

# **SOUTH BATTERY PARK CITY RESILIENCY PROJECT**

## UPDATE TO CB1 ENVIRONMENTAL PROTECTION COMMITTEE

June 15, 2020

# CB1 UPDATE | AGENDA

## DESIGN ITEMS

- Picnic Terraces
- Battery Place Service Entrance
- Inner drainage



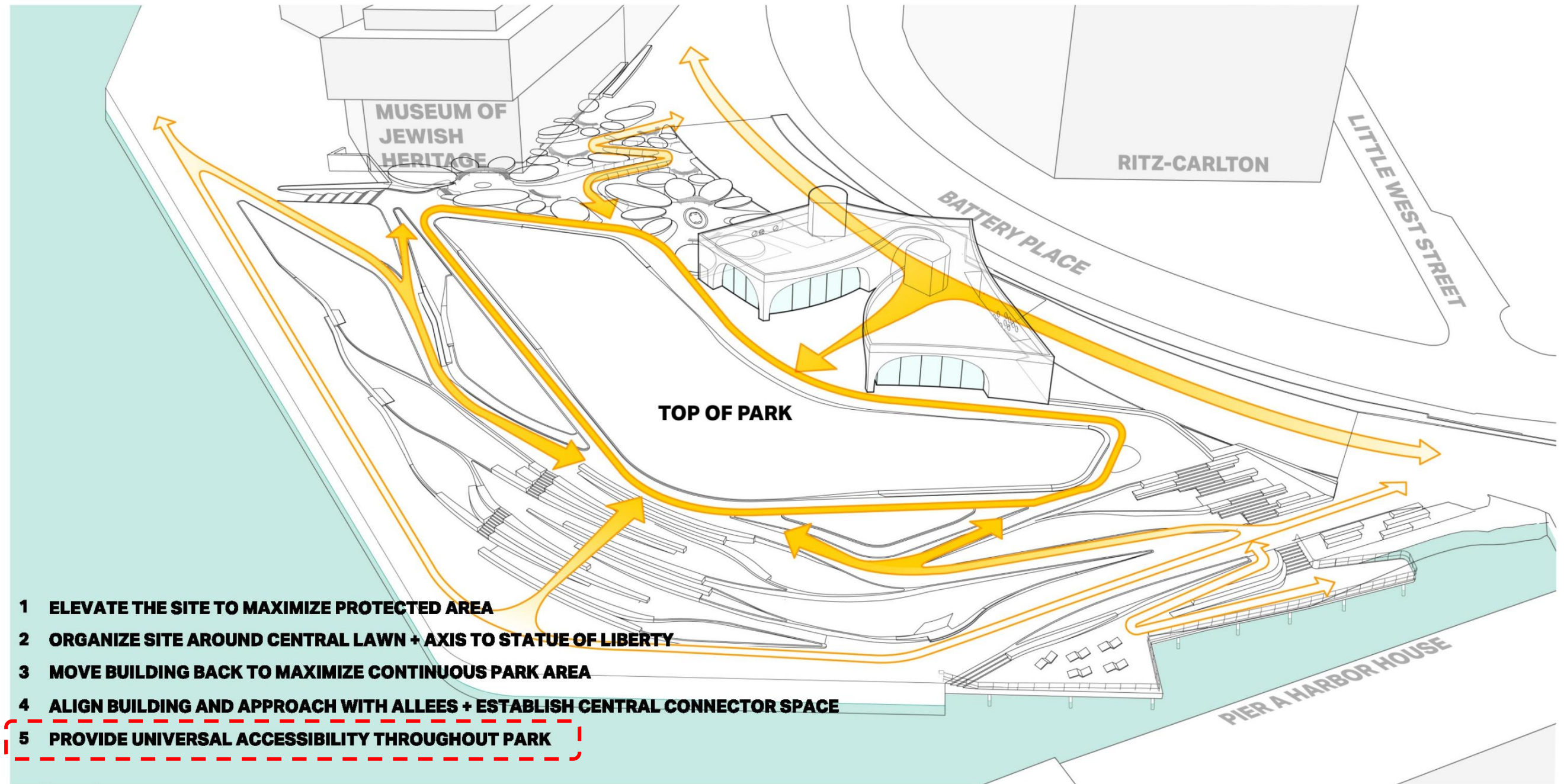
# CB1 UPDATE | PICNIC LAWNS





# CB1 UPDATE | PICNIC LAWNS

FROM JAN. 15, 2020 PUBLIC MEETING





# PICNIC LAWNS | SOUTH LAWN

DRAFT

AREA OF FOCUS

## REMOVAL OF SOUTH PICNIC LAWN:

- INCREASES PERCENTAGE OF NATIVE PLANT SPECIES NEEDED FOR WEDG CREDITS
- 3' WALL ALONG PATHWAY NEEDED FOR LAWN CAN BE DESIGNED AS 4" CURB



PICNIC LAWNS | CURRENT DESIGN

DRAFT

- WALLS / SEATING
- PLANTING
- LAWN





PICNIC LAWNS | OPTION 1

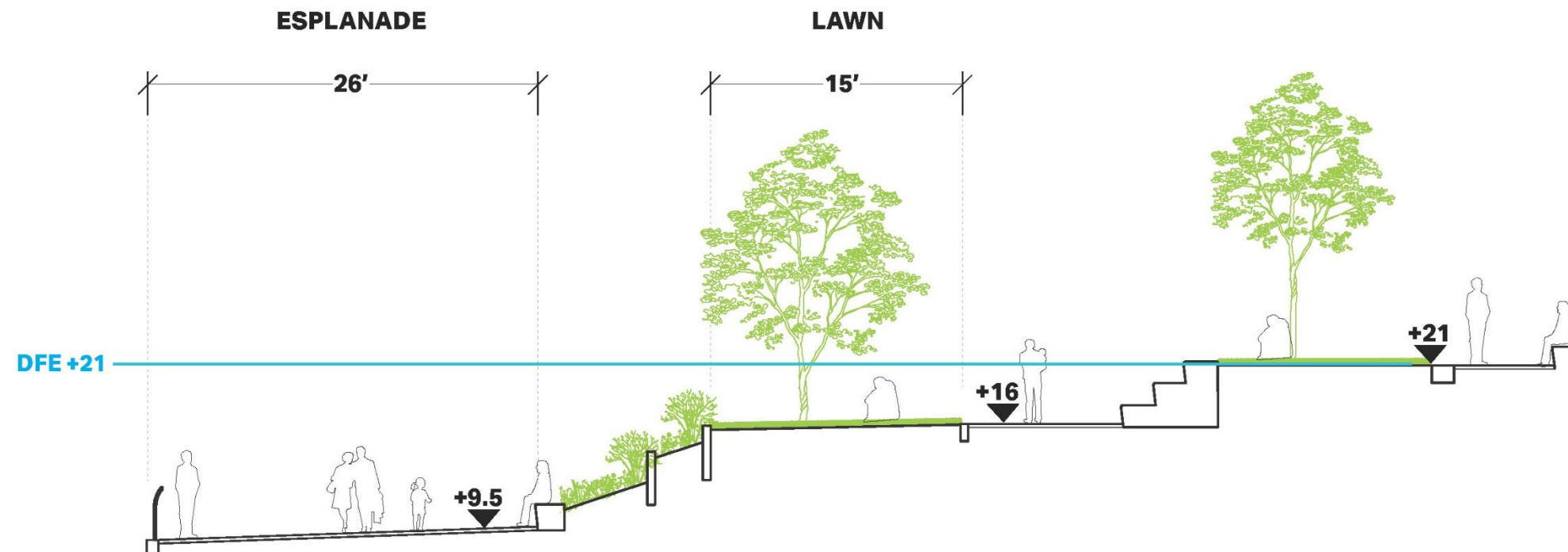
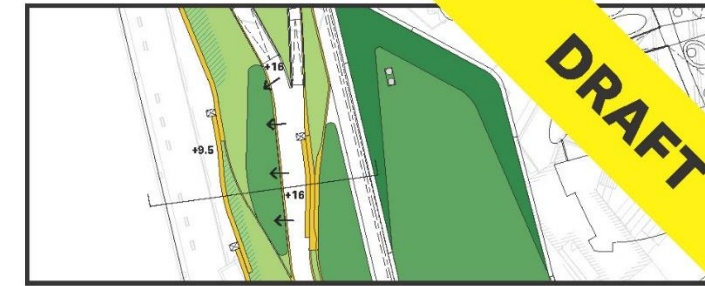
DRAFT

- ← ACCESS (UNIVERSAL)
- WALLS/SEATING
- PLANTING
- LAWN
- PONDING AREAS





# PICNIC LAWNS | OPTION 1





PICNIC LAWNS | OPTION 2

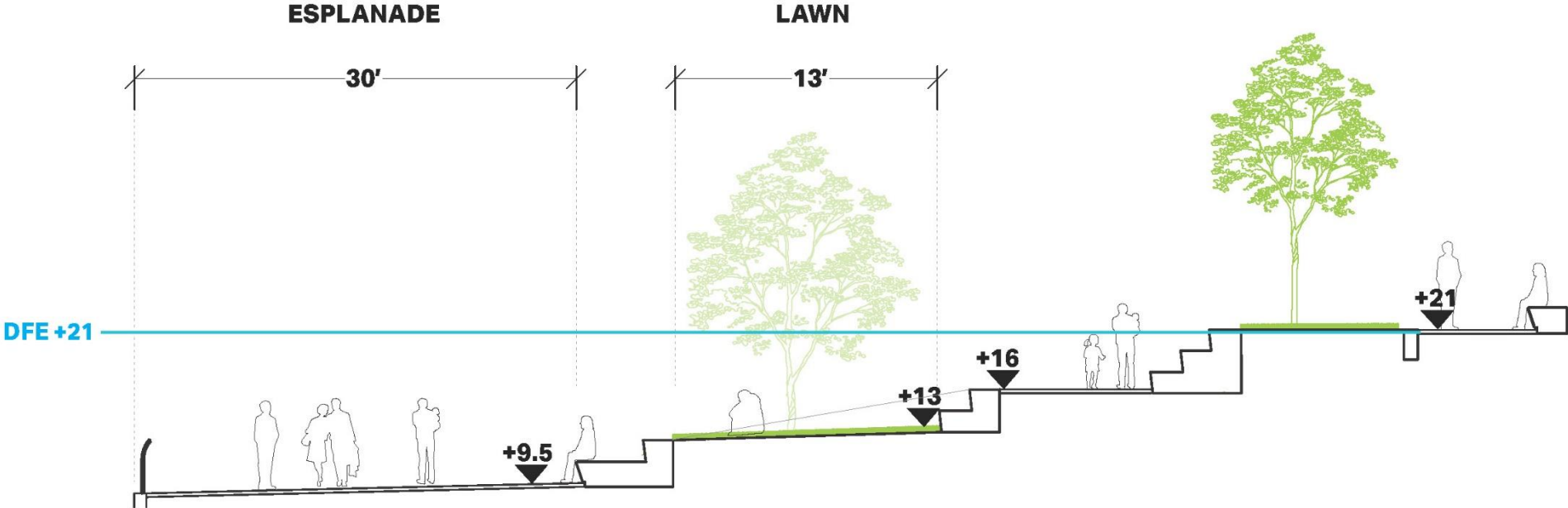
DRAFT

- ← ACCESS (ADA)
- ← ACCESS
- WALLS/SEATING
- PLANTING
- LAWN
- PONDING AREAS





PICNIC LAWNS | OPTION 2





PICNIC LAWNS | OPTION 1

DRAFT



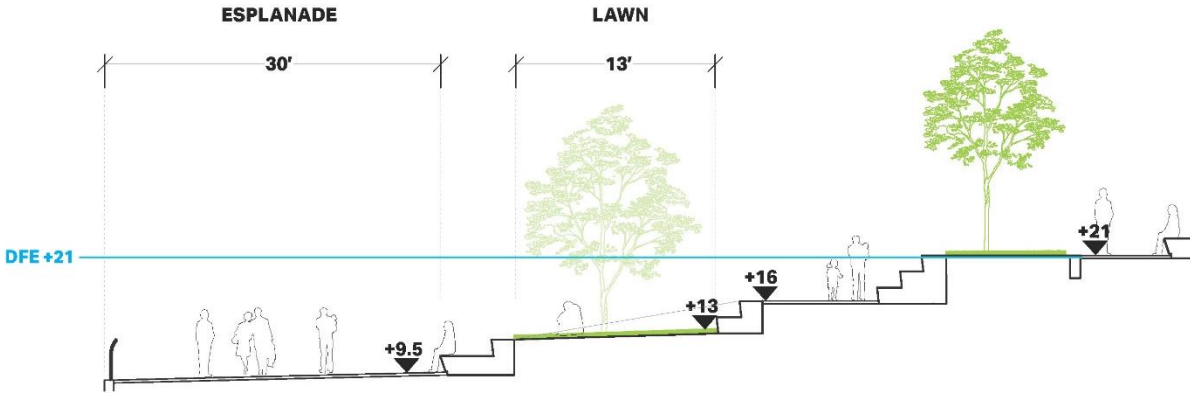
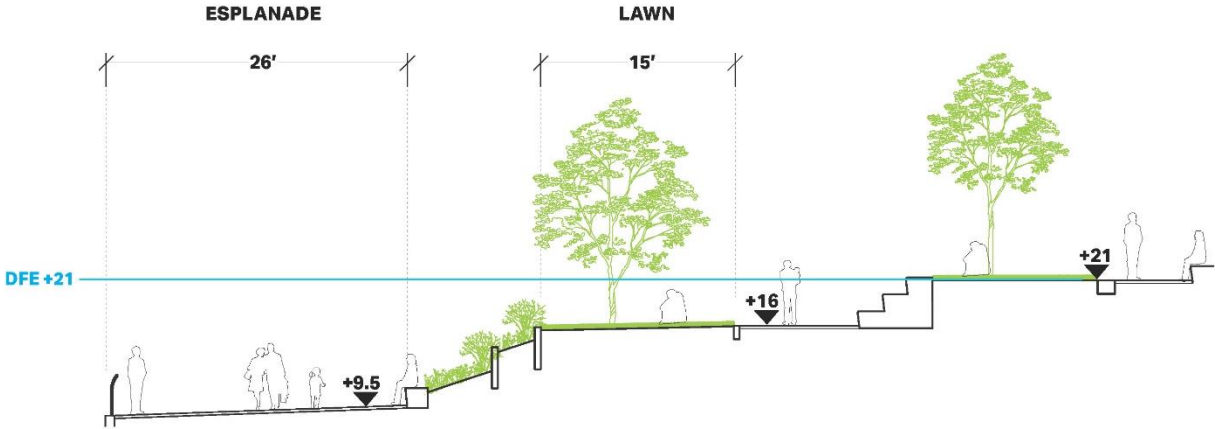
AECOM - PICNIC LAWN STUDY - APRIL 7TH

