

# ST. CROIX RIVER CROSSING PROJECT SUPPLEMENTAL FINAL EIS ABSTRACT

## **The Problem**

The Stillwater Lift Bridge is a critical crossing over the St. Croix River between Minnesota and Wisconsin. Built in 1931, the Lift Bridge is an historic transportation structure, important for its innovative engineering, but also as a symbol of Stillwater and the St. Croix valley. The bridge's unique function as a Lift Bridge, with frequent raising to allow boats to travel the St. Croix River, is also a source of traffic congestion in Stillwater and Houlton, Wisconsin, as traffic backs up to wait for the bridge to lower and resume vehicular traffic.

But traffic congestion is not only attributable to the Lift Bridge. The constrained street network in downtown Stillwater, and topographic constraints on the Wisconsin bluff, also contribute to traffic congestion and severely limit any opportunities to improve approach roadways to the Lift Bridge. Traffic on the Lift Bridge has continued to grow, with increased tourism in the St. Croix Valley, and a growing population on both sides of the river. After 70 years of service, the Lift Bridge has aged and has structural, operational, and maintenance issues. The limitations of a two-lane historic bridge, the demands of raising and lowering the bridge, and ongoing maintenance and operations have raised concerns about safety on the bridge as well as on the approach roadways, which are also at capacity and have no room for expansion or improvement within the current constraints.

Over the last three years, Minnesota Department of Transportation (Mn/DOT), Wisconsin Department of Transportation (WisDOT) and the Federal Highway Administration (FHWA), in cooperation with a Stakeholder Group, have studied four "build" alternatives and a "no-build" alternative to find a safe and efficient river crossing over the St. Croix. But the process of resolving transportation needs do not occur in a vacuum: the St. Croix River is also a National Wild and Scenic River, designated by the U.S. Congress because of its remarkable scenic, recreational and geologic values. The Riverway has rare and protected species such as the bald eagle, osprey and Higgin's eye mussel beds, as well as significant wetlands and other water resources. Nearby communities in both Wisconsin and Minnesota, particularly Stillwater, are known for their historic properties that mirror the heritage of the area and provide tourist attractions that are an increasingly important part of the regional economy.

The Environmental Impact Statement (EIS) process has resulted in the identification of a "Preferred Alternative" package that best meets the transportation needs with the fewest impacts on the natural, social and cultural environment.

## **The Preferred Alternative Package**

The St. Croix River Crossing Project Preferred Alternative package consists of four elements:

**Preferred Alternative river crossing location.** The project includes the roadway from the Highway 5/Highway 36 interchange in Minnesota, crossing the St. Croix River, and ending at the 150th Avenue overpass in Wisconsin. The segment of Minnesota Highway 36 proposed for reconstruction begins approximately 1,050 feet (0.3-mile) east of the Washington/Norell intersection with Highway 36 and extends to the St. Croix River. The new four-lane bridge will cross the river at the present location of the Highway 36/Highway 95 interchange, and landing in Wisconsin approximately 6,450 feet south of the Lift Bridge. Wisconsin Highway 35 will be

relocated to the east of its present alignment to provide an interchange with relocated St. Croix County Highway E. Wisconsin Highway 64 will be constructed from the St. Croix River through this new interchange to the 150th Avenue overpass in the Town of St. Joseph.

**Preferred Alternative bridge type.** The extradosed bridge type was identified for the St. Croix River crossing. An extradosed bridge consists of towers with cables connecting the towers to the bridge deck. The bridge deck is anticipated to be 113 to 159 feet about the river surface and the towers would extend approximately 60 feet above the bridge deck.

**Future Use of the Lift Bridge.** Under the Preferred Alternative, the Lift Bridge will be converted to a pedestrian/bicycle facility. The Lift Bridge will be a component of a loop trail connecting Minnesota and Wisconsin via the Lift Bridge and new river crossing.

**Preferred Alternative mitigation package.** FHWA, Mn/DOT and WisDOT, in consultation with the Stakeholder Group, have developed a mitigation package, funded at over \$16.5 million, to address natural, social and cultural impacts. The package includes activities such as wetland replacement and relocation of threatened and endangered species as well as items addressing important visual, recreational and historic resources. Key elements of the mitigation package include bluffland restoration and preservation activities, removal of visual intrusions from the riverway and funding for the long-term preservation of the Lift Bridge. Stakeholder, community and agency participation in development of the project's Visual Quality Manual will also ensure high quality design in all aspects of the project.

The NPS draft 7(a) evaluation indicated that the Preferred Alternative would not have a direct and adverse effect on the scenic and recreational values of the Lower St. Croix Riverway provided there was appropriate mitigation. The process to implement these mitigation items is documented in the Riverway Memorandum of Understanding (MOU). An Amended Section 106 Memorandum of Agreement (MOA) was developed to mitigate for impacts to historic resources as a result of the project. Finally, in order to address the potential negative impacts to area resources from accelerated growth in St. Croix County influenced by the project, mitigation measures were identified to provide support to assist local governments in managing growth through local plans, ordinances and other related tools. The administrative process to implement these mitigation measures is documented in the Growth Management MOU.

**Public Involvement.** The long process to identify a new, efficient river crossing while having the least impact on the natural, social and cultural environment has benefited from extensive public involvement and comment in the process. The DOTs and FHWA worked with a wide variety of organizations and groups to study and evaluate the options. Groups representing local governments, state and federal agencies, non-profit advocacy groups for the river, the environment and historic resources, and others were asked to serve on the Stakeholder Resolution process as members of the Stakeholder Group to provide input on the project. Public meetings were held to solicit comments on the river crossing alternatives as well as on bridge types that would best respect the visual character of the river valley.

### **Project Cost.**

Total anticipated project cost	\$299 to \$334 million (2004 dollars) for 10 percent to 90 percent bid probability
	\$373 million (2004 dollars) for 100 percent bid probability

# ST. CROIX RIVER CROSSING PROJECT SUPPLEMENTAL FINAL EIS EXECUTIVE SUMMARY

## 1.0 INTRODUCTION

Severe traffic congestion in downtown Stillwater and delays caused by the operation of the Stillwater Lift Bridge (the Lift Bridge) have spurred the discussion of a new bridge crossing in Stillwater for many years. “Peak hour” delays and weekend backups, especially during the tourist season, frustrate residents and visitors alike.

Development of downtown Stillwater and northwestern Wisconsin as tourist destinations, commercial development along Trunk Highway (TH) 36 in Oak Park Heights and Stillwater attracting employees and residents throughout the region, residential development in western St. Croix County, and the economic strength of the Twin Cities metropolitan area as an employment center have contributed to increasing traffic volumes on TH 36, TH 95, in downtown Stillwater, across the Lift Bridge, and on State Trunk Highway (STH) 64 and STH 35/64 in Wisconsin. Figure ES-1 shows the project location and setting.

Some drivers have avoided this congestion by finding alternate routes across the St. Croix River. Most drivers who can alternately use the Interstate-94 (I-94) (Hudson), TH 243 (Osceola), or U.S. Highway (USH) 8 (Taylors Falls) bridges are already doing so. However, a considerable number of area residents or visitors are still dependent on the Lift Bridge crossing for access to their homes, jobs, shopping, and recreation, and that demand is forecasted to continue to grow in the future.

As owners and operators of the bridge, the Minnesota Department of Transportation (Mn/DOT) and the Wisconsin Department of Transportation (WisDOT) have identified increased operations, maintenance, and safety concerns about the condition of the Lift Bridge and continued operations of the lift mechanism. Built in 1931, the historic Lift Bridge (listed in the National Register of Historic Places in 1989) is of the age where substantial investments are required to keep the bridge operating and to maintain navigation on the St. Croix River. The narrow widths and functional deficiencies of the approach roadways cause safety and congestion issues, as the traffic on these roadways are at or above capacity. Figure ES-2 shows transportation issues identified in the project area.

Identifying possible solutions to these transportation problems requires understanding of the environmental context of the Lift Bridge and adjoining roadways. At the request of the states of Minnesota and Wisconsin, the U.S. Congress has designated the St. Croix River, over which the Lift Bridge crosses, as a National Wild and Scenic River in 1972. The Riverway, which includes the river and adjacent bluffslands, was so designated because of its outstandingly remarkable scenic, recreational, and geologic values. The St. Croix River Valley supports an abundance of wildlife and aquatic species, including the federally-endangered Higgin’s eye mussel, bald eagles, peregrine falcons, and osprey. The St. Croix Valley is rich in historic resources as well; Stillwater, “the birthplace of Minnesota,” boasts many historic properties dating to its nineteenth century prosperity as a major logging center in the upper Midwest. Stillwater’s downtown

commercial area, with its varied palette of architectural styles and designs, is listed in the National Register of Historic Places (NRHP). The Lift Bridge was listed in the NRHP because it is a rare example of the vertical-lift highway bridge, representing innovative engineering techniques of the early twentieth century.

The St. Croix River Valley is valued by residents and visitors alike for its combination of natural, historic, and scenic resources. The proposed solution to the transportation problems has taken into account the potential negative impacts on these resources and strived to maintain the balance that has created this unique environment.

## **2.0 PURPOSE AND NEED**

The project purpose is to improve Minnesota TH 36 and Wisconsin STH 64 between TH 5/County State Aid Highway (CSAH) 5 in Oak Park Heights and Stillwater, Minnesota, and 150th Avenue in the Town of St. Joseph, Wisconsin, to provide a safe, reliable, and efficient transportation corridor by reducing congestion, improving roadway safety, and providing an adequate level of service for forecasted year 2030 traffic volumes<sup>1</sup>. Transportation needs for this project fall into two primary categories:

- Transportation mobility on a safe and efficient facility; and
- A reliable crossing of the St. Croix River.

### Stakeholder Group-Developed Purpose and Need

As part of their work on the project, the Stakeholder Group (see Section 3.0 of this Executive Summary for a brief description of the Stakeholder Group) developed a project purpose and need that was first documented in the *2003 St. Croix River Crossing Project Amended Scoping Document*. The following is a summary of the Stakeholder Group-developed purpose and need.

Departments of Transportation in each state are responsible for providing mobility in a safe, reliable and cost-efficient manner and for integrating environmental, cultural, economic, and social considerations into transportation solutions. While this integration is always a necessary part of the DOTs' work, it is of particular importance and sensitivity as WisDOT and Mn/DOT contemplate improving mobility and safety between the two states in the area of the existing crossing between Washington County, Minnesota, and St. Croix County, Wisconsin.

The project goal is to manage congestion and improve mobility in a reliable, safe and cost-efficient manner as part of a broader program of regional transportation improvements while avoiding (and when unavoidable, minimizing and mitigating for) impacts to the area's social, economic, cultural and environmental needs and objectives.

Chapter 2 of the SFEIS describes in greater detail the Stakeholder Group-developed purpose and need. Refer to Chapter 2 of the SFEIS for additional information.

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<sup>1</sup> Level of Service (LOS) is a indicator of intersection operations measuring an average delay per vehicle entering an intersection using the letters A - F, with LOS A representing minimal delay and LOS F representing substantial vehicle delays.

## Summary of Transportation Issues

Both the existing and future No-Build transportation systems include issues substantiating roadway improvement. Figure ES-2 summarizes the key transportation issues in the study area. The main issues are also summarized in the following bullet points.

- Poor traffic operations on TH 36 and in Downtown Stillwater: Substantial delays and queuing are caused by insufficient roadway and intersection capacity, poor TH 36 frontage road geometrics (close proximity to TH 36 mainline), and Lift Bridge deck lifts.
- Diverting traffic volumes: Delays, queuing, and Lift Bridge conditions (flooding and maintenance) encourage traffic to use alternate routes. Diverting traffic use alternate regional, river crossing and local travel routes. Regional traffic diversion would be a particular issue in future No-Build conditions when the Lift Bridge would be closed for two years for major rehabilitation.
- High crash rates: Insufficient approach roadway and intersection geometrics result in unsafe conditions.
- Delayed emergency response: Areas in both Minnesota and Wisconsin experience delays caused by poor traffic operations and Lift Bridge conditions (deck lifts, closure due to flooding and maintenance).
- Impeded access: High traffic volumes and congestion levels hamper access to properties for residents, business patrons, and pass-through travelers.
- Interrupted, unreliable river crossing: The existing Lift Bridge is a two-lane bridge with substantial structural deficiencies. It cannot accommodate existing or forecasted future traffic volumes and does not provide capacity for incident management or emergency response. A rehabilitation project addressing immediate maintenance needs began in summer 2005 and was completed in spring 2006; however, due to lack of funding, this project did not address all structural deficiencies. Another major rehabilitation would be needed by 2020; this would close the bridge for approximately two years. The Lift Bridge is also flood-prone and is closed an average of five days per year.
- Lack of bicycle/pedestrian facilities.
- Transportation System Management (TSM)/Travel Demand Management (TDM) cannot fully address transportation needs in the project area. However, a possible transit market has been identified. Mn/DOT, in cooperation with the Metropolitan Council, will conduct a transit feasibility study to determine transit goals and objectives and further examine potential transit markets (including non-traditional transit services) in western Wisconsin.

Chapter 2 of the Supplemental Final EIS (SFEIS) describes in greater detail the key issues facing the transportation system, including the ability of transportation system management and travel demand management (TSM/TDM) strategies to address the transportation issues. Chapter 2 of the SFEIS also describes the measurable and qualitative transportation objectives and environmental, social, and historic resource objectives used to identify those alternatives described in the Supplemental Draft EIS (SDEIS) that meet the project purpose and need.

