



Environmental Assessment Worksheet (EAW)

For

Southwest Reconnection Project
Highway 61/101 Flood Mitigation

Cities of Chanhassen, and Shakopee
Carver, and Scott Counties, Minnesota

May 2013



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ENVIRONMENTAL ASSESSMENT WORKSHEET

Note to writers: This form is available at www.mnplan.state.mn.us. *EAW Guidelines* will be available in spring 1999 at the web site. 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: SOUTHWEST RECONNECTION PROJECT: HIGHWAY 61/101 FLOOD MITIGATION

2. Proposer:	Carver County	3. RGU:	Carver County
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4-REASON FOR EAW PREPARATION (CHECK ONE)

EIS Scoping	Mandatory EAW <input checked="" type="checkbox"/>	Citizen petition	RGU discretion	Proposer-volunteered
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If EAW or EIS is mandatory, give EQB rule category, subpart number 22 (Highway projects), Item B: For construction of additional travel lanes on an existing road for a length of one or more miles.

5 - PROJECT LOCATION

County	City	Township:	Range:	Sections:
Carver County	City of Chanhassen	T116N	R23W	35 and 36
Scott County	City of Shakopee	T115N	R23W	1

- Figure 1, located in Appendix A, depicts the project location.

The following figures are located in Appendix A of the EAW:

- U.S. Geological Survey – Location Map (Figure 1)
- Preliminary Layout/Site plan showing all significant project and natural features (Figures 2 and 3)
- Roadway and Bridge Typical Sections (Figure 4)
- 2010 Met Council Land Use (Figure 5)
- Flood Insurance Rate Map – Chanhassen (Figure 6)
- Flood Insurance Rate Map – Shakopee (Figure 7)
- Project area Steep Slopes (Figure 8)

6 - DESCRIPTION

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

The proposed Southwest Reconnection Project, located in the cities of Chanhassen and Shakopee Minnesota, will construct a new 4,226-foot long four-lane bridge over the Minnesota River floodplain area and will include roadway safety and capacity improvements to Carver County State Aid Highway 61 (also known as Flying Cloud Drive) from approximately 475 feet west of Bluff Creek Drive to approximately 350 feet east of the Highway 61/101 “Wye” intersection. The total length of improvements along Highway 101 and Flying Cloud Drive is approximately 4,860 feet and 3,660-feet, respectively.

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

The proposed project located in the cities of Chanhassen and Shakopee Minnesota (see Figure 1 in Appendix A) includes the following features, which are illustrated on the preliminary layout (see Figures 2 and 3).

The new bridge across the Minnesota River floodplain area, particularly over Public Waters 10-221W and 27-132P (Rice Lake), is proposed to be constructed immediately southwest of the existing roadway. The bridge will be approximately 4,226-feet long and 78.5-feet wide. The new four-lane bridge will accommodate two 12-foot driving lanes in each direction with 8-foot outside shoulders. A separated 10-foot trail along the southwest side of the bridge structure will accommodate pedestrian/bicyclists crossing the floodplain. A bridge typical section is shown in Figure 4, in Appendix A. The new bridge will elevate the roadway approximately 3 feet to 22 feet above the existing roadway, which will raise the roadway above of the 100-year flood elevation and consequently minimize road closures from flooding without increasing the 100-year flood elevation.

Construction of the new bridge will allow for the removal of the existing causeway (fill material) from the Minnesota River 100-year floodplain area. The causeway will be removed to the elevation of approximately 700 feet above mean sea level(1929 NGVD), approximately 11-14 feet below the elevation of the existing roadway surface. This will reduce the frequency and duration of roadway closures and restore natural flows to the river under high water/flood conditions. Upon removal, some of the old Highway 101 roadway material may be placed on a commercial property (Golf Zone driving range) located along CSAH 61. Additional floodplain modeling will need to be conducted if this were to

occur to ensure no change in water surface elevation, velocity profiles, and changes in velocities for flood events.

Roadway capacity and intersection safety improvements are proposed along Carver CSAH 61 (Flying Cloud Drive). The CSAH 61/Flying Cloud Drive roadway improvements include adding capacity (via a four-lane roadway section) between the Highway 101 “Wye” intersection on the east and Bluff Creek Road on the west. Two new roundabout intersections are proposed at the Highway 101 “Wye” and Bluff Creek Drive intersections. In addition, the CSAH 61/Flying Cloud Drive improvements include a traffic signal at the Highway 101 (American Boulevard)/Flying Cloud Drive intersection.

Bluff Creek currently passes under CSAH 61 (Flying Cloud Drive) and Highway 101 via twin-box culverts. The proposed project includes replacement of the twin-box culverts under CSAH 61 (Flying Cloud Drive) and removal of four culverts under Highway 101. The creek channel is proposed to be modified in order to shift the crossing under Highway 101 to a location near the northern end of the new bridge across the river floodplain, which eliminates the need to replace the existing box culverts. The creek will also pass under CSAH 61 (Flying Cloud Drive) via a new bridge structure that has been sized to accommodate the creek channel as well as the new trail corridor.

The project also features pedestrian/bicycle trail improvements including a 10-foot off-road trail located on the southwest side of the proposed river/floodplain bridge. The trail corridor is proposed to cross under CSAH 61 (Flying Cloud Drive) in a shared bridge crossing with Bluff Creek. In addition, an 8-foot off-road trail will extend east along the north side of CSAH 61 (Flying Cloud Drive) to the eastern project termini, which will connect to a future trail corridor in Hennepin County. The proposed off-road trail will also extend west to Bluff Creek Drive where the trail will run along the shoulder of Bluff Creek Drive until it connects with the Minnesota River Valley LRT Trail, located approximately 0.25 miles north of CSAH 61 (Flying Cloud Drive).

Several drainage and water quality features are proposed within the project area to collect, convey, and/or treat surface water runoff. These features include drainage ditches, grass swales, infiltration ponds, and wet detention ponds. These features are being designed to meet local and state water quality standards.

CONSTRUCTION METHODS

The proposed project is anticipated to be constructed over two construction seasons (summer 2014 through fall 2015). Maintaining travel during construction is proposed to the extent practical. Temporary closures will be required for the various roadways in the study area as certain stages of the project improvements are being constructed. As part of the engineering/design and in advance of the main construction contract, a pile load test program is being proposed by MnDOT. This load test program will better define the pile depth and assist in determining the geotechnical conditions at the bridge site prior to construction. The goal of the load test program is to reduce the length of piling at each pier, which can result in a substantial cost savings. This work is proposed to be completed in late Summer/Fall 2013. The work will include pile driving at 3 test sites, with each test site area approximately 50'X50' in size.

A preliminary construction staging plan has been developed that allows traffic across the Minnesota River floodplain area throughout the duration of construction. Traffic would continue to use the existing roadway while the new four-lane bridge is constructed immediately west of the existing roadway. The causeway (existing land bridge) will be removed to the elevation of approximately 700 feet above mean sea level, which is approximately 11-14 feet below the elevation of the existing road surface.

The proposed bridge is 78.5 feet wide and approximately 4,226-feet in length and includes 40 piers. Typical construction of a bridge of this type includes driving pile and placing concrete formed pier caps. The majority of the proposed bridge piers will be spaced every 105 feet. It is anticipated that pile driving and pier placement construction would begin during summer of 2014.

The proposed improvements along Carver County Road 61/Flying Cloud Drive and the Highway 1010 Bridge will be staged in order to maintain traffic during construction to the greatest extent possible. Due to poor/muck soils found under the existing road, the reconstruction of County Road 61 will require the removal of these poor soils and replacement with a select granular sub-base material. The depth of excavation for purposes of correcting the soil material ranges from only a few feet to over twenty feet.

The anticipated construction technique for the bridge across the floodplain area will consist of placing prefabricated beams on already constructed piers and abutments. Once the beams are placed, then the remaining operations of forming and pouring the bridge deck curb and gutter, and barriers can be completed.

The portion of the project that consists of constructing new roadway will consist of placing and compacting material for new roadway and embankments. It is anticipated that the material excavated on the project will be re-used for overlay, aggregate or embankment purposes where appropriate and in accordance with best management practices established in MnDOT's Standard Specifications for Construction.

Best management practices (BMPs) will be used to control construction-related sedimentation, and turf areas will be re-established (see EAW Item 16 – Erosion and sedimentation on page 27 for more information).

Trees and vegetation will be removed as part of the project. Tree and vegetation removal are discussed in EAW Item 11 – Fish, wildlife and ecologically sensitive resources, beginning on page 17.

REGULATED WASTE

An asbestos and regulated waste assessment has been completed for the existing bridges in the project area. The following is a list of the regulated materials found in the project area:

Asbestos –deck & guardrail caulking, waterproofing, and three utility conduits found on Bridge No. 10007 are assumed to contain asbestos. Since there is asbestos-containing materials assumed to be present, a licensed asbestos abatement contractor will remove the material prior to demolition of the bridge.

Treated Wood – treated wood guardrail posts are found within the project area. These posts will be disposed of in an MPCA-permitted sanitary or industrial landfill.

Lead Paint – lead paint is present on the pilings of Bridge No. 10007. All lead paint must be encapsulated prior to demolition.

Lead – lead shims are present under the spans of bridge No. 10007. Prior to demolition of the bridge, the lead shims will be separated out and sent to a lead scrap recycling.

All regulated waste materials will be abated prior to demolition activities. All demolition activities will be in compliance with state and federal regulations, including a “Notification of Intent to Perform a Demolition” will be submitted to the Minnesota Pollution Control Agency.

PROJECT SCHEDULE

The proposed project is scheduled for a May 2014 letting. Construction will begin in the summer of 2014 and will be completed by fall 2015.

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.

PURPOSE AND NEED FOR PROJECT

This section of the EAW is divided into three subsections: Project Background, Project Needs and Project Purpose. The Project Background section summarizes the role/function of Highway 101 and Carver CSAH 61 (Flying Cloud Drive) in the regional transportation system. It also describes previous analysis on the Minnesota River crossing that has been completed. The Project Need section discusses transportation problems identified within the project area. The Project Purpose section lists objectives addressing the project’s needs that are to be met by the Preferred Alternative.

PROJECT BACKGROUND

Regional and Local Traffic Link

The Highway 101 Minnesota River crossing serves as an important component of the state and regional transportation system by providing an essential traffic link across the river for three counties; Carver, Hennepin and Scott Counties, as well as the surrounding cities, refer to Figure 1. The closest river crossings to the Highway 101 river crossing is US Highway 169, located approximately 6.8 miles to the east, and Trunk Highway (TH) 41, located approximately 3.5 miles to the southwest. Due to the distance between river crossings and high traffic volumes on US Highway 169 and TH 41 the Highway 101 river crossing is crucial to balancing the travel demand needs across the Minnesota River.

The Highway 101 and TH 41 Minnesota River crossings are both located below the 100-year flood elevation of the river. MnDOT’s policy for closing a roadway during seasonal flooding is when water encroaches within two feet of the roadway’s elevation. Typically when there is flooding in the Minnesota River Valley both Highway 101 and TH 41 are forced to close. The remaining open river crossings are US Highway 169 and TH 25, located nearly 25 miles apart. During these seasonal flood events, the detoured traffic adds a tremendous strain on the area’s regional transportation system when Highway 101 and TH 41 river crossings are closed.

Minnesota River Flood Mitigation Study

Three major flooding events between the spring of 2010 and the spring of 2011 closed both the Highway 101 and Highway 41 river crossings for several weeks, which prompted MnDOT to complete the Minnesota River Flood Mitigation Study in September 2011. The study developed a preferred alternative concept for both crossings. The Highway 101 concept planned to raise the roadway above the 100-year floodplain without causing an increase in the 100-year flood elevation.

