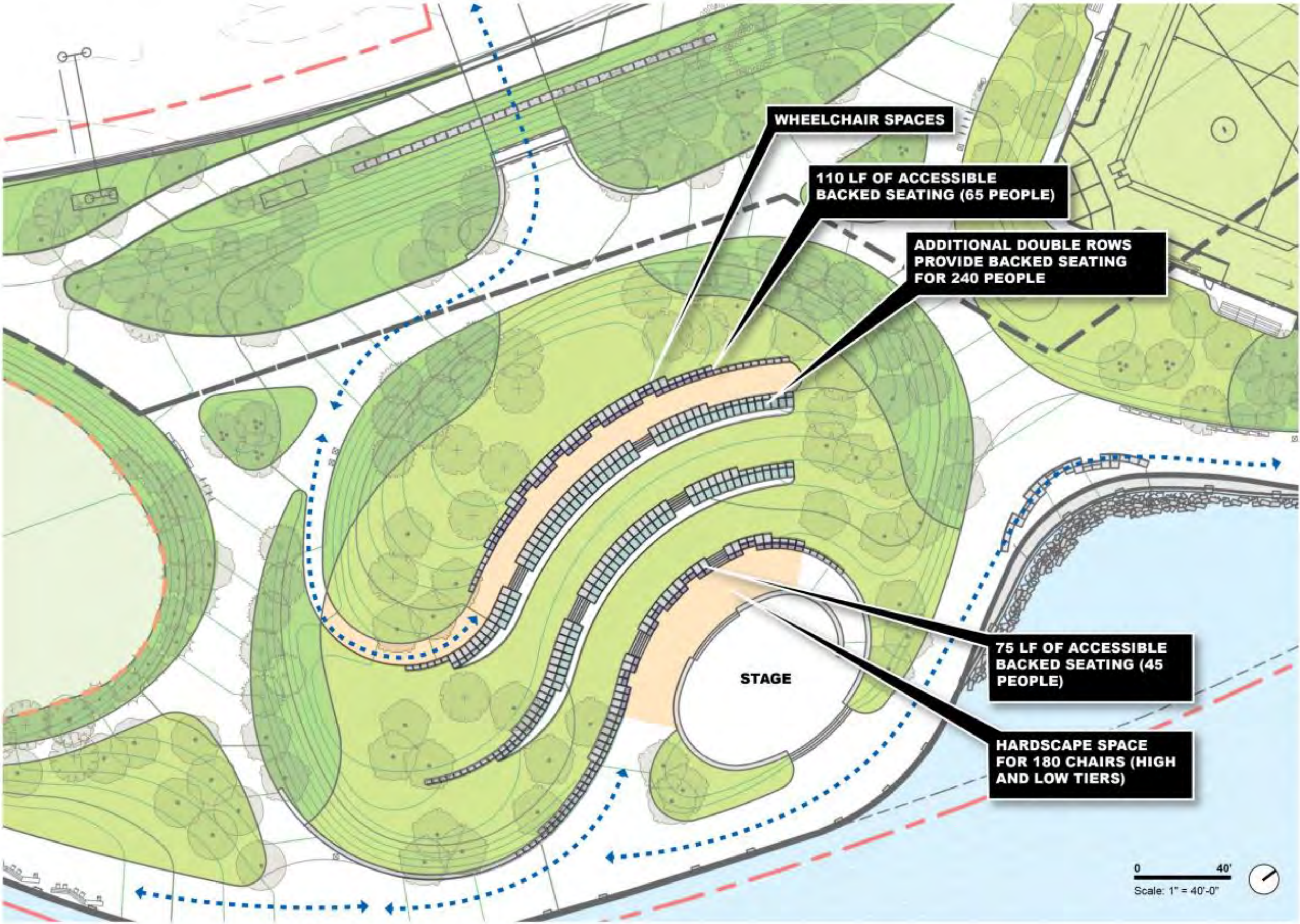
**AMPHITHEATER STRUCTURE  
TO BE CONSTRUCTED;  
DESIGN IS IN DEVELOPMENT**

**AMPHITHEATER DESIGN  
SUPPORTS DAY-TO-DAY USE,  
COMMUNITY PROGRAMMING  
& PASSIVE RECREATION**



# AMPHITHEATER

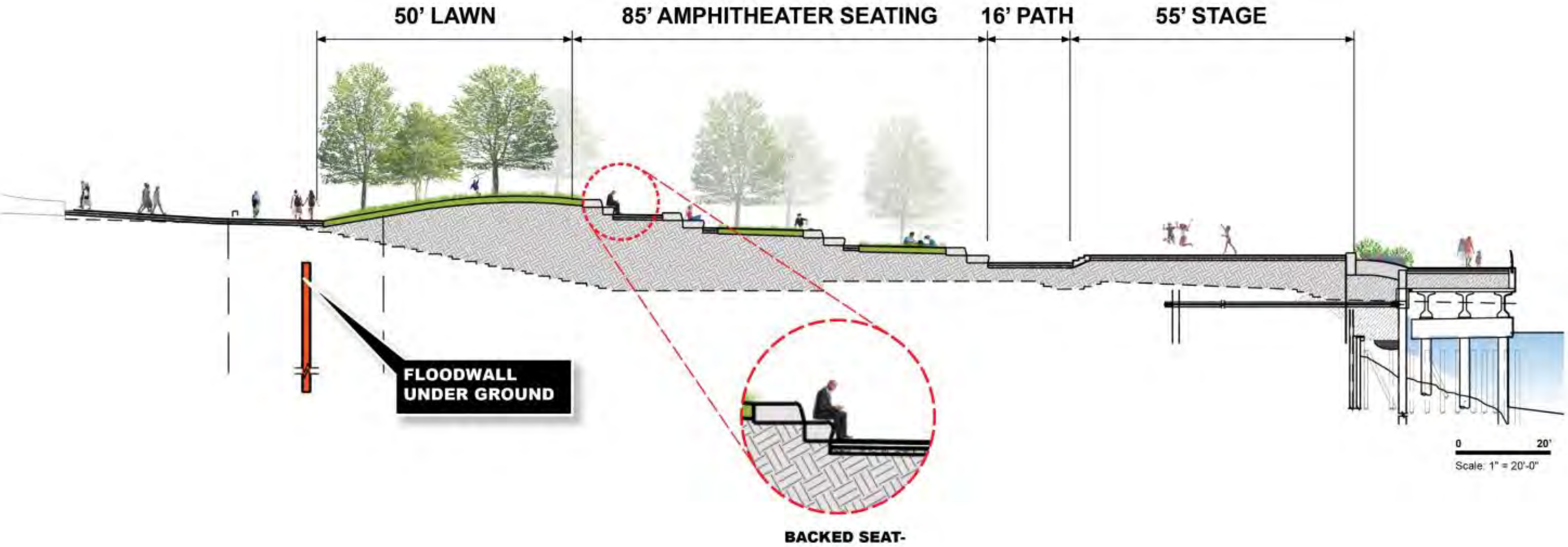
## SEATING





# AMPHITHEATER

SECTION





# NATURE EXPLORATION

AERIAL VIEW



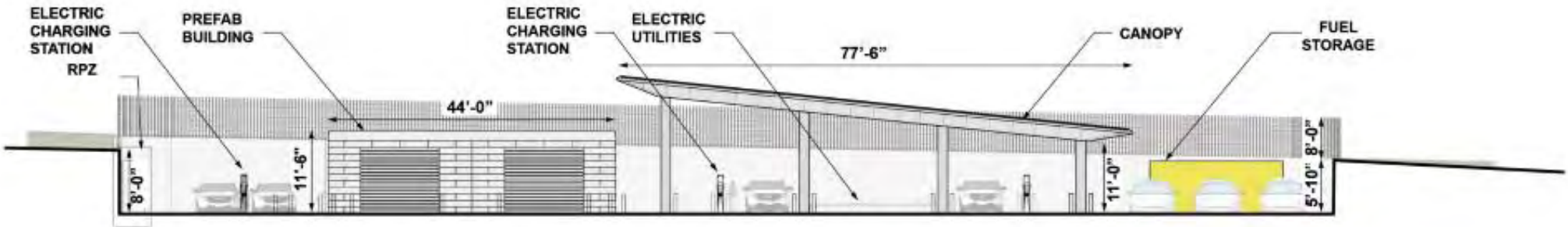


# DELANCEY ST. MAINTENANCE AREA

PLAN VIEW AND ELEVATION



Delancey Maintenance Area Plan



Delancey Maintenance Area Elevation



# DELANCEY ST. OVERLOOK

AERIAL VIEW





# DELANCEY ST. OVERLOOK

AERIAL VIEW





# DELANCEY ST. BRIDGE

AERIAL VIEW





# DELANCEY ST. BRIDGE

RENDERING





# DELANCEY ST. BRIDGE

AERIAL VIEW





# DELANCEY ST. TO HOUSTON

AERIAL VIEW





