

#ONENYC



EAST SIDE COASTAL RESILIENCY PROJECT

CB6 Parks, Landmarks & Cultural Affairs Committee Presentation

October 4, 2016

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October 4, 2016

- 1. Project Overview**
- 2. Design Inputs and Considerations**
- 3. Updated Design Concept Preview**
- 4. Next Steps**

Questions/Discussion

- 1. Project Overview**
2. Design Inputs and Considerations
3. Updated Design Concept Preview
4. Next Steps

EAST SIDE COASTAL RESILIENCY

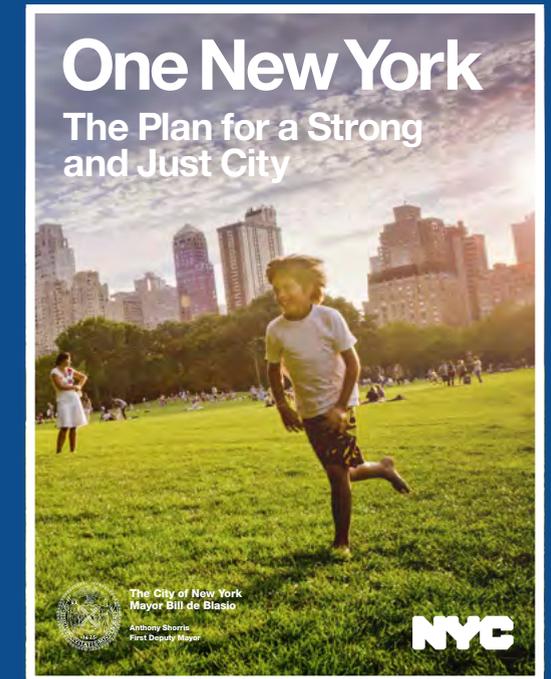
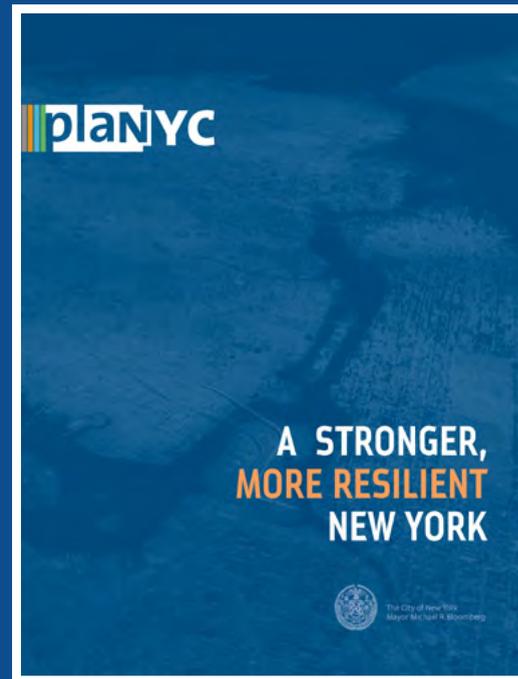
Project Goals

- Provide a reliable, integrated flood protection system; minimize use of closure structures and deployables
- Improve waterfront open spaces and access
- Respond quickly to the urgent need for increased flood protection and resiliency
- Achieve implementation milestones and project funding allocations as established by HUD



EAST SIDE COASTAL RESILIENCY

Project Schedule - 2012-2015



HURRICANE SANDY

*A STRONGER
MORE RESILIENT
NEW YORK*

HUD FUNDING
AWARD

*ONE
NYC*

REPORT PREPARATION

REBUILD BY DESIGN COMPETITION

ESCR PROJECT SCOPING

OCTOBER
2012

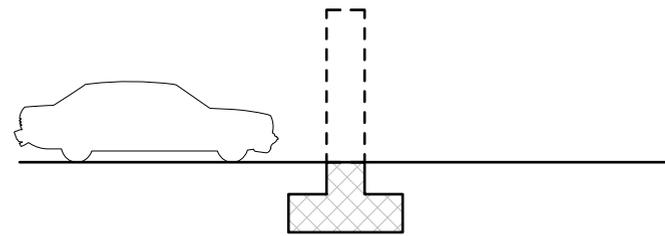
WINTER
2012/2013

WINTER
2013/2014

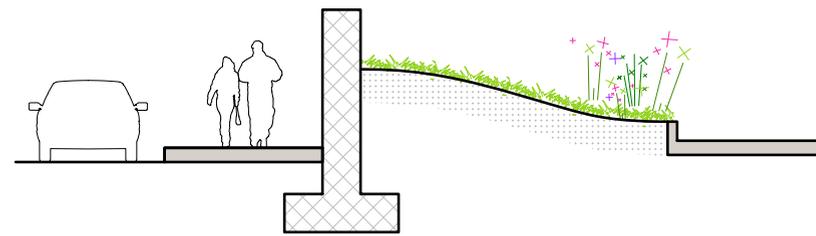
WINTER
2014/2015

ESCR PROJECT AREA

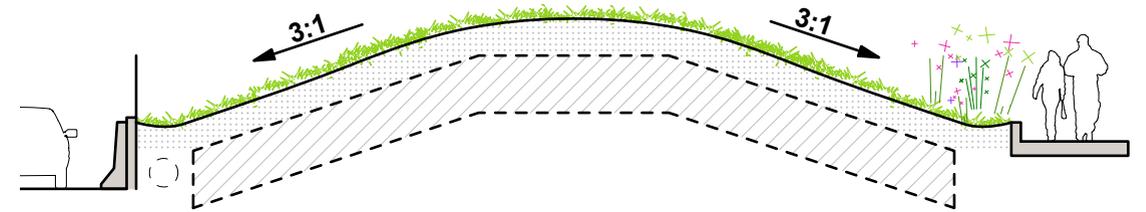
BASELINE FLOOD PROTECTION COMPONENTS



DEPLOYABLE



FLOODWALL



BERM / LEVEE

EAST SIDE COASTAL RESILIENCY

Social Infrastructure



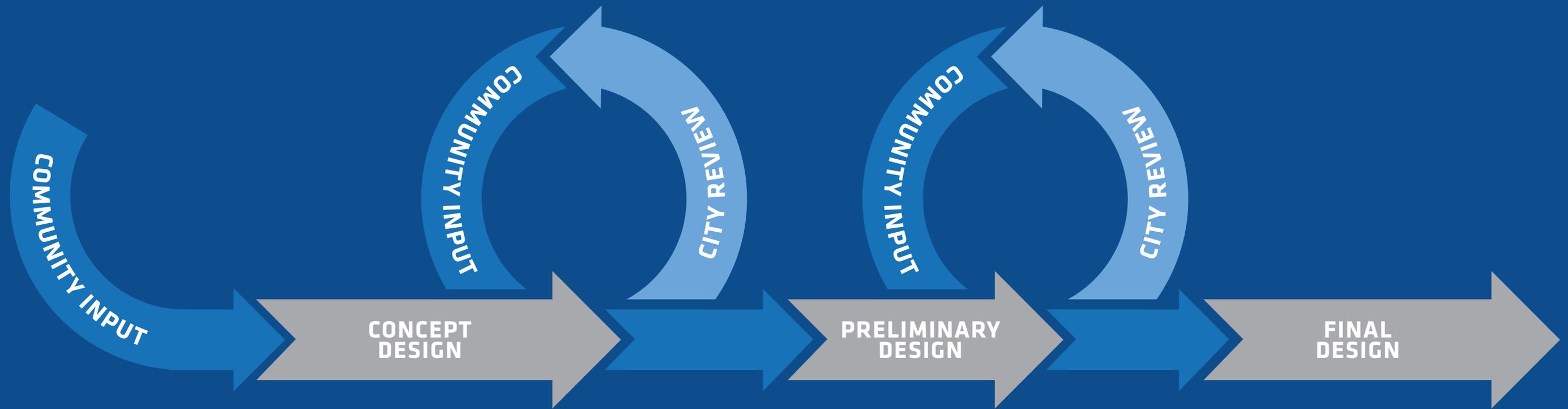
 PEOPLE



 RESILIENCY
INFRASTRUCTURE

EAST SIDE COASTAL RESILIENCY

Iterative Design Process



WINTER
2014/15

WINTER
2015/16

WINTER
2016/17

WINTER
2017/18

EAST SIDE COASTAL RESILIENCY

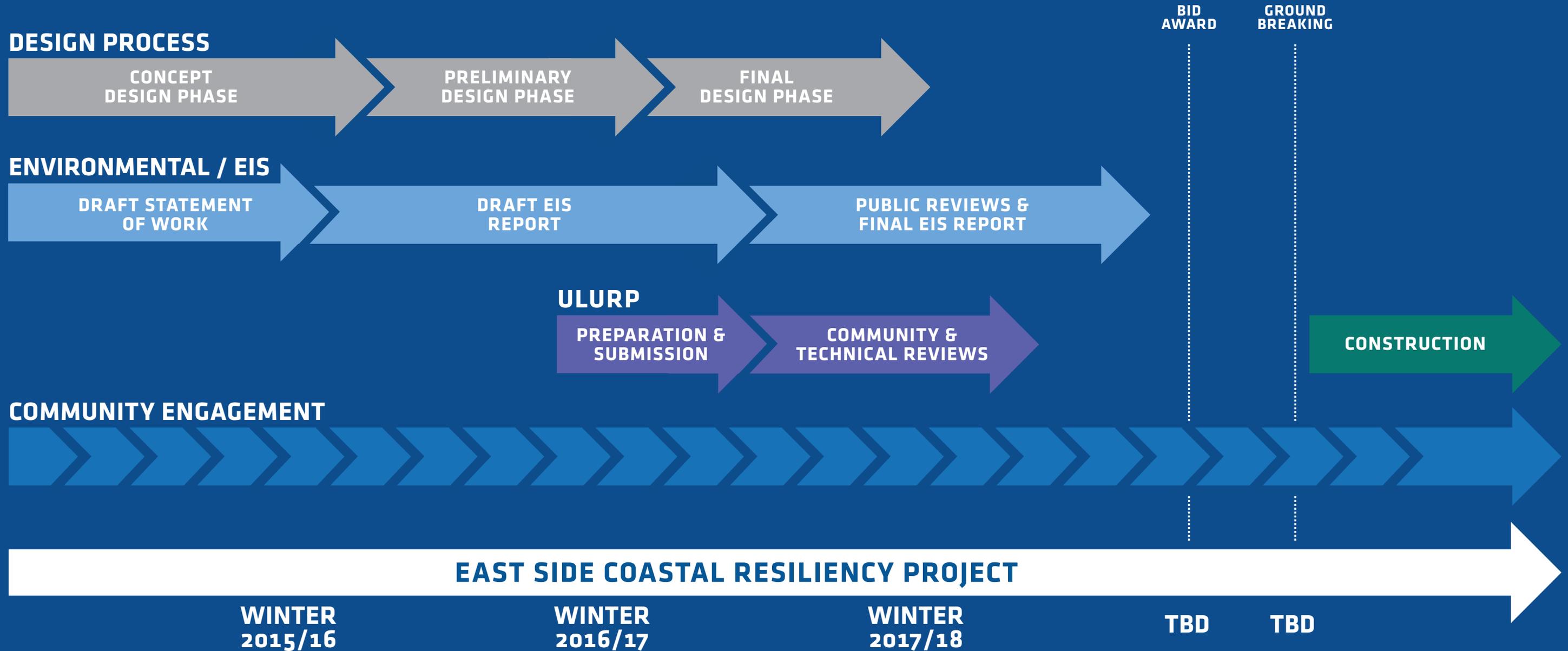
What have we been up to?

