

What we Heard

Community Goals & Themes of the Project

Early Thoughts & Themes from the Community

"An artful bridge that is safe, accessible to all, and merges the history of the area with the natural environment"

"Would love to see this be a start to rectify the wrongs of I-94 cutting off north side from the river"

"Any connection between parts of the city that have been walled off from others is a step in the right direction."

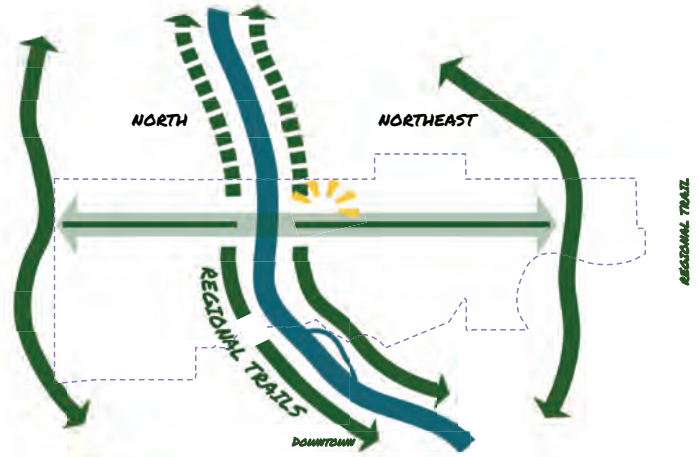
"Connecting Northeast and North Minneapolis would be a transformational walking and biking connection"

"High visibility, easy to and use, iconic, and a place to stop and enjoy the river."

"Music, food vendors, kids activities, learning and river"

"Accessible, walkable, bikeable, rollable."

"It would be good to see a bridge that was in harmony with the environment."



Connection

Promote connections to the environment & river



Arts & Culture

Celebrate the history and culture of communities on both sides of the river



Environment

Consider the impact of past city planning decisions & environmental injustices



Gathering

Create spaces for people to gather



Safety

Make it comfortable for people walking, biking, and rolling



What are our ingredients for building a river crossing?

ACCESS & CONNECTION

STROLLING AND ENJOYING THE SCENERY

LANDSCAPE & FRAMING

SLOW TRAFFICKING & APPROACH

FLEXIBILITY

BIODIVERSITY & ECOLOGY

ACTIVE TRANSPORTATION & RECREATION

COMMUNICATE AND CONNECT

GATHERING & LINGERING

ART AND CULTURE

RELAXATION AND RESPITE

EDUCATION & ENVIRONMENT STEWARDSHIP



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What we heard? Applying Values

Recent Events and Ongoing Engagement

Who have we heard from:

- Recent Engagement
- Open houses
- Site tours
- Neighborhood and community meetings

Key questions to ask when looking at the conceptual direction to date.



Where can the crossing



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Arts & Culture

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... provide opportunity for arts and cultural intervention in harmony with the landscape. Provide a dedicated plaza for local programming, highlighting local foods, and interactive play.



Environment

Consider the impact of past city planning decisions & environmental injustices

... encourage conservation, enhancing habitat development, provide opportunities for educational programming and family friendly activities on the water.



Gathering

Create spaces for people to gather

... provide opportunity for gathering like a plaza space, parks, and food trucks. Seating, benches, grass, or shaded and grass covered areas.



Safety

Make it comfortable for people walking, biking, and rolling

Key Features to provide to ensure safety:

- good lighting
- covered / protected areas
- handrails
- ease of maintenance
- Minimize conflicts between cyclists and pedestrians

Precedents & Themes

to guide the design of a new crossing

Between Open House #2 and an online follow-up survey the project engaged with approximately 600 more people across the community.

Feedback was provided in various forms, including survey responses, conversations, and written opinions.



Site Tours & Continuing Engagement

Throughout discussions we heard that arts and culture should be represented strongly on the bridge, and be framed by robust environmental treatments on both sides of the river.



Verbal and written feedback focused on preference for amenities, park program, materiality, and the types of activities the community at large would like to see happen on the new crossing. These themes of connection have remained consistent through both phase 1 and 2 engagement.