# TENNIS HOUSE

PARK VIEW





# ESPLANADE EMBAYMENT

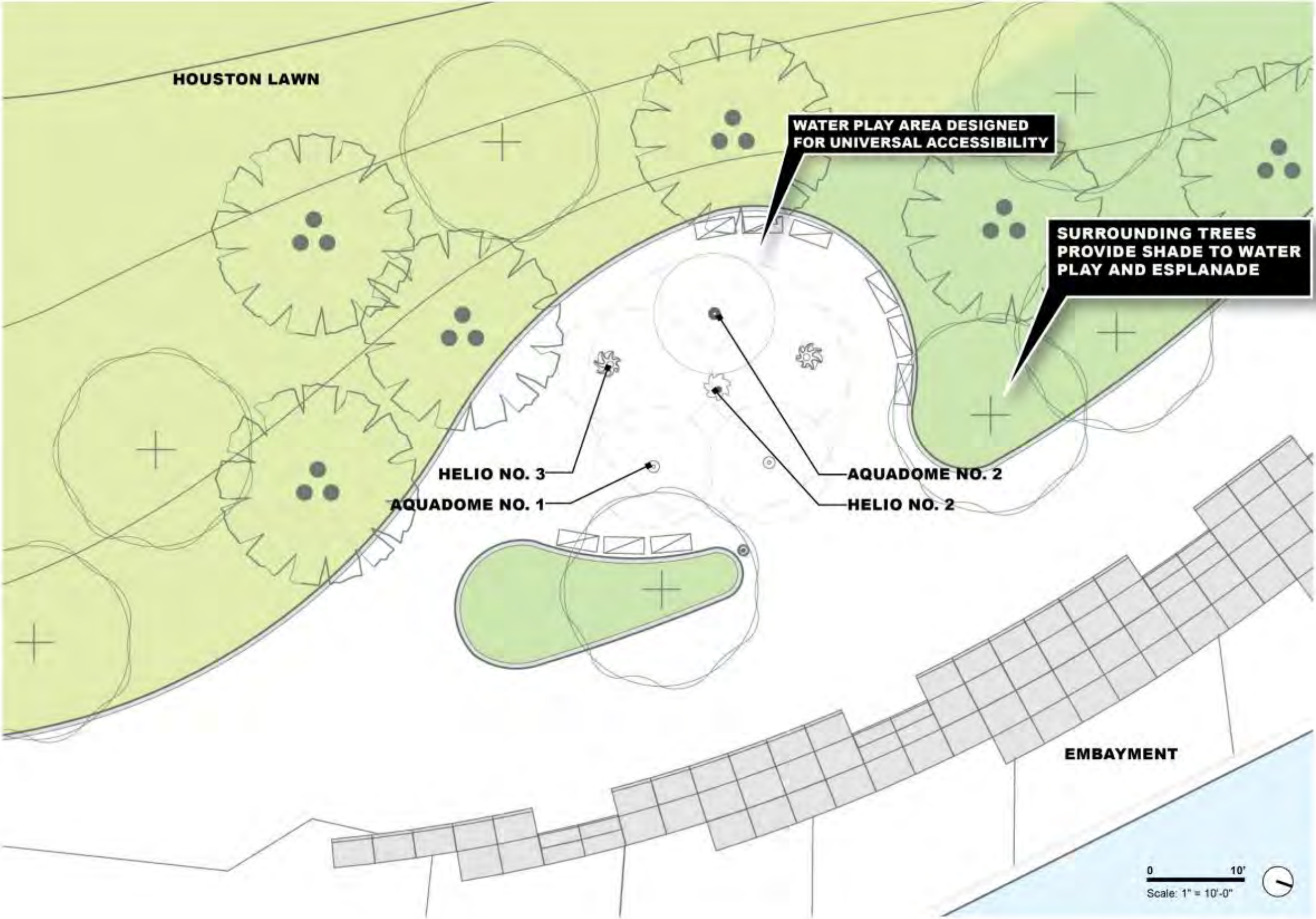
AERIAL VIEW





# WATER PLAY

DETAIL PLAN





# WATER PLAY FEATURES

EQUIPMENT PALETTE



VORTEX AQUADOME 1



VORTEX AQUADOME 2



VORTEX HELIO 3



VORTEX HELIO 2



VORTEX HELIO 3

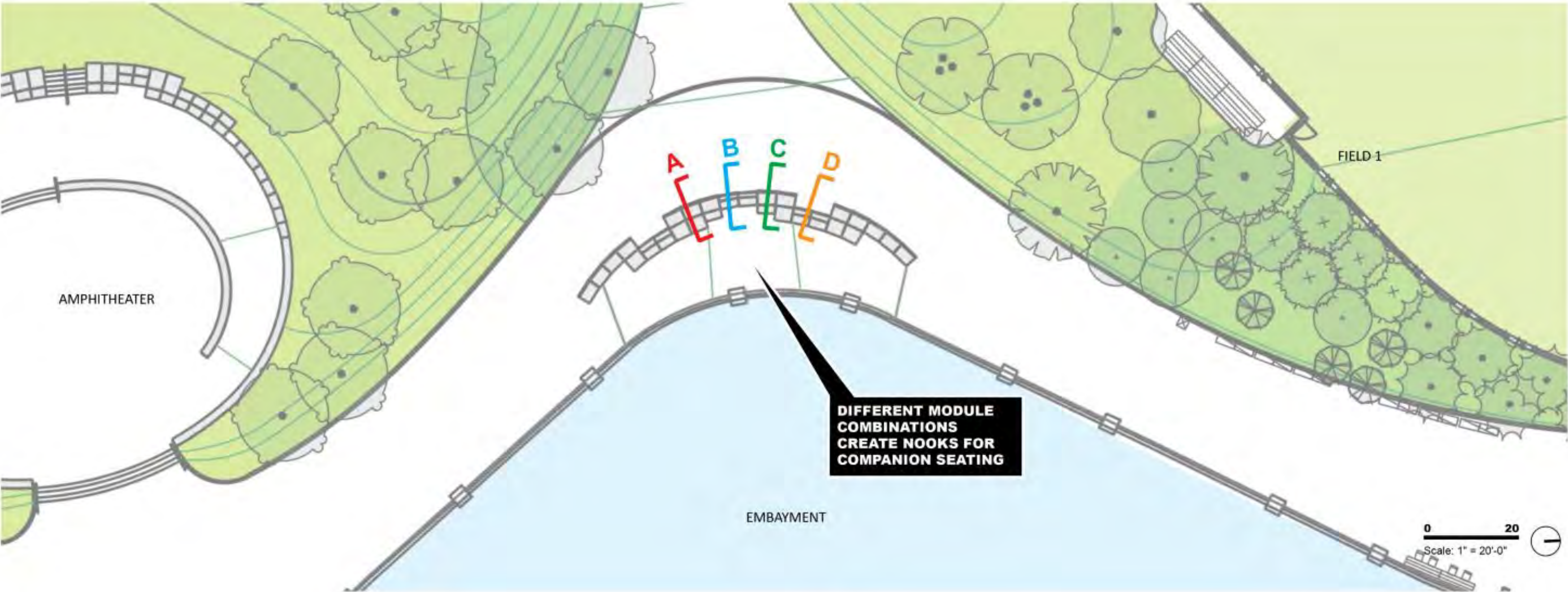


ESPLANADE EMBAYMENT AERIAL VIEW  
WATER PLAY ENLARGEMENT

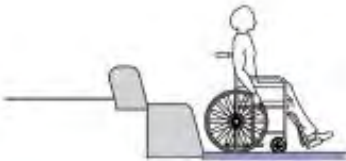


# ESPLANADE EMBAYMENT

## PLAN VIEW & SECTIONS



SECTION A



SECTION B



SECTION C

BACKED SEATING  
PROVIDED

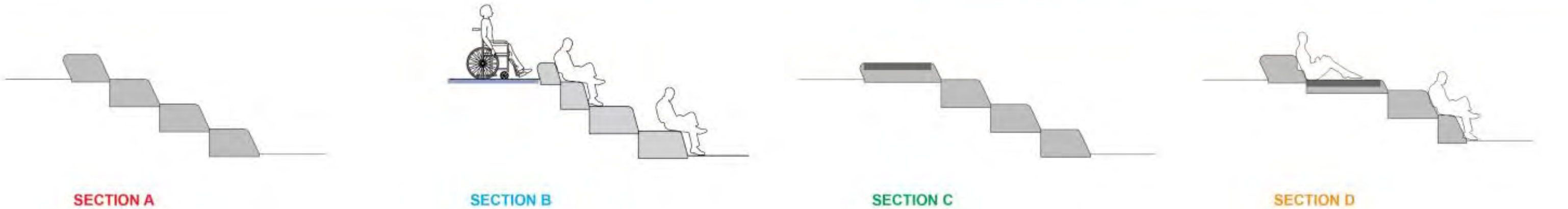
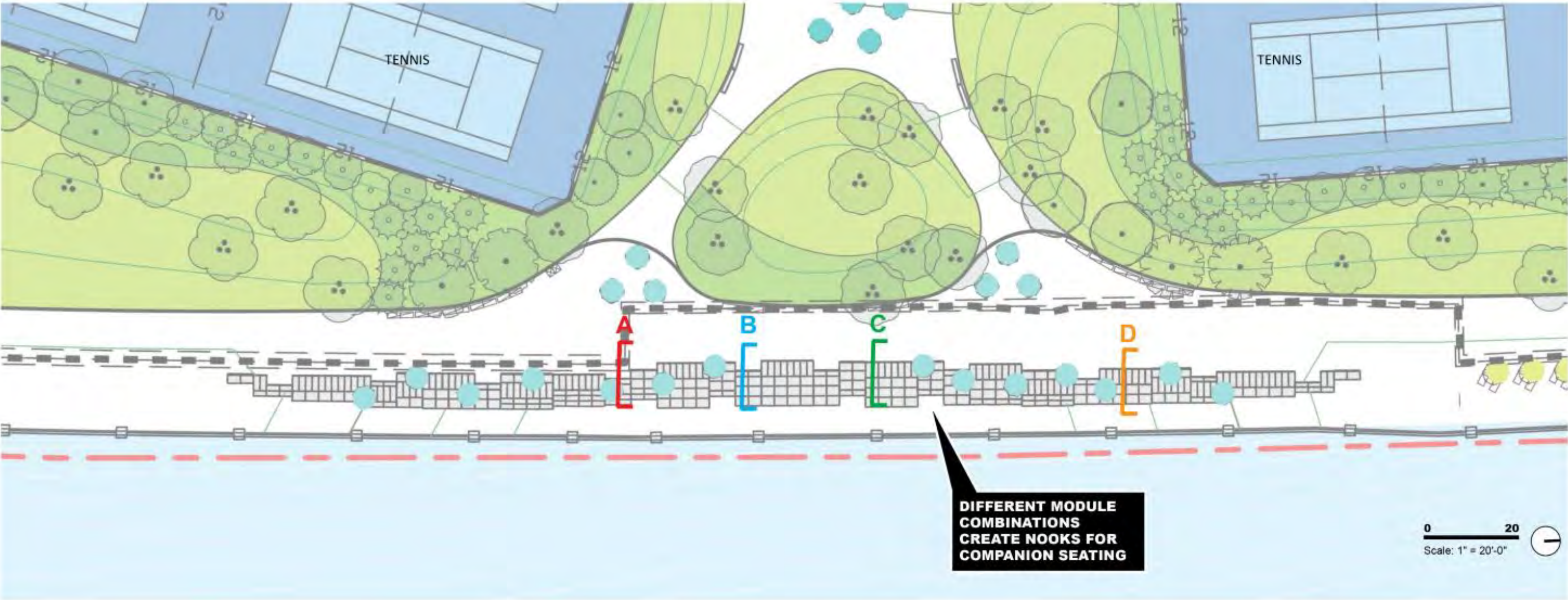


SECTION D



# TENNIS HOUSE EMBAYMENT

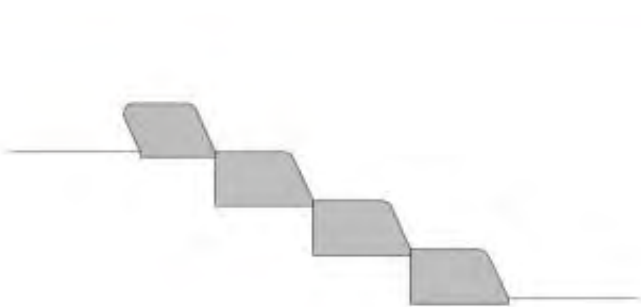
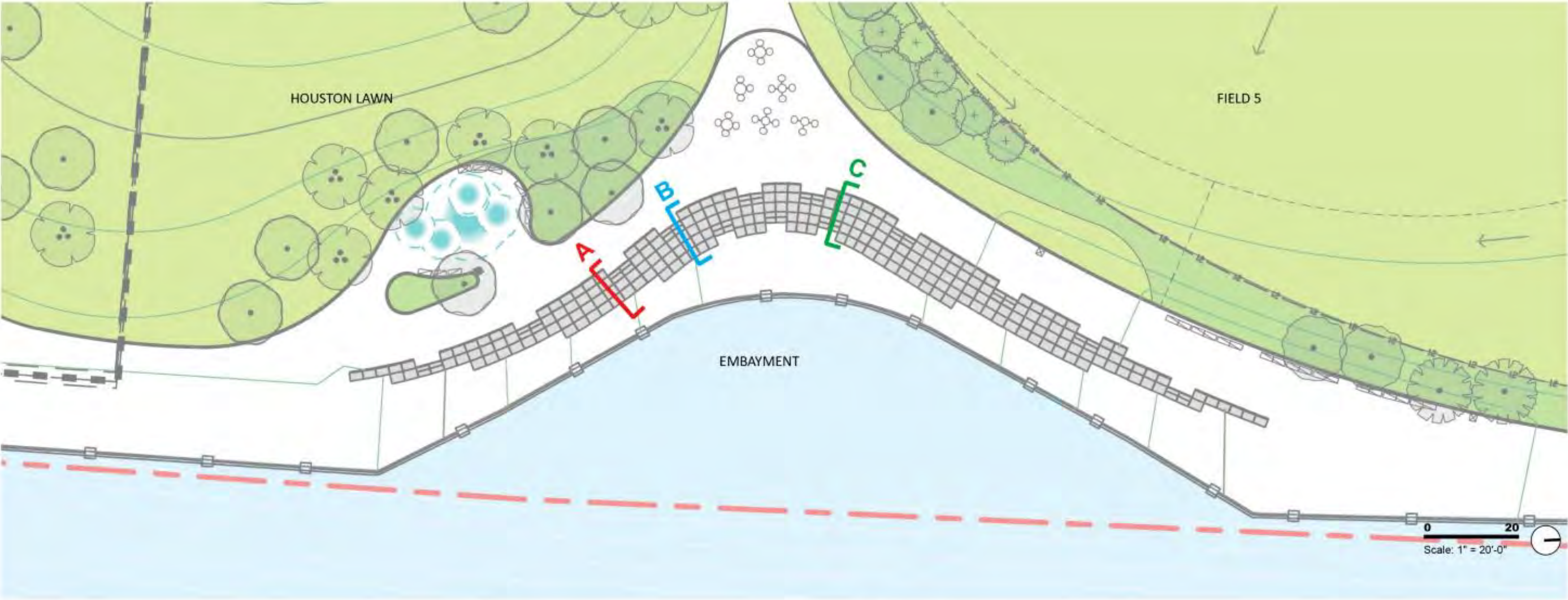
## PLAN VIEW & SECTIONS