PICNIC LAWNS | OPTION 2

DRAFT



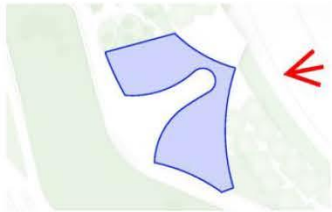
AECOM - PICNIC LAWN STUDY - APRIL 7TH





# CB1 UPDATE | BATTERY PLACE

FROM JANUARY 15 PUBLIC MEETING

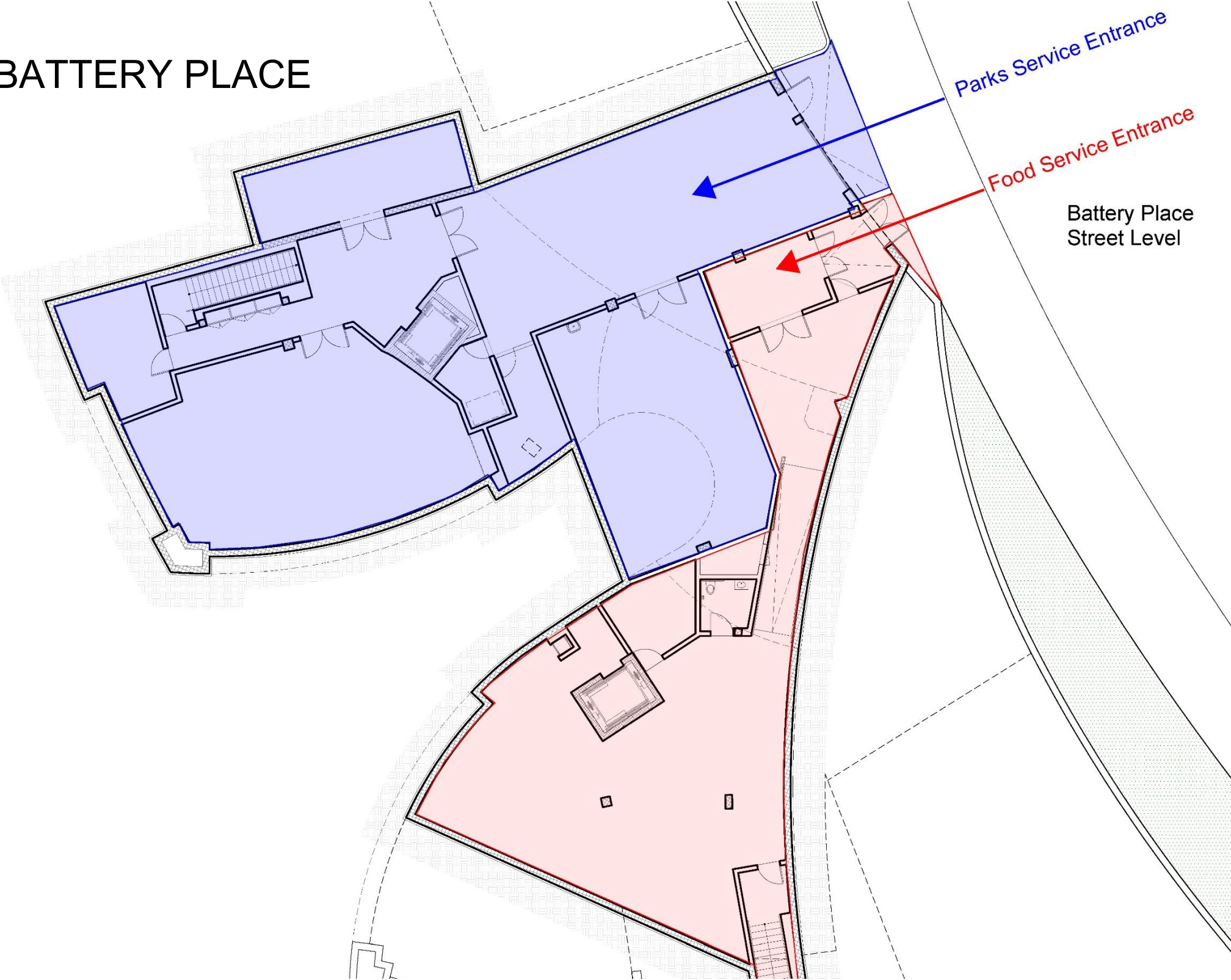


**VIEW FROM BATTERY PLACE**

ENHANCE PROCESSION - STREET TO PARK



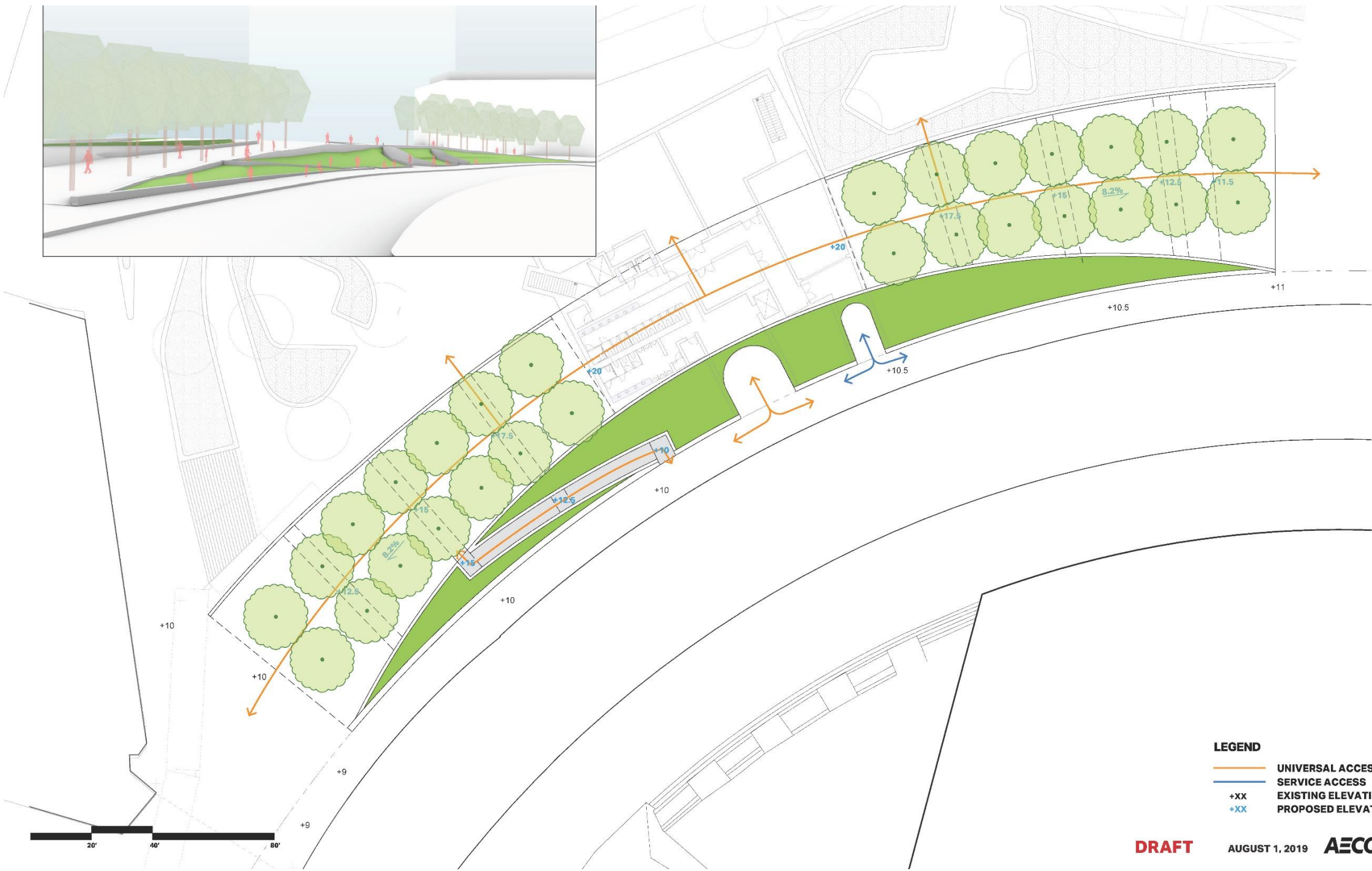
# CB1 UPDATE | BATTERY PLACE





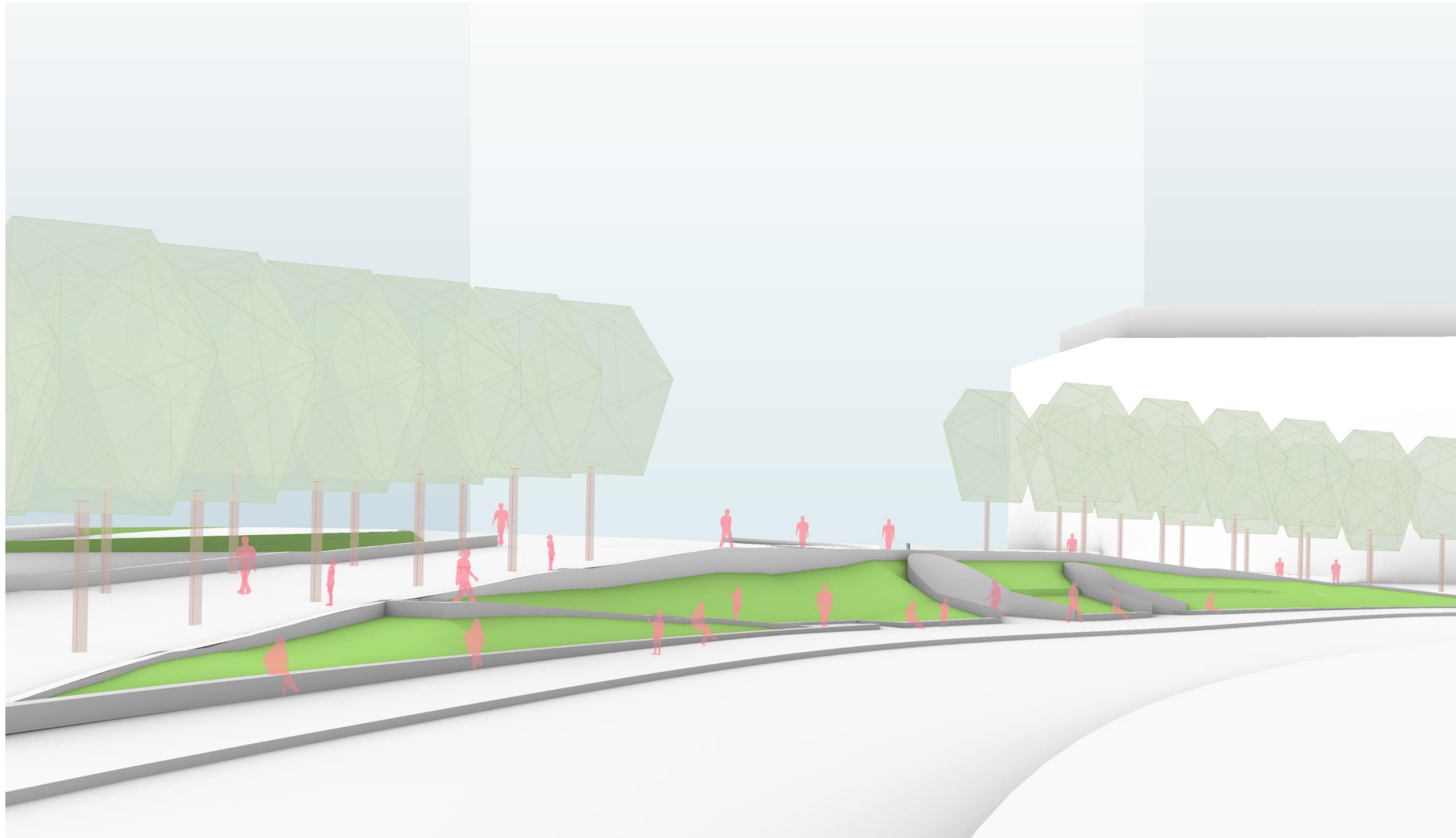
# BATTERY PLACE | STUDY 1

DRAFT INTERNAL STUDY



# BATTERY PLACE | STUDY 1

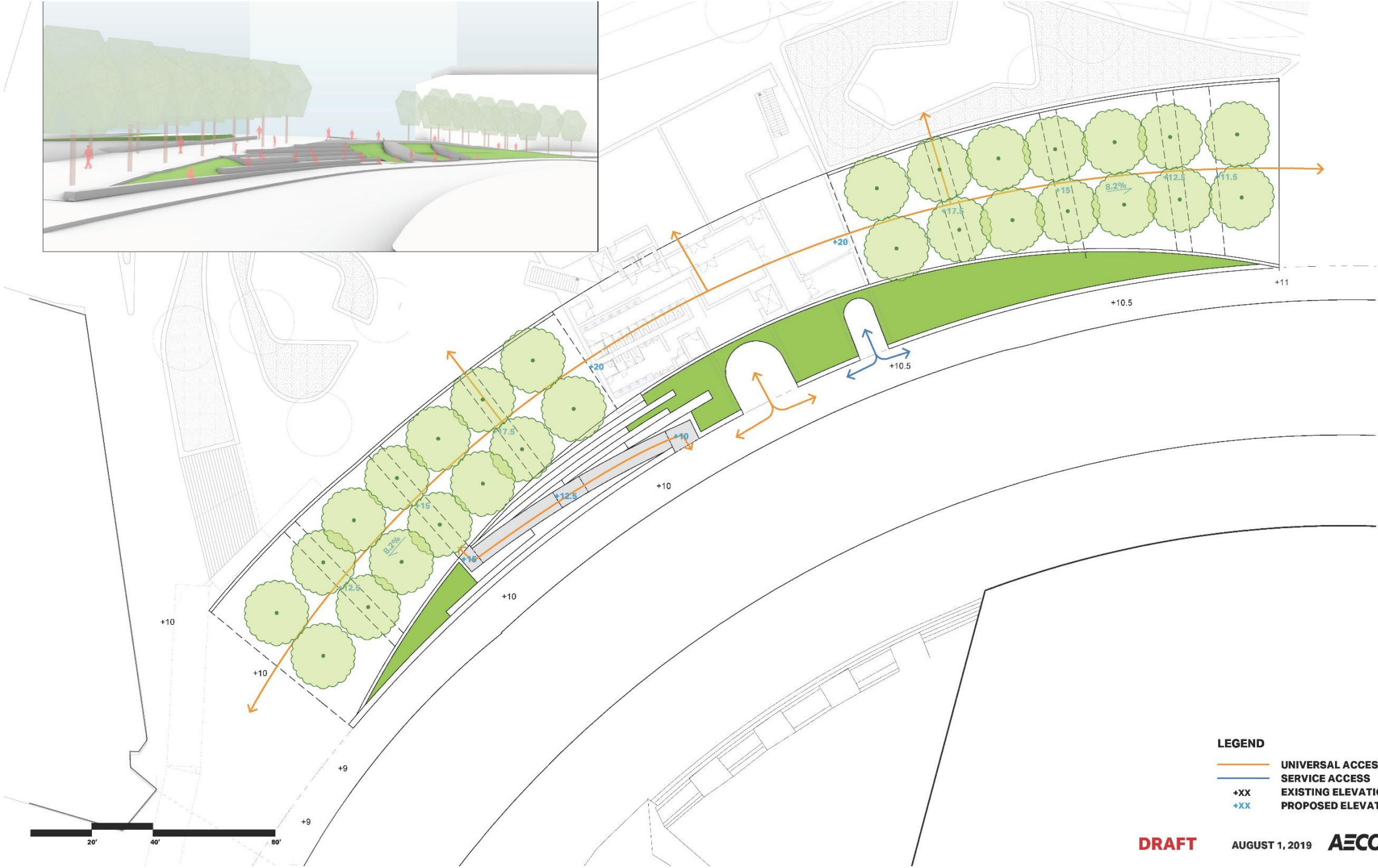