Project Information

Timeline & agencies having jurisdiction over the project

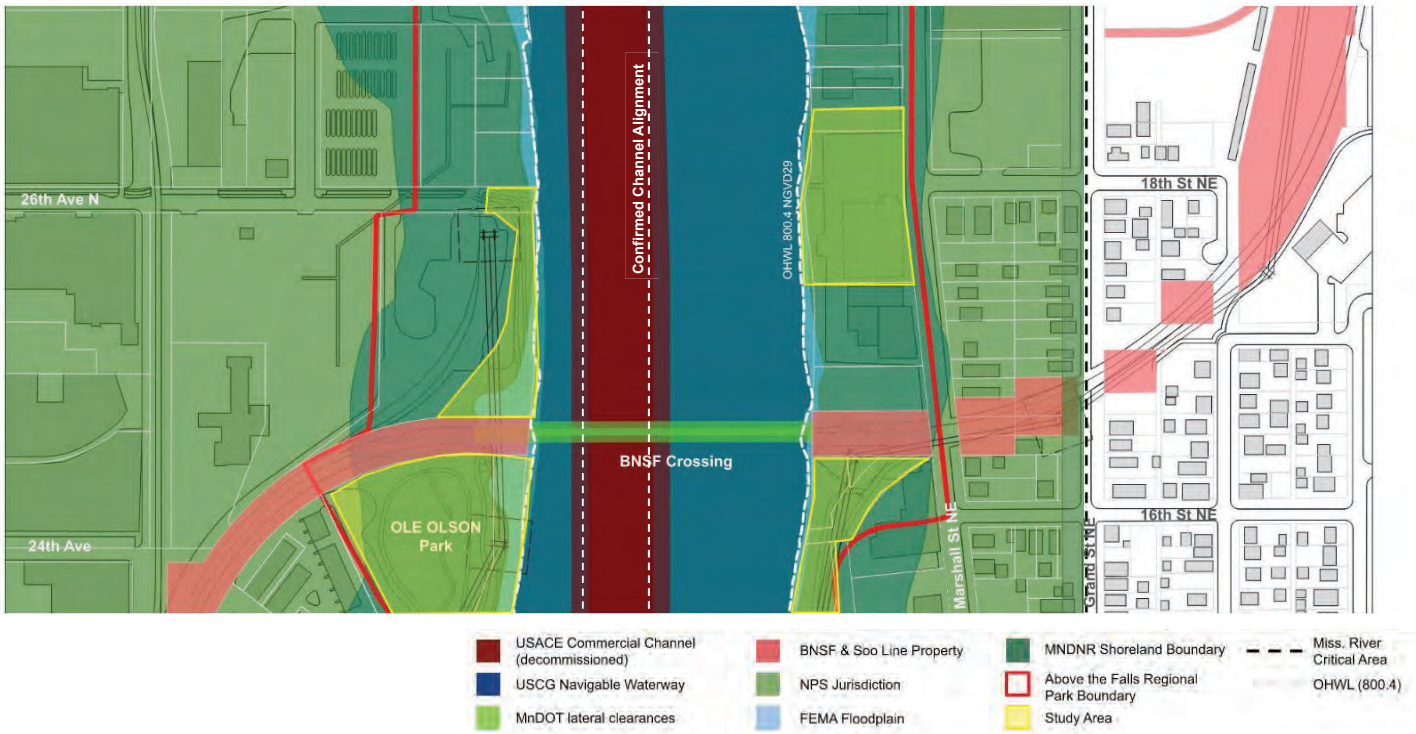
Project Timeline*

*Project Timeline Contingent on funding availability



Who we have met with so far

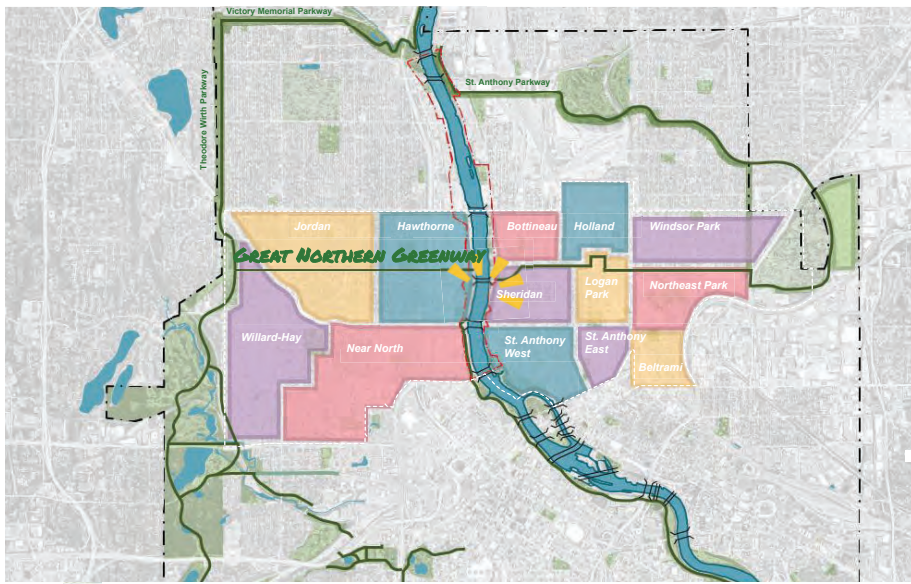
MARCH 6TH U.S. Coast Guard
FEBRUARY 27TH U.S. Army Corps of Engineers
FEBRUARY 26TH National Park Service
 U.S. Fish & Wildlife Service
 FEMA - Federal Emergency Management Agency
 BNSF RAILWAY
MARCH 17TH DEPARTMENT OF NATURAL RESOURCES - Minnesota Department of Natural Resources
FEBRUARY 26TH DEPARTMENT OF TRANSPORTATION - Minnesota Department of Transportation
 MPCA - Minnesota Pollution Control Agency
 BWSR - Minnesota Board of Water & Soil Resources
 DEPARTMENT OF ADMINISTRATION - STATE HISTORIC PRESERVATION OFFICE - State Historic Preservation Office
MARCH 5TH Minneapolis - City of Minneapolis Public Works
MARCH 17TH MISSISSIPPI WATERSHED MANAGEMENT ORGANIZATION - Mississippi Watershed Management Organization (non-regulatory)



