

# ENVIRONMENTAL ASSESSMENT (EA)

The Environmental Assessment (EA) is a joint Federal/State document that:

- determines the potential for significant environmental effect and whether or not there is a need for an Environmental Impact Statement (EIS)
  - discusses
    - project need
    - reasonable alternatives
    - social, economic, and environmental impacts
    - Section 106 and Section 4(f) findings
  - is released for public and agency review and comment, including a formal public hearing
- Comments are considered in the EIS need decision.



## HOW TO COMMENT ON THE EA

Copies of the EA are available for review at today's meeting. Copies are also available for review at the City of Winona Public Works Department, the Winona Library, or at the MnDOT offices in Rochester. The EA is also posted on the project website:

[www.dot.state.mn.us/d6/projects/winonabridge](http://www.dot.state.mn.us/d6/projects/winonabridge)

Comments on the EA can be provided in writing at today's meeting, or mailed to the address provided on the comment sheet and on the handout available at the sign-in table. Verbal comments can be provided to the court reporter at today's meeting.

Comments on the Section 4(f) de minimis finding or the Section 106 findings reported in the EA will also be accepted.

# TENTATIVE SCHEDULE AND FUNDING

EA/EAW released for public comment:	Fall 2013
Public hearing:	Fall 2013
EIS Need Decision:	Spring 2014
Preliminary and final design:	Summer 2013 – Fall 2014
Right of way acquisition:	Summer 2013 – Spring 2015
Start of construction:	Summer 2014 – Spring 2015
Construction complete:	Spring 2020

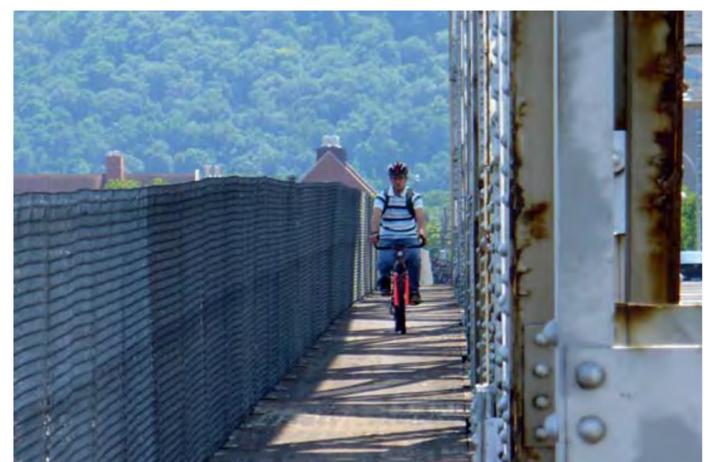
The estimated construction cost (in 2015 dollars) for the Recommended Alternative is as follows:

- Bridge 5900 rehabilitation/reconstruction costs: **\$56-\$63 million**
- Bridge 85851 new bridge costs: **\$52-\$59 million**
- Roadway costs: **\$7-\$9 million**
- Total construction costs: **\$115-\$131 million.**

State of Minnesota Chapter 152 bond and Federal Aid will cover the majority of the construction costs, while local municipal cost participation will cover other miscellaneous construction costs. The project funding cap is set at \$142 million, not including property acquisition costs which are estimated to total \$12 to 20 million and which will be funded with state construction funds. The funding cap includes project development and design costs. The project is listed in the State Transportation Improvement Program.

# ENVIRONMENTAL ASSESSMENT TOPICS

- Traffic changes including truck movements
- Fish, wildlife, and ecologically sensitive resources
- Cultural resources, particularly historic properties and districts near downtown, and the bridge itself
- Land use impacts
- Contaminated properties
- Noise
- Air quality
- Social effects such as changes to community facilities and to low-income and minority communities
- Visual quality
- Water quality
- Bicycle and pedestrian facilities
- Parks
- Cumulative impacts



# ENVIRONMENTAL IMPACTS - NATURAL RESOURCES



- Wetlands**
- 0.19 acres of permanent impact, 0.5 acres of temporary impact, and 1.69 acres of impacts to wetland trees. These impacts would be mitigated for through the purchase of credits at an existing MnDOT wetland bank.

- Water Resources**
- Dredging and construction activities in the river are expected. The project would use Best Management Practices such as wet basins and infiltration basins to prevent and mitigate for impacts to the river.
  - Addition of a second bridge adds 1.5 acres of impervious surface increasing stormwater runoff. Stormwater treatment areas will be constructed as part of the project.
  - Erosion control measures would be used to protect slopes and the river.

- Vegetation**
- Trees removed for construction access would be replaced.

- Migratory birds**
- The girder structure type has less above-deck structure than other bridge types considered, which minimizes the potential for migratory bird collisions.
  - Coordination with the U.S. Fish and Wildlife Service will continue, to prevent impacts to nesting birds, including bald eagles.

- Threatened/  
endangered species  
(Mussels)**
- A mussel survey was completed in 2013 and found one state-listed species and no federally listed species. Based on these results, DNR staff have indicated they have no concerns. MnDOT and the U.S. Fish and Wildlife Service have agreed that a determination of “may affect, not likely to adversely affect” is the appropriate Section 7 finding for federally listed species.
  - No other state or federally listed species have been identified in the project area

- Visual Resources**
- Several locations with high potential for adverse effects to visual resources – primarily to the view of the river valley looking upstream from the existing bridge.

# ENVIRONMENTAL IMPACTS - COMMUNITY RESOURCES



- Parks**
- Minor disruptions to the Winona Municipal Harbor during construction.
  - Temporary easement over the Waterfront Trail for construction access. The trail would be detoured during construction and then restored. The impact to the trail is proposed to meet the de minimis definition regarding Section 4(f) use.
  - The de minimis finding means it is anticipated that the project would not impede activities or adversely affect features or attributes of the trail.

- Community Facilities**
- The project would result in the loss of one parking space at the County Law Enforcement Center parking lot, removal of on-street parking in the vicinity of the YMCA, and temporary access impacts in the area near the YMCA during construction.

- Pedestrian/Bike**
- The new bridge would include a pedestrian/bicycle facility. The walkway on the existing bridge would be removed.
  - Sidewalks at intersections would be improved to be ADA-accessible.
  - Bicycle/pedestrian connections to the riverfront underneath the bridge are under consideration.

