Hall's Island – Concept to Construction

MN Stormwater Summit
May 9, 2019

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A PIECE OF HISTORY

HALL'S ISLAND

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SCHERER BROTHERS – THROUGH TIME

1955

1966-2010

SCHERER BROTHERS – EARLY 2000'S

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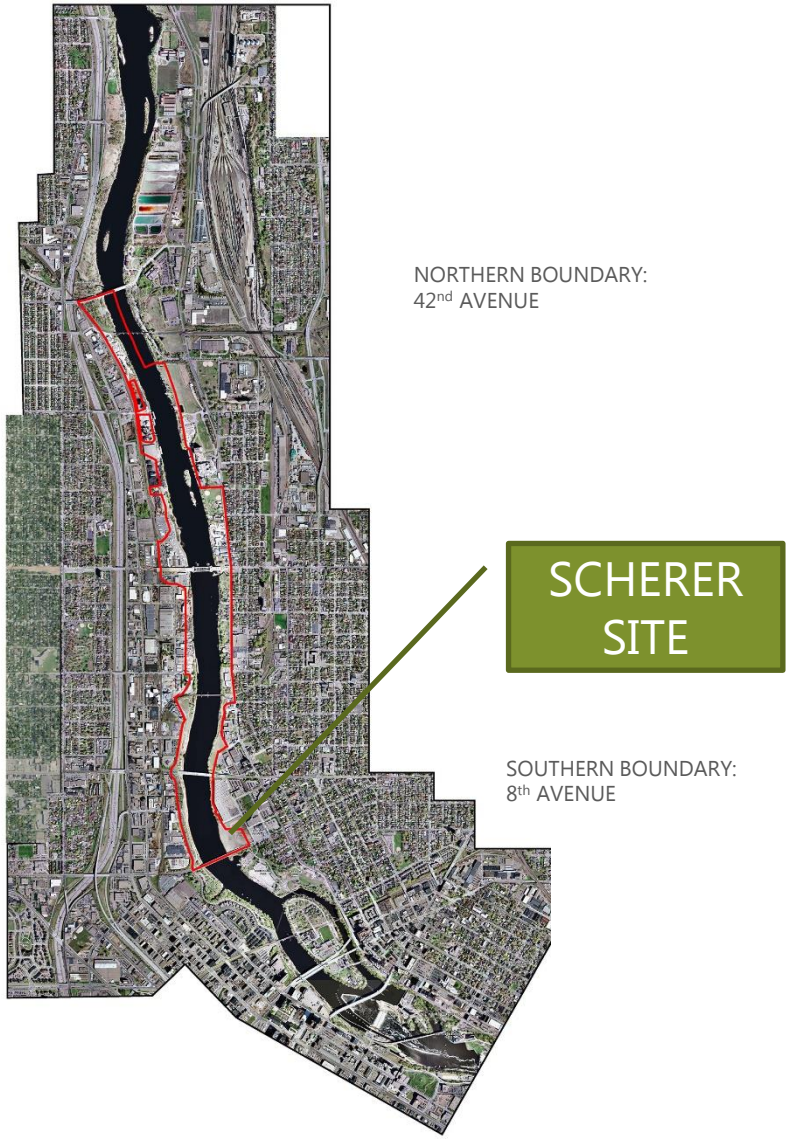
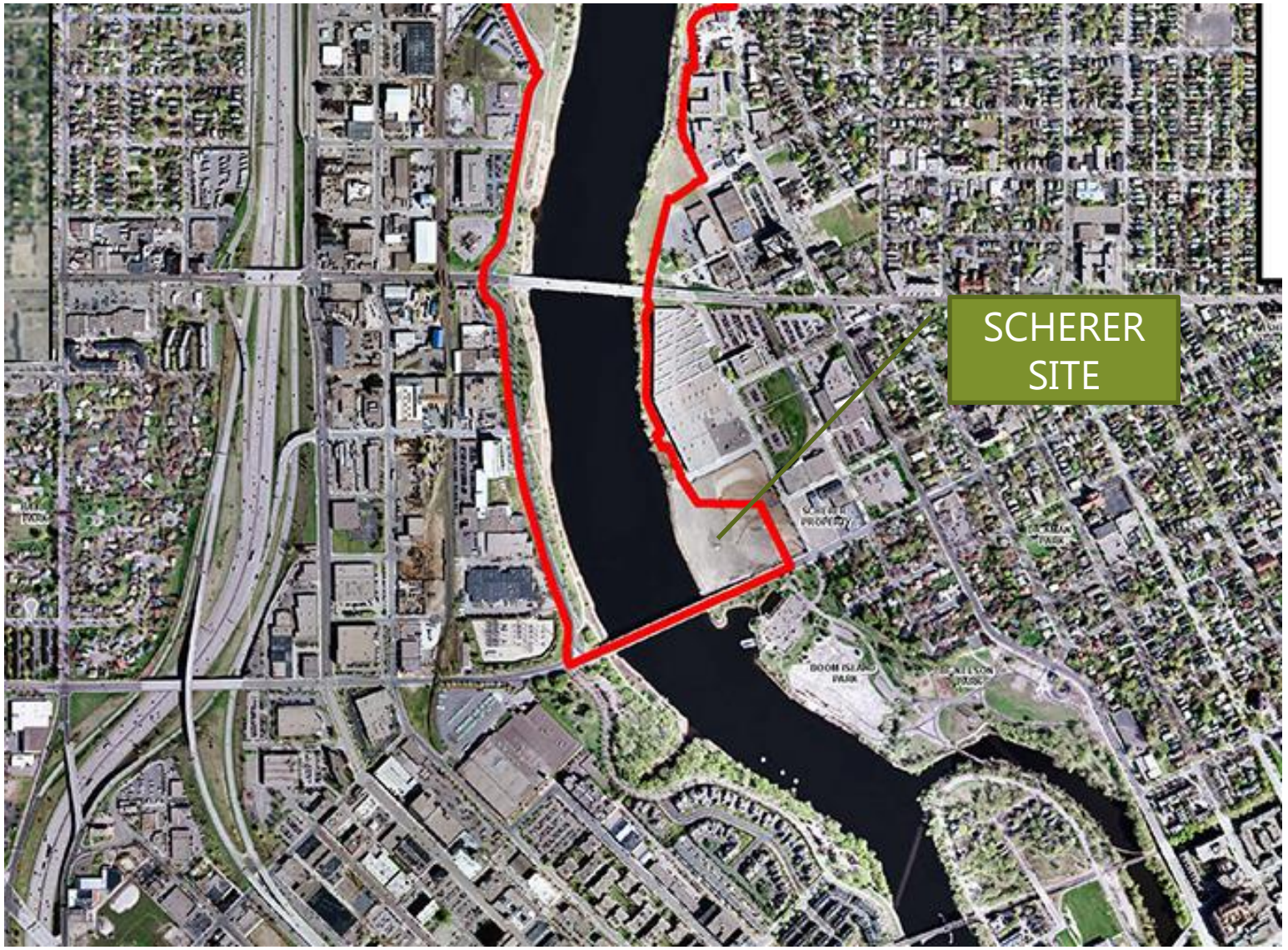
PLANNING: ABOVE THE FALLS REGIONAL PARK