### 3.0 PROJECT HISTORY

A replacement bridge crossing in the Oak Park Heights and Stillwater, Minnesota area, and the Town of St. Joseph, Wisconsin, has been discussed for many years. Consideration of a replacement bridge crossing over the St. Croix River near Stillwater began in the early 1970s, but was not pursued because of a lack of funding. Formal assessment of the alternatives to address growing transportation problems in the area began with the preparation of the *St. Croix River Crossing Draft Study Outline and Scoping Document* (1985). Numerous studies, as discussed in Chapter 1 of this SFEIS, have been completed since that time.

Alternatives assessed with the 1985 Scoping Document eventually led to the analysis of three river crossing corridor alternatives and two tunnel alternatives with the 1990 Draft Environmental Impact Statement (EIS). A Preferred Alternative was identified in the 1995 Final EIS and a Record of Decision (ROD) issued on July 10, 1995. Final design, right-of-way acquisition, and site preparation began on the 1995 Preferred Alternative but were halted following the finding of the NPS Section 7(a) Evaluation in 1996.

In 1996, the National Park Service (NPS) evaluated the project under Section 7(a) of the Wild and Scenic Rivers Act and found that the project, as proposed, would have a direct and adverse effect on the outstandingly remarkable scenic and recreational values for which the Lower St. Croix River was included in the National Wild and Scenic River System. As a result of this finding, federal permits from the U.S. Army Corps of Engineers (Corps) and the U.S. Coast Guard were not issued for the project, and the project was not allowed to proceed. In April 1998, the U.S. District Court upheld the NPS determination.

New alternatives, including consideration of the future of the Lift Bridge, were identified as part of the Braun Facilitation Process in 1998. This led to identification of the Braun C Alternative, later referred to as the “Consensus Alternative.” Documentation of the Braun C Alternative in a Supplemental Draft EIS was halted in January 2001 due to the inability to reach a consensus on the future of the Lift Bridge.

In 2002, FHWA, Mn/DOT, and WisDOT re-initiated the St. Croix River Crossing Project EIS process with alternatives recommended during the Braun Facilitation Process as well as the 1995 FEIS Preferred Alternative and Stakeholder recommended alternatives. This led to the identification of six alternatives in the 2003 Amended Scoping Document; the *2004 Amended Final Scoping Decision Document* identified four alternatives in addition to the No-Build Alternative for study in the 2004 Supplemental Draft EIS (SDEIS). The 2004 SDEIS “supplements” the 1995 Final EIS and the 1990 Draft EIS by providing information related to the Build Alternatives as well as updating information related to the No-Build Alternative.

#### Stakeholder Resolution Process

In September 2002, the facilitation firm RESOLVE was selected by a multi-agency and stakeholder panel to proceed with the project through mediation. RESOLVE developed a dispute resolution process that centered on a “Stakeholders Group,” made up of representatives of the diverse interests in the project area who would provide input to the project proposers’ decision-making process. This process, the “Stakeholder Resolution Process,” responded to the

need for a new start to the project, and a new approach to address the environmental, historical and transportation concerns surrounding the project. Formal facilitated Stakeholder meetings began in June 2003. Chapter 15 of the 2004 SDEIS provides a detailed description of the Stakeholder Resolution Process.

#### 2005 Lift Bridge Repair project

In fall of 2002, the 106th United States Congress provided \$4,989,000 in funding from the Labor, Health, and Human Services bill for the repair of the Lift Bridge (referred to herein as the “\$5 Million Lift Bridge Repair Project”), and was completed as a separate project. A series of meetings were held to prioritize the needs with local governments, state and federal government agencies, and historic preservation groups to prioritize Lift Bridge needs that could be completed with available funds. A separate environmental document (Mn/DOT Project Memorandum, *Lift Bridge Repair*, Bridge #4654, March 2004) resulted in a federal categorical exclusion under NEPA. These repairs began in summer 2005 and were completed in spring 2006.

FHWA conducted Section 106 review of the repair options and determined that the repair plan would have no adverse effect on the National Register qualities of the Stillwater Lift Bridge. Both MnSHPO and WisSHPO concurred in this determination, with the understanding that MnSHPO will review all project plans prior to implementation.

## **4.0 2006 SUPPLEMENTAL FINAL EIS**

The 2006 *St. Croix River Crossing Supplemental Final EIS* identifies the Preferred Alternative package and documents the social, economic, and environmental impacts associated with the Preferred Alternative. The Preferred Alternative was identified from the alternatives studied and discussed in the 2004 Supplemental Draft EIS. The Supplemental Final EIS documents the river crossing location, approach roadway design, bridge type, and mitigation package to be included with the Preferred Alternative.

Following public review of the Supplemental Final EIS, a Record of Decision (ROD) and Adequacy Determination, anticipated in August 2006, will document Mn/DOT, WisDOT and FHWA’s final decision regarding the project.

### **4.1 ALTERNATIVES NOT IDENTIFIED AS THE PREFERRED ALTERNATIVE**

The SDEIS alternatives that were not identified as the preferred alternative are discussed below. Detailed discussion of these alternatives is located in Chapter 3 of the SFEIS.

#### No-Build Alternative

The No-Build Alternative was not identified as the Preferred Alternative because existing deficiencies (operational, geometric, and capacity) would persist and become worse as anticipated development in the project area will increase traffic on the roadway system in the future. However, the No-Build Alternative was used as a basis of comparison in the SDEIS and is used as a basis of comparison for the Preferred Alternative in this SFEIS.

### Alternative C

Alternative C was similar to Alternative B-1 in many transportation impacts, including river crossing reliability; congestion; decreases in Vehicle Hours Traveled (VHT; indication of the overall system efficiency); Regional Daily Vehicle Miles Traveled (VMT; another indication of the overall system efficiency); and the amount of local travel diversion. Alternative C differed slightly from Alternative B-1 in several measures. Alternative C may experience poor traffic operation at one merge/diverge movement (TH 36 traffic taking the TH 95 off-ramp). Under Alternative C, the number of accidents forecasted for the period 2011 to 2030 will be reduced by over 600 crashes; however, this was less than half of the improvement anticipated under Alternative B-1.

Environmental, cultural and social considerations were more critical than the transportation impacts in rejecting Alternative C as the preferred alternative. These considerations included parkland impacts; farmland impacts under Alternative C – Option 2; noise impacts; impacts to potentially contaminated sites; impacts to the Wisconsin bluff; impacts to the 100-year floodplain; and wetland impacts. Refer to Chapter 3 of the SFEIS for additional detail regarding the reasons why Alternative C was not identified as the preferred alternative.

### Alternative D

Like Alternative C, Alternative D was similar to Alternative B-1 in many transportation impacts, including river crossing reliability, congestion, decreases in Vehicle Hours Traveled (VHT) and Vehicle Miles Traveled (VMT). Alternative D may experience unacceptable traffic operations at the TH 36/95 interchange ramps; it also presents more local intersections operating at an unacceptable level than with Alternative B-1. Under Alternative D, the number of accidents forecasted for the period 2011 to 2030 will be reduced by over 600 crashes, again, less than half the improvement anticipated under Alternative B-1.

Environmental, cultural and social considerations were also more critical than the transportation impacts in rejecting Alternative D as the preferred alternative. These considerations included residential acquisitions and commercial relocations; parkland impacts; impacts to potentially contaminated sites; impacts to the Minnesota and Wisconsin bluffs; longitudinal and transverse impacts to the 100-year floodplain; and wetland encroachments. Refer to Chapter 3 of the SFEIS for additional detail regarding the reasons why Alternative D was not identified as the preferred alternative.

In addition, the likelihood of receiving a positive Section 7(a) Evaluation from the National Park Service (NPS) with Alternative D was unknown and contributed to the elimination of the alternative from further consideration. In a preliminary review of the Build Alternatives for the SDEIS, the NPS had indicated that Alternative D may not be able to receive a favorable Section 7(a) Evaluation, even with a strong mitigation package.

### Alternative E

Many of the same reasons for not identifying Alternative D as the Preferred Alternative also apply to Alternative E. Alternative E, however, would utilize the Lift Bridge for vehicular traffic, and would be affected by congestion related to bridge closings and regular bridge deck lifts for navigation.



- Approximately 3.3 miles of approach roadway (STH 64) in Wisconsin.

In Minnesota, TH 36, the TH 36 frontage roads, and cross streets (Oakgreen Avenue/Greeley Street and Osgood Avenue) will be reconstructed from east of Washington/Norell Avenues to Osgood Avenue. The intersections of TH 36 and local streets will remain as at-grade intersections. No improvements will be constructed at Norell Avenue/Washington Avenue under the Preferred Alternative. Frontage roads at Oakgreen Avenue/Greeley Street will be pulled back away from TH 36; frontage roads at Osgood Avenue will remain in place. East of Osgood Avenue, TH 36 will be reconstructed and a new TH 36/95 diamond interchange will be constructed along with corresponding improvements to TH 95.

The new bridge is located approximately 7,550 feet south of the Lift Bridge along the Minnesota shoreline and approximately 6,450 feet south of the Lift Bridge along the Wisconsin shoreline. The extradosed bridge type design was identified for the Preferred Alternative bridge. Under the Preferred Alternative, the Lift Bridge will be converted to a pedestrian/bicycle facility.

In Wisconsin, a new STH 64 roadway, using a four-lane divided, controlled access freeway design, will be constructed from the new bridge to 150th Street, and includes construction of a new diamond interchange with relocated STH 35 and relocated CTH E and a new STH 35 roadway between the interchange and existing STH 35.

#### Reasons for Identifying Alternative B-1<sub>a</sub> as the Preferred Alternative

The primary reasons considered in identifying Alternative B-1<sub>a</sub> (conversion of the Lift Bridge to a pedestrian/bicycle facility) as the Preferred Alternative are summarized below.

- The proposed four-lane river crossing provides sufficient capacity to meet forecasted year 2030 travel demand, with sufficient capacity to meet additional travel demands beyond year 2030. The four-lane crossing also reduces the amount of diversion of traffic to the I-94 St. Croix River Crossing, thereby reducing capacity concerns at that crossing as well.
- The proposed alignment lies far enough south of downtown Stillwater to remove a substantial number of regional through trips from downtown streets, thereby reducing congestion.
- Construction of a new river crossing for both directions of traffic eliminates concerns regarding the structural condition, geometric restrictions and reliability associated with the Lift Bridge.
- Construction of a new river crossing and elimination of vehicular use of the Lift Bridge will also eliminate traffic congestion in downtown resulting from bridge raisings.

The Stakeholder Group-developed purpose and need identified a number of environmental, economic, social, and historic resource concerns that should be avoided or minimized by the project. The Preferred Alternative best addresses these concerns as noted below.

- The proposed roadway alignment reduces and/or avoids direct impacts to National Register of Historic Places listed or eligible properties, as it is the farthest in distance from the Lift Bridge, the Stillwater Commercial Historic District, and the Stillwater Cultural Landscape

District. The Preferred Alternative also avoids use of contributing sites within the Landscape District, including the Hersey and Bean site in the Stillwater South Main Street Archaeological District, and the Tourist Camp and Legion Park sites in Kolliner Park.

- The Alternative B-1<sub>a</sub> alignment avoids substantial right-of-way taking from local parks including the Stillwater Municipal Barge facility property, Lowell Park, and Kolliner Park.
- The Alternative B-1<sub>a</sub> alignment minimizes impacts to the Lower St. Croix National Scenic Riverway by minimizing river crossing distance through an alignment more perpendicular to the river centerline and by constructing a new river crossing in an area already disrupted by the development of a water treatment facility and an electrical generating plant.
- Conversion of the Lift Bridge to a pedestrian/bicycle facility under Alternative B-1<sub>a</sub> allows the new river crossing project to be compatible with the National Park Service Riverway management policy of “non-proliferation” of transportation crossings and the historic Lift Bridge to be preserved as a recreational amenity.

### **Other Resource Issues**

- Fewer contaminated sites are affected under Alternative B-1<sub>a</sub>. Although all alternatives potentially affected roughly the same number of medium-risk sites, Alternative B-1<sub>a</sub> would potentially affect six high-risk sites, compared to nine sites under the other alternatives.
- All alternatives exerted similar impacts on protected species, the fish and aquatic community, the terrain and climate, and wildlife. Alternative B-1<sub>a</sub> resulted in less removal of trees and undergrowth along shorelines and upland/bluff areas, with the amount estimated at 2.18 acres. Other alternatives required removal of 3.98 to 13.29 acres of trees and undergrowth.
- Impacts were the same for all alternatives for water quantity (drainage), water quality and groundwater. Alternative B-1<sub>a</sub> resulted in substantially less longitudinal impact (900 feet) and no transverse impact to the floodplain from road and pond construction, compared to other SDEIS Build alternatives that ranged from 1,600 to 5,400 feet of longitudinal and additional transverse impacts.
- Alternative B-1<sub>a</sub> resulted in the fewest acres of wetland impacts, with a total of 6.37 acres affected compared to 6.97 to 7.68 acres for the other SDEIS Build Alternatives.

Since publication of the SDEIS, Alternative B-1<sub>a</sub> has been refined (e.g.; TH 36 design; drainage design in Wisconsin) to address environmental, right-of-way, and other concerns and to incorporate elements of the Preferred Alternative package (e.g., loop trail mitigation item). Additional benefits of the Preferred Alternative package include:

- Use of the “1995 layout” in the Osgood to TH 5 segment avoided a substantial number of commercial property takings in the cities of Oak Park Heights and Stillwater while improving short-term traffic operations and safety concerns in this segment of TH 36. The cities of Oak Park Heights and Stillwater plan to continue working toward long-term operations improvements that will address right-of-way and economic concerns in this segment.