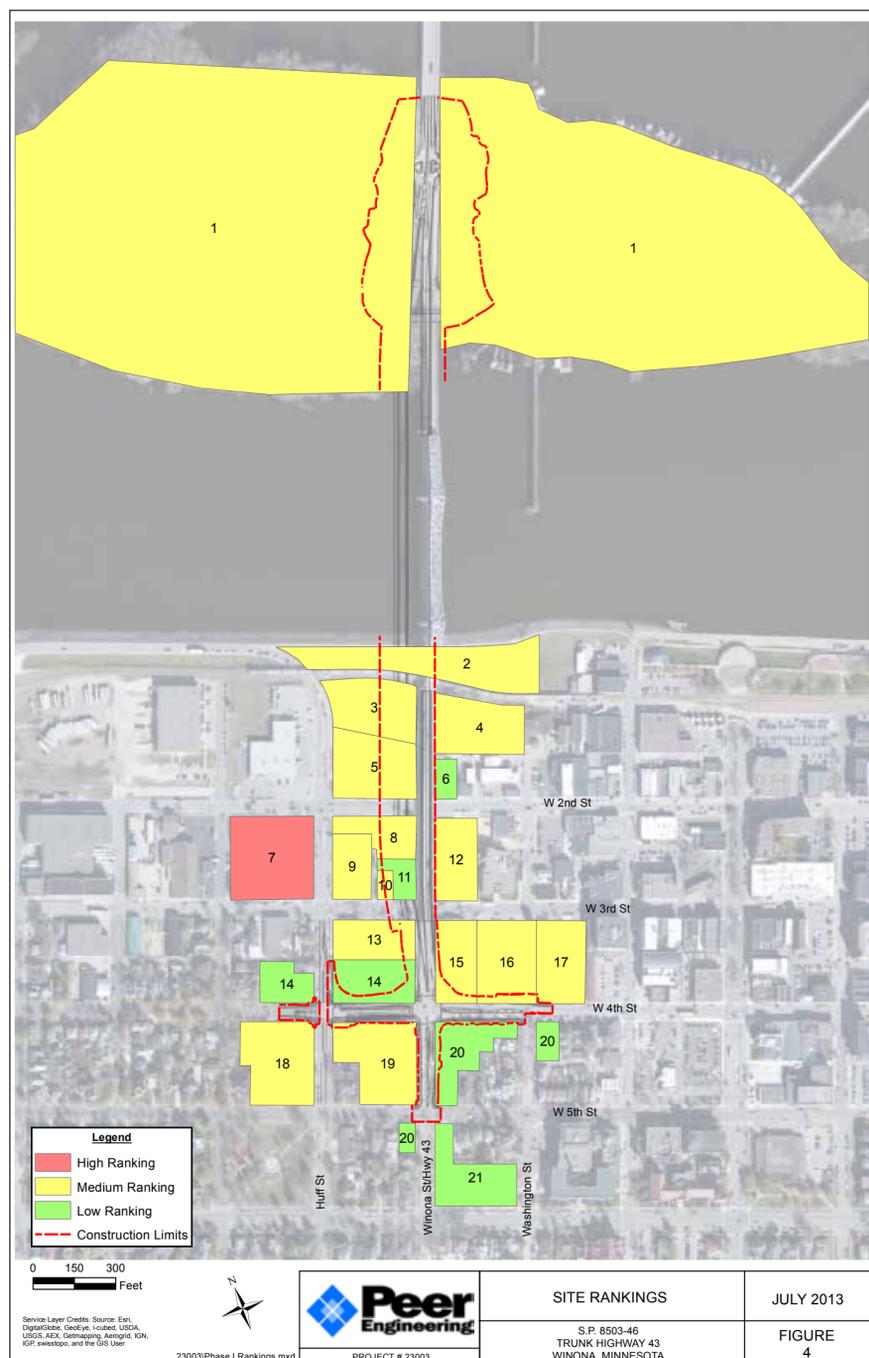
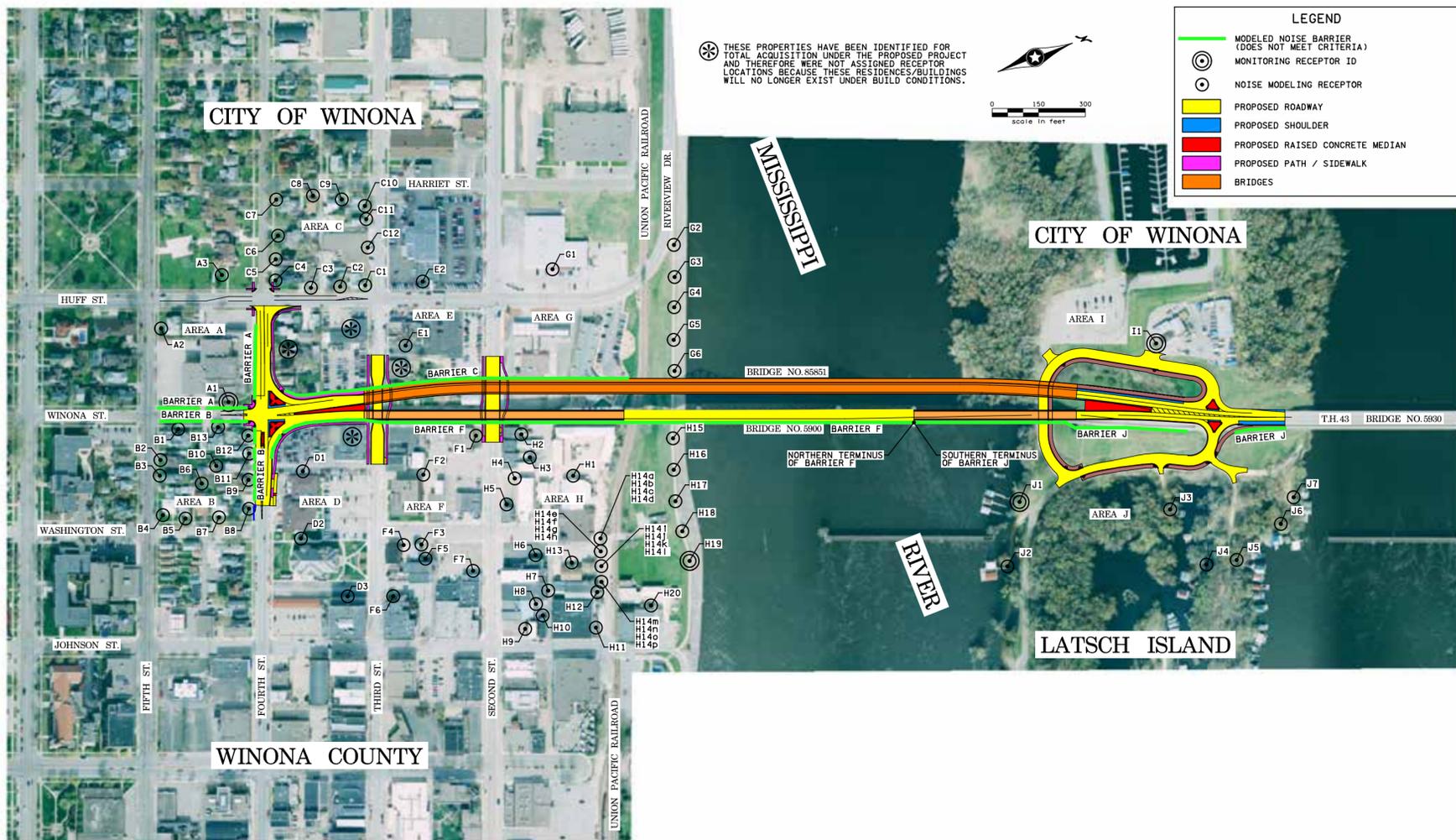
- Aviation**
- Coordination with the Winona Airport and the Federal Aviation Administration has occurred, and a Determination of No Hazard to Air Navigation is expected because the project lies outside of the Runway Protection Zone.