- **Cost of Road Closures from Flooding**

The Minnesota River Flood Mitigation Study calculated the daily combined cost of both highway closures by applying the value of additional time and miles traveled using the Metropolitan Council’s 2030

Regional Travel Demand Model. The resulting cost was \$670,000 per day in the year 2009, and is forecasted to be \$1,670,000 per day in year 2030. Using the study results, MnDOT was successful in securing Flood Mitigation funding for the Highway 101 crossing of the Minnesota River floodplain area.

Sensitive Adjacent Land

Sensitive areas adjacent to the project area include the U.S. Fish and Wildlife Service (FWS) Minnesota Valley National Wildlife Refuge, the Minnesota Department of Natural Resources (MNDNR) Raguet Wildlife Management Area, and the Seminary Fen Scientific and Natural Area (SNA). During development of the Minnesota River Flood Mitigation Study and the highway improvement project development process, the US Fish FWS, MNDNR and Lower Minnesota River Watershed District (LMRWD) were active partners in development of alternatives and identification of natural resource issues.

PROJECT NEEDS

Highway 101 and CSAH 61 have safety and operational needs associated with the roadways having to close during periods of flooding, whereby requiring traffic to find alternative routes to cross the Minnesota River. There are also short- and long-term capacity deficiencies with the growing travel demand along these corridors. Both Highway 101 and CSAH 61 are currently experiencing peak hour traffic delays as the traffic volumes are approaching or exceeding the capacities of these two-lane roadways. It should be noted that the main river channel crossing (bridge # 70002) was recently constructed in 1992. This bridge is located on the Shakopee side of the river and was raised above the 100-year flood elevation. This portion of the river crossing is not part of the proposed project area.

Highway Structure Needs

- **Existing Highway Elevation**

Highway 101 through the project area is currently a roadway on land with one bridge (Bridge #10007) that carries intermittent flow. The remaining portions of Highway 101 across the Minnesota River floodplain area are located on land. The low member¹ elevation of Bridge #10007 is approximately 710.8 feet at the north end of the bridge. The roadway elevation varies as it crosses the floodplain area, however the low elevation of the road does not go below 711.4 feet.

- **Highway Flooding Closures**

Highway 101 currently closes when flood waters reach an elevation of approximately two feet below the low road elevation at the crossing, which requires closure at 709.4 feet. Table 1 below shows the surface elevations for the 10-year, 50-year, 100-year and 500-year flood events. As shown in the table, even a 10-year flood event can require closure of Highway 101. Exhibit 1 on the following page was taken from the *Minnesota River Flood Mitigation Study*. The exhibit illustrates Minnesota River flood events and the corresponding water elevations in relation to the current closure elevation set by MnDOT.

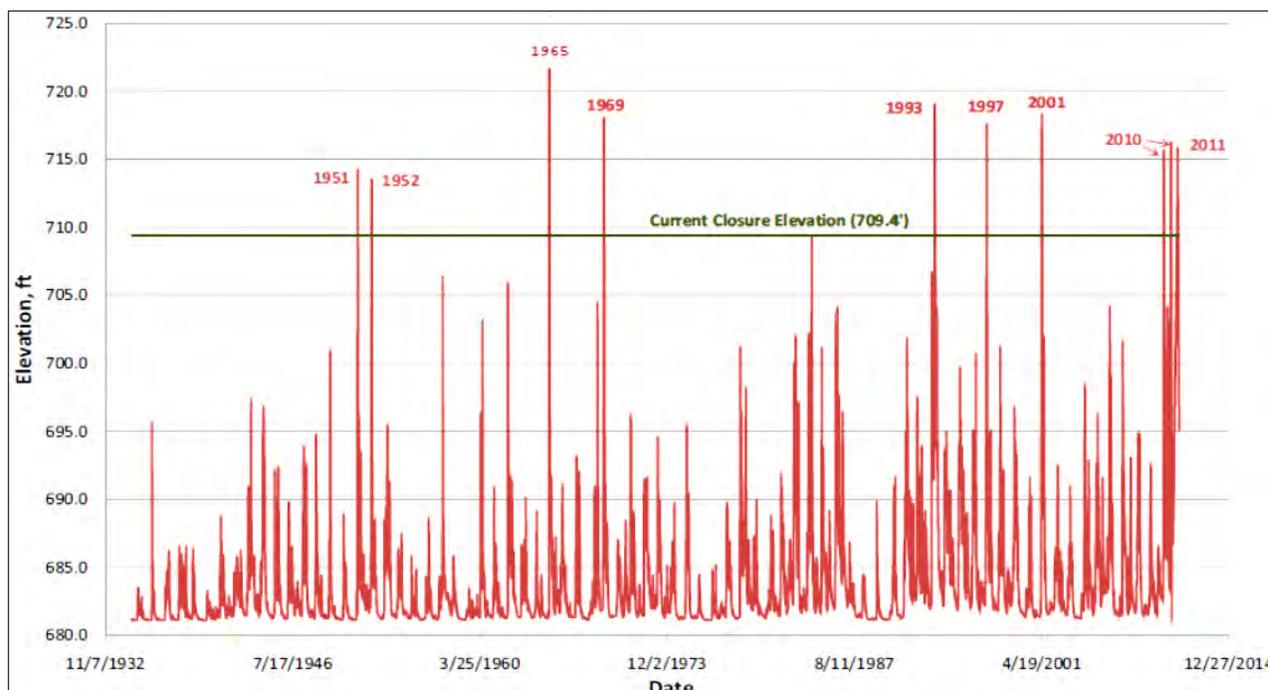
Table 1: Existing TH 101 Flood Elevations

Hydraulic Event	Water Surface Elevation (ft, NGVD 29)
10-Year Flood	712.0
50-Year Flood	718.4
100-Year Flood	720.7
500-Year Flood	726.0

¹ The low member element of a bridge are the girders located under the bridge deck.

Source: HEC-RAS Modeling. SEH, Inc.

Exhibit 1: TH 101 Crossing Historical River Elevations



• **User and Highway Impacts During Closures**

The duration of Highway 101 closures from flooding is provided below in Table 2. The most recent flooding event in which the highway was closed 43 days had a substantial cost to users. It has been estimated that a Highway 101 closure has a cost of approximately \$233,000 per day in 2009 costs, and will have a cost of \$930,000 per day in 2030 costs².

Table 2: Days Highway 101 Crossing Was Closed During Flood Events (1965-2011)

Flooding Event	*Highway 101 Days Closed
Spring 2011	43
Fall 2010	16
Spring 2010	27
Spring 2001	29
Spring 1997	18
Summer 1993	27
Spring 1969	17
Spring 1965	15

* Table Note: Data extracted from the 2010 Minnesota River Flood Mitigation Study. The study noted data from the following: Data for 2010 and 2011 was provided by MnDOT. Data for 1993, 1997 and 2001 were obtained from the *Trunk Highway 41 Draft Environmental Impact Statement*, Data for 1965-1969 were estimates from historic hydrograph plots and assuming the road is closed for three days beyond the date when the water level dropped below the closure elevation to conduct maintenance and restoration work.

² The 2010 Minnesota River Flood Study determined the cost by using the Metropolitan Council’s 2030 Regional model with the value of addition time and miles traveled when Highway 101 is closed.

The Trunk Highway 41 crossing in Chaska is often forced to close during high flood water events and because Highway 101 is at a lower elevation it is also closed when TH 41 is closed due to river flooding. The combined closures of these two river crossings place a tremendous strain on the remaining open highways.

The 2010 Average Annual Daily Traffic (AADT) along the Highway 101 crossing and Trunk Highway 41 crossing was approximately 19,000 and 17,000 respectively. When these highways are both closed other roadways are used as detours. The two closest crossings to these highways are US Highway 169 to the north and TH 25 to the south.

Mobility

Existing and forecast traffic volumes were reviewed and developed for the section of Highway 101 and Carver CSAH 61 in the project area. The existing traffic (2012) and forecast volumes were based largely on the use of the most recent Carver County Travel Demand Model (County Model, updated in 2011). The County Model was developed based on the Twin Cities Travel Demand Model (TCTD Model) by adding more detailed roadway network and Traffic Analysis Zones (TAZ) in the Carver County area. The TCTD Model utilizes the traditional four-step modeling process which includes trip generation, trip distribution, mode choice, and trip assignment. The County Model basically follows those steps except that it inserts a module to split trip tables for the subdivided TAZs in the Carver County area prior to the assignment step. Table 3 below presents the existing (2012), short-range forecast (2014), and long-range forecast (2030) traffic volumes.

Table 3: Existing and Forecast Average Annual Daily Traffic (AADT) Volumes

Location	Existing Daily Traffic	2014 Forecasts			2034 Forecasts		
	2012	No-Build	Hwy 101 Bridge 4-lane ⁽¹⁾	Hwy 101 4-lane ⁽²⁾	No-Build	Hwy101 Bridge 4-lane ⁽¹⁾	Hwy 101 4-lane ⁽²⁾
Hwy 101 Bridge ⁽³⁾	18,500	19,400	20,400	20,500	28,800	38,400	39,800
Flying Cloud Dr East of Hwy 101 ⁽⁴⁾	10,100	10,700	10,900	10,800	16,300	18,500	17,600
Hwy 101 North of Flying Cloud Dr	5,000	5,400	5,500	5,900	9,700	10,900	15,000
Flying Cloud Dr West of Hwy 101	10,500	11,300	11,600	11,600	19,800	22,100	22,500
Bluff Creek Dr	2,900	3,100	3,200	3,200	5,600	6,500	5,800
Flying Cloud Dr West of Bluff Creek	8,200	9,000	9,200	9,200	17,000	18,700	19,500

Table Notes:

¹ Includes existing street network with a four-lane Hwy 101 River Bridge.

² Includes a four-lane Hwy 101 River Bridge and continuing four-lanes along TH 101 north of CSAH 61 (Flying Cloud Drive).

³ Base daily forecast is 27,000 for year 2030 in the US 169/CR 69 Study based on the updated Scott County 2030 Model (Mar, 2010)

⁴ Base daily forecast is 14,700 for year 2035 in the CSAH 61 study by Hennepin County (Feb 2012)

Traffic operations data indicates that two-lane roadways begin to experience noticeable problems once they exceed 10,500 – 12,000 vehicles per day. As shown in Table 3, existing daily trips on Highway 101

across the Minnesota River floodplain area as well as along Carver CSAH 61 (Flying Cloud Drive), within the project area, are approaching and/or exceeding the capacity threshold of a two-lane roadway. Furthermore, forecast traffic volumes indicate that operations are likely to decline under a No-Build condition because the two-lane roadway capacity will remain unchanged, while traffic volumes are forecast to increase.

PROJECT PURPOSE

The purpose of the project is to ensure Highway 101 and CSAH 61 remain open to traffic during 100-year flood events, while also ensuring the transportation improvements do not cause an increase in the 100-year floodplain elevation. The project purpose also includes improving safety and mobility throughout the project area by adding capacity to both Highway 101 and CSAH 61 (Flying Cloud Drive) and improving the intersections in the study area.

PROJECT BENEFICIARIES

The beneficiaries of this project are motorists, using these vital transportation corridors and the area communities (Shakopee, Chanhassen, etc.). The post-construction condition will allow CSAH 61 and Highway 101 to remain open to traffic during 100-year or greater flood events, which benefits the motorists travel time, distance, and cost. There are also economic benefits to the surrounding communities that will be realized as a result of the roadway(s) remaining open during 100-year flood events. Furthermore, benefits to motorists that typically use Highway 169 to cross the Minnesota River will benefit from lower level of congestion as traffic will not need to be rerouted from Highway 101.

