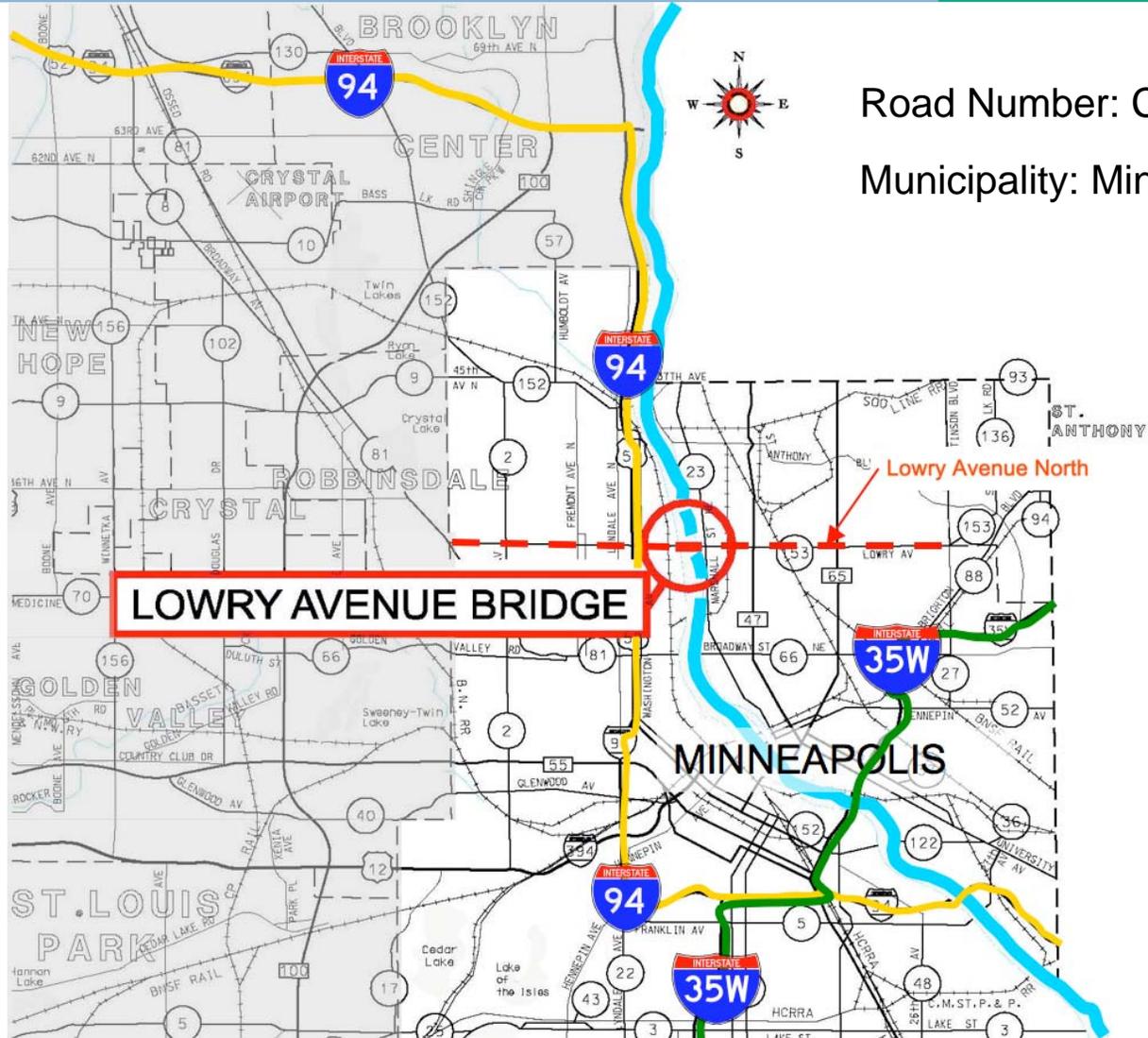


Lowry Avenue Bridge Replacement Project



Project Location Map



Road Number: CSAH 153 Lowry Avenue
Municipality: Minneapolis

Study Area and Project Context



Minneapolis Park Board Holdings



Lowry Avenue Bridge (CSAH 153)