- River Navigation**
- Construction activities would result in temporary impacts to river navigation, but the river would remain open to the extent possible. Short term closures would be coordinated with river users, including barges and recreational boats.

- Right of Way**
- The project would require acquisition of land for highway right of way as well as permanent and temporary easements during construction. Permanent total acquisitions include 22 residential units and 7 business properties. Permanent partial acquisitions affect 3 residential properties, the YMCA, Winona County property, and Winona Port Authority property.
  - The boathouses located on new MnDOT right of way over the Mississippi River would be addressed as encroachments.

- Parking**
- Total of 122 parking spaces would be removed including 75 from under existing bridge

# AIR, NOISE AND CONTAMINATION



- Air quality impacts would be temporary during construction due to dust from grading and building removals. Dust control measures would be used.
- Construction noise likely, to be lessened using proper equipment and avoiding night construction, especially jack hammering and pile driving.
- Likelihood that construction activities will encounter contaminated materials due to previous uses (fuel storage, industrial uses, etc.). The project will follow state, federal, and MnDOT policies for containment and removal of contaminated materials.
- Future traffic noise levels will be higher than existing due to increased traffic, regardless of the project. Increases are not projected to be substantial.
- No noise walls are proposed because they would not achieve MnDOT's minimum noise reduction design goals.

# PURPOSE, NEED, AND EVALUATION

The Purpose and Need statement formally defines why MnDOT is doing the project and states what problems must be addressed.

**Purpose/Primary Need:** Provide structurally sound crossing of Mississippi River at Winona

## **Secondary Needs:**

- **Connect to Wisconsin highway system**
  - Minnesota Highway 43-Wisconsin Highway 54 is an important regional and interstate route
  - Critical connection between WI communities and Winona, including for emergency services
- **Maximize “maintenance of traffic” (keeping the crossing and navigation channel open)**
  - Closure means a one hour travel detour for vehicles
  - River carries up to 1400 barges a year
- **Maintain access to Latsch Island and minimize closure during construction**
  - No other roadway connection
- **Find opportunities to improve traffic safety and capacity**
  - Issues at existing touchdown intersection (Winona and 4th Street) - future congestion geometric deficiencies
- **Maintain pedestrian/bicycle connections**
  - Existing bridge provides the only pedestrian/bicyclist river crossing opportunity for 30 miles
- **Meet critical regulatory requirements**
  - Historic resources - existing bridge eligible for National Register of Historic Places; other historic properties in study area (Section 106) (Section 4[f])
  - Parkland - Latsch Island Park, Trempealeau National Wildlife Refuge, Upper Mississippi River National Wildlife Refuge, Levee Park (Section 4[f])
  - Water quality - existing does not meet current stormwater management practices
  - River navigational clearances required by U.S. Coast Guard

## **Other Considerations**

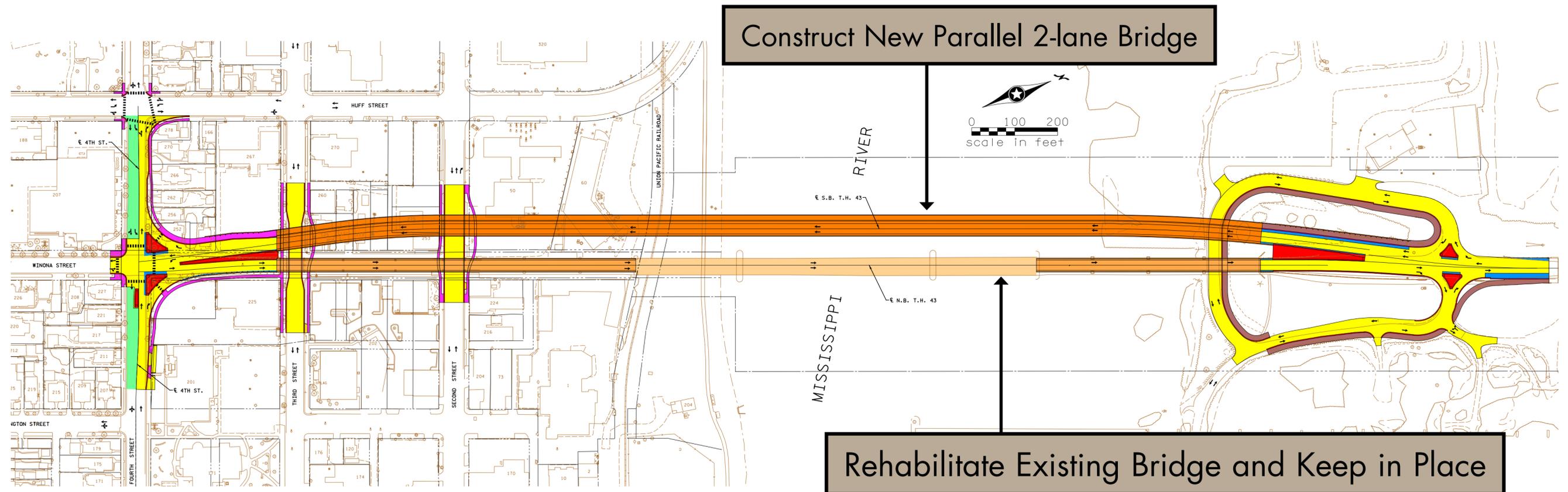
- **Improve pedestrian/bicycle connections**
  - Current sidewalk/bike path does not meet minimum width standards
  - No connections to/from other trails
- **Address structural redundancy**
  - Existing bridge non-redundant design
- **Improve bridge geometrics**
  - Issues with geometrics of existing bridge
- **Minimize impacts to local roadway network (cross-streets)**
  - 2nd, 3rd, and 4th Streets remaining open to local traffic is desired
- **Minimize truck impacts**
  - Highway 43 is a designated truck route
  - Multi-modal facilities east and west of crossing