The construction of a new river bridge crossing and removal of the fill material associated with the existing roadbed through the Minnesota River floodplain will allow natural river flows to occur whereby reestablishing natural river dynamics.

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.

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.

While not considered future stages of development, there are several other transportation improvements planned for the surrounding area. These include the following:

- TH 101 from Pioneer Trail to Lyman Boulevard – four-lane expansion project planned for 2013 construction (City of Chanhassen, MNDOT)
- CSAH 61/Flying Cloud Drive from Highway 101 to Charlson Road– three-lane expansion project planned for 2015 (Hennepin County)
- CSAH 61/Flying Cloud Drive from Bluff Creek Drive to Engler Boulevard – improvements and schedule to be determined.
- Highway 101 from CSAH 61 to Pioneer Trail – improvements and schedule to be determined.

7-PROJECT MAGNITUDE DATA

Total Project Acreage	Approximately 41 Acres (total area within proposed construction limits)		
Number of Residential units: N/A	Unattached : N/A	Attached: N/A	
Commercial, industrial or institutional building area (gross floor space): Total Square Feet = N/A			
Office	N/A	Manufacturing	N/A
Retail	N/A	Other industrial	N/A
Warehouse	N/A	Institutional	N/A
Light industrial	N/A	Agricultural	N/A
Other commercial (specify)	N/A		
Building height. If over two stories, compare to heights of nearby buildings	N/A		

The length of the project is a distance of approximately 0.92 miles (4,860 feet) along Highway 101. The improvements also include 0.69 miles (3,660 feet) along CSAH 61/Flying Cloud Drive, approximately 275 feet along the north leg of Highway 101, and approximately 135 feet on Bluff Creek Drive.

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.

Table 4: Project Permits and Approvals

Unit of government	Type of application	Status
Federal		
U.S. Army Corps of Engineers	Section 404 Permit	To be applied for
	Section 10	To be applied for
U.S. Fish & Wildlife Service	Special Use Permit – Bluff Creek Realignment	To be applied for
State		
Minnesota Pollution Control Agency	National Pollutant Discharge Elimination System (NPDES) Construction Stormwater Permit	To be applied for
	401 Water Quality Certification	To be applied for
Department of Natural Resources	Public Waters Work Permit	To be applied for
	Water Appropriations Permit - Dewatering	To be applied for
	Utilities Crossing Permit (River)	To be applied for
	Land Transfer	Pending
Local		
Carver County	EAW Approval	Complete
	EIS Need Decision	Pending
City of Chanhassen	Wetland Conservation Act (WCA)	Pending
City of Shakopee	Wetland Conservation Act (WCA)	Pending
Lower Minnesota River Watershed District	Preliminary Layout/Water Quality Treatment Review	Pending

Project Cost and Funding

ESTIMATED TOTAL PROJECT COST - \$60,300,000 (includes construction, right-of-way, and engineering)

PROJECT FUNDING

MnDOT Flood Mitigation Program:	\$20,000,000
Local Road Improvement Program (LRIP):	\$9,000,000
MnDOT Construction Engineering	\$8,200,000
County Turnback Funds:	\$12,400,000
Carver County:	\$7,500,000
Scott County:	\$2,300,000
<u>City of Chanhassen:</u>	<u>\$900,000</u>
TOTAL	\$60,300,000

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.

LAND USE AND DEVELOPMENT

The project area is located in the cities of Chanhassen (Caver County) and Shakopee (Scott County). The current land use adjacent to the project is a mix of open space (U.S. Fish and Wildlife Service Minnesota River Valley National Wildlife Refuge and the Minnesota Department of Natural Resources Raguet Wildlife Management Area, low density residential, light industrial and commercial developments. Figure 5 depicts the 2010 Metropolitan Council inventory of existing land uses in the project area.

The proposed project is not anticipated to result in permanent land use changes other than converting existing open space to a transportation use (construction of new roadway sections) and vice versa (removal of existing roadway from the floodplain area).

POTENTIAL ENVIRONMENTAL HAZARDS

Affected Environment

The presence of potentially contaminated properties (defined as properties where soil and/or groundwater is impacted with pollutants, contaminants or hazardous wastes above regulated limits) is a concern in the development of highway projects because of potential liabilities associated with ownership of such properties, potential cleanup costs, and safety concerns associated with construction personnel encountering unsuspected wastes or contaminated soil and/or groundwater.

A Phase I Environmental Site Assessment (Phase I ESA) provides information on potentially contaminated properties. These properties are identified through review of historic land use records and air photos, Federal EPA (Environmental Protection Agency), State MPCA (Minnesota Pollution Control Agency) and county/city records, as well as the current property condition. Sites of potential concern identified by the Phase I are categorized into three areas: high, medium, and low environmental risk. In general, high environmental risk sites are properties that have a documented release of chemicals or other strong evidence of contamination such as soil staining or storage of large volumes of petroleum or other chemicals. Medium environmental risk sites may include properties where relatively smaller volumes of petroleum, chemicals, or hazardous materials are stored, but there

is no evidence of spills or releases, or properties with documented releases that have been “closed” (no further cleanup action deemed necessary) by the MPCA. A “closed” site is considered a medium risk because residual soil or groundwater contamination may still remain. Low environmental risk sites include properties where small volumes of chemicals or hazardous materials have been used or stored and are considered not of concern to the project.

Environmental Consequences

Phase I ESA investigations were performed on properties lying adjacent to Highway 101 and CSAH 61 (Flying Cloud Drive) to provide information on potentially contaminated properties within the project impact area. Copies of the Phase I report have been placed on file at the Carver County Public Works Department and the MnDOT Metro Division office.

Contaminated materials encountered during highway construction projects must be properly handled and treated in accordance with State and Federal regulations. Improper handling of contaminated materials can exacerbate their impact on the environment. Contaminated materials also cause adverse impacts to highway projects by increasing construction costs and causing construction delays, which also can increase project costs.

Over thirty sites were identified in the project area: two (2) sites were classified as having a high risk for contamination, two (2) with a medium risk, and the remaining are considered low risk sites for contamination. Table 5 lists the potential high and medium risk sites and Figures 2 and 3, located in Appendix A, depicts the location of these same sites that could be impacted by the project. The table and figure identify the sites of concern and are color coded in accordance with individual risk profiles (red=high; yellow=medium).

Table 5: Potentially Contaminated High and Medium Risk Sites

Site ID	Site Name	Risk Classification	Environmental Concerns
1	Parking Lot	High	Dumping of tires, aluminum pipe, and trash.
2	Common Cents Auto Sales	Medium	Former fuel station; LUST, UST and RCRA/NLR site.
3	Air Compressors Plus/Full Spectrum Motors	Medium	Vehicle maintenance conducted on-site.
4	Shakopee Pay Dump	High	Inactive unpermitted former dump site. Existed prior to 1967, and may be a farm or municipal disposal site that accepted household waste and was never issued a valid permit by the MPCA. The dump is also listed on the CERCLIS and NFRAP databases as a non-site specific Superfund site (not on the NPL) that was investigated for potential environmental risk. Discovered on 7/9/1986 and after a preliminary assessment on 6/24/1987, the site was archived and No Further Remedial Action is planned.

Notes: Underground Storage Tank (UST), Leaking UST (LUST), Resource Conservation and Recovery Act Hazardous Waste Generator (RCRA/NLR), No Longer Regulated (NLR) sites, Comprehensive Environmental Response Compensation and Liability Information system (CERCLIS), No Further Remedial Action Planned (NFRAP), National Priority List (NPL).

Potentially contaminated properties identified in the Phase I that are to be potentially impacted by the project will be drilled and sampled if necessary to determine the extent and magnitude of contaminated soil or groundwater in the areas of concern. A Phase II drilling investigation has been initiated by MnDOT and the results will be used to determine if the contaminated materials can be avoided, or the project's impacts to the properties minimized. If necessary, a plan will be developed for properly handling and treating contaminated soil and/or groundwater during construction.

Carver County will work with the MPCA, as appropriate, to obtain assurances that the county's contaminated site cleanup work, and/or contaminated site acquisition, will not associate it with long-term environmental liability for the contamination.

10 - COVER TYPES

Estimate the acreage of the site with each of the following cover types before and after development:

The Minnesota Land Cover Classification System (MLCCS) was used to establish the "Before" cover type information for the project area. A 500-ft buffer was placed around the centerline of the affected roadways and as a result the total acreage shown is greater than the Total Project Acreage shown in EAW Item 7 which included only the area within the preliminary construction limits.

The MLCCS cover type data was refined into the categories listed below. The "After" cover type information is based on preliminary construction impacts associated with the proposed transportation improvements. These estimates are subject to change due to design modification likely to occur during the final design phase of the project development process.

Cover Type	Before (Acres)	After (Acres)
Type 1-8 wetlands	162.4	167.5*
Wooded/forest	38.4	32.3
Brush/Grassland	34.0	23.1
Cropland	15.9	15.2
Lawn/landscaping (includes grassy right of way)	5.4	14.0
Impervious surfaces	53.3	57.3
Other (sand/gravel pit)	12.2	12.2
TOTAL	321.6	321.6

*the added wetland acreage is associated with the removal of the existing causeway that carries Highway 101 across the Minnesota River floodplain. At the conclusion of construction, the causeway (roadbed and sub-grade) will be removed and this approximately 11 acre area will be allowed to naturally be restored back to wetland habitat.

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.

Existing Habitat

The large portion of the project area lies adjacent to wildlife management areas; US Fish and Wildlife Service (FWS) MN Valley National Wildlife Refuge and the DNR Raquet Wildlife Management Area (WMA). The portion of the project area that crosses the Minnesota River floodplain as had no previous development except for the construction of Highway 101. The floodplain habitat found adjacent to the highway corridor primarily consists of forested wetlands and grasslands. Along Carver CSAH 61 (Flying Cloud Drive), there are scattered private parcels with recent land disturbances that can be characterized as more rural commercial and residential development

Habitat Impacts

Construction of the proposed project will be staged such that the project will not occupy either temporarily (during construction) or permanently within the US FWS Minnesota River Valley National Wildlife Refuge property. Since the eastern boundary of the designated Raquet WMA abuts the existing Highway 101 causeway across the Minnesota River floodplain area, a narrow strip of the WMA will be affected by the construction of the new bridge. Furthermore, a small permanent right-of-way will be needed from the MNDNR on a parcel of property owned by the MNDNR near the north end of the proposed bridge. A land transfer between the MndNR and MndOT has been previously discussed and since Highway 101 will be turned back to Carver and Scott Counties a local jurisdictional transfer of the roadway and right-of-way is planned to occur.

The project will remove the fill from the exiting highway and replace it with a pile supported land bridge. This will allow higher water levels to flow under the new bridge thus providing a benefit to wildlife passage and the surrounding wetlands. It is estimated that 11 acres of wetlands will be created with the project, refer to EAW Item 12 for additional details on wetlands.

The project will involve removal of existing soils and vegetation within the construction limits of the proposed project. An estimated 125,000 cubic yards of old roadbed material across the floodplain area is expected to be removed, whereby benefitting the surrounding wildlife habitat. To the extent practicable, storm water runoff from the reconstructed sections of highway are proposed to be routed to water quality ponds located outside of the floodplain area. One ponding area located near the north end of the new Highway 101 Bridge will be constructed within the 100-year flood zone. This pond is proposed to not only collect storm water runoff from the northern portion of the bridge, but also serve as a containment structure in case a hazardous material spill were to occur on the bridge. This pond would provide temporary containment to avoid any direct release of hazardous materials to the surround natural environment. Access to all ponds will be provided for maintenance purposes.