The Study Area

Where we're looking

Project Context



- Green Parkway Connection
- Above the Falls Park Boundary

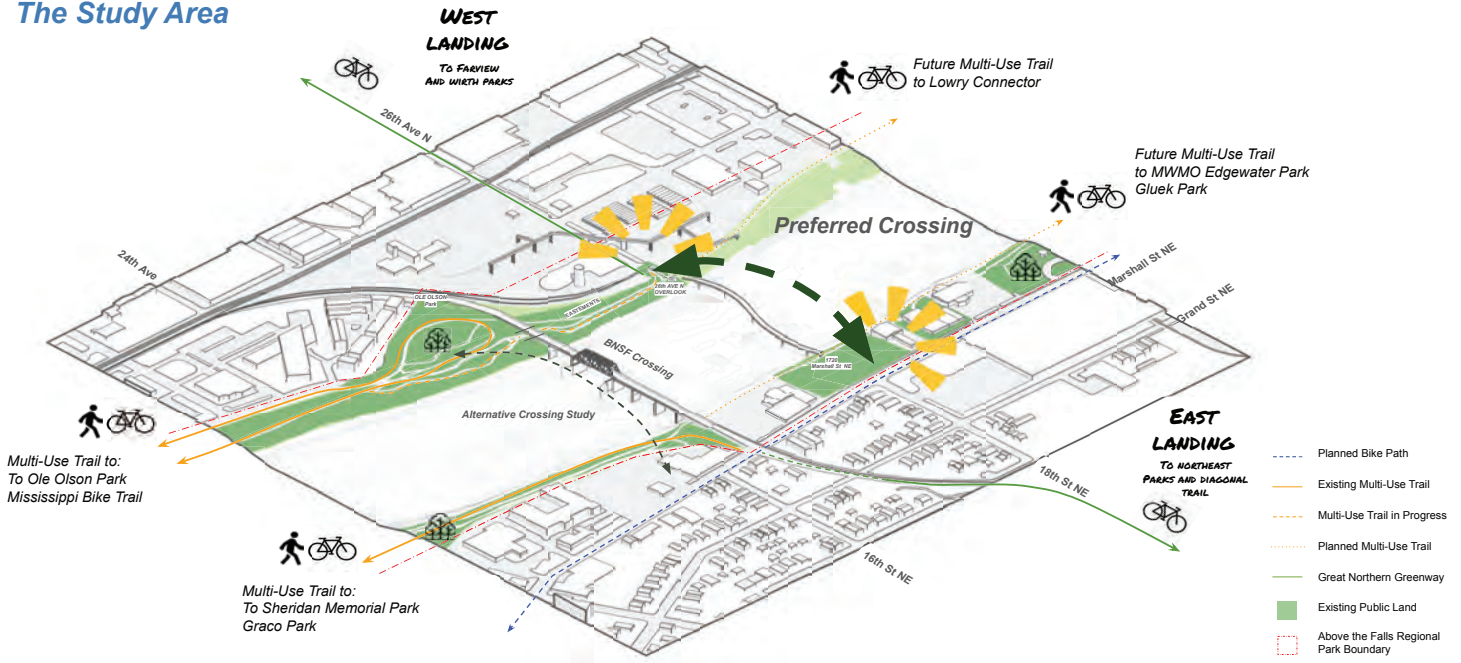


East Bank Connection, NE 18th Ave Multi-Use Trail Profile



West Bank Connection, N 26th Ave Multi-Use Trail Profile

The Study Area



West Bank



West bank at 26th Ave N Overlook



Adjacent industrial use

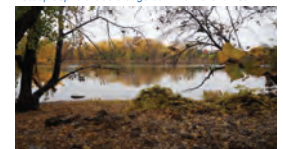
East Bank



East bank at 1720 Marshall St NE



Steep asphalt rubble edge at 1720 Marshall St NE

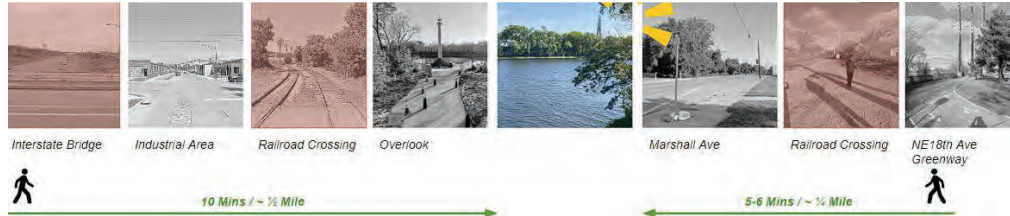


Shallow riparian edge at 1720 Marshall St NE

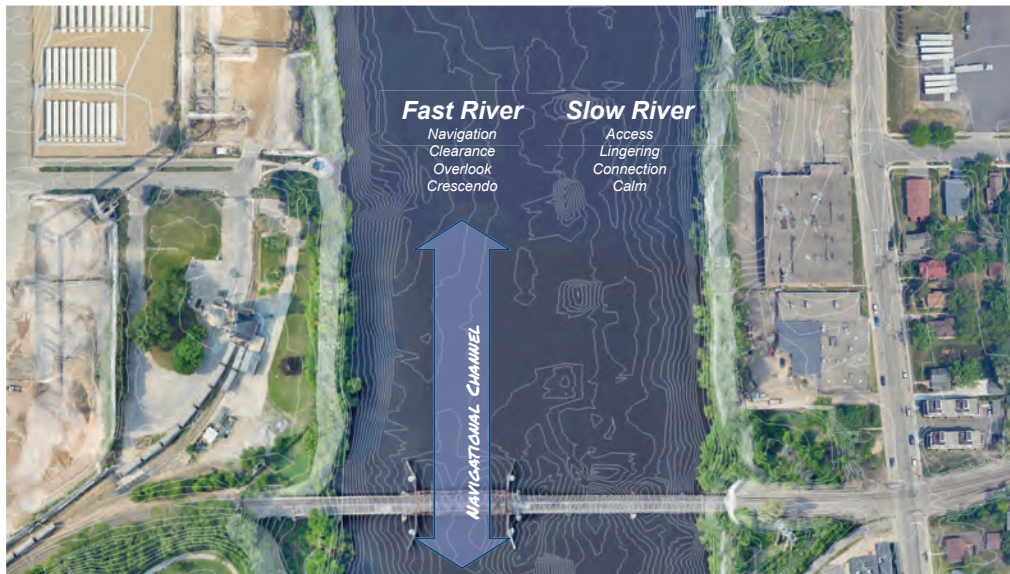
Fast & Slow, Experiencing the Mississippi River

How to create Access to the River

East & West Connectivity



How would you like to engage with the river



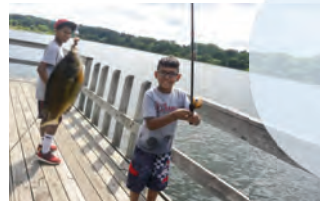
River access parameters

Project Values

- Connection**
Promote connections to the environment & river
... facilitate key connections to existing trail gaps east west and north south. Include opportunities for separated, curved, paved pathways.
- Arts & Culture**
Celebrate the history and culture of communities on both sides of the river
... provide opportunity for arts and cultural intervention in harmony with the river landscape. Provide river access for programming, and interactive play.
- Environment**
Consider the impact of past city planning decisions & environmental injustices
... encourage conservation, enhancing habitat development, provide opportunities for educational programming and family friendly activities on the water.
- Gathering**
Create spaces for people to gather
... provide opportunity for gathering at the river (near, on, around). Provide seating, benches, grass, or shaded areas.
- Safety**
Make it comfortable for people walking, biking, and rolling
... ensure safety with:
 - good lighting
 - covered / protected areas
 - Visual connection and access
 - Minimize conflicts between cyclists and pedestrians



Fast



Slow

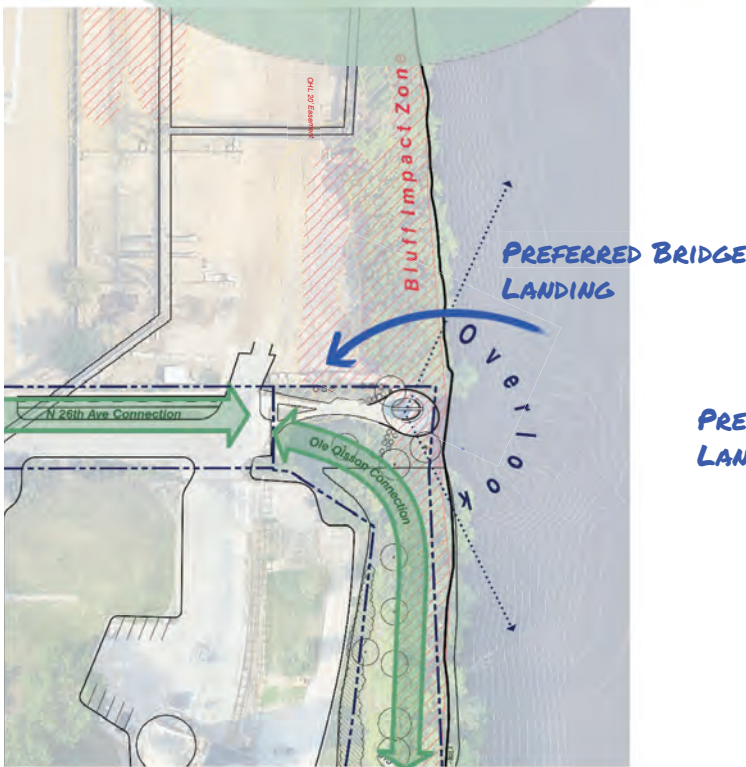
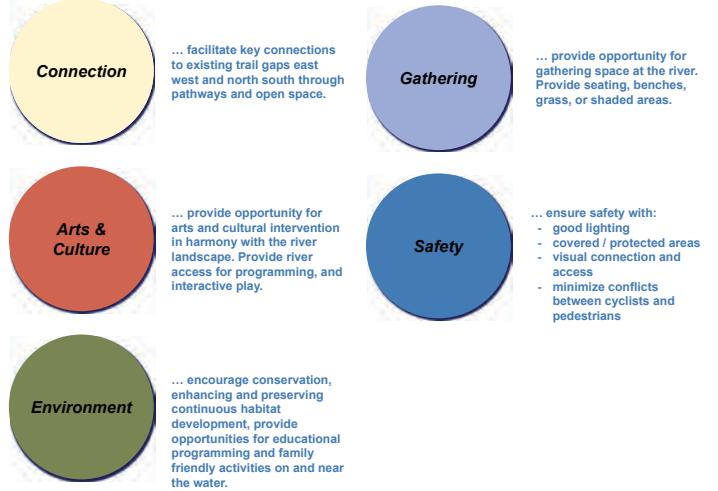
Creating a place for gathering & connection