# ENVIRONMENTAL PROCESS NEXT STEPS



After the EA comment period ends October 30, 2013, MnDOT will consider whether the project will result in significant environmental impacts. If so, the next step would be preparation of an EIS. If MnDOT concludes that the project will not result in significant environmental impacts, MnDOT will prepare a Findings of Fact and Conclusions document and a Negative Declaration for the EIS Need Decision, and request a Finding of No Significant Impact (FONSI) from FHWA. The Findings document will include an update on any new information since the EA was published. The Negative Declaration and FONSI document the conclusion that the project has no potential for significant environmental impacts, feasible mitigation will be provided, and all environmental review requirements have been met.

# RECOMMENDED ALTERNATIVE: TWO-BRIDGE SOLUTION



## 1. Rehabilitate existing bridge

- Remove sidewalk
- Retain through truss
- Address other existing bridge spans based on detailed study of condition and ability to retain historic integrity
- Replace bridge components with in-kind replicas as needed
- Rehabilitated bridge will carry two lanes of northbound traffic

## 2. Construct new permanent bridge

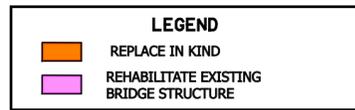
- Located parallel to and upstream of existing bridge on the "Winona Street West" alignment
- Girder type bridge, with support structure beneath the deck, rather than above.
- New bridge will carry two lanes of southbound traffic
- New bridge will include 12-foot wide pedestrian/bike way on west side, barrier-separated from vehicle lanes

## 3. Improvements to Winona Street/4th Street intersection

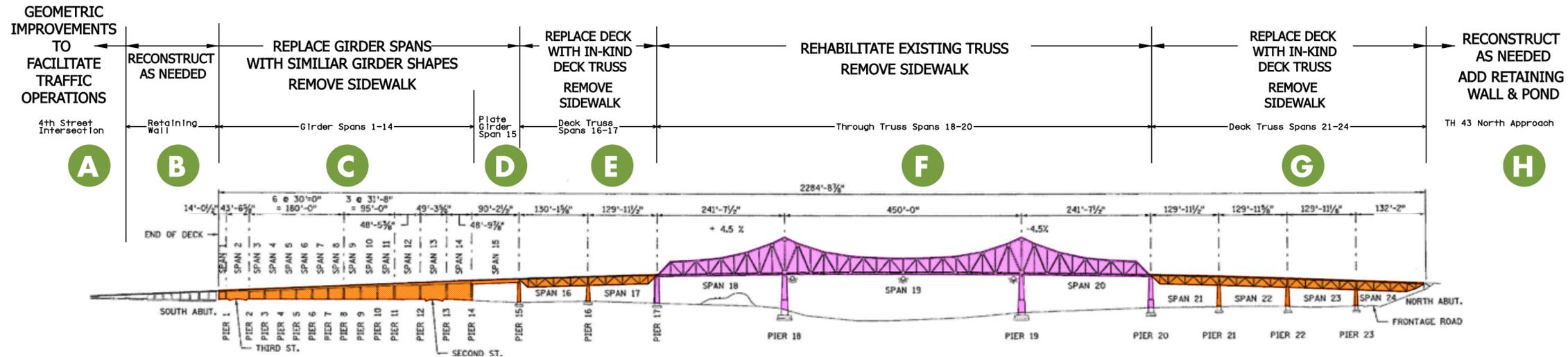
- Traffic signal
- Turn lanes
- Pedestrian refuge islands at crosswalks

## 4. Project construction staging to keep one river crossing open during construction/rehabilitation work.

# EXISTING BRIDGE No. 5900 REHABILITATION



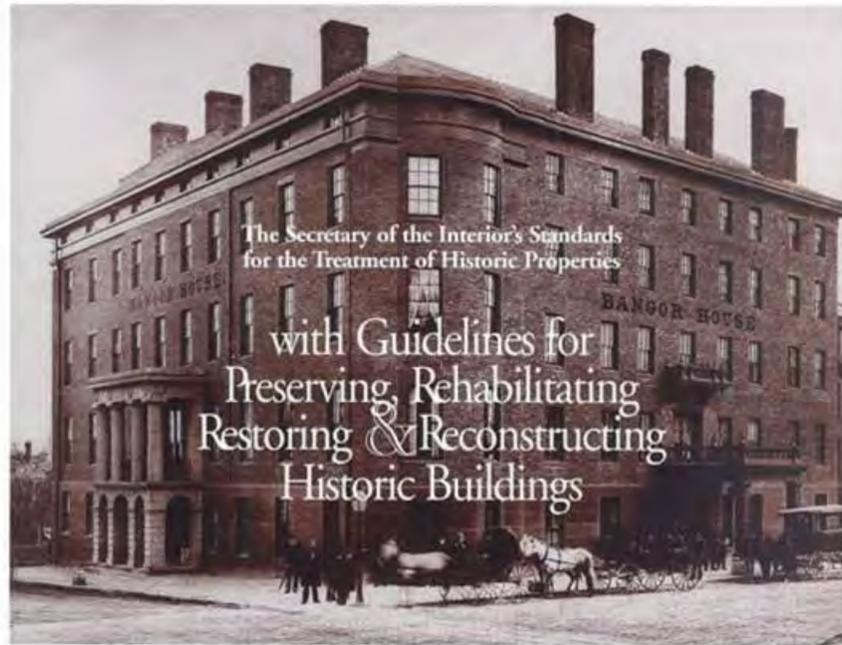
June 28, 2013



Elevation view, schematic and photograph, of the existing Winona Bridge, looking west

09-30-2013

# SECRETARY OF THE INTERIOR'S STANDARDS FOR TREATMENT OF HISTORIC PROPERTIES



Because the rehabilitation will, in part, use federal funds, the project must comply with Section 106 regulations implementing the National Historic Preservation Act. This calls for rehabilitation to follow the Standards for Rehabilitation.