Since Fall/Winter 2015:

- Procuring final design team
- Addressing comments on Draft Scope of Work
- Evaluating Alternatives
- Developing draft Environmental Impact Statement (EIS) and permit applications
- Refining concept design based on:
 - Community input
 - Agency requirements
 - Regulatory concerns
 - Technical constraints
 - New inputs and considerations

EAST SIDE COASTAL RESILIENCY

Current Project Schedule



1. Project Overview
- 2. Design Inputs and Considerations**
3. Updated Design Concept Preview
4. Next Steps

ESCR PROJECT AREA FROM MONTGOMERY ST. TO E. 25TH ST.

STUYVESANT COVE PARK

EAST RIVER PARK

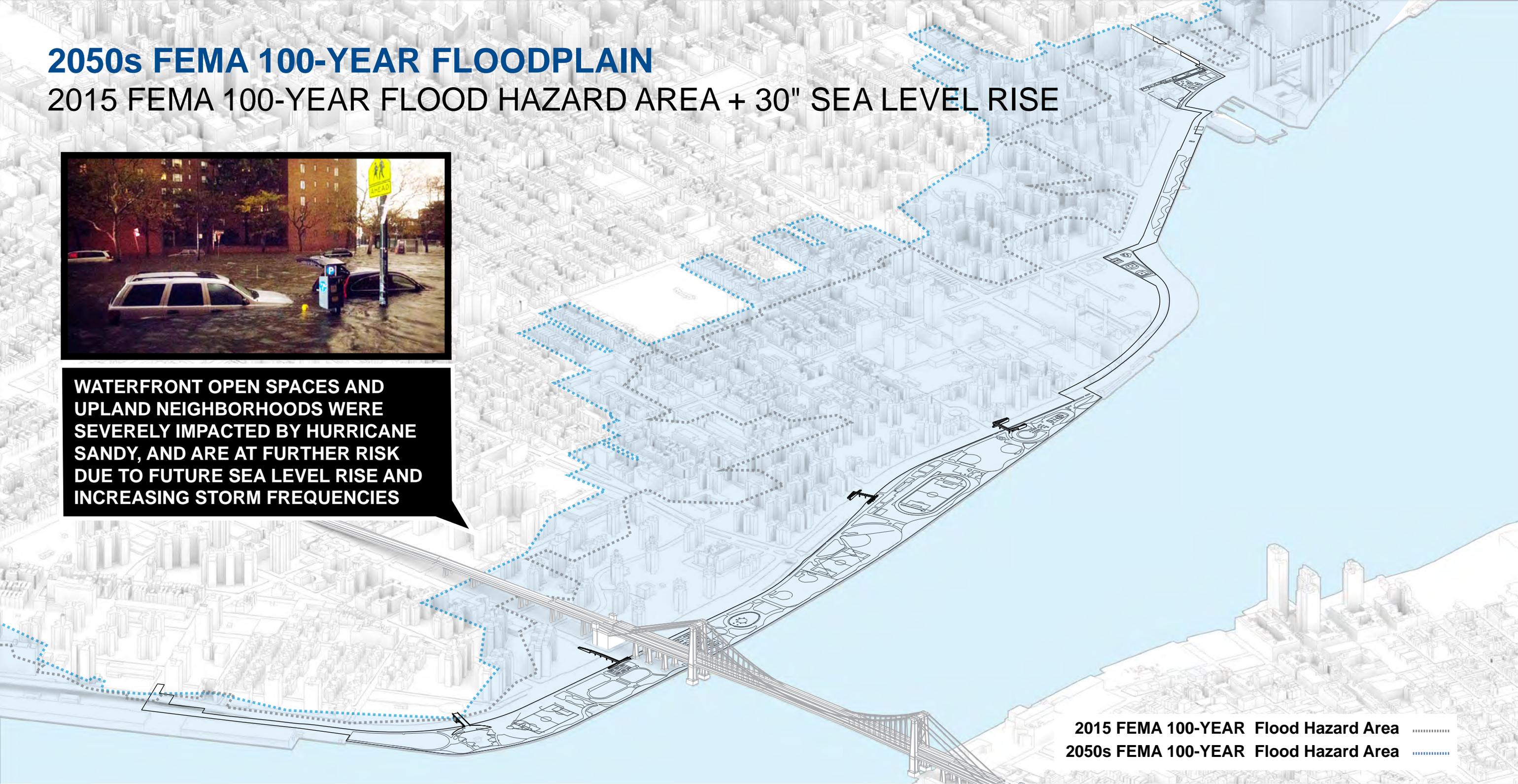
Site Boundary ———
2050s FEMA 100-YEAR Flood Hazard Area

2050s FEMA 100-YEAR FLOODPLAIN

2015 FEMA 100-YEAR FLOOD HAZARD AREA + 30" SEA LEVEL RISE



WATERFRONT OPEN SPACES AND UPLAND NEIGHBORHOODS WERE SEVERELY IMPACTED BY HURRICANE SANDY, AND ARE AT FURTHER RISK DUE TO FUTURE SEA LEVEL RISE AND INCREASING STORM FREQUENCIES



2015 FEMA 100-YEAR Flood Hazard Area
2050s FEMA 100-YEAR Flood Hazard Area

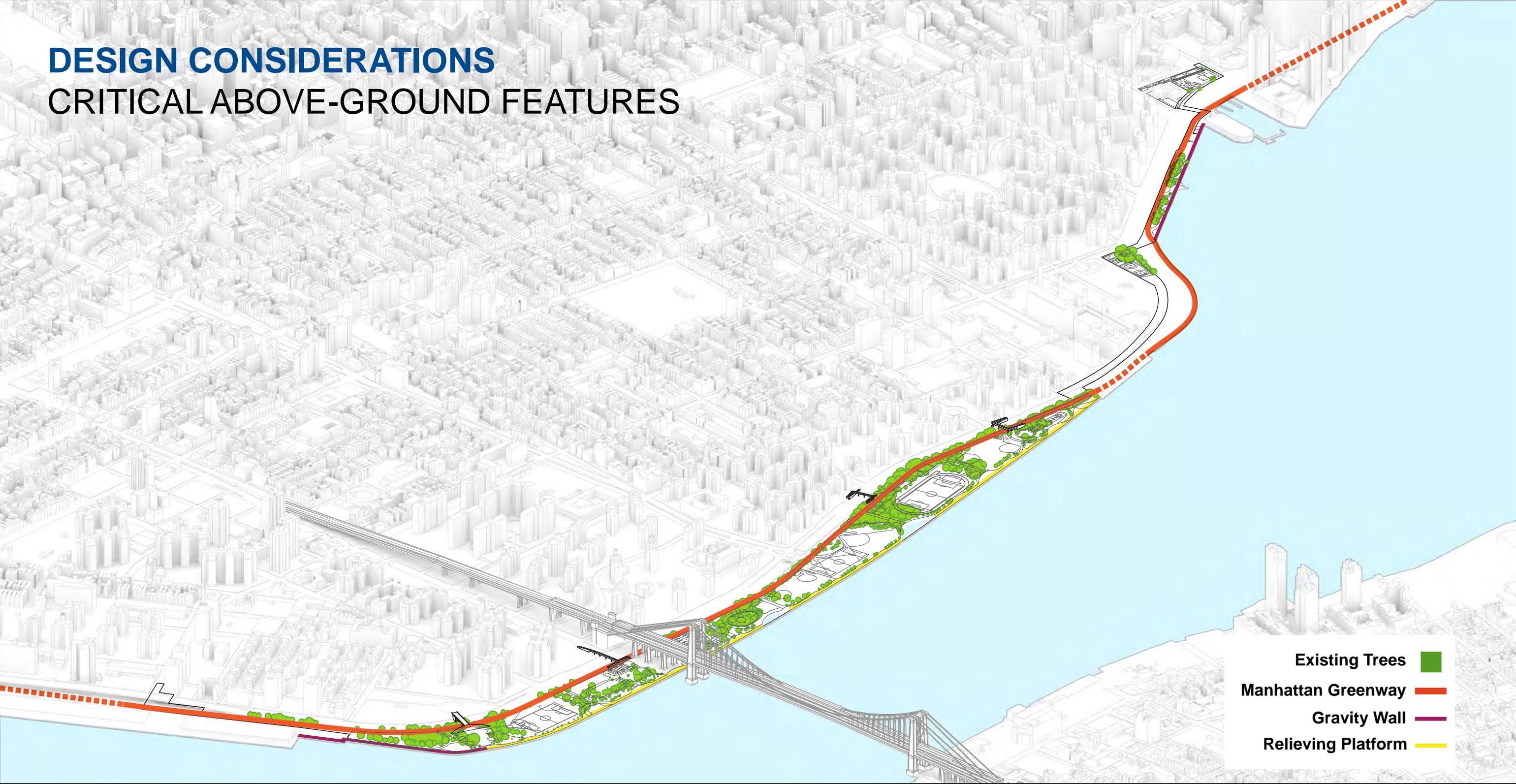
EXISTING PROGRAM USES ALONG THE WATERFRONT