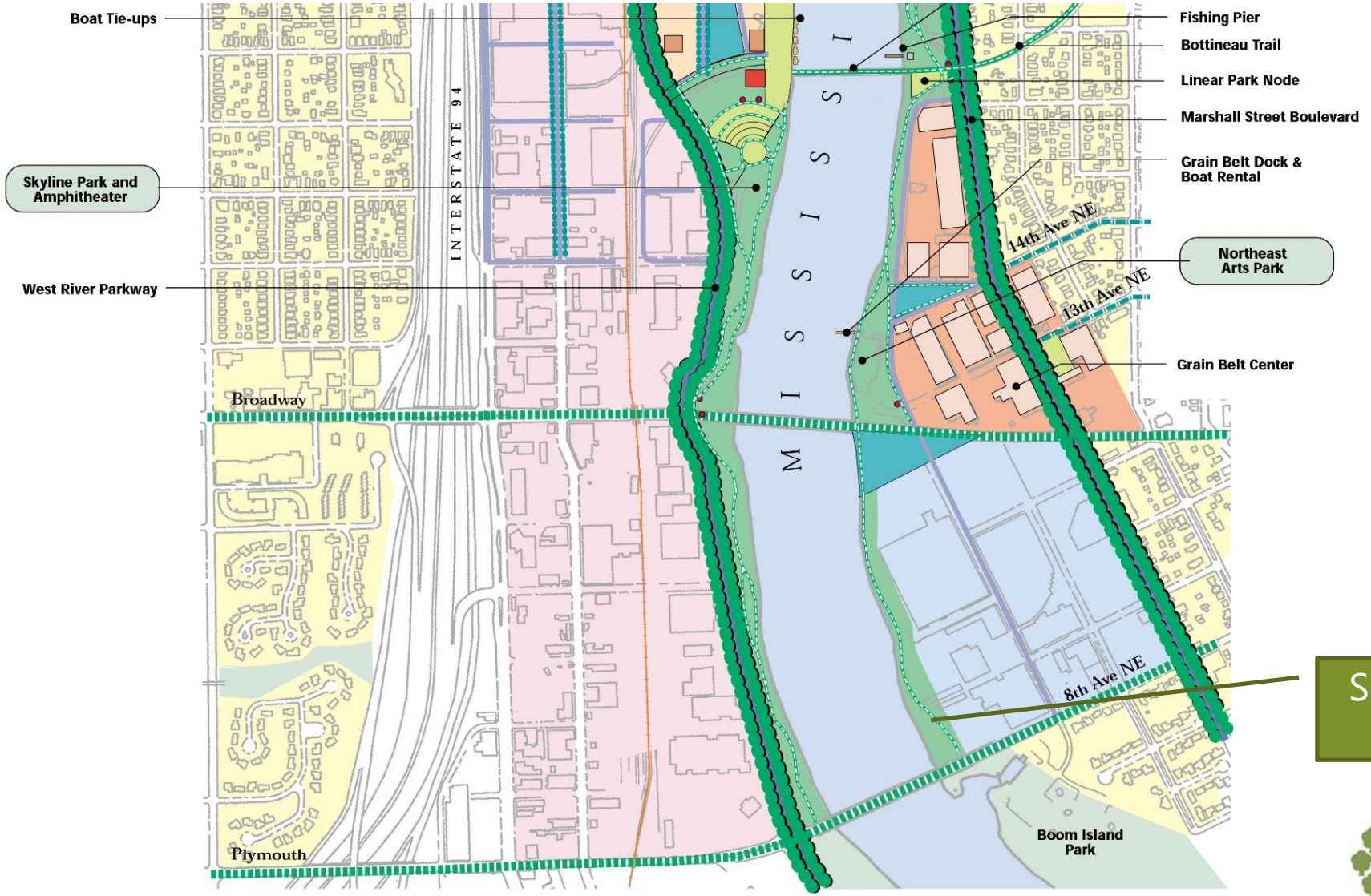
NORTHERN BOUNDARY:
42nd AVENUE

SCHERER SITE

SOUTHERN BOUNDARY:
8th AVENUE



1999 ABOVE THE FALLS REGIONAL PARK MASTER PLAN



SCHERER SITE

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2012 RIVERFIRST and COMMUNITY ENGAGEMENT

CURRENT
SCHERER PARK - SITE PLAN

Community Input:

- Experience the River - Access
- Restore and Improve the River

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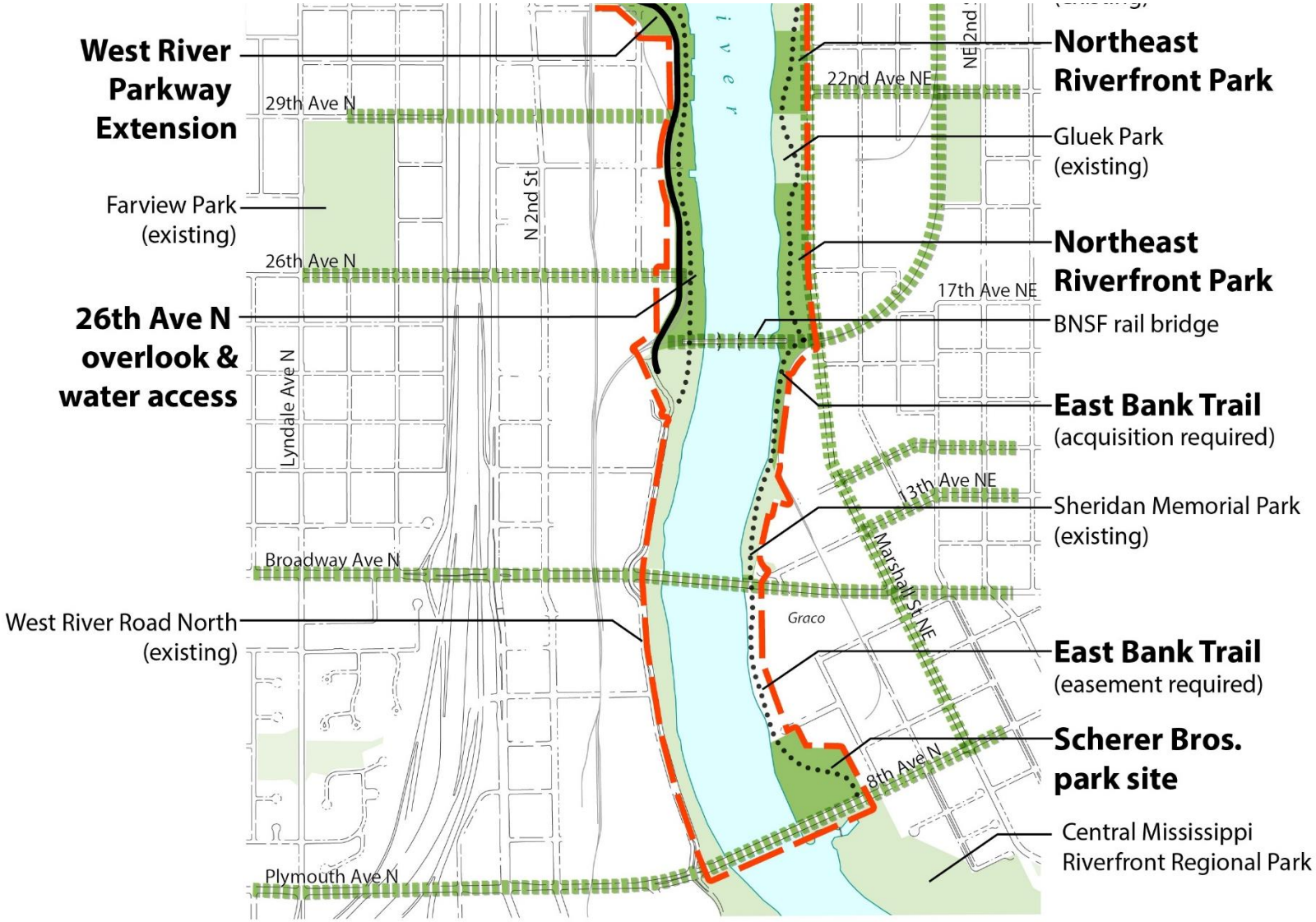
ABOVE THE FALLS REGIONAL PARK MASTER PLAN - AMENDED



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HALL'S ISLAND PHASE 1 – PRIORITY PROJECT

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What is the MWMO?

- Special-purpose unit of local government
- One of three dozen watershed organizations in Twin Cities metro area
- Protect and improve water quality and habitat in the Mississippi River

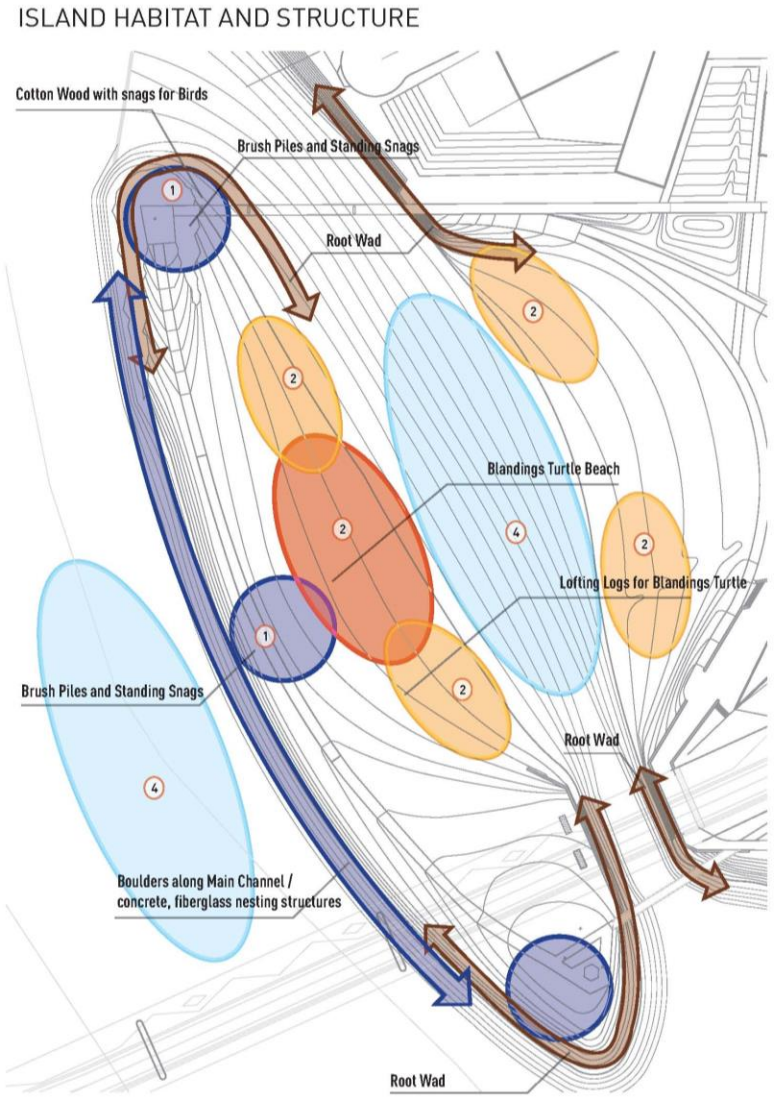
Photo provided by MWMO

Capital Projects

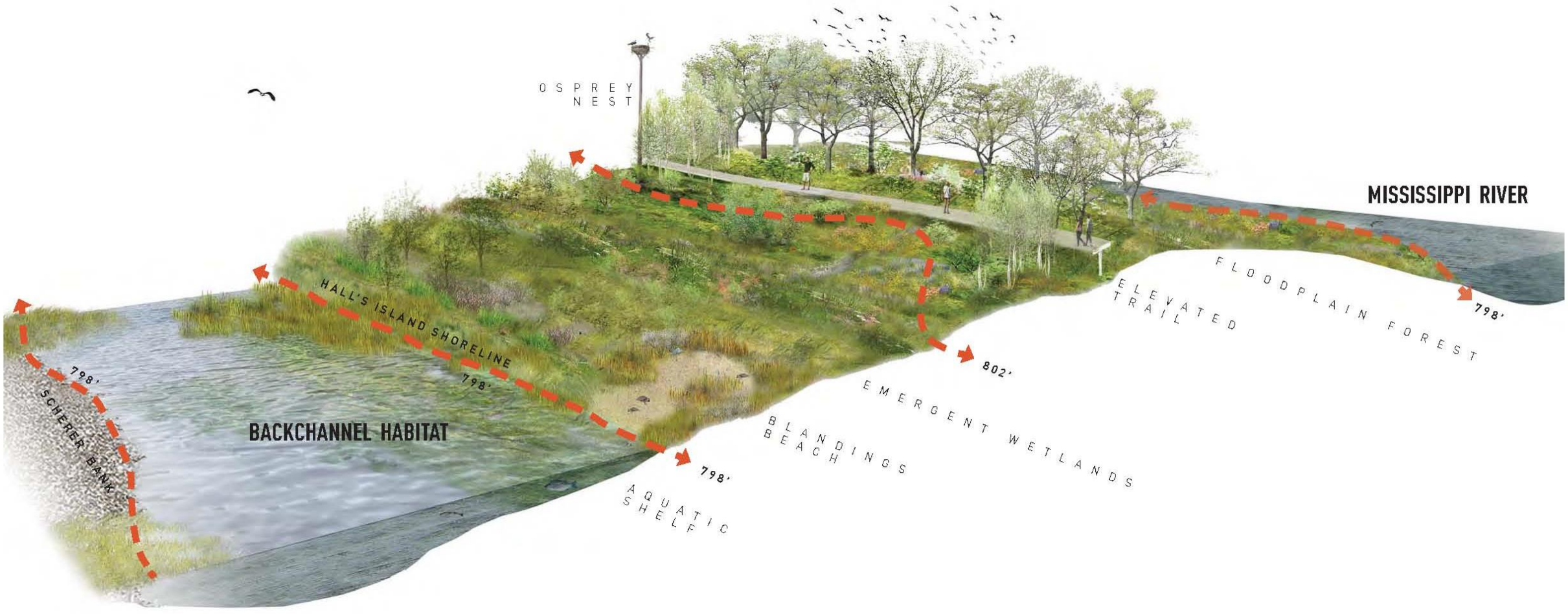
- Innovation
- Water Quality Improvement
- Creation of Habitat
- Public Benefit