**Standards for Rehabilitation** – *Repair or replace historic materials while preserving features that convey historical or architectural importance.*

# ARCHITECTURAL HISTORY EVALUATION



**Figure 33: Final Results Map**

Winona TH 43 Bridge Study  
Architectural History Evaluation  
S.P. 8503-46 2011 rev. 12/11

**Broadway Residential NRHP Historic District  
NRHP-listed, NRHP-determined Eligible,  
and Contributing Properties**

LR Landscape Research LLC

- Broadway Residential NRHP Historic District
- NRHP-listed or Previously Determined Eligible
- Contributing Property
- MN SHPO Inventory Number: WA-WAC-####



**Figure 32  
FINAL RESULTS MAP**

**Winona TH 43 Bridge Study  
Architectural History Evaluation  
S.P. 8503-46 2011 rev. 11/12**

LR Landscape Research LLC

- Architectural History Area of Potential Effect (APE)
- Broadway Residential NRHP Historic District
- WN-WAC-####:  
MN SHPO Inventory Number
- NRHP-listed or Previously Determined Eligible
- Phase II property NRHP-eligible (outside Broadway Residential NRHP Historic District)
- Phase II property not NRHP-eligible (outside Broadway Residential NRHP Historic District)
- Phase I property not NRHP-eligible (outside Broadway Residential NRHP Historic District)

# Character-Defining Features

Bridge 5900, completed in 1942, has been determined to be eligible for the National Register of Historic Places under Criterion A-Transportation, as a major river crossing important to Winona's economy, and under Criterion C-Bridge Design and Engineering, as the State's only surviving example of a cantilever thru-truss design used for long spans and built prior to 1946. Character-defining features are physical elements that represent a property's historical significance.

## **Feature 1.** Steel, riveted, cantilever through-truss, design and construction



## **Feature 2.** Deck-truss design and construction for approach spans



## **Feature 3.** Architectural stylistic elements used in design of concrete bridge piers for the cantilever spans and deck-truss approach spans



# BRIDGE TERMS



**Through Truss** Bridge type that carries traffic through the interior of the support structure with bracing along the top.

**Deck Truss** Bridge type with support structure under the deck

**Superstructure** Portion of the bridge that supports the bridge deck. Includes all truss members.

**Gusset Plate** - A metal plate that attaches multiple members of a truss.

**Deck** - The driving surface of a bridge, including shoulders.

**Member** - An individual steel piece that makes up part of an assembled frame or structure (such as the truss).

**Rivet** - Fasteners that hold steel pieces together.

**Bearing** - Device that distributes forces from the superstructure to the substructure and allows for expansion/contraction.

**Substructure** Consists of all parts that support the superstructure. Includes:

**Abutment** – A retaining wall supporting the ends of the bridge.

**Pier** – A vertical structure that supports the superstructure at points along the bridge.

**Footing** – The enlarged lower portion of the substructure resting directly on the soil, bedrock, or piles. Usually below ground and not visible.

**Piling** – Vertical shafts driven into the soil to support the foundation. Underneath the footings.

**Live Loads** Vehicle & Truck loads the bridge supports

**Section Loss** Deterioration of a steel element most commonly caused by corrosion.

**Delamination** Separation of concrete into layers below the surface.

**Spalling** Breaking away of surface concrete caused by deterioration or rebar corrosion



Gusset Plate



Abutment



Pier

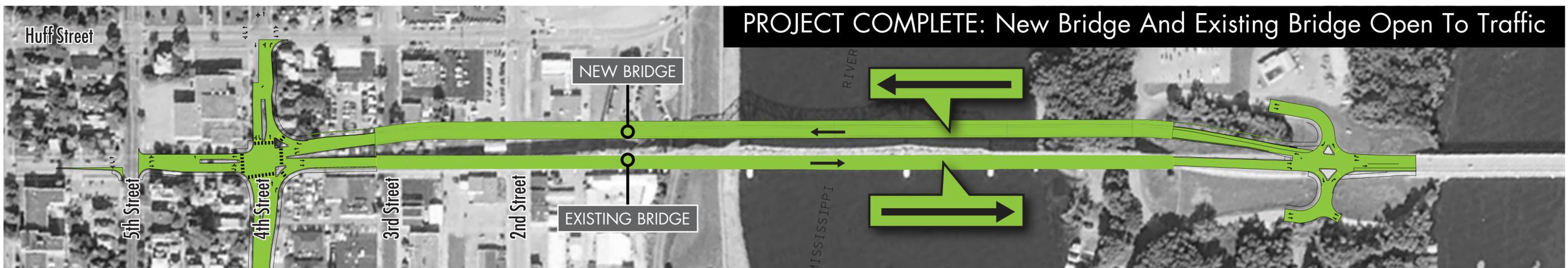
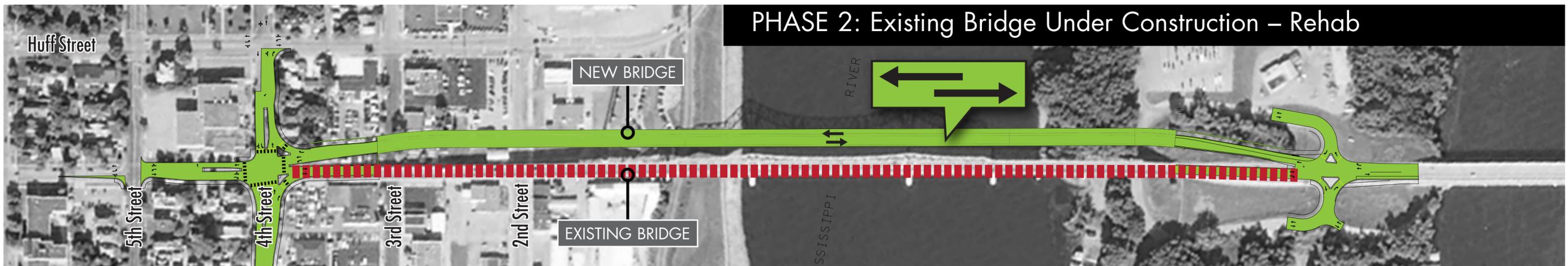
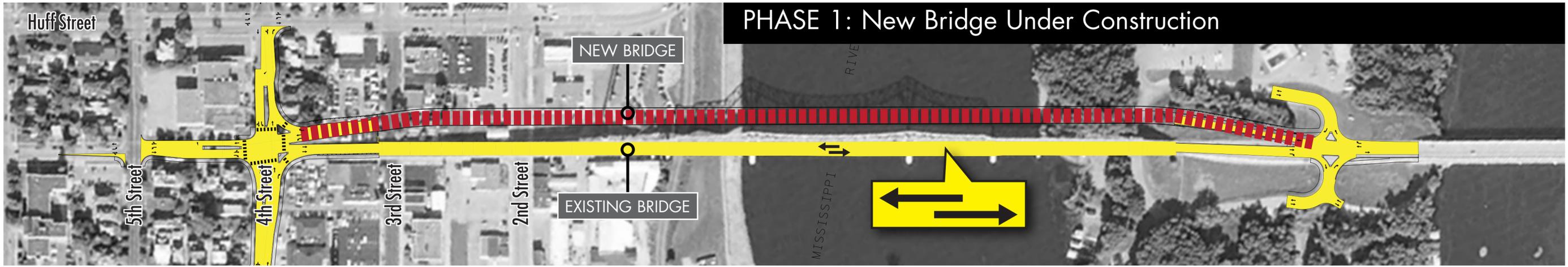


