

# Tibbetts Brook Daylighting Project

Located in the Borough of The Bronx, NY

DEP ID#: GX-P-TIBB

PDC Conceptual Review



NYC Parks

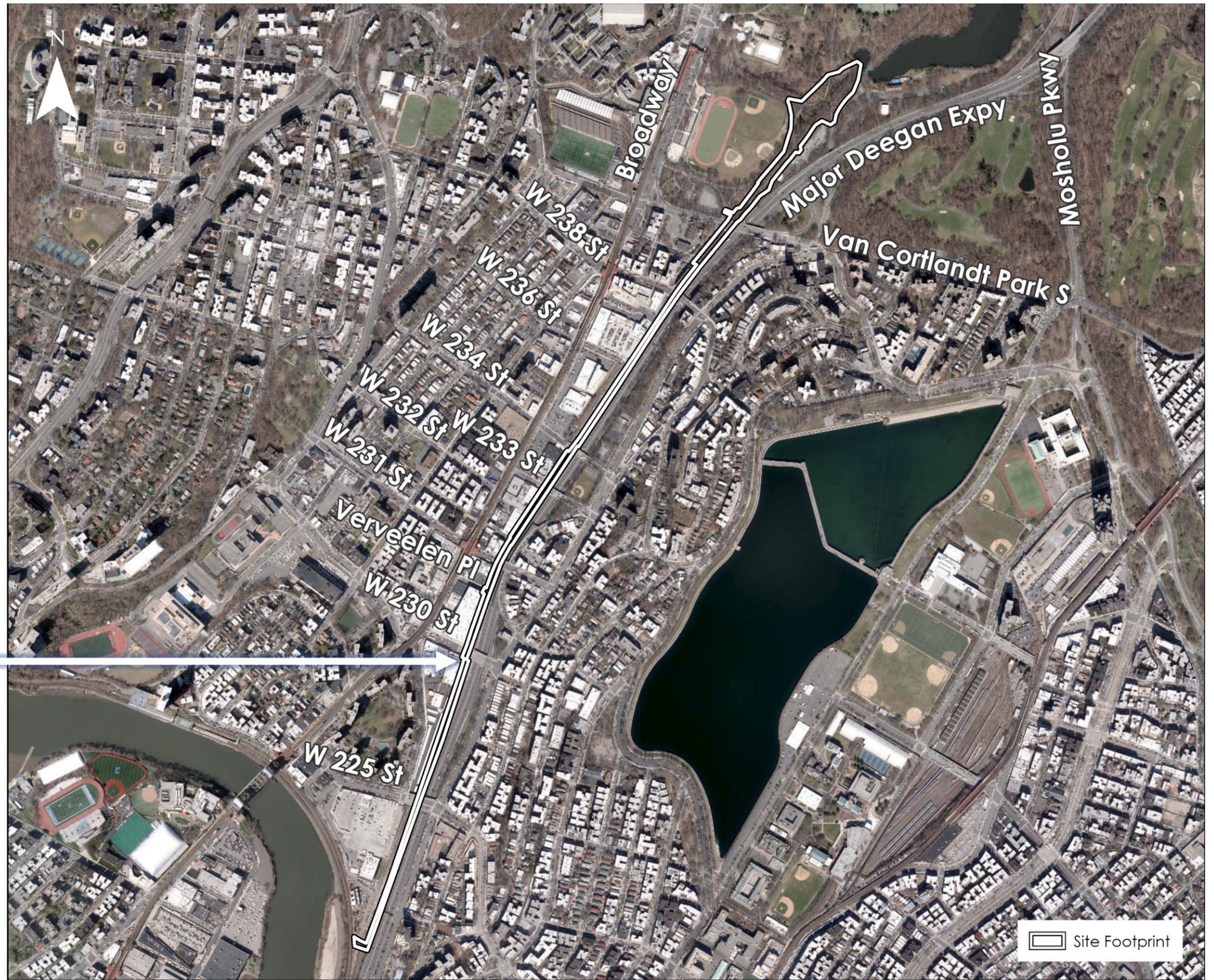




City 10 MI



Neighborhood 1 MI



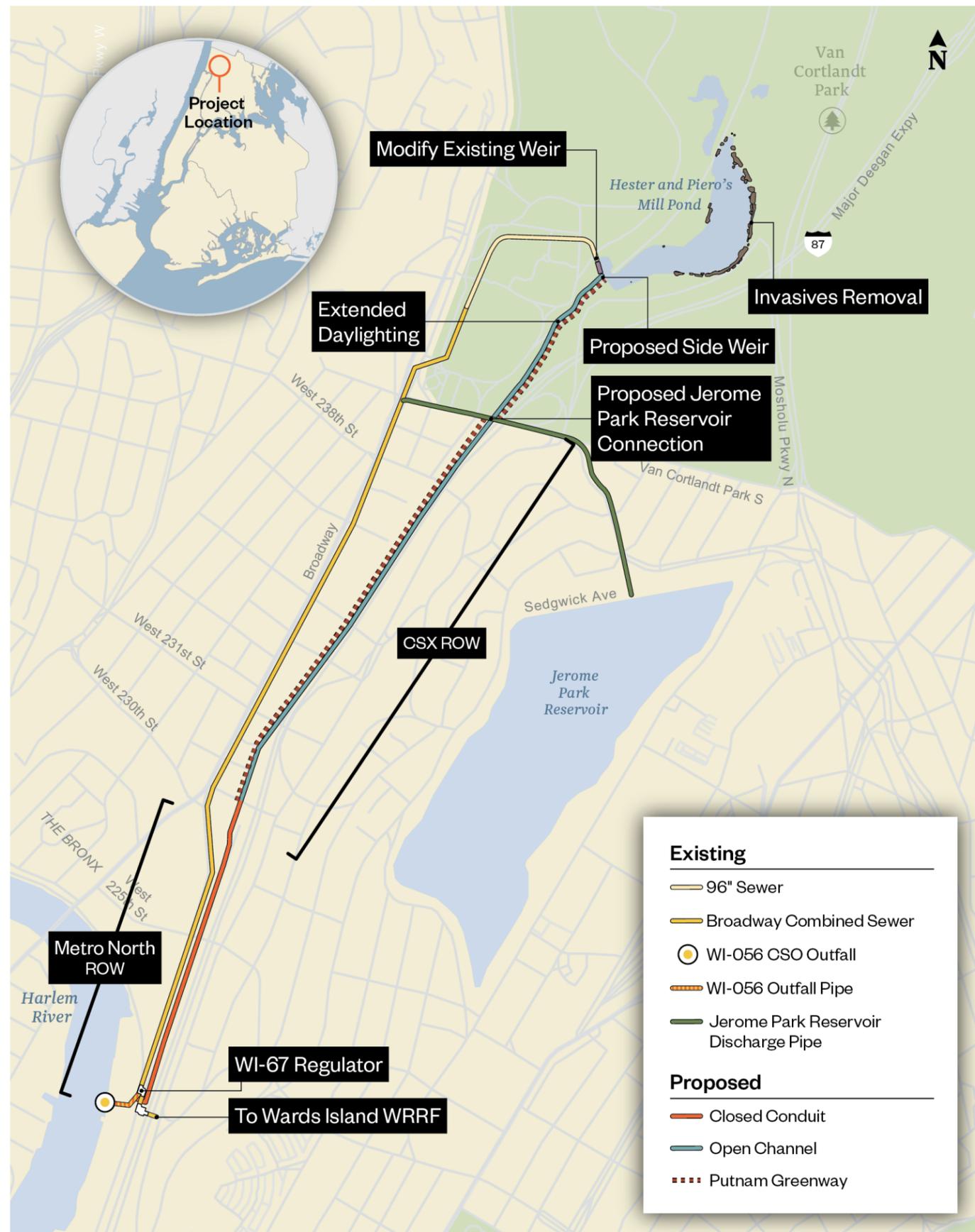
Site 2000 FT

Project Location



NYC Parks





## Tibbetts Brook Daylighting:

- Restores the hydraulic connection between Tibbetts Brook and the Harlem River
- Reduces annual CSO volume by up to 215-220 million gallons per year (MGY)
  - The proposed open channel would be designed for a baseflow of 7 cubic feet per second (cfs) and a maximum wet weather flow of 38 cfs
- Improves ecology through enhancement around Hester and Piero's Mill Pond and along daylighted Tibbetts Brook channel
- Enhances recreational opportunities with extension of Putnam Greenway along the stream corridor



Key Plan

1. Existing Weir Structure and Gate Valve Manhole at Southwestern Corner of Lower Hester and Piero's Mill Pond Connecting to Broadway Sewer



Key Plan

2 - Viewing opportunity on top of historic dam located west of the Old Putnam Trail footbridge looking over proposed daylighting location



Key Plan

3 – Existing weir with future side weir/viewing platform location in the background



Key Plan

3 – Retained Side of Historic Dam and Location of Proposed Outlet to Open Channel

4 – Proposed Start Location of Daylighted Channel



5



6



Key Plan

6 – Pathway crossing under Putnam Trail Crossing Railroad Bridge

7 – Underside of Putnam Trail Crossing Railroad Bridge



Key Plan

5 – Connection to boardwalk south of Tibbetts Wetland



Key Plan

8 – Old Putnam Trail with Historic Rail Ties

9 – Chain Link Fence on west side of proposed daylighting location in southern part of Van Cortlandt Park



10



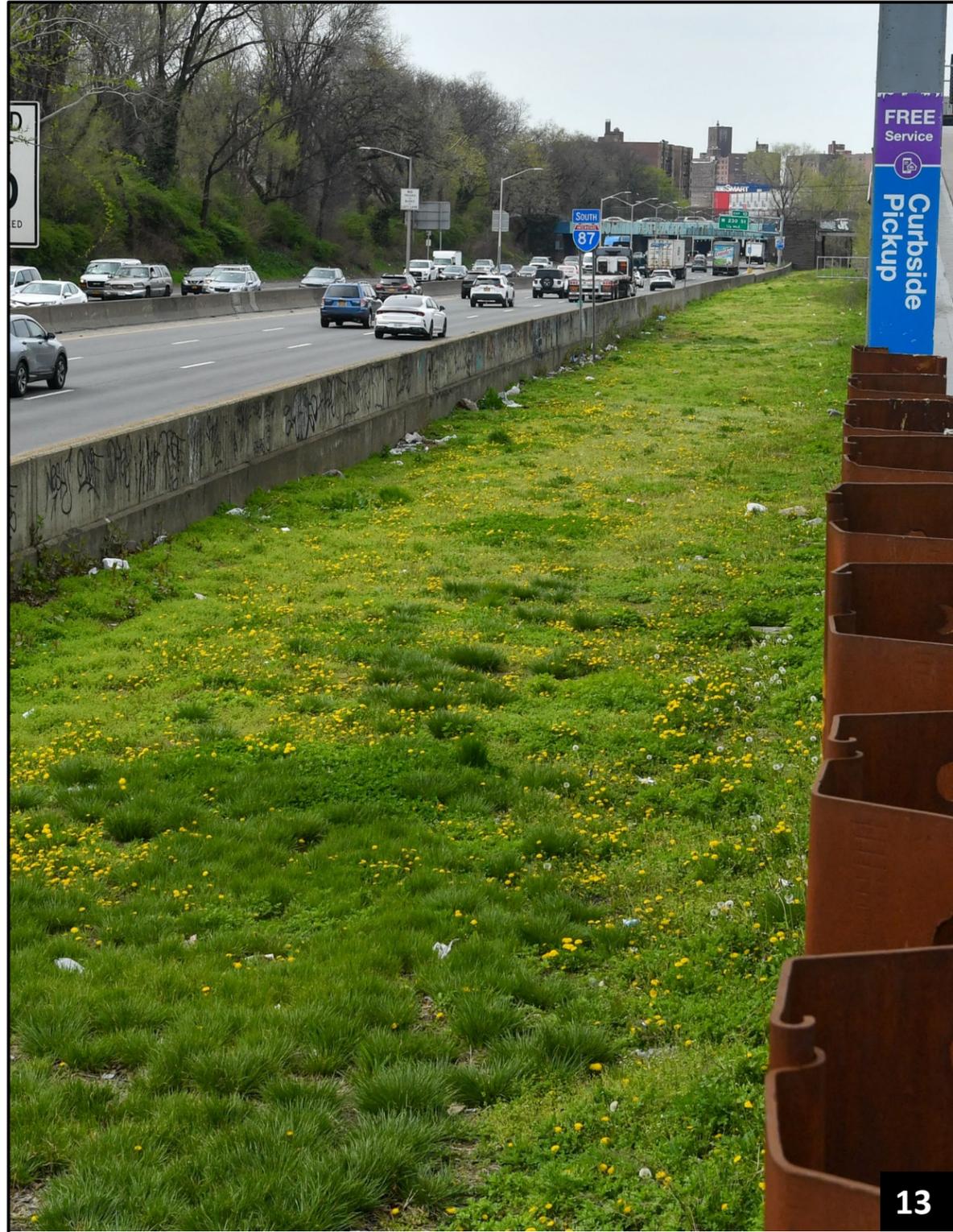
11



Key Plan

10 – Location of Proposed Daylighting with Van Cortlandt Park South Bridge in Background