A Park to Welcome the Bridge

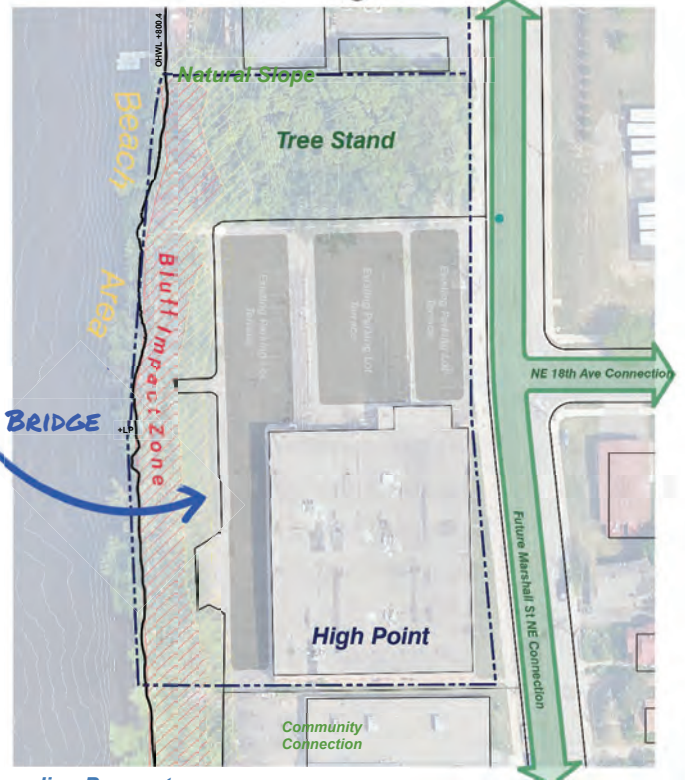
Park Ambitions



Park Parameters

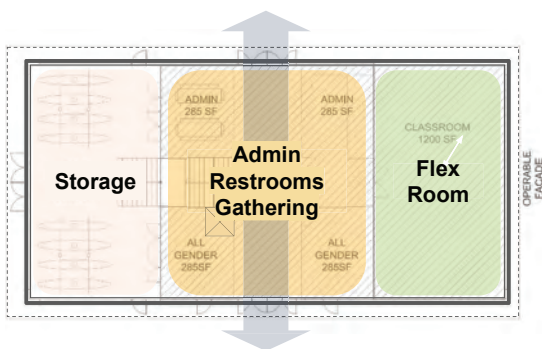


West Landing Parameters



East Landing Parameters

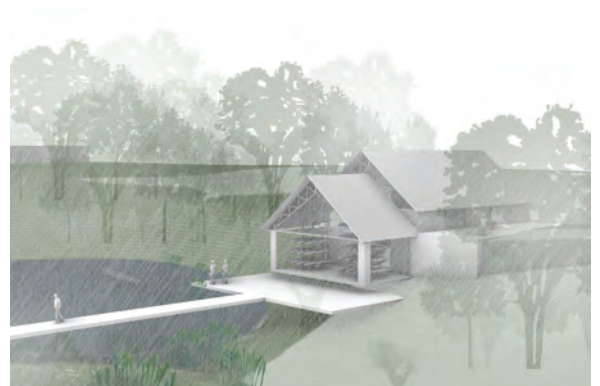
New Water Access & Parks Board Outpost



Preliminary Program

3,000 - 5,000 sf +/-

- Community classroom spaces (x2)
- Storage for kayaks/canoes + rec
- Administration / reception entrance
- Public restrooms
- Loading ability for kayaks/canoes to river



Bridge Design & Structure 101

Overview of Structural Systems

Structural Forms

Typical bridge structures can be developed based on a few predominate structural forms represented below. Each form has its own benefits relative to span length, efficiency, materiality, and constructability.

Bending

Structure: beams elements typically **below** bridge deck

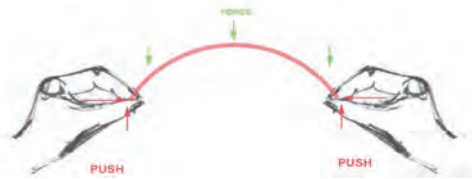
Materials: Steel, concrete, timber



Compression

Structure: arch structures **above** or **below** bridge deck

Materials: Steel, concrete, timber, stone



Tension

Structure: cable systems typically **above** bridge deck

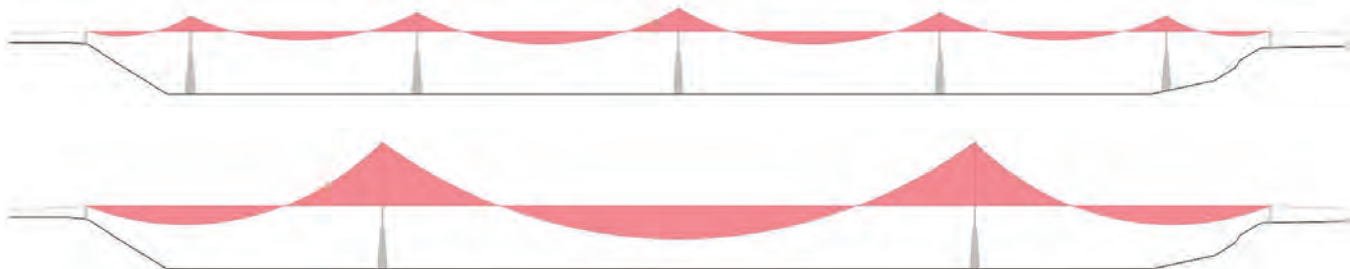
Materials: Steel



Effects of Bridge Span on Structure

A greater number of supports allows for the applied forces to be carried more efficiently through the structure. This is one reason why bridges are often divided into several pieces or spans. The red areas shaded above and below the bridge decks represent the magnitude of the bending moments (stresses) experienced by the bridge in the two schemes shown. Minimizing span lengths reduces the demand on the bridge structure.