- Owner: Hennepin County
- Year Built: 1905
- Remodeled: 1958
- Structural Classification: **Fracture Critical**
- Bridge Condition: **Structurally Deficient**
- Sufficiency Rating: **43.0**

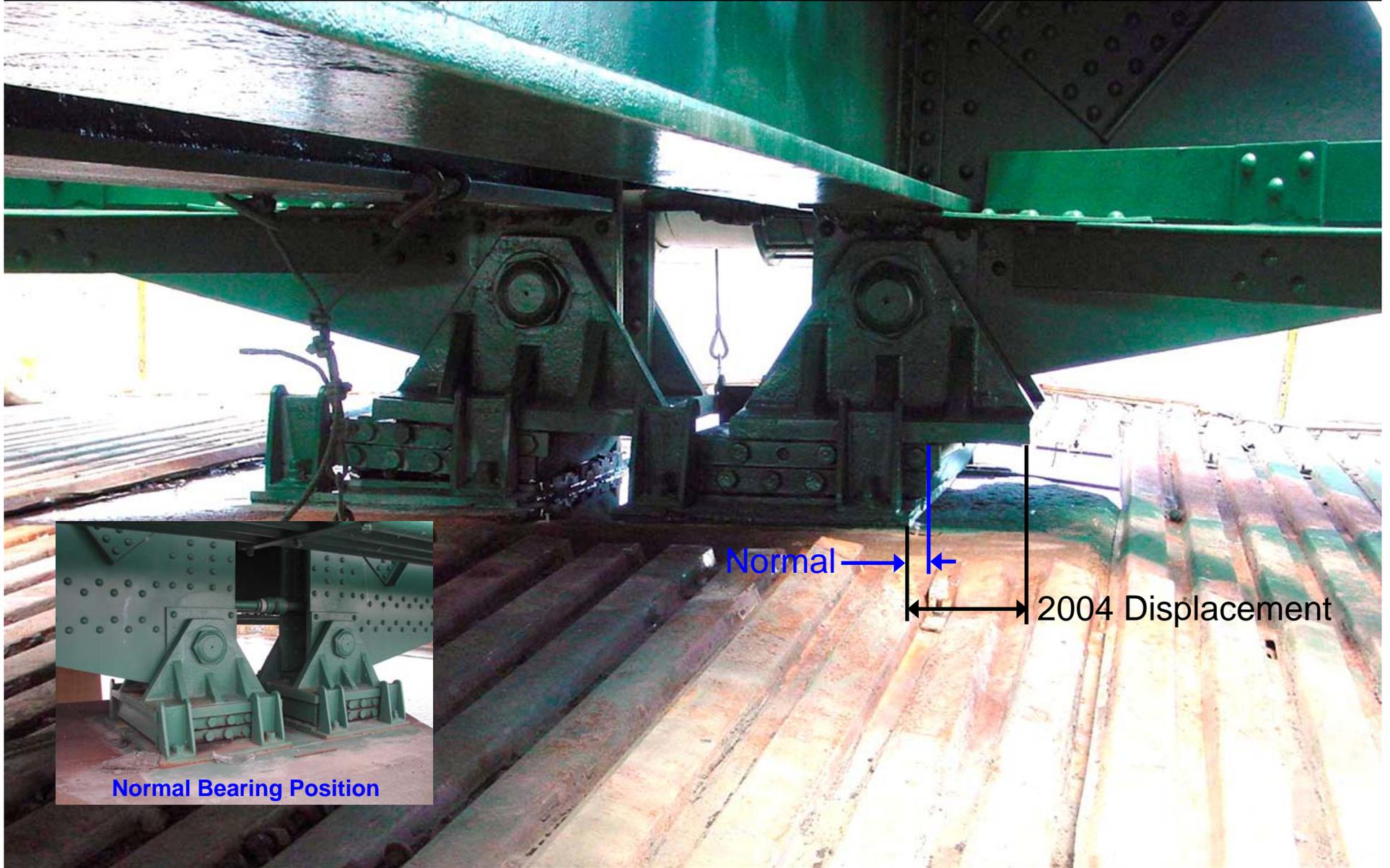
Lowry Avenue Bridge Construction 1905



Lowry Avenue Bridge Over the Mississippi River



Lowry Avenue Bridge Bearing Assembly Damage



Normal Bearing Position

Normal

2004 Displacement

Project Intent

The primary intent of the Lowry Avenue Bridge Project is to develop a preferred bridge and approach road design that Hennepin County can build. Key issues to be addressed include:

- Identifying the bridge type, design, and appearance.
- Determining whether or not the railroad bridge will be included in the reconstruction.
- Establishing the roadway width and making provisions for pedestrians and bicycles.
- Accommodating existing and future land use.
- Assessing environmental impacts.
- Determining project costs and likely funding.



Issues and Challenges



Possible Embankment Stability Issues ("Slump")



Potential Building Impacts to Widen Lowry Avenue



Existing Utility Relocations During Bridge Construction

Potential Impacts to Widen Lowry Avenue



Potential Impacts to Widen Lowry Avenue



CP Rail Coordination and Crossing Reconstruction