11 – Start of CSX Property and Continuation of Proposed Daylighting



Key Plan

12 – Start of CSX Property and proposed ramp area

13 – CSX corridor adjacent to Riverdale Crossing



14



Key Plan

14 – Street view of CSX Property and Adjacent Building from Major Deegan Expressway



15



Key Plan

15 – Street view of CSX Property and Adjacent Parking Lot from Major Deegan Expressway



16



Key Plan

16 – Street view of CSX Property and Adjacent Property from Major Deegan Expressway



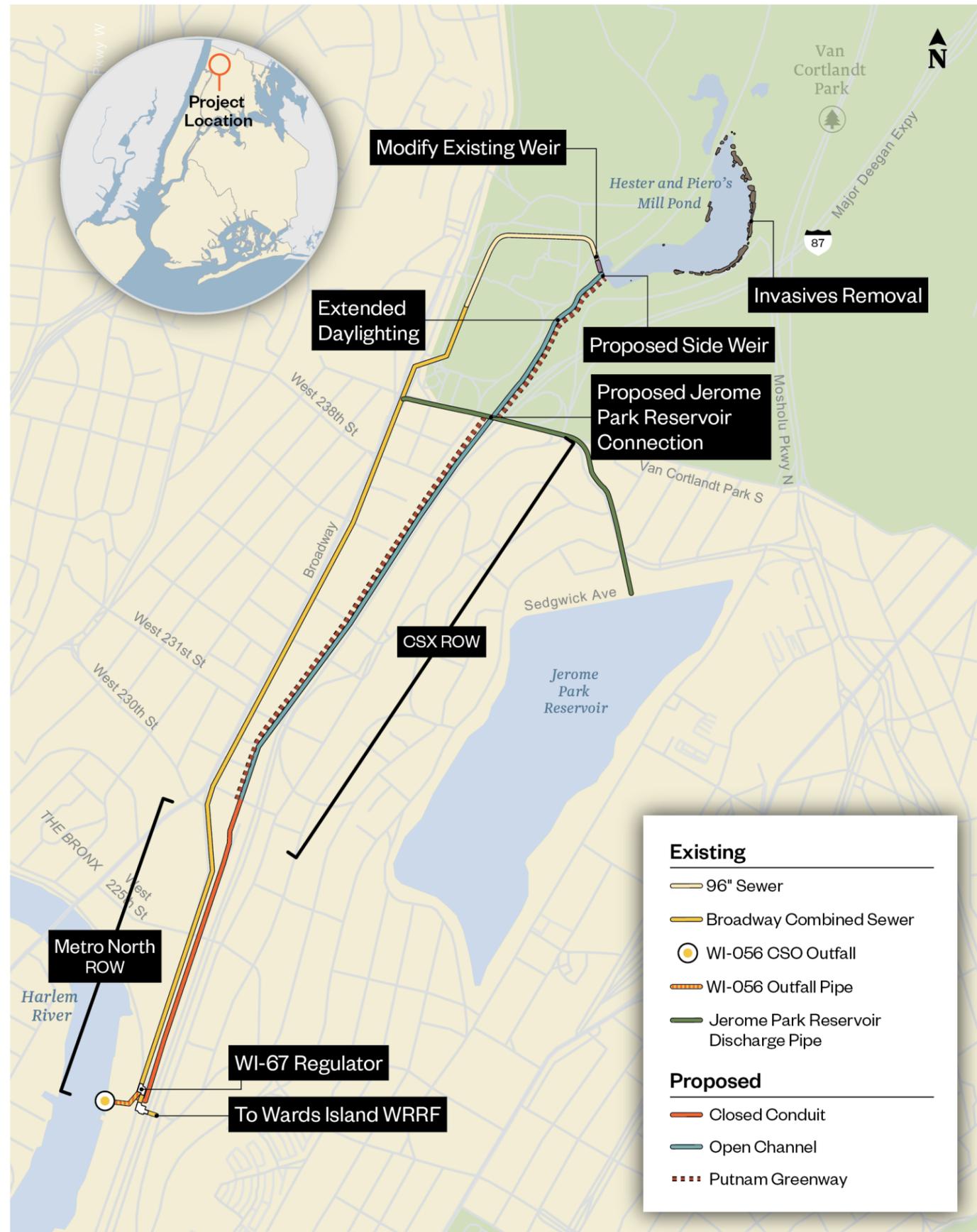
Key Plan

17 – Location of Proposed Daylighting along CSX Corridor between 232<sup>nd</sup> Street and W 231<sup>st</sup> Street

18 – Location of Proposed Daylighting along CSX Corridor between Verveelen Place and W 231<sup>st</sup> Street

# Project Overview

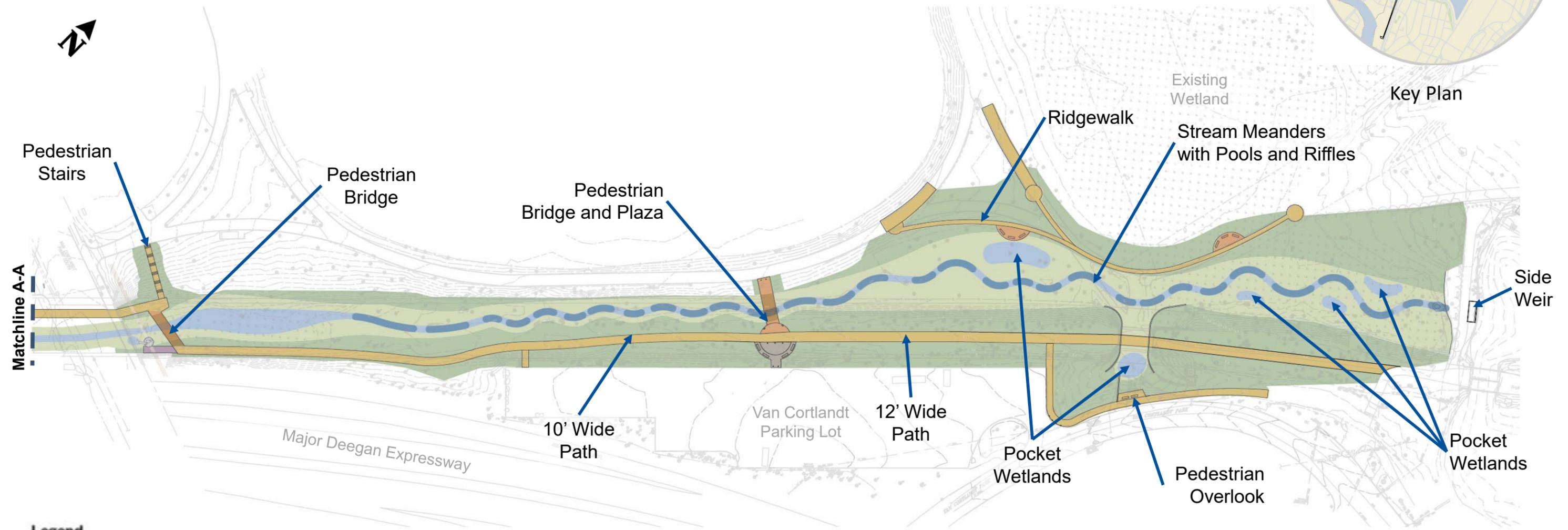




Tibbetts Brook Daylighting Alignment



Key Plan



Matchline A-A

**Legend**

- Shared Pathway
- Upland Vegetation
- Bridge
- Parking Lot Connection to Plaza
- Floodplain
- Maintenance Path
- Pools and Riffles within Open Channel



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**Site Plan – Van Cortlandt Park**

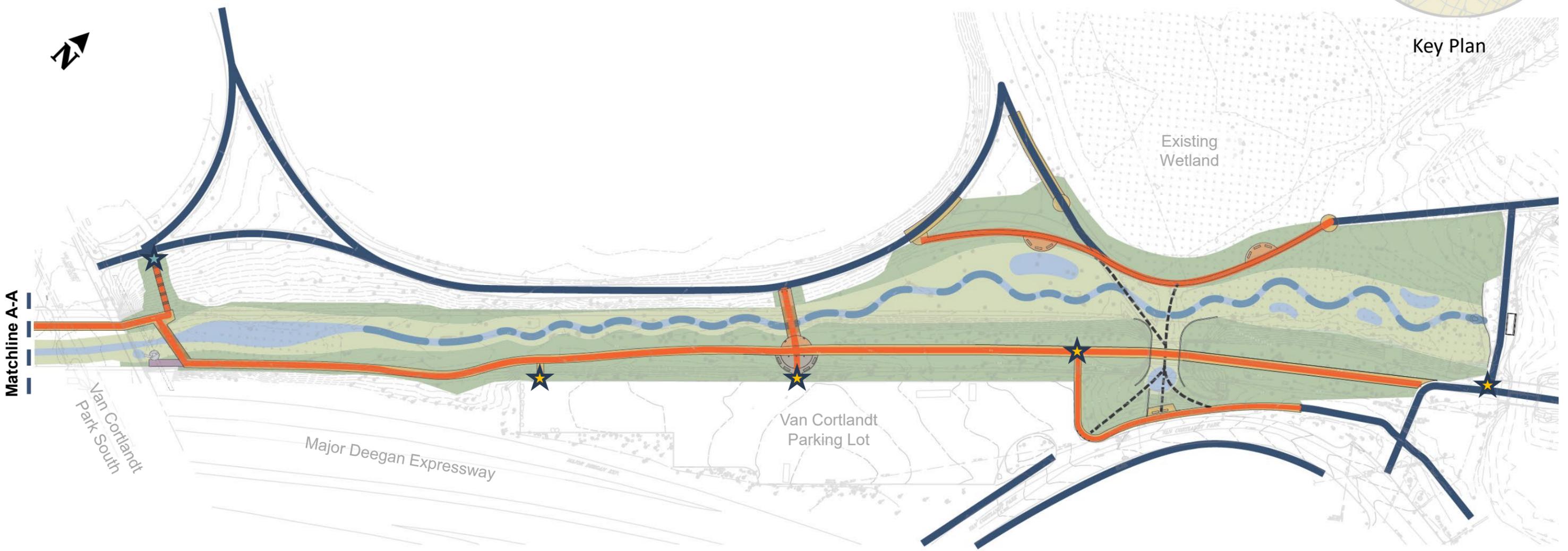


**Legend**

-  Opportunities to Reconnect Circulation
-  Existing Circulation to Remain
-  Existing Circulation to be Removed
-  Greenway Access Location
-  Greenway Access Under Evaluation