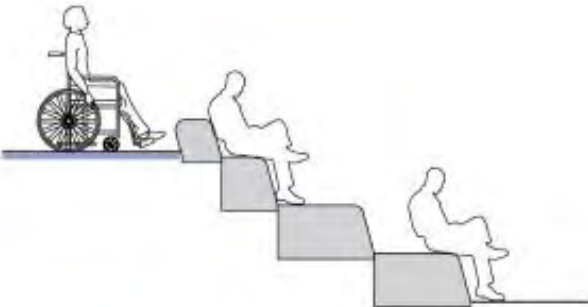


# HOUSTON EMBAYMENT

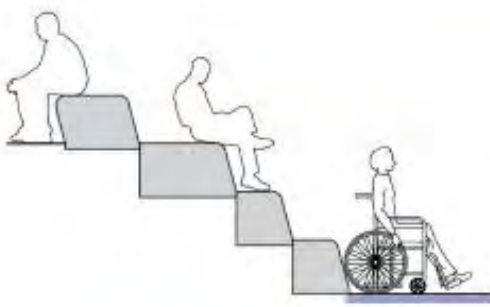
PLAN VIEW & SECTIONS



SECTION A



SECTION B

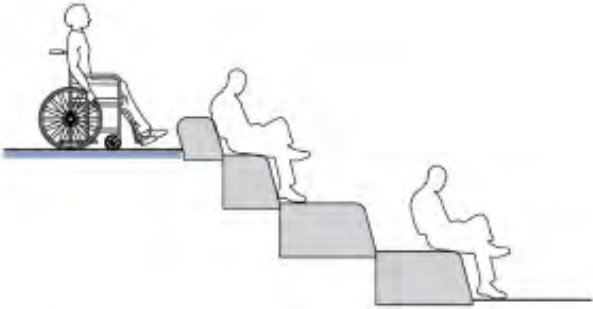
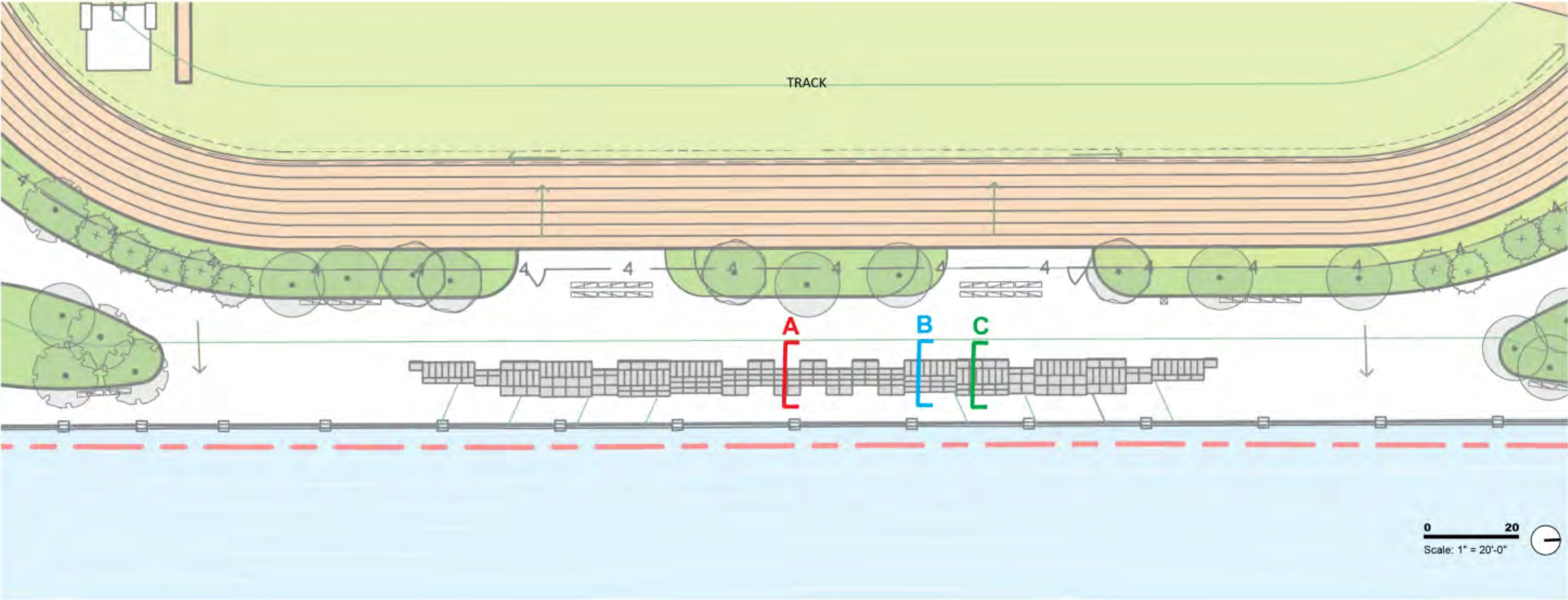