Mitigation

During the final design process, vegetation protection measures will be applied to the construction plan. These vegetation protection measures will be based on MndOT Standard Specification for Construction 2572 (Protection and Restoration of Vegetation) and specific requests from the MNDNR. In order to protect vegetation that lies outside of the construction limits, special attention will be paid to 2572.3A, including but not limited to the use of temporary fence for tree protection. These areas should be

identified in the plan and Standard Detail Sheets that are available for these items included in the plan package.

Re-vegetation within the project area will try to control invasive species. The contractor will be required to control the eleven state listed noxious weeds. These can be found at: <http://www.mda.state.mn.us/news/publications/pestsplants/badplants/noxiousplantsminnesota.pdf>

Regarding wetlands, best management practices (BMPs) will minimize impacts to water quality during construction (see EAW Item 16 – Erosion and sedimentation on page 27 for more information).

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 water bird nesting colonies or regionally rare plant communities on or near the site? 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 Non-game Research program has been contacted, give the correspondence reference number: ERDB file (none received). Describe measures to minimize or avoid adverse impacts.

State-Listed Species

The Department of Natural Resources (DNR) was involved during development of the Minnesota River Flood Mitigation Study Report, and has had continued involvement with the refined project plan development of the Southwest Reconnection Project (Highway 101 Bridge and CSAH 61 improvements). Overall the DNR supports the project. Comments were received on October 12, 2012; refer to Appendix B for a copy of an e-mail correspondence received. The state-listed (endangered, threatened, or special concern) species items outlined in the MNDNR correspondence are included below:

“An attached map of the project area shows locations of MNDNR concerns such as Public Waters, designated aquatic invasive species, snowmobile Trails, and various polygons of rare features from the Natural Heritage Information System (NHIS) database.

The Minnesota NHIS has been queried to determine if any rare plant or animal species, native plant communities, or other significant natural features are known to occur within an approximate one-mile radius of the project area. Based on this query, rare features have been documented within the search area. The Minnesota River contains several types of rare species (fish and native mussel species). A restoration of the floodway should ultimately provide aspects for their benefit; precautions should be taken not to cause adverse impact during construction. With appropriate sediment control measures during construction, the MNDNR does not believe the project will negatively affect any known occurrences of rare features. The NHIS is not an exhaustive inventory and thus does not represent all of the occurrences of rare features within the state. If information becomes available indicating additional listed species or other rare features, further review may be necessary.”

A Scientific and Natural Area (SNA), is located a short distance southwest from the immediate Southwest Reconnection Project study area. The SNA includes a rare calcareous fen (known as the Seminary Fen) with threatened plant species. According to the MNDNR, the establishment of a SNA is intended to preserve and perpetuate the ecological diversity of Minnesota's natural heritage, including landforms, fossil remains, plant and animal communities, rare and endangered species, or other biotic features and geological formations, for scientific study and public edification as components of a healthy environment. Continued coordination with the

MNDNR and LMRWD will occur to ensure no impacts occur to the Seminary Fen as a result of the proposed improvements.

- **Measures to Minimize or Avoid Harm**

Impacts to any state-listed (endangered, threatened, or special concern) species or rare plant communities are not anticipated. Measures to minimize any potential temporary impact to the MNDNR WMA during construction will be applied through the best management practices (BMPs) to appropriately control sediment and minimize impacts to water quality during construction (see EAW Item 16 – Erosion and sedimentation for more information).

As noted above, vegetation protection measures will be applied based on MnDOT Standard Specification for Construction 2572 (Protection and Restoration of Vegetation). In order to protect vegetation that lies outside of the construction limits, special attention will be paid to 2572.3A, including but not limited to the use of temporary fence for tree protection.

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: N/A. Describe alternatives considered and proposed mitigation measures to minimize impacts.

WETLANDS

The project will cross the Minnesota River floodplain, and occurs within an area with numerous wetlands, and sensitive groundwater areas. In order to determine the extent of wetlands present, and potential wetland impacts that may occur, wetland delineations have been completed. For the portion along CSAH 61, a Level 2 wetland delineation was completed on September 5, 2012. Wetland adjacent to Highway 101 were delineated using a Level 1 methodology in January 2012. Level 2 delineations for wetlands along Highway 101 are scheduled to occur spring 2013. Field reviews of all wetland delineations are proposed for June 2013, and will also serve to provide pre-application discussion.

The wetland delineations followed the U.S. Army Corps of Engineers (USACE) guidance document Identifying Wetlands of the United States (1987), also known as the 1987 Corps Wetland Delineation Manual. The Midwest Regional Supplement was used to refine the wetland criteria. Level 2 Wetland Delineations were completed in accordance with *Local Road Authority Reference Guide to U.S. Army Corps of Engineers (Corps) Clean Water Act Section 404 and Rivers and Harbors Act Section 10 Permits*, (USACE 2012). The three parameters of soils, vegetation, and hydrology were confirmed for each delineated wetland and recorded on USACE Routine Onsite Determination (RODM) datasheets. The delineated wetland boundaries that occurred within the project limits were flagged and surveyed with a Trimble GeoXH Global Positioning System (GPS).

Each delineated wetland was typed and classified in accordance with the U.S. Fish and Wildlife Service (USFWS) publications, *Circular 39 Wetlands of the United States, Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et. al., USFWS/OBS 79/31) and Eggers, S.D. and Reed, D.M. 1997, *Wetland Plants and Plant Communities of Minnesota and Wisconsin*, U.S. Army Corps of Engineers.

Additional data gathered on each delineated wetland included the identification of any inlet and outlet features and hydrological connectivity indicators. Topographic setting, when possible, was also determined in accordance with the settings described in the Wetland Conservation Act (WCA). Important wetland functions and values were also recorded when observed. Land uses adjacent to and surrounding each delineated wetland were also described. Each delineated wetland and/or storm water pond was assigned a unique identification number.

Nine wetlands have been identified within the project area, and are shown on Figures 2 and 3, located in appendix A. Brief descriptions of the wetlands are included to provide an overview of the existing functions and values of the basins.

Wetlands 1 and 2 – Wet Meadow, PEMB

Wetlands 1 and 2 are located south of CSAH 61 and west of Highway 101 and a golf driving range business. These wetlands are very large, and connect to wetland and associated with the Minnesota River floodplain area. Within the project area, these wetlands are composed of wet meadow habitat, and have vegetation dominated by reed canary grass (*Phalaris arundinacea*), prairie cord grass (*Spartina pectinata*), and several forbs such as Joe pye weed (*Eutrochium purpureum*) and spotted jewelweed (*Impatiens capensis*). Narrow leaved cattails are also present, but tend to be within the immediate roadside drainage, at the existing culvert outlets, or in larger depressional areas within the wetland. Large areas of the wetland are also forested, and are floodplain forest, with a mixture of eastern cottonwood (*Populus deltoides*), Black willow (*Salix nigra*), green ash (*Fraxinus pennsylvanica*), and silver maple (*Acer saccharum*). The wetland slope to the south and away from the project area, but connect (via culverts) to the wetlands on the north side of CSAH 61.

Wetland 3 – Wet Meadow/Hardwood Swamp/Shallow Marsh –PEMC/PFO1B/PEMC

Wetland 3 is located on the west side of the project area, and is north of CSAH 61 and west of Bluff Creek Drive. Wetland 3 is a mixture of wetland communities, with large areas of hardwood swamp and mixed wet meadow habitats. Hardwood swamps are dominated by eastern cottonwood, green ash, and silver maple. Wet Meadow habitat is dominated by reed canary grass, with scattered cattails. Along CSAH 61 is a cattail ditch, and a channel that collects runoff from Wetland 3, and directs it to the west and into a culvert that discharges south to Wetland 2. Although similar in many respects to Wetland 1 and 2 Hydrology in Wetland 3 is dominated by seepage, and is not part of the Minnesota River floodplain. Wetland impacts to Wetland 3 will be to the Type 3 cattail ditch along CSAH 61.

Wetland 4 – Wet Meadow/Shrub Carr – PEMC/PSS1B

Wetland 4 is located on the north side of CSAH 61, and directly east of Bluff Creek. The wetland is composed primarily of cattail marsh along the southern portion of the wetland, but transitions to a mixture of willow shrubs with reed canary grass understory. Hydrology is supported by groundwater seepage and surface inputs, and discharges into Bluff Creek. Wetland impacts will occur to the shallow marsh habitats.

Wetland 5- Shallow Marsh - PEMB

Wetland 5 is a small wetland that collects groundwater seepage and directs it to the south into Wetland 6 through a culvert. The wetland is small, located under the tree canopy, and is situated within the existing bluff. Vegetation is composed of spotted jewelweed and rice cut grass (*Leersia oryzoides*). This entire wetland will be impacted as part of this project.

Wetland 6 – Wet Meadow/Hardwood Swamp/Shallow Marsh –PEMC/PFO1B/PEMC

Wetland 6 is part of the large Minnesota River floodplain wetland complex and Rice Lake and is located south of CSAH 61 and east of Highway 101. Functionally, Wetland 6 is the same as Wetland 1 and 2, and the floodplain crossing, but is being identified separately as the impact areas are geographically apart. The wetland is dominated by hardwood swamp, which transitions to areas of wet meadow, shallow marsh, and deep water habitat. Vegetation is similar to the other Minnesota River floodplain complexes, with large areas of hardwood swamp and floodplain forest, shrub carr, wet meadow, and shallow marsh habitat. Overall the area is diverse, but is dominated by common species such as eastern cottonwood, green ash, and silver maple trees, reed canary grass, willow shrubs, and cattails. Wetland 6 is also a MNDNR Public Water (27-132P). Impacts to Wetland 6 will occur to wet meadow habitat associated with the drainage channel that originates in Wetland 5.

Wetland 7 – Wet Meadow/Hardwood Swamp/Shallow Marsh –PEMC/PFO1B/PEMC

Wetland 7 is located within the existing “Y” of CSAH 61 and Highway 101, and is located between the park and ride and Bluff Creek. Wetland 7 includes a large area of cattail marsh on the northwest side, and area of hardwood swamp on the southeast side, and wet meadow and willow-dominated shrub carr habitat along Bluff Creek. Vegetation species are similar to those in the rest of the project area, including eastern cottonwood, green ash, and silver maple trees, reed canary grass, willow shrubs, and cattails. As part of the project, all of Wetland 7 will be impacted.

Minnesota River Floodplain Wetlands

The Highway 101 portion of the project will cross large areas of Minnesota River backwater, floodplain, Rice Lake, and other Unnamed wetland areas. This area is composed of a diverse assemblage of habitats and vegetation. Wetlands 1, 2, and 6 are part of this large wetland complex, but are in the fringe areas. The majority of Highway 101 crossing occurs adjacent to backwater areas composed of Type 4/5 wetlands.