- Existing Passive Program ■
- Existing Active Program ■
- Existing Circulation ■
- Existing Buildings ■
- Existing Maintenance Areas ■

DESIGN CONSIDERATIONS

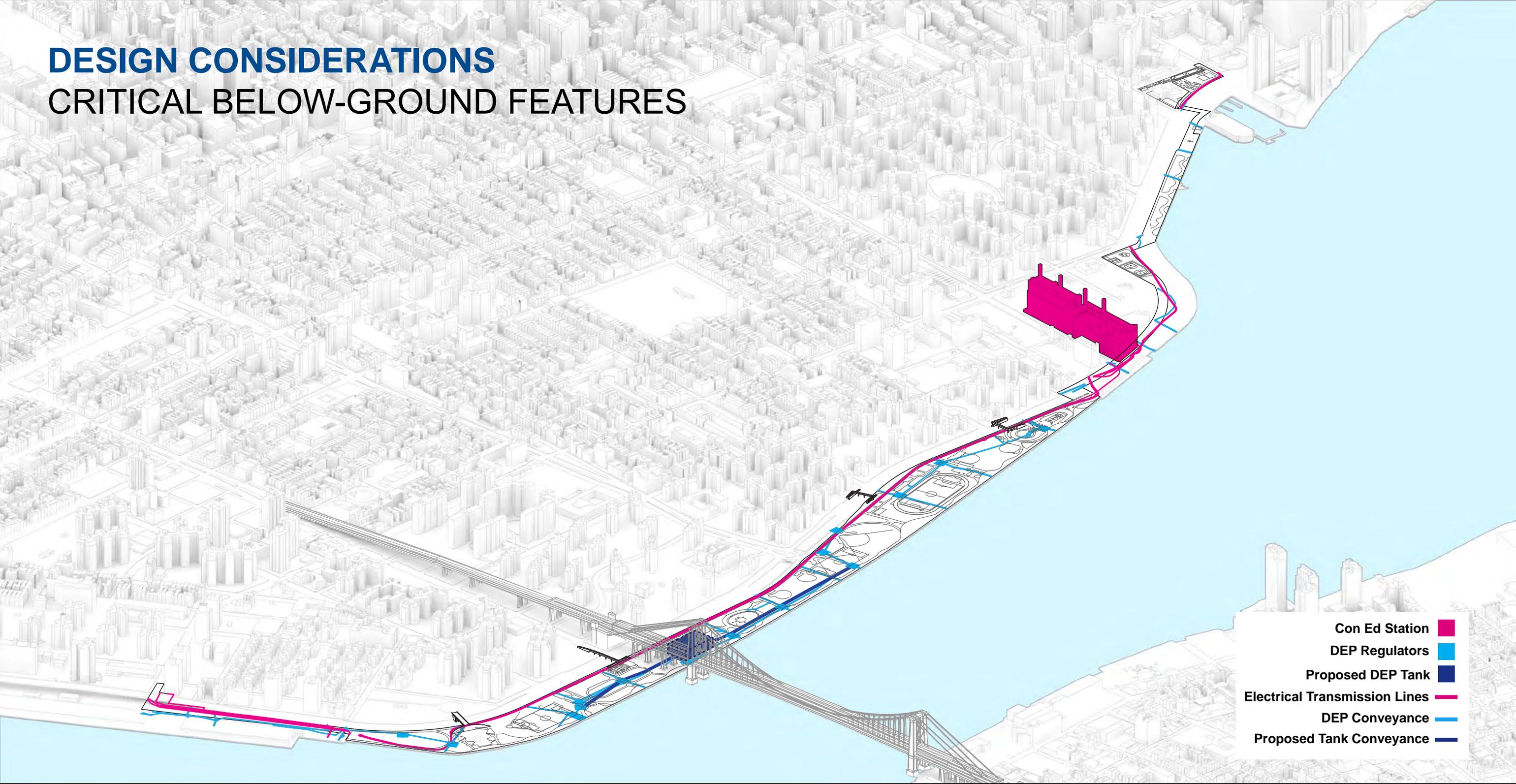
CRITICAL ABOVE-GROUND FEATURES



- Existing Trees ■
- Manhattan Greenway ■
- Gravity Wall ■
- Relieving Platform ■

DESIGN CONSIDERATIONS

CRITICAL BELOW-GROUND FEATURES

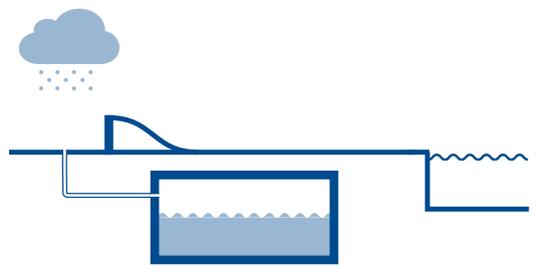
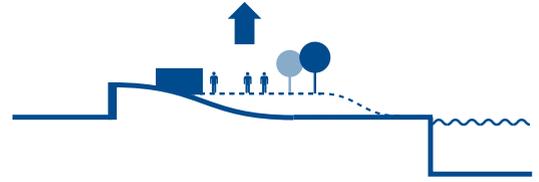


- Con Ed Station
- DEP Regulators
- Proposed DEP Tank
- Electrical Transmission Lines
- DEP Conveyance
- Proposed Tank Conveyance

ADDITIONAL DESIGN PARAMETERS

EXPAND AVAILABLE PROGRAMMING BY CREATING MORE FLEXIBLE, CASUAL, MULTI-USE AREAS OF PARK

INCORPORATE A NEW STORAGE TANK IN EAST RIVER PARK TO MANAGE COMBINED SEWER OVERFLOW



PARK RESILIENCY

DIVERSIFY PROGRAM

INTEGRATE CON-ED

STORAGE TANK

INCORPORATE MORE HOLISTIC RESILIENCE OF WATERFRONT PARKS AND OPEN SPACES

INCORPORATE CRITICAL CON-ED TRANSMISSION LINES, WHICH CARRY 16% OF NYC'S ELECTRICITY

DESIGN CONSIDERATIONS

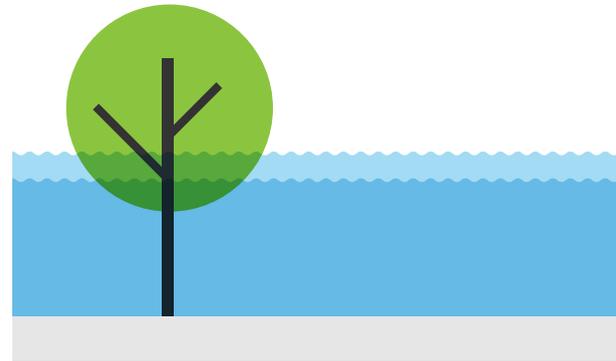
STORM CONSIDERATIONS FOR WATERFRONT PARKLAND



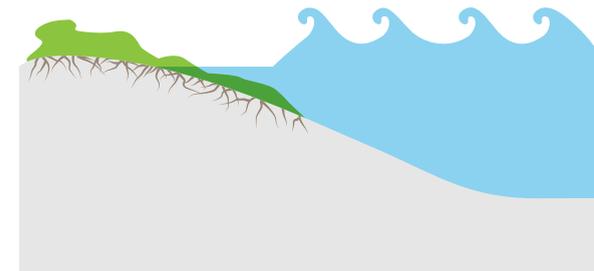
WIND

WIND FROM STORMS DAMAGES TREES AND REDUCES CANOPY HEALTH OVER TIME

INUNDATION AFFECTS ROOTS AND TREE HEALTH



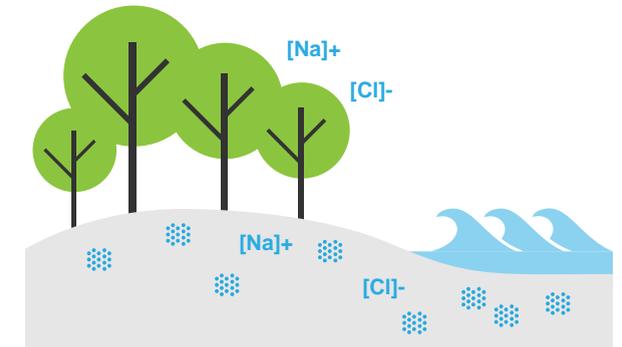
INUNDATION



WAVE ACTION + EROSION

WAVES ERODE LANDSCAPE SOILS AND CAUSE PHYSICAL DAMAGE TO TREES, SHRUBS, LAWNS, GARDENS

SALT DEPOSITS BUILD UP IN SOILS AND AFFECT PLANT HEALTH



SALINITY

EAST SIDE COASTAL RESILIENCY 2015 Community Engagement Recap

ROUND 1

x2 Meetings



MARCH 19TH + 23RD

How do you use the waterfront?

ROUND 2

x3 Meetings



MAY 18TH, 28TH, 30TH

Access and Flood Protection:
What are the options?

ROUND 3

x4 Meetings



JULY 28TH, 29TH, 30TH + SEPT. 10TH

How do we combine options?

ROUND 4

x2 Meetings



OCTOBER 6TH + 8TH

Initial Design Direction:
Feedback and Discussion



QUARTERLY JOINT CB3/CB6 WATERFRONT TASK FORCE MEETINGS

COMMUNITY ENGAGEMENT FEEDBACK

EXTENSIVE COMMUNITY ENGAGEMENT WAS UNDERTAKEN TO DETERMINE HOW FLOOD PROTECTION COULD MEET NEEDS AND DESIRES OF THE COMMUNITY

“MAINTAIN AT GRADE CROSSINGS AT MAJOR JUNCTIONS!”