Span Scheme	# of Supports	Structure Aligned with Span	Relative Material Usage	Relative Cost
	6	Structure aligned with span (yellow dot)	++	\$\$
	5	Structure not aligned with span (yellow and red dots)	+++	\$\$\$
	4	Structure not aligned with span (yellow and red dots)	++++	\$\$\$
	3	Structure not aligned with span (yellow, red, and blue dots)	+++++	\$\$\$\$
	2	Structure not aligned with span (red and blue dots)	++++	\$\$\$\$



Magnitude of Bending



Bridge Design & Structure 101

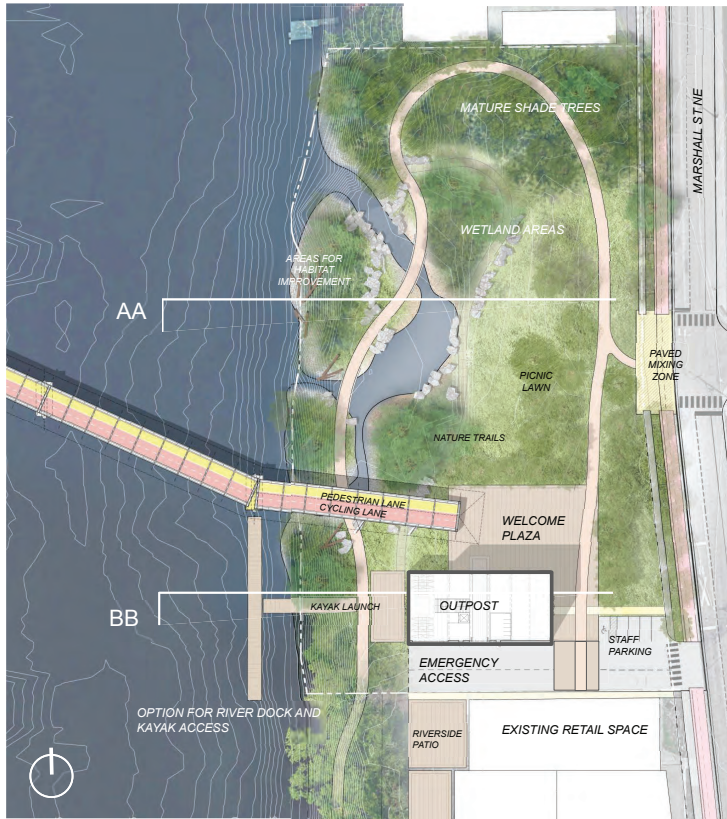
Overview of Structural Systems

References - Span



Re-naturalizing the Water's Edge

Creating Access and Landscape Immersion at the Bridge's East Landing

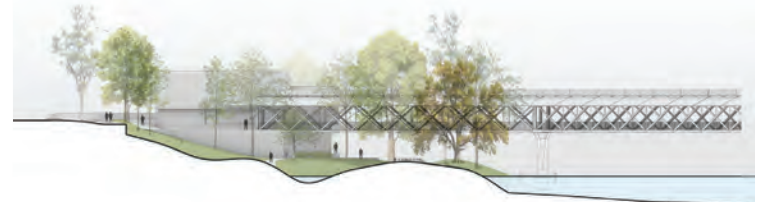


CONCEPTUAL RIVERSIDE PARK UPDATE

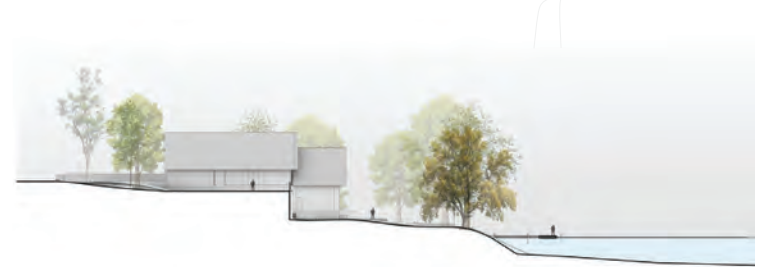


SLIGHT COMMUNITY PREFERENCE FOR HABITAT FOCUS OF RIVERSIDE HAVEN ECOTONE

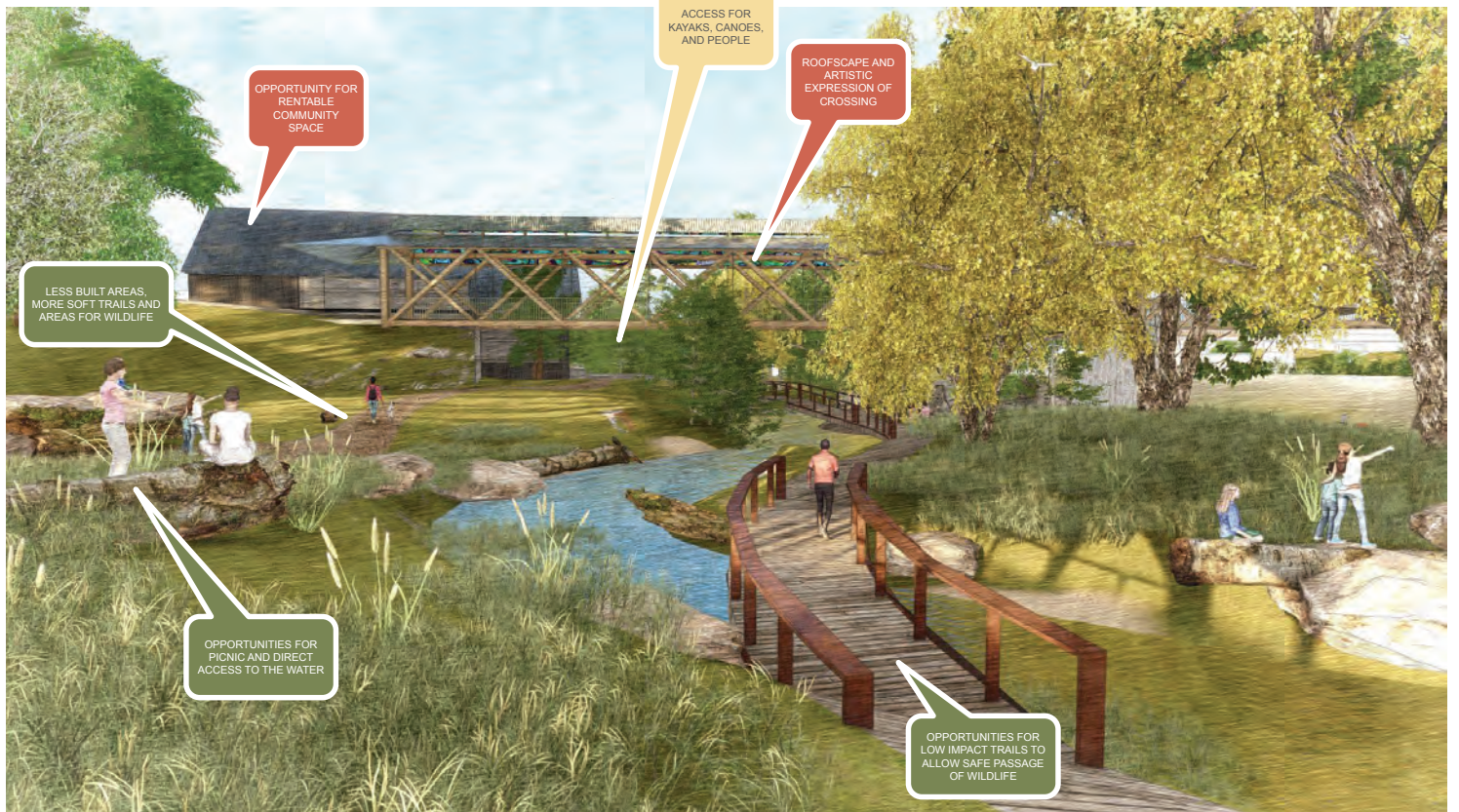
OPPORTUNITY FOR PARK ECOTONES



SECTION AA - VIEW LOOKING SOUTH



SECTION BB - VIEW AT OUTLOOK