Key Plan



Matchline A-A



**Proposed Circulation – Van Cortlandt Park**



# Sections and Renderings

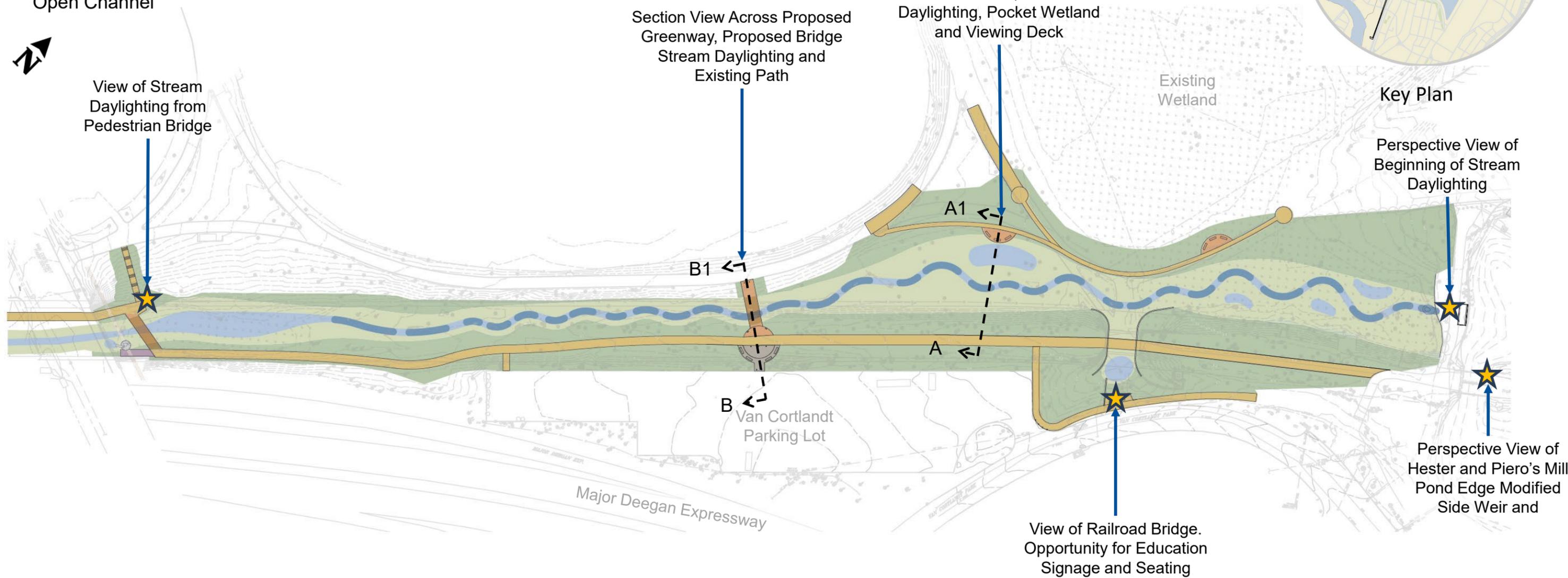


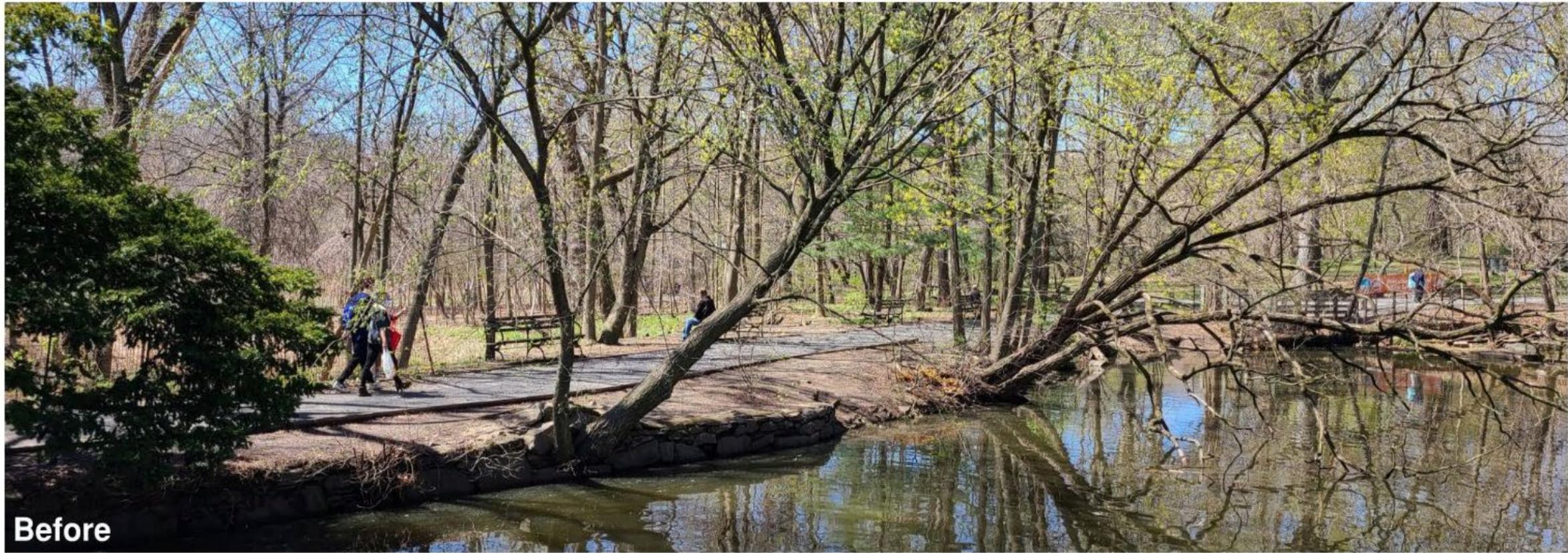
**Legend**

- Shared Pathway
- Bridge
- Floodplain
- Pools and Riffles within Open Channel
- Upland Vegetation
- Parking Lot Connection to Plaza
- Maintenance Path
- Opportunities for Enhanced Views

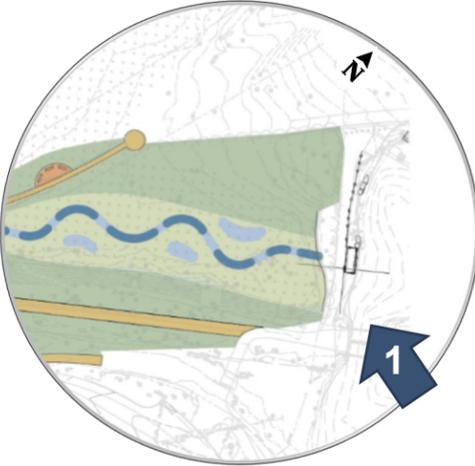


**Key Plan**



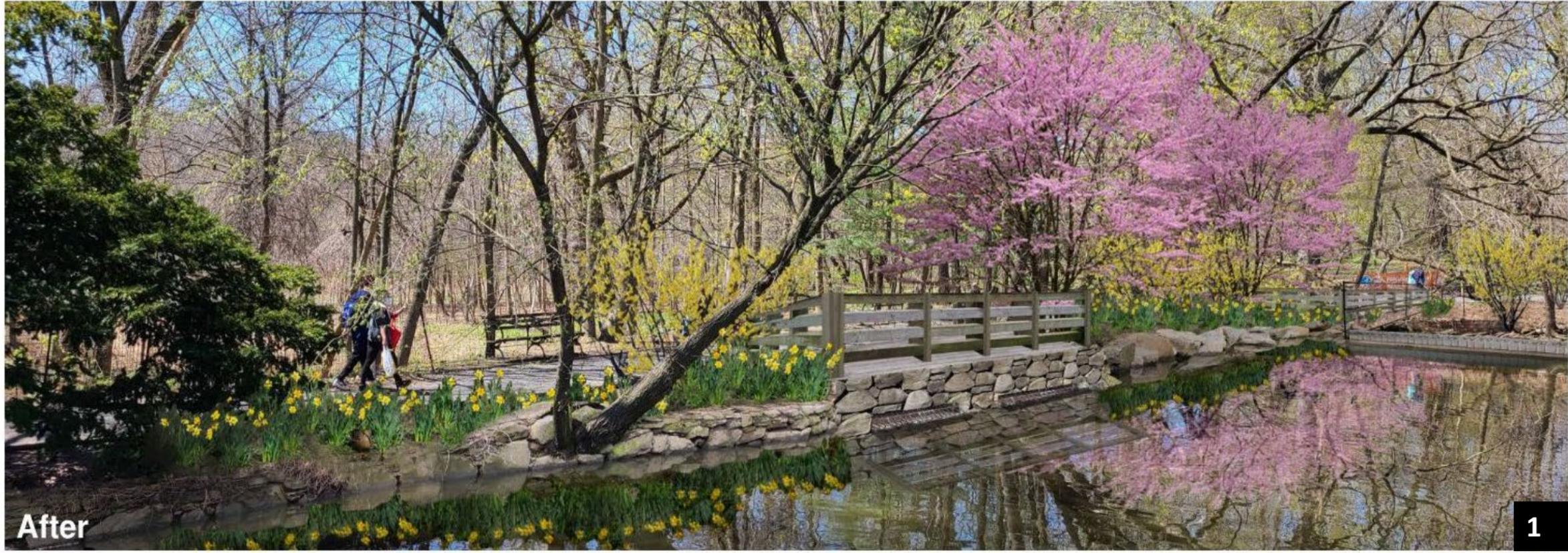


Before



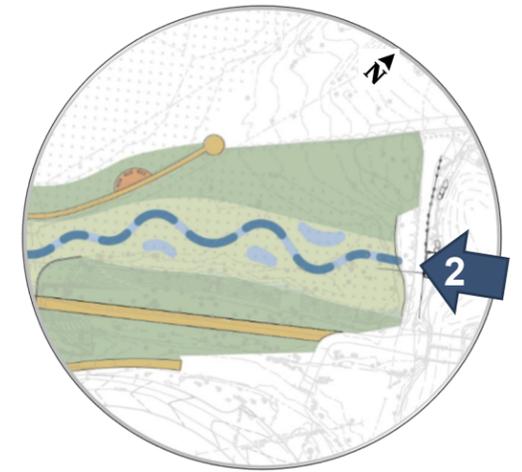
Key Plan

1 – Perspective Rendering of proposed side weir (before and after)



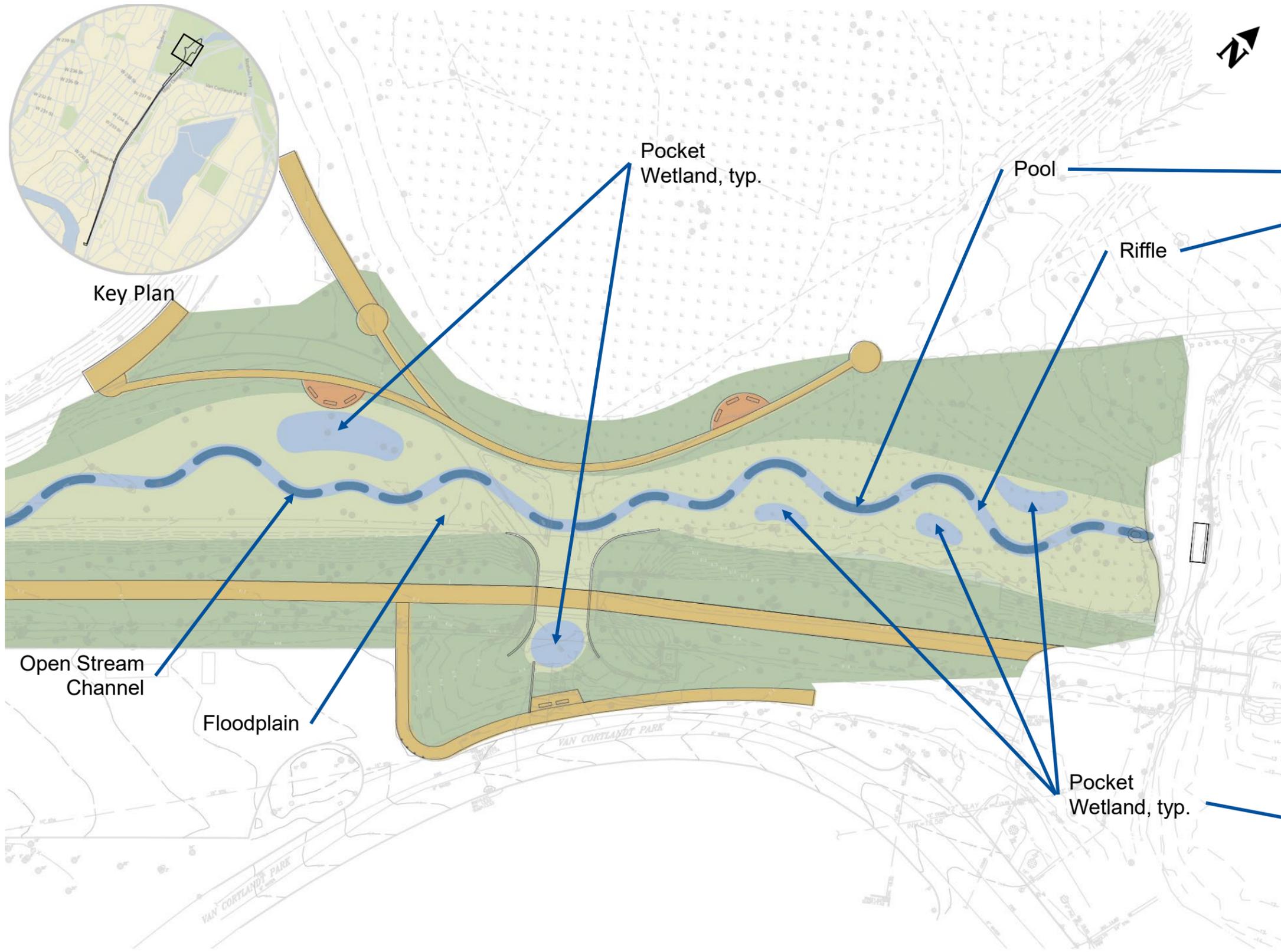
After

1

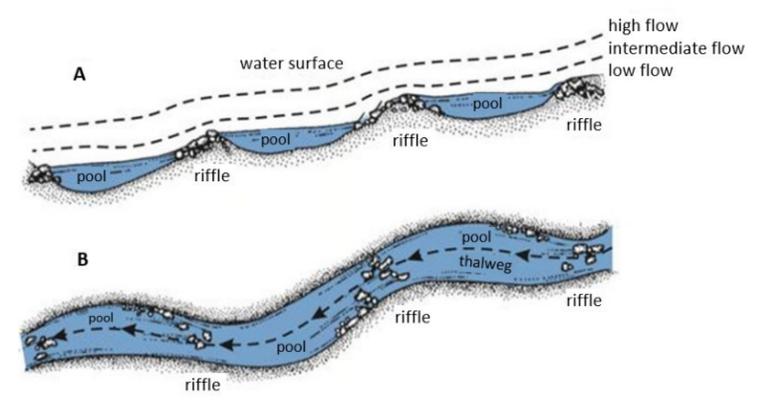


Key Plan

2 – Perspective Rendering of start of the proposed daylighting from the top of the historic dam at Hester and Piero’s Mill Pond