SECTION C

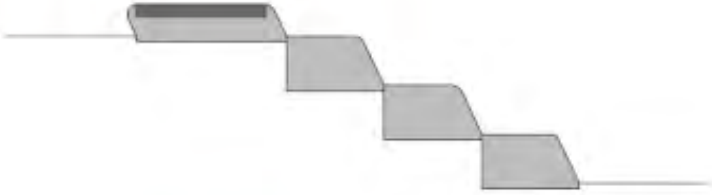


# TRACK EMBAYMENT

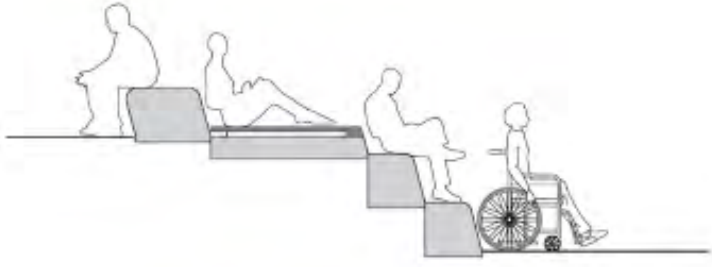
PLAN VIEW & SECTIONS



SECTION B



SECTION C



SECTION D



# HOUSTON TO E. 10<sup>TH</sup> ST.

AERIAL VIEW





# TRACK HOUSE

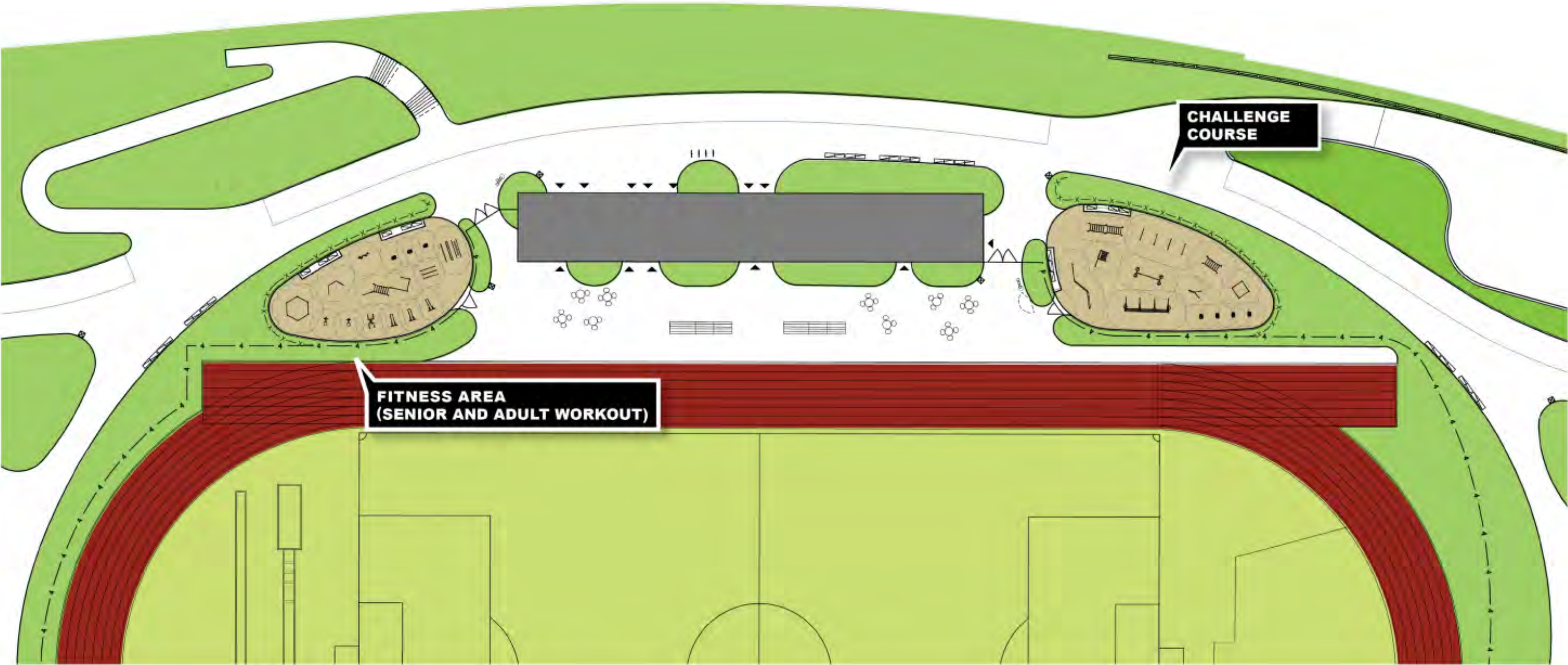
PARK VIEW





# FITNESS AREA AND CHALLENGE COURSE

OVERVIEW





**FITNESS AREA**  
EQUIPMENT PALETTE



**BALANCE BEAM AND TRIPLE BARS (MODIFIED)**



**STEPS**



**HIGH TRIPLE BARS (MODIFIED)**



**PUSH UP AND LEG LIFT &  
UNIVERSAL CHEST PRESS**



**ARM BIKE**



**HEXAGON PULL UP STATION**



**BENCH**



**COMBI 3 (MODIFIED)**



**PUSH UP BARS (MODIFIED)**



# CHALLENGE COURSE

EQUIPMENT PALETTE



**DOUBLE OVERHEAD LADDER**



**OVER UNDER**



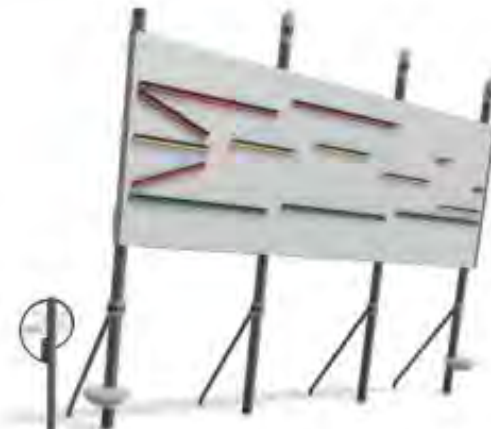
**CHELSEA OVERHEAD**



**SQUARE PULL UPS**



**STEPS**



**LEDGE HANGER (MODIFIED)**



**BALANCE BEAM**



**GLOBE GRASP (MODIFIED)**



**ROPE CLIMB (MODIFIED)**

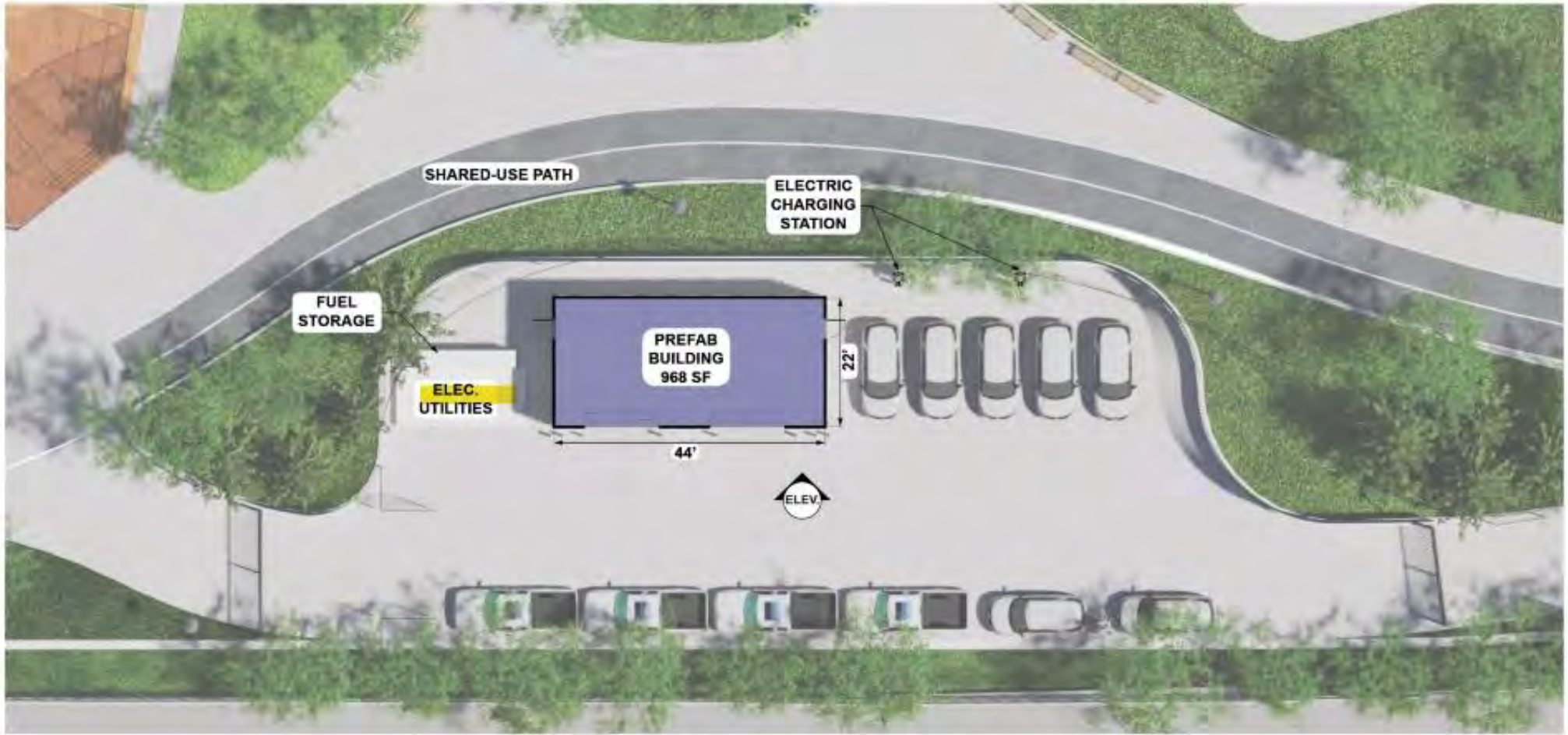


**WALL NET**



# TRACK MAINTENANCE AREA

PLAN VIEW & ELEVATION



Track Maintenance Area Plan



Track Maintenance Area Elevation



# E. 10<sup>TH</sup> ST. BRIDGE

FDR VIEW





# E. 10<sup>TH</sup> ST. BRIDGE

FDR VIEW





**E. 10<sup>TH</sup> ST. BRIDGE**  
CITY-SIDE LANDING





**E. 10<sup>TH</sup> ST. BRIDGE**  
RENDERING





**E. 10<sup>TH</sup> ST. BRIDGE**  
PARK-SIDE LANDING





# E. 10<sup>TH</sup> ST. COMFORT STATION

PARK VIEW





# E. 13<sup>TH</sup> ST. FLOODWALL

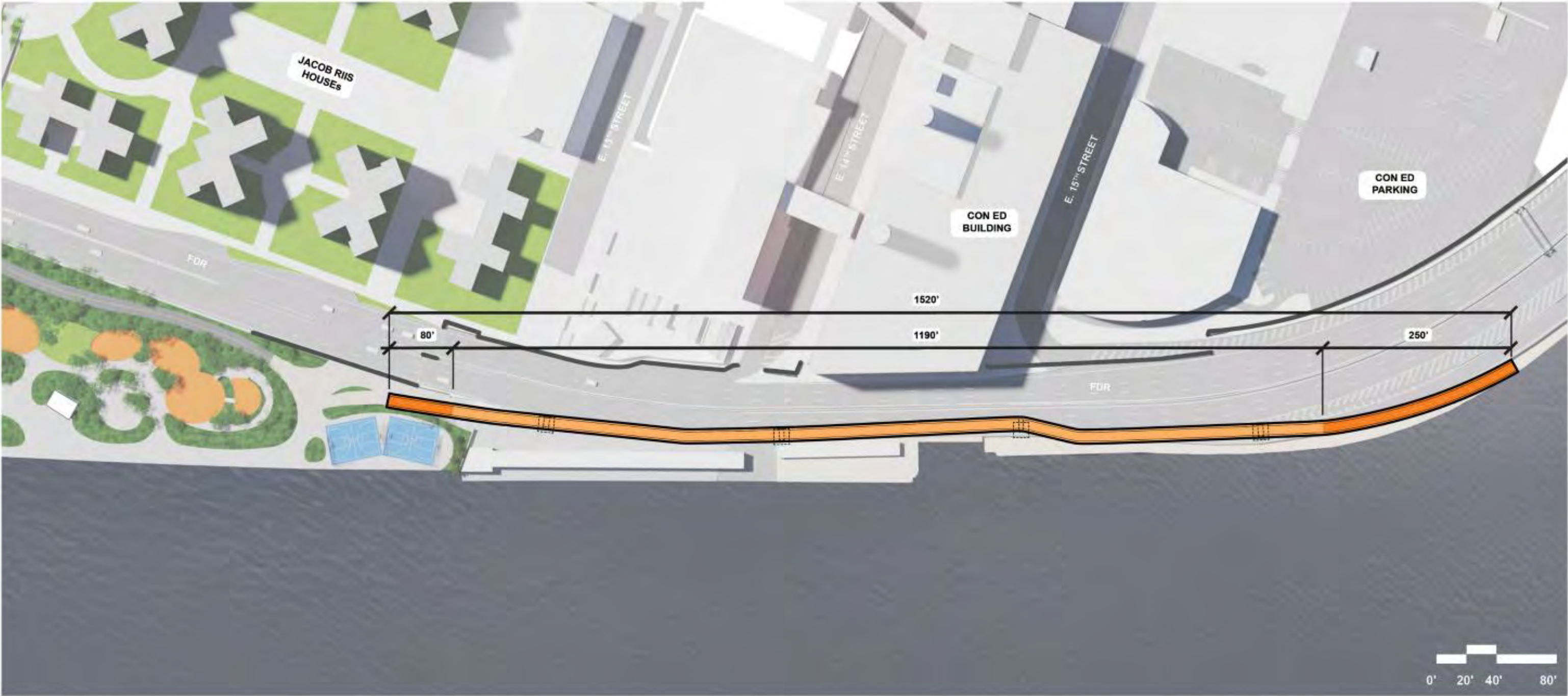
AERIAL VIEW





# PINCH POINT FLYOVER BRIDGE

PLAN VIEW



- FLYOVER BRIDGE
- BRIDGE APPROACH
- FLYOVER BRIDGE FOUNDATION



# PINCH POINT AREA

AERIAL VIEW



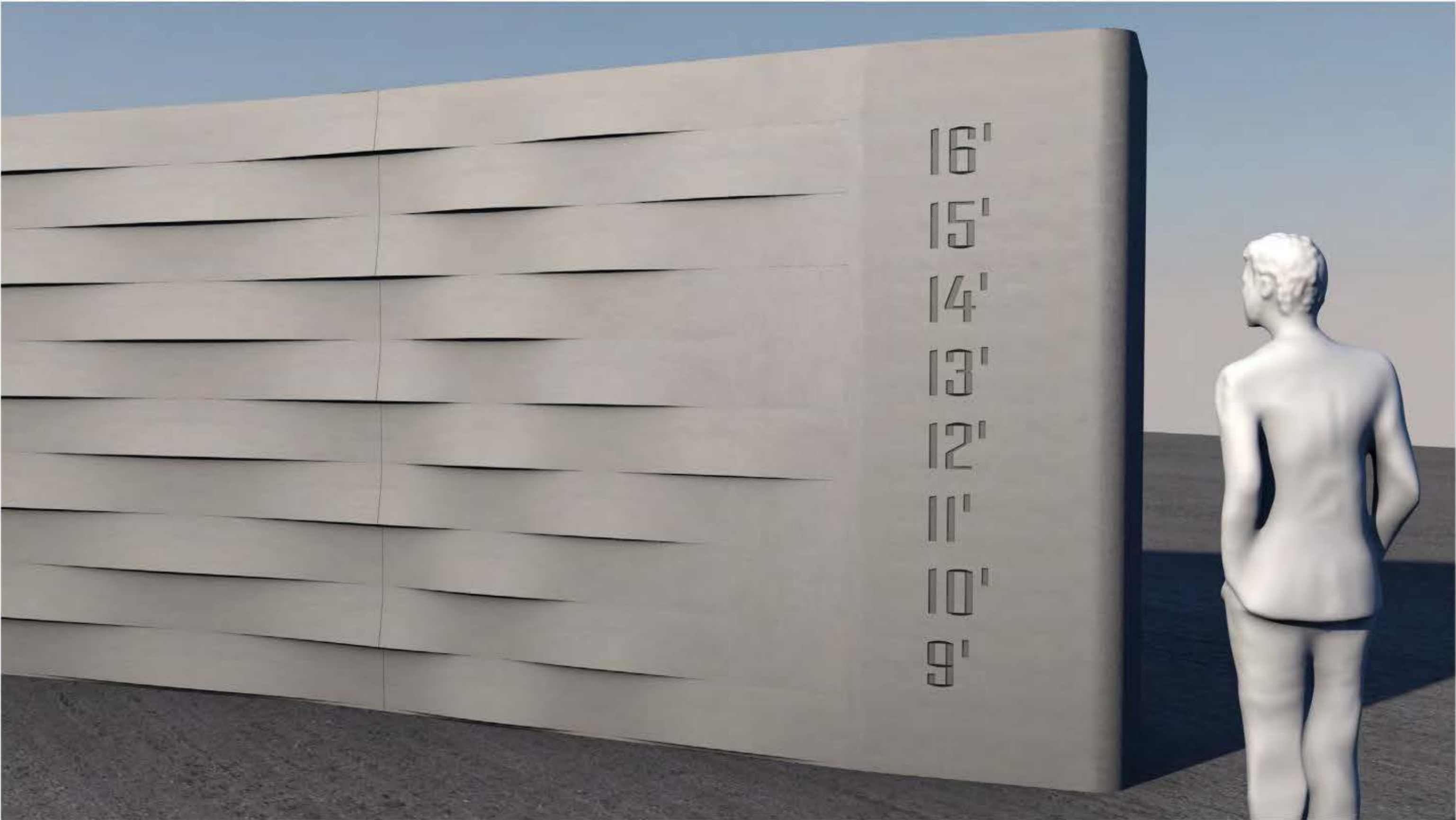


An aerial photograph of a bridge crossing a river, with a floodwall running alongside it. The floodwall features several large, rectangular, light-colored panels, likely for signage. The surrounding area includes greenery and some buildings. The entire image is overlaid with a semi-transparent teal color.