Limited Existing Right of Way - May Need to Acquire Additional ROW



Potential Transmission Tower Relocation

Design considerations include:

- Coordinate West Approach Design and Bridge Type selection
- Roadway width
- Bridge Length
- Cost
- Right of Way
- Parcel Redevelopment
- Riverfront Parkway & Open Space

Project Process



Project Advisory Committee (PAC)

- Neighborhoods
 - Hawthorne Neighborhood
 - Marshall Terrace Neighborhood and AFCAC
 - Bottineau Neighborhood
 - McKinley Neighborhood
 - Minneapolis 1st Ward Appointee
 - Minneapolis 3rd Ward Appointee
- City of Minneapolis
 - Public Works
 - CPED
- Metropolitan Council
- U.S. Army Corps of Engineers
- Minnesota DNR
- Mn/DOT
- SRF Consulting Group, Inc.
- TY Lin International

Technical Advisory Committee (TAC)

- Hennepin County Transportation
- Hennepin County H,CW, & T
- Hennepin County Environmental Services
- Minneapolis Public Works
- Minneapolis CPED
- Minneapolis Park and Recreation Board
- Metro Transit (Planning)
- Metro Transit (Street Operations)
- Mn/DOT Metro State Aid Office
- Mn/DOT State Aid Bridge Office
- Federal Highway Administration
- Minnesota DNR
- U.S. Army Corps of Engineers
- U.S. Coast Guard
- CP Rail
- Xcel Energy
- SRF Consulting Group, Inc
- TY Lin International