Section Loss



Spalling

# STAGING PLAN: RIVER CROSSING TO REMAIN OPEN DURING CONSTRUCTION



Existing Roadway Open
  Closed to Traffic During Construction
  Completed Construction
  Direction of Traffic

# Property Acquisition

INFORMATION

# TRAFFIC OPERATIONS

## EXISTING

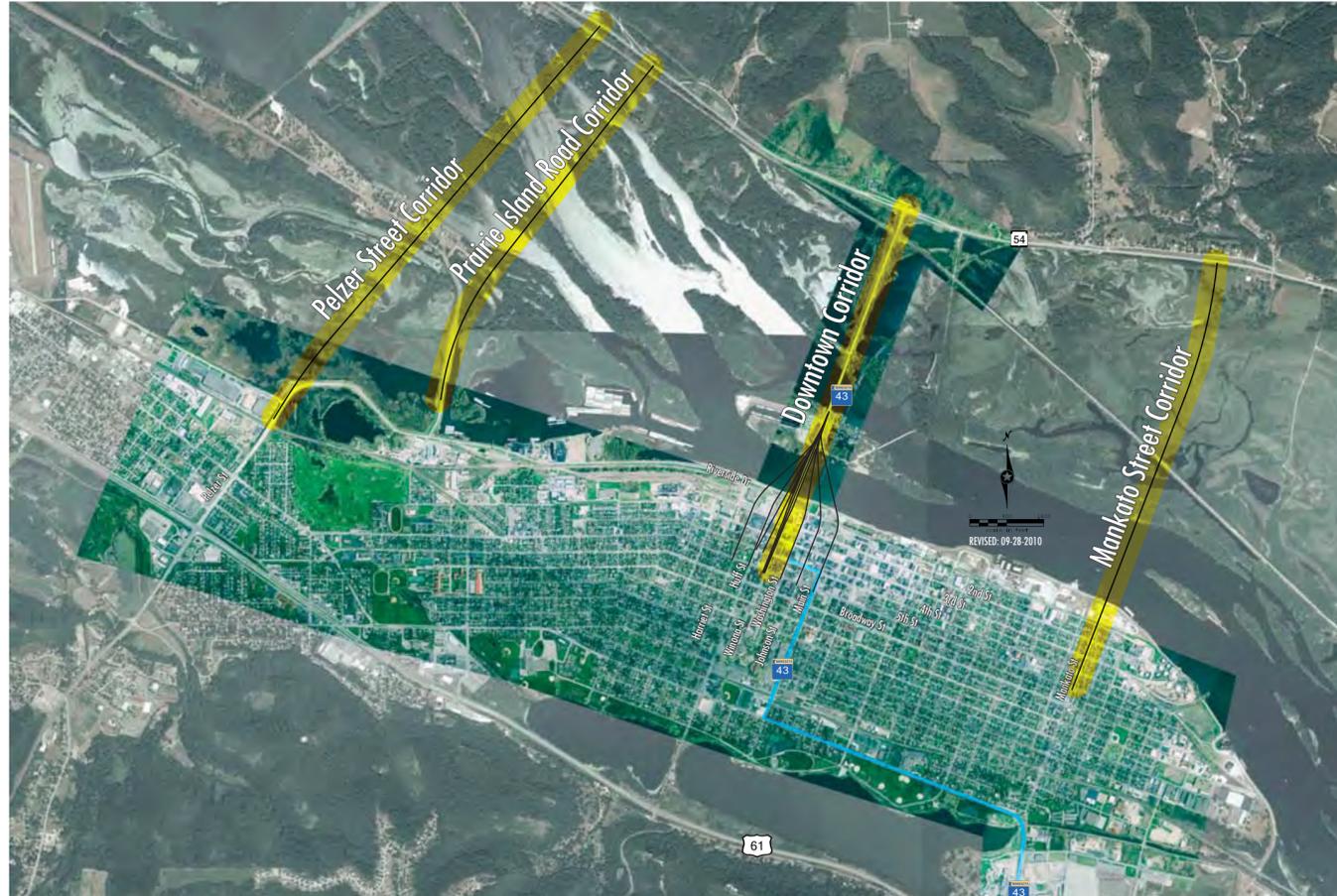
## YEAR 2038 NO BUILD

## YEAR 2038 RECOMMENDED ALTERNATIVE

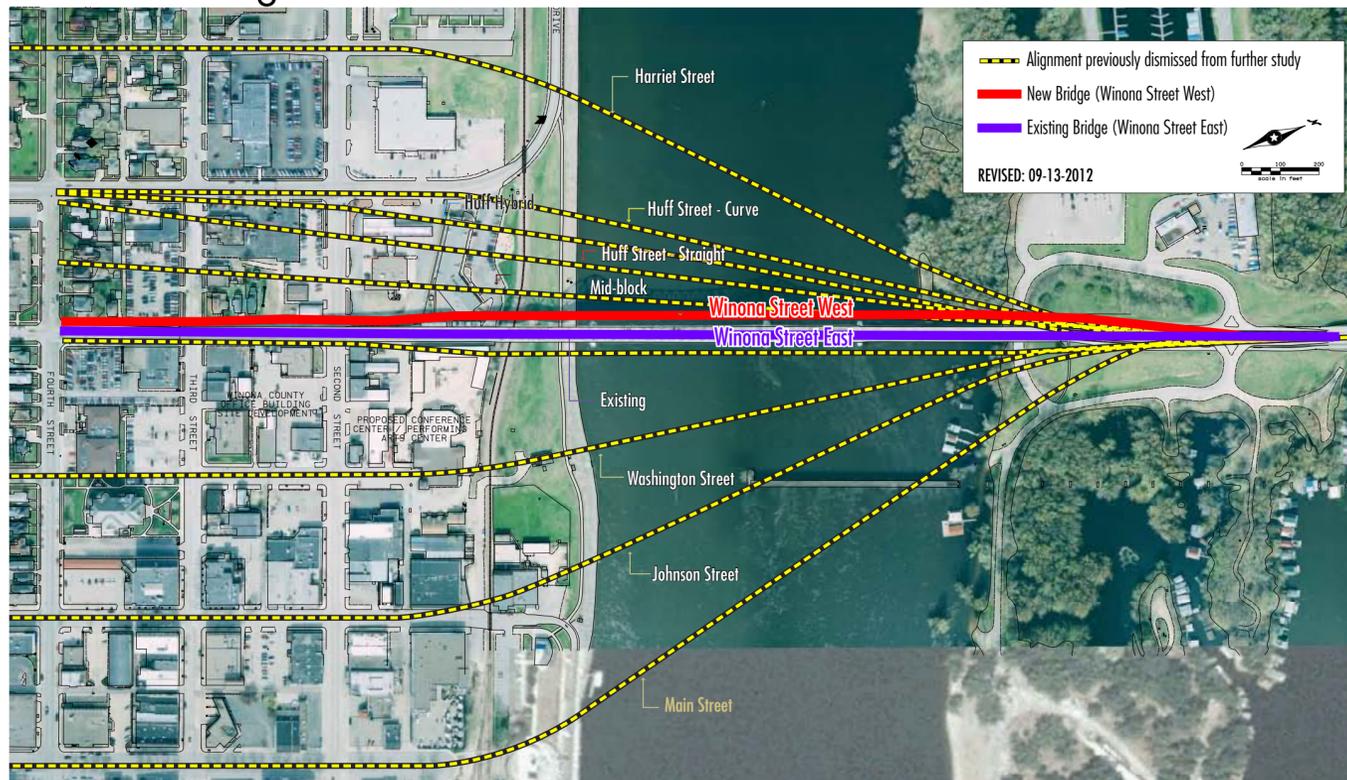


# ALIGNMENT ALTERNATIVES CONSIDERED

## Alignment Alternatives



## Downtown Alignment Alternatives



09-25-2012

# ALIGNMENT ALTERNATIVES DISMISSED FROM FURTHER STUDY

Pelzer Street Corridor and Prairie Island Road Corridor alignments dismissed due to:

- Impacts to the Upper Mississippi River National Wildlife Refuge
- Lack of connection between downtown and Latsch Island

Mankato Street alignment dismissed due to:

- Impacts to the Trempeleau National Wildlife Refuge
- Lack of connection between downtown and Latsch Island

Harriet Street alignment dismissed due to:

- High probability for impacts to historic properties and residences

Huff Street alignments dismissed due to:

- Impacts to neighborhood
- Contaminated property impact
- Potential effect to Huff-Lamberton historic property

Mid-Block alignment dismissed due to:

- Limited space for vehicles queueing which would impact traffic operations at adjacent intersections

East Winona Street alignment dismissed due to:

- Visual effect to downtown historic district
- Encroachment on Winona County Office Building site

Washington Street alignment dismissed due to:

- Severity of impacts to the historic County Courthouse
- Other impacts similar to Johnson Street

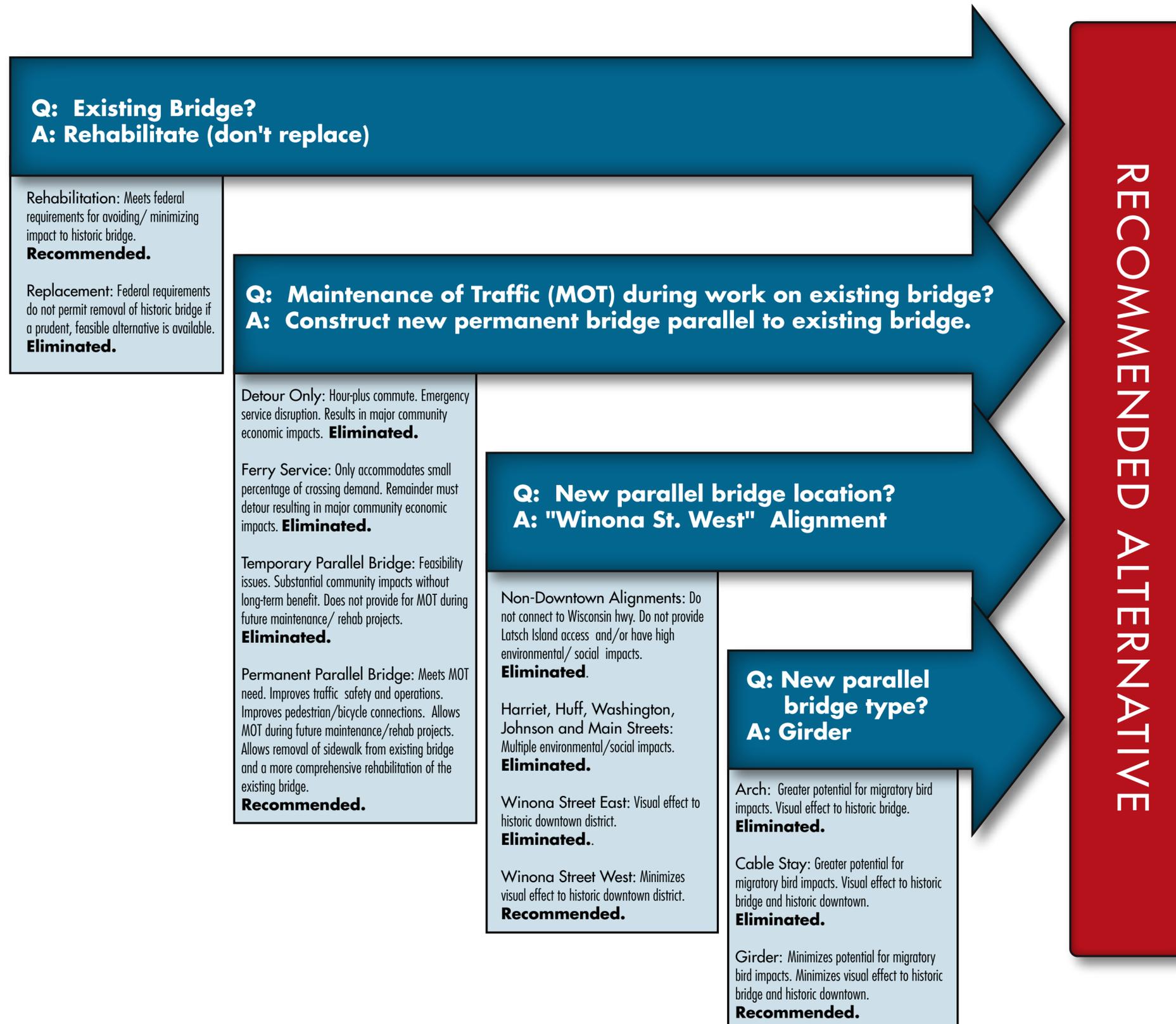
Johnson Street alignment dismissed due to:

- High probability for impacts to historic districts
- High potential for impacts to Levee Park
- Close spacing between buildings

Main Street alignment dismissed due to:

- Severity of impacts to downtown historic district

# RECOMMENDED ALTERNATIVE DECISION PROCESS



# VISUAL QUALITY REVIEW COMMITTEE (VQRC)

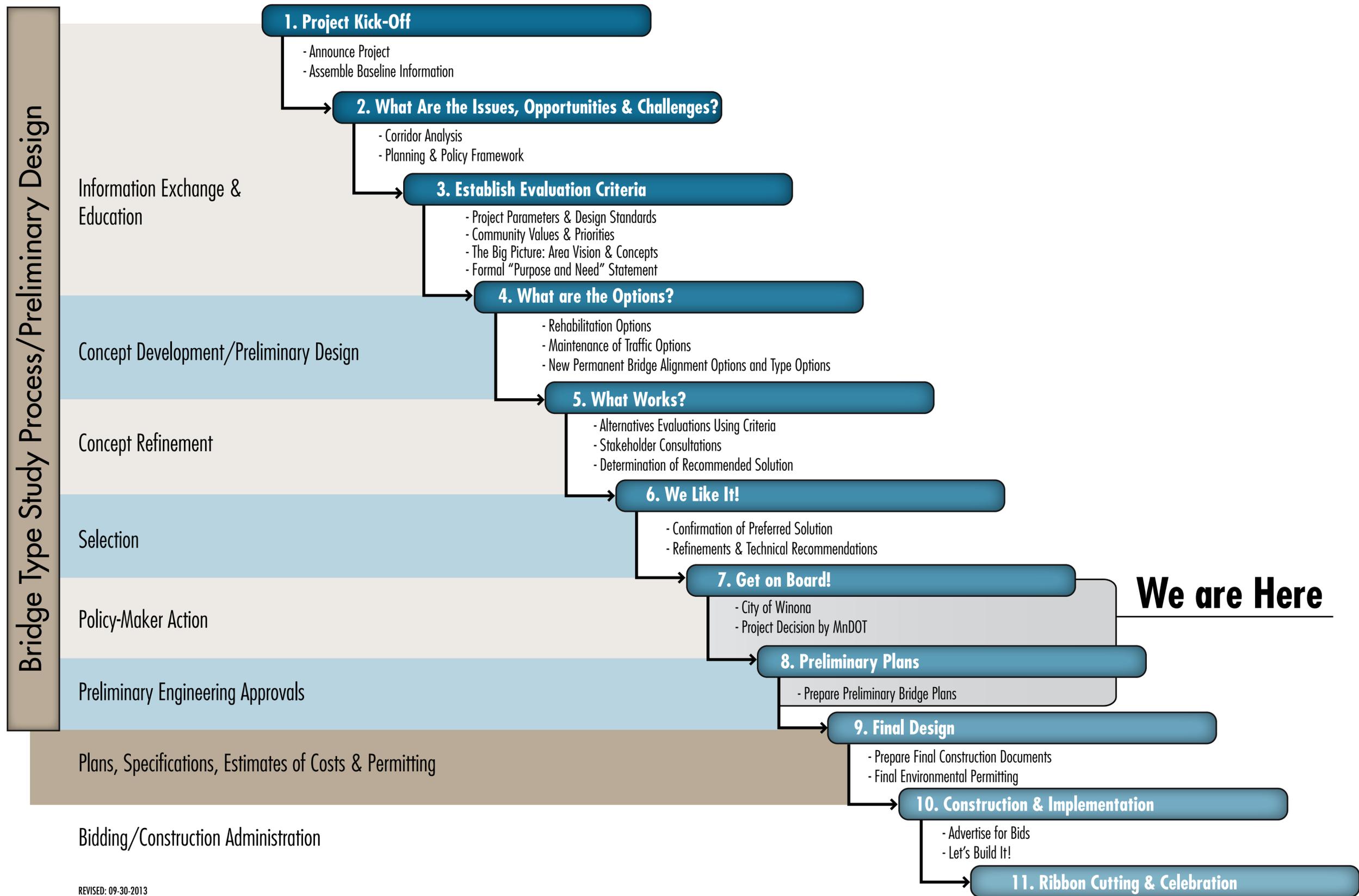


VQRC meetings are underway now to provide recommendations to MnDOT for design elements of the project. The committee includes representatives from City staff, the Winona Heritage Preservation Commission, the Chamber of Commerce, and other community interests. Elements under review include bridge railing designs, pier designs, and potential amenities such as bike paths and landscaping. The expected outcome of the VQRC meetings is a list of recommendations for design improvements, as well as an indication of priorities, since funding for these improvements is limited.

## Winona Bridge Visual Quality Advisory Committee

- David Bittner, Chamber of Commerce
- Coleen Bremer
- Tom Choinski
- Vicki English, Chamber of Commerce
- Lynn Englund, Heritage Preservation Committee
- Pamela Eyden, Winona City Council
- Jason Gilman, Winona County Planning
- Joanne Gove
- Jordan Hoel, Chamber of Commerce
- Mike Kennedy, Levee Park Committee
- Leone Mauszycki
- Liz Reach, Winona State
- Dominic Ricciotti, Winona State
- Peggy Sannerud, Winona State
- Tom Stoa, Winona Bicycle Advisory Committee
- Jack Stoltman
- Chad Ubl, City of Winona

# PROJECT PROCESS



REVISED: 09-30-2013

09-30-2013