Transformation of the Riverfront

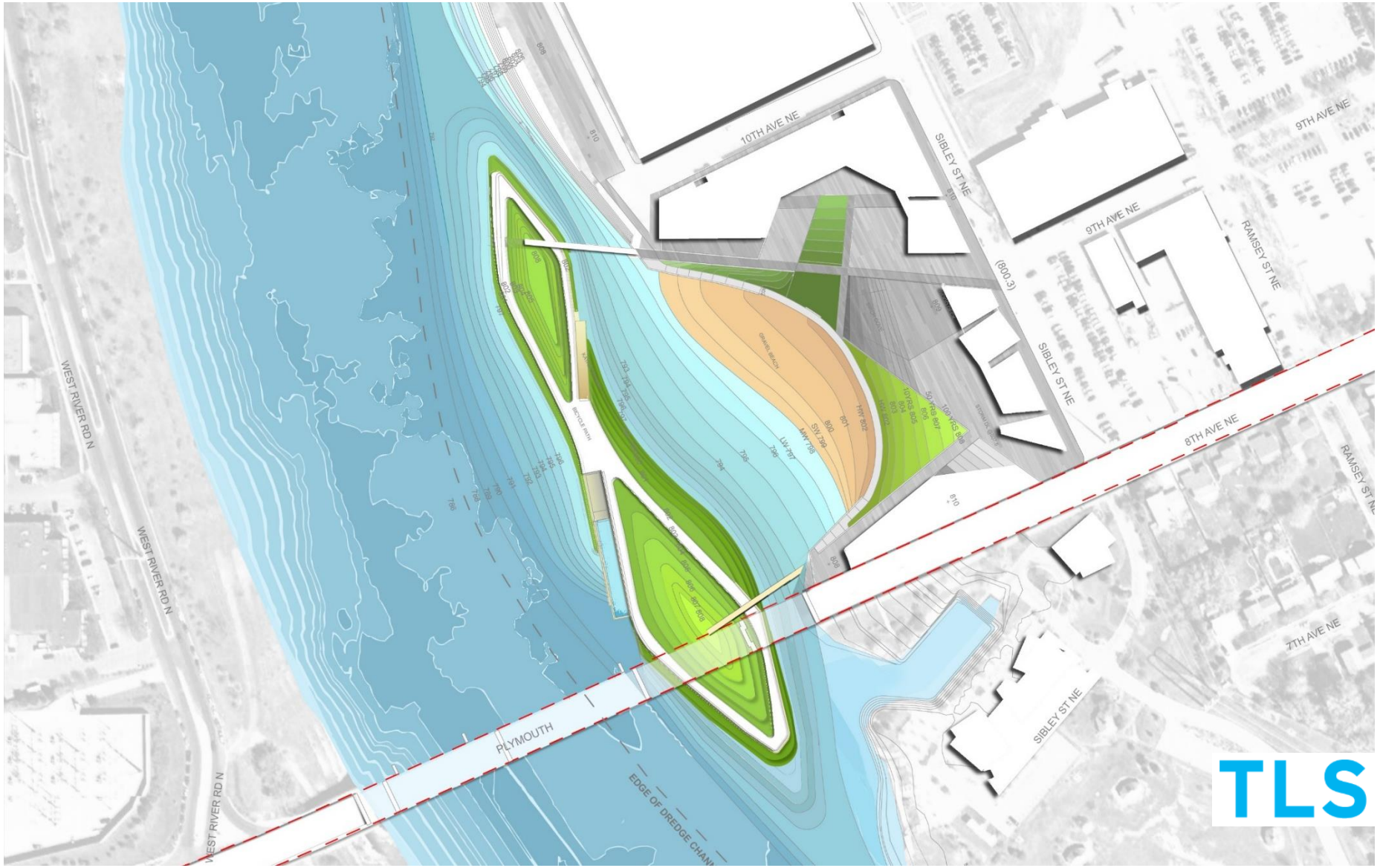
Creation of Habitat



River Bank Reconstruction



Original Schematic Design



TLS Landscape Architecture

Original Schematic Design

Presented Schematic Design to Agencies – Nov. 2012

- The SD combined habitat creation with recreation
- Creating mussel habitat in the back channel was consistent with DNR efforts to help mussels
- The USACE builds islands in the river downstream
- River advocacy organizations were supportive of our design
- We were expecting some level of support from the agencies

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Presented Schematic Design to Agencies – Nov. 2012

- DNR - Placement of fill in a public water to create upland is prohibited by state law
  - Placing fill to build a swimming pool/ice rink, a building and a plaza with paved trails cannot be permitted
  - Only way to permit this is to change the law
  - The primary function of the island must be for habitat

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Legislation

- MPRB was able to get a bill passed requiring state agencies to permit the project.