Bluff Creek

Bluff Creek is located within the project area, and flows from north to south along the west side of Wetland 4, and the west side of Wetland 7. North of CSAH 61 Bluff Creek is composed of a defined channel, with gabion walls on the west bank. The northern channel is located through a heavily wooded area with a complete canopy. The channel bottom is composed of cobble and gravel. Bluff Creek passes through a two-barrel box culvert, of which the eastern barrel is buried with sand and is vegetated and is no longer used to convey flows outside of flood conditions. South of CSAH 61 the channel is more natural with riffles and pools and gentle meanders. Bluff Creek passes through additional culverts under the eastern lane of Highway 101 and into the Minnesota River floodplain. The culverts under CSAH 61 and under TH 101 will be removed and replaced with bridges. A new 36' x 101' bridge is proposed to be constructed along CSAH 61/Flying Cloud Drive to allow Bluff Creek and a new pedestrian trail to pass under the roadway. The creek channel is also proposed to be relocated as part of the proposed roundabout intersection design (see Figure 2 in Appendix A). Nearly 1,000 lineal feet of the creek, located between CSAH 61 and Highway 101 will be disturbed and realigned as part of the project. The future channel will be designed to meander to the extent practical and will pass under Highway 101 using the roadway bridge structure that will elevate the roadway above the Minnesota River 100-year flood elevation. The river banks of the realigned Bluff Creek will be graded to allow for natural vegetation.

Wetland Impacts:

The project will have unavoidable wetland impacts. Table 6 summarizes the anticipated impacts from the project for each wetland. Impacts are based off of the anticipated construction limits. The new

Highway 101 crossing will replace the existing land crossing with a bridge thus resulting in approximately 11 acres of floodplain area the ability to be restored back to natural wetland habitat.

The wetland type listed in Table 6 corresponds to what type will be impacted. Where multiple wetland types will be impacted, the total impact area is provided. Specific impacts by type will be determined during the permit process, and following approval of the wetland delineations.

Table 6: Wetland and Watercourse Impacts

Wetland ID	Cowardin	Circular 39	MNDNR PWI	Approximate Wetland Size (acres)	Wetland Impact (acres)
1	PEMB	Type 2	-	>100	0.86
2	PEMB	Type 2	-	>100	0.45
3	PEMC	Type 3	-	75	0.37
4	PEMC	Type 3	-	3	0.91
5	PEMC	Type 3	-	<1	0.07
6	PEMB	Type 2	27-132P	>100	0.12
7	PEMB / PEMC / PFO1B	Type 2, 3, 7	-	3.16	3.16
Bluff Creek	Riverine	N/A	Bluff Creek	N/A	N/A
TOTAL IMPACT					5.94
Rice Lake & Floodplain Area	PEMB / PUBH	Type 3, 5	27-132P 27-122W	>100	Approximately 11 acres added

Sequencing

Within the project purpose and need, design alternatives that would avoid and minimize impacts were considered. Minimizing wetland impacts for the project remains difficult due to the location of the wetlands adjacent to the roadways. Design measures such as changes to the roadway profile, steeper slopes and minimized clear zones have been implemented to help reduce the impact to the wetland.

Wetland impacts have been minimized primarily by keeping CSAH 61 as close to the existing alignment as possible. Preliminary plans included the relocation of CSAH 61 to the north, which would have added acres of impacts to Wetlands 3 and 4, which are currently minimized. Impacts to Wetland 7 are inevitable under any project alternative, as it is located within the proposed intersection of CSAH 61 and Highway 101, and is the location that the proposed new bridge would terminate. Alternatives that would reduce impacts to Wetland 7 would have significantly greater impacts to the Minnesota River floodplain wetlands.

Impacts to the Minnesota River floodplain wetlands have been minimized by replacing the existing land crossing with a bridge. This has reduced the amount of wetland fill by at least 10 acres.

Wetland Permitting and Mitigation:

The wetlands in the project area are regulated by the United States Army Corps of Engineers (USACE), the Minnesota Department of Natural Resources (MNDNR), and the Minnesota Wetland Conservation Act (WCA). Because wetland impacts exceed five acres, the Minnesota Pollution Control Agency (MPCA) will also have jurisdiction, and will provide 401 water quality certification, which is a component of the 404 permitting administered by the USACE.

Specific to the WCA, Carver County and MnDOT are the local government units (LGU) for any wetland impact within their perspective rights-of-way. The Highway 101 right-of-way is proposed to be

jurisdictionally transferred to Carver County prior to construction of the project. The City of Chanhasen administers the WCA for areas within the city limits. It is anticipated that Carver County will be the lead agency to coordinate the WCA for this project, with input from the other organizations. A wetland mitigation plan for replacement of impacted wetland areas will be developed consistent with the regulatory requirements in WCA. The intent of the mitigation plan will be to replace lost wetland functions in the project area where possible, however that does not appear to be feasible for this project.

Wetland impacts for this project will be mitigated by using wetland bank credits from a bank site as close to the project area as feasible. Replacement of lost wetlands will be in accordance with regulations and guidelines in place during the permitting stage of the project, and will occur prior to or concurrent with the impacts. Efforts will be made to replace all lost wetland functions and values with similar wetland types. It is anticipated that wetland replacement will be completed at a 2:1 ratio, which based on current estimates would require a total of 11.88 acres of wetland credits for this project.

The removal of the existing land crossing will also be considered for mitigation potential. The removal of the existing roadway will create approximately 11 acres of floodplain storage area and will be allowed to be restored to its natural wetland habitat, which it once was before being filled for the roadway crossing. If this removal cannot be used for wetland replacement it will serve for floodplain mitigation, and is a significant improvement to reconnect the Minnesota River floodplain.

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 ground or surface water (including de-watering)? X 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; source, duration, quantity and purpose of 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.

A review of wells listed in the Minnesota Department of Health (MDH) County Well Index (CWI) was conducted. Fourteen wells were identified in the study area; however, no wells are located within the existing or proposed right of way for the proposed roadway and bridge improvements. Eleven wells appear to be within approximately 750 feet of the roadway improvements proposed along CSAH 61 (Flying Cloud Drive) and Highway 101, but these water wells are located outside the project construction limits. If any unused or unsealed water wells are discovered in the project area during construction, they will be addressed in accordance with Minnesota Rules, Chapter 4725. A list of CWI wells located in close proximity to the project limits are listed in Table 7 below and shown on Figures 2 and 3.

Table 7: Nearby Wells

Well Number	Well Name	Approximate Well Depth (feet)
W1	C. Peterson	108
W2	B. Johnson	135
W3	Green Garden	N/A
W4	Brookside Motel & Camp	N/A
W5	J. Helstrom	308
W6	Rain, Snow, or Shine Golf	N/A
W7	J. Helstrom	85
W8	P. Blood	290
W9	M. Sorenson	260
W10	North Star Station	300
W11	Western Motel	N/A
W12	Shakopee 1	715

Preliminary soils investigations have determined that large areas of poor (muck) soils will need to be excavated and replaced with select granular material. Due to shallow groundwater levels throughout the project area, dewatering is anticipated during the removal of poor soils. A MNDNR Water Appropriations permit will be obtained prior to construction and any dewatering activities.

14 - WATER-RELATED LAND USE MANAGEMENT DISTRICT

Does any part of the project involve a shore land zoning district, a delineated 100-year flood plain, or a state or federally designated wild or scenic river land use district? X Yes No

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

Floodplain

Minnesota Statutes 103F.101 to 103F.155 requires agencies carrying out proposed projects, to provide leadership and action to reduce the risk of flood loss and minimize the impacts of floods on human safety. Supporting references for this floodplain assessment include the USGS Quadrangle Maps, aerial photographs, and Federal Emergency Management Agency (FEMA), Flood Insurance Rate Maps (FIRM) for the project area.

National Flood Insurance Program Flood Insurance Rate Maps for the City of Shakopee (Scott County) and city of Chanhassen (Carver County) were examined for this project. The proposed improvements encroach upon designated flood hazard areas for both the Minnesota River and Bluff Creek. The designated floodplain areas are depicted on FIRM maps found in Appendix A (see Figures 6 and 7).

Hydrologic Engineering Centers River Analysis System (HEC-RAS) computer modeling (version 4.1) was initially used to perform preliminary hydraulic analysis for the purpose of screening viable alternatives and design options. A more detailed hydraulic modeling study³ was completed using a finite element surface water modeling system (FESWMS) model. The FESWMS effort included the development of a two-dimensional hydrodynamic model of the Minnesota River. The hydraulic model of the existing

³ *Hydrodynamic Modeling for Minnesotat River Crossing Feasibility Study* September 23, 2011, can be obtained for detailed information on model calibration, model runs, and model runs by alternatives by contacting the RGU Contact Person listed on page 4 of this EAW.

conditions, provided by MnDOT, included approximately thirty-five miles of the Minnesota River, reaching from the City of Carver to approximately 1.5 miles upstream of the confluence with the Mississippi River. This existing conditions model was used as the basis for the hydraulic analysis of the river crossing alternatives.

The objectives of the Flood Mitigation Study and modeling was to: a) assess water surface elevation in the existing conditions and provide the necessary information for highway design; b) assess the impact of different design alternatives for highway improvement on the frequency of flooding and road closures; and c) develop a calibrated two-dimensional model of the Minnesota River in the FESWMS modeling environment.

The cross sections of the Highway 101 proposed river crossing alternative from the Minnesota River Flood Mitigation Study has been refined and carried forward in the proposed Southwest Reconnection Project. The total project improvements (Highway 101 Bridge and CSAH 61) have been incorporated into the calibrated hydrodynamic two-dimensional FESWMS model of the Minnesota River. Model results illustrating flood extents, change in water surface elevation, velocity profiles, and changes in velocities indicate little to no change for each of the modeled events (10-year, 50-year, 100-year, and 500-year flood events). Model results showed that the proposed Highway 101 bridge crossing would not flood during a 100-year event that has a base flood elevation of approximately 720.7 because the low point of the bridge structure is proposed at an elevation of 723.1. All other roadway segments within the project area are also above 100-year flood elevations. However, portions of the Highway 101 crossing would be underwater during a 500-year event that has been modeled to occur at elevation 726.0.

The proposed project is located within the Lower Minnesota River Watershed District. The restriction on development that would apply to the proposed project includes not producing an increase in the surface water elevation during flood events. As demonstrated in the detailed hydrodynamic modeling, the proposed project will maintain the existing river levels during flood events. Therefore, the proposed project will not increase the existing river levels during flood events.

Additional Floodplain Assessment

1. The proposed improvement would not result in permanent interruption or termination of a transportation facility, which is needed for emergency vehicles or which provides the only evacuation route for a city or surrounding communities. All roadways (Highway 101 and CSAH 61) would be constructed above the 100-year flood elevation.
2. No substantial adverse impact on natural and/or beneficial floodplain values should result from this project. The project will in fact re-establish natural floodplain habitat with the removal of the existing Highway 101 causeway across the floodplain.
 - No fisheries impact is anticipated.
 - The project improvements would not increase flow velocities in the rivers for most flow conditions.
 - The project area is not located in any State or Federal Wild and Scenic River sections.
 - Threatened and endangered plant and/or animals have been identified in the project area. Impacts on these resources are anticipated to be minimal and are not directly associated with floodplains.
 - Appropriate turf establishment and erosion control measures would be used. Contractors would comply with standard construction specifications regarding erosion control and protection of public waters. An erosion control plan and best management practices will be

- employed that will include temporary and permanent measures such as temporary seeding, bale ditch checks, silt fences, energy dissipaters and re-vegetation of disturbed areas with native species.
3. No substantial increased risk of flooding would result. No roadway embankment work would encroach on floodplains or floodways. There are no known existing flooding problems or concerns within the project area. County and Judicial Ditches and crossings would be maintained both during and following construction of the proposed improvements. Any Alternative chosen may cross other flood prone areas and small drainage ways. During design, these flood prone areas and drainage ways will be examined for any localized flooding problems and corrected to the extent practicable.
 4. This project should not result in any incompatible floodplain development. The proposed improvements are consistent with local land use and zoning regulations. These local regulating documents/standards will ensure development within floodplain areas are not incompatible floodplain developments.

