

STATE OF MINNESOTA  
DEPARTMENT OF TRANSPORTATION,  
CITY OF RED WING  
and  
PRAIRIE ISLAND INDIAN COMMUNITY  
ENVIRONMENTAL ASSESSMENT

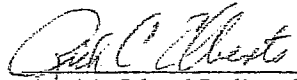
FOR

Municipal State Aid Street (MSAS) 104: Sturgeon Lake Road  
State Project: S.P. 91-104-02  
Minnesota Project: PLHD 2504(160)

Sturgeon Lake Road From Approximately 2200 Feet East of Prairie Island Blvd  
(CSAH 18) east to the intersection of Sturgeon Lake Road and Buffalo Slough Trail  
in  
The City of Red Wing, Goodhue County, Minnesota  
Section 31, Township 114N, Range 15W and  
Section 6, Township 113N, Range 15W

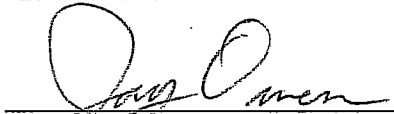
**PROPOSED IMPROVEMENT:** Reconstruction of an approximately 3100 foot segment of an existing four-lane roadway and construction of a grade separated crossing at the current at-grade intersection of the Canadian Pacific Railway line and Sturgeon Lake Road, including necessary modifications to the supporting roadway network and access points.

**Recommended:**

  
\_\_\_\_\_  
Prairie Island Indian Community

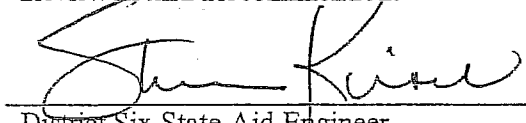
11/10/05  
\_\_\_\_\_  
Date

**Recommended:**

  
\_\_\_\_\_  
City of Red Wing

11/10/05  
\_\_\_\_\_  
Date

**Reviewed and Recommended:**

  
\_\_\_\_\_  
District Six State Aid Engineer

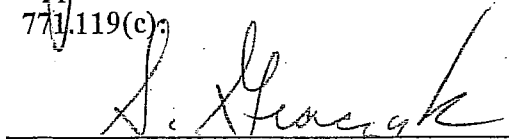
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**Approved:**

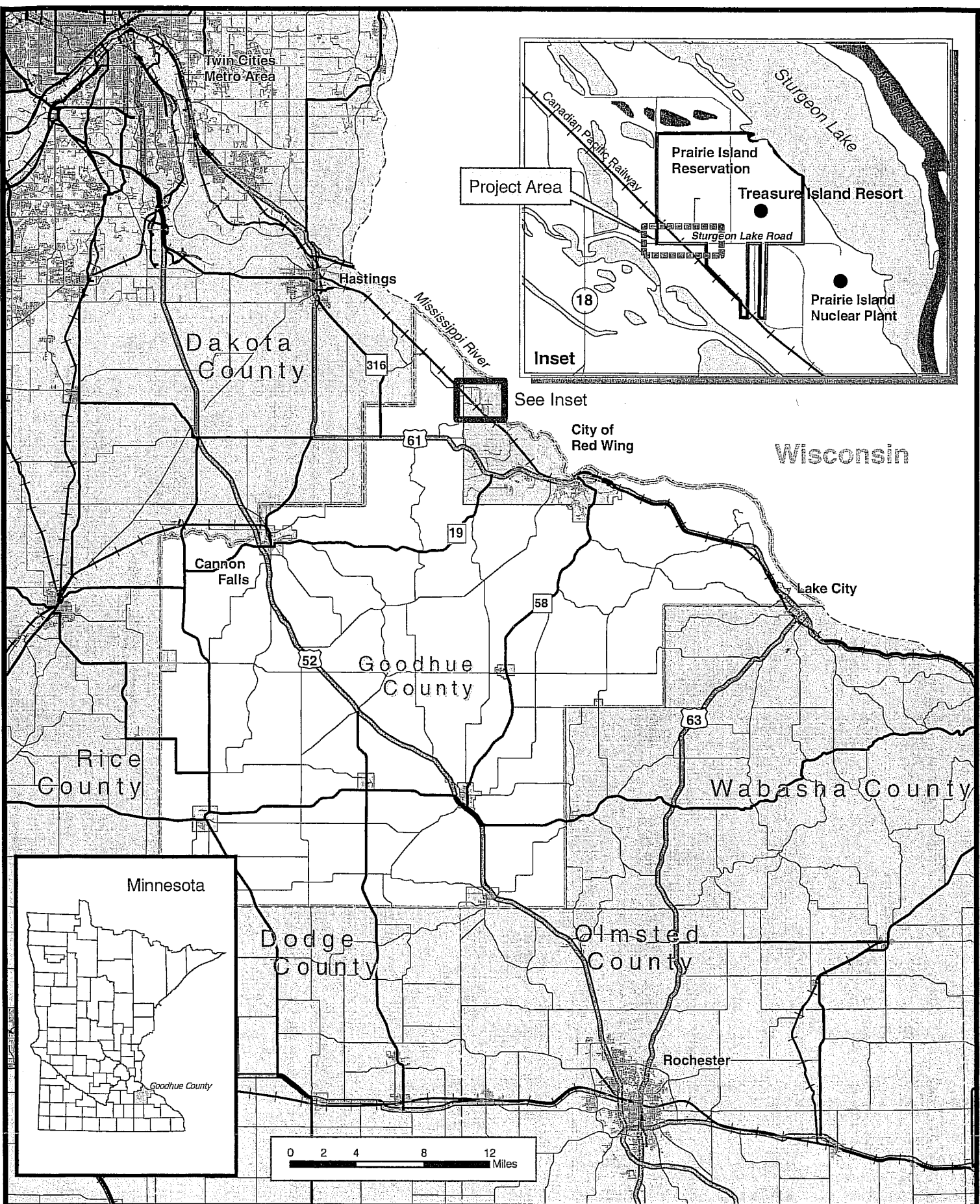
  
\_\_\_\_\_  
Director, State Aid for Local Transportation

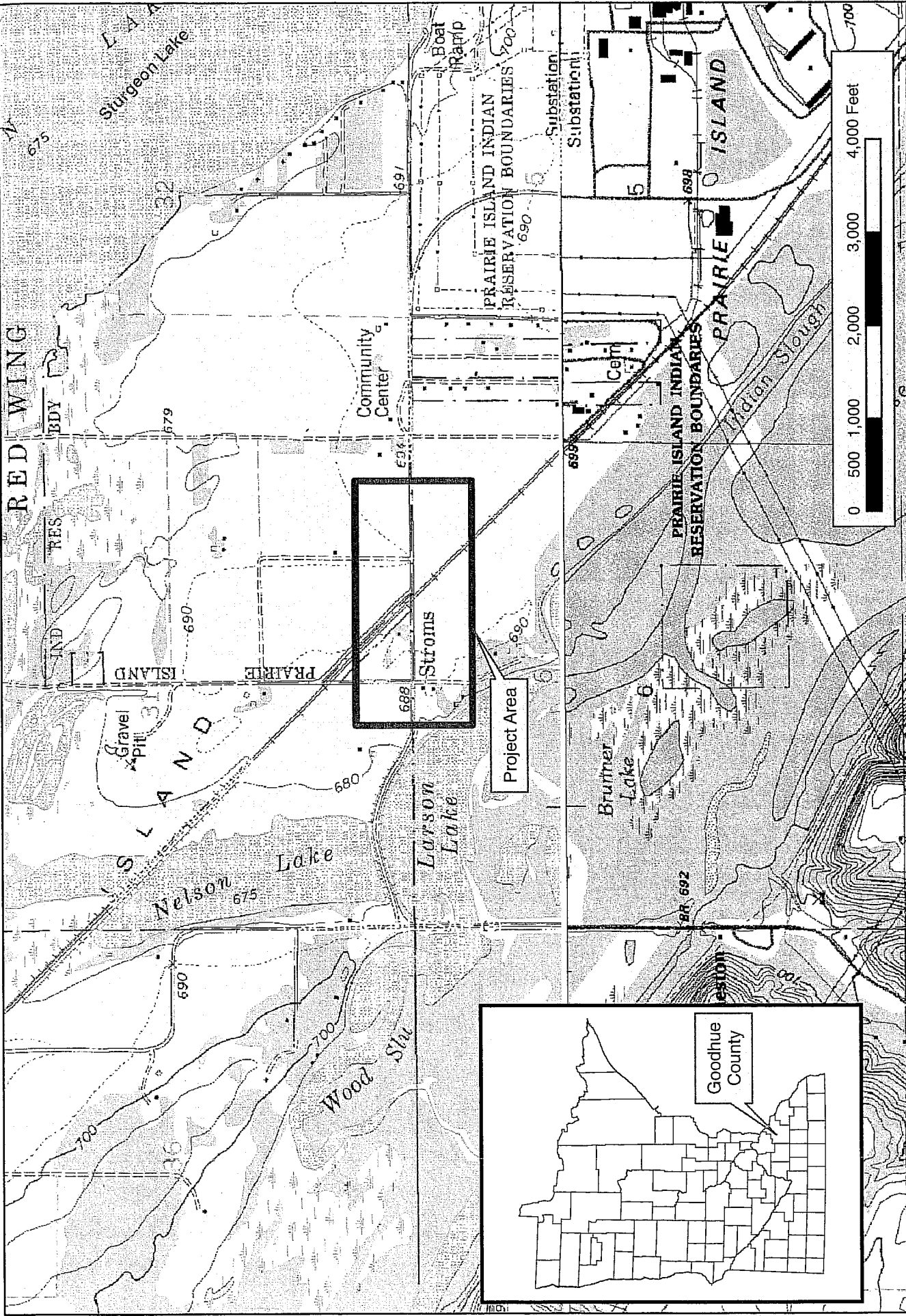
11/14/05  
\_\_\_\_\_  
Date

Approved as an Environmental Assessment per 23 CFR Part  
771.119(c):

  
\_\_\_\_\_  
FHWA - Project Development Engineer

11/17/2005  
\_\_\_\_\_  
Date





Sturgeon Lake Road Overpass  
Environmental Assessment



**Project Location**  
**Figure 2**

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## I. REPORT PURPOSE

This Environmental Assessment (EA) provides background information including:

- ♦ need for the proposed project
- ♦ alternatives considered
- ♦ environmental impacts and mitigation
- ♦ agency coordination and public involvement

This EA was prepared as a part of the National Environmental Policy Act (NEPA) process and state environmental review process to fulfill requirements of both 42 USC 4332 and M.S. 116D. At the federal level, the EA is used to provide sufficient environmental documentation to determine the need for an Environmental Impact Statement (EIS) or that a Finding of No Significant Impact (FONSI) is appropriate. At the state level, the EA is used to provide sufficient environmental documentation to determine the need for a state EIS or that a Negative Declaration is appropriate.

At the state level, this document also serves as an Environmental Assessment Worksheet (EAW). Minnesota Rules 4410.1300 allows the EA to take the place of the EAW form, provided that the EA addresses each of the environmental effects identified in the EAW form. This EA includes each of the environmental effects identified in the EAW form.

The Prairie Island Indian Community (PIIC) is the project proposer. For the purposes of state level environmental review, the PIIC is the Responsible Governmental Unit for this project. Sturgeon Lake Road is a City of Red Wing City Municipal State Aid Route. The City has entered into an agreement with the Prairie Island Indian Community wherein the Prairie Island Indian Community will be the lead agency in the design of this project. Upon project completion, the bridge and road will be owned and maintained by the City of Red Wing.

The proposed project would be funded partially with Federal funds administered through the Federal Highway Administration (FHWA), thereby necessitating review under NEPA.