# **FLOODWALL SIGNAGE**



**FLOODWALL SIGNAGE**  
ELEVATION MARKERS



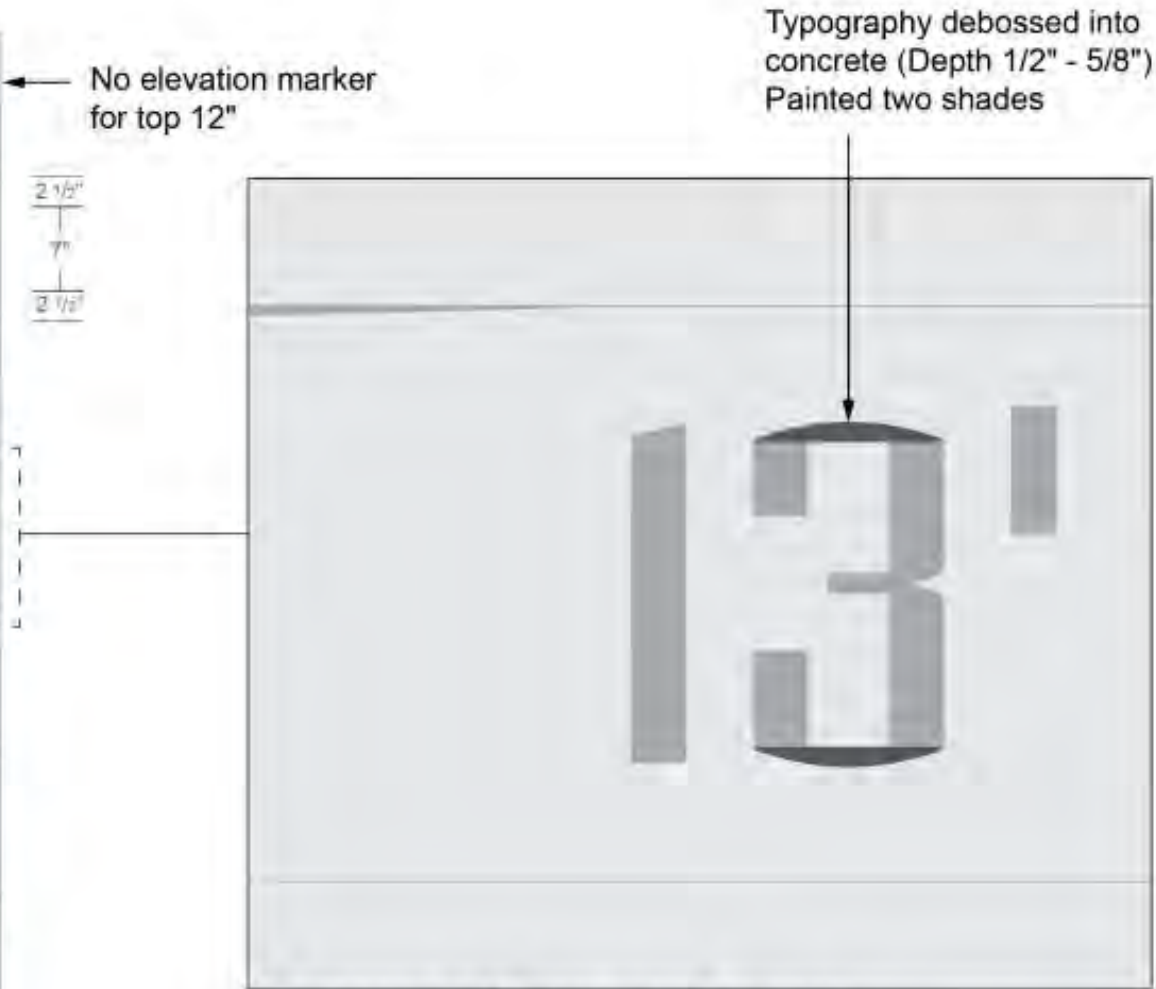


# FLOODWALL SIGNAGE

## ELEVATION MARKERS



1. FLOODWALL SIGNAGE TYP. ELEVATION



2. FLOODWALL SIGNAGE DETAIL

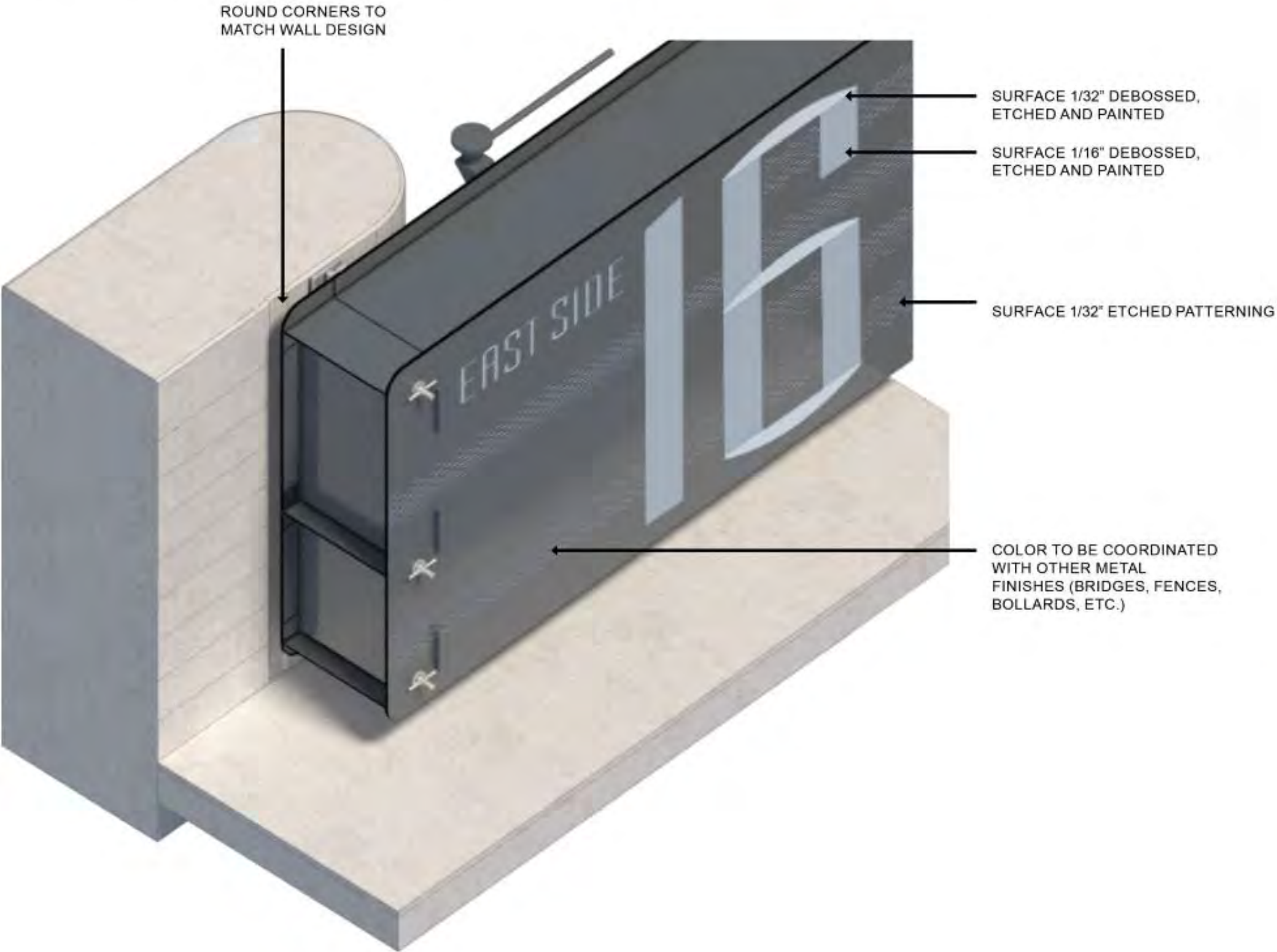


3. FLOODWALL SIGNAGE DETAIL - SECTION



# FLOODWALL SIGNAGE

## ELEVATION MARKERS



**TEXT + LABELING**  
**MUNSEL GREY PAINT (TYP)**

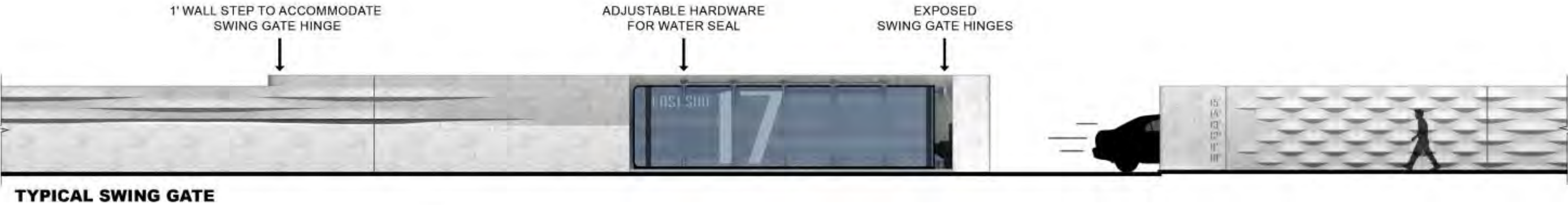


**TEXT + LABELING**  
**GW GREY PAINT (ASSER LEVY)**



# FLOODWALL SIGNAGE

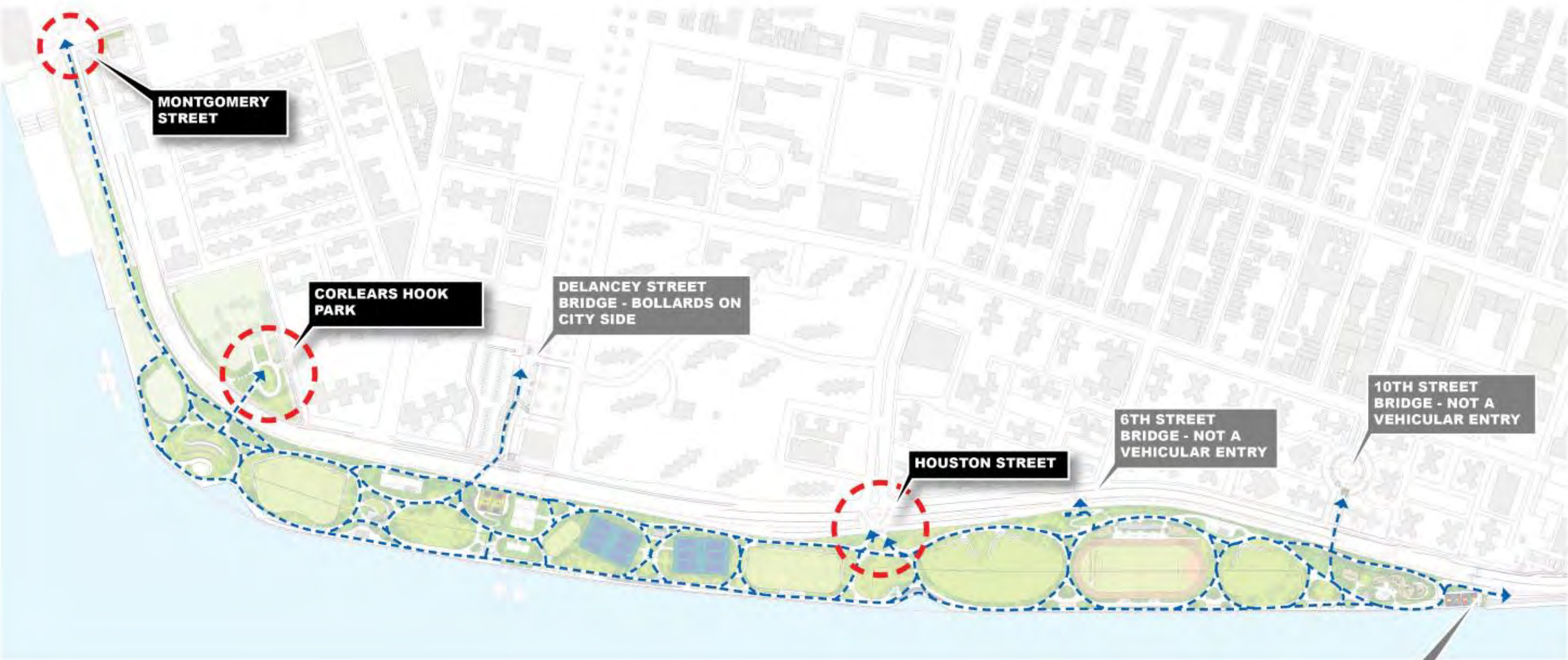
## GATE MARKERS





# AUTHORIZED VEHICULAR ACCESS

PA1



## LEGEND

--- MAJOR CIRCULATION PATHS (EAST RIVER PARK)

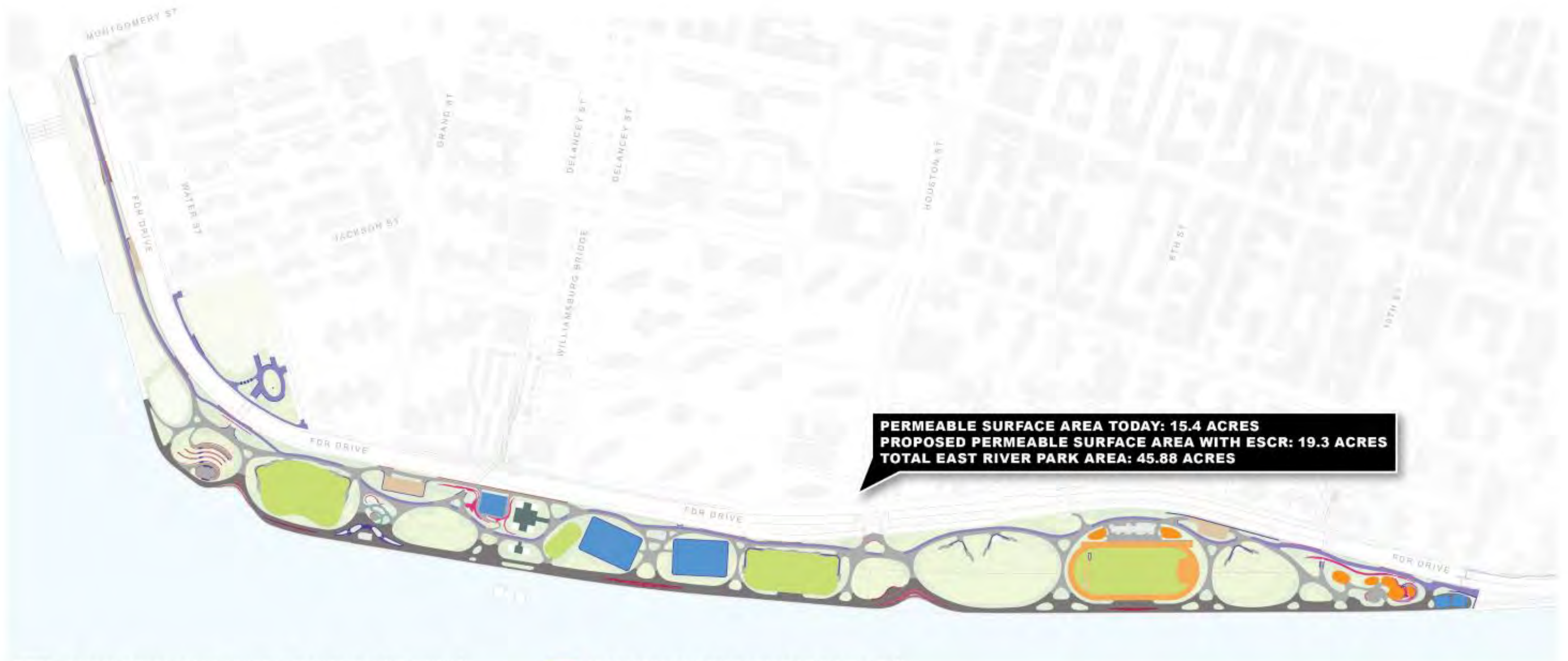
( ) VEHICULAR ENTRIES FOR SECURITY MEASURES



An aerial photograph of a bridge spanning a body of water, with a teal overlay. The bridge has multiple lanes and is surrounded by greenery and a road. The text "MATERIALS & PLANTING" is centered in white, bold, uppercase letters.