Mitigation

The Highway 101 and CSAH 61 improvements will not cause restrictions to the Minnesota River or Bluff Creek. The proposed project improvements will result in removal of the existing roadway causeway across the Minnesota River floodplain area. Furthermore, the existing culverts that carry Bluff Creek under CSAH 61 and Highway 101 will be removed and the channel will flow under both roadways via new bridge structures.

No Practicable Alternative Finding

Several concept alternatives were considered and evaluated, but all had similar beneficial effects on the floodplain within the project area. No location alternatives were considered due to the present location of Highway 101 and CSAH 61. The proposed roadway improvements were selected because they satisfy the project purpose and need objectives of improving safety, maintaining mobility, and mitigating safety and operational concerns associated with the roadways having to close during periods of flooding, whereby requiring traffic to find alternative routes to cross the Minnesota River.

Shoreland Zoning District

The cities of Chanhassen and Shakopee have adopted shoreland overlay zoning districts with 1,000' boundaries for lakes (including public waters/wetlands) and 300' for rivers, stream, and other water courses. The existing roadways and proposed improvements are present within these shoreland districts.

Land use restrictions within these districts vary depending on the activity proposed and is typically reviewed and enforced through permits with the watershed district and the shoreland ordinance standards adopted by each City. It was determined that since the Preferred Alternative includes improvements along the existing roadways and that the improvements include a comprehensive water quality and stormwater management component that the proposed project is compatible and will likely have a beneficial effect on the surrounding waterbodies.

Bluff Creek Overlay Zoning District

The City of Chanhassen has developed a Bluff Creek overlay zoning district that is defined by topography, vegetation, and other environmental features. The intent of the overlay district is to apply land use and density standards for the purpose of preserving natural land cover and water quality.

15 - WATER SURFACE USE

Will the project change the number or type of watercraft on any water body? Yes 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 22.3; Cubic yards 963,670 - See below. 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 area inside the proposed construction limits (shown on Figures 2 and 3 in Appendix A) is approximately 41 acres. The amount of soil to be moved is estimated at 514,000 cubic yards of cut and 593,000 cubic yards of fill. Approximately 125,000 cubic yards of the excavated material will be as a result of removing the existing land bridge across the Minnesota River floodplain area. These quantities are estimates based on preliminary design and are subject to change as final design progresses. Some of this material may be relocated and/or reused throughout the project area. See EAW Item 29 – Cumulative Potential Effects: Floodplain for further description of where excess fill may be placed in the vicinity of the proposed project.

a. Describe any steep slopes or highly erodible soils and identify them on the site map.

The project will result in some potential for erosion during the construction process as existing ground cover will be disturbed. The EAW Guidelines from the Minnesota Environmental Quality Board (MEQB) identifies steep slopes as slopes of 12 percent or greater. Figure 8 depicts potential areas of steep slopes based on soil types and classifications found within the project area.

At the completion of construction, newly constructed slopes within the project area are not expected to exceed a 1:4 (V:H) ratio for the side slopes and 1:2 for the ditch slopes. Soils that are less prone to erosion will be used when constructing side slopes.

Retaining walls have been proposed in four locations in order to reduce the overall footprint of the roadway improvements and reduce the extent of steep slopes.

- Wall 1: is proposed to be 5' high and 31' long and is located along the northeast side of the trail (next to Bluff Creek) and on the north side of CSAH 61/Flying Cloud Drive
- Wall 2: is proposed to be 8' high and 109' long and is located along the south side of the trail (next to Bluff Creek) and on the south side of CSAH 61/Flying Cloud Drive
- Wall 3: is proposed to be 1.5' high and 235' long and is located in the southwest quadrant of the roundabout intersection between the eastbound CSAH 61 lanes and the trail
- Wall 4: is proposed to be 10' high and 120' long and is located near the south end of crossing between the Highway 101 lanes and the trail

b. Describe any erosion and sedimentation control measures to be used during and after project construction.

Temporary erosion and sediment control measures will be implemented throughout the construction activities to protect drainage areas. A National Pollutant Discharge Elimination System (NPDES) Construction Storm Water Permit (NPDES general permit MN# R100001) will be required for the project.

The NPDES permit has both temporary directives used primarily during construction, as well as permanent requirements, which the project must meet. The standards and permit requirements of the Lower Minnesota River Watershed District and the cities of Chanhassen and Shakopee will also be followed during the construction process. Below is a summary of the requirements and sediment control methods that may be used for this project.

- Horizontal slope grading, construction phasing, and other techniques designed to reduce erosion and sedimentation.
- Implementation of temporary controls to protect exposed soil areas, such as wood chip cover, seeding and mulching, hydromulching, silt fence, bio-rolls and stabilization of steep slopes.
- Prior to any connection of a pipe or outfall structure to a water of the state, installation of inlet protection and temporary energy dissipation using riprap to control the outfall water will be implemented.
- Perimeter barriers for sediment control BMPs will be in place on down gradient perimeters where runoff will discharge off site before construction disturbance begins.
- Minimization of vehicle soil tracking onto paved surfaces will occur by limiting construction equipment use on paved roads and using rock construction entrances.
- Permanent cover will be provided post construction using topsoil, seed and mulch, sod or hydroseeding.
- Dewatering will be needed on site and will be employed using the appropriate BMPs to prevent nuisance conditions.

A Storm Water Pollution Prevention Plan (SWPPP) is required as part of the National Pollutant Discharge Elimination System (NPDES) Permit. The SWPPP will provide methods, schedules and details for the BMPs to be used for this project to prevent impacts to the quality of the receiving waters. The SWPPP will be incorporated into and made part of the construction documents. Erosion control measures will be in place and maintained throughout the entire construction period. Removal of erosion measures will not occur until all disturbed areas have been stabilized.

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 storm water pollution prevention plans.

The project has been evaluated for both water quality requirements and water quantity capacity needs.

Quality of Runoff

A study conducted by the U.S. Environmental Protection Agency (EPA), *Results of the Nationwide Urban Runoff Program, December 1983*, identified copper, lead, zinc, and phosphorus as the predominant constituents in roadway runoff. Other common pollutants are total suspended solids (TSS) and chloride. TSS and chloride are introduced into roadway runoff primarily from winter deicing practices. The

amounts vary depending upon the application rates and the number of ice/snowfall events in a given year. An effective means of reducing the level of pollutants discharged into the receiving stream/water body is to provide grass side slopes, vegetated ditches, sedimentation ponds and filtration practices. The impervious surface impacted by construction activities including both new impervious and reconstructed impervious areas is an estimated 16.87 acres. The project will create an estimated 4.0 acres of new impervious surface.

In accordance with the requirements of the NPDES permit, the roadway design will include storm water treatment BMPs that will be designed and built to comply with the NPDES Construction Stormwater permit requirements (in effect prior to August 2013), Lower Minnesota River Watershed District (LMRWD) volume control standards and City of Chanhassen storm water design standards.

The project includes two planned filtration basins and two wet detention ponds to treat runoff from the local roadway, bridge and intersection improvements. The water quality feature locations are shown in Figures 2 and 3, located in Appendix A. The features were designed to provide adequate treatment capacity, storage volume and rate control to meet the NPDES, LMRWD and City of Chanhassen standards.

Quantity of Runoff

The volume of runoff in the project area is expected to increase slightly as a result of the 4.0 acres of additional impervious surface created as a result of the proposed transportation improvements. The proposed stormwater features were designed to manage runoff for the 100-year storm event as well as provide rate controls so discharge rates after the project is completed do not exceed the existing conditions. To the extent that soils investigations in the final design stages identify the potential for infiltration in the planned treatment areas, runoff volumes will be reduced relative to the current assumption of filtration only.

A preliminary HydroCAD model has been developed for the existing and proposed conditions to analyze the overall peak discharge rates throughout the project area. The design rainfall events used in the analysis are based on the NRCS method, 24-hour rainfall event with Type II distribution and antecedent soil moisture conditions 2. The total depth of rainfall used for each critical duration storm event using TP 40 rainfall frequency analysis is as follows: 2-year (2.8 in), 50-year (5.4 in), and 100-year (6.0 in).

The proposed storm features were designed to meet or exceed all agency requirements for water quality volume. Table 8 represents the water quality volume required by the LMRWD and the MPCA. This requirement is calculated as ½ inch of runoff from the new impervious surfaces created by the project. The ponds were also evaluated for compliance with the City of Chanhassen's pollutant removal requirements for Total Suspended Solids and Total Phosphorus.

Table 8: Project Stormwater Impacts and Requirements

Drainage Area Description	Impervious Area (Acres)			Quality Volume (Cu-Ft)
	Existing	Proposed	New	0.5 X New
South Bridge Approach	0.70	0.64	-0.05	-100
Highway 101 Bridge	5.43	7.70	2.27	4,120
Hwy 101/CSAH 61 Roundabout	2.89	3.81	0.92	1,1664
CSAH 61 – Creek Bridge to west	2.28	2.47	0.19	345
CSAH 61 – west of low point	0.39	0.47	0.08	143
CSAH 61 – Bluff Creek Drive roundabout	1.18	1.78	0.60	1,089
Project Totals	12.87	16.87	4.00	7,262

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 downstream receiving water bodies include the Minnesota River which is located south of the project area and Bluff Creek, which runs through the Highway101/CSAH 61 intersection and eventually discharges into the Minnesota River.

The ultimate receiving water, the Minnesota River, is impaired for PCB in Fish Tissue; Turbidity, Mercury in Fish Tissue; Mercury in Water Column. As required by the NPDES Construction Stormwater Permit, additional BMPs will be implemented during construction. A SWPPP will be prepared as part of the project and will detail the permanent and temporary BMPs which will be implemented in accordance with the requirements for discharges to an impaired water.

According to MPCA standards, Bluff Creek is impaired for turbidity and fish bio-assessments and has a draft Total Maximum Daily Load (TMDL) Study that identifies the contributing factors to the impairment and an implementation plan for reducing sediment loads to the system. While Bluff Creek runs through the project limits, the project area itself is not a contributing factor to the impairment. Bluff Creek will be realigned slightly as part of the construction project and will be improved by removal of two set of culverts and the creation of additional channel meandering compared to what currently exists in this segment of the creek.

The overall quality of the runoff originating from within the project limits and discharging to the Minnesota River is expected to improve. A preliminary analysis of the water quality treatment features indicates that the project meets or exceeds the applicable standards. A more detailed analysis of the stormwater features will be carried out using the P8 process as the project goes into final design and agency permitting.

18 - WATER QUALITY: WASTEWATER

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: 4-6 feet; minimum: -6 feet;

Average depth to bedrock: 650 feet; minimum: 600 feet

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.

Soils at the site lie within the Alluvial Land-Chaska-Oshawa Association and consist chiefly of medium textured to moderately fine textured soils on flood plains along the Minnesota River. Native soils along the project alignment include Marsh (Ma), Alluvial Land (Al), Alluvial Land Frequently Flooded (Au), and Terril Loam (TeB, TeC). Soils in the existing roadway embankment, which is above the 100-yr flood plain, consist of fill soils, such as, silty sand, silty loam, loamy sand, sandy loam and sandy clay loam. The Marsh soils consist of peat and organic clays of low and high plasticity.

20 - SOLID WASTES, HAZARDOUS WASTES, STORAGE TANKS

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.

All solid wastes generated by construction of the proposed project will be disposed of properly in a permitted, licensed solid waste facility or a similarly regulated facility elsewhere. Project demolition of concrete, asphalt, and other potentially recyclable construction materials will be directed to the appropriate storage, crushing or renovation facility for recycling or reuse.