"Sec. 8. Laws 2010, chapter 361, article 3, section 7, is amended to read:

Sec. 7. **PARKS.**

The Minneapolis Park and Recreation Board may acquire all or part of the entire property known as the Scherer Brothers Lumber Yard for a metropolitan area regional park and may allocate any future appropriations to the board from the parks and trails fund to acquire the property. Notwithstanding Minnesota Rules, 6115.0190, subpart 3; 6115.0190, subpart 5, item E; or 6115.0191, subpart 8, item A; the Minneapolis Park and Recreation Board is authorized to recreate Hall's Island or such similar island located at approximately river mile 855 on the Mississippi River, just north of the Plymouth Avenue bridge, at project site in Sec. 15, T.29 N., R.24 W., Hennepin County, Minnesota, on or adjacent to the property known as the Scherer Brothers Lumber Yard. The commissioner of natural resources shall grant any authorizations, permits, or permissions necessary to effectuate the project, provided that the project is consistent with all other standards and guidelines in Minnesota Rules, chapter 6115. If the project is not constructed within six years of the effective date of this act, the authority provided in this section to reconstruct Hall's Island shall expire. Once recreated, Hall's Island shall remain in public ownership in perpetuity.

Environmental Assessment Worksheet

- New schematic design for the island (RiverFirst)
  - No pool
  - No buildings
  - Simple elevated boardwalk
  - Focused on habitat
- Agency meeting at the start of the EAW
  - A more favorable response to the concept
  - Wanted 60% design to adequately assess the issues

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Permitting Challenges

- Upper SAF lock closed 2015 - dredging ceased, USACE Section 408 not required
- Tight timeline – environmental review, permitting, full design & construction before 6-year deadline (2020)

Unit of Government	Type of Approval
U.S. Army Corps of Engineers	• Section 10 Permit
Federal Emergency Management Agency	• Conditional Letter of Map Revision (CLOMR)
U.S. Fish and Wildlife Service	• Section 7 Concurrence
Minnesota Pollution Control Agency	• Section 401 Water Quality Certification • NPDES/SDS Construction Stormwater Permit • Response Action Plan
Minnesota Department of Natural Resources	• Work in Public Waters Permit
State Historic Preservation Office	• Section 106 Concurrence
MN Office of State Archaeologist	• Project Approval
City of Minneapolis	• Preliminary Development Review, including Floodplain Permit • Conditional Use Permit • Right-of-Way Permit (for work under Plymouth Avenue Bridge) • Bridge Engineer Approval
Minneapolis Park & Recreation Board	• Construction Permit • Maintenance agreement with City of Minneapolis

Permitting – what went well

- Early agency engagement allowed team to understand concerns before design
- Agency updates with design changes helped build trust
- In-person, pre-application meetings to develop common understanding, address questions before application submittal

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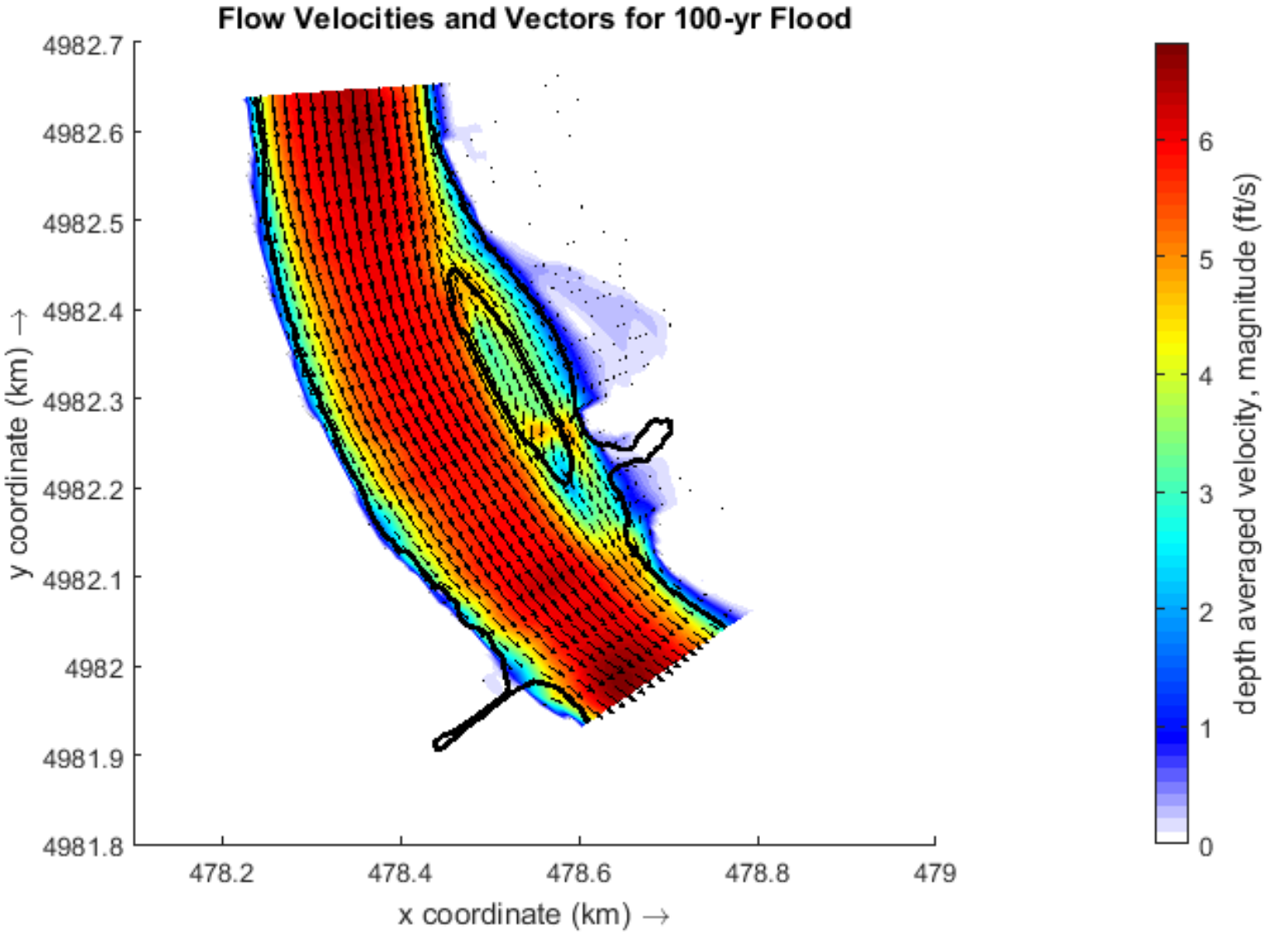
HEC-RAS FEMA Flood Modeling

- No net rise of FEMA flood elevations
  - Many iterations to island size and shape
  - Steep slopes on river side (2H:1V)
  - Maximize opening under bridge (bridge stability analysis)

2D Sediment and Scour Modeling

- Minimize sediment deposition in the side channel
- Minimize scour
  - Many iterations to island size and shape
  - Side channel velocity




VOLVO
VOLVO

2D Sediment and Scour Modeling

- Minimize sediment deposition in the side channel
- Minimize scour
  - Many iterations to island size and shape
  - Side channel velocity