Public Open House Meetings

- August 21, 2007
- October 16, 2007
- February 25, 2008



Preferred Alternative Evaluation

Impacts	Span River Only			Span to West of CP Rail			Span to Washington Avenue		
	Widen to North	Widen Both Sides (hold existing CL)	Widen to South	Widen to North	Widen Both Sides (hold existing CL)	Widen to South	Widen to North	Widen Both Sides (hold existing CL)	Widen to South
Minimizes Existing Park Impacts	Yes	No	Yes if SA site converted to parkland	Yes	No	Yes if SA site converted to parkland	Yes	No	Yes if SA site converted to parkland
Supports Above the Falls land use vision west of Mississippi River	No	No	No	Yes (phased)	Yes (phased)	Yes (phased)	Yes	Yes	Yes
Maximizes future options for West River Parkway and trail systems	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Minimizes potential for retaining wall foundation issues related to weak soils	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Minimizes potential for embankment settlement issues related to weak soils	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Maximizes future options for stormwater treatment facilities & BMPs	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Minimizes Traffic/Access changes	Yes	Yes	Yes	Yes	Yes	Yes	No - limited or no access between Lowry & 2nd St.	No - limited or no access between Lowry & 2nd St.	No - limited or no access between Lowry & 2nd St.
Minimizes reconstruction of 2nd St.	Yes	Yes	Yes	Yes	Yes	Yes	No - lowering of 2nd St under Lowry likely required for profile reasons	No - lowering of 2nd St under Lowry likely required for profile reasons	No - lowering of 2nd St under Lowry likely required for profile reasons
Minimizes Xcel 115 kV Line Impacts	Yes - avoids impacts to line	No - reconstruct 3 towers	No - reconstruct 3 towers	Yes - avoids impacts to line	No - reconstruct 3 towers	No - reconstruct 3 towers	No - Major relocation of line required	No - Major relocation of line required	No - Major relocation of line required
Minimizes Right of Way Acquisition Costs	No	No	Yes	No	No	Yes	No	No	No
Minimizes likely residential relocations	No	Yes	Yes	No	Yes	Yes	No	No	Yes
Minimizes likely demolition square footage of existing commercial buildings	No	No	Yes	No	No	Yes	No	No	No
Requires demolition of existing buildings on one side of Lowry Avenue only	Yes	No	Yes	Yes	No	Yes	No - matching I-94 bridge alignment requires demolition both sides near Washington	No	No - matching I-94 bridge alignment requires demolition both sides near Washington
Minimizes Dislocation of Existing jobs	No	Partial	Yes	No	Partial	Yes	No	No	No
Estimated construction cost conforms to County budget	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No

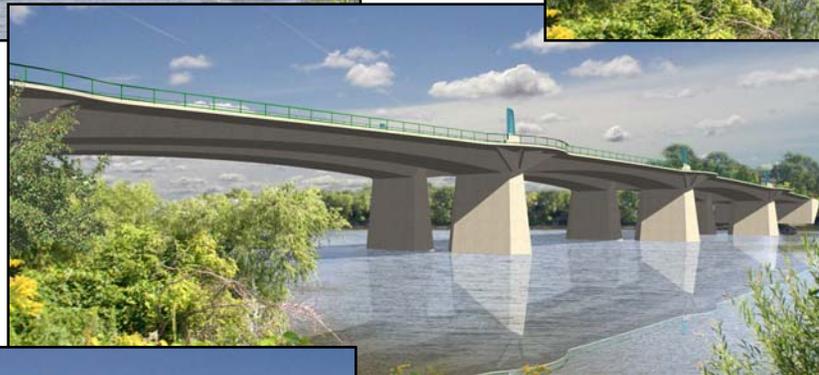
Bridge Type Alternatives



Cable-Stayed (two pylons)

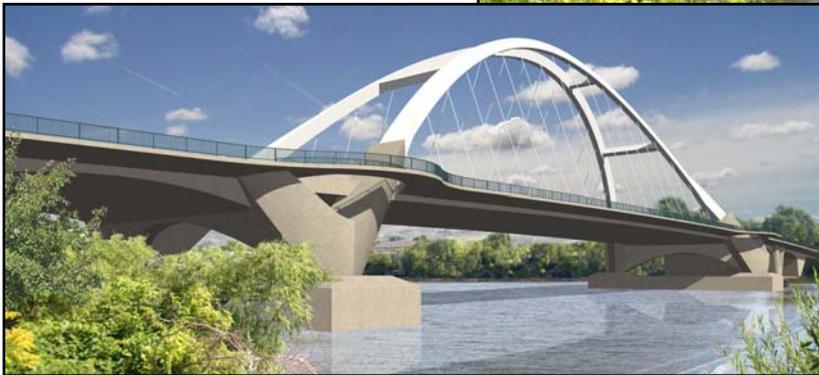


Cable-Stayed (single pylon)