DRAFT INTERNAL STUDY





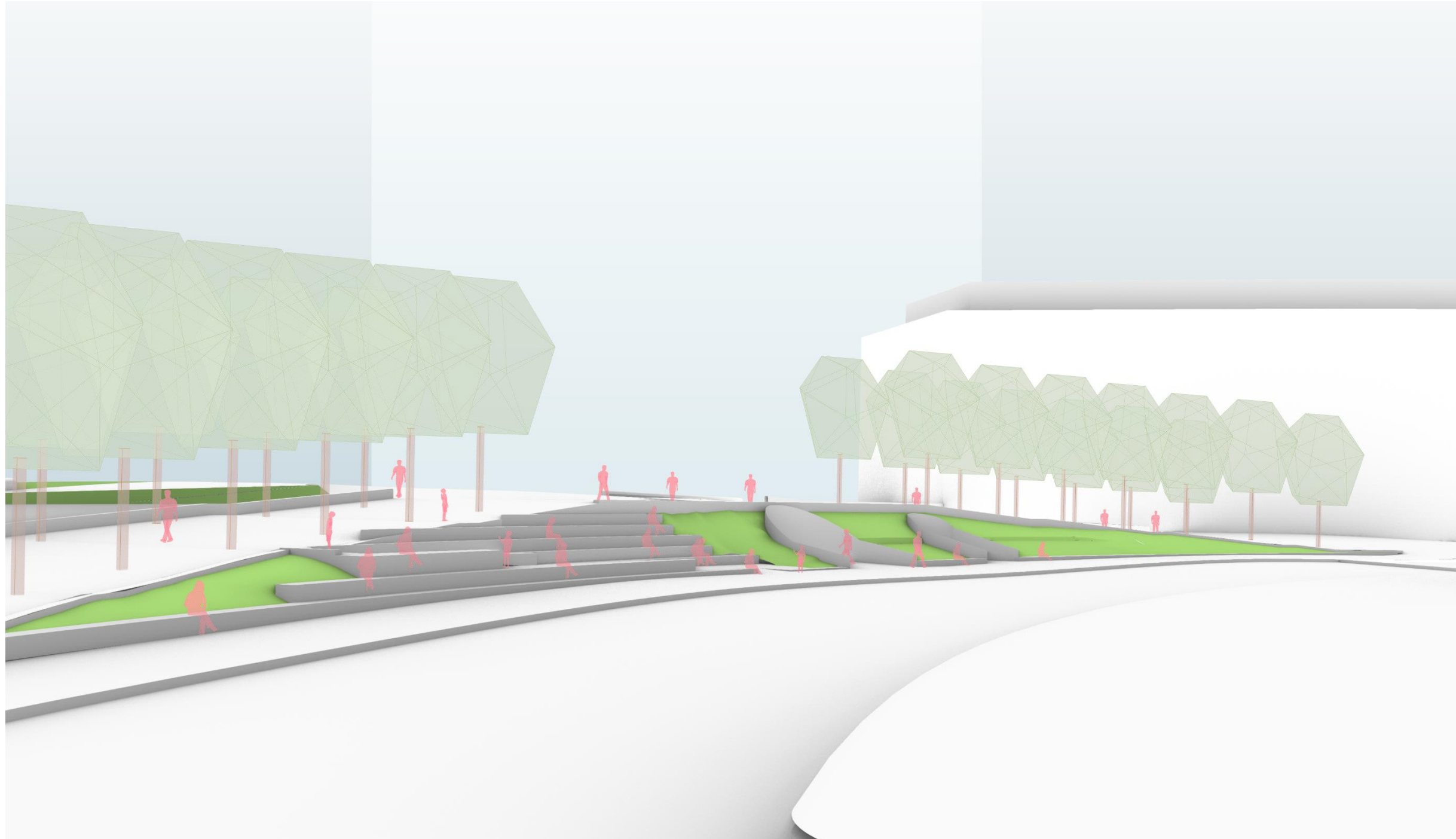
# BATTERY PLACE | STUDY 2

DRAFT INTERNAL STUDY



# BATTERY PLACE | STUDY 2

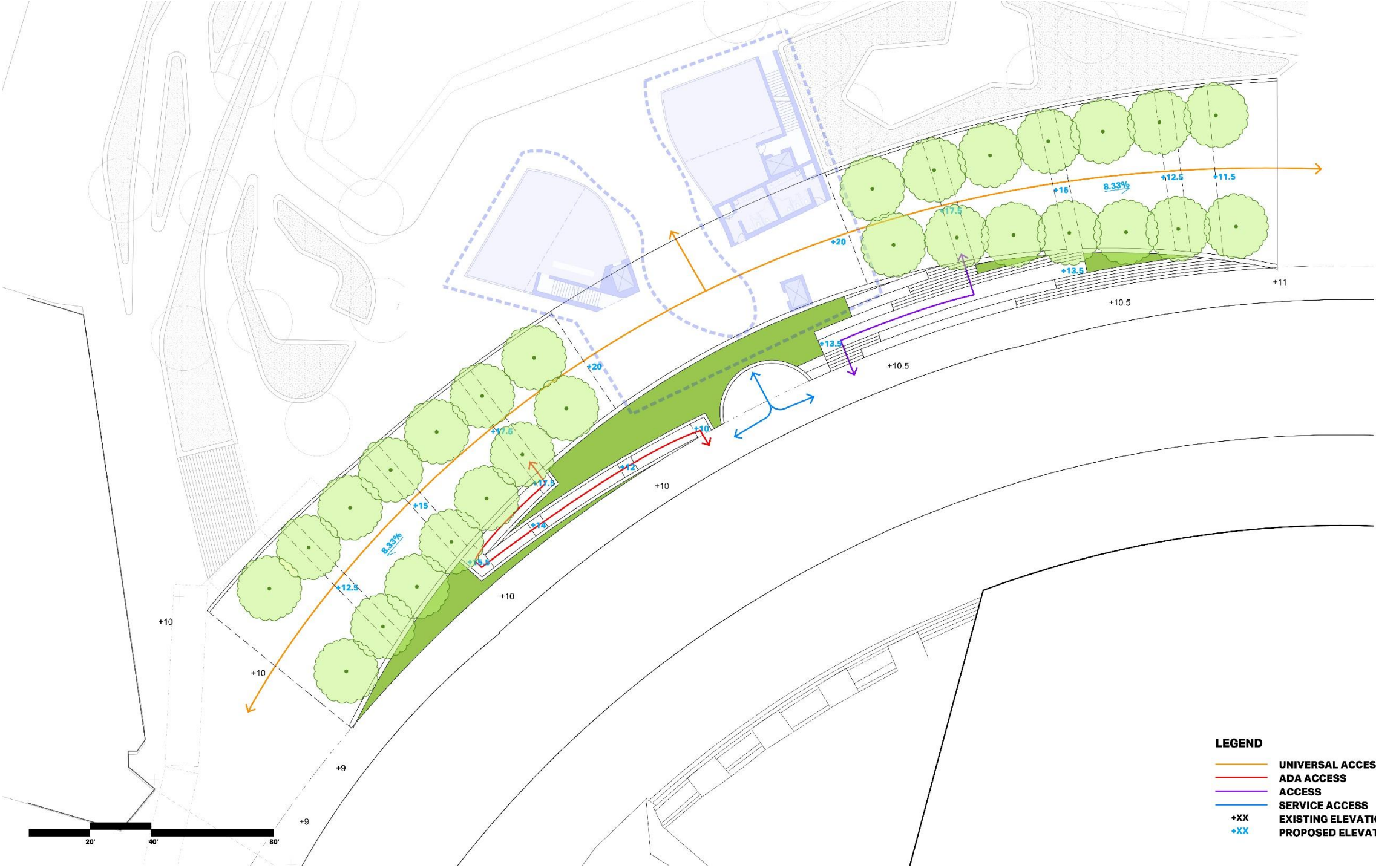
DRAFT INTERNAL STUDY





# BATTERY PLACE | STUDY 3

DRAFT INTERNAL STUDY



# BATTERY PLACE | STUDY 4

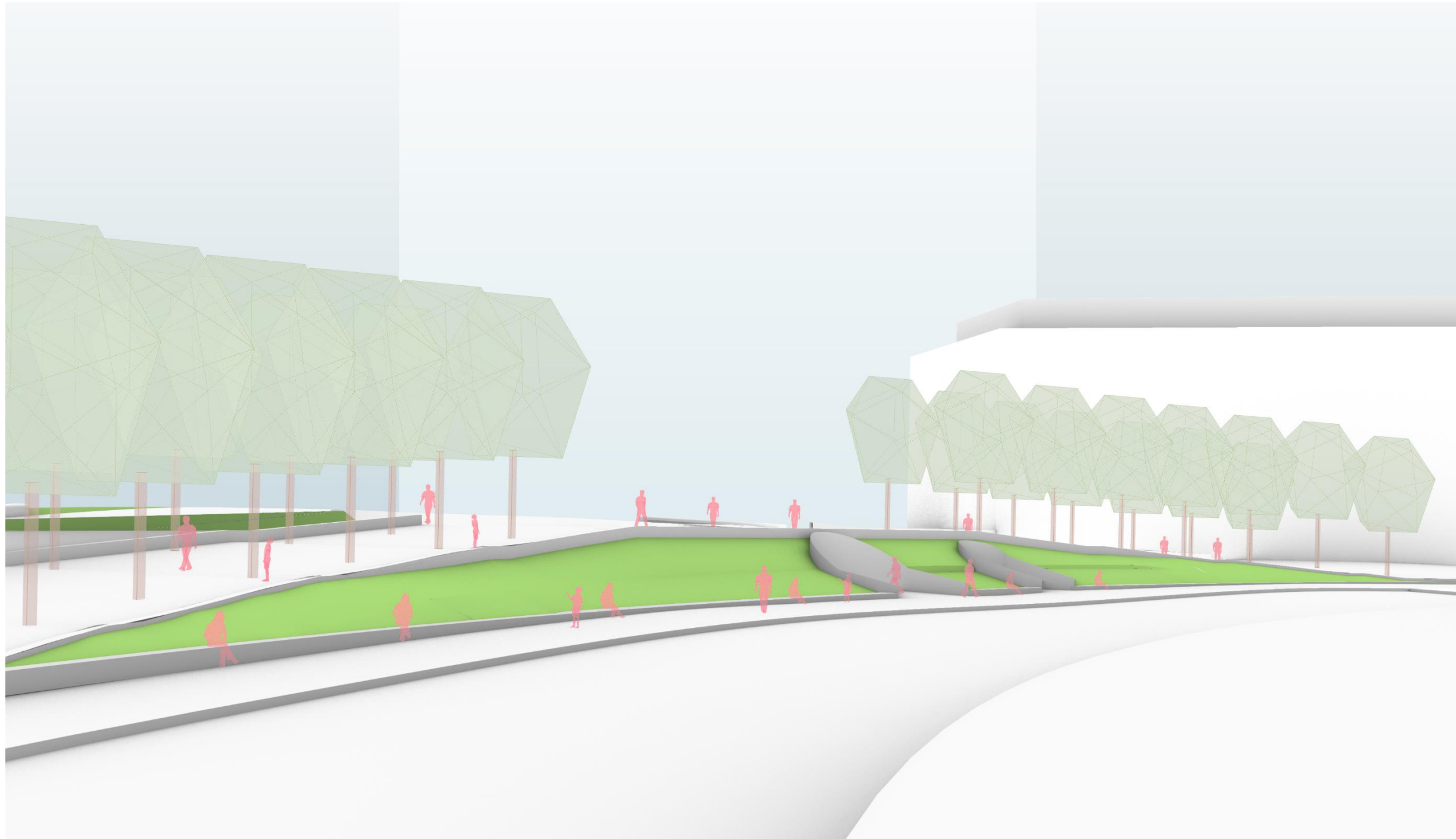
DRAFT INTERNAL STUDY





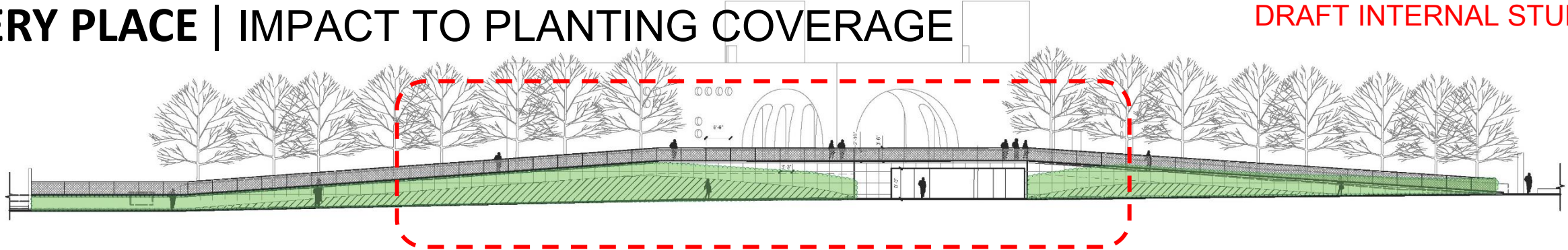
# BATTERY PLACE | STUDY 4

DRAFT INTERNAL STUDY

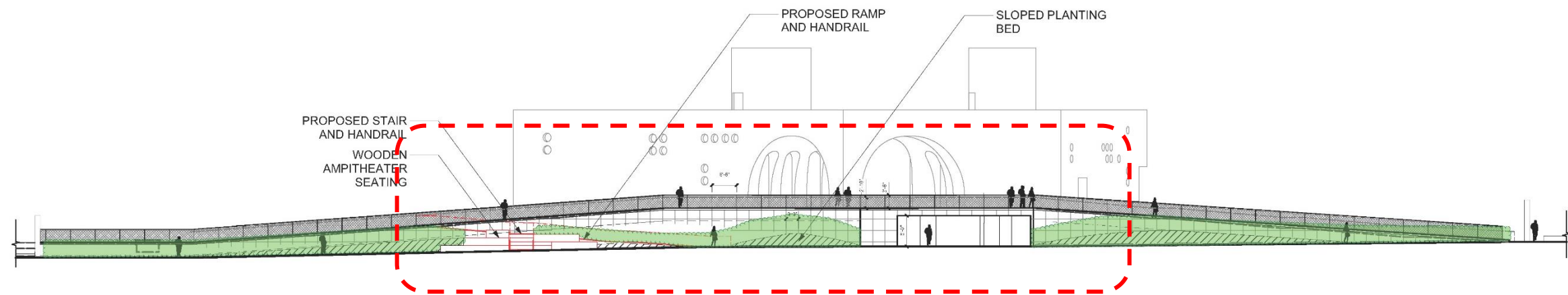