“INTEGRATE FUTURE DEVELOPMENTS SUCH AS SOLAR 2!”

“WE LIKE THE SEPARATED BIKE LANE! IT’S SAFER FOR BIKES AND PEDESTRIANS.”

“MAXIMIZE PASSIVE PROTECTION!”

“GET US IN THE MOOD FOR A PARK! YOU CAN’T SEE THE BRIDGE FROM BACK HERE”

“THE RAMPS ARE TOO STEEP ON BOTH SIDES OF THE BRIDGE”

“WE NEED MORE PASSIVE SPACE!”

“THIS IS A VERY DANGEROUS CROSSING FOR KIDS!”

“THIS AREA IS THE BEST FOR FAMILIES”

“DELANCEY IS AN IMPORTANT CROSSING INTO THE PARK”

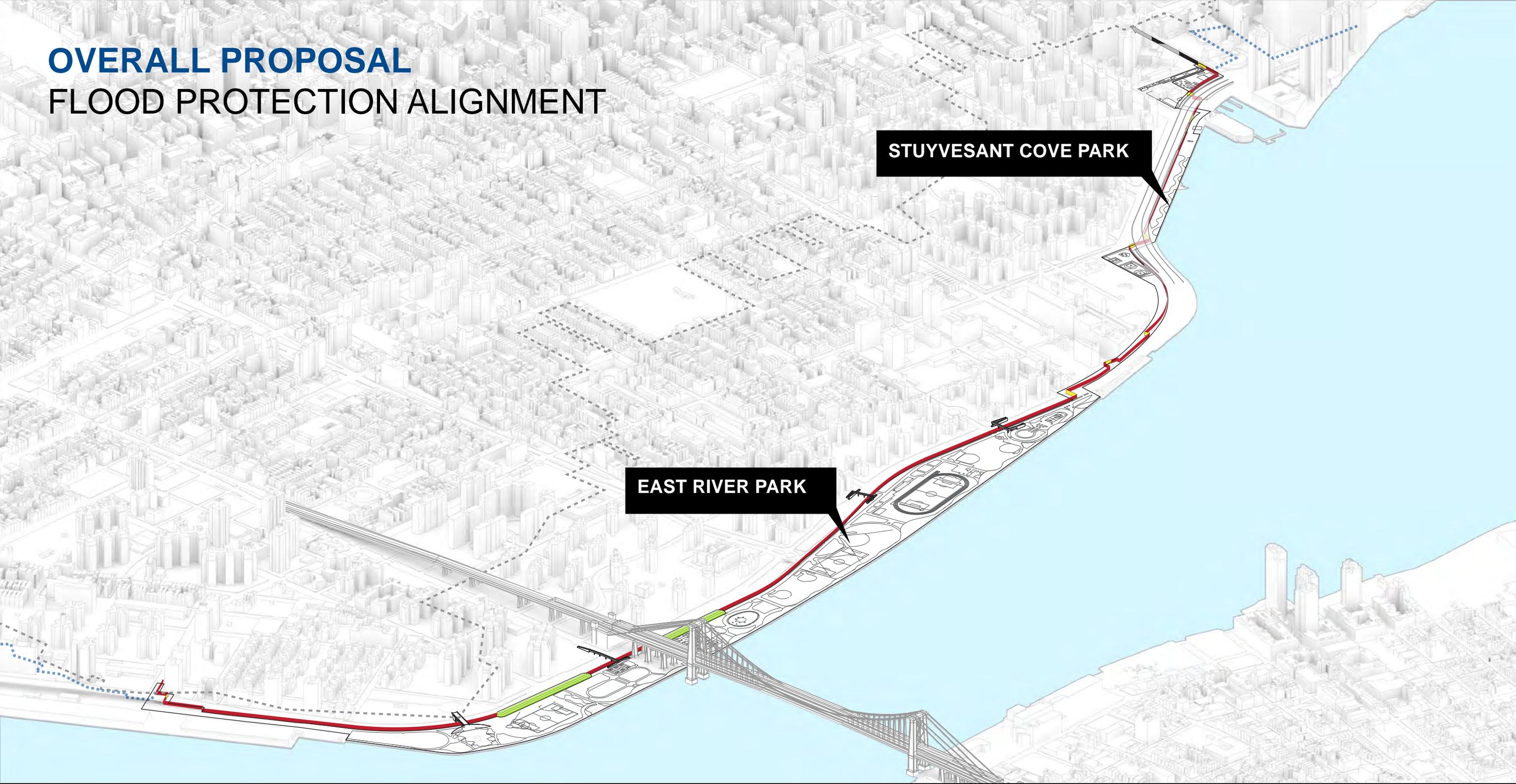
“THIS AREA HAS THE BEST TREES!”

“MAINTAIN VIEWS AND ACCESS TO THE NEW PIER 42 PARK”

“THIS STAIRCASE IS DANGEROUSLY STEEP”

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OVERALL PROPOSAL FLOOD PROTECTION ALIGNMENT



STUYVESANT COVE PARK

EAST RIVER PARK

OVERALL PROPOSAL



PROJECT AREA 2

STUYVESANT COVE PARK, ASSER LEVY PLAYGROUND,
MURPHY BROTHERS PARK, CON-ED TIE-IN



BASELINE FLOOD PROTECTION COMPONENTS

A COMBINATION OF FLOODWALLS, LEVEES, AND CLOSURE STRUCTURES COMPRISE THE BASELINE FLOOD PROTECTION SYSTEM, REACHING +16' ABOVE MEAN SEA LEVEL

PINCH POINT ALONG GREENWAY REQUIRES FLOODWALL TO CROSS FDR DRIVE

23RD STREET INTERSECTION

STUYVESANT COVE PARK

EAST RIVER PARK

E. 23RD ST.

E. 20RD ST.

AVENUE C

CON ED

FDR

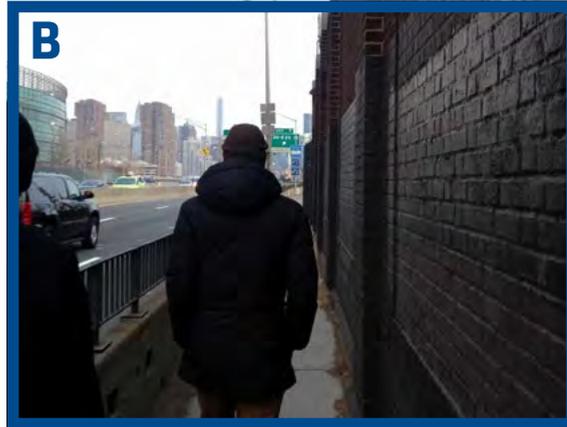
2015 FEMA 100-YEAR Flood Hazard Area
2050s FEMA 100-YEAR Flood Hazard Area
Floodwall/Levee	■
Closure Structures	■

BASELINE FLOOD PROTECTION COMPONENTS

CON ED NARROWS ALONG FDR



FDR



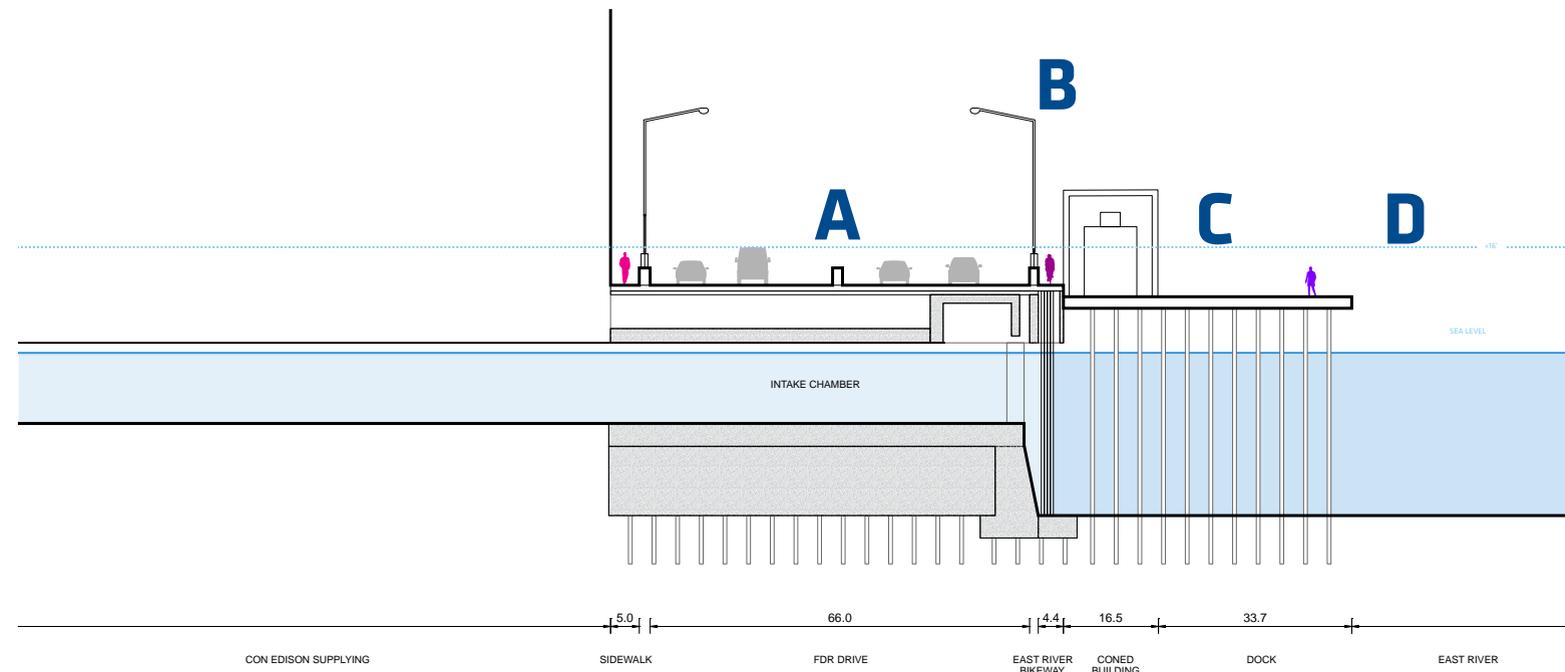
30" NARROWS ALONG
CON-ED HEAD HOUSE



CON-ED RECEIVING PIER



VIEWS ACROSS EAST RIVER

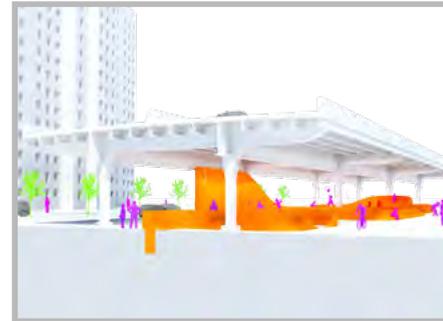


MAY 2015 COMMUNITY ENGAGEMENT FINDINGS - STUYVESANT COVE PARK

Multiple alignments were studied and discussed, with overwhelming preference expressed for the elevated Stuyvesant Cove Park alignment - which provided the most desirable balance of reliability, cost, complexity, and urban design attributes.