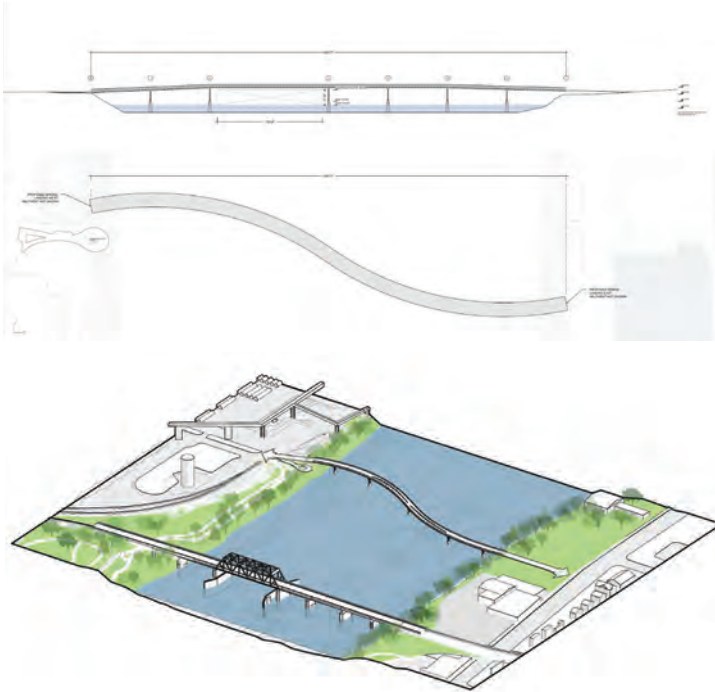
The Floodplain & the Crossing

Tailored Structural Design to the River

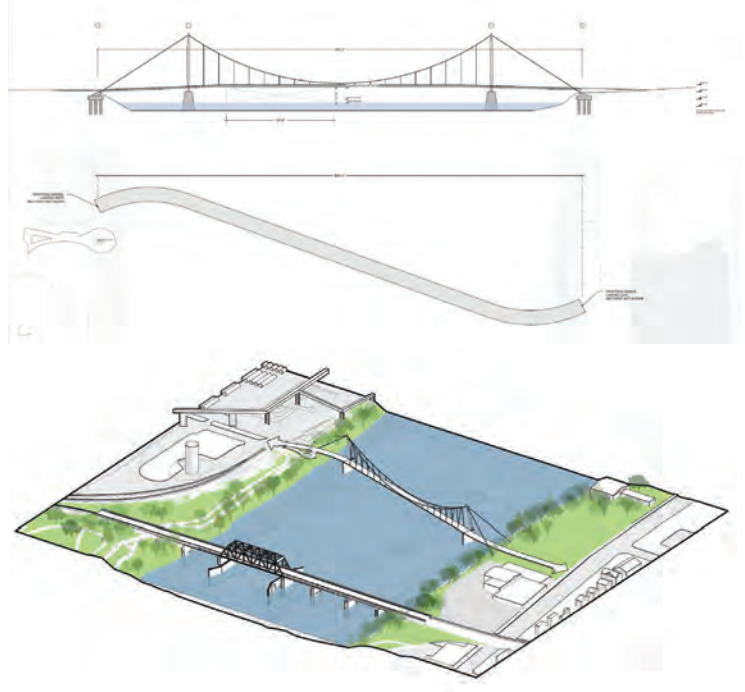
Why Does It Matter? What are we studying?

The following two scenarios show two bridges, one with multiple piers in the water and one with only two piers in the water. As the project moves past schematic design and is further funded, the MPRB and its partners will be required to study further the impacts to the floodplain. As estimated today, both scenarios increase the water level and floodplain by less than 0.75 inches. The project goal is zero rise.

Scenario A



Scenario B



Differing Structural Systems and Differing Qualities of Space ...



Parameters for a River Crossing ...

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Safety
Make it comfortable for people walking, biking, and rolling

... ensure safety with:

- good lighting
- covered / protected areas
- handrails
- ease of maintenance
- Minimize conflicts between cyclists and pedestrians