Concrete
Box Girder

Basket Handle Arch



Vertical Rib Arch



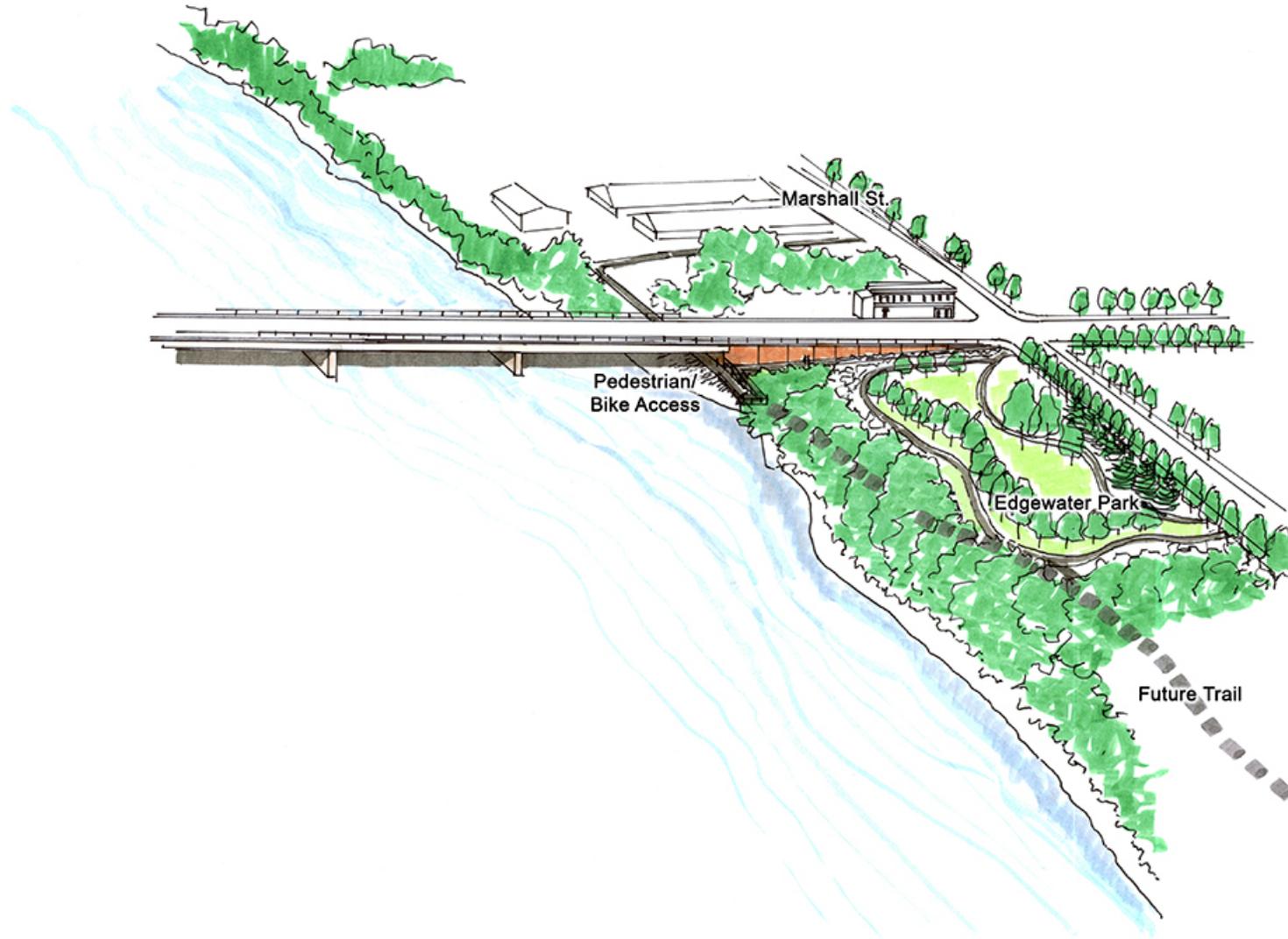
Cable-Stayed Dual Tower



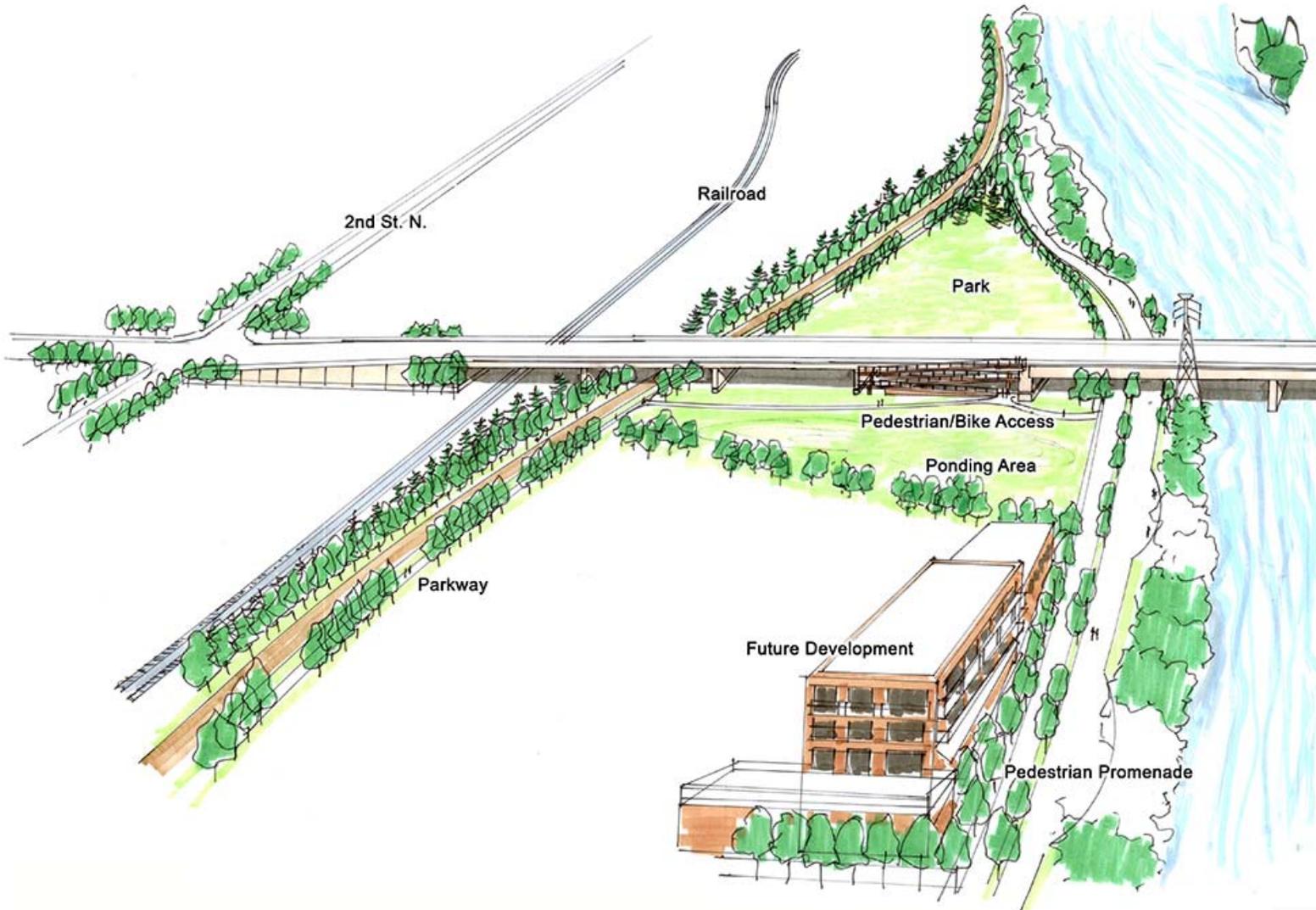
Basket-Handle Arch



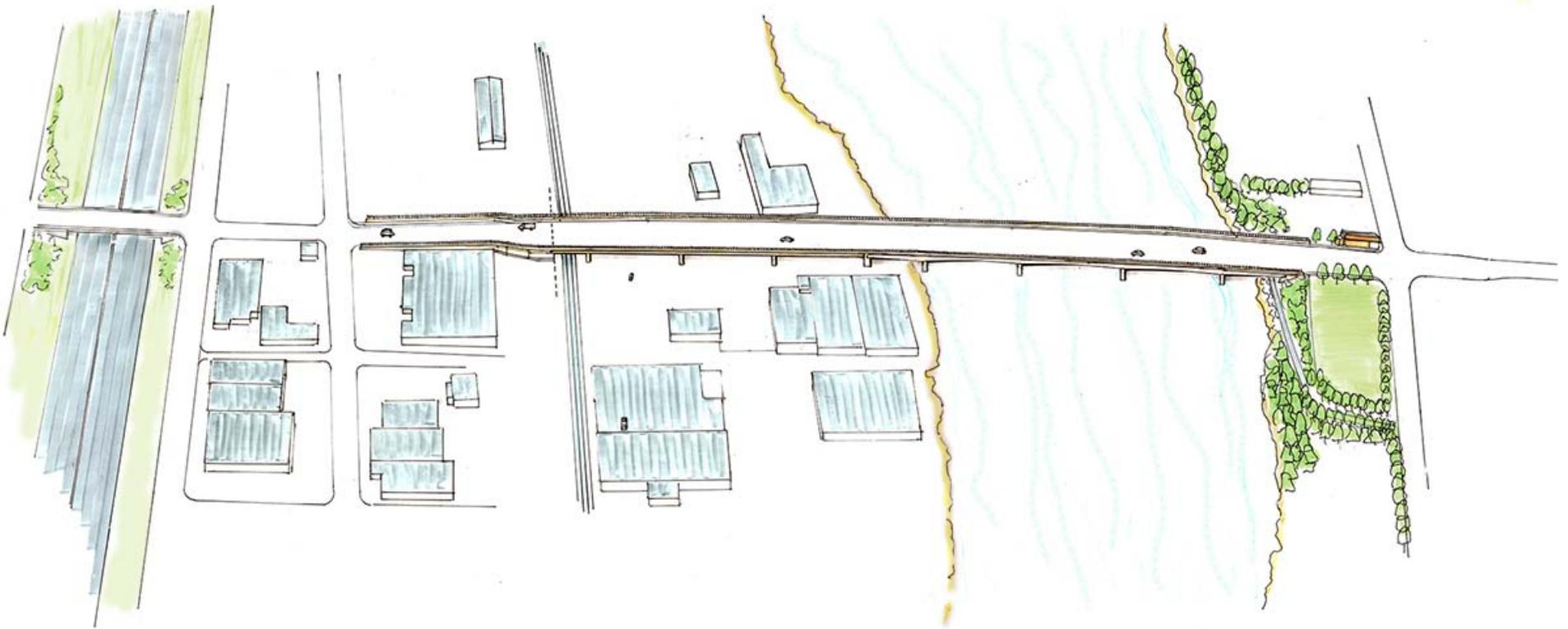