# MATERIALS & PLANTING





- |  |  |
|--|--|
| EXPOSED AGGREGATE CONCRETE PAVEMENT (PATHWAYS)     | SAFETY SURFACE (PLAY AND FITNESS AREAS)          |
| CONCRETE UNIT PAVERS (ESPLANADE)                   | RESILIENT SPORT SURFACE (TRACK)                  |
| ASPHALT PAVEMENT (BIKE LANE, PATHWAYS)             | ASPHALT PAVEMENT WITH COLOR SEAL (SPORTS COURTS) |
| CEMENT CONCRETE PAVEMENT (MAINTENANCE)             | PRECAST CONCRETE (SEATWALLS)                     |
| GRANITE BLOCK PAVEMENT (ALONG FLOODWALL)           | POURED IN PLACE CONCRETE (WALLS AND STAIRS)      |
| PERMEABLE PAVERS (UNDER WILLIAMSBURG BRIDGE)       | STONE (SLOPE AND EDGES)                          |
| SYNTHETIC TURF (FIELDS 1, 2, 3, 4 & TRACK INFIELD) | STEEL EDGE (NATURE EXPLORATION AREA)             |

## Park Materials Key Plan PA1





**STANDARD BENCH (BACK)**  
**1964 WORLD'S FAIR**  
 WITH ARMS  
 8'-0" & 4'-0" LENGTH  
 RPL SLATS, WEATHERED WOOD  
 LOCATION: ALL PROJECT AREAS



**STANDARD BENCH (NO BACK)**  
**1964 WORLD'S FAIR**  
 WITH OR WITHOUT ARMS  
 8'-0" LENGTH  
 RPL SLATS, WEATHERED WOOD  
 LOCATION: EAST RIVER PARK  
 AND STUYVESANT COVE PARK  
 WATERFRONT ESPLANADES



**STANDARD TYPE 'C'**  
**SPORTS BENCH**  
 WITHOUT ARMS & BACKS  
 7'-0" LENGTH  
 RPL SLATS, WEATHERED WOOD  
 LOCATION: SPORTS FIELDS



**STANDARD PICNIC TABLE &**  
**ACCESSIBLE PICNIC TABLE**  
 7'-0" LENGTH  
 RPL SLATS, WEATHERED WOOD  
 LOCATION: BBQ AND PICNIC AREAS  
 IN EAST RIVER PARK, MURPHY  
 BROTHERS PLAYGROUND & ASSER  
 LEVY PLAYGROUND



**CAROUSEL SEATING**  
 3 OR 4 SEATS WITH BACKS  
 DINING HEIGHT, LANDSCAPE FORMS  
 COLOR SILVER  
 LOCATION: EAST RIVER PARK  
 ECOLOGY PLAZA



**STANDARD BOTTLE FILLER WITH**  
**HI-LO DRINKING FOUNTAINS**  
 ELKAY MODEL LK4430BF1UNYC  
 COLOR GRAY/SILVER



**STANDARD SPORTS STEEL**  
**SPRAY FIXTURE**  
 AQUAJEUX MODEL 1507-MALF-08  
 COLOR GRAY/SILVER



**BBQ GRILL**  
**CLUSTER OF THREE**  
 MDF, INC.  
 COLOR BLACK



**NYC DOT CITYRACK "HOOP"**  
 COLOR GRAY/SILVER



**STANDARD PUB-**  
**LIC SPACE BINS**  
 TRASH  
 RECEPTACLE  
 MAGLIN MODEL:  
 CMLWR9074032HST  
 COLOR GRAY W/  
 BLACK LID



**BIGBELLY**  
 RECYCLING  
 RECEPTACLE

## Furnishings and Equipment Site Furnishings





**BAR STOOL, 1964 WORLD'S FAIR**  
**1'-6" WIDTH 4'-9" LENGTH**  
**RPL SLATS, WEATHERED WOOD**  
**LOCATION: ESPLANADE**



**CHAIR, 1964 WORLD'S FAIR**  
**1'-6" WIDTH**  
**RPL SLATS, WEATHERED WOOD**  
**LOCATION: ESPLANADE**



**CHaise LOUNGE, 1964 WORLD'S FAIR**  
**2'-1" WIDTH**  
**RPL SLATS, WEATHERED WOOD**  
**LOCATION: ESPLANADE**



**BAR TOP TABLE HIGH HEIGHT**  
**22'-0" LENGTH**  
**RPL SLATS, WEATHERED WOOD**  
**LOCATION: ESPLANADE**



**BAR TOP TABLE LOW HEIGHT**  
**22'-0" LENGTH**  
**RPL SLATS, WEATHERED WOOD**  
**LOCATION: ESPLANADE**



**SOLSTICE UMBRELLA - ALTAIR**  
**LANDSCAPE FORMS**  
**LOCATION: ESPLANADE**  
**COLORS:**  
**OCEAN / SEAGREEN/GREEN /**  
**FLAMBEE ORANGE / TANGERINE**



**STANDARD PICNIC TABLE & ACCESSIBLE PICNIC TABLE**  
**8'-0" LENGTH**  
**PERFORATED METAL**  
**LOCATION: EAST RIVER PARK**



**SOLSTICE UMBRELLA - ALTAIR**  
**LANDSCAPE FORMS**  
**PRECEDENT IMAGE**





**TYPE B LIGHT**  
12' POLE  
LED  
COLOR: BLACK  
ASSER LEVY  
PLAYGROUND



**FLUSHING MEADOWS**  
12' POLE  
LED  
COLOR: BLACK  
EAST RIVER PARK,  
STUYVESANT COVE  
PARK, MURPHY  
BROTHERS  
PLAYGROUND



**WORLD'S FAIR**  
12' POLE  
LED  
COLOR: BLACK  
CORLEARS HOOK PARK



**PROPOSED**  
EVERGEN M SERIES  
SOLAR LIGHT BY SOL, INC.  
POLE HEIGHT 18'  
SOLAR LIGHT  
COLOR BLACK  
EAST RIVER PARK  
ESPLANADE  
(UNDER REVIEW )



**DOT STANDARD  
DAVIT W/ COBRA  
HEAD**  
30' POLE  
LED LIGHT  
COLOR: SILVER  
MAINTENANCE AREAS,  
BRIDGES



**DOT STANDARD  
DAVIT W/ COBRA  
HEAD**  
14' POLE  
LED LIGHT  
COLOR: SILVER  
DELANCEY BRIDGE



**SPORTS TOWER**  
60'-80' POLE  
LED FLOODLIGHT  
COLOR: SILVER  
FIELDS 1,2 & 6



**SPORTS  
TOWER**  
30' POLE  
LED  
FLOODLIGHT  
COLOR: SILVER  
AMPHITHEATER



**TYPE M**  
27'-7" POLE  
LED  
ROW



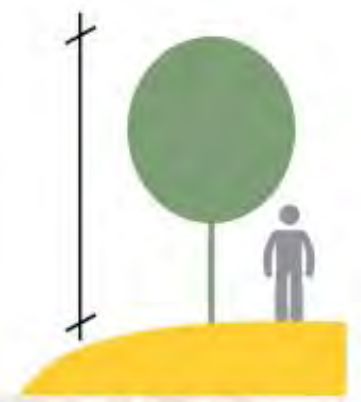


**TREE SIZE AT PLANTING**

AVERAGE HEIGHT AT 3"-3.5" CALIPER:  
**14'-16'**

TYPICAL MAXIMUM HEIGHT: **18'**

(per ANSI Z60.1)

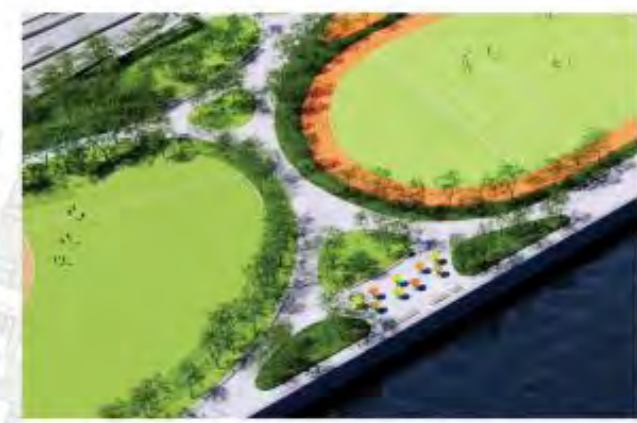
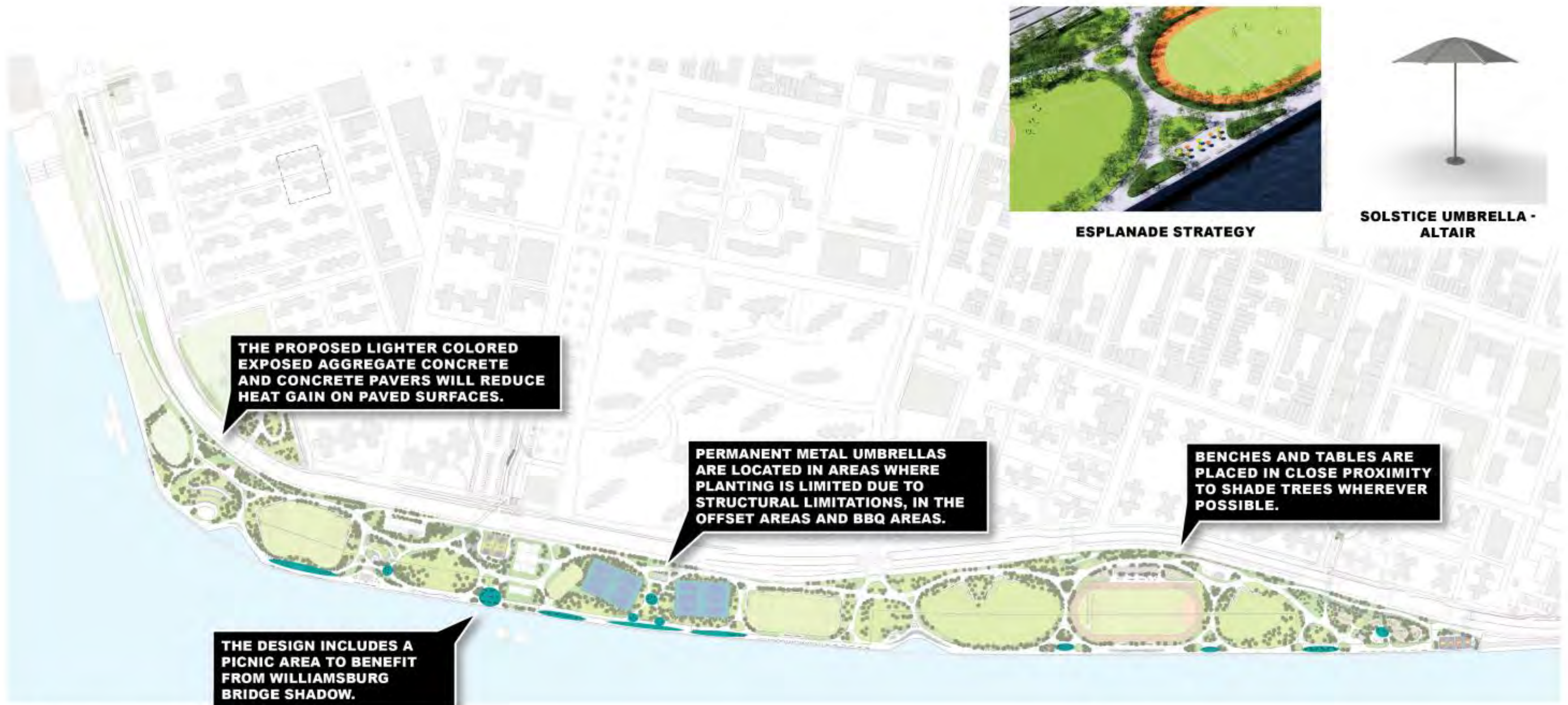


NOTES:  
TREE GROWTH WILL VARY BY SPECIES, BUT IN NURSERY SETTINGS A RULE OF THUMB IS THAT TREES WILL OFTEN ADD ½" CALIPER PER YEAR WITH 1'-2' OF GROWTH IN THE CANOPY.

THE DESIGN TEAM IS WORKING WITH PARKS PROCUREMENT TO IDENTIFY WHETHER SOME SPECIES MAY BE ABLE TO BE SOURCED AT LARGER SIZES WITHOUT COMPROMISING TREE HEALTH.

**Shade Strategy PA1  
Tree Canopy**





**ESPLANADE STRATEGY**



**SOLSTICE UMBRELLA -  
ALTAIR**

- PROPOSED TREES
- UMBRELLA CLUSTERS

NOTES:  
TO MAXIMIZE TREE PLANTING, SOLAR LIGHTING IS IMPLEMENTED ONLY ALONG THE ESPLANADE. AREAS INTERIOR TO THE PARK UTILIZE STANDARD FLUSHING MEADOW LIGHT POLES.

## Shade Strategy PA1 Furnishings



THE PLANTING DESIGN  
MAXIMIZES TREE PLANTING IN  
THE PARK AND INCLUDES A HIGH  
PROPORTION OF FAST TO MEDIUM  
GROWING TREES.