- The Preferred Alternative package minimizes impacts to the Riverway through identification of the extradosed bridge type, a profile that minimizes bluff disturbance, a design that reduces the number of piers in the river, and a structure that allows for an aesthetic design compatible with the character and importance of the Riverway.

However, these modifications (e.g., 1995 TH 36 layout; loop trail mitigation item) have resulted in some impacts (e.g., wetlands; floodplains), as described in the following SFEIS chapters, to be greater than the Alternative B-1 impacts described in the SDEIS. If these same modifications were equally applied to the other SDEIS Build Alternatives (Alternatives C, D, and E), their impacts would also increase in the same amount as the increase experienced with the Preferred Alternative package under Alternative B-1. Therefore, although some impacts have increased under the Preferred Alternative package, the Preferred Alternative package still best addresses the transportation purpose and need to provide safe and efficient mobility while considering the environmental, economic, social, and historic resource concerns present within the project area.

### **Comparison to 1995 FEIS Preferred Alternative**

As noted in the project history above, a Final EIS, completed in 1995, identified a Preferred Alternative river crossing immediately to the north of the Preferred Alternative described in this SFEIS. Work on the 1995 FEIS Preferred Alternative was halted in 1996 following a negative finding in the NPS Section 7(a) Evaluation and subsequent decisions from the U.S. District Court.

The Preferred Alternative identified by Mn/DOT and WisDOT in this SFEIS is substantially different from the 1995 FEIS Preferred Alternative because of elements incorporated into the Preferred Alternative, including: an enhanced bridge design; river crossing alignment; number of bridge piers in the river; avoidance of mussel habitat; reuse of Xcel Energy barge facility prior to its removal; mitigation package; and use of the Lift Bridge as a recreation facility with the loop trail system. Refer to Chapter 3 of this SFEIS for additional discussion regarding the comparison of the 1995 FEIS Preferred Alternative to the Preferred Alternative described in this SFEIS.

## **4.3 PREFERRED ALTERNATIVE IMPACTS**

The Preferred Alternative would have both beneficial and adverse impacts on human and natural elements within the project area. Table ES-1 (provided at the end of this Executive Summary) provides a summary of the anticipated impacts of the Preferred Alternative and mitigation measures. The table also provides information on where (chapter/section) impacts are discussed in detail within the SFEIS.

### Transportation Impacts

#### **Traffic Operations**

Traffic volume forecasts show a year 2030 average daily traffic (ADT) volumes on the Preferred Alternative river crossing bridge of 48,000 vehicles, and a year 2030 ADT of 198,400 vehicles for all four St. Croix River crossings (USH 8, TH 243, TH 36/STH64, and I-94). This is a

3,000 ADT increase for St. Croix River crossings compared to the No-Build Alternative ADT of 195,400 vehicles.

The Preferred Alternative shows a demand of 1,755 vehicles per lane per hour on the Preferred Alternative river crossing bridge. The forecast demand on the Preferred Alternative river crossing bridge is lower than its capacity of approximately 2,000 vehicles per lane. The Preferred Alternative would have sufficient capacity to accommodate forecasted year 2030 demands.

The Preferred Alternative substantially reduces regional congestion (based on Vehicle Hours Traveled [VHT] results) and substantially reduces regional traffic diversion (based on Vehicle Miles Traveled [VMT] results) compared to the year 2030 No-Build condition. The Preferred Alternative also reduces traffic volume shifts to other St. Croix River crossings compared to the No-Build Alternative.

Local traffic operations analysis completed for the Preferred Alternative showed that 12 of 31 key intersections analyzed would operate at level of service (LOS) E or F. A majority of these intersections (9 key intersections) are located along the TH 36 segment of the project. Although these 9 key intersections would operate at LOS E or F, only 2 of these intersections would exhibit average intersection control delays over 300 seconds per vehicle, compared to 6 for the No-Build Alternative. Traffic operations at other key intersections in the project area are anticipated to operate at acceptable LOS in year 2030.

The Preferred Alternative shows acceptable levels of service for all merge/diverge/weave movements for the freeway segment of the project east of Osgood Avenue.

## **Safety**

The Preferred Alternative will improve traffic safety in the project area through the construction of a new four-lane divided freeway facility east of Osgood Avenue and through the decrease in traffic volumes on TH 95 between downtown Stillwater and the existing TH 36/95 interchange. For the 20-year period from 2011 to 2030, the estimated number of crashes under the Preferred Alternative is anticipated to decrease by more than 1,200 crashes compared to the No-Build Alternative.

Incident management and emergency response will be affected by the Preferred Alternative. Conditions through the TH 36 segment (TH 5 to Osgood Avenue) are not anticipated to improve under the Preferred Alternative compared to existing conditions. Conditions will substantially improve with a new river crossing in regards to emergency response times in Wisconsin.

## **Marginal Benefit-Cost Ratio**

The marginal benefit-cost ratio (as compared to the No-Build Alternative) for the Preferred Alternative is 6.0. This result shows the Preferred Alternative is beneficial from an economic viewpoint, as the marginal benefit-cost ratio is greater than 1.0.

## **Access and Local Road Connectivity**

Construction of the Preferred Alternative will maintain access to TH 36 and the frontage road system in Oak Park Heights and Stillwater; some driveway access to the frontage roads may be reconfigured under the Preferred Alternative. A diamond interchange will provide full access between TH 95 and TH 36. Several access changes are proposed along TH 95 north and south of the interchange to improve traffic operations. Access to downtown Stillwater will be available to both eastbound and westbound TH 36 through the TH 36/95 interchange.

STH 64 will be a controlled-access four-lane highway in Wisconsin. Access to STH 64 will be available at the new STH 64/35/CTH E interchange. New frontage roads will be constructed along new STH 35/64 near Andersen Scout Camp Road and west of 20th Street to provide local access to other portions of the roadway network.

## **Vehicular Energy Consumption**

The Preferred Alternative is expected to generate shifts in traffic patterns between the I-94 and TH 36/STH 64 crossings of the St. Croix River. Regional energy consumption would be reduced for the Preferred Alternative as a result from fewer vehicle miles of travel overall. Although the Preferred Alternative would result in indirect energy use (e.g., construction of the project), this would be offset by direct (operational) energy savings from the Preferred Alternative (e.g., fewer vehicle hours and fewer vehicle miles traveled). As a result, the Preferred Alternative is anticipated to result in a long-term net energy savings over the life of the project when compared to the No-Build Alternative.

## **Multi-Modal Systems**

The Preferred Alternative includes no direct changes to the transit system. However, roadway infrastructure and congestion have effects on transit. The Preferred Alternative improves traffic flow and congestion, thereby providing favorable roadway conditions for transit.

The Preferred Alternative will improve pedestrian/bicycle infrastructure through the construction of the loop trail system between Minnesota and Wisconsin. A new trail is also proposed along the TH 36 south frontage road in Oak Park Heights. Pedestrians and bicyclists will cross TH 36 at signalized intersections.

The Preferred Alternative river crossing bridge will not impede navigational and recreational boating, but the bridge piers will introduce new navigational obstructions in the river.

## **Regional Plan Compatibility**

The consistency of the TH 36 segment of the Preferred Alternative is unclear with respect to the goals and objectives of the Minnesota Interregional Corridor (IRC) Plan. The short-term operation of signalized intersections will address the IRC goals and objectives, but a long-term vision for TH 36 will need to be studied further. The Preferred Alternative's rural, limited access four-lane facility for Wisconsin STH 64 is consistent with regional transportation plans.

## Right-of-Way Acquisitions and Relocation

Six single-family residential properties must be relocated due to right-of-way acquisition. Of this total, three single-family residential properties are relocated in Minnesota and three single-family residential properties are relocated in Wisconsin. Additional partial acquisitions are necessary and are described in Chapter 5 of this SFEIS.

The Preferred Alternative also utilizes previously-acquired right-of-way from the 1995 FEIS Preferred Alternative. A total of 61 single-family and four multi-family residences were acquired in Minnesota for the 1995 FEIS Preferred Alternative. No residences were acquired in Wisconsin for the 1995 FEIS Preferred Alternative.

Two commercial properties, one each in Minnesota and Wisconsin, will need to be acquired for the Preferred Alternative. Four commercial properties were previously acquired in Minnesota for the 1995 FEIS Preferred Alternative.

Two-hundred seventy eight (278) acres of right-of-way will need to be acquired for the Preferred Alternative.<sup>2</sup> Approximately 89 acres would be acquired in Minnesota and approximately 189 acres would be acquired in Wisconsin.

## Parkland/Recreational Areas

The Preferred Alternative will require temporary use of land from the Stillwater Municipal Barge Facility property (the site of a planned city park) for road and bridge construction. The site may be used as a staging area during bridge and road construction. The Preferred Alternative will impact approximately 1.4 acres of the site for the construction of a park access road at the south end of the property; the construction of this road is consistent with the park master plan.

Construction of the Preferred Alternative river crossing will not require the use of land from Kolliner Park. Implementation of the Preferred Alternative mitigation items will result in temporary construction impacts to Kolliner Park.

Construction of the Preferred Alternative river crossing will not require the use of land from Lowell Park or Teddy Bear Park in downtown Stillwater.

The Preferred Alternative south frontage road connection between Osgood Avenue and Stagecoach Trail in Oak Park Heights will be located within the north boundary limits of the Moelter Site. The alignment of the south frontage road and potential parking lot connections to the south frontage road have been incorporated into preliminary plans for the site and will not affect future plans for recreational use of the site.

## Lower St. Croix National Scenic Riverway

The Preferred Alternative will result in adverse visual and recreational impacts on the Lower St. Croix National Scenic Riverway with construction of a new river crossing.

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<sup>2</sup> Includes right-of-way previously acquired for the 1995 FEIS Preferred Alternative.

The NPS determined in their draft Section 7(a) Evaluation (see Appendix F of this SFEIS) that the Preferred Alternative river crossing, when considered with the Preferred Alternative mitigation package, would not have a direct and adverse effect on the scenic and recreational values for which the Riverway was included in the National Wild and Scenic Rivers System. However, this finding is contingent upon measures identified in the draft Section 7(a) Evaluation (see Sections VII and IIX of the draft Section 7(a) Evaluation in Appendix F of this SFEIS) being incorporated into the project to ensure that the mitigation package remains intact into perpetuity.

### Commercial

There will be no business relocations in the downtown Stillwater area resulting from the Preferred Alternative. With conversion of the Lift Bridge to a pedestrian/bicycle facility, there is the opportunity to increase the number of parking stalls in downtown Stillwater .

With the maintenance of at-grade access, increasing traffic volumes on TH 36, and no business relocations resulting from the Preferred Alternative in Minnesota, no adverse commercial impacts are anticipated to result to the TH 36 commercial corridor in Oak Park Heights and Stillwater.

One business in Minnesota within the proposed TH 36/95 interchange area will be relocated as a result of construction of the Preferred Alternative.

One business will be relocated under the Preferred Alternative in Houlton, Wisconsin. With the exception of one business (gas station/convenience store), most businesses in Houlton are not greatly dependent on drive-by traffic and will not be affected by the realignment of STH 35/64 under the Preferred Alternative.

### Fiscal

Because residential acquisition and business relocation is limited to a total of eight properties, no further adverse fiscal impacts to any communities in the project area are anticipated to result from the Preferred Alternative.

### Farmland

The Preferred Alternative would affect an estimated 140 acres of the 310,178 acres of land in farms within St. Croix County, or approximately 0.04 percent. Fourteen landowners are affected. The Preferred Alternative will divide several fields, primarily south of existing CTH E and near the existing STH 35/64 roadway northeast of Houlton.

### Visual

Construction of the Preferred Alternative would cause an adverse impact on the existing visual setting of the project area. Visual impacts of the Preferred Alternative river crossing cannot be avoided.

## Air Quality

Emissions of projected priority mobile source air toxics (e.g., acetaldehyde; acrolein; benzene; 1,3-butadiene; formaldehyde; and diesel particulate matter) are expected to decline between the present and year 2030. There are no state or federal standards for air toxics concentrations or emissions. Overall metro area gaseous air toxics emissions are expected to decline slightly as a result of the project. Diesel particulates are expected to increase, but remain below current levels.

The Preferred Alternative will not result in an exceedance of carbon monoxide (CO) standards in Minnesota or Wisconsin.

## Noise

The Preferred Alternative will result in year 2030 noise levels exceeding Minnesota daytime and nighttime state noise standards at several locations in the Minnesota portion of the project area. In Wisconsin, the Preferred Alternative will also result in noise levels that exceed the state definition of “noise impact” at three locations along the project corridor. None of the analyzed locations in Minnesota met the reasonableness criteria established in Mn/DOT’s noise mitigation policy for construction of a noise abatement barrier. None of the analyzed locations in Wisconsin met the requirements of Wisconsin Administrative Code Chapter Trans. 405 for construction of noise barriers.

Peak-hour traffic noise levels from the Preferred Alternative river crossing bridge will approach or exceed federal noise abatement criteria (70 dBA) at the river level below the bridge and continue to a distance approximately 200 feet north and south of the bridge centerline.

## Contaminated Sites

Six properties identified as high environmental risk sites are located within close proximity to the Preferred Alternative in Minnesota. Three properties identified as having excessive clean up costs and/or environmental liability are located within close proximity to the Preferred Alternative.

There are no sites of concern identified in Wisconsin that will be affected by the Preferred Alternative.