# BATTERY PLACE | IMPACT TO PLANTING COVERAGE

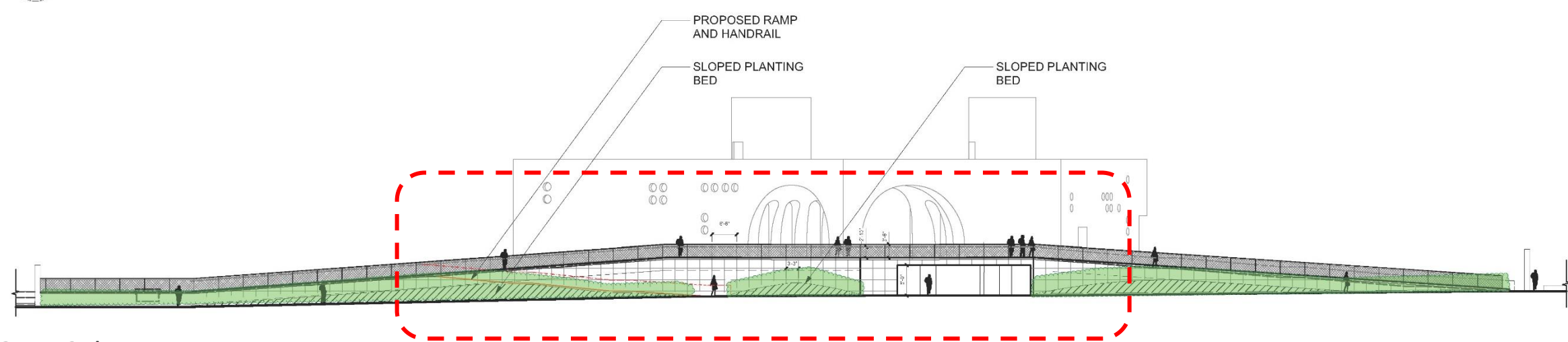
DRAFT INTERNAL STUDY



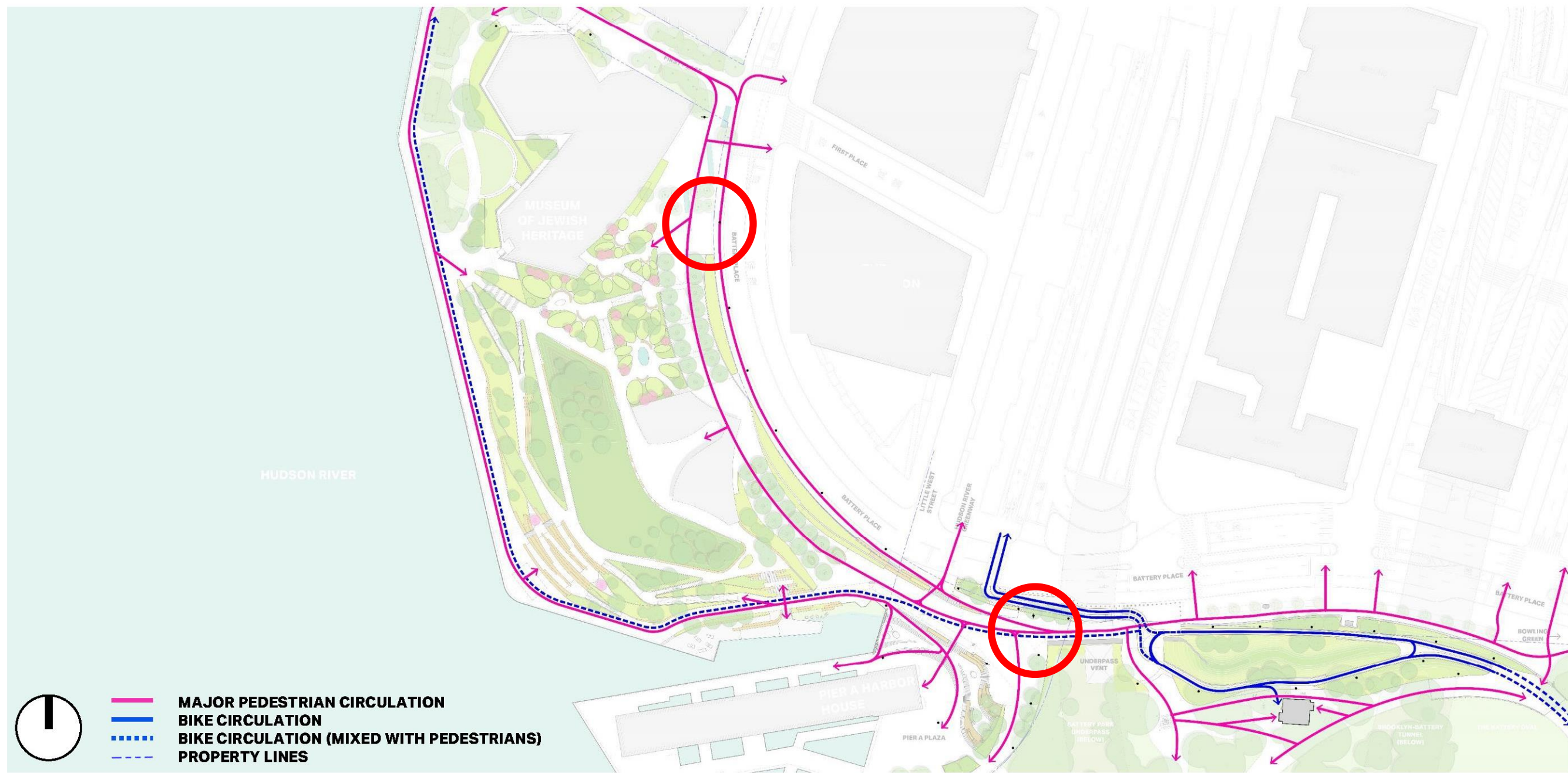
3 CURRENT BATTERY PLACE ELEVATION  
SCALE: 1/16" = 1'-0"



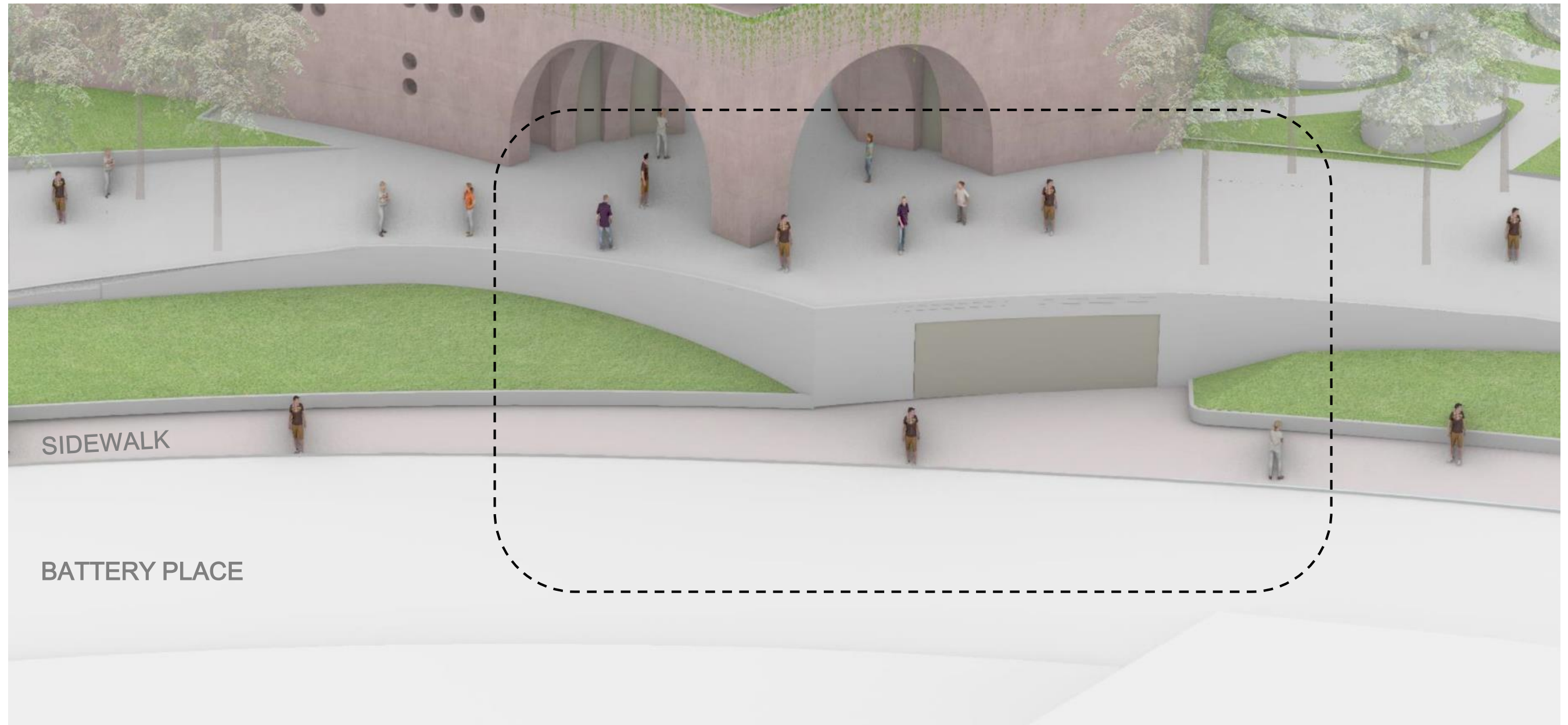
2 BATTERY PLACE ELEVATION WITH ADDITIONAL RAMP AND STAIRS CONNECTING PARK TO SIDEWALK  
SCALE: 1/16" = 1'-0"





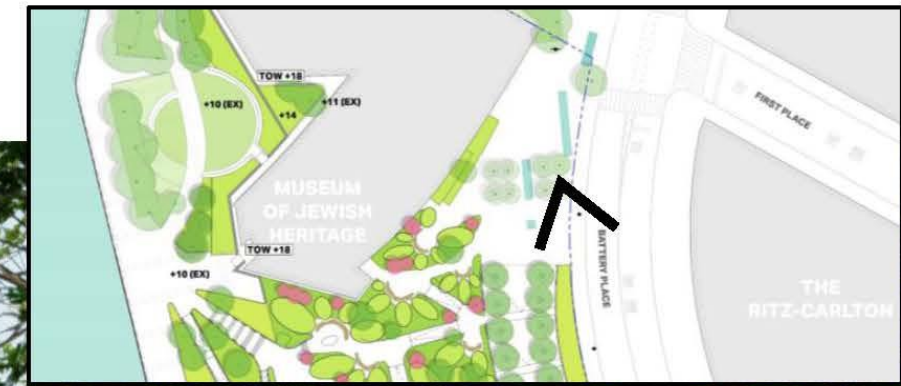


# BATTERY PLACE | DESIGN CHANGES



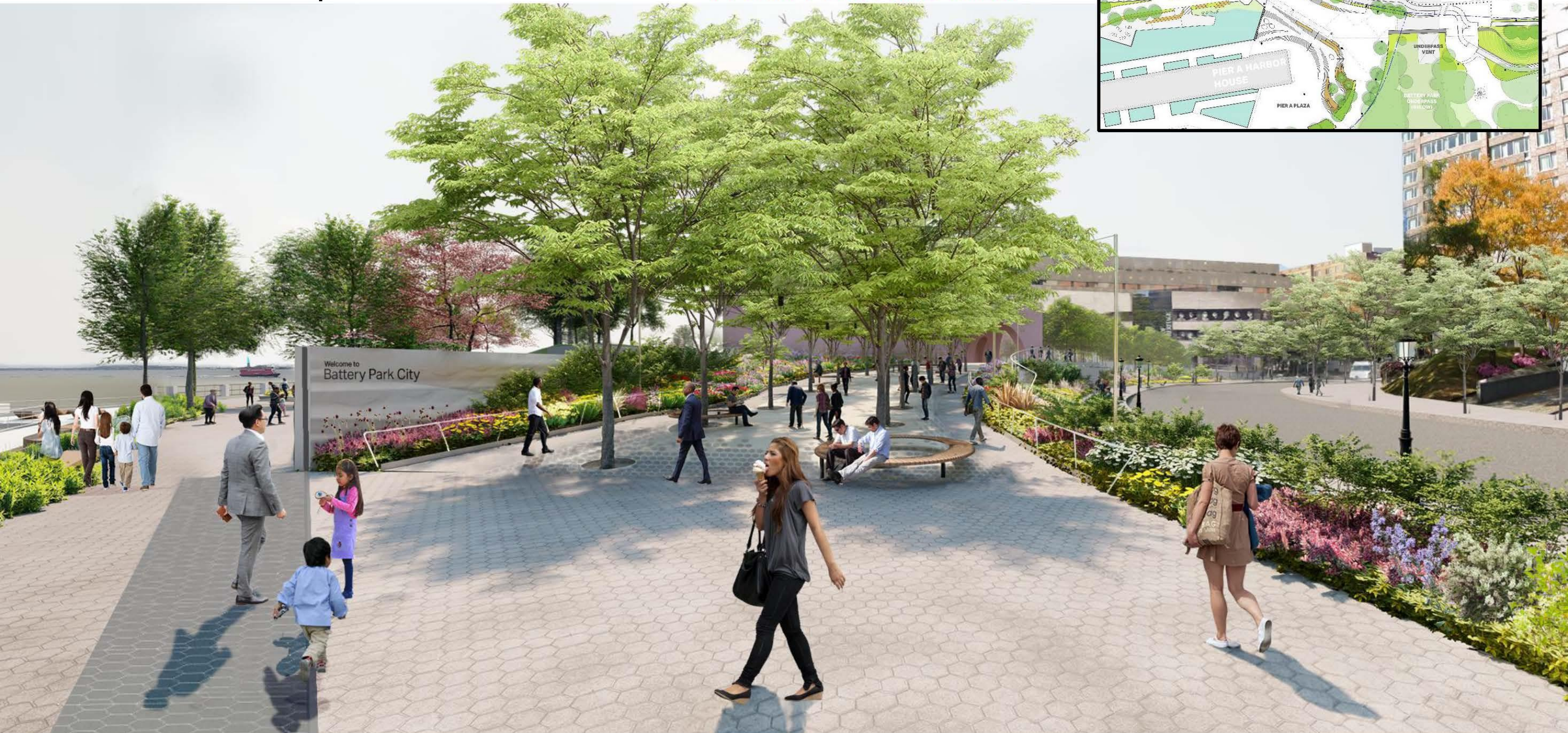
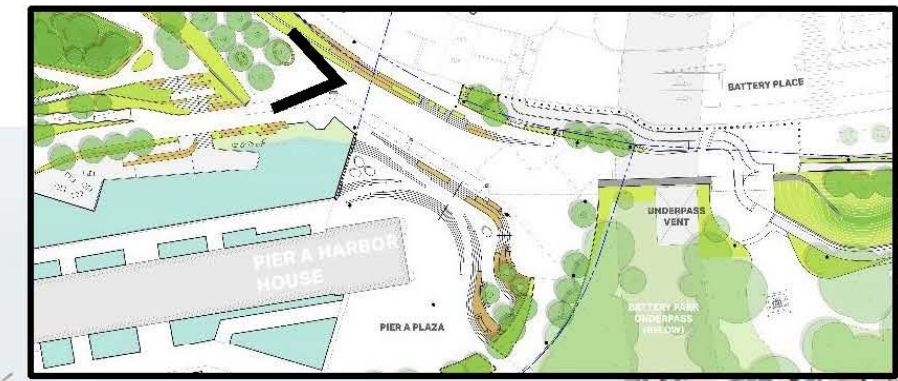