PRIMARY SPECIES



*Acer rubrum*  
Red Maple 'Oct Glory'

GROWTH RATE:  
**MEDIUM**



*Quercus palustris*  
Pin Oak

GROWTH RATE:  
**MEDIUM**

PRIMARY SPECIES



*Quercus bicolor*  
Swamp White Oak

GROWTH RATE:  
**MEDIUM**



*Celtis occidentalis*  
Hackberry

GROWTH RATE:  
**FAST**

PRIMARY SPECIES



*Betula nigra* 'Heritage'  
Heritage River Birch

GROWTH RATE:  
**FAST**



*Liquidambar styraciflua*  
Sweetgum

GROWTH RATE:  
**FAST**



*Taxodium distichum*  
Bald Cypress

GROWTH RATE:  
**MEDIUM**











**PRIMARY SPECIES**





*Liquidambar styraciflua*  
Sweetgum

*Rhus typhina*  
Staghorn Sumac

GROWTH RATE:  
**FAST**

GROWTH RATE:  
**FAST**

**PRIMARY SPECIES**





*Gymnocladus dioica*  
Coffee tree

*Gleditsia triacanthos*  
Honey Locust

GROWTH RATE:  
**MEDIUM**

GROWTH RATE:  
**MEDIUM**

**PRIMARY SPECIES**



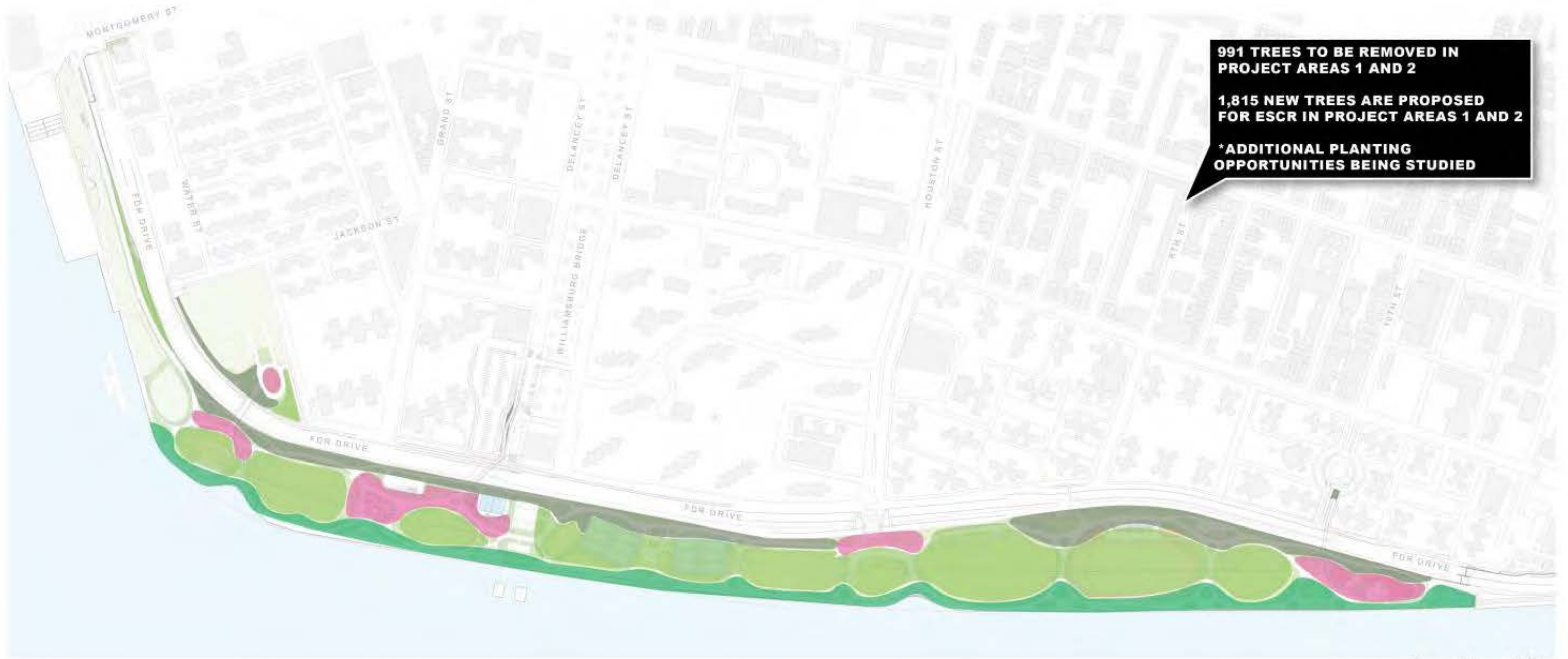
*Liquidambar styraciflua*  
Sweetgum

*Gleditsia triacanthos*  
Honey Locust

GROWTH RATE:  
**FAST**

GROWTH RATE:  
**MEDIUM**





**WOODLAND  
EDGES**

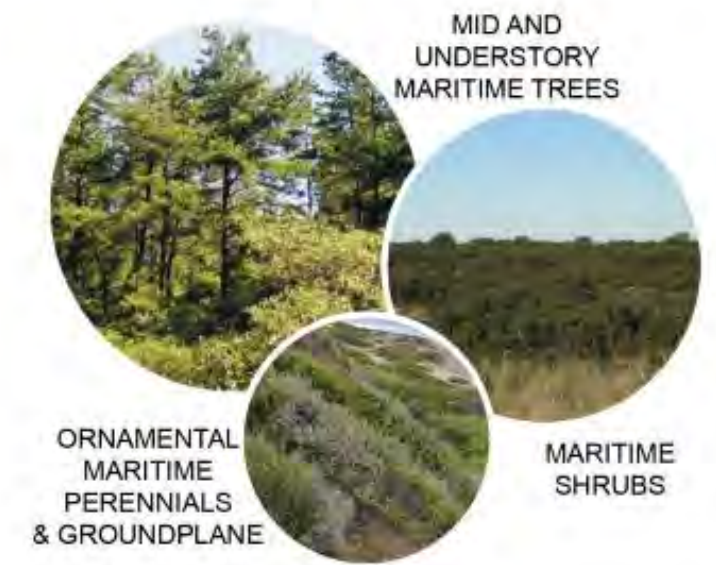
**PASTORAL  
OPENINGS**

**LAYERED  
GROVES**

**MARITIME  
EDGES**

## Planting Key Plan PA1





**HIGH, FULL CANOPY  
CREATES CONNECTED,  
DAPPLED SHADE**



**WOODLAND  
EDGES**



**PASTORAL  
OPENINGS**



**LAYERED  
GROVES**



**MARITIME  
EDGES**

- Location: Western urban edge of park. Ornamental understory trees, conifers, shrubs, and perennials provide visual interest along paths and slopes while buffering views
- Maintenance: Trees, shrubs, groundcovers

- Location: Open lawns and spectator areas
- Lawn groundplane maintains open sight lines and open circulation
- Maintenance: Trees, lawn

- Location: Clearing edges and special areas
- Ornamental understory trees and a low perennial groundplane maintain veiled, eye-level sight lines
- Maintenance: Trees, garden beds

- Location: Maritime edges of open spaces and esplanade
- Mid and Understory trees, maritime evergreens, shrubs, and grasses provide shade and interest along the river edge
- Maintenance: Trees, shrubs, grasses



## TREES



*Catalpa speciosa*  
Catalpa



*Gleditsia triacanthos*  
Honey Locust



*Ilex opaca*  
American Holly



*Metasequoia glyptos.*  
Dawn Redwood



*Nyssa sylvatica*  
Blackgum



*Pinus rigida*  
Pitch Pine



*Pinus thunbergii*  
Japanese Black Pine



*Pinus virginiana*  
Virginia Pine



*Quercus alba*  
White Oak



*Quercus rubra*  
Northern Red Oak



*Quercus velutina*  
Black Oak



*Ulmus Americana 'Princeton'*  
Princeton Elm

## SHRUBS



*Aronia melanocarpa*  
Black chokeberry



*Ceanothus americanus*  
New Jersey Tea



*Clethra alnifolia*  
Summersweet



*Diervilla lonicera*  
N. Bush Honeysuckle



*Prunus maritima*  
Beach Plum



*Rhus aromatica 'Gro-Low'*  
Fragrant Sumac



*Rosa carolina*  
Carolina Rose



*Rosa virginiana*  
Virginia Rose



*Morella penslyvanica*  
Northern Bayberry



*Rhus copallinum*  
Winged Sumac



*Rhus typhina*  
Staghorn Sumac



*Viburnum dentatum*  
Southern Arrowwood

## GROUNDCOVERS



*Baptisia australis*  
Blue Indigo



*Bouteloua curtipendula*  
Sideoats Grama



*Deschampsia cespitosa*  
Tufted Hair Grass



*Eutrochium dubium*  
Coastal Joe Pye Weed



*Eragrostis spectabilis*  
Purple Lovegrass



*Liatris spicata*  
Blazing Star



*Panicum amarum*, Bitter  
Panicgrass 'Dewey Blue'



*Pycnanthemum mutic.*  
Mountain Mint



*Schizachyrium scoparium*  
Little Bluestem



*Solidago sempervirens*  
Seaside Goldenrod



*Solidago juncea*  
Early Goldenrod



*Sporobolus cryptandrus*  
Sand Dropseed



- Location: Edges of open spaces and esplanade
- Mid and Understory trees, maritime evergreens, shrubs, and grasses provide shade and interest along the river edge
- Maintenance: Trees, shrubs, grasses



# TREES



*Aesculus octandra*  
Yellow Buckeye



*Betula nigra* 'Heritage'  
Heritage River Birch



*Cercis canadensis*  
Eastern Redbud



*Crataegus crus-galli iner.*  
Cockspur Hawthorne



*Gymnocladus dioica*  
Kentucky Coffee Tree



*Liquidambar styraciflua*  
Sweetgum



*Magnolia virginiana*  
Sweetbay Magnolia



*Malus* 'Royal Raindrops'  
Crabapple Royal Raindrops



*Prunus serrulata* 'Mt Fuji'  
Flowering Cherry



*Prunus x yed.* 'Akebono'  
Flowering Cherry



*Quercus phellos*  
Willow Oak



*Syringa vulgaris*  
'Monge' Lilac

# SHRUBS



*Amorpha fruticosa*  
False indigo bush



*Calicarpa americana*  
Beautyberry



*Comptonia peregrina*  
Sweetfern



*Cotinus obovatus*  
Smokebush



*Fothergilla major*  
Fothergilla Major



*Hydrangea quercifolia*  
Oakleaf Hydrangea



*Hydrangea tardiva*  
Panicle Hydrangea



*Itea virginica*  
Virginia Sweetspire



*Ilex glabra*  
Inkberry



*Physocarpus opulifolius*  
Common Ninebark



*Prunus laurocerasus*  
Cherry Laurel



*Spiraea tomentosa*  
Steeplebush

# GROUNDCOVERS



*Amsonia hubrichtii*  
Hubricht's Bluestar



*Anemone canadensis*  
Canada anemone



*Asclepias incarnata*  
Swamp Milkweed



*Asclepias tuberosa*  
Butterfly Milkweed



*Echinacea purpurea*  
Purple Coneflower



*Hibiscus coccineus*  
Scarlot Rose Mallow



*Mertensia virginica*  
Virginia bluebells



*Monarda punctata*  
Spotted Beebalm



*Panicum virgatum* Ruby  
Ribbons Switchgrass



*Phlox paniculata*  
Garden Phlox



*Rudebeckia hirta*  
Black-Eyed Susan



*Symphyotrichum novi-angelli*  
New Eng. Aster

# LAYERED GROVES



- Location: Clearing edges and special areas
- Ornamental understory trees and a low perennial groundplane maintain veiled, eye-level sight lines
- Maintenance: Trees, garden beds

# Planting Palette PA1



TREES



*Acer rubrum*  
Red Maple 'Oct Glory'



*Amelanchier canadensis*  
Serviceberry



*Carya ovata*  
Shagbark Hickory



*Cornus florida*  
Dogwood



*Ginkgo biloba*  
Ginkgo



*Liriodendron tulipifera*  
Tulip Poplar



*Ostrya virginiana*  
Hop Hornbeam



*Quercus bicolor*  
Swamp White Oak



*Quercus coccinea*  
Scarlet Oak



*Quercus nuttalli*  
Nuttall Oak



*Sassafras albidum*  
Sassafras



*Taxodium distichum*  
Bald Cypress

SHRUBS



*Clethra alnifolia*  
Summersweet



*Cornus sericea*  
Redtwig Dogwood



*Hammelis vernalis*  
Ozark Witch Hazel



*Hammelis virginiana*  
Witch Hazel



*Lindera benzoin*  
Spicebush



*Ilex verticillata*  
Inkberry



*Lindera glauca*  
Greybush Spicebush



*Rubus allegheniensis*  
Blackberry



*Vaccinium corymbosum*  
Highbush Blueberry



*Vaccinium angustif.*  
Lowbush Blueberry



*Viburnum acerifolium*  
Mapleleaf Viburnum



*Viburnum dentatum*  
Southern Arrowwood

GROUNDCOVERS



*Ajuga reptans*  
Bungleweed



*Carex pensylvanica*  
Pennsylvania Sedge



*Carex albicans*  
White-Tinged Sedge



*Galium odoratum*  
Sweet Woodruff



*Geranium macrorrhizum*  
Bigroot Geranium



*Pycnanthemum tenuif.*  
Slender Mountain Mint



- Location: Western urban edge of park. Ornamental understory trees, conifers, shrubs, and perennials provide visual interest along paths and slopes while buffering views
- Maintenance: Trees, shrubs, groundcovers