## Protected Species

The Preferred Alternative will result in disruption of the river habitat of the Higgin’s eye pearly mussel (*Lampsilis higginsii*); however the U.S. Fish and Wildlife Service has concluded that the project is not likely to jeopardize the continued existence of this federally-endangered species. Impacted mussels will be relocated prior to river crossing construction.

The project is unlikely to adversely affect the winged mapleleaf mussel (*Quadrula fragosa*), a federally-endangered species.

Potential introduction of the exotic invasive zebra mussel by construction barges and equipment would be reduced through decontamination protocols.

An active bald eagle (*Haliaeetus leucocephalus*) nest within the project area is avoided by the Preferred Alternative. Design measures have been taken to avoid the nest and effort will be made during project construction to reduce impacts to nesting activities.

Other species of concern include nesting swallows, osprey and peregrine falcon. Nesting swallows are located on the Lift Bridge, while an active peregrine falcon nest is located on the exhaust stack of the Xcel King Power Plant. No impacts are anticipated to either species with construction of the Preferred Alternative.

An active osprey nest is located on the barge off-loading facility at the Xcel King Power Plant. Xcel Energy will move the osprey nesting platform to a new location in the general area during the non-nesting season prior to the removal of the barge off-loading facility.

Dotted blazing star (*Liatris punctata* var. *nebraskiana*), a Wisconsin state-endangered plant species, has been identified along the Wisconsin bluff in the project area. Field surveys for dotted blazing star will be performed prior to construction and mitigation measures such as relocation will be completed.

### Vegetation

The Preferred Alternative will require the removal of trees and vegetation on the river bluffs and other areas due to bridge, interchange, and approach roadway construction, resulting in the overall loss of these resources within the study area.

### Water Quantity (Drainage)

The Preferred Alternative will increase the amount of impervious surface in the project area. Based on the increase in impervious area, the volume of runoff is expected to increase. However, the incorporation of wet detention ponds, dry detention ponds, new conveyance systems, and diversion of some flow through existing outflow areas, is expected to mitigate any effects on specific water bodies that are susceptible to flooding.

### Water Quality

The Preferred Alternative will change the existing rural section of TH 36 and TH 95 in Oak Park Heights and Stillwater to an urban section with curb and gutter and storm sewer to convey stormwater for handling and treating runoff. The proposed drainage system also includes water quality treatment facilities, consisting of wet detention ponds, infiltration basins and grass swales. These facilities are intended to maintain and improve water quality in the project area.

The majority of the Wisconsin portion of the Preferred Alternative will be constructed as a rural drainage system in an area where no roadway currently exists. The rural highway section will maintain the existing drainage patterns and improve treatment through the use of wet detention ponds, infiltration basins, grass ditches, and culverts.



## Construction

The Preferred Alternative will result in unavoidable temporary construction impacts related to air quality, noise, dust generation, vibration, traffic, and roadway access due to necessary construction activities. Most impacts will be short in duration.

The Preferred Alternative will result in construction-related impacts to protected species, wetlands, the Wisconsin bluff, the St. Croix River, and navigation. These impacts are described in greater detail in Chapter 12 of the SFEIS.

Construction of the Preferred Alternative will result in the relocation of utilities (e.g., sanitary sewer; water mains; storm sewer). Most utility relocations will occur during the first stage of project construction. Municipal utility relocation costs will be addressed through Memorandums of Understanding with Oak Park Heights and Stillwater. Mn/DOT and WisDOT will continue to work with local governments to address utility relocations during final design and construction of the project.

Potential construction staging areas have been identified in Minnesota (Oakgreen Avenue/Greeley Street intersection with TH 36; TH 36/95 interchange area; Stillwater Municipal Barge Facility property; Xcel Energy barge unloading facility and mooring cells) and in Wisconsin (St. Croix River shoreline; abandoned STH 35 wayside rest; WisDOT-owned property east of STH 35). Final determination of construction staging areas and barge docking facilities will be made during final design.

A preliminary construction staging concept plan has been identified for the Preferred Alternative. Detailed construction staging plans will be developed for the Preferred Alternative prior to construction.

## Indirect Effects

Three geographic areas potentially affected by improved mobility or access changes under the Preferred Alternative were identified: TH 36 corridor in Washington County, Minnesota; STH 64/35/CTH E interchange area in St. Croix County, Wisconsin; St. Croix County and Polk County, Wisconsin.

## **Consistency with Existing Plans**

The Preferred Alternative is consistent with existing land use plans for the cities of Oak Park Heights and Stillwater, and for Washington County, in Minnesota, and with the Metropolitan Council's *Regional Development Framework*. It is also consistent with the *St. Croix County Development Management Plan* and local comprehensive plans for the Village of Somerset, the Towns of Somerset, St. Joseph and Hudson as well as the City of New Richmond. The *Washington County Comprehensive Plan* and the *St. Croix County Development Management Plan*, in particular, include a new St. Croix River Crossing in their planning efforts.

The Town of St. Joseph wishes to retain its rural character but still accommodate growth. The Village of Somerset projects growth based on the wastewater treatment plant capacity. The City of New Richmond has planned sequential annexations of land to accommodate growth but has clearly stated its desire to retain the scale and feeling of a small town with rural surroundings.

City and county plans in western Wisconsin acknowledge that rapid and sustained growth is occurring and would continue to occur with or without a new St. Croix River Crossing. Planning officials in these communities note that tremendous growth has occurred despite the uncertainty regarding a new river crossing, citing quality of life factors as well as competitive land prices as factors encouraging development in western Wisconsin. The improved mobility provided by the Preferred Alternative will affect the timing and/or the amount of growth that occurs in western Wisconsin; however it is difficult to separate that effect from the other substantial influences occurring simultaneously in the area.

### **Probable impacts of increased development on natural, social and cultural resources**

While the types of impacts to natural, social and cultural resources resulting from land development as discussed in Section 13.1.7 of the SFEIS are possible, the probability of those impacts is directly related to the land use management policies and regulations of local governments. As a substantial growth trend is already apparent in these areas, the potential for impacts to water quality, wetlands, wildlife habitat and cultural resources is already present in the area of influence. To the degree that the Preferred Alternative adds to the amount of development anticipated, the potential amount of impact also increases; however, it does not increase the probability that the impacts will occur with development.

### **Mitigation Items Identified Since the SDEIS**

In discussing comments received on the SDEIS, a number of additional needs were identified by the Stakeholder Group to address the anticipated potential indirect effects of land development and subsequent effects resulting from the Preferred Alternative. These additional needs are described in Section 13.4.1.2 of the SFEIS. In the fall of 2005, a cooperative process was developed to address the concerns of the Stakeholder Group and others. This process included meetings with, and input from, Stakeholder Group members and local government staff (see Section 16.1.4 of the SFEIS).

The outcome of these discussions was an additional set of mitigation items totaling \$2.7 million. These mitigation items are described in Section 13.4.1.2 of the SFEIS. Details regarding the implementation of these mitigation items as well as funding mechanisms and administrative oversight was documented in an agreement among WisDNR, WisDOT, Mn/DOT, and FHWA titled the Growth Management Memorandum of Understanding (MOU) (see Appendix I of the SFEIS). The MOU states the goal of these mitigation items is to promote natural, cultural and historic resource protection in the St. Croix River watershed, thus helping to preserve water quality and scenic values and identifies the WisDNR as the agency best suited to lead the activities covered under the MOU. The WisDNR will be assisted by the Growth Management Advisory Team consisting of representatives from the National Park Service, WisDOT, St. Croix Basin Water Resources Planning Team, St. Croix County, the Town of St. Joseph, UW-River

Falls, Minnesota Center for Environmental Advocacy, Wisconsin State Historic Preservation Officer and other interested groups.

### Cumulative Impacts

Potential for cumulative impacts exists in issue areas related to land consumption: land development, prime agricultural land, water quality and quantity, vegetation, wildlife, aesthetics and historic resources. These potential impacts are typically considered through local and county comprehensive planning efforts. These impacts can be avoided or minimized through land use controls, site plan/development controls and roadway access restrictions.

## 4.4 PREFERRED ALTERNATIVE MITIGATION MEASURES

Mitigation strategies for Preferred Alternative impacts are summarized in Table ES-1. Table ES-2 (provided at the end of this Executive Summary) summarizes the non-design mitigation items to be implemented under the Preferred Alternative. These non-design mitigation items are described in detail in Chapter 15 of the SFEIS.

Since publication of the SDEIS, a cooperative process was developed to further define the implementation of the Preferred Alternative mitigation items, and involved input from members of the Stakeholder Group. Stakeholder members involved in this process are identified in Section 16.1.4 of this SFEIS. Through this cooperative process, changes to the Preferred Alternative mitigation package were identified, which ultimately led to an additional set of mitigation items to improve the protection and enhancement of the area's natural, cultural, and historic resources.

Details regarding the implementation of these mitigation items as well as funding mechanisms and administrative oversight were documented in two agreements titled: 1) Memorandum of Understanding for the Implementation of Riverway Mitigation Items (Riverway MOU); and 2) Memorandum of Understanding for the Implementation of Growth Management Items (Growth Management MOU). Signed copies of the Riverway MOU and Growth Management MOU are included in Appendices H and I, respectively, of the SFEIS. A third memorandum of understanding, the Water Quality MOU, is discussed in Section 8.0 of this Executive Summary.

Because of the unique nature of the project area and values of the Lower St. Croix National Scenic Riverway, additional funding above the maximum limit of allowable funds that are dedicated to visual enhancements per Mn/DOT cost participation policy will be budgeted for implementation of the aesthetic project features as defined in the project's Visual Quality Manual.

As noted above in Section 4.2 of this Executive Summary, the extradosed bridge type was identified for the Preferred Alternative because it balances the impact of a new river crossing across a range of high-quality values (e.g., natural; cultural; recreational; visual) that define the Riverway. The extradosed bridge type represents a substantial additional investment compared to a typical girder bridge, reflecting the values of the Riverway.

## 5.0 AREAS OF POTENTIAL CONTROVERSY

The St. Croix River Crossing Project has attracted considerable attention from surrounding communities, local, state, and federal agencies, special interest groups, and the general public. A list of key areas of potential controversy was identified for the SDEIS, which included: STH 64 alignment, access points and acquisitions in Wisconsin; agricultural impacts; resolution of and preservation strategies for the Lift Bridge; growth in western Wisconsin and resulting potential cumulative impacts on natural and historic resources; economic impacts on downtown Stillwater; visual and recreational impacts on the Lower St. Croix National Scenic River; and disturbance to the Wisconsin bluff.

Since the publication of the SDEIS, with input from the public, comments on the SDEIS, through Stakeholder Group meetings, and through meetings with cooperating agencies, these areas of potential controversy have been resolved with the identification of the Preferred Alternative package.

## 6.0 UNRESOLVED ISSUES/ACTIONS TO BE ADDRESSED

The following issues were unresolved at the time of publication of the 2006 SFEIS:

- TH 36 roadway layout and intersection design in Stillwater/Oak Park Heights: A narrative of TH 36 (TH 5 to Osgood Avenue) evaluation since publication of the SDEIS is included in Chapter 3 of the SFEIS. Alternatives for the reconstruction of TH 36 to a grade-separated facility through Oak Park Heights and Stillwater will be evaluated through future independent studies. Mn/DOT will work with both cities and Washington County to evaluate potential alternatives. Any future changes to TH 36 will be evaluated through a separate environmental documentation process.
- Partial property acquisitions: A table indicating the number of partial property acquisitions under the Preferred Alternative is included in the SFEIS. Efforts to minimize both the number and size of partial property acquisitions will continue through final design.
- Transit Feasibility Study: Mn/DOT, in cooperation with the Metropolitan Council, will conduct a study to determine transit goals and objectives and examine potential transit markets (including non-traditional transit services) in western Wisconsin. The study will also examine operations/maintenance strategies, institutional impediments and potential funding sources. The Transit Feasibility Study would potentially identify transit opportunities that preserve transportation capacity on existing river crossings and avoid or delay additional future impacts to the St. Croix resulting from expansion of existing crossings.
- Municipal Consent/Cost Participation: Minnesota state law requires municipal consent from the Cities of Oak Park Heights, Stillwater, and Bayport prior to implementation of the Preferred Alternative. Concerns have been raised from the adjacent communities regarding cost participation requirements. Local cost issues are being discussed as part of the consent process.

- Supplemental Draft EIS Economic Impact Study: An economic impact study (*Economic Impact Analysis: St. Croix River Crossing, Minnesota TH 36/Wisconsin STH 64*, July 13, 2004) was completed as part of the SDEIS process. This study built upon an original unpublished report that was completed in 1999 as part of the “Consensus Alternative” studies. The economic impact study focused on economic impacts associated with a bypass of downtown Stillwater, the reconfiguration of frontage roads and interchange construction along TH 36, and a new roadway alignment in Houlton, Wisconsin. The findings of the study are summarized in Section 5.3 of the SDEIS. The City of Oak Park Heights has rejected the findings and conclusions of this economic impact study.