This document is made available for public review and comment in accordance with the requirements of 23 CFR 771.119 (d) and Minnesota Rules 4410.1500 through 4410.1600.

## II. PURPOSE AND NEED FOR PROJECT

Sturgeon Lake Road is a four-lane undivided roadway between County State Aid Highway (CSAH) 18 (Prairie Island Boulevard) and the intersection with Buffalo Slough Trail. The current traffic volume is approximately 11,500 vehicles per day (vpd), which empirical evidence suggests approximately 80% of the traffic has an origin or destination at the Treasure Island Resort and Casino. This roadway serves as the only paved vehicle access point for the PIIC



(which consists of approximately 90 residences) and also for Xcel Energy's Prairie Island Nuclear Plant. In 2025, traffic volumes are expected to be approximately 17,500 vpd.

Sturgeon Lake Road crosses the Canadian Pacific Railway's (CPR) River Subdivision at-grade approximately 1,000 feet west of the main access to Treasure Island at a crossing with overhead warning flashers and gates. According to CPR, in 2005 approximately 43 trains per day cross Sturgeon Lake Road; the volume of train traffic has grown in recent years and is expected to continue to grow in the foreseeable future.

In 1998, Mn/DOT prepared a rail corridor safety evaluation for the CPR mainline through Goodhue County. In 1998, the train volume was 40 trains per day with an average daily traffic (ADT) on Sturgeon Lake Road of 10,300 vpd. Based on the evaluation of this study, this at-grade crossing was identified as hazardous due to the combination of high traffic volumes, high volumes of buses, and many drivers unfamiliar to the area. A recommendation was made in 1998 to consider a grade separation. In 1998, the exposure at this crossing (trains per day x ADT) was at 412,000 which made it one of the ten highest volume crossings in the State of Minnesota. As a point of reference, crossings with exposure of greater than 300,000 are considered good candidates for grade separation.

Discussions with CPR staff and regional transportation planning staff indicate that additional rail lines will be added to the current CPR corridor. Steady growth in freight traffic will likely require an additional CPR line. The Red Rock commuter rail line, which is in the planning stage, is likely to be extended from its original southern terminus at Hastings to Red Wing along the CPR corridor. High-speed commuter rail between the Twin Cities and Chicago, which is also in the preliminary planning stage, would likely use the CPR corridor. Therefore there is a reasonable potential for a total of four tracks at the current crossing location at some point in the future (this is discussed in further detail below).

The major factors contributing to the purpose and need for a grade-separation bridge on Sturgeon Lake Road are traffic delay, roadway safety, emergency response time, and evacuation from the island. These factors are discussed in detail below.

- ♦ **Traffic Delay** – According to CPR, an average train along this corridor can vary between 7,200 feet and 8,500 feet in length – with a recommended value of 8,200 feet as a reasonable average. The maximum timetable speed for freight trains across Sturgeon Lake Road is 50 MPH, meaning that slower operation is probable; however, no



freight train may exceed 50 MPH.<sup>1</sup> Assuming 43 trains per day at 50 MPH with an average length of 8,200 feet, the crossing is blocked for approximately 136 seconds per train (including advance warning time). This results in a daily blockage of approximately 98 minutes (1.63 hours) each day, or about 6.8% of the total 24-hour period.

- ♦ **Roadway Safety** – According to the Federal Railroad Administration's (FRA) Office of Safety Analysis (<http://safetydata.fra.dot.gov/OfficeofSafety/>), this crossing was reported to have had only one crash since 1970. This crash occurred June 12, 1981 and did not result in a fatality. Given the excellent safety history of the corridor, the FRA's Accident Prediction System (WBAPS) predicts the Sturgeon Lake Road crossing will have 0.038 collisions per year (or one collision every 26 years). The FRA's complex algorithm accounts for a variety of parameters including type of warning device, volume and speed of trains, history of the crossing, and many other parameters. Typically, Mn/DOT considers crossings with an accident prediction greater than 0.050 per year (or one collision every 20 years) candidates for grade separation. It is estimated that the actual accident prediction of this crossing is closer to 0.050 because the FRA's database uses 1993 data which indicates that only 28 trains use the corridor. Installation of additional tracks would also have a negative impact on roadway safety.<sup>2</sup> In 2005, the exposure for this crossing had risen to 494,500 (43 trains per day x ADT of 11,500) and with no additional growth in train traffic, would grow to 752,500 by 2025 (assuming Mn/DOT's forecast of 17,500 ADT), likely making this the highest exposure crossing in Minnesota. With the addition of one to three new tracks, the exposure, and therefore the safety concerns, would increase dramatically at this crossing.
- ♦ **Emergency Response** – The Goodhue County Dispatcher received approximately 897 service calls from Prairie Island and the surrounding area in the period from December 11, 2003 to October 5, 2005. Approximately 715 of those calls were from the PIIC and Treasure

<sup>1</sup> Nearly every train crossing Sturgeon Lake Road is considered a freight train by CPR. Special status is given to occasional high-priority intermodal trains which may operate at speeds up to 60 MPH and for Amtrak which is allowed to operate at speeds up to 79 MPH. Currently, two Amtrak trains operate each day through this corridor.

<sup>2</sup> CPR stated that it is likely in the near future that a second mainline track may be added because 43 trains per day is at the capacity of what their single-track mainline can accommodate. Additional tracks for either the Red Rock Corridor or the Midwest High Speed Rail Initiative would likely be spaced at 25-ft track centers and would be parallel to CPR's freight main(s).



Island Casino. Ambulance and fire protection service is provided to the island by the City of Red Wing and must use this crossing. It should be noted that there is a cooperative law enforcement agreement between the PIIC, the City of Red Wing, and Goodhue County. This agreement means that the PIIC Police Department responds to calls off of the island. This crossing therefore impacts police response times in both directions.

- ♦ **Evacuation** – Sturgeon Lake Road represents the only road surface to and from the island that is above the 100-year floodplain. In a flooding event, this would be the only evacuation route for leaving the island. In the event that a train derailment or stall blocked Sturgeon Lake Road, any necessary evacuation would be severely hampered, if not impossible. The presence of the Prairie Island Nuclear Plant also presents safety and homeland security concerns. Should an accident or terrorist attack occur at the plant, requiring evacuation of the island, the at-grade crossing could potentially block the primary, and depending on conditions (such as flooding during such an accident or attack), the only evacuation route.

An additional concern expressed by citizens and local officials is the tendency for traffic to exceed the speed limit along the current roadway. This is a safety concern as the land use surrounding the corridor transitions from rural to semi-urban. As the number of access points to Sturgeon Lake Road increase to the east, the potential for conflicts rise between traffic turning onto or off of Sturgeon Lake Road and through traffic. The accident potential is exacerbated by the prevalence of traffic exceeding the speed limit.

Therefore, the purpose and need of the proposed Sturgeon Lake Road Grade Separation project is to eliminate roadway traffic delay associated with the railway, eliminate the potential for train/roadway traffic collisions, improve emergency response time, improve the efficiency of (and depending on conditions provide the only means of) island evacuation in the event of natural or man-made disasters, and calm traffic speeds.

### III. ALTERNATIVES

With the purpose and need for a transportation improvement established, a series of project alternatives that could potentially meet the purpose and need were considered. These alternatives are discussed below.





## ALTERNATIVES CONSIDERED BUT REJECTED

Two general and two specific alternatives were considered and later rejected because they did not adequately meet the project purpose and need. These alternatives include the Alternative Corridor, the North Alternative, the Turtle Alternative, and the Eagle Alternative.

*Alternative Corridor* – Early discussions included consideration of improving a different roadway corridor with a grade-separated rail crossing, such as Church Road to the north or potential road corridors to the south. While this general Alternative Corridor concept may have addressed emergency response and evacuation concerns, it would not have addressed delay, safety, or speed issues on Sturgeon Lake Road. Therefore, the Alternative Corridor concept was rejected. It should also be noted that the federal funding acquired for the study was specifically designated for Sturgeon Lake Road, and could not have been applied to a crossing at a different roadway corridor.

*North Alternative* – A general improvement alternative involving the realignment of Sturgeon Lake Road to the north of its existing alignment was considered early in the review process. Several residences, a business (Dakota Station Store), and Treasure Island Casino overflow parking are located along the north side of existing Sturgeon Lake Road. A northern realignment of the road would involve the relocation of multiple residences and potentially the Dakota Station Store. These relocations were considered unacceptable by the community. Therefore, while a north realignment may be feasible from an engineering standpoint, it would not be prudent from an individual and community impact perspective. Therefore, the North Alternative was rejected.

With the elimination of the Alternative Corridor and the North Alternative concepts, the alternative evaluation process focused on improvements realigning the existing horizontal alignment to the south.

*Turtle Alternative* – The Turtle Alternative offers the option of constructing an overpass over the CPR within the existing alignment (see Figure 3-A). This alternative was presented in a public meeting on September 13, 2005. Feedback from community members attending the public meeting indicated that this alternative was not a reasonable option because of the visual barrier that would be created for residents living on the north side of Sturgeon Lake Road (the Turtle Alternative would require retaining walls less than 80 feet from residences that would have an excessive visual impact). The Turtle Alternative would also require the removal of several large trees located on the north side of the existing alignment. In addition, given the lack of horizontal curves, the Turtle Alternative presents little opportunity for traffic calming, and therefore would not meet the purpose and need of the project. Furthermore the Turtle Alternative would require



the construction of a bypass route to maintain traffic. Therefore, the Turtle Alternative was rejected.

***Eagle Alternative*** – The Eagle Alternative (see Figure 3-B) presents an option for reconstructing Sturgeon Lake Road on a southern alignment. While this alternative reduces the visual impact on residences to the north (as compared to the Turtle Alternative), the 50 mph design speed does not provide a notable improvement over the existing horizontal alignment in terms of traffic calming. In addition, the Eagle Alternative would require relocation or modification of a fiber optic regeneration station. Exact costs of such impacts have not been determined, but based on similar projects, it appears likely that such impacts would make the project financially infeasible. Therefore, the Eagle Alternative was rejected.

#### **ALTERNATIVES UNDER CONSIDERATION, INCLUDING THE “NO-BUILD” ALTERNATIVE**

***Buffalo Alternative*** – The Buffalo Alternative (see Figure 3-C) presents another option for reconstructing Sturgeon Lake Road on a southern alignment. Similar to the Eagle Alternative, the Buffalo Alternative would reduce the visual impacts to residences on the north side of the existing alignment. The 40 mph design speed does provide a notable improvement over the existing horizontal alignment for traffic calming purposes. The Buffalo Alternative also avoids impacts to the fiber optic regeneration station, provides a large area for stormwater management (north of the proposed alignment and on/south of the existing alignment), and minimizes the need for retaining walls because of the distance from existing residences. Since the Buffalo Alternative meets the purpose and need of the proposed project and appears to minimize impacts as compared to the Turtle and Eagle Alternatives, the Buffalo Alternative was selected to be carried forward for detailed analysis in the EA.

***No-Build Alternative*** – Under the No-Build Alternative, the Sturgeon Lake Road Overpass would not be constructed. Roadway improvements would be limited to normal pavement maintenance and possibly minor safety improvements. The safety concerns as identified in the purpose and need statement would not be addressed.

Therefore, the No-Build Alternative is not considered a reasonable option for Sturgeon Lake Road from an engineering and safety perspective. However, it does provide a basis for comparison regarding social, economic, and environmental impacts from the proposed action. Furthermore, should the project not obtain community acceptance, the No-Build Alternative could be selected in lieu of any grade-separation improvements.