Ave. C Wiggle Wall



FDR Big Bench



Ave. C Flip-Down Canopy



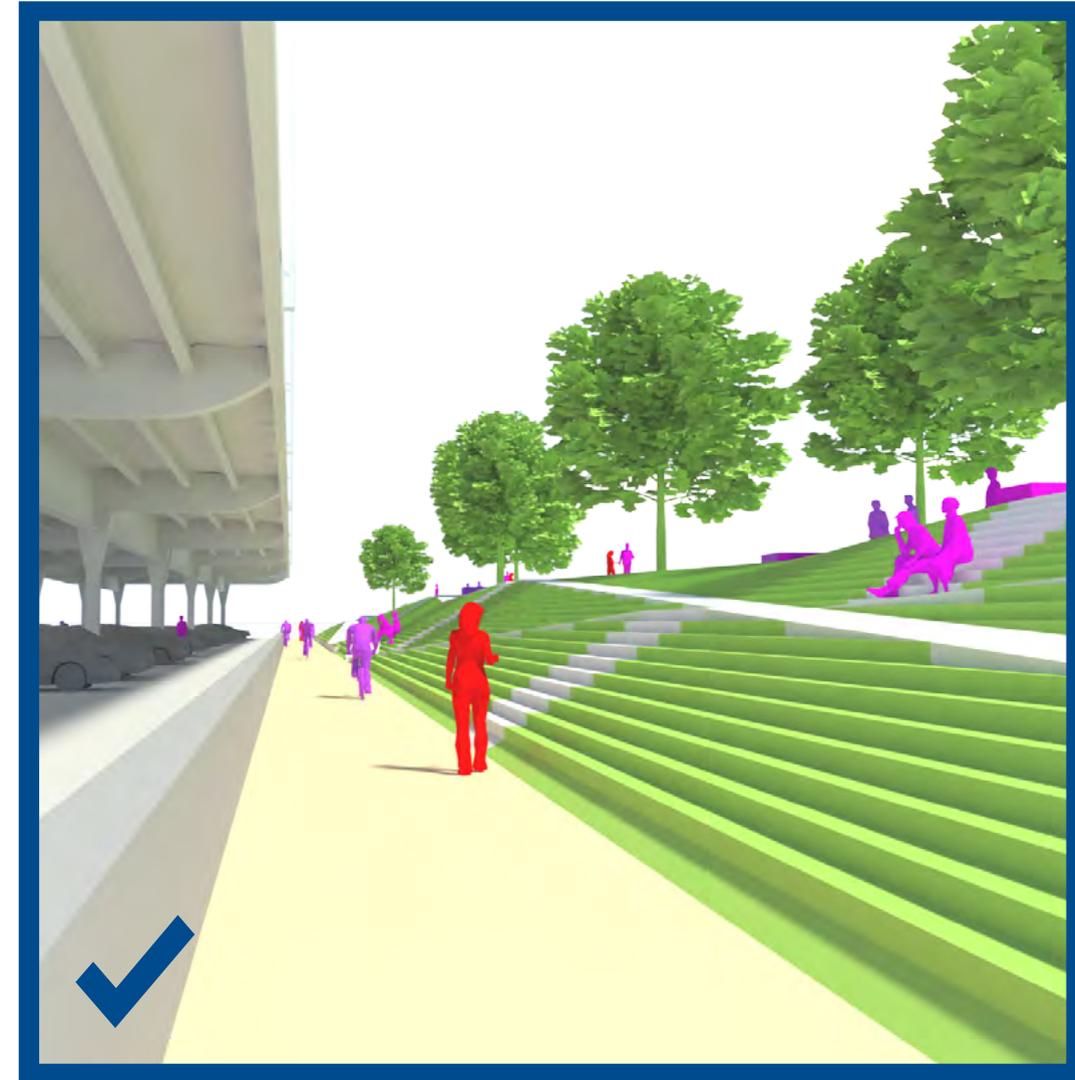
FDR Edge Flip-Down with Bench



Protective Pavilions



Flip-Down Park Canopy



ELEVATED STUYVESANT COVE PARK

PARK INTEGRATION WITH FLOOD PROTECTION

AIM TO ELEVATE PORTIONS OF EAST RIVER AND STUYVESANT COVE PARKS, REDUCING RISK TO WATERFRONT OPEN SPACES, AND PROTECTING THE CITY

E. 23RD ST.

E. 20RD ST.

STUYVESANT COVE PARK

AVENUE C

CON ED

MAINTAIN CONNECTIONS TO PARK AND CITY

MAINTAIN OR IMPROVE WATERFRONT CONNECTIONS

PARK ALIGNMENTS MAINTAIN CONNECTIONS BETWEEN PARK AND NEIGHBORHOOD

E. 20TH ST. ENTRY POINT

STUYVESANT COVE PARK

E. 23RD ST.

AVENUE C

CON ED

MANHATTAN GREENWAY

PRESERVE NORTH-SOUTH CONNECTIVITY

THE MANHATTAN GREENWAY IS STRATEGICALLY LOCATED INLAND ALONG THE WEST EDGE OF THE PARK, SERVING BICYCLISTS, PEDESTRIANS, EMERGENCY AND MAINTENANCE VEHICLES

E. 23RD ST.

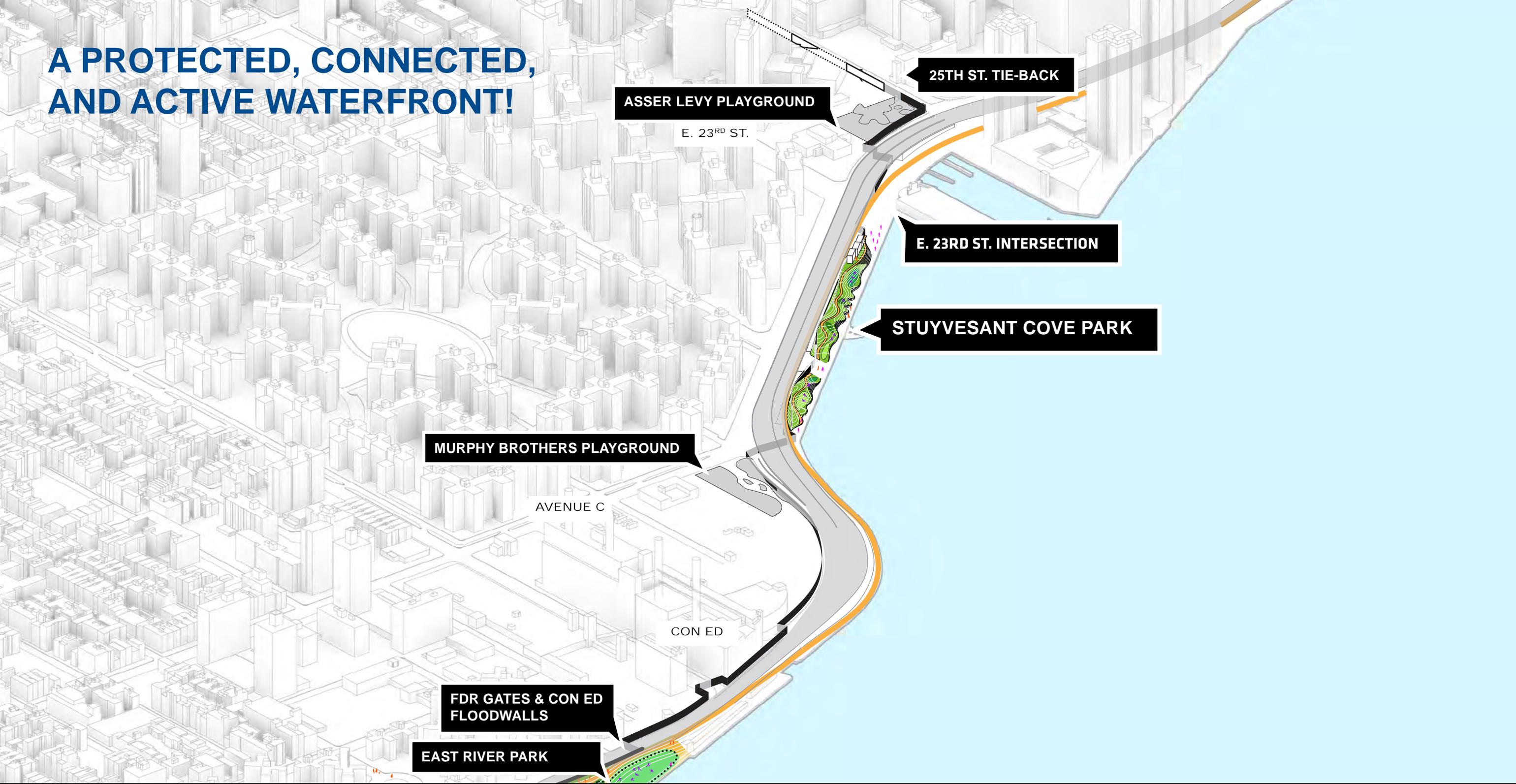
E. 20RD ST.