## 7.0 PROJECT SCHEDULE, COSTS AND FUNDING

The following is the anticipated schedule for completion of project activities:

	<u>Date</u>	<u>Status</u>
Scoping Document/Draft Scoping Decision Document	November 2003	Completed
Scoping Meetings	December 2003	Completed
Final Scoping Decision Document	March 2004	Completed
Public Information Meetings	June 2004	Completed
Supplemental Draft EIS –Public Review	August – October 2004	Completed
SDEIS Public Hearings in Minnesota and Wisconsin	September 2004	Completed
Supplemental Final EIS	June 2006	In progress
Record of Decision/Adequacy Determination (anticipated outcome)	August 2006	To be completed
Final Design	2006-2008 <sup>3</sup>	To be completed
Right-of-Way Acquisition	2007-2009	To be completed
Construction	2009-2014 <sup>4</sup>	To be completed
Project Completion	2012-2014	

Funds from various federal, state, and local funding sources are anticipated for this project. Minnesota and Wisconsin will fund its respective approach roadway costs while the cost of the river bridge and other project related items will have varied combinations of Minnesota and Wisconsin funding. A project cost estimate review workshop concluded that the project cost range, for 10 percent to 90 percent bid probability, is \$299 million to \$334 million dollars (2004 dollars). When project risks were considered, and a 100 percent bid probability, the project cost estimate approached \$373 million (2004 dollars), which includes the approach roadways and interchanges in Minnesota and Wisconsin, the loop trail, the extradosed river crossing bridge, the non-design mitigation items, right-of-way, and engineering costs.

## 8.0 PERMITS AND APPROVALS

Table ES-(a) summarizes the permits, approvals, or other required actions that may be necessary to implement the Preferred Alternative.

<sup>3</sup> Two to three years for final design following completion of this SFEIS, environmental clearances and other necessary agreements, dependent on available project funding.

<sup>4</sup> Three to six years for construction, dependent upon available project funding.

**TABLE ES-(a)  
AGENCY PERMITS, APPROVALS, AND OTHER REQUIRED ACTIONS**

<b>FEDERAL</b>	
Advisory Council on Historic Preservation	<ul style="list-style-type: none"> <li>• Section 106 of the National Historic Preservation Act – Amended Memorandum of Agreement (refer to Appendix G of this SFEIS)</li> </ul>
Federal Highway Administration	<ul style="list-style-type: none"> <li>• Supplemental EIS (Draft and Final)</li> <li>• Section 4(f) Evaluations – Department of Transportation Act of 1966 (Draft and Final)</li> <li>• Section 106 of the National Historic Preservation Act – Amended Memorandum of Agreement</li> <li>• Supplemental EIS Record of Decision</li> </ul>
National Park Service	<ul style="list-style-type: none"> <li>• Section 7(a) of the Wild and Scenic Rivers Act – Evaluation (refer to Appendix F of this SFEIS)</li> </ul>
U.S. Army Corps of Engineers	<ul style="list-style-type: none"> <li>• Section 404 of the Clean Water Act - Permit (fill in U.S. waters)</li> <li>• Section 10 of the Rivers and Harbors Act – Permit (all structures other than new river crossing)</li> <li>• Section 106 of the National Historic Preservation Act – Amended Memorandum of Agreement</li> </ul>
U.S. Coast Guard	<ul style="list-style-type: none"> <li>• Section 9 of the Rivers and Harbors Act - Permit (navigable waters)</li> <li>• Section 401 of the Clean Water Act – Water Quality Certification (construction/operation of new river crossing)</li> </ul>
U.S. Fish and Wildlife Service	<ul style="list-style-type: none"> <li>• Biological Opinion (refer to Appendix C of this SFEIS)</li> </ul>
<b>STATE</b>	
MN Department of Transportation	<ul style="list-style-type: none"> <li>• Amended Scoping Decision Document</li> <li>• Supplemental EIS (Draft and Final) and Section 4(f) Evaluations – Department of Transportation Act of 1966 (Draft and Final)</li> <li>• Supplemental EIS Adequacy Determination</li> <li>• Noise Standards Exemption</li> <li>• Wetland Conservation Act (WCA)</li> </ul>
WIS Department of Transportation	<ul style="list-style-type: none"> <li>• Supplemental EIS (Draft and Final) and Section 4(f) Evaluations – Department of Transportation Act of 1966 (Draft and Final)</li> </ul>
MN Department of Natural Resources	<ul style="list-style-type: none"> <li>• Public Waters Permit</li> <li>• Mussel Relocation Permit</li> <li>• Special Permit to Remove an Osprey Nest</li> <li>• Water Appropriation Permit (if needed)</li> </ul>
MN Pollution Control Agency	<ul style="list-style-type: none"> <li>• Noise Standards Exemption</li> <li>• Apply for Section 401 of the Clean Water Act -Water Quality Certification</li> <li>• National Pollutant Discharge Elimination System/State Disposal System Permit (NPDES/SDS)</li> </ul>
WIS Department of Natural Resources	<ul style="list-style-type: none"> <li>• Section 401 of Clean Water Act Water Quality Certification/Project Concurrence Letter (through WisDOT – WisDNR Cooperative Agreement liaison process)</li> <li>• Scientific Collector Permit (for surveys, species relocations, etc.)</li> <li>• Authorization for Taking Endangered/Threatened Species (required jeopardy determination)</li> <li>• Air Quality Construction Permit (if needed)</li> </ul>

**TABLE ES-(a) continued**  
**AGENCY PERMITS, APPROVALS, AND OTHER REQUIRED ACTIONS**

<b>STATE</b>	
MN State Historic Preservation Office	<ul style="list-style-type: none"> <li>• Section 106 of the National Historic Preservation Act – Amended Memorandum of Agreement</li> </ul>
WIS State Historic Preservation Office	<ul style="list-style-type: none"> <li>• Section 106 of the National Historic Preservation Act – Amended Memorandum of Agreement</li> </ul>
<b>REGIONAL</b>	
Twin Cities Metropolitan Council	<ul style="list-style-type: none"> <li>• Controlled Access Approval</li> </ul>
<b>LOCAL</b>	
Washington County	<ul style="list-style-type: none"> <li>• County Right-of-Way Permit</li> </ul>
City of Oak Park Heights	<ul style="list-style-type: none"> <li>• Municipal Consent</li> </ul>
City of Stillwater	<ul style="list-style-type: none"> <li>• Municipal Consent</li> </ul>
City of Bayport	<ul style="list-style-type: none"> <li>• Municipal Consent</li> </ul>
Local Watershed District (Brown’s Creek)	<ul style="list-style-type: none"> <li>• Permits/Coordination of Grading and Drainage Plans/Dewatering</li> </ul>
Local Watershed Management Organization (Middle St. Croix WMO)	<ul style="list-style-type: none"> <li>• Coordination of Grading and Drainage Plans/Dewatering/ Floodplain Management</li> </ul>
St. Croix County	<ul style="list-style-type: none"> <li>• Coordination of State Trunk Highway changes and local road alterations</li> </ul>
Town of St. Joseph	<ul style="list-style-type: none"> <li>• Coordination of State Trunk Highway changes and local road alterations</li> </ul>

Water Quality Memorandum of Understanding

A water quality memorandum of understanding was developed with members of the Stakeholder Group and St. Croix River Basin Team to provide a coordinated process for consideration and review of permitting activities related to water quality. A signed copy of the Water Quality MOU is included in Appendix J of the SFEIS.

**9.0 INDEPENDENT REGIONAL INFRASTRUCTURE PROJECTS**

The following list of roadway and transportation projects or studies are planned or underway in the vicinity of the St. Croix River Crossing Project. These projects are independent of the St. Croix River Crossing Project; that is, the projects are not needed to support each other and each has independent utility. The social, economic, and environmental impacts of each of the projects has been or will be evaluated in independent environmental review processes as required by law. Chapter 14 of the SFEIS presents a comprehensive list of the regional infrastructure and development projects taken into consideration in the cumulative impacts study.<sup>5</sup>

<sup>5</sup> Current as of August 2004 when the cumulative impacts analysis was completed and the SDEIS was published. Major actions proposed by other governmental agencies/other interests since that time are not reflected in this table.

## Minnesota

- USH 8 from I-35W to TH 95; improvements and capacity study.
- TH 36: CSAH 24 (Osgood Avenue) reconstruction/improvements north and south of TH 36 and an adjacent trail; and CR 66 (Greeley Street) improvements and Oakgreen Avenue jurisdiction changes (from city to county).
- TH 36/95 south of downtown Stillwater: construction of approximately 43 new on-street parking stalls along the east side of TH 36/95; 2005.
- CSAH 13 from CR 74 to CSAH 20: four-lane construction on new alignment, 2004.
- CSAH 18, Anoka CSAH 14 between I-35 and TH 61: Four-lane divided roadway construction (with intermodal trail), 2005.
- CSAH 16 (Valley Creek Road) CSAH 25 (Century Avenue) to I-494 and new interchange: Interchange construction dependent on third lane construction on I-94, expected in 2006.
- CSAH 2, Broadway Avenue I-35 to TH 61: I-35 to TH 61 and interchange reconstruction expected in 2007.
- CSAH 18 from I-94 to CSAH 21: road resurfacing, turn lane additions, access consolidation; Bridge replacement over Valley Branch Creek north of downtown Afton.
- CSAH 15 from TH 35 to CSAH 12 (75th St. N): Reconstruction to a four-lane roadway from TH 36 to 1/2 mi north of CSAH 12.
- CR 66 (Greeley Street), CSAH 24 (Osgood Avenue), CSAH 14: Intersection reconstruction tied to TH 36 Reconstruction/ River Crossing project.

## Wisconsin

- Reconstruction of I-94 from STH 35 South to E. of USH 12: Added one eastbound and one westbound lane between STH 35 and USH 12 in 2002.
- STH 35/64 Expansion: WisDOT is reconstructing this two-lane highway as a four-lane expressway, with bypasses of the Somerset and New Richmond central business districts, from west of Somerset to New Richmond (about 15 miles). The project, which began at the eastern terminus of the St. Croix River Crossing Project, will be completed in 2006.
- STH 35 Expansion (River Falls to I-94): WisDOT reconstructed STH 35 as a four-lane expressway (was formerly two lanes) between River Falls and I-94 in 2002, including the reconstruction and relocation to the west of the STH 35/I-94 interchange.
- STH 65 Reconstruction: WisDOT reconstructed STH 65 (from two lanes to four lanes) in New Richmond in 2002, from 0.75 mile south of Paperjack Drive to 6th Street.

WisDOT is currently studying future access and capacity needs on USH 8 between STH 35 north of St. Croix Falls (Polk County) to USH 53 near the City of Barron

(Barron County). WisDOT currently has no capacity expansion projects for USH 8 in their Six-Year Program, but is planning for construction of passing lanes on USH 8 from Almena to Barron in Barron County in about 10 years. WisDOT also anticipates additional passing lane construction on other sections of USH 8 between 2015 and 2025.

- USH 63 between I-94 and STH 64: Expansion from two-lane to four-lane, bypass of cities/villages (currently not programmed).
- I-94: WisDOT as the lead agency, with Mn/DOT, is adding an auxiliary lane on westbound I-94 bridge over the St. Croix River (2005).
- USH 12/CTH U: WisDOT and St. Croix County are currently reconstructing the existing two-lane USH 12/CTH U as a four-lane expressway from north of I-94 to CTH A, including the relocation of USH 12 east of USH 12 and CTH U.
- CTH "I", STH 35/64, and Village of Somerset Improvement Project(s) (Village of Somerset area). Apple River Flume area and Flume Bridge (2004 project- bridge replacement) CTH "I" from Somerset south to 53rd Avenue (2004 project currently underway- expansion). CTH "I" from STH 35 south to Village of Somerset (in planning stage). Expansion is likely.

#### **Other**

- Power line in Chisago County, MN and Polk County, WI: Xcel Energy in Minnesota and Dairyland Power Cooperative in Wisconsin are seeking approval for the construction of a new power transmission line over the St. Croix River between Chisago County, Minnesota and Polk County, Wisconsin.

**TABLE ES-1  
SUMMARY OF PREFERRED ALTERNATIVE IMPACTS**

IMPACT	RELATED SFEIS CHAPTER OR SECTION	PREFERRED ALTERNATIVE IMPACT	PREFERRED ALTERNATIVE MITIGATION
<b>COSTS – CHAPTER 3</b>			
<b>Total Cost</b> <sup>6</sup> (millions of dollars)	Section 3.5	Anticipated costs, for 10 percent to 90 percent bid probability, is \$299 million to \$334 million dollars (year 2004 dollars). When project risks are considered, and a 100% bid probability, the project cost estimate approaches \$373 million (year 2004 dollars).	Not applicable.
<b>TRANSPORTATION IMPACTS – CHAPTER 4</b>			
<b>River Crossing Reliability at Stillwater/Houlton</b>		No anticipated closings. Lift Bridge to be converted to a pedestrian/bicycle facility.	No mitigation necessary.
<b>Traffic Operations:</b>  Daily Congestion  P.M. Peak Period River Crossings  Regional Travel Effects  Local Intersection Operations  Local Freeway Operations	Sections 4.2.2, 4.2.3; 4.3.1 and 4.3.2	Minimal congestion to regional trips on St. Croix River Crossing; minimizes volume shifts to other St. Croix River crossings  0 hours of congestion anticipated (compared to 6+ hours under No-Build Alternative).  Substantial decreases in vehicle miles traveled and vehicle hours traveled compared to No-Build Alternative.  12 of 31 intersections operate at LOS E or F by year 2030; 9 of these intersections are located along the TH 36 segment (TH 5 to Osgood Avenue)  Acceptable LOS for all merge/diverge/weave movements	No impacts associated with travel demand forecasts, therefore no mitigation is necessary.  No impacts associated with travel demand forecasts, therefore no mitigation is necessary.  No impacts associated with travel demand forecasts, therefore no mitigation is necessary.  No impacts associated with local traffic operations analysis, therefore no mitigation is required. Mn/DOT will work with Oak Park Heights, Stillwater, Washington County to address TH 36 concerns.  No impacts associated with local freeway operations, no mitigation is required
<b>Safety</b>	Sections 4.2.4. and 4.3.3		
Crash Rates  Incident Management/ Emergency Response		Estimated number of crashes anticipated to decrease by approximately 1,200 crashes from year 2011 to 2030. Conditions not anticipated to improve along TH 36 (TH 5 to Osgood Avenue); conditions anticipated to improve in Wisconsin	No mitigation required as crash rate is anticipated to decrease. No mitigation required as incident management/emergency response

<sup>6</sup> Refer to Section 7.0 of this Executive Summary for a description of Preferred Alternative costs.