If a spill of hazardous/toxic substances should occur during or after construction of the proposed project, it is the responsibility of the transport company to notify the Department of Public Safety, Division of Emergency Services, to arrange for corrective measures to be taken pursuant to 6 MCAR 4.9005E. Any contaminated spills or leaks that occur during construction are the responsibility of the contractor and would be responded to according to MPCA containment and remedial action procedures.

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.

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.

Materials anticipated to be present on-site are those normally associated with the operation or maintenance of construction equipment including petroleum products such as gasoline and other engine fluids. No other toxic or hazardous materials are anticipated during construction and none will be present following construction. No above- or below-ground storage tanks are planned for permanent use in conjunction with the proposed project. Temporary storage tanks for petroleum products may be located in the project area for refueling construction equipment during roadway construction activities.

Appropriate measures will be taken during construction to avoid spills that could contaminate groundwater and/or surface water in the project area. In the event that a leak or spill occurs during construction, appropriate action to remedy the situation will be taken immediately in accordance with MPCA guidelines and regulations.

21 – TRAFFIC

Parking spaces added None Existing spaces (if project involves expansion) N/A Estimated total average daily traffic generated None Estimated maximum peak hour traffic generated (if known) and time of occurrence None 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.

Table 9: Forecast Average Annual Daily Traffic Volume – 2014 and 2034

Location	2014 Forecasts		2034 Forecasts	
	No Build	Build	No Build	Build
Hwy 101 Bridge	19,400	20,500	28,800	39,800
CSAH 61 (Flying Cloud Dr.); East of Hwy 101	10,700	10,800	16,300	17,600
CSAH 61 (Flying Cloud Dr.); West of Hwy 101	11,300	11,600	19,800	22,500
Bluff Creek Drive	3,100	3,200	5,600	5,800
CSAH 61 (Flying Cloud Dr.); West of Bluff Creek Dr.	9,000	9,200	17,000	19,500

Table Note: Detailed traffic forecasting was conducted as part of the project scoping process and is documented in a Technical Memorandum, dated July 2012. A copy of the memo is available for review by contacting the Project Contact listed on page 4 of this EAW.

Both Highway 101 and CSAH 61 (Flying Cloud Drive) are major arterial roadways that serve as vital transportation corridors for residents, commuters, and businesses located in and around the cities of Shakopee and Chanhassen. Highway 101 is one of only three crossings of the Minnesota River in the southwest portion of the Twin Cities metropolitan area. The other two crossings include the Trunk Highway 41 crossing in Chaska (approximately 3.5 miles upstream) and the US 169 Bridge between Shakopee and Bloomington (approximately 6.7 miles downstream). Therefore the Highway 101/CSAH 61 corridors are regionally significant to the overall transportation system in this area.

An Intersection Control Evaluation (ICE) study was completed for the proposed improvements. The purpose of the study is to determine the most appropriate type of traffic control for the preferred alternative of the reconfigured “Wye” intersection and the two surrounding intersections (CSAH 61/Trunk Highway 101 and CSAH 61/Bluff Creek). The ICE investigation included analyzing traffic operations at all intersections during the AM and PM peak hour for the existing, Build Year (2014) and Design Year (2034) traffic conditions. The ICE Report was completed on May 1, 2013. A copy of the ICE Report is available for review by contacting the Carver County Public Works Department.

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.

Introduction to Transportation Air Quality

Motorized vehicles affect air quality by emitting airborne pollutants. Changes in traffic volumes, travel patterns, and roadway locations affect air quality by changing the number of vehicles in an area and the congestion levels. The air quality impacts from the project are analyzed by addressing criteria pollutants, a group of common air pollutants regulated by EPA on the basis of criteria (information on health and/or environmental effects of pollution). The criteria pollutants identified by the EPA are ozone, particulate matter, carbon monoxide, nitrogen dioxide, lead, and sulfur dioxide. Potential impacts resulting from these pollutants are assessed by comparing projected concentrations to National Ambient Air Quality Standards (NAAQS). In addition to the criteria air pollutants, the EPA also regulates air toxics.

Criteria Pollutants

OZONE

Ground-level ozone is a primary constituent of smog and is a pollution problem throughout many areas of the United States. Exposures to ozone can cause people to be more susceptible to respiratory infection, resulting in lung inflammation, and aggravating respiratory diseases, such as asthma. Ozone is not emitted directly from vehicles but is formed when volatile organic compounds (VOCs) and nitrogen oxides (NOx) react in the presence of sunlight. Transportation sources emit NOx and VOCs and can, therefore, affect ozone concentrations. However, due to the phenomenon of atmospheric formation of ozone from chemical precursors, concentrations are not expected to be elevated near a particular roadway.

The overall trend shows that ozone concentrations are on the rise due to increasing population and congestion. As a result of this trend, the Minnesota Pollution Control Agency (MPCA), in cooperation with various other agencies, industries, and groups, has encouraged voluntary control measures to control ozone and has begun developing a regional ozone modeling effort. Ozone concentrations in the lower atmosphere are influenced by a complex relationship of precursor concentrations, meteorological conditions, and regional influences on background concentrations. The MPCA staff has begun development of ozone modeling for the Twin Cities metropolitan area. Recent conversations with MPCA staff indicate that the ozone models currently use federal default traffic data and a relatively coarse modeling grid. As such, ozone modeling in Minnesota is in its developmental stage, and therefore, there is no available method of determining the contribution of a single roadway to regional ozone concentrations. Ozone levels in the Twin Cities metropolitan area currently meet state and federal standards. Additionally, the State of Minnesota is classified by the Environmental Protection Agency as an "ozone attainment area," which means that Minnesota has been identified as a geographic area that meets or exceeds the national standards for the reduction of ozone levels. Because of these factors, a quantitative ozone analysis was not conducted for this project.

PARTICULATE MATTER (PM)

Particulate matter is the term for particles and liquid droplets suspended in air. Particles come in a wide variety of sizes and have been historically been measured by the diameter of the particle in micrometers. PM_{2.5}, or finer particulate matter, refers to particles that are 2.5 micrometers or less in diameter. PM₁₀ refers to particulate matter that is 10 micrometers or less in diameter.

Motor vehicles (i.e., cars, trucks, and buses) emit direct PM from their tailpipes, as well as from normal brake and tire wear. Vehicle dust from paved and unpaved roads may be re-entrained, or re-suspended,

in the atmosphere. In addition, PM_{2.5} can be formed in the atmosphere from gases such as sulfur dioxide, nitrogen oxides, and volatile organic compounds. PM_{2.5} can penetrate the human respiratory system's natural defenses and damage the respiratory tract when inhaled. Numerous scientific studies have linked particle pollution exposure to a variety of problems, including:

- Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing;
- Decreased lung function;
- Aggravated asthma;
- Development of chronic bronchitis;
- Irregular heartbeat;
- Nonfatal heart attacks; and,
- Premature death in people with heart or lung disease.

(Source: <http://www.epa.gov/air/particlepollution/health.html>)

The EPA issued a final rule on October 17, 2006, that tightened the NAAQSs for PM_{2.5} to include a 24-hour standard of 35 micrograms per cubic meter (ug/m³) and retained the 1997 annual PM_{2.5} standard of 15.0 ug/m³. The annual standard is based on a three-year average of annual mean PM_{2.5} concentrations; the 24-hour standard is based on a three-year average of the 98th percentile of 24-hour concentrations. The NAAQS 24-hour standard for PM₁₀ is 150 ug/m³, not to be exceeded more than once per year, on average, over three years. The following statement, published by the Minnesota Pollution Control Agency in the [Air Quality in Minnesota: 2011 Report to the Legislature](#), EPA is reevaluating the particulate standards in response to scientists' better understanding of the serious risks associated with breathing even low levels of fine particles. In light of these potential health effects, EPA's new standards will likely be more stringent.

The Clean Air Act conformity requirements include the assessment of localized air quality impacts of federally-funded or federally-approved transportation projects that are deemed to be projects of air quality concern located within PM_{2.5} nonattainment and maintenance areas. The entire State of Minnesota has been identified as a geographic area that meets or exceeds the national standards for the reduction of PM levels, and therefore is exempt from performing PM qualitative hot-spot analysis.

NITROGEN DIOXIDE (NITROGEN OXIDES)

Nitrogen Oxides, or NO_x, is the generic term for a group of highly reactive gases, all of which contain nitrogen and oxygen in varying amounts. The two primary components are nitric oxide (NO) and nitrogen dioxide (NO₂). Nitrogen oxides form when fuel is burned at high temperatures, as in a combustion process. The primary sources of NO_x are motor vehicles, electric utilities, and other industrial, commercial, and residential sources that burn fuels. The MPCA's [Annual Pollution Report to the Legislature: A Summary of Minnesota's Air Emissions and Water Discharges](#), April 2012, indicates that On-road gasoline vehicles and diesel vehicles account for 40% of NO_x emissions in Minnesota. NO_x contribute to a wide range of health and environmental effects.

Nitrogen dioxide (NO₂), which is a form of nitrogen oxide (NO_x), is regularly monitored in the Twin Cities metropolitan area. Data presented in the MPCA's [2013 Annual Air Monitoring Network Plan for Minnesota](#), indicates that the averages at Minnesota sites ranged from 5 parts/per/billion (ppb) to 9 ppb. According to the EPA standards, a monitoring site meets the annual air quality standards if the annual average is less than or equal to 53 ppb; therefore Minnesota currently meets the annual average NO₂ standard. In addition, in January 2010 the EPA created a new 1-hour standard. This new 1-hour standard protects against adverse health effects associated with short term exposures to elevated NO₂.

To meet this standard, the three-year average of the annual 98th percentile daily maximum 1-hour NO₂ concentration must not exceed 100 ppb. Minnesota averages ranged from 33 ppb to 46 ppb. As a result, all Minnesota sites currently meet the 1-hour air quality standard for NO₂.

Further reductions are still sought and as newer, cleaner cars enter the national fleet, reduced nitrogen oxide emissions are anticipated to be reduced by about 74 percent by 2030. Within the project area, it is unlikely that NO_x standards will be approached or exceeded based on the relatively low ambient concentrations of NO_x in Minnesota and on the long-term trend toward reduction of NO_x emissions. Because of these factors, a specific analysis of NO₂ was not conducted for this project.

SULFUR DIOXIDE

Sulfur dioxide (SO₂) and other sulfur oxide gases (SO_x) are formed when fuel containing sulfur, such as coal, oil, and diesel fuel is burned. Sulfur dioxide is a heavy, pungent, colorless gas. Elevated levels can impair breathing, lead to other respiratory symptoms, and at very high levels, can aggravate heart disease. People with asthma are most at risk when SO₂ levels increase. Once emitted into the atmosphere, SO₂ can be further oxidized into sulfuric acid, a component of acid rain.

The MPCA's Annual Pollution Report to the Legislature: A Summary of Minnesota's Air Emissions and Water Discharges, April, 2012, indicates that nearly 70% of emissions are generated from point sources (e.g. coal burning electric utilities/power plants). Minnesota has seen a steady reduction of SO_x emissions over the past several years. Furthermore, MPCA monitoring shows that ambient SO₂ concentrations are consistently below air quality standards. The MPCA has concluded that long-term trends in both ambient air concentrations and total SO₂ emissions in Minnesota indicate steady improvement.

Emissions of sulfur oxides from transportation sources are a small component of overall emissions and continue to decline due to the desulphurization of fuels. Additionally, the State of Minnesota is classified by the EPA as a "sulfur dioxide attainment area," which means that Minnesota has been identified as a geographic area that meets or exceeds the national standards for the reduction of sulfur dioxide levels. Because of these factors, a quantitative analysis for sulfur dioxide was not conducted for this project.