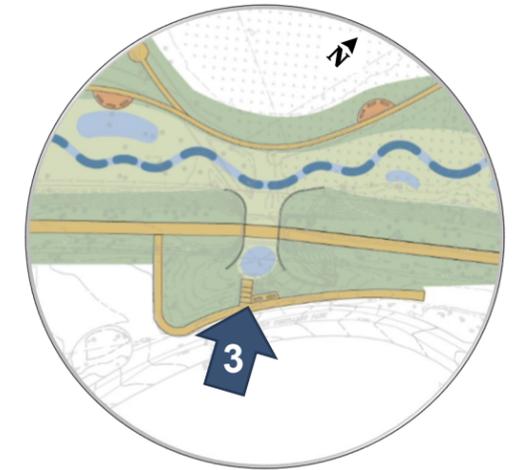
Typical Riffle and Pool Morphology



Schematic of Riffle and Pool Morphology



Typical pocket wetland

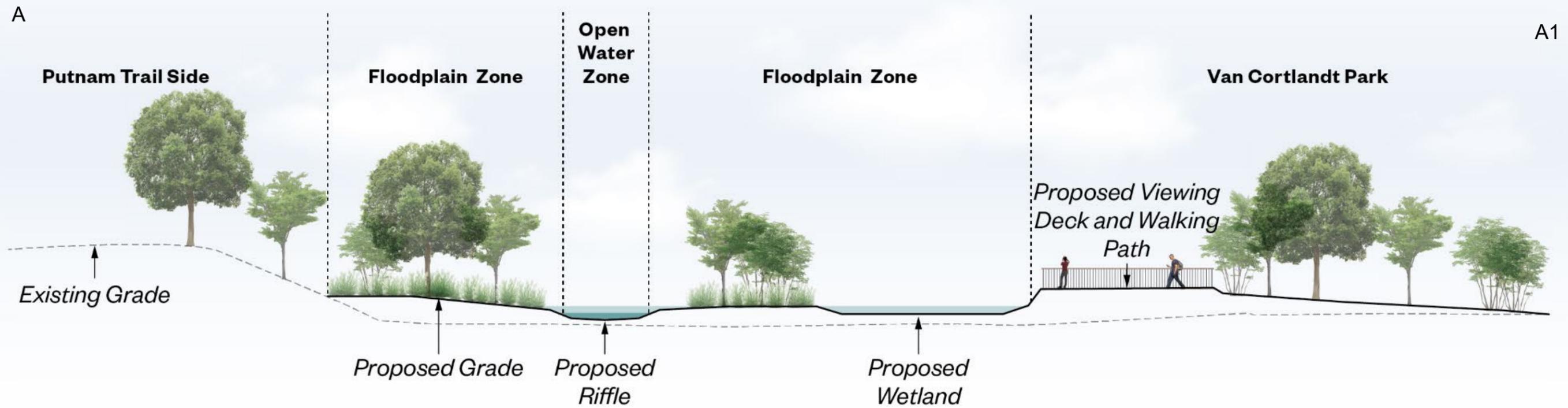
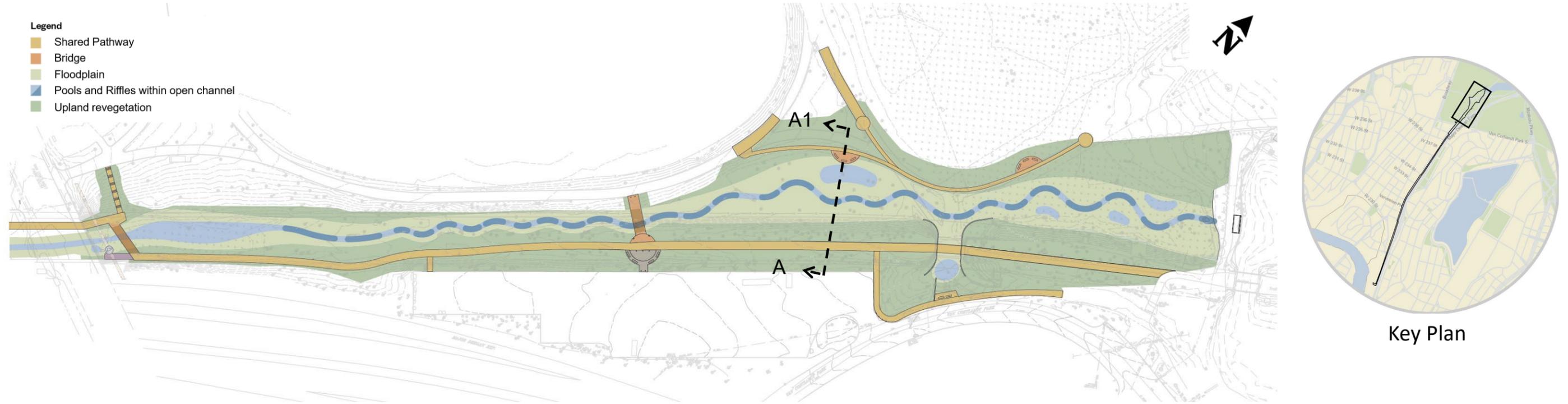


Key Plan

3 – Perspective Rendering of Proposed Pedestrian Overlook

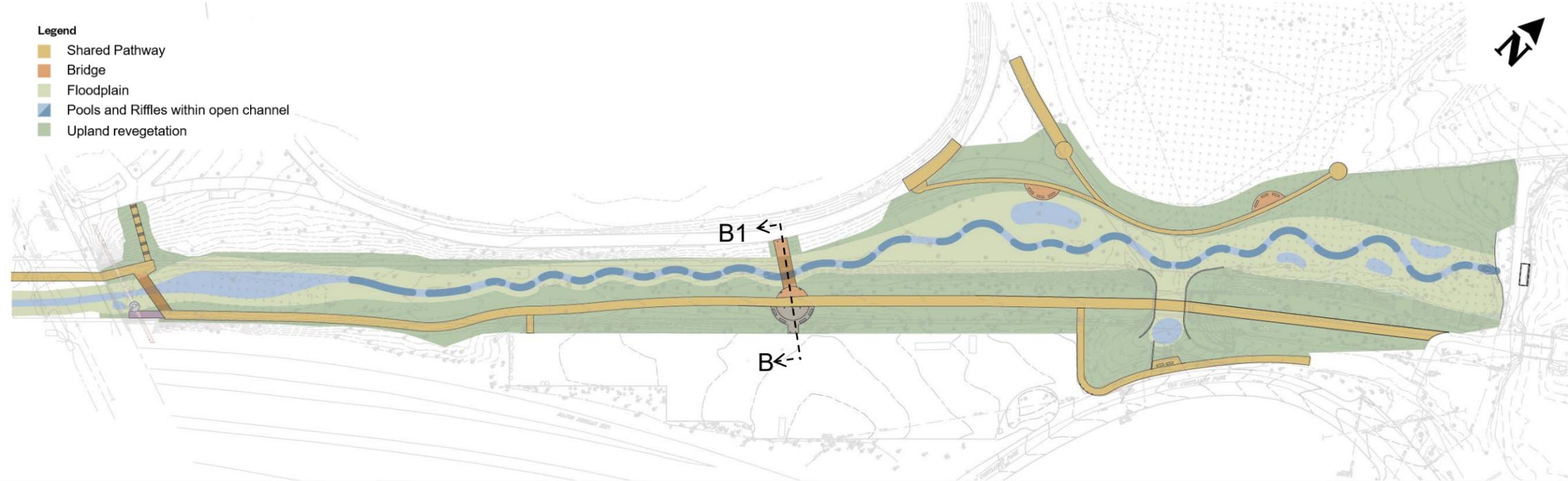
The overlook will have a view of the adjacent pocket wetland and contain opportunities for educational signage.