**TABLE ES-1  
SUMMARY OF PREFERRED ALTERNATIVE IMPACTS**

IMPACT	RELATED SFEIS CHAPTER OR SECTION	PREFERRED ALTERNATIVE IMPACT	PREFERRED ALTERNATIVE MITIGATION
		with construction of new river crossing.	anticipated to stay unchanged.
<b>Marginal Benefit-Cost Ratio (compared to No-Build)</b>	Sections 4.2.5 and 4.3.4	Marginal benefit/cost ratio = 6.0	No mitigation required because the benefit/cost ratio is favorable.
<b>Access and Local Road Connectivity</b>	Sections 4.2.6 and 4.3.5	Direct TH 36/95 access provided. Interchange provided at STH 64/35/CTH E.	No mitigation necessary other than access modifications incorporated into Preferred Alternative design.
<b>Vehicular Energy Consumption</b>	Section 4.3.6	Preferred Alternative anticipated to result in reduced energy consumption (compared to No-Build) because of fewer vehicle hours and fewer vehicle miles of travel.	No mitigation is required because of anticipated decrease in energy consumption.
<b>Multi-Modal Systems</b> Transit  Bicycle/Pedestrian  Navigation and Recreational Boating	Section 4.3.7	No direct changes to the transit system.  Pedestrian/bicycle conditions not anticipated to improve on TH 36 (TH 5 to Osgood Avenue). Potential for pedestrian/vehicle conflict decreases in downtown Stillwater. Pedestrian/bicycle facilities added throughout project area. Improved pedestrian/bicycle infrastructure with completion of loop trail system. Preferred Alternative river crossing bridge places new navigational obstruction in river, bridge will not impede navigational or recreational boating.	Mitigation measures not necessary as no adverse impacts anticipated to transit system. Mitigation measures not necessary as no adverse impacts anticipated to pedestrian/bicycle systems.  New public boat access <sup>7</sup> to mitigate for impacts of a new river crossing on recreational values of Riverway.
<b>Regional Plan Compatibility</b>	Section 4.3.8	Consistency of Preferred Alternative with plans in respect to TH 36 through Oak Park Heights is unclear. Preferred Alternative consistent with <i>Wisconsin Corridors 2020</i> plan.	Mn/DOT anticipates updating TH 36 IRC following project. No mitigation necessary as project is consistent with <i>Wisconsin Corridors 2020</i> plan.
<b>SOCIAL, RELOCATION, AND ECONOMIC IMPACTS – CHAPTER 5</b>			
<b>Parks and Recreation Areas</b> Lower St. Croix National Scenic Riverway	Section 5.1.4	Adverse impact to Lower St. Croix National Scenic Riverway resulting from visual intrusion of new river crossing, physical presence of a new structure in river; navigational obstruction of river crossing piers.	Recreational improvements included as part of Preferred Alternative mitigation package (see Table ES-2).

<sup>7</sup> Funds for public boat access to be provided by Mn/DOT to Minnesota Department of Natural Resources (MnDNR) for construction of the boat launch facility. MnDNR will be responsible for locational studies, environmental documentation, permitting, and construction of the boat launch facility.

**TABLE ES-1  
SUMMARY OF PREFERRED ALTERNATIVE IMPACTS**

IMPACT	RELATED SFEIS CHAPTER OR SECTION	PREFERRED ALTERNATIVE IMPACT	PREFERRED ALTERNATIVE MITIGATION
<p>Stillwater Municipal Barge Facility property</p> <p>Lowell Park</p> <p>Kolliner Park</p> <p>Teddy Bear Park</p> <p>Moelter Site/Cover Park</p>		<p>No acquisition of park property required. Temporary occupancy for construction of park access road, completion of loop trail system, and removal of Terra Terminal building. Potential temporary occupancy of site for construction staging.</p> <p>No physical impacts anticipated. Preferred Alternative will not interfere with activities or purpose of park.</p> <p>No acquisition of park property required. Will require temporary occupancy of park for completion of loop trail. Loss of vehicular access to the site. Park master plan cannot be fully implemented. City could still develop, subject to applicable federal, state, and local government regulations, some elements proposed in park master plan.</p> <p>No physical impacts anticipated.</p> <p>Site currently a fly ash landfill owned by Xcel Energy. South frontage road connection within boundary of Moelter site.</p>	<p>No mitigation necessary as project will not result in permanent impacts to site. Preferred Alternative mitigation package includes items to improve site for development of City of Stillwater park.</p> <p>No mitigation necessary. Conversion of Lift Bridge to pedestrian/bicycle facility will improve connectivity between north/south portions of park.</p> <p>Preferred Alternative mitigation package items to prepare Stillwater Municipal Barge Facility property for park development.</p> <p>No impacts to Teddy Bear Park, therefore mitigation is required.</p> <p>South frontage road alignment incorporated into preliminary site plans and will not adversely impact recreational plans for the site.</p>
<b>Relocation and Right-of-Way</b>			
Right-of-way area to be acquired	Section 5.2	Construction will require approximately 278 acres of right-of-way between Minnesota and Wisconsin, including right-of-way acquired as part of 1995 FEIS Preferred Alternative.	All right-of-way acquisition and relocation will be in accordance with the Uniform Relocation and Real Property Acquisition Act of 1970, as amended.
Commercial properties to be relocated (total takes only)	Section 5.2	1 commercial property to be relocated in Wisconsin; 1 in Minnesota.	All right-of-way acquisition and relocation will be in accordance with the Uniform Relocation and Real Property Acquisition Act of 1970, as amended.
Residential properties to be acquired (total takes only)	Section 5.2	3 residential properties will be acquired in Minnesota and 3 residential properties will be acquired in Wisconsin.	All right-of-way acquisition and relocation will be in accordance with the Uniform Relocation and Real Property Acquisition Act of 1970, as amended.

**TABLE ES-1  
SUMMARY OF PREFERRED ALTERNATIVE IMPACTS**

IMPACT	RELATED SFEIS CHAPTER OR SECTION	PREFERRED ALTERNATIVE IMPACT	PREFERRED ALTERNATIVE MITIGATION
<b>Commercial Impacts</b> Downtown Stillwater  TH 36 Commercial Corridor  Houlton, Wisconsin  Regional Economy	Section 5.3	No business relocations; opportunity to increase on-street parking stalls with conversion of Lift Bridge to pedestrian/bicycle facility.  No business relocations along TH 36 (TH 5 to Osgood Avenue). <sup>9</sup>  1 business relocation; realignment of STH 35/64 will decrease drive-by traffic, although most businesses in Houlton are not dependent upon drive-by traffic. Project not expected to affect aggregate regional business attraction, expansion or retention.	Measures identified in Amended Memorandum of Agreement (MOA) to address access to downtown Stillwater. <sup>8</sup> No mitigation necessary as no commercial impacts are anticipated. No mitigation necessary as no commercial impacts are anticipated.  No mitigation necessary as no commercial impacts are anticipated.
<b>Fiscal Impacts</b>	Section 5.4	Residential acquisition and commercial relocation limited to 8 properties, therefore no fiscal impacts are anticipated.	No mitigation necessary as no fiscal impacts are anticipated.
<b>LAND USE – CHAPTER 6</b>			
<b>Direct Impacts</b>	Section 6.3.1.1 and 6.3.1.2	Acquisition of right-of-way in Minnesota and Wisconsin. No excess right-of-way available for redevelopment in Minnesota. Potential for redevelopment of excess right-of-way in Wisconsin. Farmland converted to highway use in Wisconsin.	Right-of-way acquisition and relocation will be in accordance with the Uniform Relocation and Real Property Acquisition Act of 1970, as amended. Excess right-of-way in Wisconsin to be sold with restrictive covenants.
<b>Indirect Effects</b>	Chapter 13	Refer to Chapter 13 of the SFEIS.	Refer to Chapter 13 of the SFEIS.
<b>Farmland Impacts</b>	Section 6.3.1.3	Approximately 140 acres of farmland acquired. 14 landowners will be affected. No farm operation buildings will be displaced.	Preferred Alternative design to avoid and minimize farmland impacts. Farmowners compensated in accordance with federal and state laws. WisDOT will consult with landowners to ensure safe and efficient access to farm property.

<sup>8</sup> See Appendix G of the SFEIS for the Amended Section 106 Memorandum of Agreement (MOA).

<sup>9</sup> One business will be relocated in Minnesota in the TH 36/95 interchange area. This business relocation is located east of the TH 36 commercial corridor.

**TABLE ES-1  
SUMMARY OF PREFERRED ALTERNATIVE IMPACTS**

IMPACT	RELATED SFEIS CHAPTER OR SECTION	PREFERRED ALTERNATIVE IMPACT	PREFERRED ALTERNATIVE MITIGATION
<b>VISUAL – CHAPTER 7</b>			
<b>Visual impacts on the St. Croix River and River Valley</b>	Sections 7.1 to 7.4	Preferred Alternative will result in visual impacts to viewsheds and visual corridors throughout project area. Visual impacts will vary depending upon the perspective and preference of the viewer.	Identification of signature-style bridge design. Mitigation items included with the Preferred Alternative mitigation package to offset visual impacts of a new river crossing (see Table ES-2). Completion of Visual Quality Planning Process and Visual Quality Manual. Allocation of an additional 50 percent above maximum allowable limit to visual enhancements for implementation of visual quality manual.
<b>AIR QUALITY, TRAFFIC NOISE, AND CONTAMINATED SITES – CHAPTER 8</b>			
<b>Air Quality</b> Air toxics analysis  Carbon monoxide	Section 8.1	Reduction in long-term emission rates for air toxics on regional basis. Changes in traffic patters could result in increases in some areas and decreases in others on a smaller scale.  No exceedance of carbon monoxide standards in Minnesota and Wisconsin.	No mitigation required as neither methodology or standards are available to adequately assess air toxics concentrations.  No mitigation required as Preferred Alternative does not exceed standards.
<b>Traffic Noise</b> Minnesota – daytime (L <sub>10</sub> and L <sub>50</sub> ) Minnesota – nighttime (L <sub>10</sub> and L <sub>50</sub> )	Section 8.2	8 of 29 modeled receptors over state daytime L <sub>10</sub> standards. 11 of 29 modeled receptors over state daytime L <sub>50</sub> standards. 26 of 29 modeled receptors over state nighttime L <sub>10</sub> standards. 27 of 29 modeled receptors over state nighttime L <sub>50</sub> standards.	See discussion of noise abatement barriers. See discussion of noise abatement barriers.
Wisconsin (L <sub>eq</sub> )  Noise abatement barriers – Minnesota  Noise abatement barriers – Wisconsin		3 of 26 modeled receptors approach or exceed Wisconsin noise abatement criteria. None of the analyzed locations in Minnesota met the reasonableness criteria (minimum 5 dBA reduction or cost effectiveness that does not exceed \$3,250/dBA/residence) for noise barrier construction. None of the analyzed locations in Wisconsin met the requirements (minimum 8 dBA reduction or cost per residence maximum threshold of \$30,000) of Trans. 405	See discussion of noise abatement barriers. Not applicable.  Analysis shows that residential areas should be at least 100 feet from new roadway to avoid approaching noise standards; information being provided to local authorities.

**TABLE ES-1  
SUMMARY OF PREFERRED ALTERNATIVE IMPACTS**

IMPACT	RELATED SFEIS CHAPTER OR SECTION	PREFERRED ALTERNATIVE IMPACT	PREFERRED ALTERNATIVE MITIGATION
On the St. Croix River		Noise levels to approach or exceed noise abatement criteria for parks for 200 feet from bridge.	No mitigation of noise impacts on water – based receptors required.
<b>Potentially Contaminated Sites</b>	Section 8.3	There are a total of 39 sites of concern identified within the project area. Six high environmental risk sites in close proximity to the Preferred Alternative. Three properties with a potential for excessive clean up costs and/or environmental liability within the vicinity of Preferred Alternative.	All properties of concern will be evaluated for potential impacts prior to construction. Plans will be developed for properly handling and treating any contamination encountered during construction. Coordination with regulatory agencies.
<b>NATURAL RESOURCES – CHAPTER 9</b>			
<b>Protected Species</b>	Sections 9.1 to 9.4	Impacts anticipated to freshwater mussels, nesting bald eagles, osprey nest, and dotted blazing star. No impacts anticipated to swallows or peregrine falcon.	Relocation of mussels, location of bridge piers outside of mussel habitat, implementation of zebra mussel decontamination protocol. Preferred Alternative design to avoid bald eagle nest. Relocation of osprey nest with removal of barge mooring cells. Relocation of dotted blazing star or funding efforts to acquire land known to support dotted blazing star. <sup>10</sup>
<b>Fish and Aquatic Community</b>	Section 9.1	Potential impacts from construction that disturbs habitat, water quality, or river substrate.	Minimize number of piers to be located in water. Erosion control measures to protect water quality during construction.
<b>Terrain and Climate</b>	Sections 9.1 to 9.4	Grading of terrain during construction. Disturbance to river bottom substrate with pier construction. Impacts to Wisconsin bluff. Preferred Alternative will have no impact on climate.	Preferred Alternative design to minimize bluff impacts. Preferred Alternative Riverway mitigation items to provide funding for the protection of replacement lands to offset impacts on the Wisconsin bluff (see Table ES-2).