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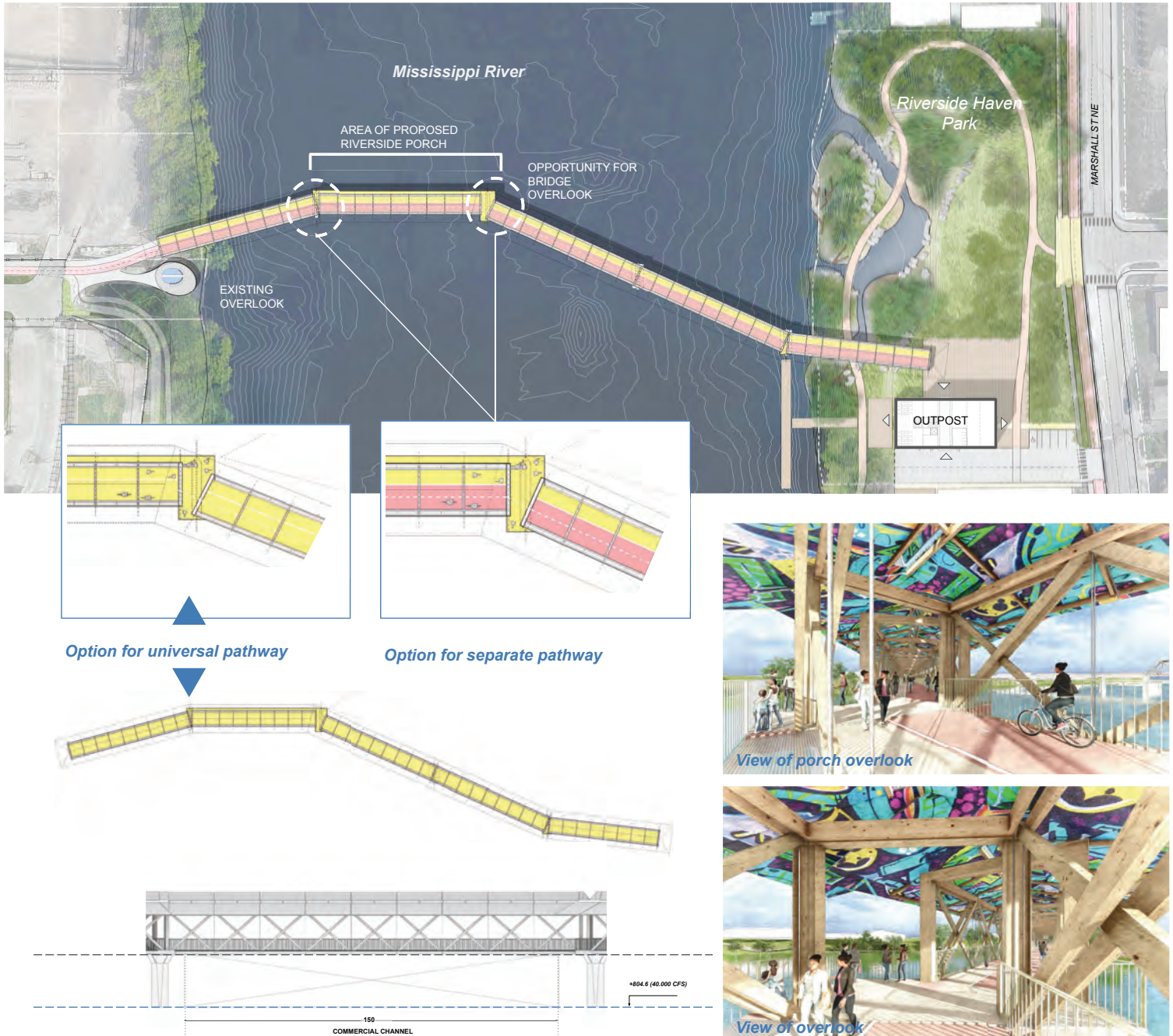
Scenario A - Covered Truss Bridge

Placemaking and River Crossing, An Opportunity for Artistic Expression

What We Heard for the Crossing Design

Understanding that placing piers in the water may have impact to the floodplain this design expands on the Community Desire for natural materials (wood), a close proximity to nature, and multiple opportunities for gathering along the crossing. A roofscape could be an opportunity for collaboration with local artists, another community desire.

Artist Impression of Wooden Truss Bridge



Parameters for a River Crossing ...

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Scenario A - Covered Truss Bridge

Placemaking and River Crossing, An Opportunity for Artistic Expression



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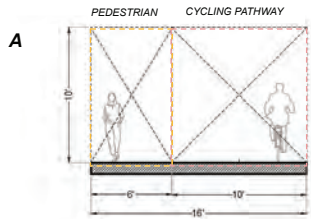
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Scenario A - Covered Truss Bridge

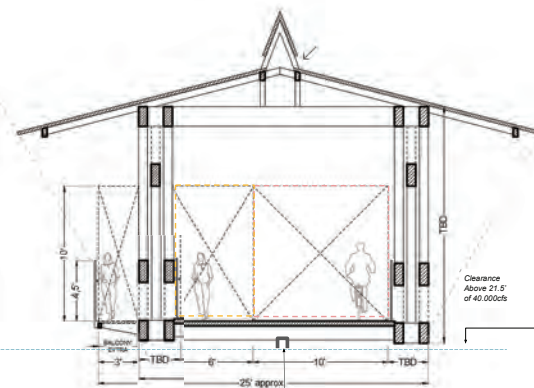
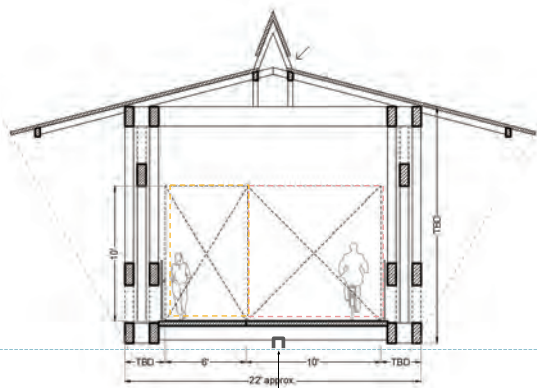
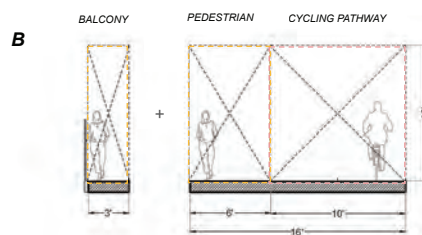
Placemaking and River Crossing, An Opportunity for Artistic Expression

Conceptual sections showing
How we could experience the bridge together

RECOMMENDED MULTIMODAL SECTION

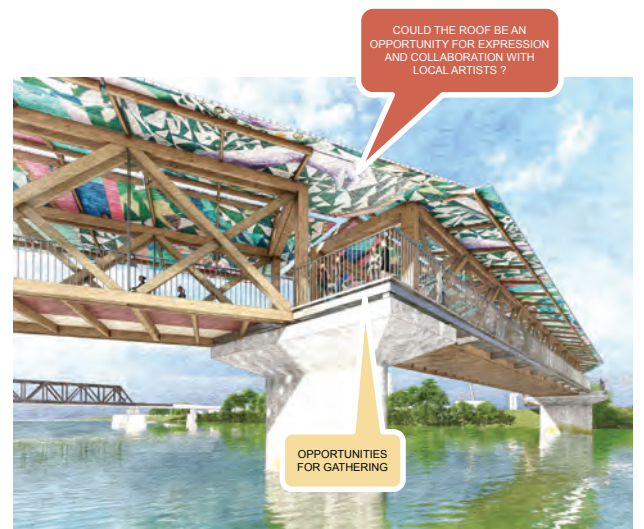
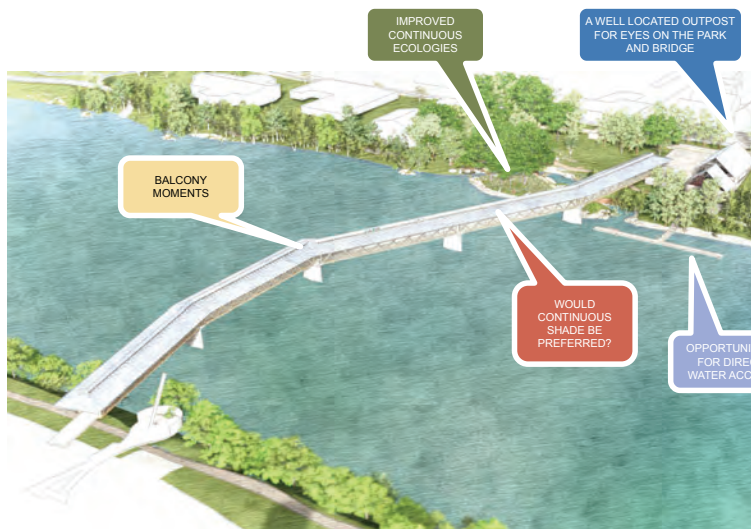
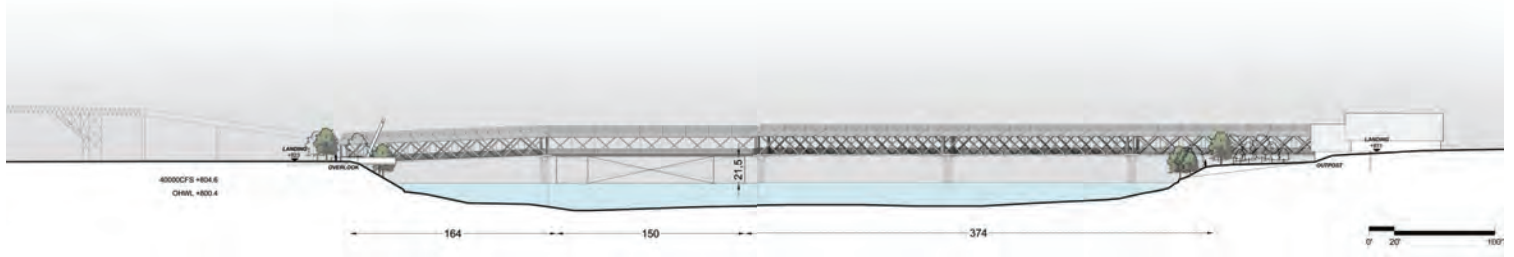