## Section A-A1: Stream Channel with Wetland Expansion, Overlook, and Pocket Wetland

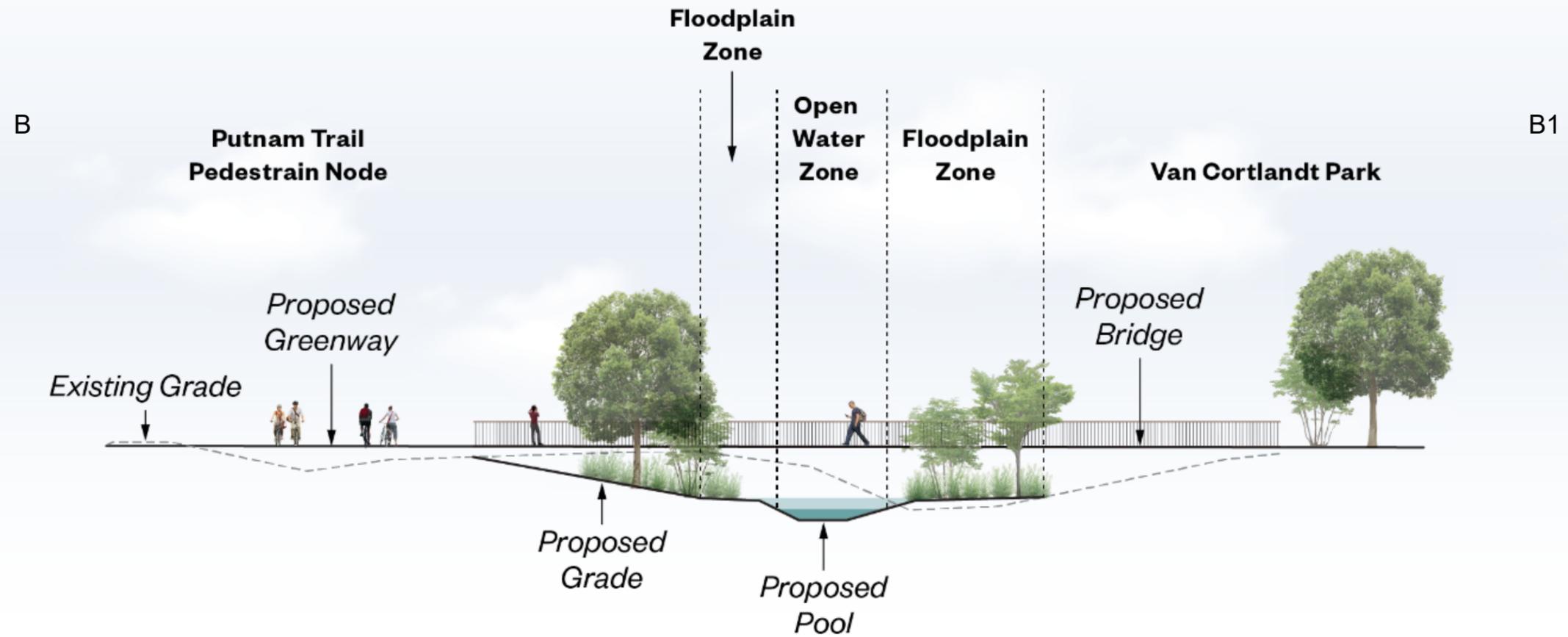


Section View A-A1 – Van Cortlandt Park

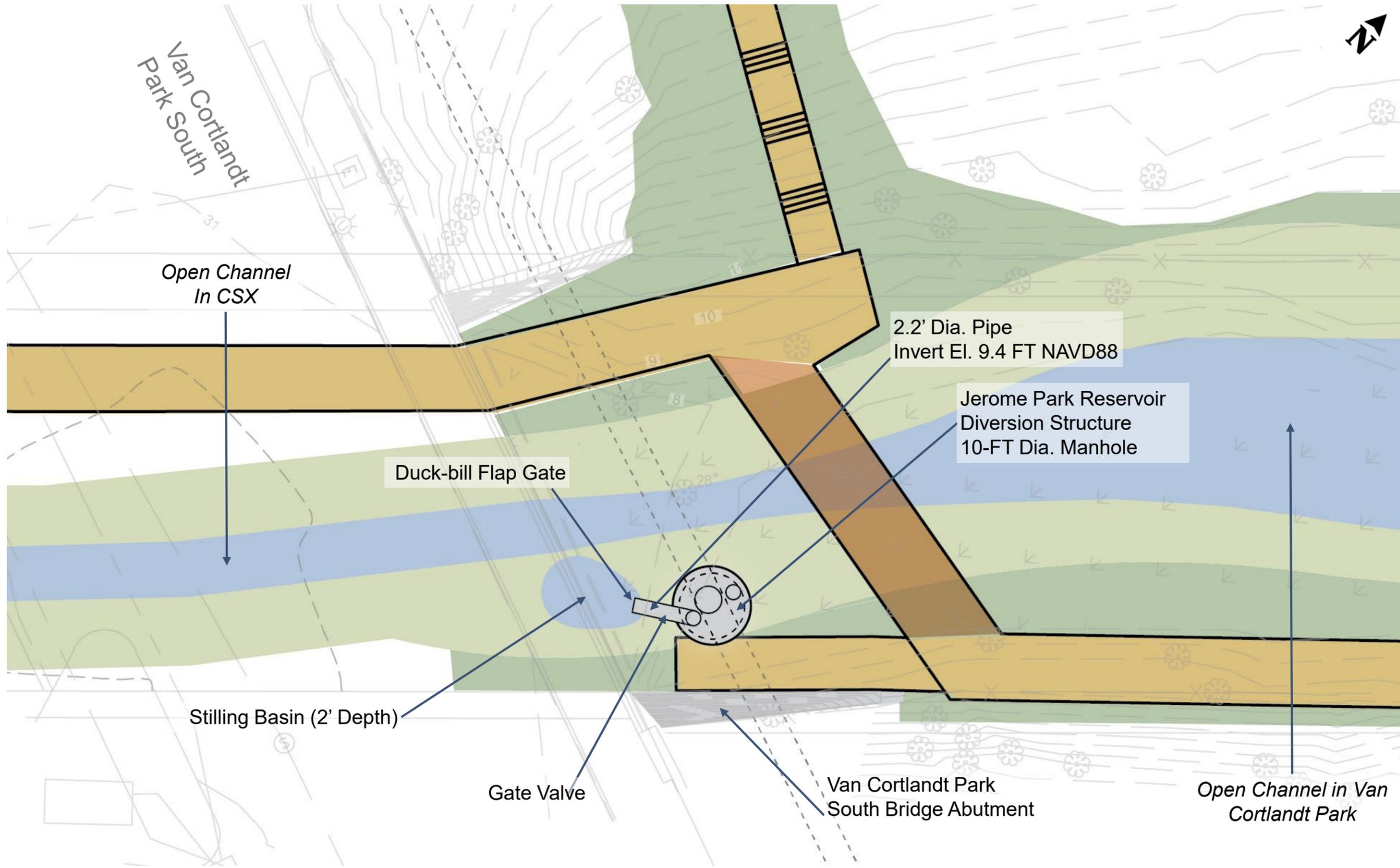
# Section B-B1: Stream Channel with Bridge to Van Cortlandt Park



Key Plan



Section View B-B1 – Van Cortlandt Park



Van Cortlandt  
Park South

Open Channel  
In CSX

2.2' Dia. Pipe  
Invert El. 9.4 FT NAVD88

Jerome Park Reservoir  
Diversion Structure  
10-FT Dia. Manhole

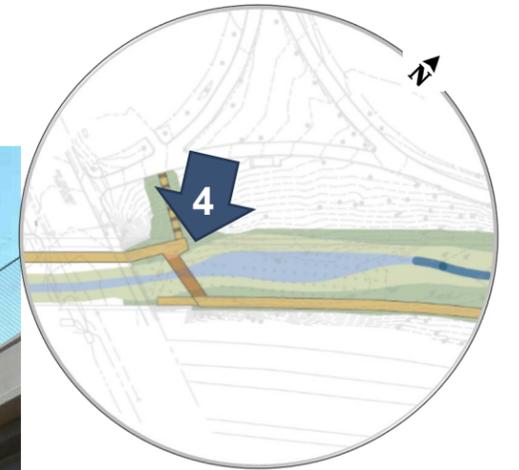
Duck-bill Flap Gate

Stilling Basin (2' Depth)

Gate Valve

Van Cortlandt Park  
South Bridge Abutment

Open Channel in Van  
Cortlandt Park



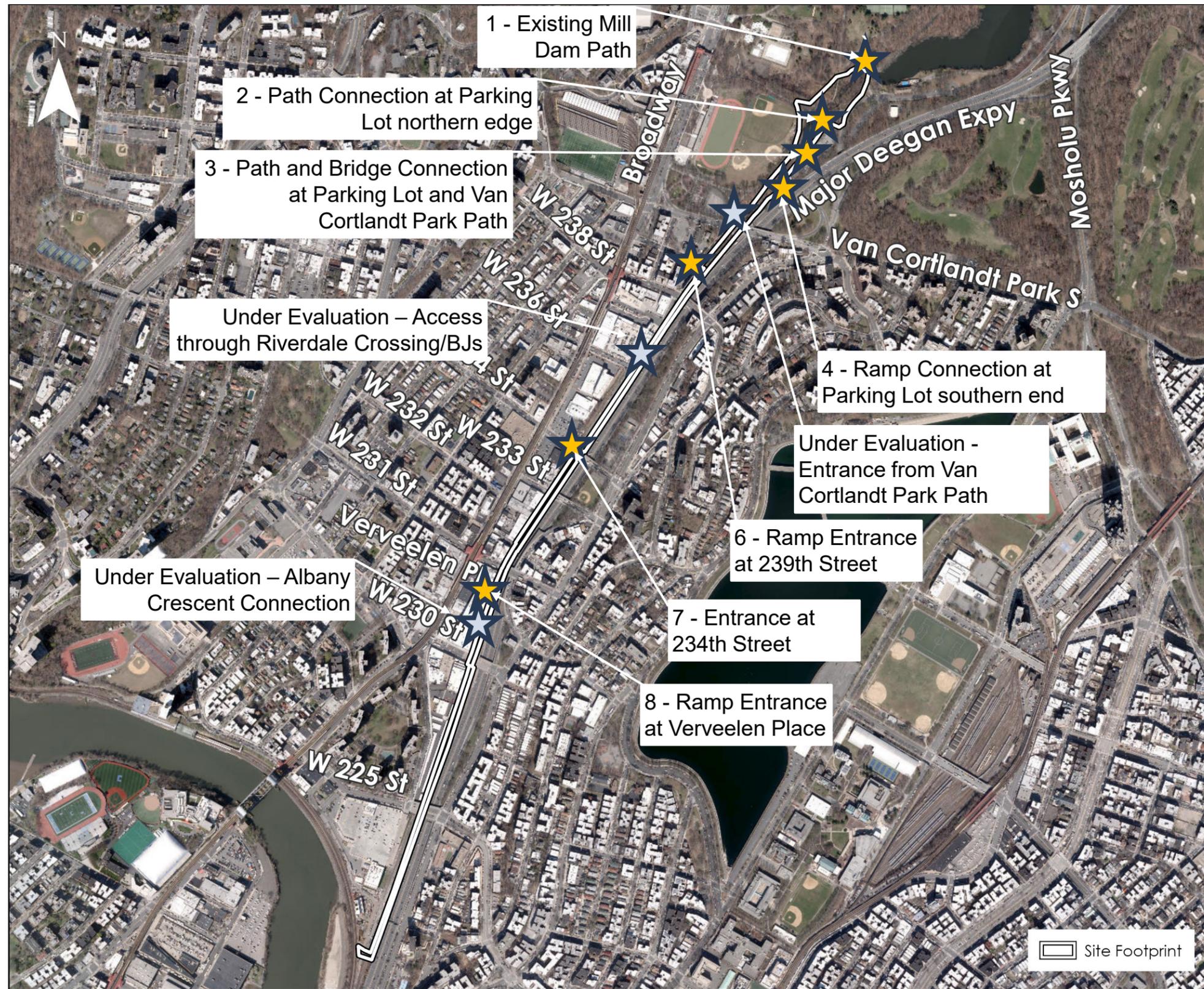
Key Plan

**4 – Perspective Rendering of Pedestrian Bridge at the South End of Van Cortlandt Park**

The Jerome Park Reservoir Blowoff Manhole is located at the southeastern end of Van Cortlandt Park. A maintenance path to the manhole will be extended and gated off.

# CSX Corridor





Site

2000 FT

The City is in the process of acquiring the CSX property (Van Cortlandt Park South to W. 230th St)

**Seven** Greenway access locations will be provided along the 1-mile-long daylighting stretch of Tibbetts Brook

Access from path within Van Cortlandt Park near Van Cortlandt Park South is being evaluated based on tree impacts

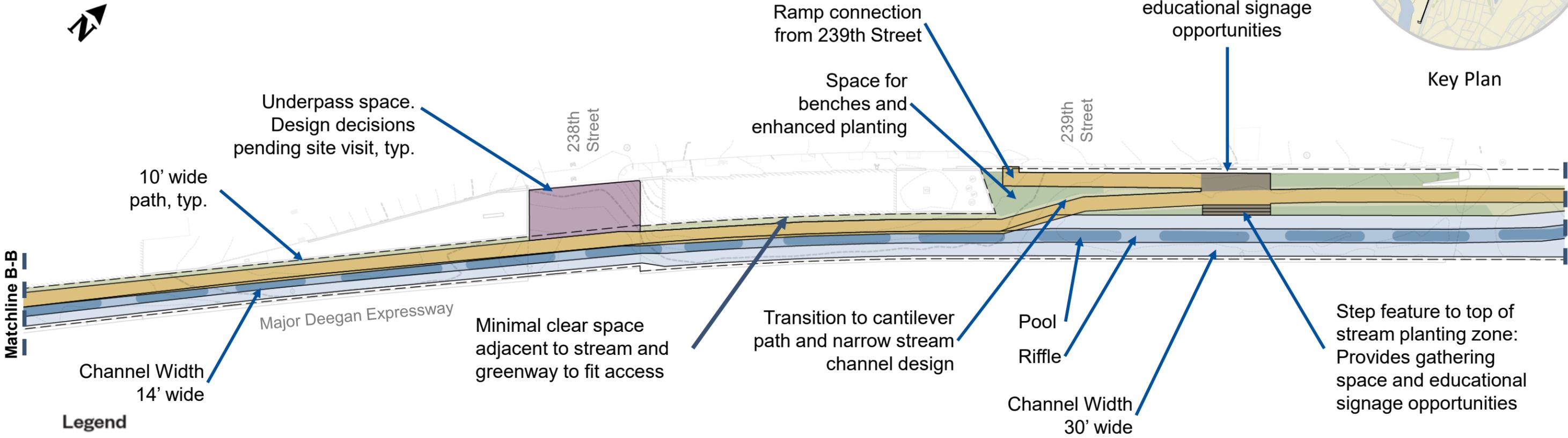
Access at W 236<sup>th</sup> St/W 237<sup>th</sup> St is being evaluated – requires easement through private property

Access to Albany Crescent for potential future DOT greenway connection being evaluated