#### IV. SOCIAL, ECONOMIC AND ENVIRONMENTAL IMPACTS (SEE)

This section discusses environmental impacts of alternatives identified in the Alternatives section. It contains two sub-sections;

- ♦ State Environmental Assessment Worksheet (EAW)
- ♦ Additional Federal Issues

The EAW is a standard format used in Minnesota for environmental review of projects meeting certain thresholds at Minnesota Rule 4410.4300. Federal environmental regulations not addressed on the EAW are addressed in separate sub-section.



# ENVIRONMENTAL ASSESSMENT WORKSHEET

**Note to preparers:** The Environmental Assessment Worksheet provides information about a project that may have the potential for significant environmental effects. The EAW is prepared by the Responsible Governmental Unit or its agents to determine whether an Environmental Impact Statement should be prepared. The project proposer must supply any reasonably accessible data for — but should not complete — the final worksheet. If a complete answer does not fit in the space allotted, attach additional sheets as necessary. The complete question as well as the answer must be included if the EAW is prepared electronically.

**Note to reviewers:** Comments must be submitted to the RGU during the 30-day comment period following notice of the EAW in the *EQB Monitor*. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation and the need for an EIS.

1. **Project title:** Sturgeon Lake Road Grade Separation, City of Red Wing,  
Goodhue County, Minnesota
2. **Proposer:** Prairie Island Indian Community  
Contact person: Rick Elberts  
Title: Tribal Engineer  
Address: 5636 Sturgeon Lake Road  
City, State, ZIP: Welch, Minnesota 55089  
Phone: 651-267-4084  
Fax: 651-385-2980  
E-mail: relberts@piic.org
3. **RGU:** Prairie Island Indian Community  
Contact Person: Rick Elberts  
Title: Tribal Engineer  
Address: 5636 Sturgeon Lake Road  
City, State, ZIP: Welch, Minnesota 55089  
Phone: 651-267-4084  
Fax: 651-385-2980  
E-mail: relberts@piic.org



**4. Reason for EAW preparation (check one)**

EIS scoping:\_\_\_; Mandatory EAW:\_\_\_; Citizen petition:\_\_\_; RGU discretion: X; Proposer volunteered: X

Because the Sturgeon Lake Road Improvements do not clearly exceed any mandatory EAW threshold, this EAW is considered discretionary with respect to Minnesota Rules.

This EA/EAW is made available for public review and comment in accordance with the requirements of 23 CFR 771.119 (d) and Minnesota Rules 4410.1500 through 4410.1600. This EA/EAW evaluates highway improvement alternatives that minimize effects on the surrounding natural, cultural, and socioeconomic environments.

**5. Project location County: Goodhue City/Township: Red Wing**

SE ¼ of SW ¼	Section 31	Township 114N	Range 15W
S ½ of SE ¼	Section 31	Township 114N	Range 15W
NE ¼ of NW ¼	Section 6	Township 113N	Range 15W
N ½ of NE ¼	Section 6	Township 113N	Range 15W

**Attach each of the following to the EAW:**

- ♦ County map showing the general location of the project (Figure 1);
- ♦ U.S. Geological Survey 7.5 minute, 1:24,000 scale map indicating project boundaries (photocopy acceptable) (Figure 2);
- ♦ Site plan showing all significant project and natural features (Figure 3-C).

**6. Description**

- a. Provide a project summary of 50 words or less to be published in the *EQB Monitor*.

The Prairie Island Indian Community proposes to reconstruct Sturgeon Lake Road by building an overpass spanning the existing Canadian Pacific Railroad. The project would address delay and safety issues with the existing at-grade railway crossing. Safety will also be improved through the addition of turn lanes at key intersections. A multi-use trail would be constructed to better facilitate non-motorized travel. The improved roadway will provide for decreased traffic delays, safer and more reliable movement of people, goods, and services in both motorized and non-motorized travel modes.

- b. Give a complete description of the proposed project and related new construction. Attach additional sheets as necessary. Emphasize construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes. Include modifications to existing equipment or industrial processes and significant demolition, removal or remodeling of existing structures. Indicate the timing and duration of construction activities.



### Project Description

Sturgeon Lake Road was originally constructed in the early 1970s. It is one of two access points onto Prairie Island; Church Road (an unimproved gravel road) to the north is the other access point. Sturgeon Lake Road is the primary access road to Treasure Island Resort and Casino, U.S. Army Corps of Engineer Lock and Dam No. 3, the Prairie Island Nuclear Plant, and approximately 90 private residences.

The Prairie Island Indian Community (PIIC) proposes to realign approximately 3,100 feet of Sturgeon Lake Road from approximately 300 feet west of the intersection of Xcel Road and Sturgeon Lake Road to the intersection of Buffalo Slough Trail and Sturgeon Lake Road (Figures 1 and 2). Currently, Sturgeon Lake Road is a four lane undivided roadway with an at-grade crossing of the Canadian Pacific Railway (CPR). The proposed project will shift the mainline of Sturgeon Lake Road south and construct a divided four-lane road for much of the proposed new alignment, will widen the driving lanes, will widen or add turn lanes, and will add landscaped medians and boulevards. The proposed project will retain the eight foot paved sidewalk on the north side and will install a ten foot paved trail on the south side of the proposed roadway. Most importantly, the project will construct an overpass spanning the railway. The project will shift Xcel Road to the south. The project will also install a direct connection between Holmquist Road and Otherday Road, and one access point for both roads onto Sturgeon Lake Road.

The project will require the acquisition of temporary and permanent right-of-way to accommodate road and clear zone widening; the new right-of-way will not require the purchase or relocation of homes or businesses.

- c. Explain the project purpose; if the project will be carried out by a governmental unit, explain the need for the project and identify its beneficiaries.

The project purpose and need is discussed in Section II above.

- d. Are future stages of this development including development on any outlots planned or likely to happen? ☐ Yes ☒ No

If yes, briefly describe future stages, relationship to present project, timeline and plans for environmental review.

- e. Is this project a subsequent stage of an earlier project? ☐ Yes ☒ No

If yes, briefly describe the past development, timeline and any past environmental review.



**7. Project magnitude data**Total project acreage: Approximately 23Total project length: Approximately 3,700 feet (note that the proposed alignment modifications result in a longer roadway segment than the existing alignment).

Number of residential units: NA unattached: NA attached: NA

Maximum units per building: NA

Commercial, industrial or institutional building area (gross floor space): NA

Indicate areas of specific uses (in square feet):

Office	None	Manufacturing	None
Retail	None	Other industrial	None
Warehouse	None	Institutional	None
Light industrial	None	Agricultural	None

Other commercial (specify)

Building height NA If over 2 stories, compare to heights of nearby buildings NA

**8. Permits and approvals required.** List all known local, state and federal permits, approvals and financial assistance for the project. Include modifications of any existing permits, governmental review of plans and all direct and indirect forms of public financial assistance including bond guarantees, Tax Increment Financing and infrastructure.



Permit	Agency	Action Required	Status
<b>Federal</b>			
Environmental Assessment	FHWA Mn/DOT	Approval	Pending
Finding of No Significant Impact	FHWA	Approval	Pending
Tribal Trust Land Easement	Bureau of Indian Affairs	Approval	Pending
ARPA Permit	Bureau of Indian Affairs	Approval	Approved
Section 106 (Historic / Archeological)	FHWA / SHPO	Approval	Pending
<b>State</b>			
EIS Need Decision	Prairie Island Indian Community	Approval	Pending
Geometric Layout	Mn/DOT	Approval	Pending
Construction Plans	Mn/DOT	Approval	Pending
National Pollutant Discharge Elimination System	Minnesota Pollution Control Agency/US Environmental Protection Agency	Permit	Pending
<b>Local</b>			
Municipal Consent / Plan Approval	City of Red Wing	Approval	Pending
Grading and Filling permit	City of Red Wing	Approval	Pending

## 9. Land use.

- Describe current and recent past land use and development on the site and on adjacent lands.
- Discuss project compatibility with adjacent and nearby land uses.
- Indicate whether any potential conflicts involve environmental matters.
- Identify any potential environmental hazards due to past site uses, such as soil contamination or abandoned storage tanks, or proximity to nearby hazardous liquid or gas pipelines.

## Past Land Use and Development

Prairie Island is part of the Mississippi floodplain that has become a complex of channels, lakes, and marshes. The island is located between the Mississippi and Vermillion Rivers. Native Americans inhabited the area and early habitation sites may be deeply buried in lowland alluvium and/or flooded by the construction of the lock and dam. There are numerous mounds that have been documented within a 20-mile radius of the Cannon/Mississippi confluence (Red Wing).





Euroamerican settlement began along the river in the 1830s. The rail line was built in 1872 by the St. Paul and Chicago Railway Company as a connection between Red Wing and St. Paul which increased the numbers of settlers to the area. The 1851 Treaty of Mendota opened the area to homesteading. Some of the Dakota population that had been living in this area relocated following the Dakota Conflict in 1862, but a tribal presence continued to exist. Logging and farming activities became the dominant land use. Agriculture has been the primary land use even following the construction of the Mississippi River lock and dam system in the 1930s which flooded the lowland area of the island. Results of the flood control facilities caused considerable expansion of North and Sturgeon Lakes to the north of Prairie Island. Water channel location and floodplain areas have continued to create changes across the landscape.

In 1936, the tribe was reorganized pursuant to the Indian Reorganization Act of 1934 and 534 acres of Prairie Island was returned to the Mdewakanton Dakota as reservation. In 1968, then Northern States Power Electric (now Xcel Energy), built a nuclear power generating facility on the island. In 1984, Treasure Island Bingo was opened, with expanded facilities in 1988 and 1990. In 1993, the Prairie Island Marina was constructed. In 1996, a 250-room hotel was added; later, a fee-based sports complex including softball fields and a concession stand was added. In 2004, a convenience store was opened on Sturgeon Lake Road. Though not in the immediate vicinity, Sturgeon Lake Road is used as access to the Corps of Engineer's Lock and Dam No.3 Visitor Center.

There are approximately 90 residences on the island.

### **Current Land Use**

Planning and Zoning for the City of Red Wing is guided by a Comprehensive Plan. The Comprehensive Plan serves as a vision statement for the City of Red Wing that anticipates and guides growth. The plan includes long-range goals, policies, and plans related to land use, transportation, housing, infrastructure, parks, trails, and recreation.

The Sturgeon Lake Road project is compatible with adjacent and nearby land uses. The project is located on the fringe of rural and semi-urban settings that include private property, Federal property, Indian reservation, railroad property, and utility-owned property. Starting on the westside of the project area and progressing east, the land use and land ownership are as follows:

- ♦ The CPR transverses the project area from northwest to southeast.
- ♦ From the western project limits to the CPR corridor on the north side of Sturgeon Lake Road, the site is dominated by agricultural land that is privately owned and rural residencies surrounded by grassland-shrubs-trees, much of which is on land held in trust



for the PIIC by the Bureau of Indian Affairs (BIA). Under the proposed project alternative, no impacts are anticipated to these properties.

- ♦ From the western project limits to the CPR corridor on the south side of Sturgeon Lake Road, the land use is agriculture that is privately and utility company owned. In addition, an access road to the Prairie Island Nuclear Plant is located within the project area. The access road and its right-of-way are owned by Xcel Energy.
- ♦ From the railway to the eastern-most project limits on the north side of Sturgeon Lake Road, the land use is grassland, and is land held in trust for the PIIC by the BIA (between the railway and Otherday Road). From Otherday Road to the eastern project limits the land use is commercial (classified as Rural Residential Development), and includes the Dakota Station Store and the Treasure Island Resort/Casino and associated parking facilities.
- ♦ From the railway to the eastern-most project limits on the south side of Sturgeon Lake Road, the land use is agriculture and Rural Residential Development (ball fields). The land is owned by the PIIC or is held in trust for the community by the BIA.
- ♦ Williams Communications leases property from Xcel Energy on the west side of the railway, and has built a fiber optic regeneration station west of the rail line and south of the existing Sturgeon Lake Road Alignment.