# BATTERY PLACE | PROPOSED DESIGN FROM PDC PACKAGE





# PIER A PLAZA | PROPOSED DESIGN FROM PDC PACKAGE





# BATTERY PL + WAGNER PARK | PRELIMINARY PLANTING PALETTE FROM PDC PACKAGE

## SHRUBS



**SALIX PURPUREA**  
PURPLE WILLOW



**RHUS TYPHINA**  
STAGHORN SUMAC



**CALLICARPA DICHOTOMA**  
PURPLE BEAUTYBERRY



**ITEA VIRGINICA**  
VIRGINIA SWEETSPIRE



**ILEX VERTICILLATA**  
WINTER BERRY

## GROUNDCOVERS + PERENNIALS + GRASSES



**AMSONIA HUBRICHTII**  
BEARBERRY



**ASTILBE CHINENSIS**  
CHINESE ASTILBE



**ASTER 'PURPLE DOME'**  
NEW ENGLAND ASTER



**SOLIDAGO SEMPERVIRENS**  
SEASIDE GOLDENRON



**PANICUM VIRGATUM**  
SWITCHGRASS



**CAREX VULPINOIDEA**  
FOX SEDGE



**CERASTIUM TOMENTOSUM**  
SNOW IN SUMMER



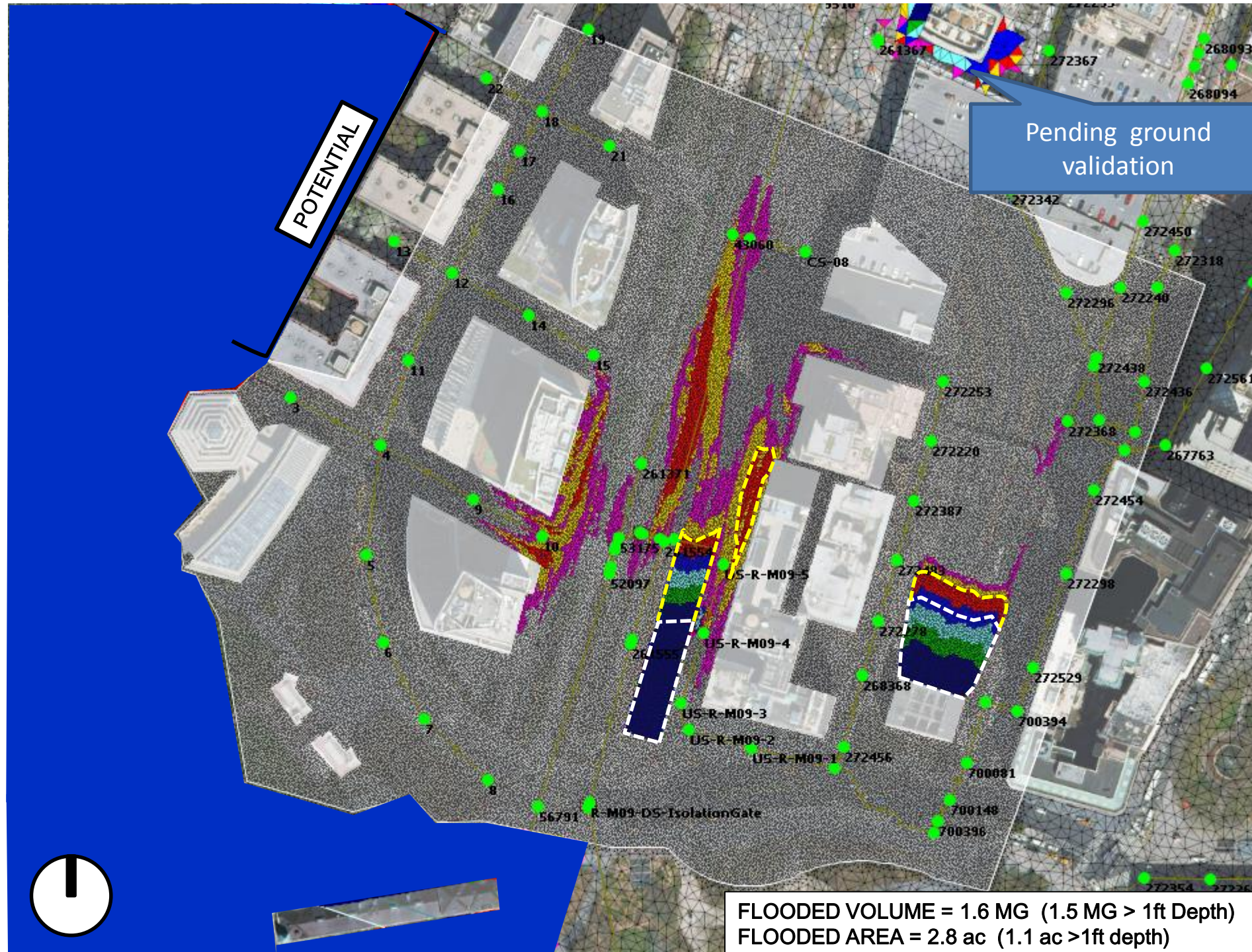
**IBERIS SEMPERVIRENS**  
EVERGREEN CANDYTUFT

- **BLENDS IN WITH PIER A PLAZA + MJH PALETTE**
- **MIXTURE OF PERENNIALS AND EVERGREENS FOR SEASONAL INTEREST**
- **INCORPORATES NATIVE PALETTE**
- **SALT TOLERANT**
- **CAN BE PLANTED IN SLOPED CONDITIONS**
- **EMBODIES "BPC GUIDING PRINCIPLES FOR LANDSCAPE DECISIONS"**



# INTERIOR DRAINAGE| 2050 SIMULATION (WITH FUTURE WEST ALIGNMENT )

DRAFT



FLOODED DEPTH (FT.)	CORRESPONDING COLOR
0	
< 0.5	
0.5-1	
1-2	
2-3	
3-4	
4-5	
5+	

## SIMULATION NOTES

- + PRELIMINARY RESULTS
- + ASSUMES INTERCEPTOR ISOLATION GATES NORTH OF REG-08 AND SOUTH OF REG-09
- + NO WAVE OVERTOPPING














## DESIGN CRITERIA

- + 100-YR SURGE
- + 2050 SEA LEVEL
- + 5YR NOAA RAIN



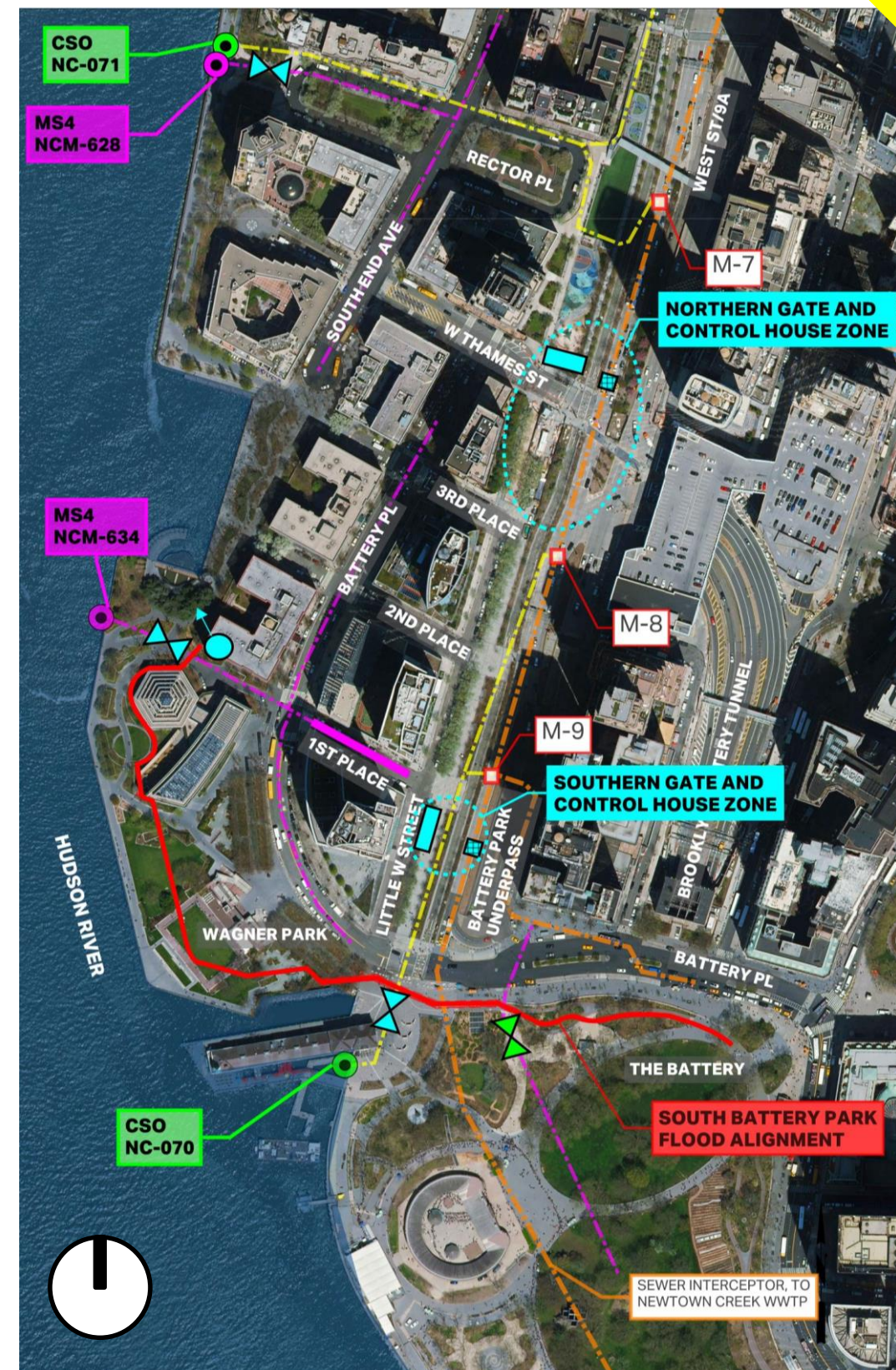
# INTERIOR DRAINAGE| POTENTIAL MITIGATION STRATEGIES

## LEGEND

-  EXISTING COMBINED SEWER OVERFLOW (CSO) DISCHARGE POINT
-  EXISTING SEPARATED STORMWATER DISCHARGE POINT
-  EXISTING COMBINED SEWER INTERCEPTOR
-  EXISTING COMBINED SEWER OVERFLOW (CSO) OUTFALL PIPE
-  EXISTING SEPARATED STORMWATER SEWER
-  EXISTING COMBINED SEWER REGULATOR
-  PROPOSED FLOOD ALIGNMENT
-  PROPOSED CONTROL HOUSE LOCATION
-  PROPOSED INTERCEPTOR GATE LOCATION
-  PROPOSED BACKFLOW PREVENTION VALVE
-  PROPOSED ISOLATION VALVE
-  POTENTIAL PUMP STATION
-  POTENTIAL PIPE UPSIZING