STUYVESANT COVE PARK

AVENUE C

CON ED

A PROTECTED, CONNECTED, AND ACTIVE WATERFRONT!



PLAN - PROJECT AREA 2 - EXISTING

STUYVESANT COVE PARK, ASSER LEVY PLAYGROUND, MURPHY BROTHERS PARK, CON-ED TIE-IN



PLAN - PROJECT AREA 2 - PROPOSED

STUYVESANT COVE PARK, ASSER LEVY PLAYGROUND, MURPHY BROTHERS PARK, CON-ED TIE-IN

ASSER LEVY PLAYGROUND
COMMUNITY DISCUSSIONS
FORTHCOMING

STORM PROTECTION INTEGRATED INTO
NEW STUYVESANT COVE PARK DESIGN

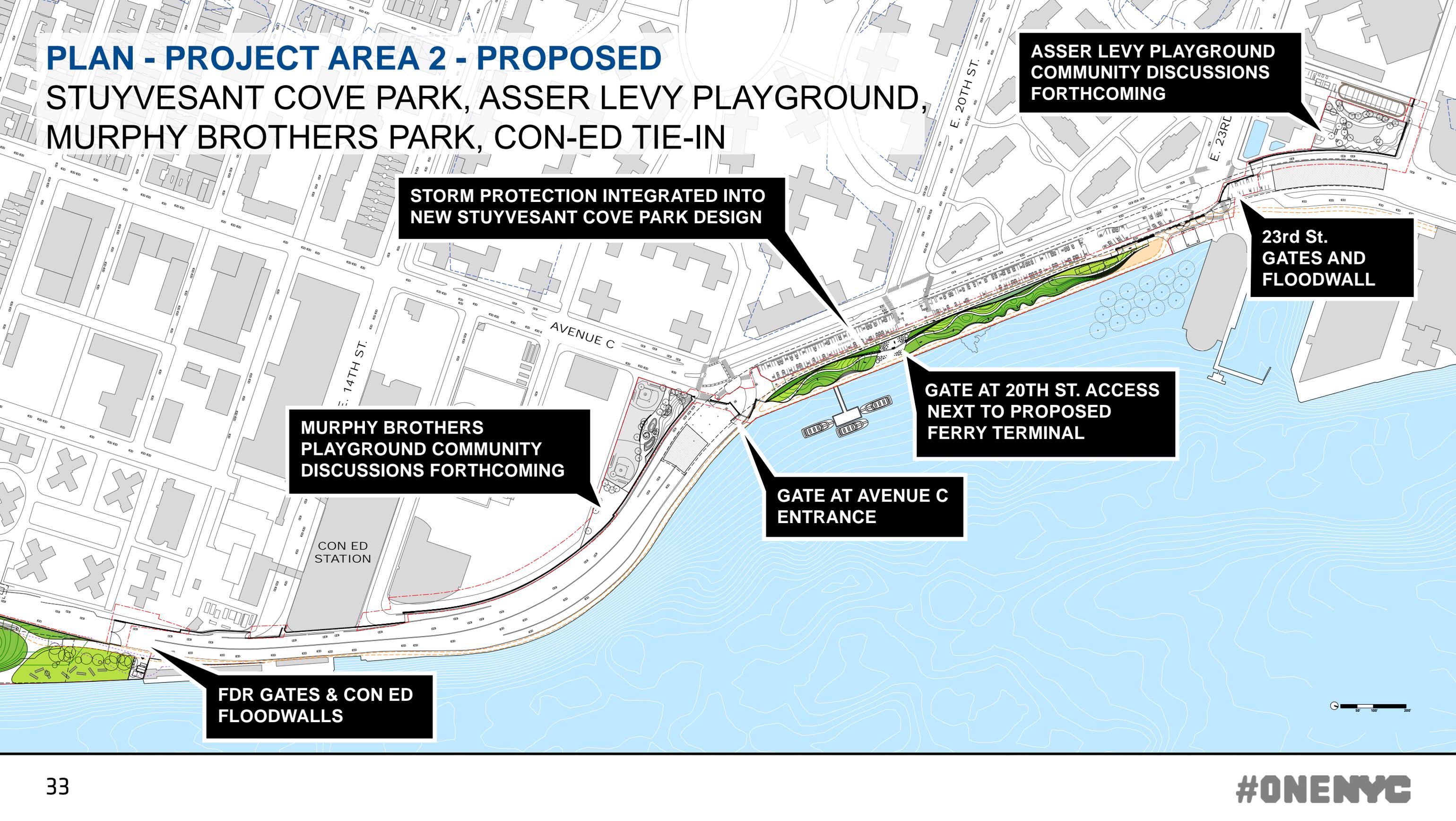
23rd St.
GATES AND
FLOODWALL

MURPHY BROTHERS
PLAYGROUND COMMUNITY
DISCUSSIONS FORTHCOMING

GATE AT 20TH ST. ACCESS
NEXT TO PROPOSED
FERRY TERMINAL

GATE AT AVENUE C
ENTRANCE

FDR GATES & CON ED
FLOODWALLS



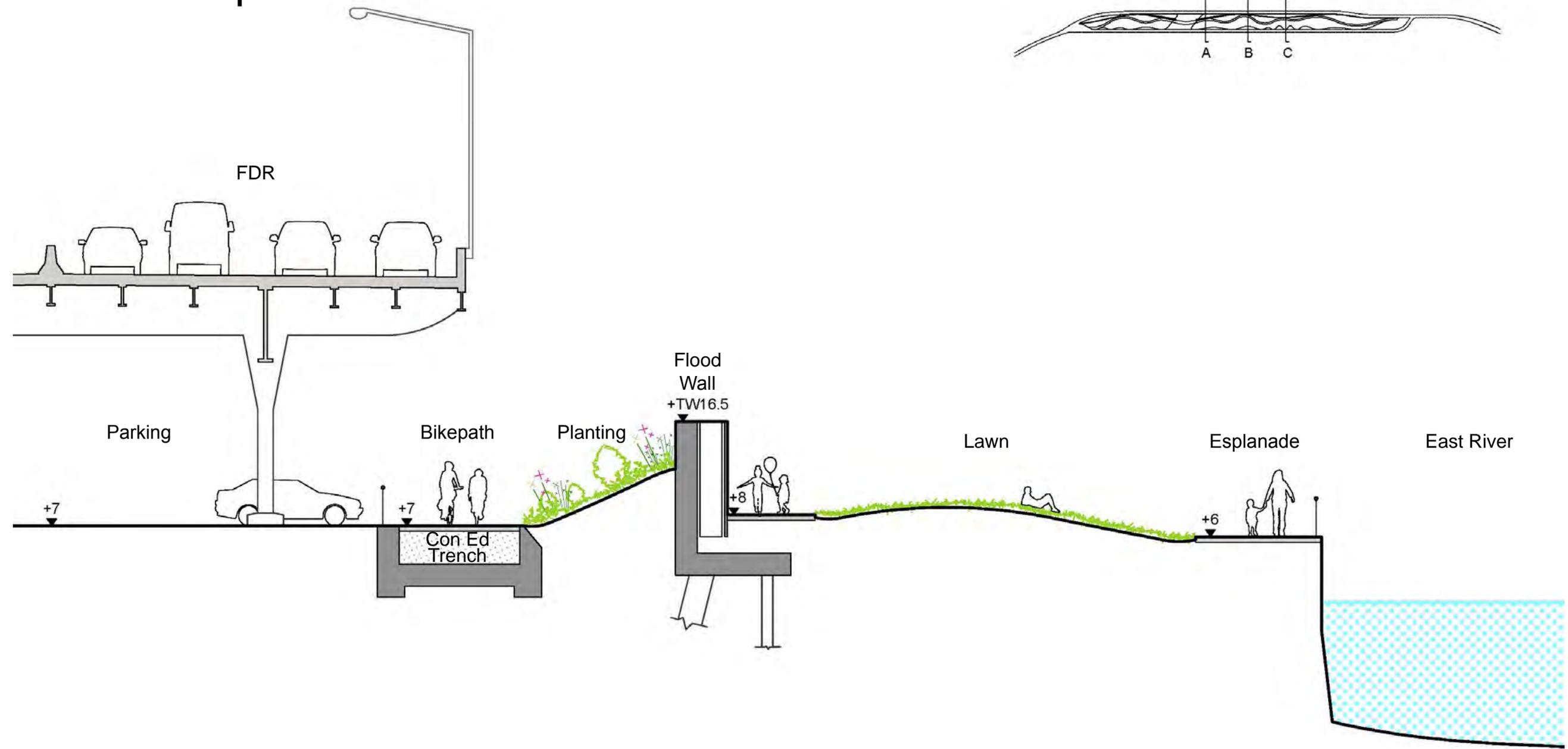
Stuyvesant Cove Park

Typical Section - Existing Conditions



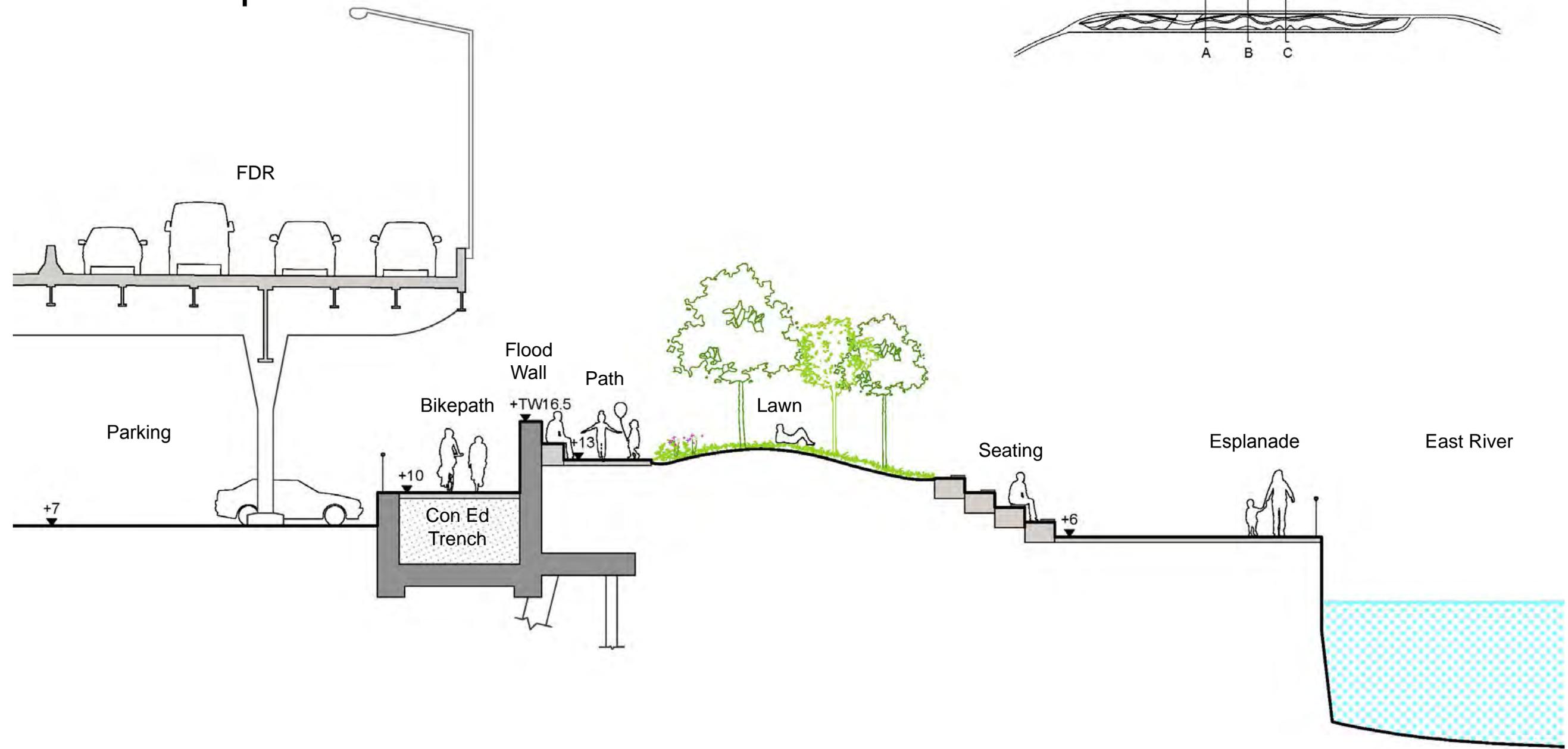
Stuyvesant Cove Park

Section A - Proposed