East Bridge Abutment – Trail Underpass



Future Parkway and Pedestrian Promenade



Lowry Bridge Replacement Project



Potential Future Bridge Extension



Anticipated Funding Package for Preferred Alternative

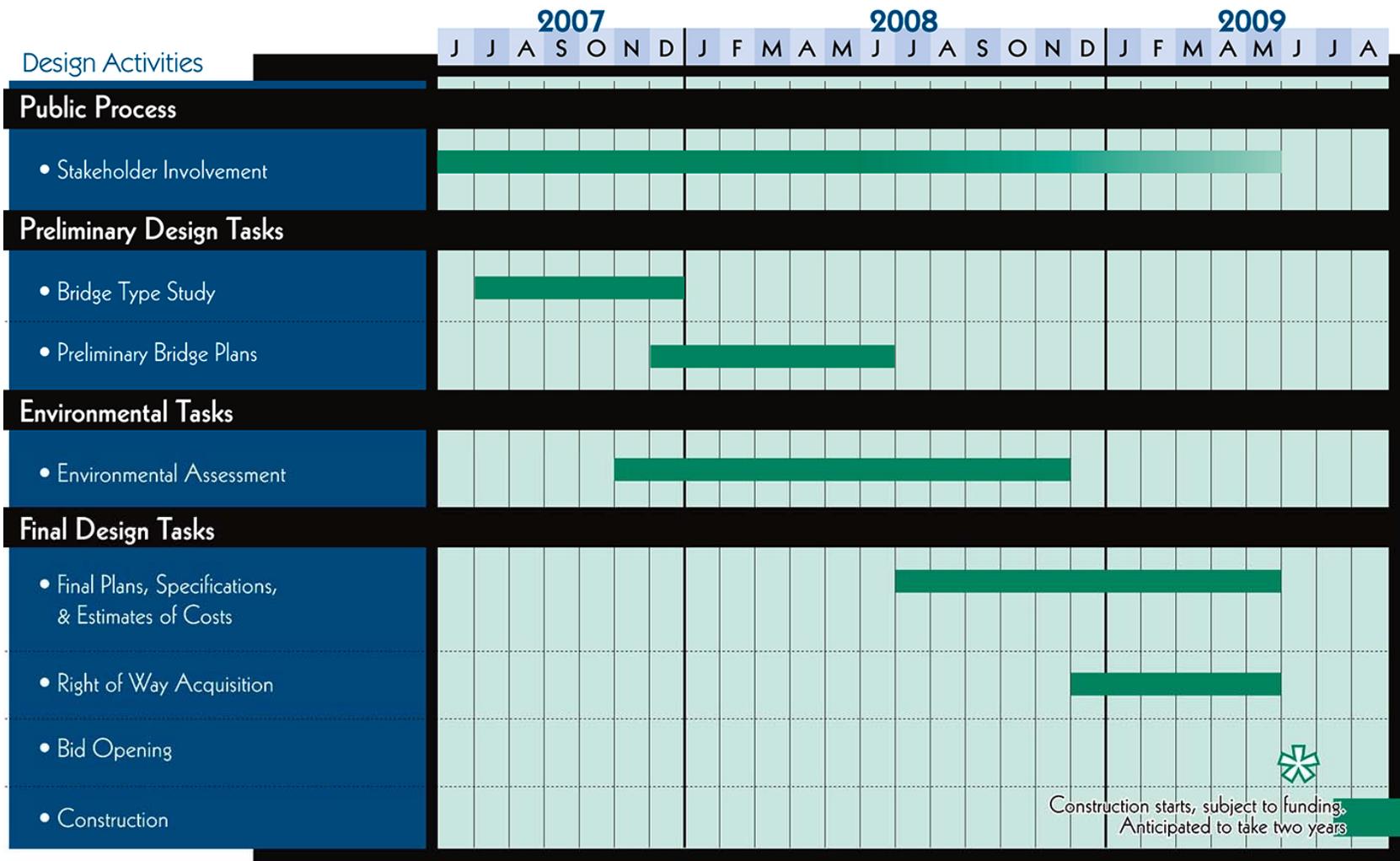
\$12 million – Hennepin County

\$24+ million – State

\$72+ million – Federal

\$109 million

Project Schedule



Estimated dates are subject to change

Project implementation subject to funding

Construction starts, subject to funding.
Anticipated to take two years



Next Steps

- Project Advisory Committee Meeting – March 25, 2008
- Environmental Process – ongoing
- Preliminary and Detail Design – 2008/2009
- Obtain Funding – 2008/2009
- Begin Construction – 2009

Lowry Avenue Bridge Replacement Project