REQUIRED FOR  
FEMA CERTIFICATION

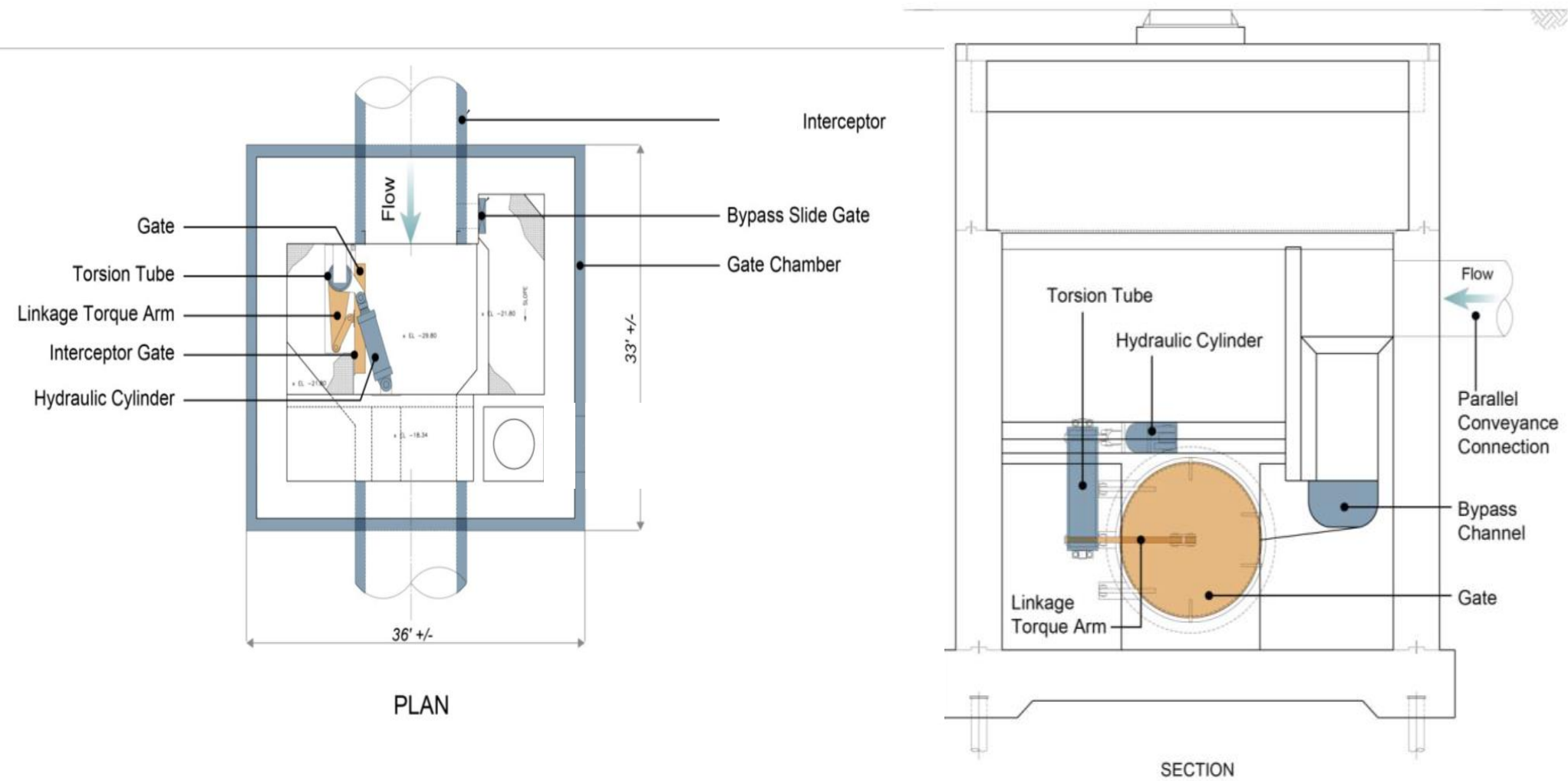
ADDITIONAL MEASURES  
UNDER  
CONSIDERATION





## INTERCEPTOR GATE| REPRESENTATIVE EXAMPLE

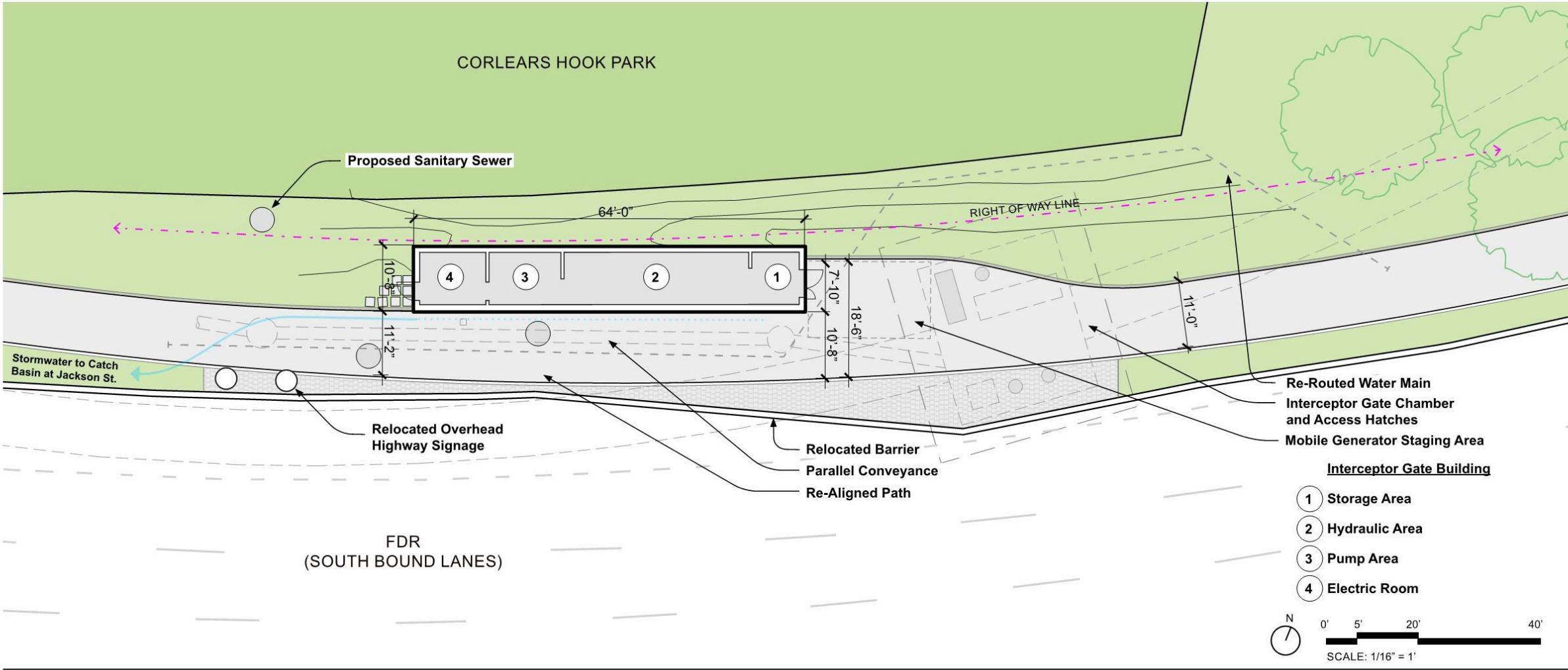
### ESCR CONCEPT DESIGN





# INTERCEPTOR GATE| REPRESENTATIVE EXAMPLE

## ESCR CONCEPT DESIGN

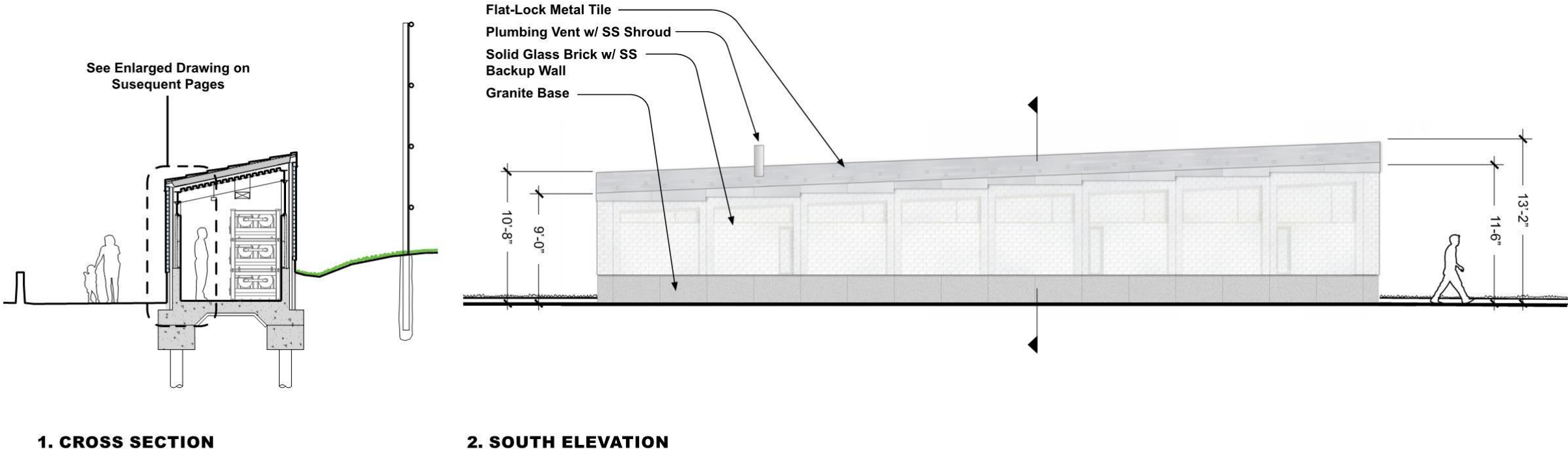
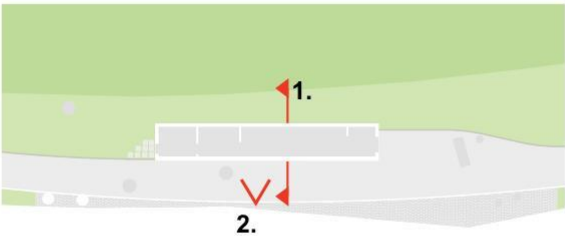


AKRF-KSE, JV | BJARKE | MATHEWS NIELSEN | ONE | NEW YORK CITY | NEW YORK CITY | NEW YORK | NEW YORK CITY DEPT. | NEW YORK CITY MAYOR'S  
INGELS | LANDSCAPE | ARCHITECTURE | DEPT. OF DESIGN AND | DEPT. OF PARKS AND | CITY DEPT. OF | OF ENVIRONMENTAL | OFFICE OF RESILIENCY  
GROUP | ARCHITECTS, P.C. | AND URBANISM | CONSTRUCTION | RECREATION | TRANSPORTATION | PROTECTION

**PDC FINAL REVIEW**  
**EAST SIDE COASTAL**  
**RESILIENCY PROJECT**  
DECEMBER 16, 2019

**South Gate Building**  
**Site Plan 15**

# CONTROL HOUSE| REPRESENTATIVE EXAMPLE ESCR CONCEPT DESIGN NORTH GATE



AKRF-KSE, JV | BJARKE | MATHEWS NIELSEN | ONE | NEW YORK CITY | NEW YORK CITY | NEW YORK | NEW YORK CITY DEPT. | NEW YORK CITY MAYOR'S  
INGELS | LANDSCAPE | ARCHITECTURE | DEPT. OF DESIGN AND | DEPT. OF PARKS AND | CITY DEPT. OF | OF ENVIRONMENTAL | OFFICE OF RESILIENCY  
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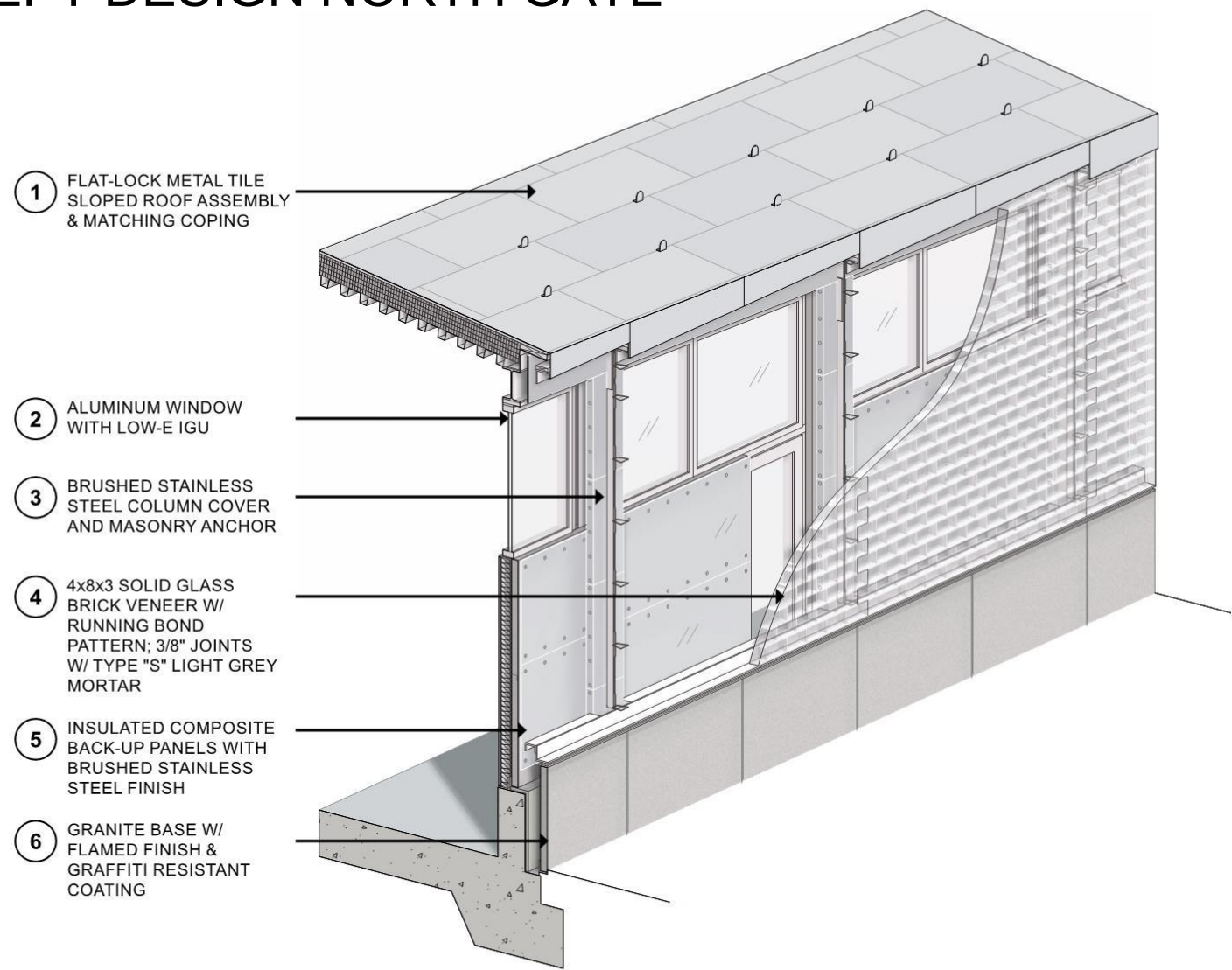
**PDC FINAL REVIEW**  
**EAST SIDE COASTAL**  
**RESILIENCY PROJECT**  
DECEMBER 16, 2019