Construction – Nov. 2017 to Spring 2018

- Low winter flows – 5,000 CFS
- Excavate the channel and build the island "in the wet" - avoid very high sheet pile and dewatering costs
- Frozen soil
- Ice and snow

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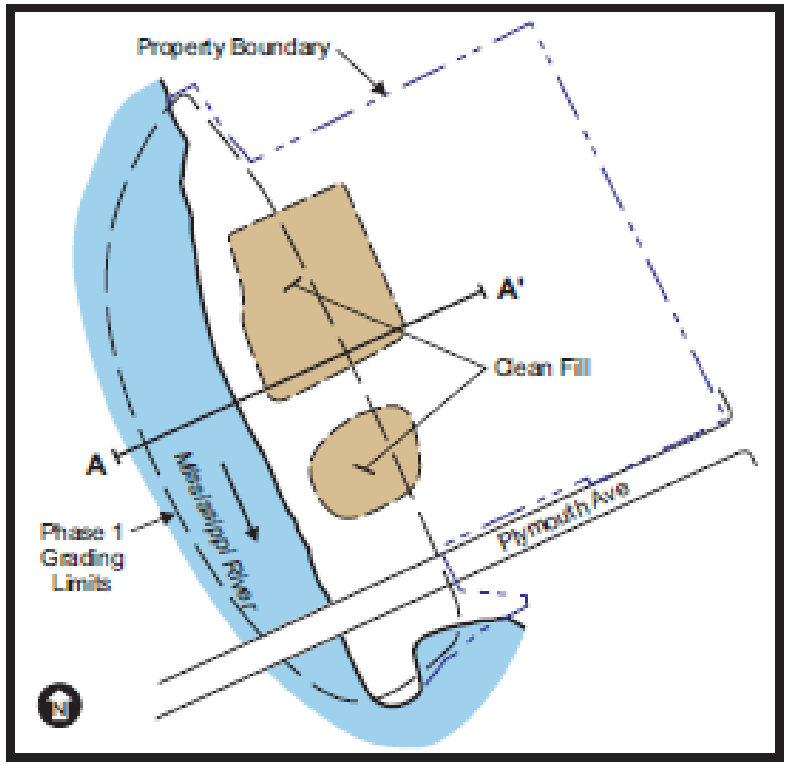
330E
VEIT


