



# S.P. 8503-46 (Trunk Highway 43) Winona Bridge Project Environmental Assessment (EA) Recommended Alternative

October 2013

EA Recommended Alternative background:

- The existing bridge is eligible for the National Register of Historic Places. The project is using federal funding and is required to follow federal requirements for preservation of historic features (Section 106 of the National Historic Preservation Act).
- Through collaboration between the FHWA, MnDOT, the State Historical Preservation Office (SHPO) and the engineering and historical consultants on the project, the historic review process, which was led by MnDOT, resulted in the preservation of the iconic historic truss and avoidance of any adverse impacts to the other historic properties in the project area. (See the attached background materials on the Historic Review process for the project).
- Rehabilitation of the existing bridge includes full deck replacement, removal of pedestrian walkway, replacement of approach spans and piers, replacement in kind of deck truss spans and piers, repair and painting of main through truss and piers (estimated cost of the existing bridge rehab is \$56 to \$63 million in 2015 dollars).
- Pending completion of the National Environmental Protection Act (NEPA) analysis, construction of a new parallel bridge with a girder type structure located on the Winona Street West Alignment is planned. This alignment minimizes visual effect to the downtown historic district. This new structure includes a 12 foot wide pedestrian and bike way on the upstream (west) side of the structure (estimated cost of the new structure is \$ 52-\$59 million in 2015 dollars).

For More Information

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## Bridge Types Considered and Rationale for Recommended Alternative:

- Girders, Arch and Cable type bridges were considered for the new parallel bridge. Each bridge type would meet the primary need for the project and would have similar performance.
- All types would have similar impacts to most social and environmental resources, differing only in the potential for visual effect (including visual effect on historic properties) and impact to migratory birds.
- Bridge types did vary in cost of construction and life cycle cost. The girder type has the lowest initial capital cost and life cycle cost.
- The arch and cable type bridges have greater visual effect to the historic downtown and to the existing historic bridge, higher construction as well as life cycle costs and greater potential for impacts to migratory birds. For these reasons, these two bridge types were rejected.

## Other Considerations:

- Schedule was a consideration in the recommended alternative selection. MnDOT, working with the local community, is proposing to start construction in 2014 and will likely be able to meet this objective with selection of the girder alternative. Arch and Cable bridge types will take a longer design development time.
- \$142M is programmed (2015 dollars) for the Winona Bridge Project. To date, the estimated cost for rehabilitation of the existing bridge, construction of new parallel girder bridge, associated roadway work, contingencies, engineering and administration is at or slightly above the programmed amount for this project.
- MnDOT will need to absorb higher life cycle costs for the Trunk Highway 43 river crossing, as we will need to operate and maintain two structures, including the existing bridge which will need to be maintained in a manner such that it maintains its eligibility for the National Register of Historic Places.
- The additional cost for constructing an arch type structure (est is \$14-15 million) is not programmed in MnDOT's budget. Other project deferments would be necessary in order to fund this additional cost.
- The Winona Bridge project has worked collaboratively with our partners to preserve the iconic historic truss, the last remaining example of a cantilever thru-truss dating from before 1946 in Minnesota. This will result in the advantage (and cost as well) of having two structures. This will reduce construction staging delays and allow for more flexibility when addressing future maintenance and operational needs of either structure.
- The recommended alternative takes into account stakeholder goals expressed to us by the community, including: provide a 2<sup>nd</sup> bridge as part of the project scope; start construction and move traffic to the new structure as soon as possible to minimize the traffic impacts resulting from maintenance closures of the existing bridge; and keep the river crossing open to traffic during the construction process. Changing the bridge type from the recommendation in the EA will result in project delays.