**South Gate Building**  
**Section & Elevation** 16



# CONTROL HOUSE| REPRESENTATIVE EXAMPLE

## ESCR CONCEPT DESIGN NORTH GATE



CUTAWAY AXONOMETRIC



DETAILED RENDERED ELEVATION



CONTROL HOUSE| REPRESENTATIVE EXAMPLE  
ESCR CONCEPT DESIGN NORTH GATE



AKRF-KSE, JV | BJARKE | MATHEWS NIELSEN | ONE | NEW YORK CITY | NEW YORK CITY | NEW YORK | NEW YORK CITY DEPT. | NEW YORK CITY MAYOR'S  
INGELS | LANDSCAPE | ARCHITECTS, P.C. | ARCHITECTURE | DEPT. OF DESIGN AND | DEPT. OF PARKS AND | CITY DEPT. OF | OF ENVIRONMENTAL | OFFICE OF RESILIENCY  
GROUP | ARCHITECTS, P.C. | AND URBANISM | CONSTRUCTION | RECREATION | TRANSPORTATION | PROTECTION

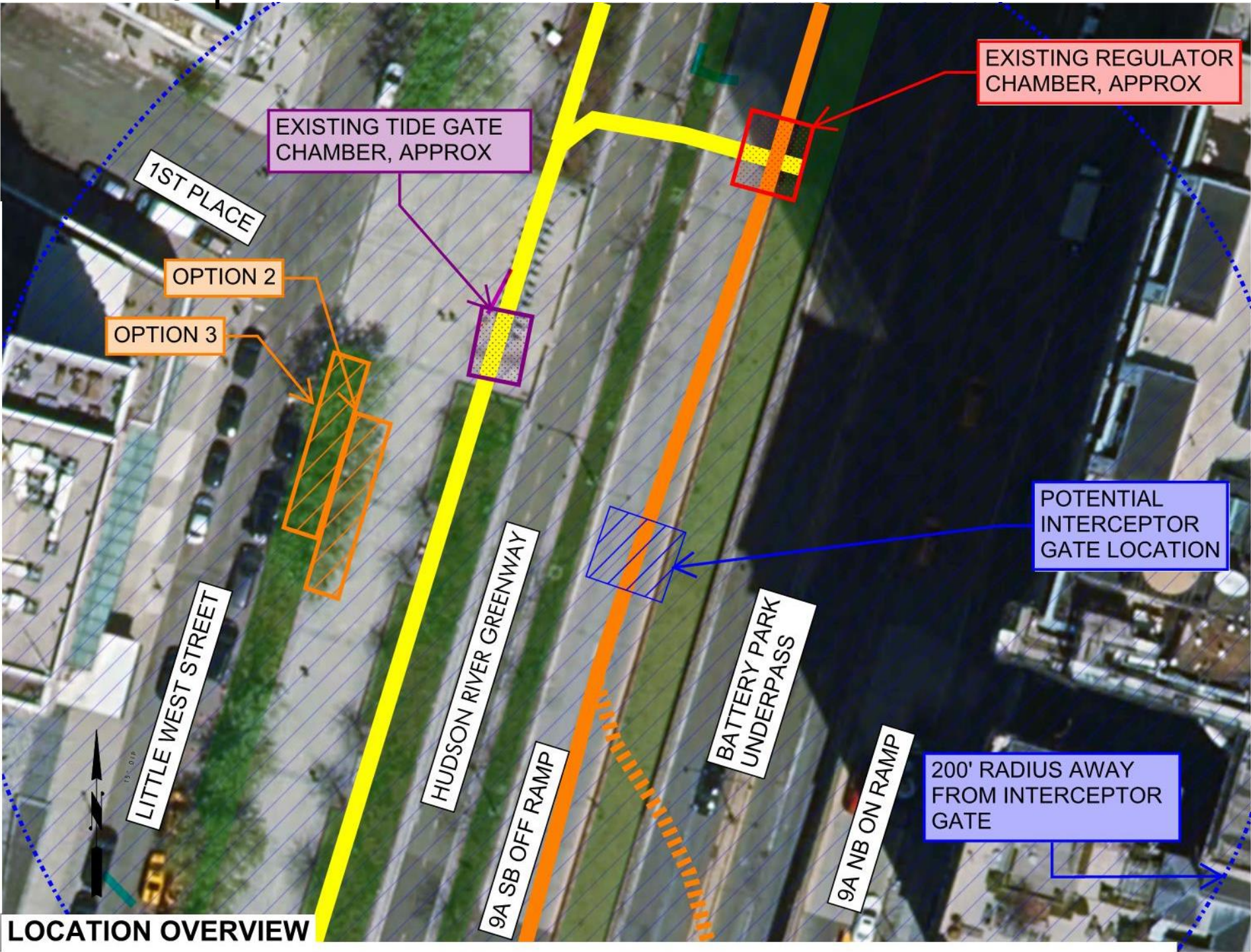
PDC FINAL REVIEW  
EAST SIDE COASTAL  
RESILIENCY PROJECT

DECEMBER 16, 2019

South Gate Building  
View From Southwest



# INTERIOR DRAINAGE | SOUTHERN CONTROL HOUSE LOCATION OVERVIEW




## NOTES:

UTILITY INFORMATION SHOWN HEREON IS BASED ON BEST AVAILABLE INFORMATION AND IS SUBJECT TO CHANGE.



INFRASTRUCTURE LOCATIONS SHOWN HEREON ARE FOR DISCUSSION PURPOSES ONLY AND DO NOT REPRESENT FINAL SITING.

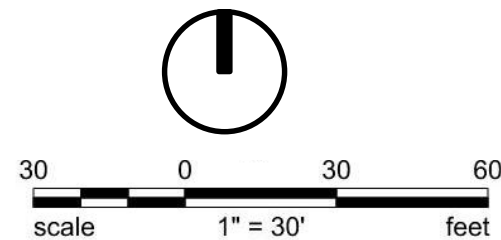
ADDITIONAL UTILITY INFORMATION IS REQUIRED TO DETERMINE CRITICAL TIE IN POINTS.

## CONTROL HOUSE OPTIONS/CONFLICTS

 OPTIONS 2 & 3: MAY BE FEASIBLE WITH MANAGEABLE CONFLICTS

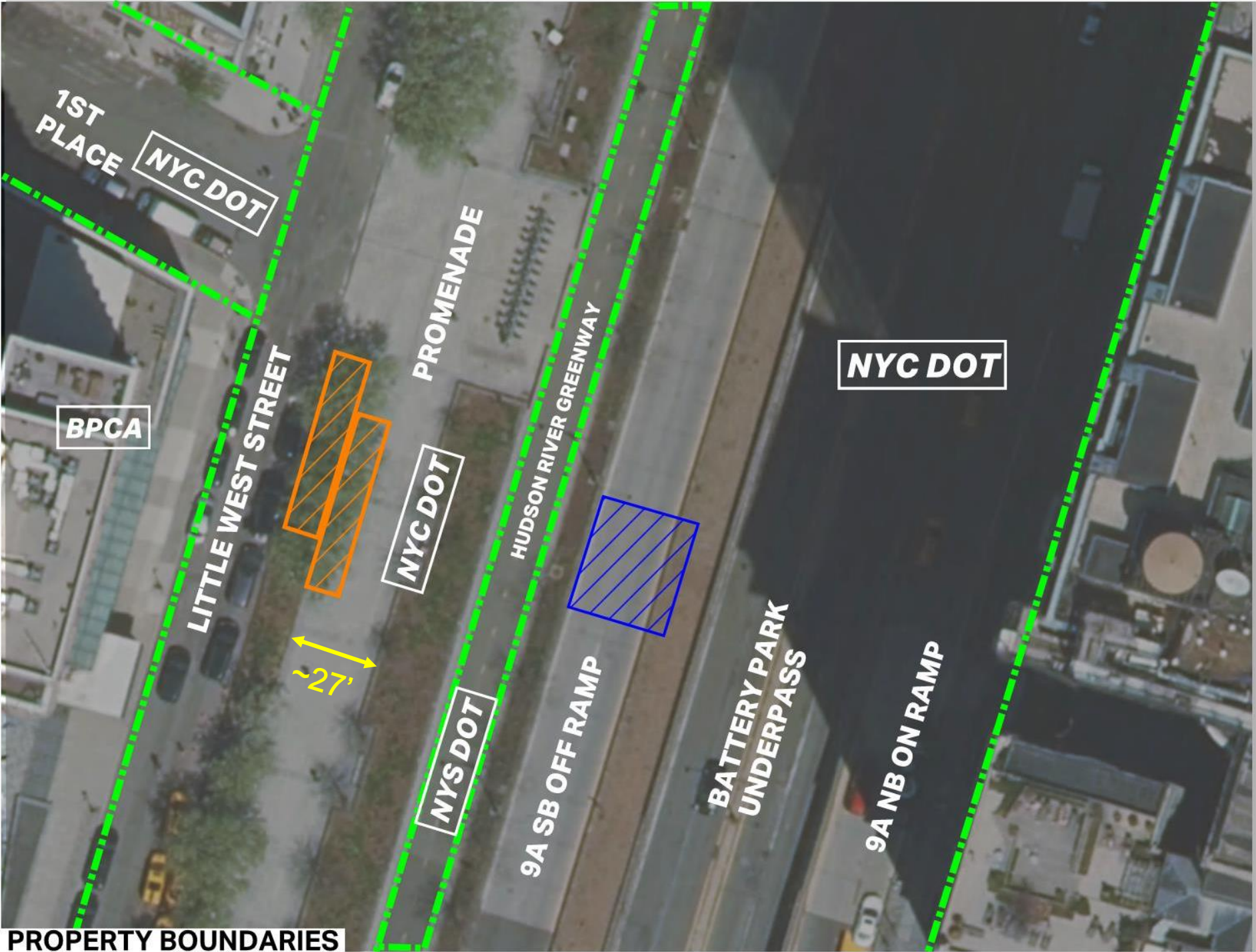
## LEGEND

-  - EXISTING SEWER INTERCEPTOR
-  - SEWER INTERCEPTOR LOCATION BASED ON RECORD DRAWINGS
-  - EXISTING CSO





# INTERIOR DRAINAGE| SOUTHERN PROPERTY BOUNDARIES



**NOTES:**

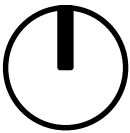
INFRASTRUCTURE LOCATIONS SHOWN HEREON ARE FOR DISCUSSION PURPOSES ONLY AND DO NOT REPRESENT FINAL SITING.

TITLE SURVEY FORTHCOMING, BOUNDARY LINEWORK SHOWN HERE IS APPROXIMATE.

LOCATION OF NYS DOT OWNERSHIP IS APPROXIMATE AND SUBJECT TO CHANGE.

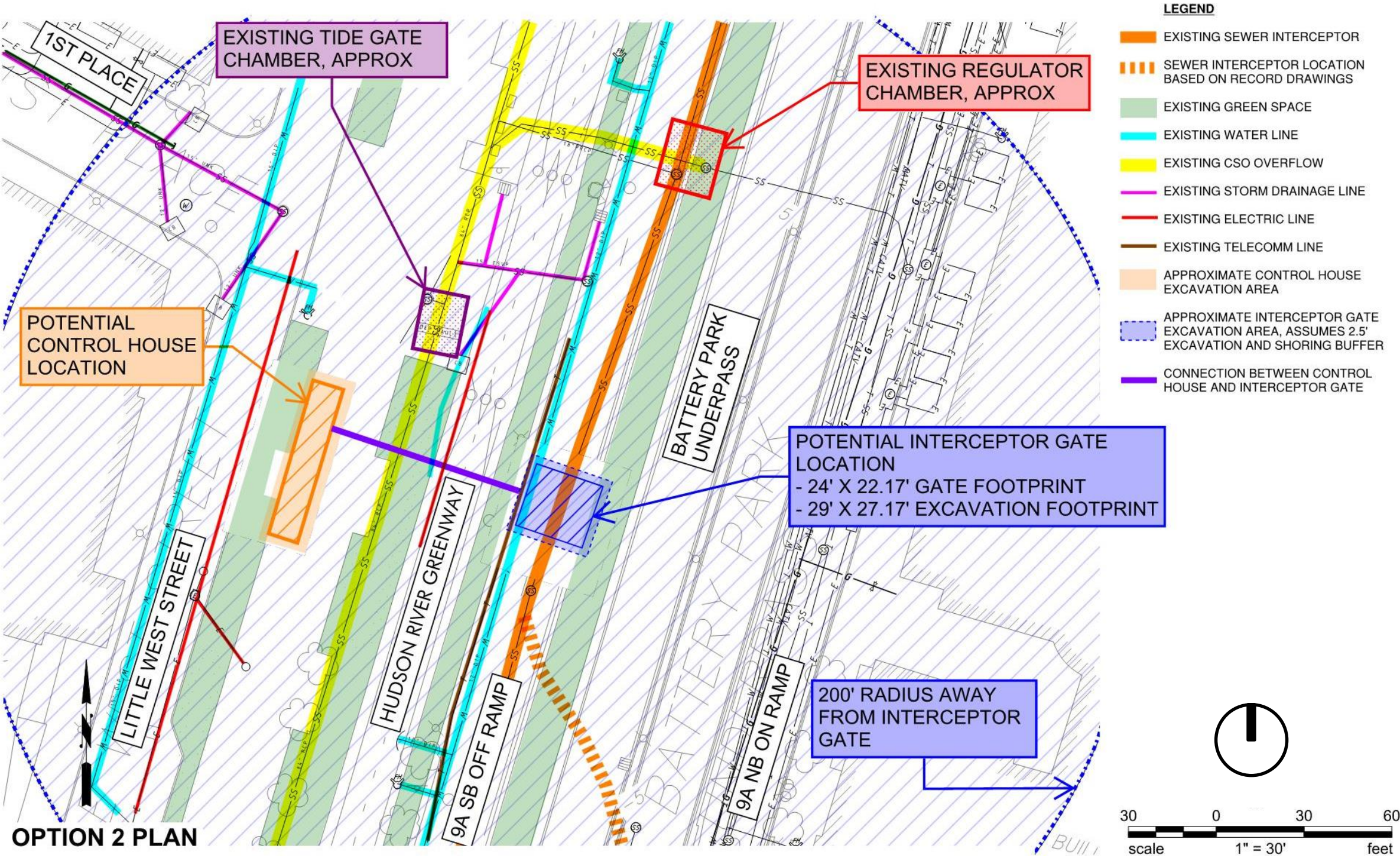
THE PROMENADE IS ASSUMED TO BE UNDER NYC DOT PURVIEW. TO BE CONFIRMED.

HIGHWAY 9A IS UNDER NYS DOT PURVIEW, HOWEVER, THE FDR TUNNEL IS UNDER NYC DOT PURVIEW. THE LOCATION OF THIS DIVIDING LINE IS UNKNOWN.