VEH

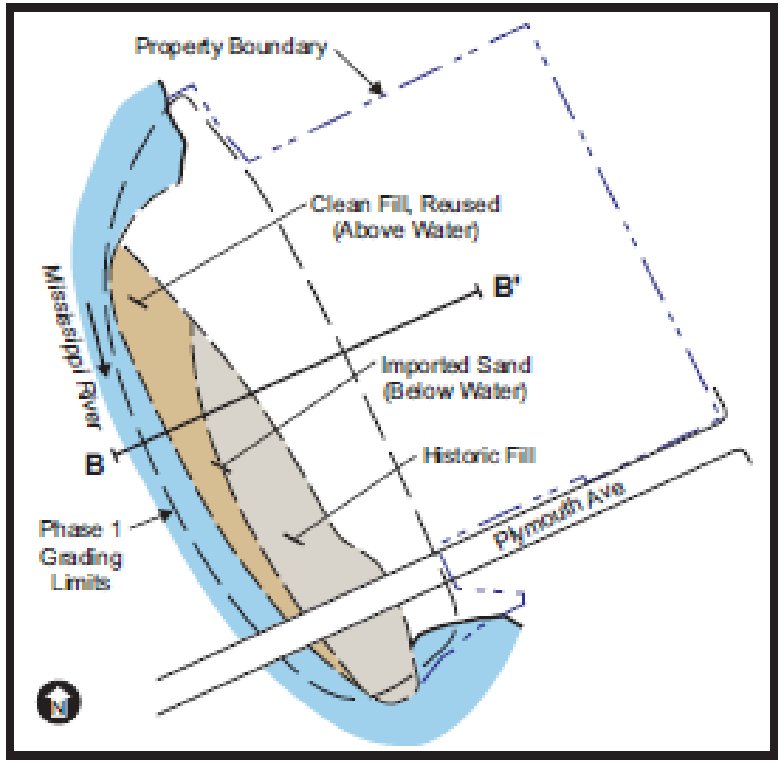
Difficult Existing Soil Conditions

Construction Sequence

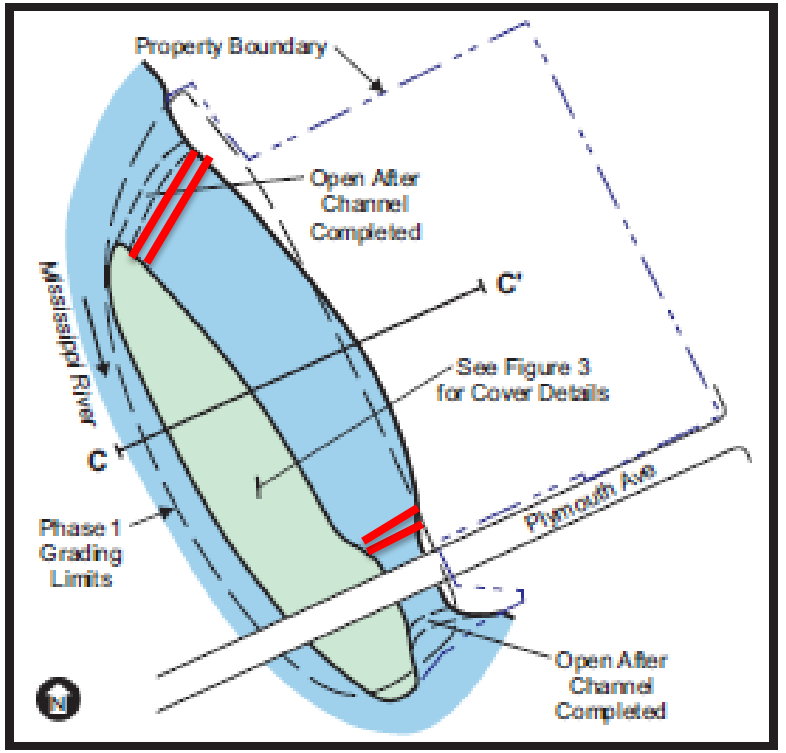
A. EXISTING CONDITIONS



B. GRADING AND ISLAND CONSTRUCTION



C. SIDE CHANNEL EXCAVATION AND COVER PLACEMENT



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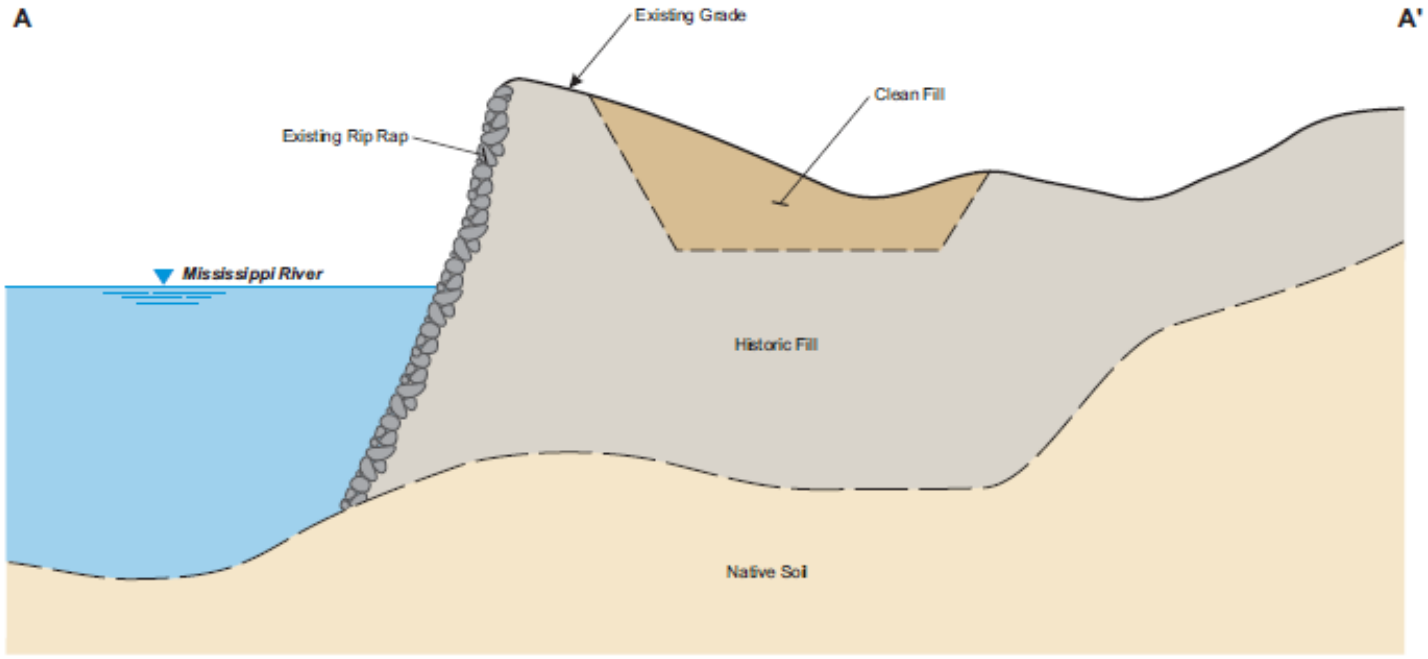
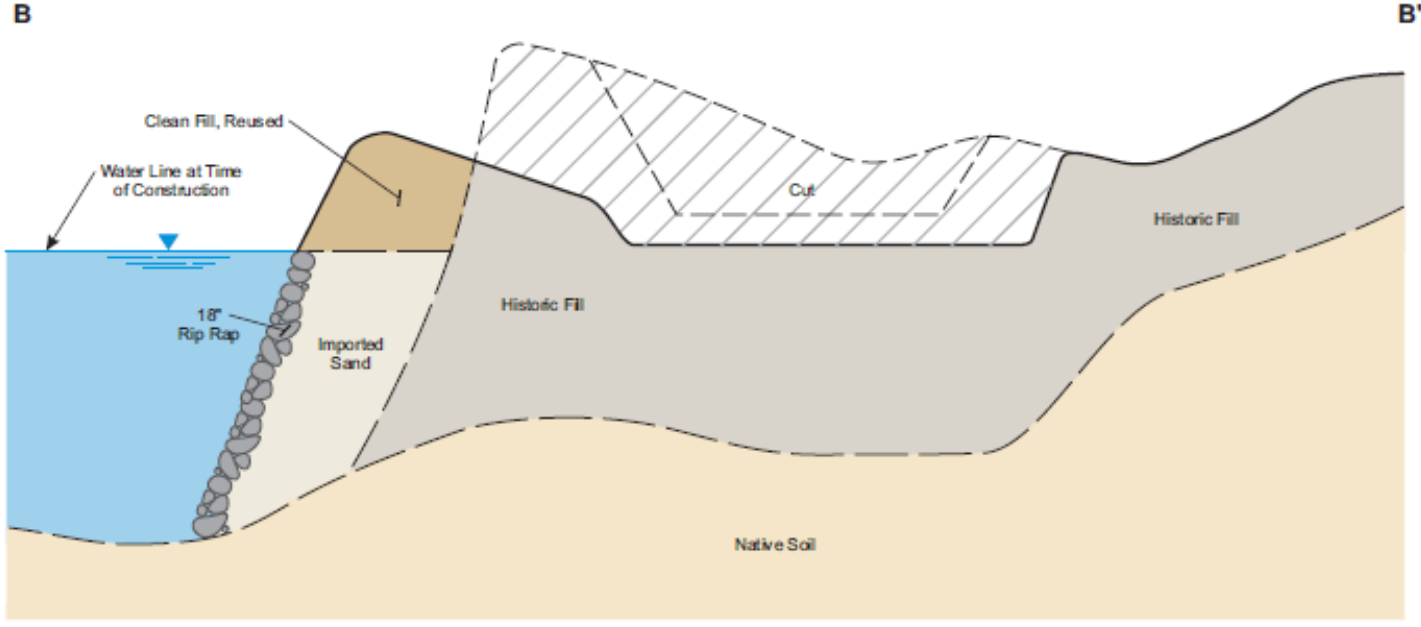
Construction - Sections

- Reuse ex. soil if possible
- Fill in river w/Super Sand just above water line (23,000 CY)
- Excavate side channel down to water line first



NOTE: Drawing not to scale. Vertical scale exaggerated.