Key Plan

Van Cortlandt Park South

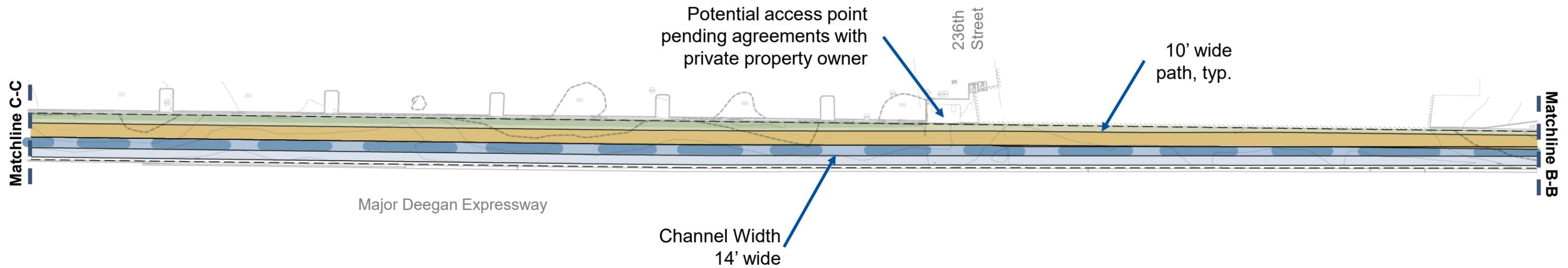


**ROW Width Range:  
28' – 63'**

- Legend**
- Shared Pathway
  - Pools and Riffles within Open Channel
  - Low Herbaceous Vegetation
  - Woody Vegetation and Room for Seating
  - Space to be Determined Pending Site Visit
  - Ramp Landing



Key Plan



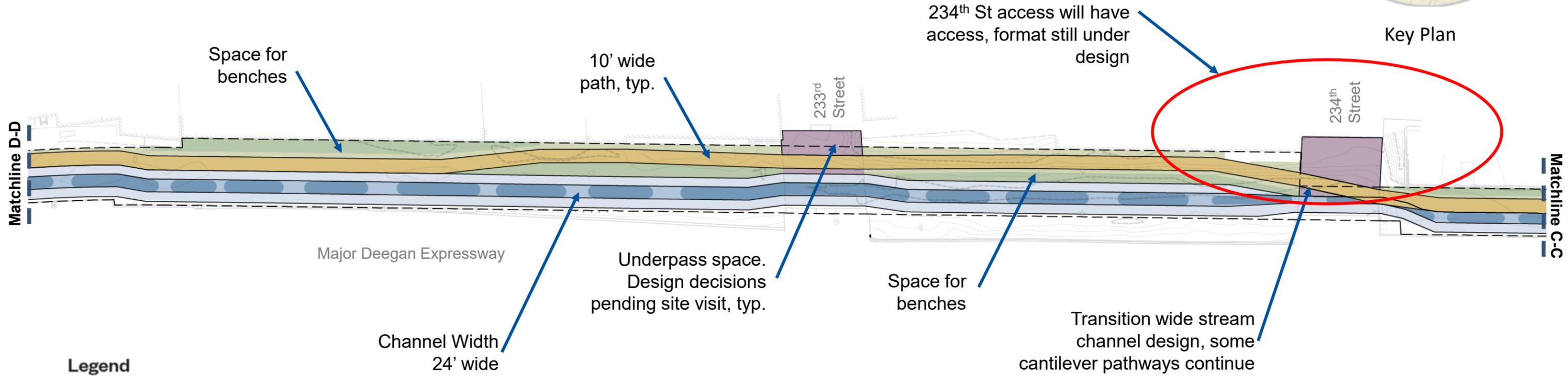
**ROW Width Range:  
28' – 33'**

**Legend**

-  Shared Pathway
-  Pools and Riffles within Open Channel
-  Low Herbaceous Vegetation
-  Woody Vegetation and Room for Seating
-  Space to be Determined Pending Site Visit



Key Plan



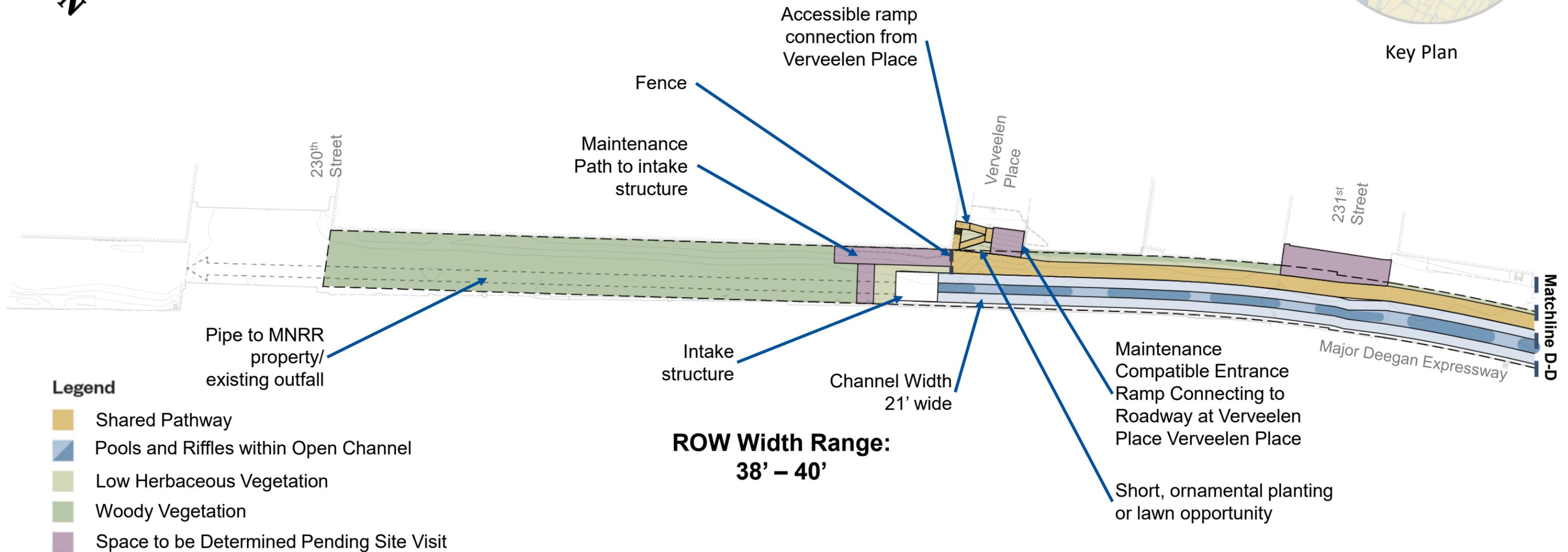
**Legend**

- Shared Pathway
- Pools and Riffles within Open Channel
- Low Herbaceous Vegetation
- Woody Vegetation and Room for Seating
- Space to be Determined Pending Site Visit

**ROW Width Range:  
25' – 46'**



Key Plan

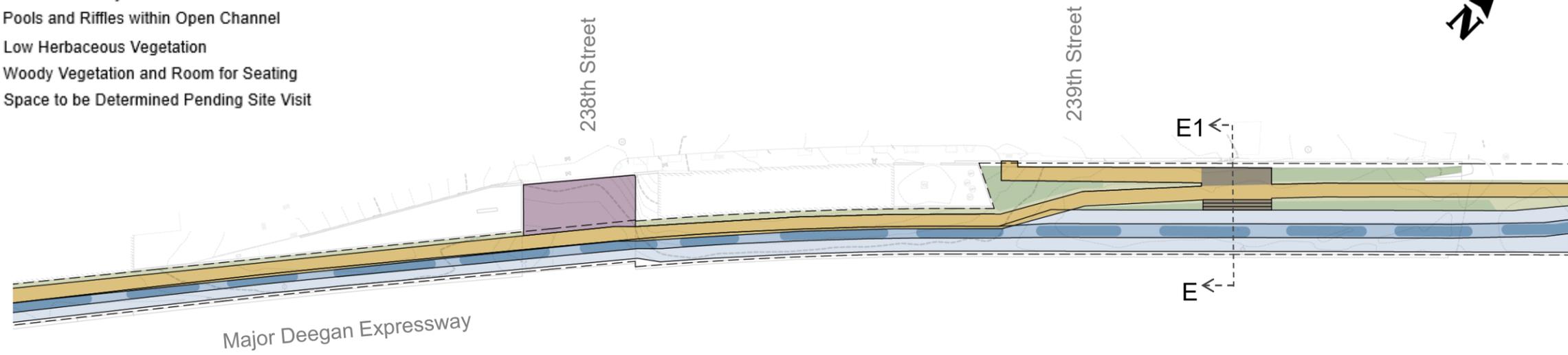


# Sections and Renderings

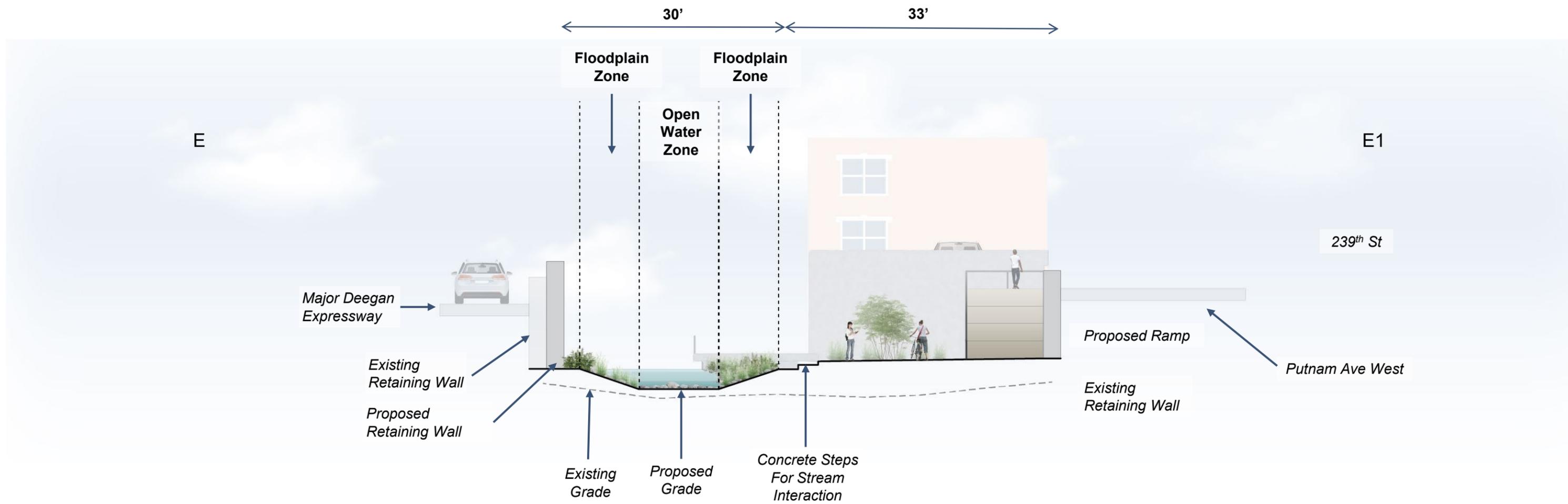


**Legend**

- Shared Pathway
- Pools and Riffles within Open Channel
- Low Herbaceous Vegetation
- Woody Vegetation and Room for Seating
- Space to be Determined Pending Site Visit