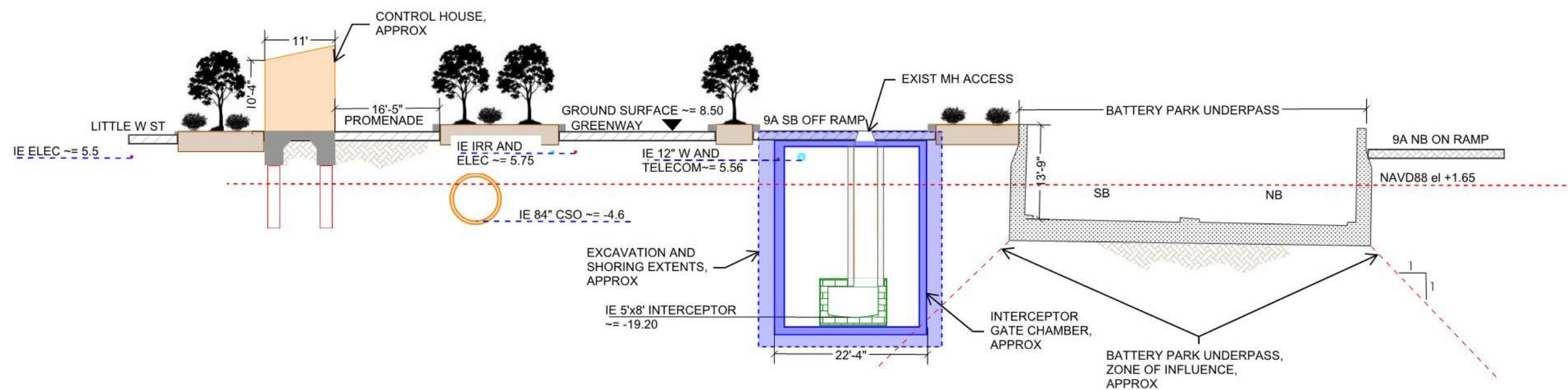


# INTERIOR DRAINAGE| SOUTHERN CONTROL HOUSE, OPTION 2 OVERVIEW





# INTERIOR DRAINAGE| SOUTHERN CONTROL HOUSE, OPTION 2 SECTION



- NOTES:**
- UTILITY AND INFRASTRUCTURE INFORMATION SHOWN IS BASED ON BEST AVAILABLE INFORMATION AND IS SUBJECT TO CHANGE. UTILITY DEPTHS, SIZES, AND LOCATION TO BE CONFIRMED WITH NYC DEP.
  - INTERCEPTOR GATE HEIGHT, AS SHOWN, IS APPROXIMATE AND WILL BE SUBJECT TO CHANGES AS DESIGN PROGRESSES.
  - PILES SUPPORTING THE CONTROL HOUSE ARE REPRESENTATIVE ONLY AND WILL BE SUBJECT TO CHANGE.



# **INTERIOR DRAINAGE| SOUTHERN CONTROL HOUSE, OPTION 2 SUMMARY**

## **OPTION 2 ADVANTAGES:**

CONTROL HOUSE LOCATED AWAY FROM  
BATTERY PARK UNDERPASS RETAINING WALL

CONSTRUCTION OF CONTROL HOUSE CAN  
PROCEED WITH LIMITED TRAFFIC IMPACTS

CONTROL HOUSE ACCESSIBLE FROM  
PEDESTRIAN PROMENADE AND SURFACE  
STREETS

CONTROL HOUSE DOES NOT REMOVE  
GREENSPACE

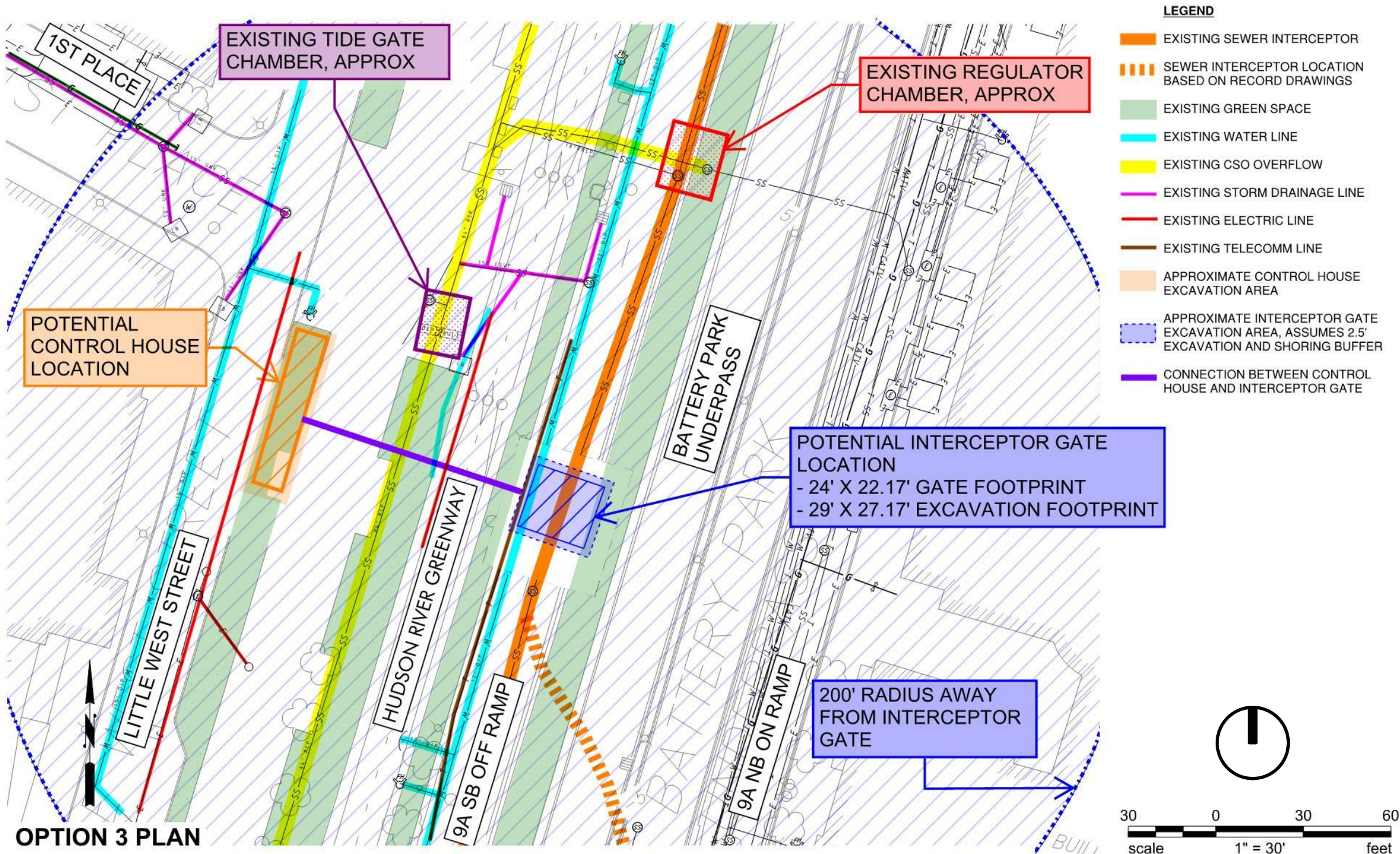
## **OPTION 2 DISADVANTAGES:**

CONNECTION BETWEEN CONTROL HOUSE AND  
GATE WILL REQUIRE MULTIPLE UTILITY CROSSINGS

CONTROL HOUSE REDUCES WIDTH OF PEDESTRIAN  
PROMENADE

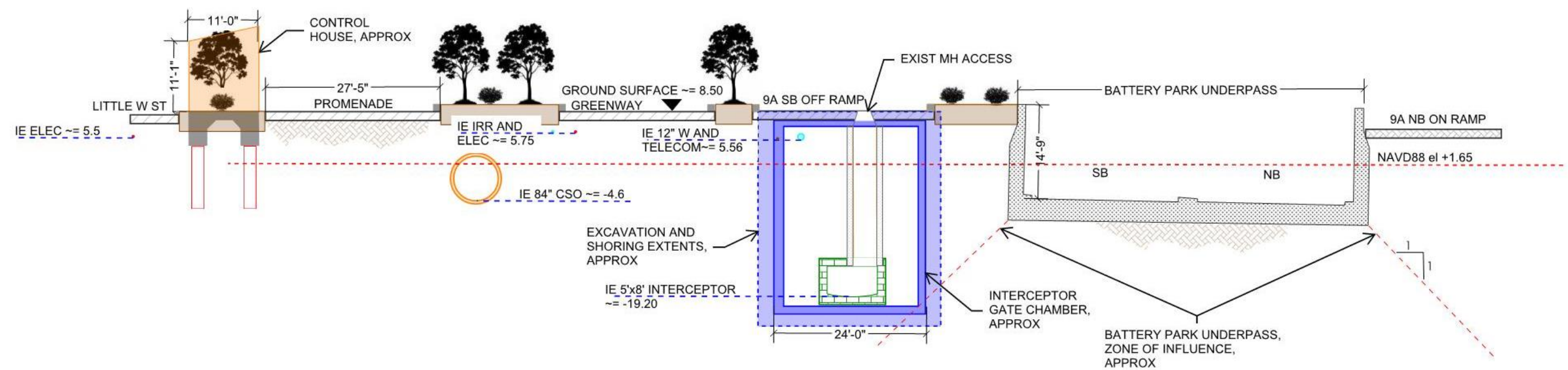


# INTERIOR DRAINAGE| SOUTHERN CONTROL HOUSE, OPTION 3 OVERVIEW





# INTERIOR DRAINAGE| SOUTHERN CONTROL HOUSE, OPTION 3 SECTION



**NOTES:**

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**OPTION 3 SECTION**



# **INTERIOR DRAINAGE| SOUTHERN CONTROL HOUSE, OPTION 3 SUMMARY**

## **OPTION 3 ADVANTAGES:**

CONTROL HOUSE LOCATED AWAY FROM  
BATTERY PARK UNDERPASS RETAINING WALL  
AND 84" CSO

CONSTRUCTION OF CONTROL HOUSE CAN  
PROCEED WITH LIMITED TRAFFIC IMPACTS

CONTROL HOUSE ACCESSIBLE FROM LITTLE  
WEST STREET

CONTROL HOUSE DOES NOT OCCUPY  
PEDESTRIAN PROMENADE

## **OPTION 3 DISADVANTAGES:**














CONNECTION BETWEEN CONTROL HOUSE AND  
GATE WILL REQUIRE MULTIPLE UTILITY  
CROSSINGS

CONTROL HOUSE REMOVES EXISTING  
GREENSPACE



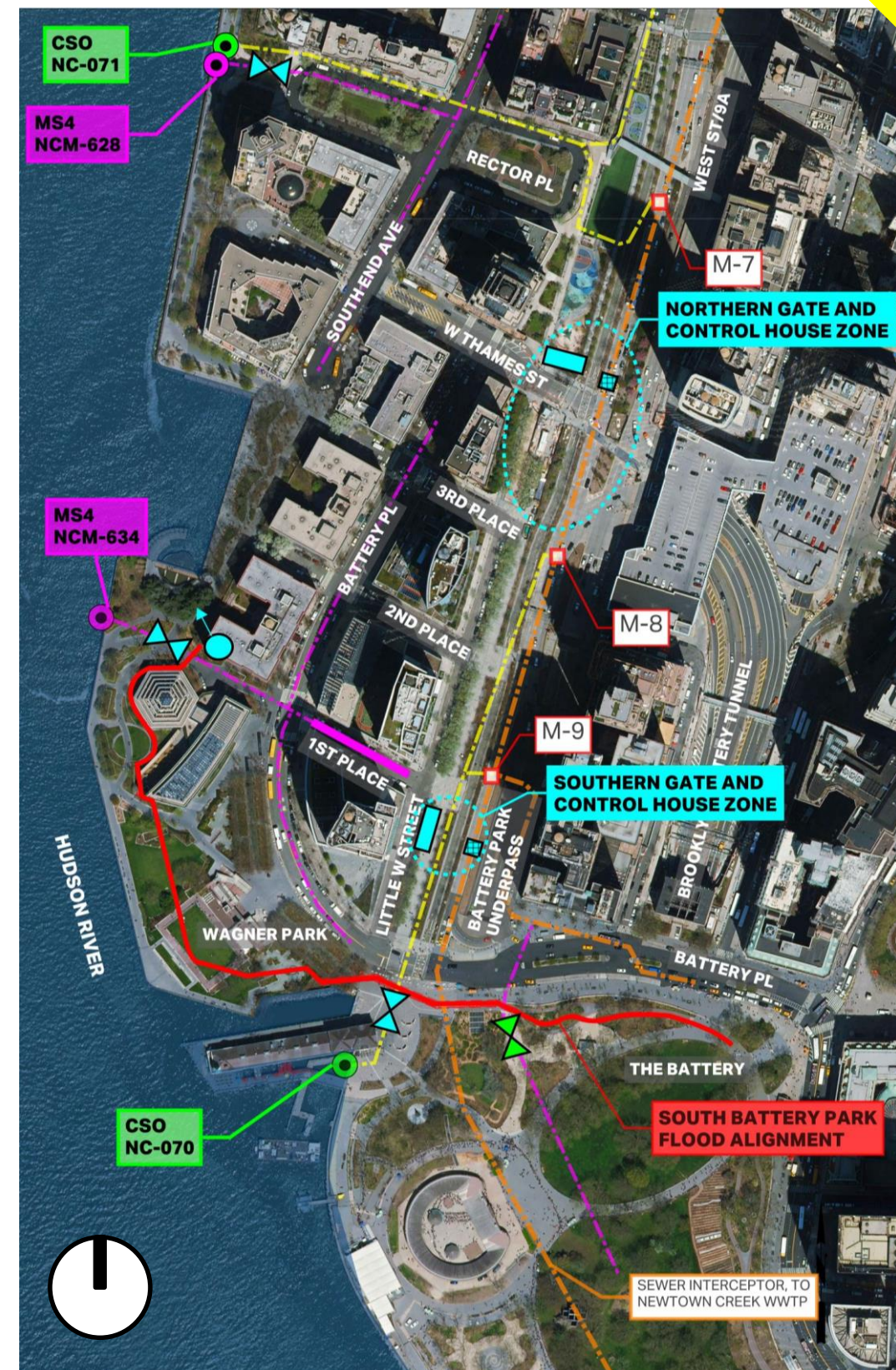
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-  PROPOSED FLOOD ALIGNMENT
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-  PROPOSED BACKFLOW PREVENTION VALVE
-  PROPOSED ISOLATION VALVE
-  POTENTIAL PUMP STATION
-  POTENTIAL PIPE UPSIZING

REQUIRED FOR  
FEMA CERTIFICATION

ADDITIONAL MEASURES  
UNDER  
CONSIDERATION





## **FOR NEXT MEETING:**

- Sustainability Update
- Pier A Plaza Northern Security Edge
- Deployables