### **Zoning**

The project is compatible with adjacent and nearby zoning districts. The majority of the project area is zoned Agriculture (A) and PIIC. The PIIC does not classify land into zoning districts. Agriculture Residential (AR) is zoned north of Sturgeon Lake Road and west of the railway. The land south of Sturgeon Lake Road and east of the railway is zoned General Industrial (I-2). The proposed project would not require reclassification of the zoning districts.

### **Potential Environmental Conflicts**

The project area has been previously disturbed, thus no threatened or endangered species and unique habitat or vegetative communities are anticipated to be in the project area. Larson Lake is designated as Natural Environment, but no impacts are anticipated. Nelson Lake is near the project area and no impacts are anticipated. The project area south of Sturgeon Lake Road is within the boundaries of the R.J. Dorer Memorial Hardwood State Forest. All lands impacted by the project are held in trust by the BIA on behalf of the PIIC, or owned by either a private resident, PIIC, Xcel Energy, or CPR. These lands have been disturbed to some extent, and do not contain tree or native vegetative communities. The lands do not appear to have a land use or land ownership consistent with general state forest uses.



**Potential Environmental Hazards**

A Phase I Environmental Site Assessment (ESA) was conducted in 2004 on that portion of the project area south of Sturgeon Lake Road, east of the rail line, and west of Island Boulevard. The potential for hazardous materials, wastes, or contamination associated with past land uses were evaluated. The "assessment revealed no recognized environmental conditions on the Property". The exception were the pole-mounted transformers (street lights) with the potential for containing PCBs.

A Phase I ESA conducted in 1999 also concluded that "there were no recognized environmental concerns at the Property that would warrant further assessment".

10. **Cover types.** Estimate the acreage of the site with each of the following cover types before and after development:

	<b>Before</b>	<b>After</b>
Types 1-8 wetlands	0	0
Wooded/forest	0	0
Brush/Grassland	8.9	12.1
Lawn/landscaping	0	0
Impervious surfaces	7.4	9.6
Cropland	6.7	0
Other (potential storm water pond)	0	1.3
<b>TOTAL</b>	<b>23</b>	<b>23</b>

If **Before** and **After** totals are not equal, explain why:

11. **Fish, wildlife and ecologically sensitive resources**

- a. Identify fish and wildlife resources and habitats on or near the site and describe how they would be affected by the project. Describe any measures to be taken to minimize or avoid impacts.

The project site itself is relatively small (23 acres) with areas outside of Sturgeon Lake Road, the rail corridor, Xcel access road, and ball fields comprised of cropland and pasture or hayfields. Within ½ mile of the proposed construction are wetlands and small wooded areas, including Nelson and Larson Lakes to the west and Sturgeon Lake and the Mississippi River approximately one mile to the east. Typical wildlife species utilizing wetland areas to the west include varieties of ducks and geese, small mammals such as raccoon, skunk, muskrat, squirrels, along with deer, and other species such as snakes, turtles, amphibians, fish, and invertebrates. Most of the natural



community has been altered by agricultural practices and residential development, as well as the nuclear plant and casino/resort.

### *Wildlife Resources*

b. Are any state-listed (endangered, threatened or special concern) species, rare plant communities or other sensitive ecological resources such as native prairie habitat, colonial waterbird nesting colonies or regionally rare plant communities on or near the site?   X   Yes  
   No

If yes, describe the resource and how it would be affected by the project. Indicate if a site survey of the resources has been conducted and describe the results. If the DNR Natural Heritage and Nongame Research program has been contacted give the correspondence reference number: **ERDB 20060132**. Describe measures to minimize or avoid adverse impacts.

A coordination letter was sent to the MnDNR Natural Heritage and Nongame Research Program to determine if any rare plant or animal species or other significant natural features are known to occur in the vicinity: a response was received on August 22, 2005. A letter was also sent to Mn/DOT's Office of Environmental Services to determine if any federally listed threatened or endangered species are present in the project area. Copies of correspondence are included in Appendix A.

The MnDNR conducted a natural heritage database search in August 2005 to determine if rare plant or animal species or other significant natural features are known to occur within an approximate one-mile radius of the project site. The MnDNR database identified 31 known occurrences of rare species or natural communities. Thirty of the 31 listed are not anticipated to be affected by the proposed project. Only the Blanding's turtle warranted specific comments because of the potential to be affected by construction activities. It was also noted in the letter that there are areas known to be of state-wide importance to Blanding's turtles, however this project area is not considered one of these priority areas.



### Blanding's Turtle

It is not anticipated that the overpass construction would adversely affect any Blanding's turtles in the area. The letter includes a summary list of recommendations for avoiding and minimizing impacts to Blanding's turtle populations. Informational sheets discussing the Blanding's turtle and measures to avoid harm to the species during construction will be shared during the preconstruction meeting, posted on the road construction contractor's project board, and distributed to road construction workers prior to the initiation of construction activities.

The PIIC is also considering the potential for constructing turtle crossings at the western end of the proposed project. Such crossings would extend beneath the roadway and allow for safe passage of turtles, as well as other creatures. The details of any such crossings would be developed in conjunction with the MnDNR during the detail design phase of the project.

### Bald Eagle

During preliminary coordination with the Mn/DOT Office of Environmental Services and the United States Fish and Wildlife Service (USFWS) a bald eagle nesting location was identified. The nest is located approximately 1,600 feet from the western edge of the project limits and approximately 3,000 feet from the proposed overpass. The USFWS has expressed some concern regarding the potential for impacts to the nesting location. The primary concern is that the noise associated with the construction of the overpass could cause a failed nesting event.

No construction activities are anticipated to occur within 1,500 feet of the nesting location. However, CSAH 18 and the surrounding roadway network provide access to Sturgeon Lake Road and the project area. Therefore, CSAH 18 is the most logical and direct route for haul trucks and other construction materials. CSAH 18 just south of the intersection with Sturgeon Lake Road, is within 600 feet of the nesting location. The average annual daily traffic for CSAH 18 is 7,400 vehicles per day.

In order to lessen the potential to affect the nesting event, the PIIC is proposing construction schedule restrictions. The restrictions include:



- ♦ During the critical nesting period identified as 2/1 through 5/1, there will be no hauling of fill or other construction materials to or from the project site. Work at the project site will be limited to relatively quiet activities such as site preparation.
- ♦ During the moderately critical period (1/10 to 2/1 and 5/1 to 6/1) and Less Critical period (6/1 to 7/31), no hauling of fill or other construction materials on CSAH 18 south of Sturgeon Lake Road. In addition, no pile driving will take place at the construction site.
- ♦ During the non-critical period (7/31 to 1/10), there would be no hauling restrictions. This is also the only period during which pile driving would be allowed.

In a letter dated November 2, 2005, the USFWS indicated that with the restrictions proposed above, the project may affect but is not likely to adversely affect the bald eagle. A copy of this letter is included in Appendix A.

12. Physical impacts on water resources. Will the project involve the physical or hydrologic alteration — dredging, filling, stream diversion, outfall structure, diking, and impoundment — of any surface waters such as a lake, pond, wetland, stream or drainage ditch? ☐ Yes ☒ No

If yes, identify water resource affected and give the DNR Protected Waters Inventory number(s) if the water resources affected are on the PWI: Describe alternatives considered and proposed mitigation measures to minimize impacts.

No physical or hydrologic alteration of any surface waters is anticipated as a result of this Project, however, permanent water quality best management practices such as storm water retention ponding may be constructed as part of the Project.

13. Water use. Will the project involve installation or abandonment of any water wells, connection to or changes in any public water supply or appropriation of any ground or surface water (including dewatering)? ☐ Yes ☒ No

If yes, as applicable, give location and purpose of any new wells; public supply affected, changes to be made, and water quantities to be used; the source, duration, quantity and purpose of any appropriations; and unique well numbers and DNR appropriation permit numbers, if known. Identify any existing and new wells on the site map. If there are no wells known on site, explain methodology used to determine.

This construction project is not anticipated to impact any public or private water supply wells or other water supply systems.



In the event that dewatering is necessary, an evaluation of the volume of water to be removed will be made and water appropriation permits will be obtained from the MnDNR. All dewatering operations will be conducted in accordance with applicable MnDNR regulations.

14. Water-related land use management district. Does any part of the project involve a shoreland zoning district, a delineated 100-year flood plain, or a state or federally designated wild or scenic river land use district? ☒ Yes ☐ No

If yes, identify the district and discuss project compatibility with district land use restrictions.

The Sturgeon Lake Road project includes a portion of a shoreland zoning district associated with one lake near the project corridor. The shoreland zoning district is administered by the City of Red Wing. No designated trout streams are within or adjacent to the project limits.

#### *Shoreland Districts*

A number of MnDNR Public Waters (lakes and wetlands) are accompanied by shoreland districts that extend 1,000 feet from the edge of these waters. Land located within the following distances from public waters may be subject to shoreland district restrictions:

- ♦ 1,000 feet from the ordinary high water level of a lake, pond, or flowage
- ♦ 300 feet from a river or stream, or the landward extent of a floodplain designated by ordinance on a river or stream, whichever is greater

The limits of shorelands may be reduced whenever the waters involved are bounded by topographic divides which extend landward from the waters for lesser distances and when approved by the commissioner.<sup>3</sup> No Public Watercourses will be affected by the proposed project. According to the City of Red Wing Comprehensive Plan and Land Use Ordinance Section 50-050 (Part A), the Sturgeon Lake Road Corridor lies partially within the Larson Lake Natural Environment shoreland classification, and is subject to a 150 foot structural setback.

Although the project is near Nelson Lake, this watercourse does not have a shoreland district classification identified by the City. Nelson Lake is identified on the MnDNR's Public Waters Inventory in conjunction with U.S. Lock and Dam #3 Pool (25-17). No effects are anticipated to Nelson Lake. Sturgeon Lake is considered a Natural Environment (25-0017 01) by the City under the shoreland district classification; the lake is also identified on the MnDNR's Public

<sup>3</sup> City of Red Wing Shoreland Management Ordinance



Waters Inventory in conjunction with U.S. Lock and Dam #3 Pool (PWI Inventory # 25-17). Sturgeon Lake is over one-half mile east of the project area, therefore no effects are anticipated. The 150 foot structural setback would also apply to this lake.

The 150 foot structural setback applies to any permanent ground-based structure constructed more than three feet in height. For the Sturgeon Lake Road project, the structural setback applies to the bridge for the CPR. The bridge is greater than 150 feet from the shoreland zoning district. The project will obtain a Grading and Filling Permit from the City of Red Wing prior to construction, if necessary. The project will adhere to all permit requirements and zoning ordinances including Section 50-050 (Part G) subparts 1 and 2:

*G) Placement and Design of New Roads, Driveways, and Parking Areas.*

- 1) Public and private roads and parking areas must be designed to take advantage of natural vegetation and topography to achieve maximum screening from view from public waters. Documentation must be provided by a qualified individual that all roads and parking areas are designed and constructed to minimize and control erosion to public waters consistent with the field office technical guides of the local soil and water conservation district, or other applicable technical materials.
- 2) Roads, driveways, and parking areas must meet structure setbacks and must not be placed within bluff and shore impact zones, when other reasonable and feasible placement alternatives exist. If no alternatives exist, they may be placed within these areas, and must be designed to minimize adverse impacts.