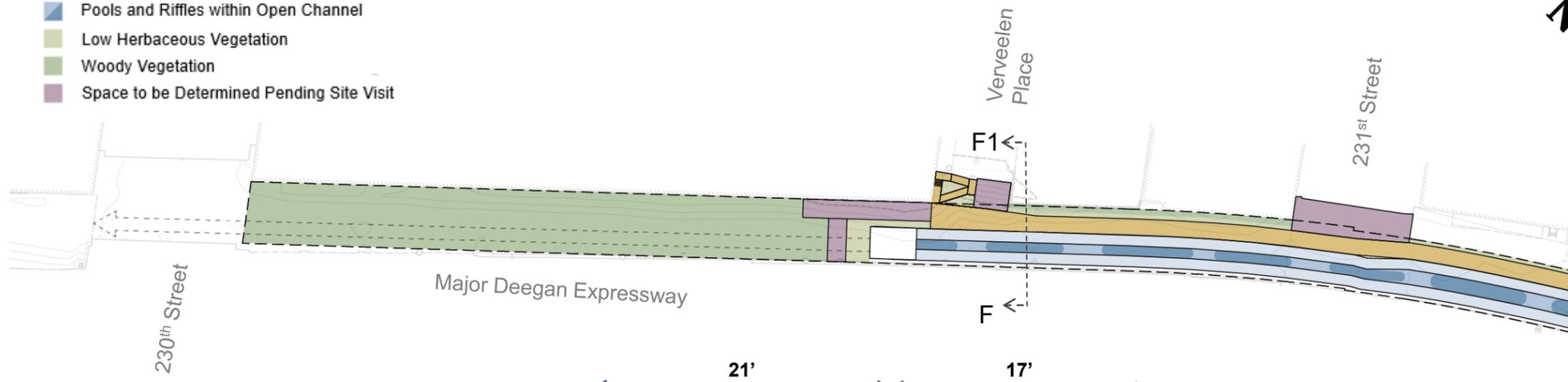
Key Plan



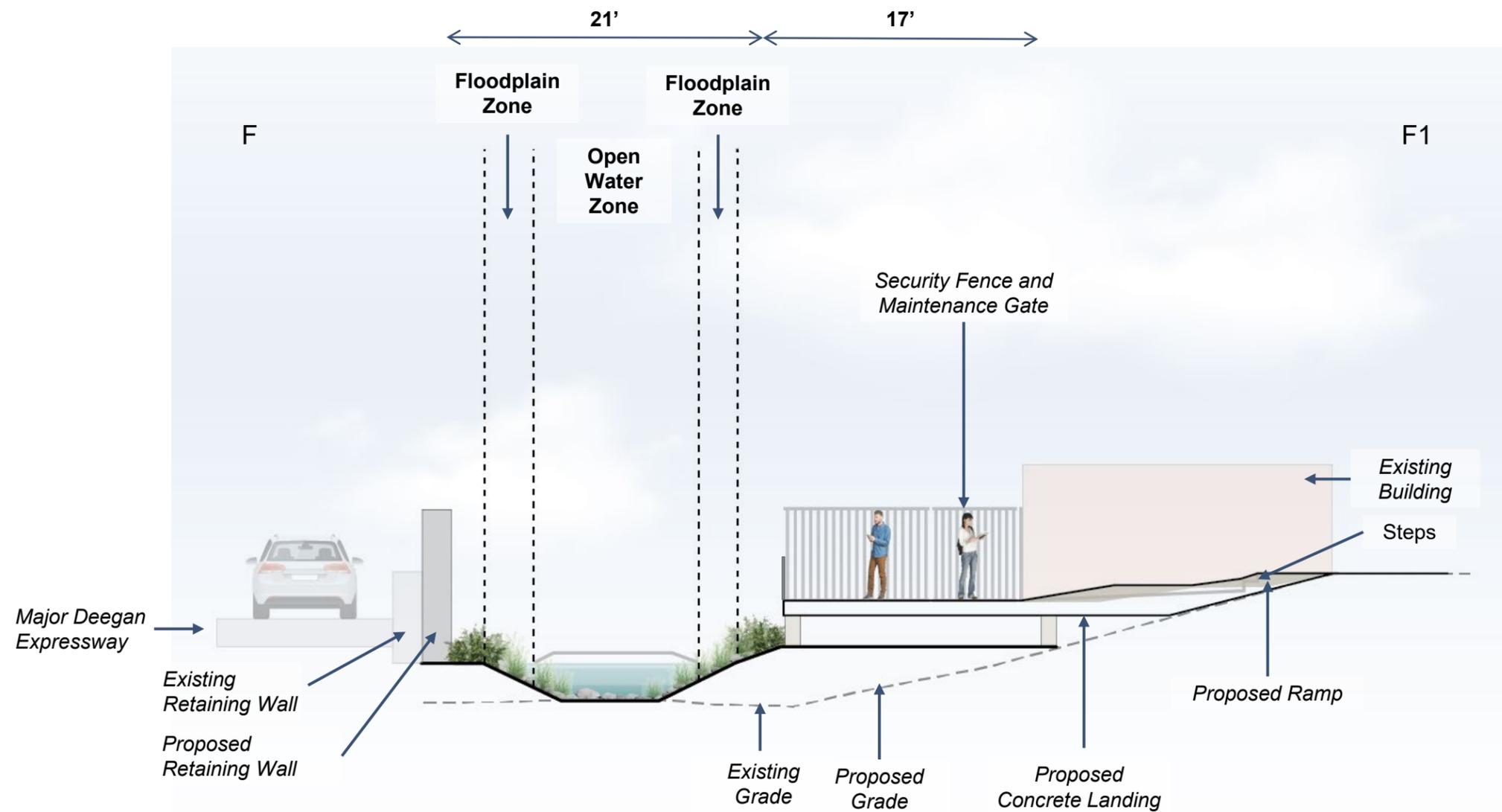
Section View E-E1 – CSX

**Legend**

- Shared Pathway
- Pools and Riffles within Open Channel
- Low Herbaceous Vegetation
- Woody Vegetation
- Space to be Determined Pending Site Visit



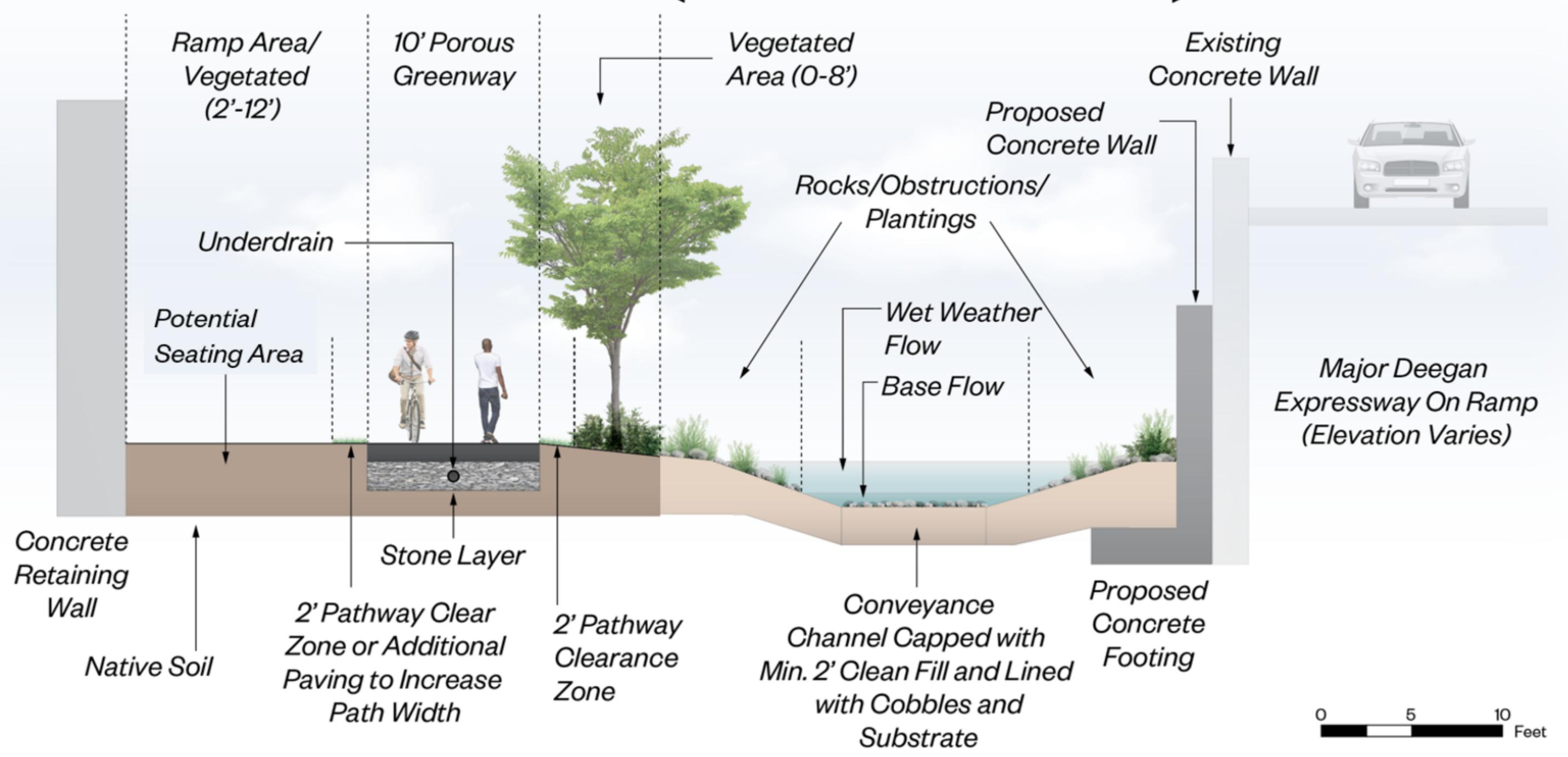
Key Plan



Section View - CSX

# Typical Wide Cross Section With Greenway

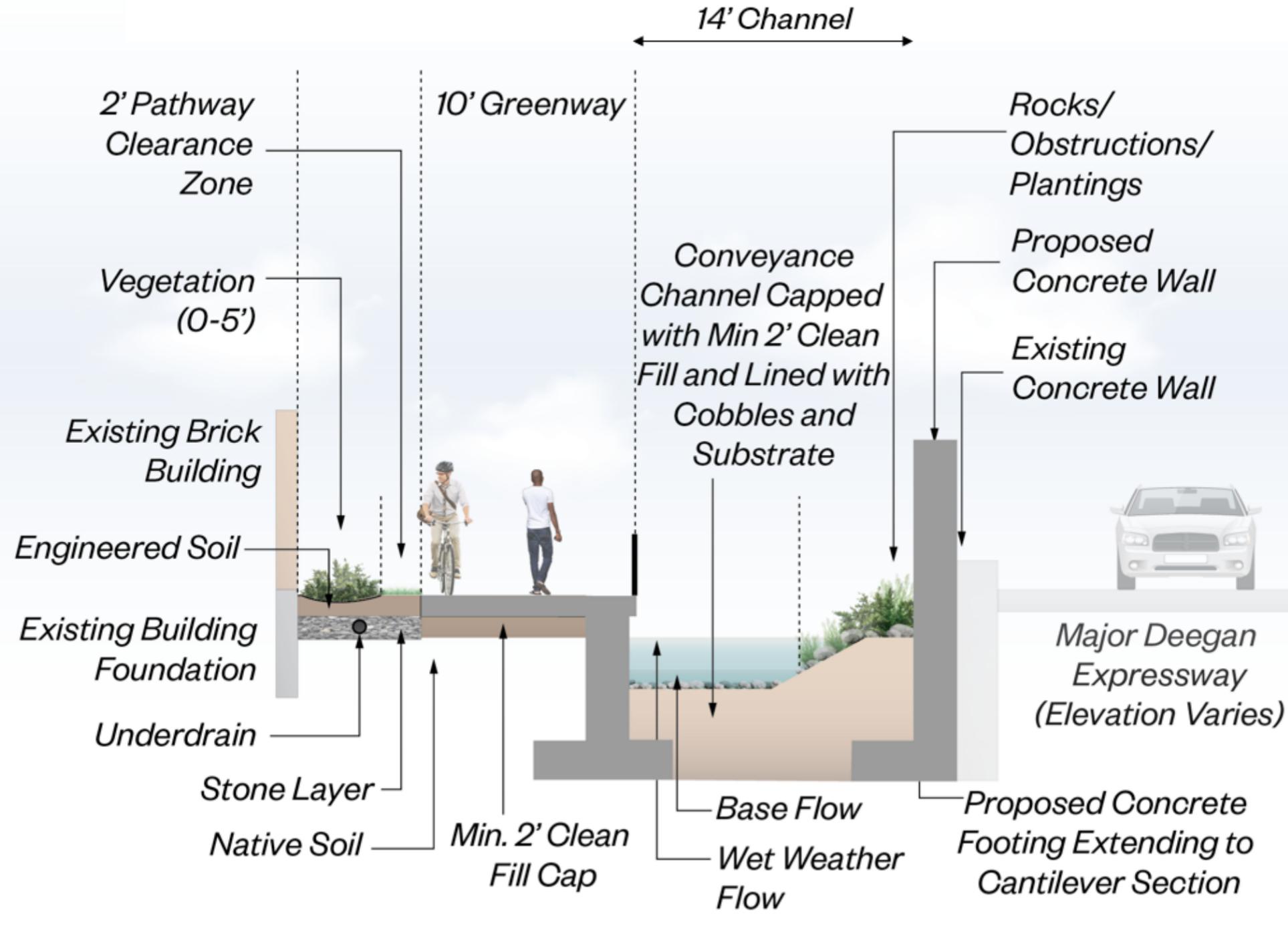
21-30' Channel





Proposed rendering of open channel and greenway alignment within CSX property

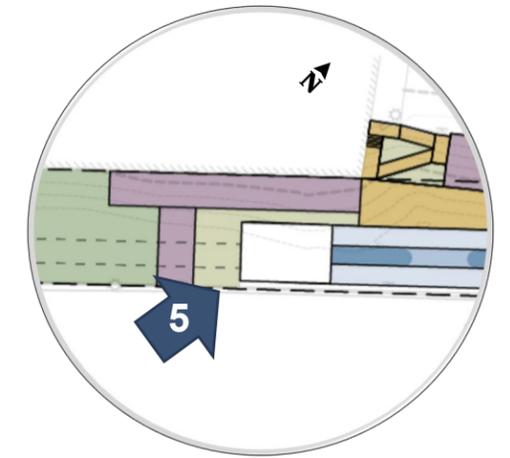
# Typical Narrow Cross Section With Greenway



CSX – Open Channel Design



Proposed rendering of open channel and cantilevered greenway alignment within CSX property



Key Plan

### 6 – Example Photo of Proposed Intake Structure at the End of the Tibbetts Brook Daylighting

A trash rack designed for self-cleaning will be installed for floatables control.