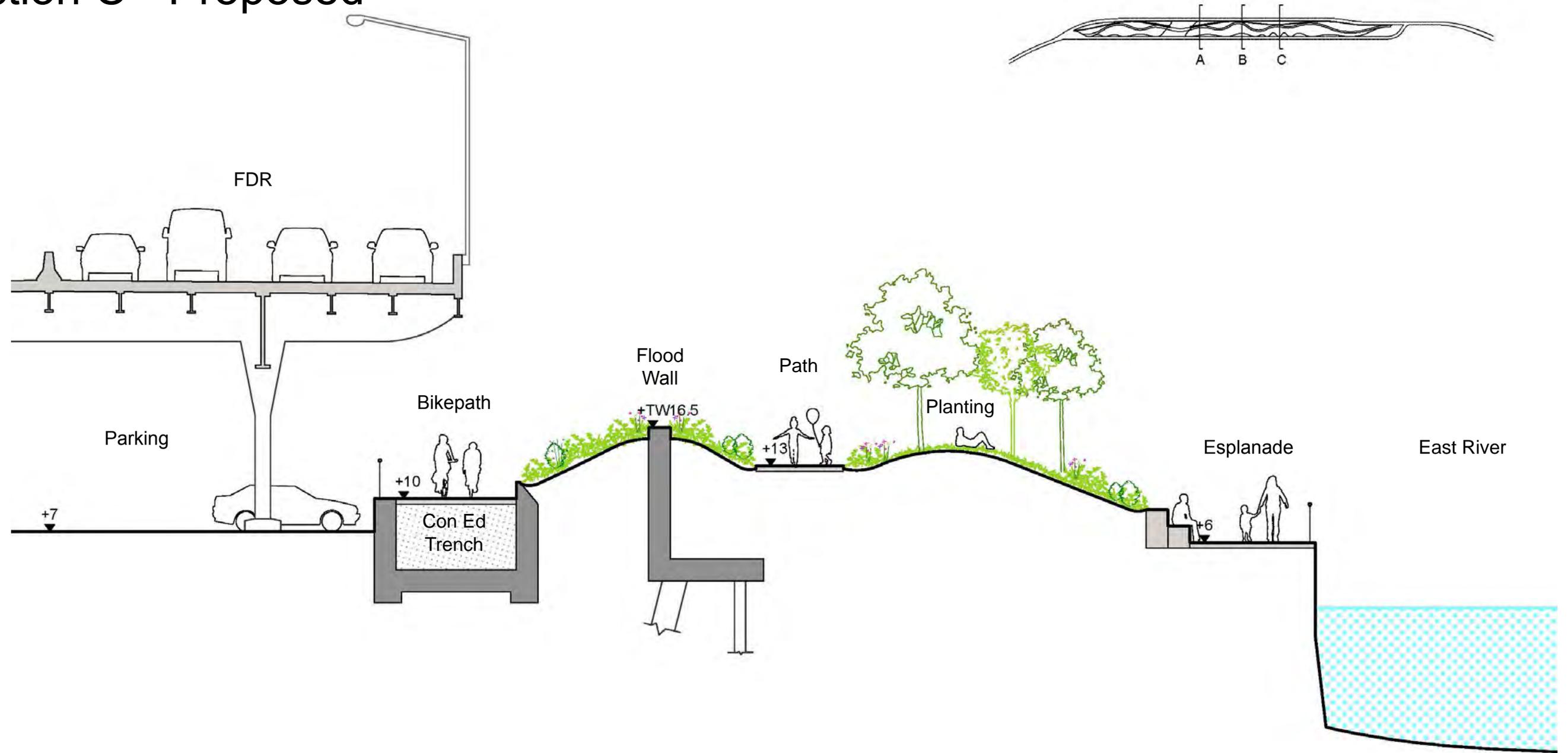
Stuyvesant Cove Park

Section B - Proposed

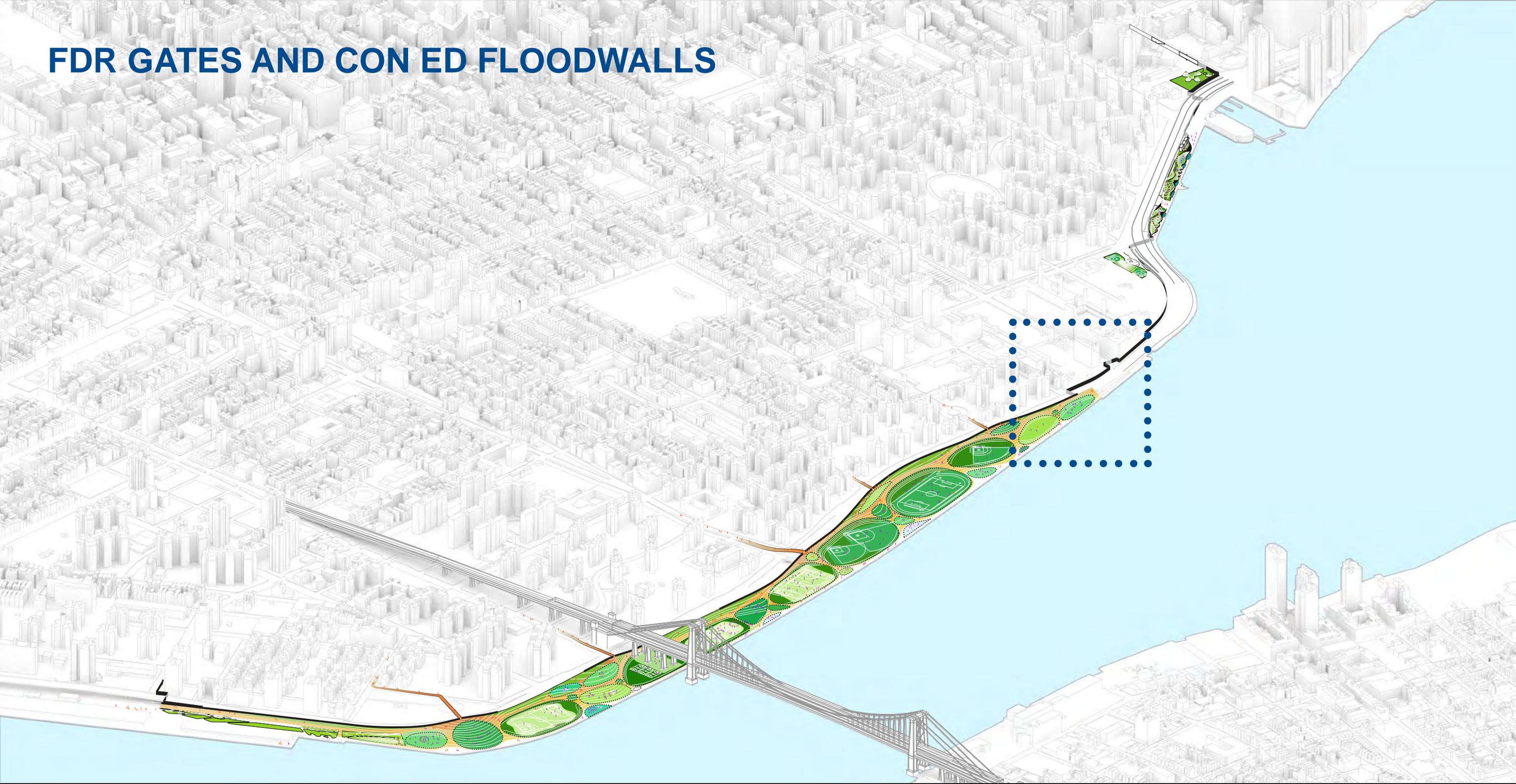


Stuyvesant Cove Park

Section C - Proposed



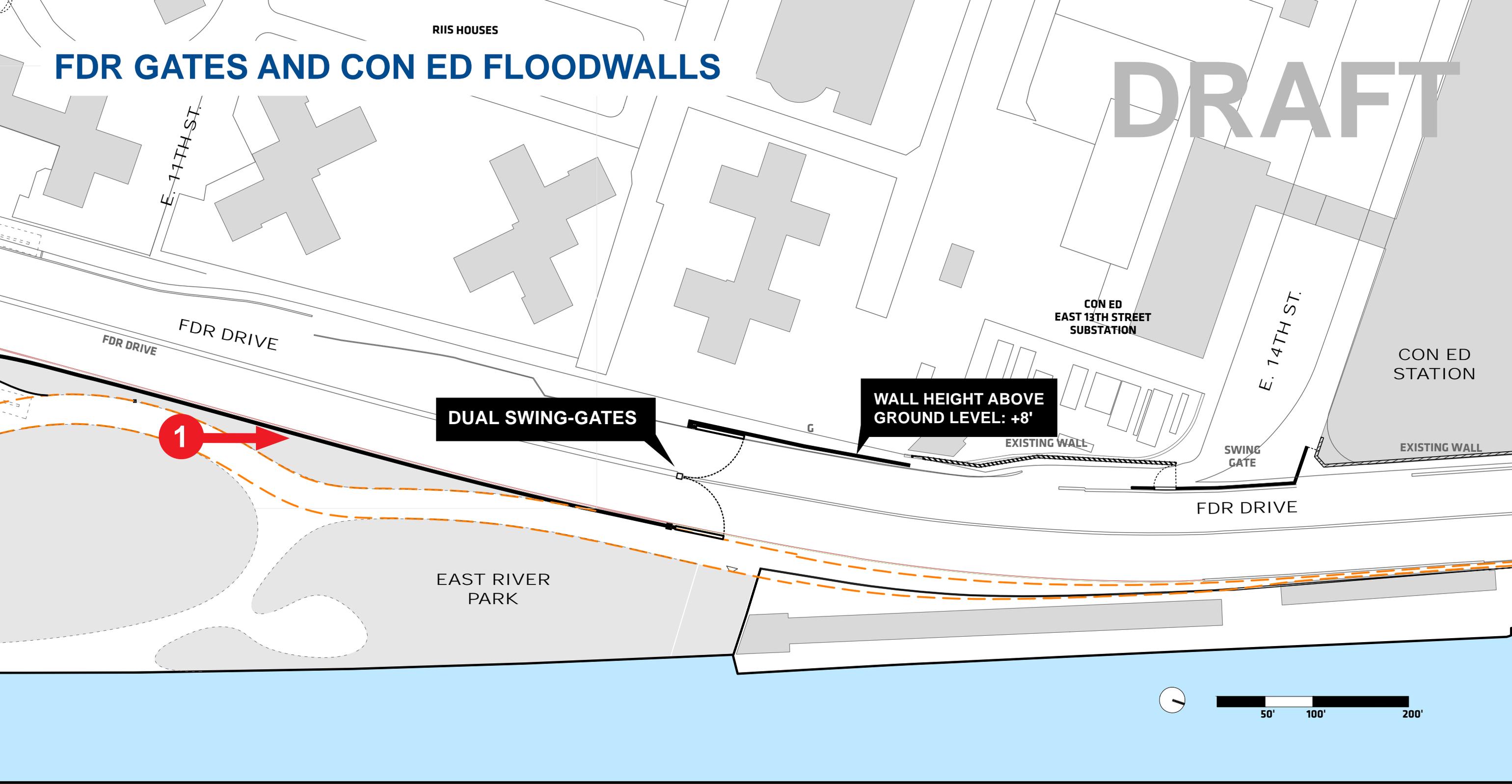
FDR GATES AND CON ED FLOODWALLS



FDR GATES AND CON ED FLOODWALLS

RIIS HOUSES

DRAFT



**EXISTING
VIEW NORTH OF FDR**



PROPOSED GATE - OPEN
VIEW NORTH OF FDR

NOTE: DRAFT ILLUSTRATIVE SKETCH
FINISHES/MATERIALS/DETAILING TO BE DEVELOPED
IN FINAL DESIGN



EXIT 7
E 20 - E 23 St
RIGHT LANE
ALL TRUCKS

PROPOSED GATE - CLOSING

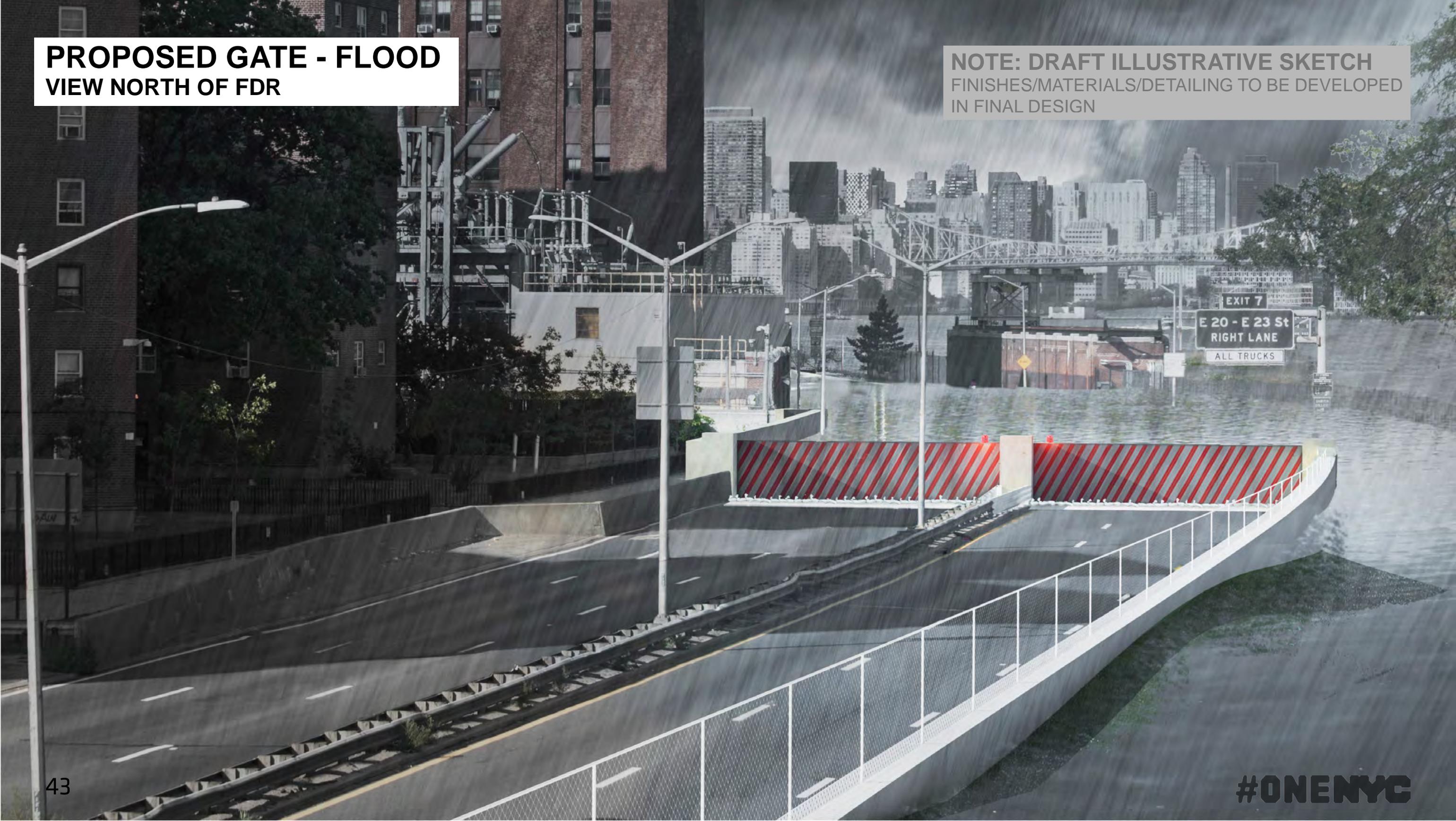
VIEW NORTH OF FDR

NOTE: DRAFT ILLUSTRATIVE SKETCH
FINISHES/MATERIALS/DETAILING TO BE DEVELOPED
IN FINAL DESIGN



**PROPOSED GATE - FLOOD
VIEW NORTH OF FDR**

**NOTE: DRAFT ILLUSTRATIVE SKETCH
FINISHES/MATERIALS/DETAILING TO BE DEVELOPED
IN FINAL DESIGN**



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2. Updated Schedule
3. Considerations & Inputs
4. Updated Design Concept Preview
- 5. Next Steps**

NEXT STEPS

Community Engagement and Revised Concept Roll-Out

OCT - DEC 2016

Asser Levy and Murphy Brothers' Playgrounds
Stuyvesant Cove Park/23rd Street Intersection
Project Area Two Overview

-Community Input Session, TBD
-Community Input Session, TBD
-Community Update Session, TBD

Project Area One Concept Preview
Project Area One North & South Overviews

-CB3 Parks Committee
-Community Update Sessions, TBD

Overall Concept Plan

-PDC Presentation, Nov
-CB3/6 Joint Task Force Meeting, Dec

NEXT STEPS

Preliminary Design



- Plan Refinement
- Detailed Planting Strategy
- Materiality, Paving, and Furnishing
- Design of Park Amenities
- Detailed Park Design
- Detailed Wall and Tie-Back Design
- Detailed Bridge Design
- Detailed M+O Strategy
- Construction Sequencing

Questions/Discussion