*Floodplains*

Federal Emergency Management Agency (FEMA) floodplain map databases and Flood Insurance Study (FIS) were reviewed for the project area (see Appendix B). The site is located primarily in flood zone X (outside the 100 year floodplain), but a small portion (approximately 325 feet) transversely encroaches on an area within flood zone AE. According to the FIS, Base Flood Elevations for this river reach are based on historic flood profile data and gaging station rating curves. This means a floodway has not been designated for this area and an accepted FEMA hydraulic model for this river reach is not available at this time.

The floodplain impact analysis is as follows:

- I. Currently, the existing Sturgeon Lake Road grade is above the 100 year flood elevation of the Mississippi River; the proposed modified alignment will tie into the existing alignment and will be built above the 100 year flood elevation.





- II. No significant permanent impacts to fisheries or wildlife habitat or beneficial floodplain values is anticipated since the project does not encroach on the river channel or appear to inhibit the conveyance of flood waters more than the existing roadway alignment. The proposed bridge is over the CPR and does not cross a waterway. The section of roadway being constructed in the 100 year floodplain is tying into the existing road. By overlaying the proposed alignment on the Flood Insurance Rate Map (FIRM) panel all but approximately 325 feet of the project is out of the 100-year floodplain. The proposed road grades are above the 100-year water surface elevation. Temporary impacts to beneficial floodplain values, specifically siltation/sedimentation of the construction zone, may occur during construction; use of erosion and sediment control best management practices would alleviate much of this impact. Any potential permanent impacts to beneficial floodplain values from erosion and sedimentation will be mitigated through the placement of rip-rap or other permanent erosion control measures as appropriate.
- III. The modified roadway alignment at the western edge of the project will be designed to maintain the existing flood conveyance capacity; therefore there will be no increased risk of flooding. The design may include floodplain mitigation, since a portion of the project area is in the 100-year floodplain. The estimated fill volume in the 100-year floodplain is approximately 5,000 to 6,000 cubic yards. To meet regulatory requirements for the City of Red Wing, on the floodplain fringe "Floodplain developments shall not adversely affect the hydraulic capacity of the channel and adjoining Floodplain of any tributary watercourse or drainage system where a Floodway or other encroachment limits has not been specified on the official Zoning Map." This may require a hydraulic analysis and some type of mitigation. One manner of mitigation would be to remove an equal amount of material from the adjacent floodplain area in order to provide conveyance capacity. This issue will be addressed in detail during the final design phase of the project.
- IV. Since this project consists of the upgrading of an existing roadway and the construction of a structure outside the existing floodplain, and since Goodhue County and the City of Red Wing have ordinances controlling floodplain development, this project will not result in incompatible floodplain development. Furthermore, this project will not provide new access to floodplain areas.

15. Water surface use. Will the project change the number or type of watercraft on any water body? \_\_Yes \_\_X\_No



If yes, indicate the current and projected watercraft usage and discuss any potential overcrowding or conflicts with other uses.

16. **Erosion and sedimentation.** Give the acreage to be graded or excavated and the cubic yards of soil to be moved:

Acres: Approximately 23; cubic yards: Approximately 300,000. Describe any steep slopes or highly erodible soils and identify them on the site map. Describe any erosion and sedimentation control measures to be used during and after project construction.

The proposed project will raise Sturgeon Lake Road and the supporting roadway network to overpass the CPR. This will require obtaining approximately 300,000 cubic yards of fill. Fill at the project site will be reused to the extent possible. Additional fill will be obtained from area gravel pits that have been permitted. The approved fill will not contain contaminated inorganic or organic materials and invasive vegetation. If fill is needed from additional gravel pits, then the pits will go through the permitting process.

In compliance with the amendments of the Clean Water Act, this project will require a National Pollutant Discharge Elimination System (General Stormwater permit) for construction activity since the project will disturb more than one acre of land. The object of this permit is to implement temporary and permanent erosion and sediment control measures to reduce and eliminate erosion and keep sediments on-site during and after construction. These goals can be achieved by implementing best management practices (BMPs) on the project as part of the temporary and permanent erosion control measures. These practices include removing accumulated sediment and repairing or replacing damaged and deteriorated erosion control devices. Temporary erosion control devices may include silt fencing, straw bales, other appropriate sediment trapping devices, and ditch checks.

Erosion control methods will be included in the construction contract specifications. The PIIC's construction plans will include temporary and permanent erosion and sediment control BMPs as suggested by the US Environmental Protection Agency (EPA), the Minnesota Pollution Control Agency (MPCA), and Mn/DOT design standards.

17. **Water quality: surface water runoff**

a. Compare the quantity and quality of site runoff before and after the project. Describe permanent controls to manage or treat runoff. Describe any stormwater pollution prevention plans.



b. Identify routes and receiving water bodies for runoff from the site; include major downstream water bodies as well as the immediate receiving waters. Estimate impact runoff on the quality of receiving waters.

The proposed overpass project will drain to the east and west along the proposed 4%-5% slopes on the main alignment, and to a lesser extent, will drain over side slopes to the north and south. Storm water along the roadway will be channeled by curb and gutter, collected by a series of catch basins and conveyed via storm sewer to an existing and potential additional storm water retention pond prior to discharge to Larson Lake and associated wetlands on the west end of the project. The water retention time in the storm water ponds will allow for contaminants to settle or be absorbed by soil and vegetation. Pond size and layout will be determined during the final design phase of the project.

Storm water that flows over the vegetated side slopes will generally drain overland toward surface water features or infiltrate into the soil. After roadway reconstruction, the vegetation established within the project area will provide some water quality treatment, reducing the pollutant load conveyed by highway runoff. The roadside drainage system will also allow pollutants to settle or be absorbed by soil and vegetation.

Sediment control practices will be implemented to minimize adverse effects on surface waters related to project construction, and sediment controls will remain in place until final stabilization has been established. Whenever practicable, the PIIC will construct temporary sediment basins during the initial stages of soil disturbance.

To comply with NPDES General Permit Requirements, the PIIC will design and implement a Stormwater Pollution Prevention Plan (SWPPP) that will identify BMPs to be implemented to control erosion and sedimentation during construction. The Community will submit a complete application form and SWPPP to the EPA and MPCA prior to initiating construction activities.

#### 18. **Water quality: wastewaters**

a. Describe sources, composition and quantities of all sanitary, municipal and industrial wastewater produced or treated at the site.

None.

b. Describe waste treatment methods or pollution prevention efforts and give estimates of composition after treatment. Identify receiving waters, including major downstream water bodies,



and estimate the discharge impact on the quality of receiving waters. If the project involves on-site sewage systems, discuss the suitability of site conditions for such systems.

None.

c. If wastes will be discharged into a publicly owned treatment facility, identify the facility, describe any pretreatment provisions and discuss the facility's ability to handle the volume and composition of wastes, identifying any improvements necessary.

None.

d. If the project requires disposal of liquid animal manure, describe disposal technique and location and discuss capacity to handle the volume and composition of manure. Identify any improvements necessary. Describe any required setbacks for land disposal systems.

None.

#### 19. Geologic hazards and soil conditions

a. Approximate depth (in feet) to ground water: 10 to 20 feet

minimum average to bedrock: 100 feet minimum 100 feet average

Describe any of the following geologic site hazards to ground water and also identify them on the site map: sinkholes, shallow limestone formations or karst conditions. Describe measures to avoid or minimize environmental problems due to any of these hazards.

No significant geologic hazards have been identified in the project area. The project area is within the driftless zone which is characterized by karst topography. However, the specific location of the proposed project is within the Mississippi River and Vermillion River valleys, and is underlain by thick floodplain and river terrace deposits. No karst features have been identified within the specific project area. The water table aquifer is highly susceptible to contamination due to the coarse nature of surficial soils and the shallow depth to groundwater; however this aquifer is not used as a primary source of water.

b. Describe the soils on the site, giving NRCS (SCS) classifications, if known. Discuss soil granularity and potential for groundwater contamination from wastes or chemicals spread or spilled onto the soils. Discuss any mitigation measures to prevent such contamination.

The soil associations<sup>4</sup> in project area have been formed in outwash or recent alluvium, including:

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<sup>4</sup> USDA SCS Soil Survey of Goodhue County, 1976



- ♦ Estherville-Waukegan-Alluvial land association – “nearly level to sloping, somewhat excessively drained, well-drained, and poorly drained, medium-textured and coarse-textured”
- ♦ Marsh-McPaul-Radford association – “depressional, very poorly drained marshes, and nearly level, moderately well drained and somewhat poorly drained, medium-textured soils”

Sparta Series soils occur at the site. The SCS soil type mapped on the project site are Sparta loamy sand (SpA) with 0 to 3 percent slopes. As stated in the Soil Survey of Goodhue County, Minnesota this soil series “consists of nearly level, excessively, drained soils on benches of major streams. Areas are wide and can make up a large part of the benches, ranging from 5 to 200 acres in size. These soils formed in sandy outwash. The native vegetation consists of a variety of grasses. In a representative profile the surface layer is very dark brown loamy sand about 8 inches thick, and the subsurface layer is very dark brown and dark-brown loamy coarse sand about 11 inches thick. The subsoil is dark-brown, loose coarse sand about 21 inches thick. The underlying material is yellowish-brown coarse sand. Permeability is very rapid and available water capacity is low. Organic matter content is moderately low and the natural fertility is low. Most areas are used for crops or pasture. The main limitation is the hazard of drought. Due to drought, the hazard of erosion or soil blowing is severe in open areas that lack plant or crop cover. Surface runoff is very slight.” Sparta is not on the list of hydric soils.

Groundwater contamination from wastes, chemicals, or spills on the ground surface is unlikely. However, should a spill occur during road construction activities, the construction contractor would be required to immediately notify the State Duty Officer and implement spill cleanup activities in accordance with MPCA guidelines. The construction contractor will be responsible for developing a spill response plan prior to conducting activities in the project area that have the potential to cause soil or groundwater contamination.

## 20. Solid wastes, hazardous wastes, storage tanks

a. Describe types, amounts and compositions of solid or hazardous wastes, including solid animal manure, sludge and ash, produced during construction and operation. Identify method and location of disposal. For projects generating municipal solid waste, indicate if there is a source separation plan; describe how the project will be modified for recycling. If hazardous waste is generated, indicate if there is a hazardous waste minimization plan and routine hazardous waste reduction assessments.

During road construction activities, construction and demolition debris will be generated through pavement removal and other construction related activities. All such demolition debris will be recycled or disposed of in accordance with Minnesota Solid Waste Rules.



There will be no animal manure, sludge, or hazardous waste generated by this project.

b. Identify any toxic or hazardous materials to be used or present at the site and identify measures to be used to prevent them from contaminating groundwater. If the use of toxic or hazardous materials will lead to a regulated waste, discharge or emission, discuss any alternatives considered to minimize or eliminate the waste, discharge or emission.

The road construction will not require the use of or generate toxic or hazardous materials with the exception of petroleum fuels used during the construction process. All such materials will be used and disposed of properly.

c. Indicate the number, location, size and use of any above or below ground tanks to store petroleum products or other materials, except water. Describe any emergency response containment plans.

None.

## 21. Traffic.

Parking spaces added: None.

Existing spaces (if project involves expansion): NA

Estimated total average daily traffic generated: The project itself will not generate traffic; currently an estimated 11,500 vehicles per day use the roadway.

Estimated maximum peak hour traffic generated (if known) and time of occurrence:

Exact numbers are not available; it is estimated that approximately the peak hour traffic is 1,150 vehicles.