Proposed intake structure will also incorporate wing walls to direct flow into closed conduit.



**Steel Picket Fence**



**Educational Signage**



**B-Pole Light Fixtures**



**1939 World's Fair Benches**



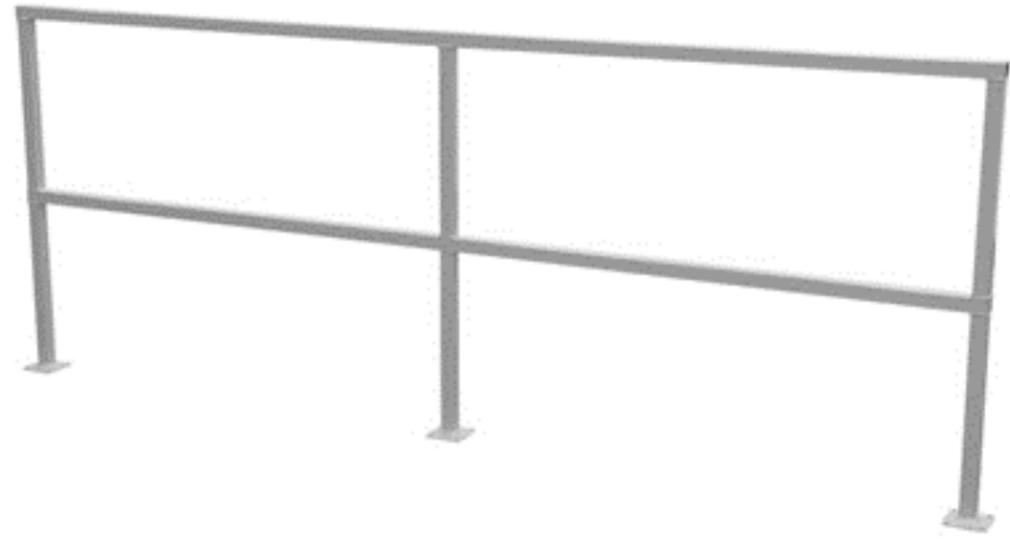
**Fixed/Removable Bollards**



**Porous Asphalt**



**Bike Racks**



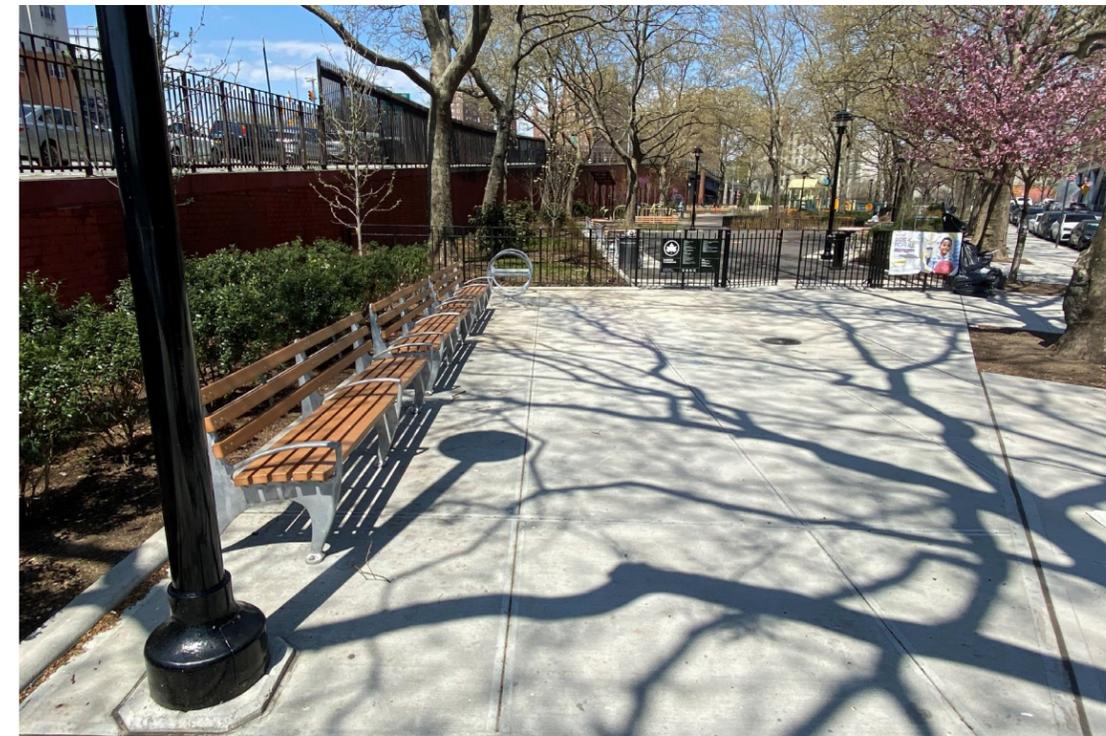
**Aluminum Pipe Rail Fence**



**Educational Signage**



**B-Pole Light Fixtures**



**1964 World's Fair Benches**

# Bullpen



- Ownership: Public ROW
- Adjacent Property Ownership: Public ROW (Putnam Ave W) to the South and Van Cortlandt Park to the North.
- Elevation Difference: Approx. 18 ft
- Ramp Length: Approx. 250 ft
- Noted in ULURP: Yes

Pros	Cons
Greenway connection to a major street.	Larger elevation difference presents constructability and safety concerns.
Direct connection into Van Cortlandt Park	No crosswalk across Van Cortlandt Park South
East/West access	Heavily trafficked street.
	Potential interference with on-/off-ramp of Major Deegan Expressway.



**PROPOSED ACCESS POINT**

- Ownership: Public ROW
- Adjacent Property Ownership: Private property (3800 Putnam Housing Development Fund Corporation) to the South and Public ROW (Putnam Ave W) to the West.
- Elevation Difference: Approx. 9 ft
- Ramp Length: Approx. 125 ft
- Noted in ULURP: No



Pros	Cons
Improved constructability and safety.	Possibly requires sidewalk extension.
Lightly trafficked street.	
Provides easy access to Van Cortlandt Park South via Putnam Ave W.	
Preferred entry/exit location of maintenance vehicles.	

- Ownership: Public ROW
- Adjacent Property Ownership: Private property (3800 Putnam Avenue West) to the North and Private property (Riverdale Crossing) to the South.
- Elevation Difference: Approx. 17 ft
- Ramp Length: Approx. 240 ft
- Noted in ULURP: Yes

Pros	Cons
Greenway connection to a major street.	Very narrow CSX corridor (25 ft). Severely constrained area would sacrifice greenway width.
East/West access	Private ownership directly adjacent to greenway on both sides of street.
	Larger elevation difference presents constructability and safety concerns.



- Ownership: Private property (Riverdale Crossing)
- Adjacent Property Ownership: Private property (Riverdale Crossing)
- Elevation Difference: Approx. 5.5 ft
- Ramp Length: Approx. 75 ft
- Noted in ULURP: No

Pros	Cons
Limited elevation difference	Private ownership.
	Interferes with entrance and parking lot of major commercial property.
	Very narrow CSX corridor (30 ft). Severely constrained area would sacrifice greenway width.



- Ownership: Public ROW
- Adjacent Property Ownership: Private property (Riverdale Crossing).
- Elevation Difference: Approx. 3 ft
- Ramp Length: Approx. 40 ft
- Noted in ULURP: No

Pros	Cons
Limited elevation difference	Private ownership.
Short transition to greenway.	Interference with loading dock for BJs.
	Putnam Ave W (privately owned) is a parking lot for Riverdale Crossing.



- Ownership: Public ROW
- Adjacent Property Ownership: Riverdale Crossing parking lot to the North
- Elevation Difference: Approx. 16 ft
- Ramp Length: Approx. 220 ft
- Noted in ULURP: Yes

Pros	Cons
Greenway connection to a major street.	Very narrow CSX corridor on the North side of 234 <sup>th</sup> Street (30 ft). Severely constrained area would sacrifice greenway width.
	Private ownership directly adjacent to greenway



**POTENTIAL ACCESS POINT\***

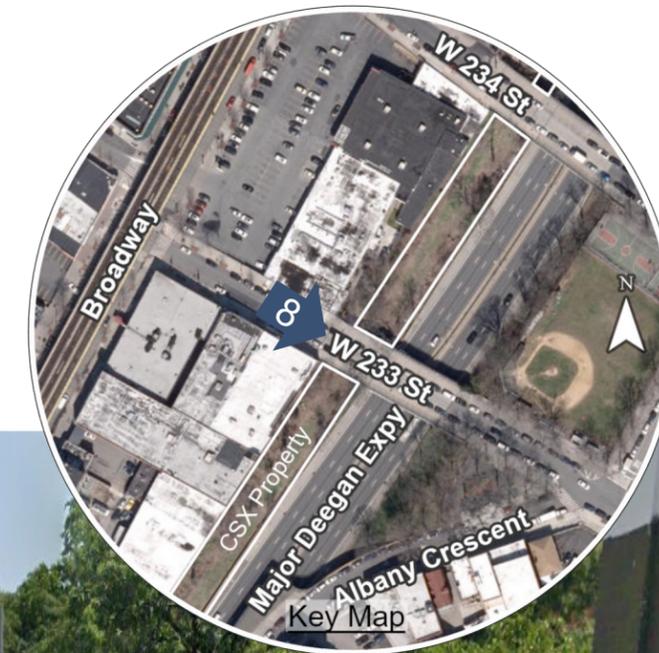
- Ownership: Public ROW
- Adjacent Property Ownership: Shopping center
- Elevation Difference: Approx. 16 ft
- Ramp Length: Approx. 220 ft
- Noted in ULURP: Yes

Pros	Cons
Greenway connection to major street.	Constructability adjacent to private property
East/West access	Limited CSX corridor on the South side of 234 <sup>th</sup> Street (50 ft).
	Constrained area would sacrifice greenway width.



- Ownership: Public ROW
- Adjacent Property Ownership: Private Property to North and South.
- Elevation Difference: Approx. 17 ft
- Ramp Length: Approx. 240 ft
- Noted in ULURP: No

Pros	Cons
Greenway connection to a major street.	Interferes with adjacent existing private building infrastructure on south side of 233 <sup>rd</sup> St.
East/West access	Larger elevation difference presents constructability and safety concerns.



- Ownership of Street: Public ROW
- Adjacent Property Ownership: Private Property to North and South.
- Elevation Difference: Approx. 18 ft
- Ramp Length: Approx. 250 ft
- Noted in ULURP: No

Pros	Cons
Greenway connection to a major street.	Very narrow CSX corridor on South side of 231 <sup>st</sup> Street (40 ft). Severely constrained area would sacrifice greenway width.
East/West access	Interferes with adjacent existing private building infrastructure on North side of 231 <sup>st</sup> Street.
	Larger elevation difference presents constructability and safety concerns.



**PROPOSED ACCESS POINT**

- Ownership: Public Right of Way
- Adjacent Property Ownership: Walgreens Parking Lot to North and Private Commercial Property to South
- Elevation Difference: Approx. 4.5 ft
- Ramp Length: Approx. 65 ft
- Noted in ULURP: No

Pros	Cons
Lightly trafficked street.	
Easy maintenance access to DEP and Parks infrastructure.	
Limited elevation difference	



- Ownership: Public Right of Way
- Adjacent Property Ownership: Private property to the North
- Elevation Difference: Approx. 20ft
- Ramp Length: Approx. 270ft
- Noted in ULURP: Yes

Pros	Cons
Greenway connection to a major street.	Heavily trafficked street.
East/West Access	Larger elevation difference presents constructability and safety concerns.
	Directly adjacent to on-/off-ramp of Major Deegan Expressway.
	No crosswalk across 230 <sup>th</sup> St