<sup>10</sup> Refer to the U.S. Fish and Wildlife Service (USFWS) Biological Opinion in Appendix C of the SFEIS for additional discussion of mitigation for impacts to protected species.

**TABLE ES-1  
SUMMARY OF PREFERRED ALTERNATIVE IMPACTS**

IMPACT	RELATED SFEIS CHAPTER OR SECTION	PREFERRED ALTERNATIVE IMPACT	PREFERRED ALTERNATIVE MITIGATION
<b>Vegetation</b>	Sections 9.2 to 9.4	Area of trees and understory vegetation to be removed along Wisconsin bluff. Other vegetation removal throughout project corridor necessary for construction.	Landscaping and revegetation in appropriate areas. Use of native plant materials where appropriate.
<b>Wildlife</b>	Sections 9.1 to 9.4	Habitat loss through land conversion to highway uses in Wisconsin. Introduction of new barrier to wildlife movement in Wisconsin. Impacts to wildlife anticipated to be less in Minnesota (generally urbanized area).	Revegetation to provide replacement habitat; bridge span of Wisconsin bluff to provide wildlife movement along bluff face.
<b>WATER RESOURCES – CHAPTER 10</b>			
<b>Water Quantity (drainage)</b>	Section 10.1	Increase in impervious surface area in affected drainage areas. Volume of runoff expected to increase.	Incorporation of wet detention ponds, dry detention ponds, new conveyance systems, diversion of flow. Design of ponds to maximize infiltration to minimize bluff impacts and stormwater discharge to St. Croix River near mussel beds.
<b>Water Quality</b>	Section 10.2	Water quality treatment facilities to maintain and improve water quality. Net decrease in total phosphorus of 19 percent compared to No-Build Alternative.	Incorporation of wet detention ponds, dry detention ponds, new conveyance systems, grass ditches, culverts to provide water quality treatment.
<b>Floodplains</b>	Section 10.3	900 feet longitudinal impacts from park access road and stormwater pond construction. 2,500 feet longitudinal impact from loop trail construction in Minnesota. 350 feet transverse impact from loop trail construction in Wisconsin. Fill impacts due to bridge pier construction.	Preferred Alternative design to minimize floodplain impacts. No mitigation necessary as no substantial floodplain impacts result from Preferred Alternative.
<b>Groundwater</b>	Section 10.4	No impacts affecting water quality, amount of groundwater recharge, or groundwater elevation are anticipated.	No mitigation necessary as no impacts are anticipated.
<b>Wetlands</b> Area of Encroachment Mitigation Plan	Section 10.5	7.71 acres of impact. 7-acre mitigation site constructed in 2000 near project area. Mn/DOT has an established wetland mitigation banking site in William O'Brien State Park. Approximately 10 to 15 acres of public value credits (PVC) resulting from wet detention basins. WisDOT to coordinate required wetland mitigation with WisDNR.	See discussion of mitigation plan below. Not applicable.

**TABLE ES-1  
SUMMARY OF PREFERRED ALTERNATIVE IMPACTS**

IMPACT	RELATED SFEIS CHAPTER OR SECTION	PREFERRED ALTERNATIVE IMPACT	PREFERRED ALTERNATIVE MITIGATION
<b>HISTORIC AND ARCHAEOLOGICAL RESOURCES – CHAPTER 11</b>			
<b>Historic and Archaeological Resources</b>	Section 11.5	Adverse effect on 7 NRHP-eligible or listed properties.	Measures identified in Amended Section 106 MOA to address adverse effects and mitigation for historic and archaeological resources. Refer to the Amended Section 106 MOA in Appendix G of the SFEIS for additional discussion of mitigation for impacts to historic and archaeological resources.
<b>CONSTRUCTION IMPACTS – CHAPTER 12</b>			
<b>Construction Impacts</b>	Section 12.3	Temporary construction impacts related to: air quality and dust generation; noise; vibration; visual impacts; traffic access and rerouting; grading and excavation; water quality impacts; generation and disposal of excess material; relocation of utilities and railroads; and potentially contaminated substance spills and leaks. Temporary construction related impacts will result to protected species, wetlands, Wisconsin bluff, St. Croix River and navigation.	Standard construction best management practices to be implemented to minimize temporary construction-related impacts. Plans to be developed with final design to minimize construction-related impacts includes: erosion control plan; staged construction; traffic flow management techniques; maintaining existing access where possible; allow use of existing roadways for as long as possible. Water quality permitting activities to be coordinated with Water Quality Management Advisory Committee. See the Water Quality MOU in Appendix J of the SFEIS.
<b>POTENTIAL INDIRECT EFFECTS ANALYSIS – CHAPTER 13 (conclusions provided here; see SFEIS Chapter 13 for details)</b>			
<b>Indirect Effects</b>	Sections 13.1 to 13.6	Project will accelerate, to some degree, planned growth in western Wisconsin.	Mitigation items totaling \$2.7 million to promote natural, cultural and historic resource protection in the St. Croix River watershed, thus helping to preserve water quality and scenic values. Details regarding the implementation of these mitigation items as well as funding mechanisms and administrative oversight documented in Growth Management MOU (see Appendix I of the SFEIS)..

**TABLE ES-1  
SUMMARY OF PREFERRED ALTERNATIVE IMPACTS**

IMPACT	RELATED SFEIS CHAPTER OR SECTION	PREFERRED ALTERNATIVE IMPACT	PREFERRED ALTERNATIVE MITIGATION
<b>CUMULATIVE IMPACTS – CHAPTER 14 (conclusions provided here, see SFEIS Chapter 14 for details)</b>			
<b>Land Use and Development</b>	Section 14.2.1	Potential for intensified development in already developed areas, expansion of developed area into rural settings and alteration of highly valued ‘rural character’, potential to habitat and natural resource impacts as development occurs in previously undeveloped areas, potential for accelerated rate of growth.	FHWA policy does not allow federal project funds to be used for mitigation of impacts not attributable to the proposed project; potential cumulative impacts cannot be controlled by the actions of FHWA, Mn/DOT or WisDOT. Therefore, no mitigation for potential cumulative effects is proposed (see Section 14.7 of SFEIS).
<b>Prime Agricultural Land</b>	Section 14.2.2	Market-driven property sales and absence of local zoning regulations mandating agricultural densities may cause cumulative impacts on the amount of prime agricultural land in western St. Croix County.	Refer to cumulative impact summary for land use and development in this table (page ES 36).
<b>Social</b>	Section 14.2.3	Urbanization of rural and small town communities will likely result in both positive and negative impacts.	Refer to cumulative impact summary for land use and development in this table (page ES 36).
<b>Regional Economy</b>	Section 14.2.4	Little potential for adverse cumulative impacts due to the strength of the overall economy. Decrease in the agricultural sector is likely as development continues, but without substantial impact on the area economy due to land values.	Refer to cumulative impact summary for land use and development in this table (page ES 36).
<b>Air Quality</b>	Section 14.3.1	No substantial adverse impacts are anticipated given existing conditions and continued decreased emissions from mobile sources of pollutants.	Refer to cumulative impact summary for land use and development in this table (page ES 36).
<b>Noise</b>	Section 14.3.2	An increase in both the number of sensitive receptors and traffic levels is expected, potentially increasing the number of receptors exceeding state and federal standards. However, noise energy disperses quickly over distance minimizing potential for cumulative impacts at specific receptors.	Refer to cumulative impact summary for land use and development in this table (page ES 36).
<b>Wetlands</b>	Section 14.4.1	Effectiveness of regulations, including replacement ratios and close coordination between agencies on mitigation measures diminishes potential for adverse cumulative impact.	Refer to cumulative impact summary for land use and development in this table (page ES 36).

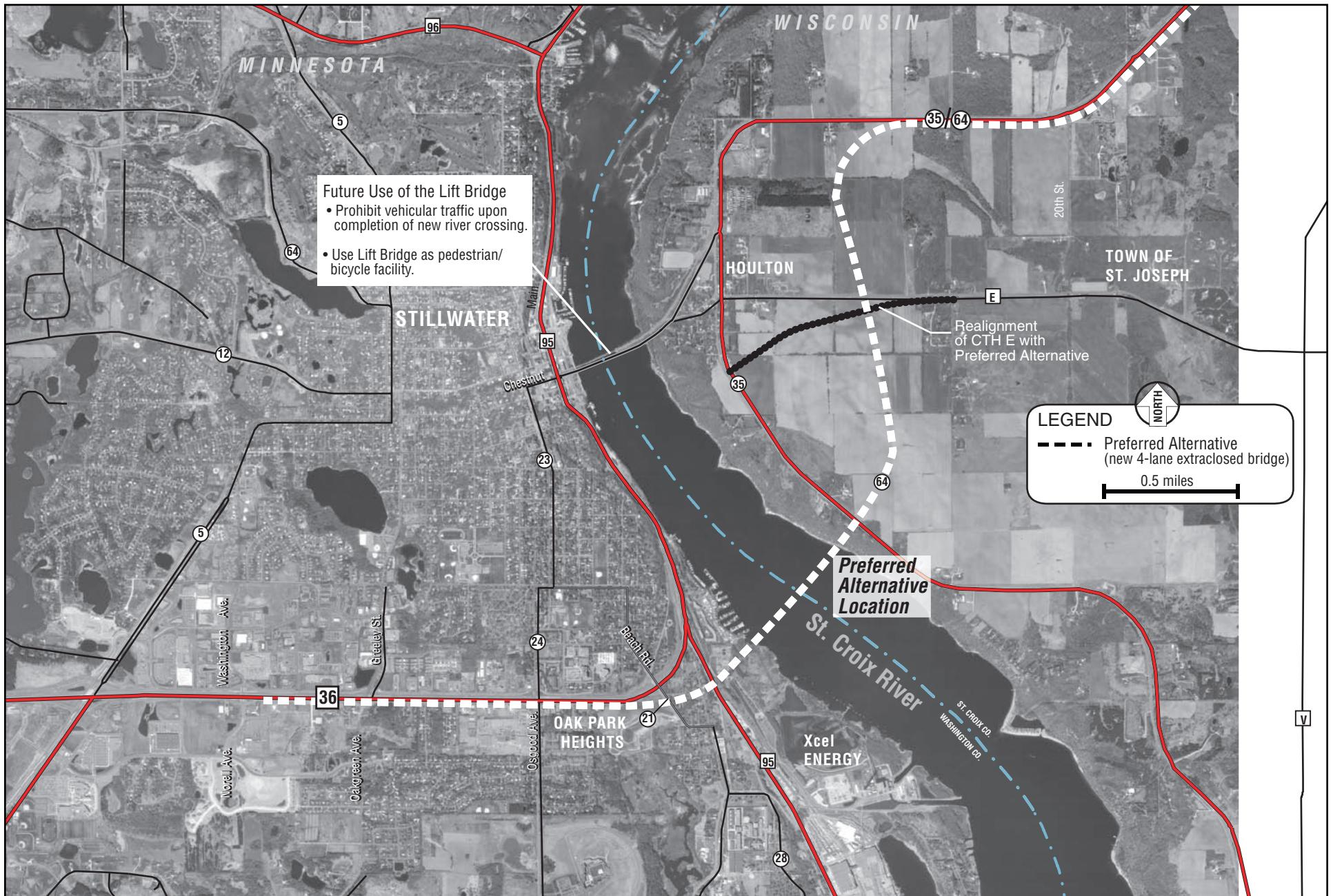
**TABLE ES-1  
SUMMARY OF PREFERRED ALTERNATIVE IMPACTS**

IMPACT	RELATED SFEIS CHAPTER OR SECTION	PREFERRED ALTERNATIVE IMPACT	PREFERRED ALTERNATIVE MITIGATION
<b>Water Quality and Quantity</b>	Section 14.4.2	Potential for adverse impact to water quality without implementation of stormwater management practices and monitoring of groundwater quality.	Refer to cumulative impact summary for land use and development in this table (page ES 36).
<b>Aquatic Resources</b>	Section 14.5.1	Long term cumulative impacts will be minimized as stringent standards and regulations at the state and federal level are in place to protect water quality.	Refer to cumulative impact summary for land use and development in this table (page ES 36).
<b>Vegetation</b>	Section 14.5.2	Potential adverse cumulative effects on vegetative resources based on increased urbanization, expansion of road networks that could be minimized through development controls, conservation easements, mandated preservation of resources in sensitive areas, tree replacement requirements, and other local governmental controls.	Refer to cumulative impact summary for land use and development in this table (page ES 36).
<b>Wildlife</b>	Section 14.5.3	Given the amount of available habitat (Lower St. Croix River and state and county parklands) and the overall health of wildlife populations in the study area, substantial adverse cumulative impacts on wildlife are not anticipated.	Refer to cumulative impact summary for land use and development in this table (page ES 36).
<b>Parks and Recreational Lands</b>	Section 14.6.1	Parklands are given a high degree of protection by local, county, state, and federal laws, reducing the potential for substantial adverse cumulative impacts.	Refer to cumulative impact summary for land use and development in this table (page ES 36).
<b>Aesthetics</b>	Section 14.6.2	Changes to highly-valued aesthetic resources can be protected through government regulations, reducing the potential for cumulative impacts.	Refer to cumulative impact summary for land use and development in this table (page ES 36).
<b>Archaeological and Historic Resources</b>	Section 14.6.3	There is potential for cumulative effects to archaeological and historic resources, due to changes in surrounding land use, accessibility, setting and views.	Refer to cumulative impact summary for land use and development in this table (page ES 36).