Provide an estimate of the impact on traffic congestion on affected roads and describe any traffic improvements necessary. If the project is within the Twin Cities metropolitan area, discuss its impact on the regional transportation system. NA

The Sturgeon Lake Road overpass construction project is not anticipated to generate additional traffic, but will provide a safer and more efficient roadway segment for the traveling public.

During construction, all reasonable and practicable attempts will be made to keep the roadway open, and access will be provided to all existing residences and businesses. During construction, traffic may be periodically delayed for short periods to accommodate construction operations and equipment. Sturgeon Lake Road will remain open and the railroad safety gates will be functional during construction.



*Existing/Future Conditions*

Sturgeon Lake Road is a four-lane undivided roadway between the west terminus at CSAH 18 (Prairie Island Boulevard) and the access to Treasure Island Resort and Casino within the PIIC. The current traffic volume is approximately 11,500 vehicles per day, which empirical evidence suggests approximately 80% of the traffic has an origin or destination at Treasure Island. This roadway serves as the only paved vehicle access point for the PIIC (which consists of approximately 90 residences) and also for the Prairie Island Nuclear Plant. It is estimated that approximately 17,500 vehicles per day will use the roadway by 2025.

The road crosses CPR's River Subdivision at-grade approximately 1,000 feet west of the main access to Treasure Island at a crossing with overhead warning flashers and gates. In 2005, approximately 43 trains per day cross Sturgeon Lake Road according to CPR; this volume is anticipated to grow for the foreseeable future.

See Section II (Purpose and Need for Project) for additional information regarding the auto and rail traffic in the project area.

22. **Vehicle-related air emissions.** Estimate the effect of the project's traffic generation on air quality, including carbon monoxide levels. Discuss the effect of traffic improvements or other mitigation measures on air quality impacts. Note: If the project involves 500 or more parking spaces, consult *EAW Guidelines* about whether a detailed air quality analysis is needed.

The project is not located in an area in which conformity requirements apply, and the scope of the project does not indicate that air quality impacts would be expected. Therefore, no further air quality analysis is necessary. With the addition of the bridge and the elimination of a stop, the potential for a reduction in air emissions exists. Currently the cars stopping and idling at the train crossing may have a negative impact on air quality in the area; this negative impact would be reduced if the need for stopping for trains were eliminated.

23. **Stationary source air emissions.** Describe the type, sources, quantities and compositions of any emissions from stationary sources of air emissions such as boilers, exhaust stacks or fugitive dust sources. Include any hazardous air pollutants (consult *EAW Guidelines* for a listing) and any greenhouse gases (such as carbon dioxide, methane, nitrous oxide) and ozone-depleting chemicals (chloro-fluorocarbons, hydrofluorocarbons, perfluorocarbons or sulfur hexafluoride). Also describe any proposed pollution prevention techniques and proposed air pollution control devices. Describe the impacts on air quality.



No stationary source air emissions are associated with the proposed project.

24. **Odors, noise and dust.** Will the project generate odors, noise or dust during construction or during operation?  X  Yes   No

If yes, describe sources, characteristics, duration, quantities or intensity and any proposed measures to mitigate adverse impacts. Also identify locations of nearby sensitive receptors and estimate impacts on them. Discuss potential impacts on human health or quality of life. (Note: fugitive dust generated by operations may be discussed at item 23 instead of here.)

#### *Odors*

There will be odors (i.e. exhaust from construction equipment) associated with Sturgeon Lake Road reconstruction activities. Following the completion of the project, there should be no additional odor increase above the levels observed currently.

#### *Construction Noise*

Construction activity could cause noise impacts from the operation of construction equipment. Standard noise control specifications will be followed, in addition to local ordinances. Construction equipment will be kept in good operating condition and properly muffled.

#### *Traffic Noise*

The issue of traffic noise is addressed in the "Additional Federal Issues" section of this document which immediately follows the EAW section.

#### *Dust*

There will be dust associated with Sturgeon Lake Road reconstruction activities. Following the completion of the project, there should be no additional dust increase above the levels observed currently.

Construction activities such as excavation and grading could cause an increase of dust and other particles in the air. Construction of an overpass in an area of flat terrain will require hauling and handling large volumes of soil. Paved roads will be used when possible to access construction areas in an effort to minimize dust from construction equipment. Dust will be minimized through the use of watering trucks and limiting the time periods (windy conditions) when construction vehicles can operate on gravel surfaces. Permanent vegetation will be established both as an erosion control measure and to minimize dust generation after construction is complete.





Air quality impacts during construction may also result from emission from construction equipment and/or from temporary traffic delays due to construction operations and staging. The impacts are expected to be minimal and of short duration.

25. **Nearby resources.** Are any of the following resources on or in proximity to the site? If yes, describe the resource and identify any project-related impacts on the resource. Describe any measures to minimize or avoid adverse impacts.

a) Archaeological, historical or architectural resources? ☒ Yes ☐ No

Mn/DOT cultural resources unit (CRU) staff indicated that two cultural resources survey projects completed in 1995 and 1999 included portions of the project area. Mn/DOT CRU staff also indicated that there are areas within the project area that were not covered in the previous cultural resources surveys, and that the closest recorded archaeological resources are two mound sites, 21GD63 and 21GD64, that are roughly 700 feet south and 650 feet southeast respectively, from the project boundaries. The State Historic Preservation Office database indicates that there are 15 recorded archaeological sites within one mile of the project area. The project does not appear likely to impact these resources. However, the proximity of these sites and the two mound sites is an indication that other archaeological resources may occur within the project area. An archaeological field survey was completed that resulted in the discovery of one sparse artifact scatter within the project construction limits, and one lithic artifact scatter adjacent to the project. Both sites were found within the context of a plowed agricultural field, and neither appears to hold enough significance or integrity to warrant additional investigation. A subsequent report to document the findings is being prepared. A letter report of the findings has been completed and submitted to Mn/DOT. The recommendations and results will be added to this section of the EA following completion of the cultural resources report. A final determination pursuant to Section 106 of the National Historic Preservation Act will be made once the full report is completed.

Correspondence on Section 106 issues is included in Appendix A. The letter reporting the archaeological survey results is included as Appendix D.

b) Prime or unique farmlands or land within an agricultural preserve? ☐ Yes ☒ No

c) Designated parks, recreation areas or trails? ☐ Yes ☒ No

#### ***Parkland***

Section 4(f) – The project has been reviewed for potential Section 4(f) involvement. The project will not use publicly owned parklands, waterfowl or wildlife refuges, recreational areas



or any land from an historic site, or any other property determined to be subject to the provisions of Section 4(f). The presence of the sports complex at the southeast quadrant of the Sturgeon Lake Road/Island Boulevard intersection was considered, but determined not to be a Section 4(f) resource due to the ownership and fee-based nature of the facility. A letter discussing this issue is included in Appendix A; follow-up verbal communication with FHWA representatives indicates that they concur with this assessment (formal documentation of FHWA concurrence will be obtained prior to the completion of the environmental review process). Therefore, no Section 4(f) involvement exists on this project.

Section 6(f) – The project has been reviewed for potential 6(f) involvement. The project will not cause the conversion of any land acquired, planned or developed with funds from the Land and Water Conservation Fund (LAWCON). No Section 6(f) involvement exists on this project.

### *Trails*

The existing roadway has a trail on the north side. The proposed project will have an 8 foot paved sidewalk on the north side of the road and a 10 foot paved trail on the south side of the road. Both the sidewalk and trail will be separated from the travel lanes by an 8 foot grass boulevard. The proposed bridge will have 10 foot paved sidewalk/trails that will be separated from the roadway by a barrier. The proposed project will not cause adverse impacts to the existing trail. The proposed project should improve trail use for all users by separating the ATVs users from the pedestrians, and from the rail line.

The decision to include an 8 foot sidewalk on the north side of Sturgeon Lake Road and a 10 foot paved multi-use trail on the south side of the road was made based on input from the local community. The sidewalk on the north side maintains an existing pedestrian pathway used by residents in the area. The multi-use trail on the south side was added after citizens identified a concern about bicycles and other non-vehicular traffic being forced to cross Sturgeon Lake Road near the casino to access the sidewalk on the north side.

d) Scenic views and vistas? \_\_\_Yes XNo

The Sturgeon Lake Road project will impact the immediate viewshed of the area, but no exceptional scenic views or vistas occur in the project area, therefore no impacts are anticipated. Further discussion of visual impacts to citizens in the project area is provided in the response to Question 26 below.

e) Other unique resources? \_\_\_Yes XNo



No unique resources have been identified in the project area, therefore no impacts are anticipated.

26. **Visual impacts.** Will the project create adverse visual impacts during construction or operation? Such as glare from intense lights, lights visible in wilderness areas and large visible plumes from cooling towers or exhaust stacks? ☒ Yes ☐ No

If yes, explain.

The proposed Sturgeon Lake Road project shifts the mainline south by a maximum of approximately 250 feet. The new roadway is proposed to have significant change in vertical alignment. The alignment changes will be caused by the proposed overpass and overpass approaches.

The proposed project will impact visual quality by causing localized changes in the ability of neighbors to see the visual resources of the natural environments. The view of the wooded areas associated with Larson Lake and associated wetlands and sloughs is the primary affected resource. The residents who live north of Sturgeon Lake Road and immediately west of the railway will be impacted. The project is not breaking up the natural environment, thus the change is not considered major.

The proposed project will minimize and mitigate for adverse impacts to natural visual resources. The proposed roadway will have a 24 foot landscaped median, 8 foot landscaped boulevards, side slopes with native plantings or other landscaping, the option for aesthetic treatments on bridge and retaining wall components, and a trail.

The proposed project will create beneficial impacts to visual quality by causing localized changes for travelers to see the visual resources of the cultural and project environments. Travelers (tourists) will be able to see their destinations, especially the Treasure Island Resort and Casino, and potentially Sturgeon Lake. The proposed project creates an opportunity for a "gateway" entrance into the PIIC.

27. **Compatibility with plans and land use regulations.** Is the project subject to an adopted local comprehensive plan, land use plan or regulation, or other applicable land use, water, or resource management plan of a local, regional, state or federal agency?  
☒ Yes ☐ No. If yes, describe the plan, discuss its compatibility with the project and explain how any conflicts will be resolved. If no, explain.



The portion of the proposed project that is not held in trust by the BIA on behalf of the PIIC is subject to the City of Red Wing's Comprehensive Plan, which was most recently updated in 1994, and the City-adopted Zoning Ordinances. As noted on the City's website, "the Red Wing Advisory Planning Commission has discussed the need to update the City of Red Wing's Comprehensive Plan. The current Comprehensive Plan underwent a complete update that was approved by the City Council on February 14, 1994. Most of the public meetings and plan discussion for that update occurred in 1993. Since that time, the City has updated various sections of the plan. These updates have include: Amendments to the land use plan (1998); two updates of the housing study (1998, 2004); several park plans (Colvill Park- 1996, Pine Ridge Neighborhood Park- 1998, Levee Park- 2003 and the Pottery Pond- 2004); the Watershed Management Plan (1999); several Transportation Studies and Access Management Plans (1998, 1999 and 2004); Area Plans (High School Area/Hi Park Village- 1995, 2000, Tyler Road Area Plan- 1999, 2000, 2001, 2002); and the Economic Development Plan (2002)."

The website also stated that, "there are several sections of the plan that have not been reviewed since the 1994 update, including the Riverfront Development Plan; Downtown Development Plan; Land Use; Parks and Recreation; Community Facilities Plan; and the Community Vision. Other sections are in need of more minor modifications to bring them up to date and others consolidated for incorporation."