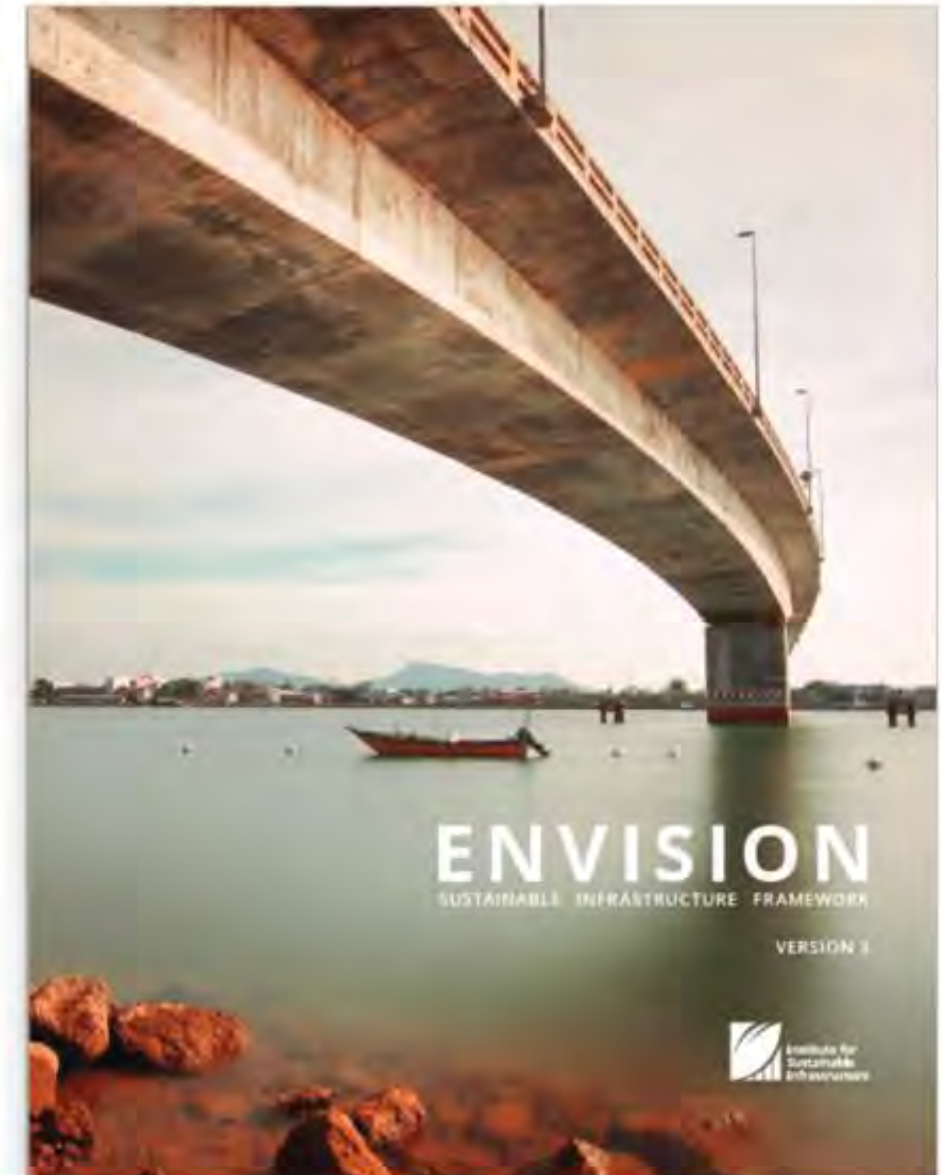
An aerial photograph of a bridge spanning a river, with a teal color overlay. The bridge has multiple lanes and is surrounded by greenery and some buildings on the banks. The text "ENVISION SUSTAINABILITY RATING SYSTEM" is centered over the image in white, bold, uppercase letters.

# **ENVISION SUSTAINABILITY RATING SYSTEM**



# ENVISION SUSTAINABILITY RATING SYSTEM

**The written framework for resiliency and sustainability created by a joint collaboration:**



<https://sustainableinfrastructure.org/envision-version-3/>



# ENVISION AND ESCR

A framework that includes 64 sustainability and resilience indicators, called ‘credits’, organized around 5 categories:



## Project’s *Envision Pre-Assessment Checklist* Preliminary Results, conducted by PM/CM:

Credit Category	Applicable	Pre-Assessment Review	Percentage
Quality of Life	200	159	80%
Leadership	182	99	54%
Resource Allocation	196	25	13%
Natural World	194	64	33%
Climate and Resilience	146	121	83%
Total Points/%	918	468	51%





An aerial photograph of a large bridge spanning a wide river. The bridge has multiple lanes and is supported by several piers. The surrounding area includes some greenery and buildings. The entire image is covered with a semi-transparent teal overlay.

# PROJECT SCHEDULE



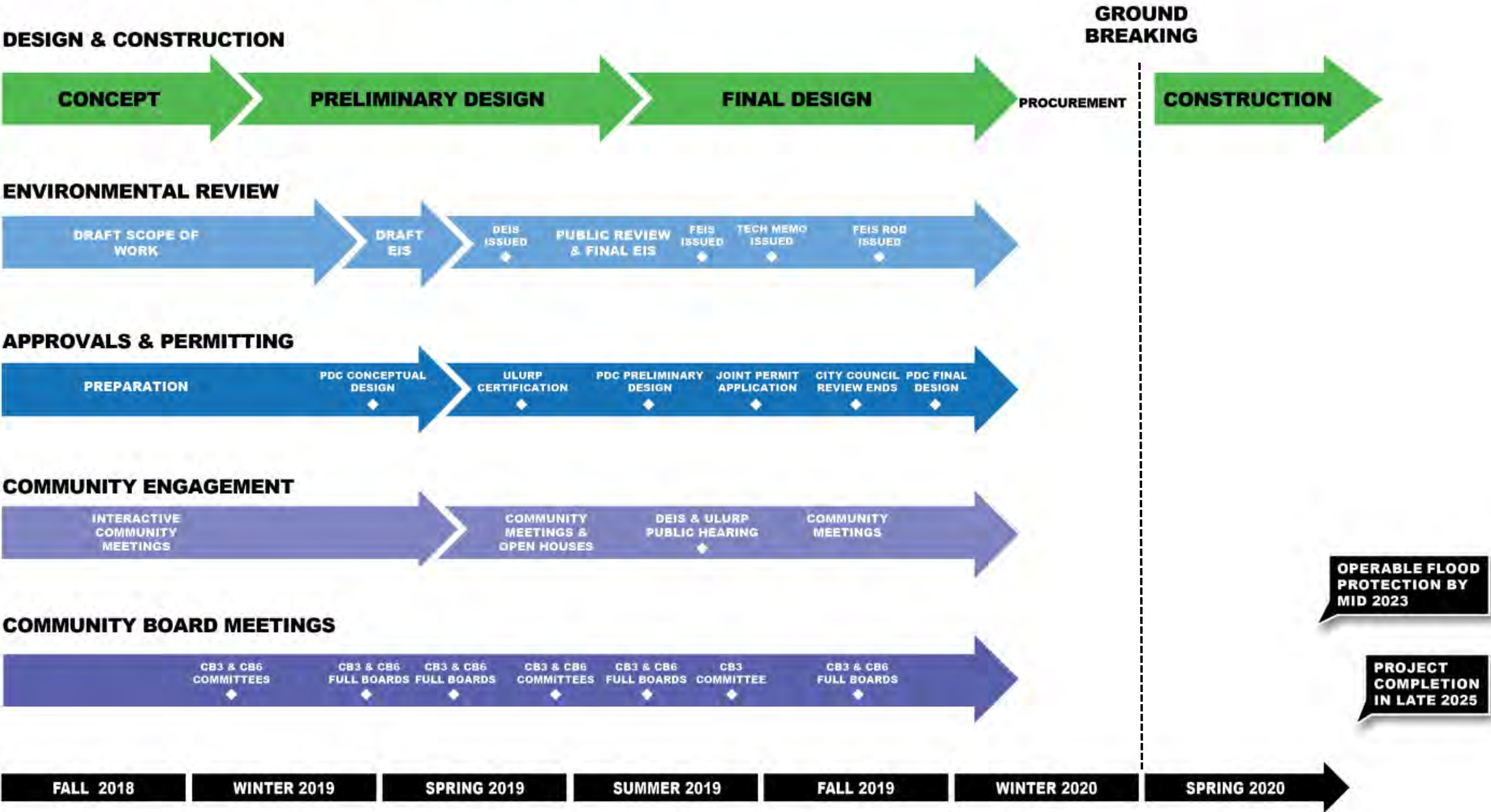
# CONSTRUCTION PHASING FOR EAST RIVER PARK: 2020

- **Spring and Summer 2020:** East River Park remains open with early construction packages:
  - Tree Transplants
  - Interim Passive Recreation Space
- **Fall 2020 – Summer 2022:** ~40% will remain open
- **Fall 2020:** ~60% will close
- **Summer 2023:** ~50% will re-open
- Esplanade to be fully closed for only one year
- **Mid-2023:** flood protection to be completed; **End of 2025:** project to be completed



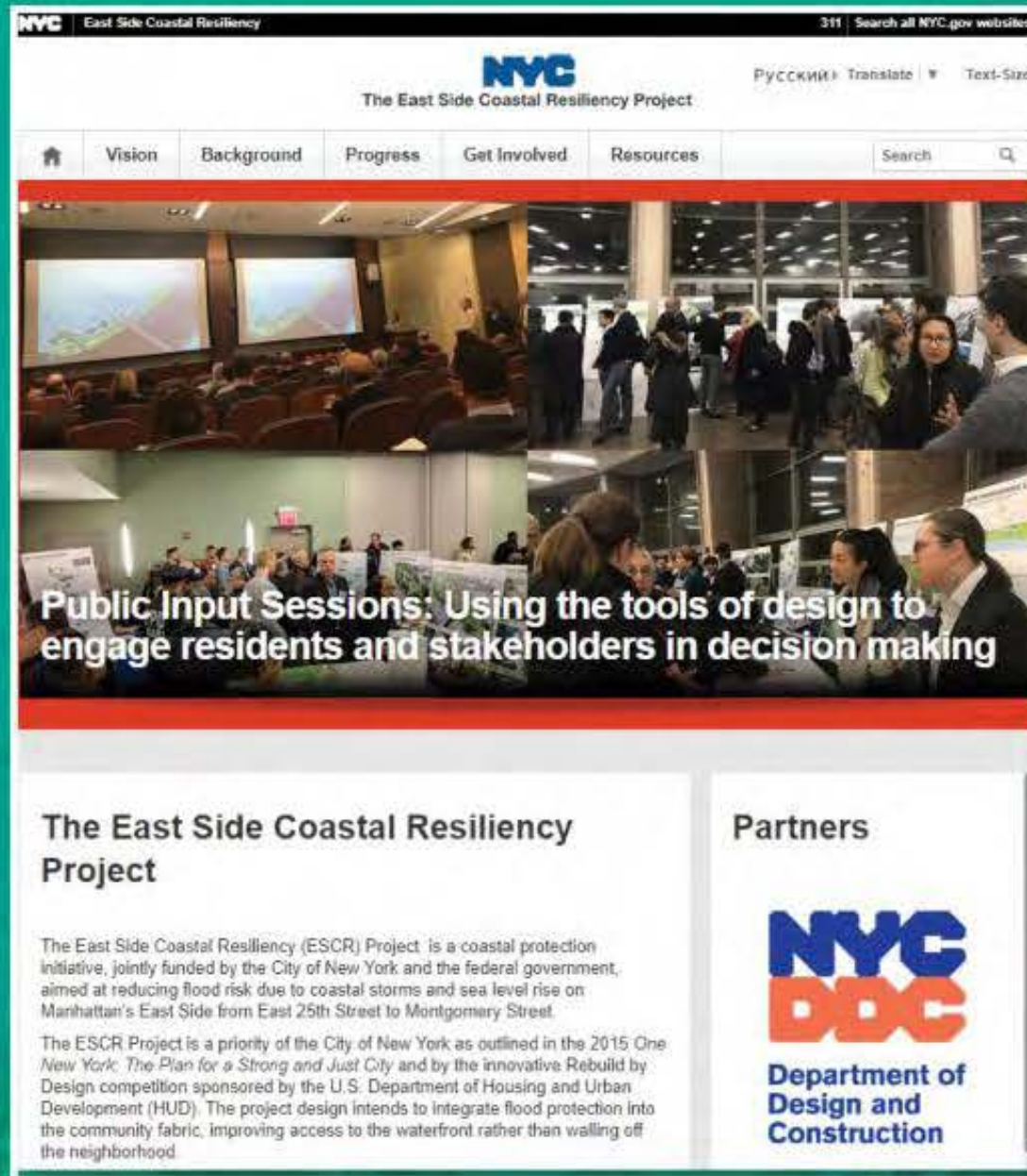


# PROJECT SCHEDULE OVERVIEW





# Website



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