BALCONIES FOR VIEWS AND RESPITE



Maintenance Rail
(for gondola)

Clearance
Above 21.5'
of 40,000cfs



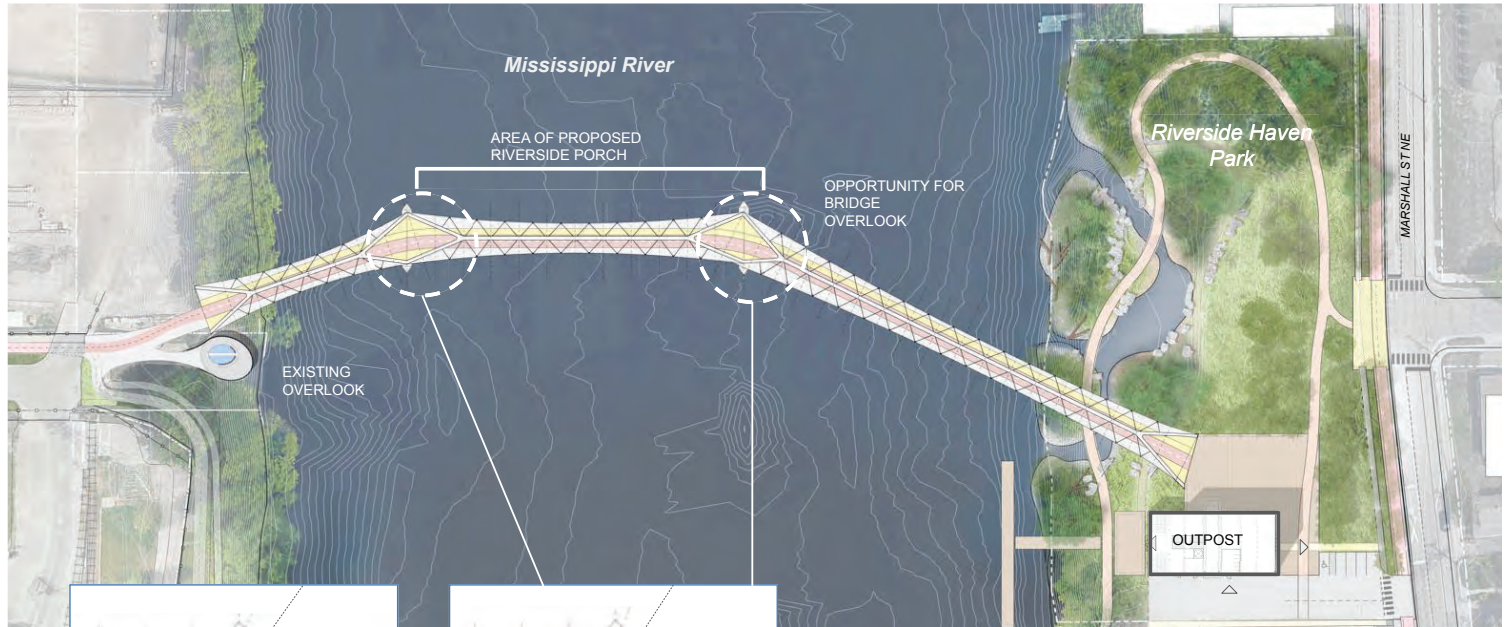
Scenario B - Athletic Steel Bridge

Minimizing Impact in the Floodplain with a Structurally Playful Crossing

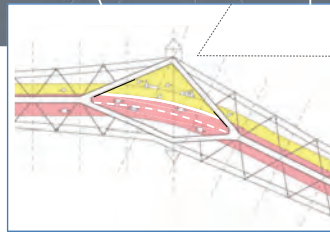
What We Heard for the Crossing Design

Understanding that placing piers in the water may have impact to the floodplain this design minimizes impact on the floodplain by employing a more athletic and expressive structural system. This type of bridge can take many forms, conceptually shown this tied arch form may evolve to express the structure in different materials, or be could be designed to split arches or lower the profile.

Artist Impression of Athletic Steel Bridge



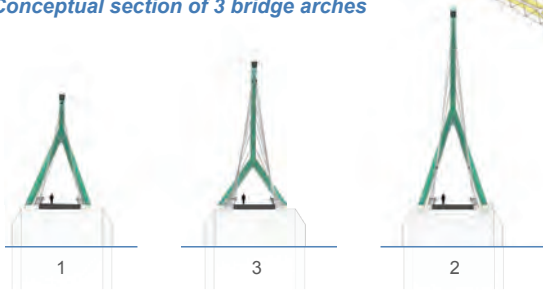
Option for universal pathway



Option for separate pathway



Conceptual section of 3 bridge arches



A conceptual view from the crossing

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Scenario B - Athletic Steel Bridge

Minimizing Impact in the Floodplain with a Structurally Playful Crossing

Artist Impression of an Athletic Steel Bridge

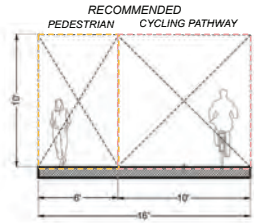


Scenario B - Athletic Steel Bridge

Minimizing Impact in the Floodplain with a Structurally Playful Crossing

Artist Impression of an Athletic Steel Bridge

A



B