The Comprehensive Plan establishes city-wide development goals. In addition, the plan is the starting point for other land use controls, such as the zoning ordinances. The proposed project is not subject to any other land use plans. The proposed project will occur on land zoned as Agriculture (A), General Industrial (I-2), and on land within the PIIC. There is a wide-variety of land use types near the project area, including agriculture, rural residencies, and rural residential development. The project is compatible with adjacent and nearby land uses.

28. **Impact on infrastructure and public services.** Will new or expanded utilities, roads, other infrastructure or public services be required to serve the project? ☐ Yes ☒ No. If yes, describe the new or additional infrastructure or services needed. (Note: any infrastructure that is a connected action with respect to the project must be assessed in the EAW; see *EAW Guidelines* for details.)

No additional infrastructure or public services will be required to serve this project. Construction of the overpass will result in changes to existing infrastructure. The overpass will eliminate a railroad crossing and this will result in the removal of the crossing gates. The PIIC will coordinate with CPR and Mn/DOT to design and construct an overpass that will accommodate future rail transportation system plans.



All utility services within the project area are sufficient to serve the proposed project. Other utilities such as gas, electric, fiber optic cable, and phone may exist within the corridor and minor relocations may be required for project construction. All relocations will be coordinated with the appropriate utility companies.

The project proposer is coordinating with local agencies and land owners to reconstruct connecting roadways and driveways that meet their needs and fulfill appropriate engineering design standards.

29. **Cumulative impacts.** Minnesota Rule part 4410.1700, subpart 7, item B requires that the RGU consider the "cumulative potential effects of related or anticipated future projects" when determining the need for an environmental impact statement. Identify any past, present or reasonably foreseeable future projects that may interact with the project described in this EAW in such a way as to cause cumulative impacts. Describe the nature of the cumulative impacts and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to cumulative impacts (*or discuss each cumulative impact under appropriate item(s) elsewhere on this form*).

Reasonably foreseeable potential cumulative impacts are limited for the Sturgeon Lake Road project area. The proposed Sturgeon Lake Road overpass project may make the area somewhat more accessible due to delay improvements and a safer roadway section. These improvements could make the Sturgeon Lake Road route more attractive to tourists and recreational users. Residential and recreational use will likely slowly increase in the future; however this increase would occur without the reconstruction of Sturgeon Lake Road. With an increase of tourists and recreational users, an increase of business that cater to those individuals can be expected. Developments that may arise include gas stations, convenience stores, cafes, restaurants, hotels, and/or potentially strip malls that contain these types of businesses.

30. **Other potential environmental impacts.** If the project may cause any adverse environmental impacts not addressed by items 1 to 28, identify and discuss them here, along with any proposed mitigation.

No additional environmental impacts are known beyond those documented in this EA/EAW.

31. **Summary of issues.** *Do not complete this section if the EAW is being done for EIS scoping; instead, address relevant issues in the draft Scoping Decision document, which must accompany the EAW.* List any impacts and issues identified above that may require further investigation before the project is begun. Discuss any alternatives or mitigative



measures that have been or may be considered for these impacts and issues, including those that have been or may be ordered as permit conditions.

- ♦ Blandings Turtle – The PIIC will coordinate with the MnDNR on the necessity of and specifications for roadway underpasses to facilitate turtle movements.
- ♦ Floodplains – Floodplain mitigation may be required for fill placed at the extreme western end of the proposed project. More detailed hydrologic evaluation will be required during the final design phase of the project.
- ♦ Water Quality/Storm Water Management – Detailed runoff analyses will be conducted during the final design phase of the project to determine the need for and specifications of storm water ponds or other storm water management BMPs.
- ♦ Cultural Resources – A Phase I Archaeological Survey has recently been completed for the project area. Results of the survey are being documented in a report, and need to be evaluated by the Mn/DOT Cultural Resources Unit. Preliminary review indicates that impacts are unlikely, however, this needs to be confirmed.



**RGU CERTIFICATION.** The Environmental Quality Board will only accept **SIGNED** Environmental Assessment Worksheets for public notice in the EQB Monitor.

I hereby certify that:

- ♦ The information contained in this document is accurate and complete to the best of my knowledge.
- ♦ The EAW describes the complete project; there are no other projects, stages or components other than those described in this document, which are related to the project as connected actions or phased actions, as defined at Minnesota Rules, parts 4410.0200, subparts 9b and 60, respectively.
- ♦ Copies of this EAW are being sent to the entire EQB distribution list.

Signature

Date

Title

Environmental Assessment Worksheet was prepared by the staff of the Environmental Quality Board at Minnesota Planning. For additional information, worksheets or for *EAW Guidelines*, contact: Environmental Quality Board, 658 Cedar St., St. Paul, MN 55155, 651-296-8253, or [www.mnplan.state.mn.us](http://www.mnplan.state.mn.us)



## V. ADDITIONAL FEDERAL ISSUES

Discussed below are the federal issues not discussed in the EAW.

### a. Social Impacts

#### Effect on Public Safety

There are no regular public services along this route. Public services that may use Sturgeon Lake Road include, but are not limited to, emergency vehicles, snowplows, road maintenance vehicles, staff of Xcel Energy, US Army Corps of Engineers, and Treasure Island Resort and Casino, and flood evacuees (if needed).

No additional public services are required to service the Sturgeon Lake Road reconstruction project. The reconstructed Sturgeon Lake Road corridor may benefit public services, such as snowplowing, emergency vehicle response, and flood evacuation, by providing safer road conditions. Roadway safety improvements include the addition of turn lanes and eliminating the at-grade railway crossing. Frequent Sturgeon Lake Road users, including residents, US Army Corps of Engineer staff, Xcel Energy staff, and tourists would also benefit from safer road conditions.

#### Effect on other Social Groups

For a road reconstruction project such as the Sturgeon Lake Road project, social and economic impacts are those usually associated with the construction period, such as detours, temporary reduction of access to businesses, homes, and public lands such as parks, rivers, and lakes.

The PIIC will stage construction in such manner as to provide access to residences and businesses and accommodate emergency vehicles. The proposed project is not expected to cause adverse impacts to communities or neighborhoods. No categories of people uniquely sensitive to transportation (such as children, the elderly, minorities, and persons with mobility impairments) will be unduly impacted by roadway reconstruction.

### b. Considerations Relating to Pedestrians and Bicyclists

The safe accommodation of bicyclists and pedestrians was an important part of the planning and development of the Sturgeon Lake Road reconstruction project. The Minnesota Bicycle Transportation Planning and Design Guidelines (Mn/DOT 1996) indicated that four foot shoulders are the minimum, and recommends wider shoulders or dedicated trails if traffic speeds are higher or if there are a significant number of heavy trucks or commercial vehicles. Sturgeon Lake Road is posted at 45 miles per hour, and heavy truck traffic comprises 2 percent of the total traffic using the road.





With the proposed addition of an 8 foot paved sidewalk (north of westbound lanes) and a 10 foot paved trail (south of eastbound lanes) to the roadway, this project will benefit pedestrians and bicyclists. See the response to Question 25c in the EAW portion of this document for additional information regarding the decision to have a sidewalk and a trail as part of the proposed project.

### c. Environmental Justice

Executive Order No. 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, dated February 1, 1994, requires that federal agencies consider and address adverse environmental effects of proposed federal projects on minority and low-income communities. The Sturgeon Lake Road overpass project would be federally funded, and is considered a federal project for the purposes of compliance with the Executive Order.

The purpose of Executive Order 12898 is to identify, address, and avoid disproportionately high and adverse human health or environmental effects on minority and low-income populations. The Sturgeon Lake Road project falls within the political boundaries of the City of Red Wing and the PIIC. The table below summarizes key population characteristics in regards to environmental justice issues.

Geographic Area	Population	Percent Minority	Percent Below Poverty Level (Individuals)
Goodhue County	44,127	3.8 %	5.7 %
City of Red Wing	16,116	6 %	6.8 %
Immediate Project Area (10 Census Blocks of Block Group 5)	105	89.9 %	11.7 %
Project Area (Census 9802, Block Group 5)	1,141	21 %	11.7 %

As the table demonstrates, the City of Red Wing has a higher percentage of minorities than Goodhue County, and has a slightly higher percentage of low-income populations than Goodhue County. Also, as shown in the table above, the immediate project area (and greater project area) has a high percentage of minorities and a high percentage of persons below the poverty level.

Given that minority and low income populations are present in the project area, the focus of the analysis must be on the impacts. Specifically, it must be determined if the project will result in disproportionately high and adverse impacts to the identified minority and low income populations. While the project will have a visual impact on residents adjacent to the project, this will be partially mitigated through the incorporation of landscaping, native plantings, and



aesthetic treatments. The project will assist the traveling public, including those living in the project area, by creating a safer roadway and decreasing delay time. This will be accomplished by eliminating the at-grade railway crossing, creating turn lanes, decreasing roadway speeds, and providing an evacuation route.

The project will potentially require the acquisition of land and/or easements from one private landowner, two businesses, the PIIC, and land held in trust by the BIA for the PIIC. Landowners and land administrators would be compensated for the loss of land in accordance with the Uniform Relocation Assistance and Real Property Acquisition Act (see section below). Furthermore, no persons would be displaced from their place of residence due to the project.

Based on this information, the proposed action will not have disproportionately high and adverse human health or environmental effects to any minority population or low income population.

#### **d. Economics**

Evaluating economic impacts involves assessing the ability of a transportation project to support economic development in the project area and the region. Transportation improvements can affect business operating costs for raw materials and finished products, and increase the number of employees that are available to work in a given location. Other key economic issues include the long-term cost of maintaining the existing (unimproved) roadway, higher vehicle operating costs due to increased traffic volumes (in this case, tourists and employees) and delays (in this case, the railway), and in some cases costs associated with crashes.

The Sturgeon Lake Road reconstruction corridor consists of a mix of privately-held residential and non-commercial property, property held in trust by the BIA on behalf of the PIIC, property owned by the PIIC, property owned by the City of Red Wing, property owned by CPR, and property owned by Xcel Energy.

Sturgeon Lake Road is an important route because it is one of two access points onto Prairie Island. Located on Prairie Island are private residences, PIIC, Treasure Island Resort and Casino, Prairie Island Nuclear Plant, and U.S. Army Corps of Engineer Lock and Dam #3. These facilities generate traffic in the form of residents, employees, and tourists. Sturgeon Lake Road has been identified as a minor arterial roadway. Much of this traffic uses the Sturgeon Lake Road corridor as an access point to Prairie Island.

If the project is not constructed, future maintenance would be required to provide safe driving conditions for Sturgeon Lake Road users. The railway crossing is sub-standard based upon estimated ADT and railway traffic, and should to be upgraded for safety and delay concerns. Substantial delays and detours requiring additional travel-related costs would become necessary



if the railway crossing was allowed to operate at the current level of service. Without reconstruction of the roadway, delay and maintenance costs would increase and accumulate over time.

The proposed Sturgeon Lake Road reconstruction project will provide an improved transportation facility that will increase the reliability of the transportation system in the area and maintain the connectivity of Prairie Island to the City of Red Wing and associated resources. The long term cost of maintaining the roadway and safety issues would likely be reduced.

#### e. Relocation

The Sturgeon Lake Road project would potentially require the acquisition of land and/or easements from one private landowner, PIIC, land held in trust by the BIA on behalf of the PIIC, and two businesses (Xcel Energy and CPR). No homes or places of business would be acquired and no persons would be displaced; therefore relocation of homes, businesses, and individuals is not a concern for this project.