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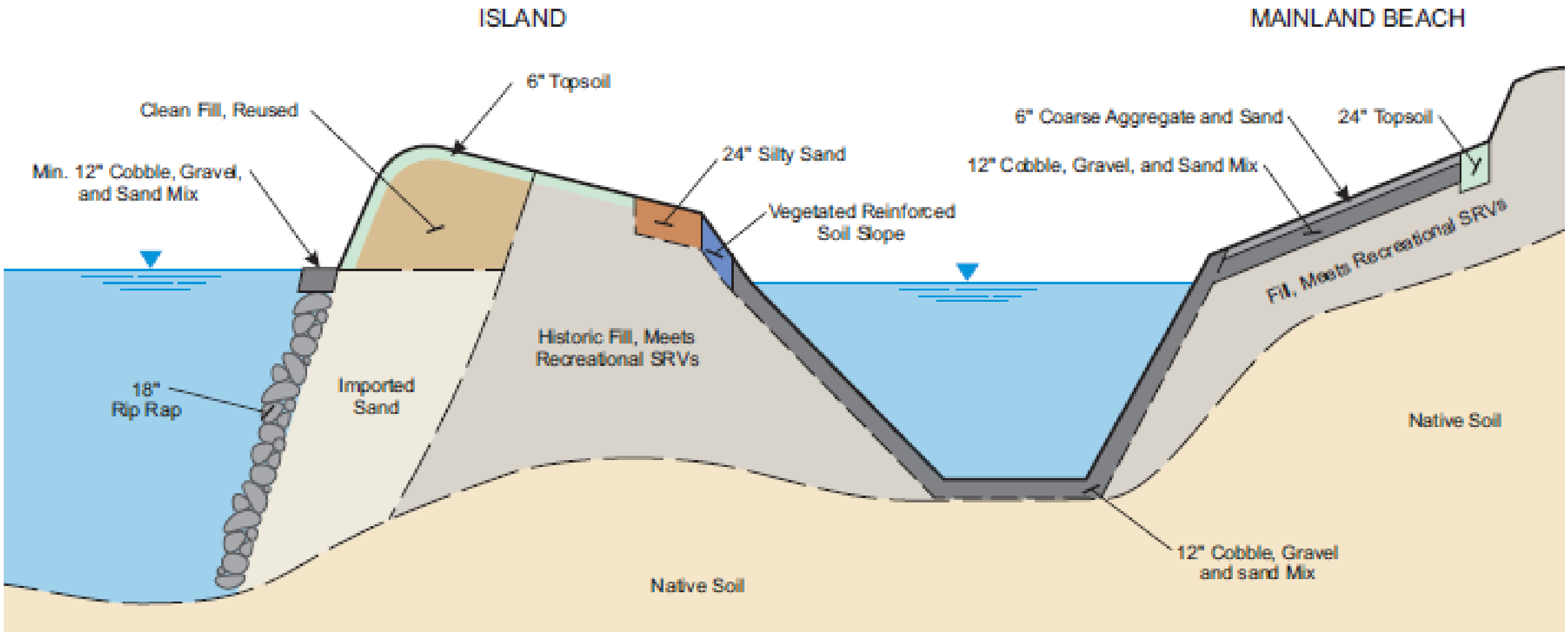
Tight Budget - $4.2M for construction

- Maximize reuse of site soil to build the island
- Removed 55,000 CY contaminated soil and debris
- Reused 10,000 CY of clean soil and rip rap

Final Cross Section of Hall's Island



Construction Time Lapse Videos on YouTube

- Go to YouTube and search “Hall’s Island Time Lapse”
- Also an informational video produced by MWMO

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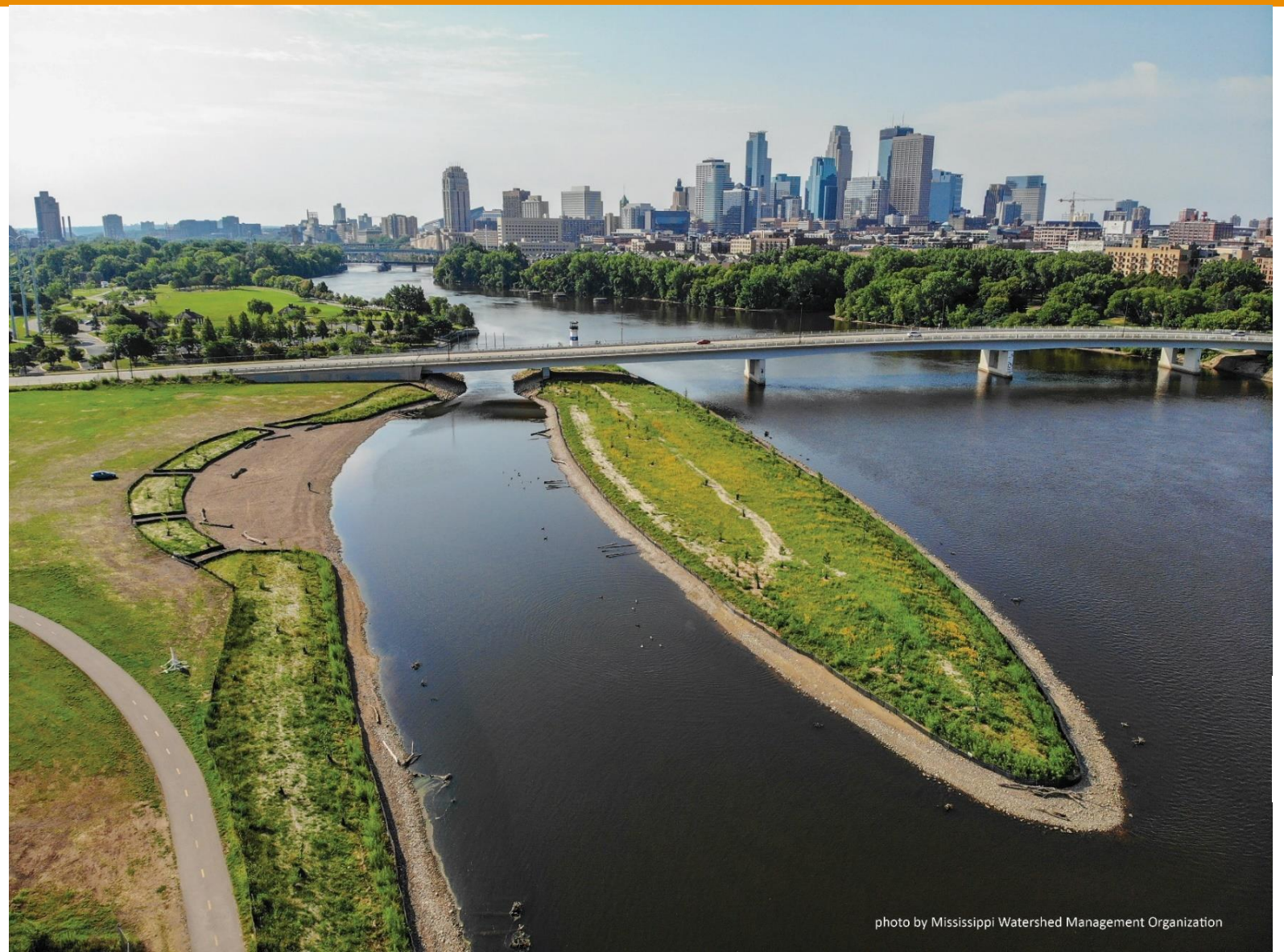
- Created 3 acres of new habitat, tripled the natural shoreline
- Provided public access to the river

Next Steps


+805'
+810'
+810'
5%
+809'
+808.5'
+808.5'
+808'

Questions?



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