**TABLE ES-2  
ST. CROIX RIVER CROSSING PROJECT  
SUMMARY OF PREFERRED ALTERNATIVE MITIGATION ITEMS**

	Estimated Proposed Mitigation Package (1)	Agency Responsible (2)	Implementation Schedule (3)	Contract/Agreement
<b>Standard Practice Mitigation Items (see Section 15.4.1.1 of the SFEIS)</b>				
Wetland replacement	Applicable	Mn/DOT, WisDOT, FHWA	During construction	Construction contract
Zebra mussel decontamination protocol used during construction	Applicable	Mn/DOT, WisDOT, FHWA	During construction	Construction contract
Mussel relocation/Dotted Blazing Star relocation (4)	\$50,000	Mn/DOT, WisDOT, FHWA	Prior to construction	Construction contract
Erosion control/turf establishment	Applicable	Mn/DOT, WisDOT, FHWA	During construction	Construction contract
<b>Riverway Impacts - Preferred Alternative Mitigation Measures (see Section 15.4.1.2 of the SFEIS)</b>				
Removal of Xcel barge unloading facility and mooring cells	\$1,100,000	Mn/DOT, WisDOT, FHWA	During construction	MOU between Mn/DOT and Xcel
Mitigation for damages to bluffslands				
- Land protection by WDNR and/or local governments through purchase, transfer or easements	\$4,500,000	WisDNR, St. Croix County	Prior to construction	Joint powers agreements between Mn/DOT, WisDNR and St. Croix County
Bluffland restoration – removal of Buckhorn sign, partial restoration of Wisconsin approach (removal of pavement from east end of bridge to STH 35 and portions of CTH E)	\$60,000	Mn/DOT, WisDOT, FHWA	During construction	Construction contract
Removal of Terra Terminal building including solid waste removal	\$100,000	Mn/DOT, WisDOT, FHWA	Prior to construction	Construction contract
Kolliner Park: removal of non-historic elements to allow reversion to “natural state”	\$6,000	Mn/DOT, WisDOT, FHWA and SHPOs	During construction	Construction contract
Riverway interpretation (kiosks for interpretation of natural/cultural resources)	\$300,000	NPS, MnDNR, WisDNR - consultation with SHPOs	After construction	Joint Powers Agreement with Mn/DOT and NPS (lead agency)
Public boat access (locational study, environmental study and wetland mitigation by MnDNR)	\$1,200,000	MnDNR	After construction	Interagency Agreement with Mn/DOT and MnDNR
Completion of loop trail system including grading of the municipal barge facility property	\$2,000,000	Mn/DOT, WisDOT, FHWA (construction of trail)	During construction	Construction contract - ownership and maintenance agreement yet to be determined
Recreation, education, and Riverway restoration	\$250,000	NPS	During construction	Joint Powers Agreement with Mn/DOT and NPS
Covenants on excess property owned by WisDOT (Buckhorn Ravine, closed rest area, east of STH 35) Estimated lost value = \$466,000 (5)	\$0	Mn/DOT, WisDOT, FHWA	After construction	Property deed
Spill response plan	\$100,000	NPS	During construction	Joint Powers Agreement with Mn/DOT and NPS
<b>Growth Management Mitigation Items (see Section 15.4.1.3 of this SFEIS)</b>				
Growth management fund				
- Water resources planning/protection	\$2,700,000	WisDNR, St. Croix County, UW-River Falls	180 days after record of decision (ROD) as stipulated in Growth Management MOU	Joint powers agreements between Mn/DOT, WisDNR, St. Croix County, and UW-River Falls.
- Local government planning/zoning support				
- Greenspace protection program				
Transit feasibility study	DOT staff support only	Mn/DOT	After record of decision (ROD); prior to construction	Interagency agreement between Mn/DOT and Metropolitan Council
Water quality memorandum of understanding (MOU) - water quality permitting	--	Mn/DOT	Prior to construction	Mn/DOT MOU with MPCA and St. Croix Basin Team Members
<b>Historic Resources Impacts - Preferred Alternative Mitigation Measures (refer to Amended Section 106 MOA in Appendix G of the SFEIS)</b>				
Design and construction review: SHPO Review of all final designs affecting NRHP properties	Included in design	SHPOs	Prior to and during construction	Section 106 Amended MOA
Lift Bridge				
- Mn/DOT continues ownership, maintenance and operations of Lift Bridge	--	Mn/DOT	Ongoing	Section 106 Amended MOA
- Establish Stillwater Lift Bridge Advisory Committee	--	Mn/DOT, WisDOT, FHWA	During construction	Section 106 Amended MOA
- Perform condition assessment. Develop operations and maintenance manual	--	Mn/DOT	During construction	Section 106 Amended MOA
- Develop Lift Bridge Management Plan	--	Mn/DOT, WisDOT, FHWA	During construction	Section 106 Amended MOA
- Establish endowment fund for operation and maintenance	\$3,000,000	Mn/DOT, WisDOT, FHWA	Prior to construction	Section 106 Amended MOA
- Capital improvements with conversion to pedestrian/bicycle facility	Funding committed to under Statewide Historic Bridge Management Plan	Mn/DOT, FHWA	Prior to construction	Section 106 Amended MOA
Log Cabin Restaurant - parking lot design and construction	\$250,000	Mn/DOT, WisDOT, FHWA	During construction	Grant agreement between Mn/DOT and OPH for construction
Bergstein Shoddy Mill and Warehouse – Potential items include: additional documentation, move or demolition of Shoddy Mill and Warehouse	\$200,000 (moving cost estimate)	Mn/DOT, MnSHPO	Prior to construction	Section 106 Amended MOA
St. Croix Overlook-South				
- Restore Overlook as directed in Roadside Restoration Report (2005)	\$656,000	Mn/DOT, WisDOT, FHWA	During construction	Construction contract
- Develop management plan for maintenance and rehabilitation	--	Mn/DOT	Prior to construction	Section 106 Amended MOA
- Mn/DOT retains ownership of site	--	Mn/DOT	During construction	Construction contract
Stillwater Commercial Historic District				
- Enhanced signage from new bridge and roadways to downtown Stillwater	Included in signage package	Mn/DOT, WisDOT, FHWA	During construction	Construction contract
- Construction communication plan	Included in construction costs	Mn/DOT, WisDOT, FHWA	During construction	Construction contract
- Optimize parking on Chestnut and Main Streets	--	Mn/DOT, WisDOT, FHWA	After construction	Section 106 Amended MOA
- Provide parking lot at old STH 35/64 and loop trail in Wisconsin	Included in loop trail costs	Mn/DOT, WisDOT, FHWA	During construction	Construction contract
Stillwater Cultural Landscape District				
- Complete and distribute illustrated study of Cultural Landscape District	\$50,000	Mn/DOT, WisDOT, FHWA, and SHPOs	Prior to construction	Section 106 Amended MOA
South Main Archaeological District				
- Protect and stabilize Hersey and Bean Archaeological Site prior to use for staging	Included in construction costs	Mn/DOT, WisDOT, FHWA	During construction	Construction contract
- Avoid and minimize effects to historic resources in design of loop trail	Included in design	Mn/DOT, WisDOT, FHWA	During construction	Section 106 Amended MOA
Kriesel Farmstead				
- Construction of berm based on concepts presented in Visual Quality Manual	Included in construction costs	Mn/DOT, WisDOT, FHWA	During construction	Section 106 Amended MOA
National Register of Historic Places (NRHP) Nominations				
- Log Cabin, Bergstein Shoddy Mill and Warehouse, St. Croix Overlook-South, South Main Archaeological District, Thelen Farmstead, Kriesel Farmstead	\$20,000	Mn/DOT, WisDOT	Prior to construction	Section 106 Amended MOA
Lift Bridge publication (illustrated book on Lift Bridge)	\$50,000	Mn/DOT, WisDOT	Prior to construction	Section 106 Amended MOA
Develop field guide to Stillwater Cultural Landscape District (includes St. Croix Overlook-South)	\$10,000	Mn/DOT	During construction	Section 106 Amended MOA
<b>Visual Enhancements (see Section 7.4.4 of the SFEIS)</b>				
Visual enhancements: implementation of the Visual Quality Manual - increase allowable aesthetic costs	Included in construction costs	Mn/DOT, WisDOT, FHWA	During construction	Construction contract
<b>MITIGATION TOTAL FOR PREFERRED ALTERNATIVE</b>	<b>\$16,552,000</b>			

(1) Funding for mitigation to be provided by the project, through the transportation agencies (FHWA, Mn/DOT, WisDOT).  
(2) Agency responsible for implementation of the mitigation item.  
(3) Implementation schedule details provided in Section 15.4.1 of the SFEIS.  
(4) Costs associated with this item are included in construction costs and not in the mitigation total for the Preferred Alternative.  
(5) Estimate of excess right of way available for resale is 46.6 acres. At \$10,000/acre difference in sale value between developed and undeveloped land, amount of lost revenue for Preferred Alternative = \$466,000.



**Future Use of the Lift Bridge**

- Prohibit vehicular traffic upon completion of new river crossing.
- Use Lift Bridge as pedestrian/bicycle facility.

Realignment of CTH E with Preferred Alternative

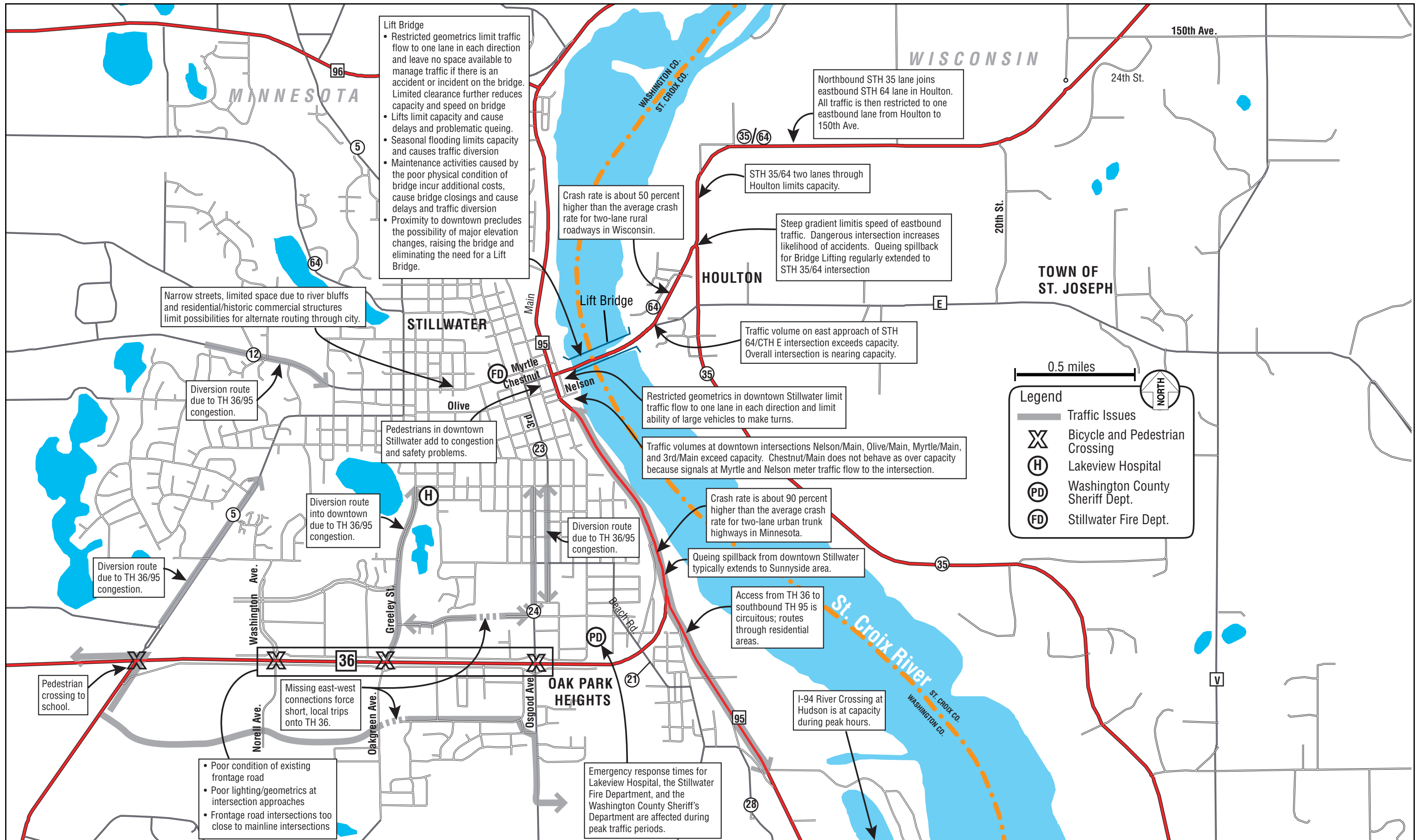
**LEGEND**

--- Preferred Alternative (new 4-lane extraclosed bridge)

0.5 miles

**Project Area and Supplemental Final EIS Preferred Alternative**

*Figure ES-1*



**Transportation Issues Map**

Figure ES-2