#### f. Right of Way

The Sturgeon Lake Road reconstruction project would require acquisition of permanent and temporary easements from one private land owner, PIIC, land held in trust by the BIA on behalf of the PIIC, Xcel Energy, CPR, and the City of Red Wing. A precise breakdown of the permanent and temporary easements has not yet been developed since the proposed improvement is in the concept stage. However, preliminary estimates of the right of way requirements are as follows:

Entity	Estimated Existing Right of Way	Estimated Right of Way After Construction	Change in Right of Way
City of Red Wing	4.7 acres <sup>1</sup>	16.1 acres <sup>2</sup>	+11.4 acres
Xcel Energy	6.5 acres	4.1 acres	-2.4 acres
PIIC/Trust Property	3.2 acres	0 acres	-3.2 acres
Other Private Property	5.8 acres	0 acres	-5.8 acres

<sup>1</sup>Includes an estimated 0.2 acres of CPR easement for existing crossing

<sup>2</sup>Includes an estimated 0.4 acres of CPR easement for new bridge

The land to be acquired is currently undeveloped (agriculture), with the exception of access points, Xcel Road, and the railway. All accesses and drainage features will be reconstructed as part of the project; preliminary estimates indicate that approximately two acres of temporary easement will be required for this purpose.



The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, provides for payment of compensation for business and residences acquired for a federal aid highway project. Landowners will be compensated in accordance with this act.

**g. Noise**

A detailed traffic noise analysis was conducted for the proposed Sturgeon Lake Road project. Since the proposed project is on a municipal state aid street owned by the City of Red Wing and since there is not full control of access, it is exempt from Minnesota Noise Standards, per Minnesota Statutes, Section 116.07 Subd. 2a. Potential traffic noise impacts of this project will therefore be evaluated using federal noise criteria.

Noise is defined as any unwanted sound. Sound travels in a wave motion and produces a sound pressure level. This sound pressure level is commonly measured in decibels. Decibels (dB) represent the logarithmic increase in sound energy relative to a reference energy level. A sound increase of 3 dB is barely perceptible to the human ear, a 5 dB increase is clearly noticeable, and a 10 dB increase is heard twice as loud. For example, if the sound energy is doubled (e.g. the amount of traffic doubles, there is a 3 dB increase in noise, which is just barely noticeable to most people. On the other had, if traffic increases to where there is 10 times the sound energy level over a reference level, then there is a 10 dB increase and it is heard twice as loud.

For highway traffic noise, an adjustment, or weighting, of the high- and low-pitched sounds is made to approximately the way that an average person hears sounds. The adjusted sound levels are stated in units of "A-weighted decibels" (dBA). In Minnesota, traffic noise impacts are evaluated by measuring and/or modeling the traffic noise levels that are exceeded 10% and 50% of the time during the hour of the day and/or night that has the heaviest traffic. These numbers are identified as the  $L_{10}$  and  $L_{50}$  levels. The  $L_{10}$  value is compared to the FHWA noise abatement criteria.

The following table provides a rough comparison of the noise levels of some common noise sources.



*Typical Noise Levels*

Sound Pressure Level (dBA)	Noise Source
140	Jet Engine (at approximately 80 feet)
130	Jet Aircraft (at approximately 330 feet)
120	Rock Concert
110	Pneumatic Wood Chipper
100	Jointer/Planer
90	Chainsaw
80	Heavy Truck Traffic
70	Business Office
60	Conversational Speech
50	Library
40	Bedroom
30	Secluded Woods
20	Whisper

Two noise receptors were identified near the existing roadway network; these receptors are residences located adjacent to Sturgeon Lake Road and the Xcel Road (see Figure 4). Discussions with residents in the project area and local officials indicated that the peak traffic periods were around 6:00 AM for Xcel Road, and between 8:00 AM and 12:00 PM for Sturgeon Lake Road. Permission was granted by one receptor (R1) to conduct noise monitoring on their property; monitoring at this location was conducted between 5:40 and 6:40 AM. Permission was not received from the second receptor (R2) to conduct monitoring, therefore the noise monitoring was conducted at a surrogate location that was deemed to be representative of noise conditions at R2. Monitoring was conducted at the R2 representative location from approximately 8:00 AM to 9:00 AM.

Following completion of the noise monitoring, modeling of existing noise levels, future No-Build noise levels, and future build noise levels was conducted. The assumptions used for and results of the noise modeling are summarized in the tables below.



*Noise Monitoring and Modeling Results*

Receptor	Monitored ( $L_{10}$ ) (2005)	Modeled Existing ( $L_{10}$ ) (2005)	2025 No-Build Alternative ( $L_{10}$ )	2025 Build Alternative ( $L_{10}$ )	FHWA NAC ( $L_{10}$ )	Difference Between Build and Existing ( $L_{10}$ )	Difference Between No-Build and Existing ( $L_{10}$ )
R1	54	64	65	65	70	+1	+1
R2	62	72	74	66	70	-6	+2

*Noise Modeling Assumptions*

Scenario	ADT	Peak Hour Traffic	Autos	Medium Trucks	Heavy Trucks	Speed
Existing	11,500	1,150	1,127	12	12	45
2025 Build	17,500	1,750	1,715	18	18	35
2025 No-Build	17,500	1,750	1,715	18	18	45

The modeling results were calibrated using the results of noise monitoring conducted at a third location immediately adjacent to Sturgeon Lake Road. These calibration modeling results were 2 dBA less than the monitoring results. Since the modeled and monitored results were within +/- 3dBA the model is considered valid.

It should be noted that the modeled existing noise levels are higher than the monitored existing noise levels. There are two possible reasons for this difference. One is that the monitored period was not actually during the peak traffic hour. The second is that the nature of traffic is such that an assumed peak hour traffic volume of 10% of the ADT is too high. Given that the largest trip generator for Sturgeon Lake Road is Treasure Island Casino, and that the timing of trips tends to be more evenly distributed than commuter driven traffic patterns, a lower peak hour number may be more appropriate. However, without detailed traffic data, this cannot be confirmed.

The results of the modeling indicate that there will be no traffic noise impacts as a result of the implementation of the project, since the project would not result in noise levels approaching or exceeding the FHWA noise abatement criteria or cause a noise increase of 5dBA or greater. The analysis further indicates that that receptor R2 may currently be experiencing noise in excess of the FHWA noise abatement criteria (Mn/DOT policy requires evaluation of noise abatement alternatives for projects that would result in traffic noise approaching, at, or above 70 dBA ( $L_{10}$ )). Receptor R2 would experience a substantial noise reduction of 6 dBA were the proposed project to be implemented.



## **VI. PUBLIC AND AGENCY INVOLVEMENT**

### **a. Public Involvement Plan**

A public involvement plan was developed and implemented early in the project development process. This plan has helped to establish communication between the PIIC, project stakeholders and individuals who are interested in the project. Elements of the public involvement plan include coordination and contact meetings, newsletters, a web-site hosted by the PIIC, public update meetings, public hearing and the public comment period on the Environmental Assessment.

### **b. Coordination Meetings and Contacts**

Several public meetings were held and newsletters sent out between July 2005 and December 2005. The following is a list of key public meetings:

- ♦ Issues and Goals Meeting – August 16, 2005
- ♦ Alternative Concepts Presentation – September 13, 2005
- ♦ Refined Alternatives Presentation – October 11, 2005
- ♦ Public Hearing on Environmental Assessment – December 8, 2005 (proposed)

In addition to agency contacts noted previously in this document (Mn/DOT OES, Mn/DOT CRU, MnDNR, USFWS), the following agencies/functional groups were contacted regarding the proposed project:

- ♦ City of Red Wing
- ♦ Mn/DOT State Aid for Local Transportation
- ♦ Mn/DOT District 6 State Aid
- ♦ Bureau of Indian Affairs
- ♦ Federal Highway Administration
- ♦ The office of US Congressman John Kline

### **c. Public Comment Period and Public Hearing**

Comments from the public and agencies affected by this project are requested during the public comment period described on the transmittal letter distributing this Environmental Assessment. A combined public informational meeting/public hearing will be held after this Environmental Assessment has been distributed to the public and to the required and interested federal, Native American Tribes, state and local agencies for their review.

At the informational meeting/public hearing, preliminary design layouts for the proposed alternative along with other project documentation will be available for public review. The



public will also be given the opportunity to express their comments, ideas and concerns about the proposed project. These comments will be received at the hearing and during the remainder of the comment period, and will become a part of the official hearing record.

**d. Report Distribution**

Copies of this document have been sent to agencies, local government units, libraries and others as per Minnesota Rule 4410.1500 (Publication and Distribution of an EAW).

**Federal Agencies**

U.S. Army Corps of Engineers  
U.S. Environmental Protection Agency  
U.S. Fish and Wildlife Service  
Federal Highway Administration  
Bureau of Indian Affairs

**Minnesota Agencies**

Department of Agriculture  
Department of Commerce  
Environmental Quality Board  
Department of Health  
State Historic Preservation Office  
Department of Natural Resources  
Pollution Control Agency  
Department of Transportation  
Board of Water and Soil Resources

**Local Agencies**

Goodhue County Highway Department  
Goodhue County Commissioners Office  
City of Red Wing  
Prairie Island Indian Community

**Libraries**

Legislative Reference Library (St. Paul)  
Technology and Science Library (Minneapolis)  
Red Wing Public Library





**e. Process Beyond the Hearing**

Following the comment period, PIIC and the FHWA will make a determination as to the adequacy of the environmental documentation. If further documentation is necessary it could be accomplished by preparing an Environmental Impact Statement (EIS), by revising the Environmental Assessment, or clarification in the Findings of Fact and Conclusion, whichever is appropriate.

When the environmental documentation is determined adequate, the PIIC will choose a project alternative, either the No-Build or the Buffalo Alternative.

If, as currently anticipated, an EIS is not necessary, PIIC will prepare a "Negative Declaration" on the need for an EIS in accordance with state environmental review requirements. PIIC will also prepare a request for a "Finding of No Significant Impacts" (FONSI) that will be submitted to the FHWA. If the FHWA agrees that this finding is appropriate, it will issue a FONSI.

Notices of the federal and state decisions and availability of the above documents will be placed in the Federal Register and the Minnesota Environmental Quality Board (MEQB) Monitor. PIIC will also distribute the Negative Declaration and FONSI to the EQB distribution list and as necessary publish notices in local newspapers announcing the environmental and project alternative decisions that were made.



## VII. GEOMETRIC DESIGN STANDARDS AND EXCEPTIONS

The project will be designed and constructed in accordance with state standards for municipal urban state aid highways (Minnesota Rules Chapter 8820.9936 – Geometric Design Standards, Urban; New or Reconstruction Projects). Bridge design will be completed in accordance with AASHTO Load Resistance Factor Design (LRFD) Bridge specifications, and current Mn/DOT policies. No exceptions or variances are anticipated at this time. Details of the proposed roadway design elements are as noted in the table below:

### *Major Roadway Design Elements*

#### *Proposed Sturgeon Lake Road Overpass*

Major Design Elements	Description
Design Traffic Volume (2025)	17,500
Heavy Commercial %	8%
Surface Type	Bituminous
Structural Capacity	10 Tons
Traffic Lane Width	12 ft
Parking Lanes	None
Concrete Curb and Gutter	B624
Curb Reaction	2 feet
Recovery Area	2 feet behind curb
Inslope Ratio	1:3 Typical
Posted Speed	35 mph
Design Speed	40 mph
Proposed Right of Way Width	Variable
Project Length	0.7 miles
Bridge-specific Design Elements	
Bridge Length	113'-0" (1 span over up to four tracks)
Cross Section	4-12' lanes, 2-10' sidewalks
Vertical Clearance	23' 0" (minimum)
Out-to-Out Deck Width	103'-0"
Bridge Type	Steel Plate Girder
Design Live Load	HL-93
Substructure Type	Parapet Abutments
Anticipated Foundations	12" Dia. C.I.P. Piling