LEAD

Due to the phase out of leaded gasoline, lead is no longer a pollutant associated with vehicular emissions.

CARBON MONOXIDE

Carbon monoxide (CO) is the traffic-related pollutant that has been of concern in the Twin Cities Metropolitan Area. In 1999, the EPA redesignated all of Hennepin, Ramsey, Anoka, and portions of Carver, Scott, Dakota, Washington, and Wright counties as a maintenance area for CO. This area includes the project area, which is located in Carver and Scott Counties. The MPCA has created a State Implementation Plan (SIP) that demonstrates how the Twin Cities maintenance area will meet federal air quality standards.

The USEPA issued final rules on transportation conformity (40 CFR 93 Subpart A) which describe the methods required to demonstrate SIP compliance for transportation projects. It requires that transportation projects must be part of a conforming Metropolitan Council's Long Range Transportation Policy Plan (LRTPP) and the four-year Transportation Improvement Program (TIP)." Accordingly, this project is consistent with the 2030 Metropolitan Council's LRTPP, approved November 2010, and in the current 2013-2016 TIP. This project is also included in the transportation conformity section of the LRTPP and/or TIP.

Air Quality Conformity

On November 8, 2010, the EPA approved a limited maintenance plan request for the Twin Cities maintenance area. Under a limited maintenance plan, the EPA has determined that there is no requirement to project emissions over the maintenance period and that “an emission budget may be treated as essentially not constraining for the length of the maintenance period. The reason is that it is unreasonable to expect that our maintenance area will experience so much growth within this period that a violation of CO National Ambient Air Quality Standard (NAAQS) would result.” (USEPA Limited Maintenance Plan Option for Nonclassifiable CO Nonattainment Areas, October 6, 1995) Therefore, no regional modeling is required. The limited maintenance plan adopted in 2010 determines that the level of CO emissions and resulting ambient concentrations will continue to demonstrate attainment of the CO NAAQS.

This project does not interfere with implementation of any transportation control measure included in the SIP. The LRTPP was determined to conform to the requirements of the 1990 CAAA (per 40 CFR 51 and 93) by the Federal Highway Administration and Federal Transit Administration May 26, 2009. A TIP conformity determination was made by those agencies May 26, 2009. The current LRTPP was submitted to MnDOT on November 22, 2010 for transmittal to USDOT for a conformity determination. The project’s design concept and scope are not significantly different from that used in the TIP conformity analysis. As demonstrated by the above information, this project conforms to the requirements of the CAAA, the Conformity Rules, 40 CFR 93, and to the applicable sections of Minnesota State Implementation Plan for air quality.

Carbon Monoxide Hot-Spot Analysis

Although this project is located in an area where conformity requirements apply, the scope of the project does not indicate that air quality impacts would be expected. Furthermore, the EPA has approved a screening method to determine which intersections need hot-spot analysis. Carver County demonstrated by the results of the screening procedure that there are no signalized intersections included in this project area with traffic volumes that require hot-spot analysis. In fact, two intersections are proposed to be roundabouts which will improve overall traffic flow in the study area. Therefore, no further air quality analysis is necessary.

Mobile Source Air Toxics (MSAT)

The purpose of this project is to elevate the Highway 101 river crossing above the 100-year floodplain, thus minimizing the need to close the roadway during times of flooding. In addition, the roadway and intersection improvements along Carver County Road 61/Flying Cloud Drive will improve safety and capacity. This project has been determined to generate minimal air quality impacts from criteria pollutants listed in the Clean Air Act Amendments and has not been linked with any special MSAT concerns. As such, this project will not result in changes in traffic volumes, vehicle mix, basic project location, or any other factor that would cause an increase in MSAT impacts from the preferred alternative as compared to the No-Build alternative.

Moreover, EPA regulations for vehicle engines and fuels will cause overall MSAT emissions to decline significantly over the next several decades. Based on regulations now in effect, an analysis of national trends with EPA's MOBILE6.2 model forecasts a combined reduction of 72 percent in the total annual emission rate for the priority MSAT from 1999 to 2050, while vehicle-miles of travel are projected to increase by 145 percent. This will both reduce the background level of MSAT as well as the possibility of even minor MSAT emissions from this project.

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.

The proposed Southwest Reconnection Project will not have stationary source air emissions concerns.

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, Noise, and Dust during Construction

The proposed project would not generate substantial odors during construction. Potential odors would include exhaust from diesel engines and fuel storage. Dust generated during construction will be minimized through standard dust control measures, such as applying water to exposed soils and limiting the extent and duration of exposed soil conditions. Construction contractors will be required to control dust and other airborne particulates in accordance with Carver County and MnDOT specifications. After construction is complete, dust levels are anticipated to be minimal because all soil surfaces exposed during construction would be in permanent cover (i.e., paved or re-vegetated areas).

Construction Noise

The construction activities associated with implementation of the proposed project will result in increased noise levels relative to existing conditions. These impacts will primarily be associated with construction equipment and pile driving.

The following table (Table 10) shows peak noise levels monitored at 50 feet from various types of construction equipment. This equipment is primarily associated with site grading/site preparation, which is generally the roadway construction phase associated with the greatest noise levels.

Table 10: Construction Equipment Noise Levels

Equipment Type	Manufacturers Sampled	Total Number of Models in Sample	Peak Noise Level (dBA)	
			Range	Average
Backhoes	5	6	74-92	83
Front Loaders	5	30	75-96	85
Dozers	8	41	65-95	85
Graders	3	15	72-92	84
Scrapers	2	27	76-98	87
Pile Drivers	N/A	N/A	95-105	101

Elevated noise levels are, to a degree, unavoidable for this type of project. Carver County will require that construction equipment be properly muffled and in proper working order. Carver County will require the contractor(s) to comply with applicable local noise restrictions and ordinances to the extent that is reasonable. Advanced notice will be provided to affected communities of any planned abnormally loud construction activities. It is anticipated that night construction may sometimes be required to minimize traffic impacts and to improve safety. However, construction will be limited to daytime hours as much as possible. This project is expected to be under construction for at least two construction seasons.

Any associated high-impact equipment noise, such as pile driving, pavement sawing, or jack hammering, will be unavoidable with construction of the proposed project. Pile-driving noise is associated with any bridge construction and sheet piling necessary for retaining wall construction. While pile-driving equipment results in the highest peak noise level, as shown in the above table, it is limited in duration to the activities noted above (e.g., bridge construction). The use of pile drivers, jack hammers, and pavement sawing equipment will be prohibited during nighttime hours.

Traffic Noise Analysis

The segment of Highway 101 that spans the Minnesota River Floodplain Area is undergoing a jurisdictional turnback (from state to county jurisdiction), which will be finalized prior to construction of the proposed improvements. A Memorandum of Understanding (MOU) between Carver County and MnDOT has been executed that outlines the commitments and process for completing the jurisdictional turnback of this segment of Highway 101 (see Appendix B). The portion of Highway 101 in Scott County has already been turned back to the County.

Coordination with the MPCA has occurred regarding the conformity of the project with the state noise standards. A correspondence letter was received from the MPCA indicating that a detailed traffic noise analysis was not needed for the proposed project because it is subject to the statutory exemptions from the noise standards found in Minn. Stat. §116.07. Appendix B contains a copy of the MPCA letter.

25 - NEARBY RESOURCES

Are any of the following resources on or in proximity to the site?

Archaeological, historical or architectural resources? Yes No

Prime or unique farmlands or land within an agricultural preserve? Yes No

Designated parks, recreation areas or trails? Yes No

Scenic views and vistas? Yes No

Other unique resources? Yes No

If yes, describe the resource and identify any project-related impacts on the resource. Describe any measures to minimize or avoid adverse impacts.

Archaeological, historical, or architectural resources

The proposed project was reviewed for archaeological, historical, and architectural resources. No historic structures eligible for listing on the National Register of Historic Places (NRHP) were identified in

the study area. However, Phase 1 and Phase 2 investigations were completed for several potentially eligible archaeological sites. Background research was conducted at the Minnesota State Historic Preservation Office and Minnesota History Center Library prior to field surveys. Research included a review of previously recorded sites, historic plat maps, and historic accounts of Native American sites along the Minnesota River near Shakopee. No sites were recorded in the project area from these sources. Below is a summary of field investigations for four sites that could be impacted by the proposed roadway improvements.

Site 21CR154 - This site is a precontact habitation that consists of a sparse amount of lithic debris, fire-cracked rocks, and animal bone. Site activities are inferred to include animal processing, cooking, and lithic reduction. The portion of the site within the existing road right-of-way was evaluated and was recommended not eligible for listing on the NRHP. A small portion of the site was surveyed outside of the road right-of-way, and this portion of the site is recommended for further Phase 2 investigations. In summary, a total of 31 deep auger tests were dug in five and ten-meter intervals at the site, with only seven tests containing artifacts. Artifacts were recovered from 0 to 80 cm below surface. Two (1 x 1 meter) excavation units were also dug, but neither unit contained artifacts.

Site 21CR155 - This site is an early Archaic or Late Paleoindian habitation that consists of a moderate amount of lithic debris, stone tools, fire-cracked rocks, and butchered and calcined (burned) animal bone (bison or elk). Site activities are inferred to include animal processing, cooking, lithic reduction, and stone tool production. A total of 42 deep auger tests were dug in five and ten-meter intervals, with 30 tests containing artifacts. Seven (1 x 1 meter) excavation units were also dug. Artifacts were recovered from 100 to 240 cm below surface, with most recovered from a buried soil between 220 and 240 cm. Lithic materials include Knife River Flint and Hixton Quartzite that derive from western North Dakota and west-central Wisconsin. Radiocarbon dating was performed on the animal bone (bison or elk) and provided a conventional date of 7160 BP⁴ (+/-30), with a 2 Sigma Calibration of 8020 to 7940 BP. The evaluation results indicate that the site has the potential to provide important information on the precontact period because of the site's research potential and the well-preserved cultural deposits that have integrity. The site is recommended eligible for listing on the NRHP, and a Phase 3 data recovery is recommended if the site can't be avoided.

Site 21CR156 - This site is a precontact habitation that consists of a moderate amount of Late Woodland ceramics, lithic debris, stone tools, and animal bone. Site activities are inferred to include animal processing, cooking, lithic reduction, and stone tool production. A total of 50 deep auger tests were dug in five-meter intervals, with 35 tests containing artifacts. Artifacts were recovered from 20 to 240 cm below surface. Eight (1 x 1 meter) excavation units were also dug. The site contains stratified Late Woodland, Archaic, and Late Paleoindian components. Radiocarbon dating was conducted on calcined/burned turtle bone, which provided a conventional date of 7040 +/- 30 BP, with a 2 Sigma Calibration of 7940 to 7830 BP. The evaluation results indicate that the site has the potential to provide important information on the precontact period because of the site's research potential and the well-preserved cultural deposits that have integrity. The site is recommended eligible for listing on the NRHP. The site will be avoided since it has been determined that the site is located outside the construction limits of the Southwest Reconnection Project.

Site 21CR157 - This site is a precontact habitation that consists of lithic debris, fire-cracked rock, and animal bone. Site activities are inferred to include animal processing, cooking, and lithic reduction. The

⁴ Before Present (BP) years is a time scale used in archaeology, geology, and other scientific disciplines to specify when events in the past occurred. Because the "present" time changes, standard practice is to use 1 January 1950 as the origin of the age scale, reflecting the fact that radiocarbon dating became practicable in the 1950s.

site is buried below modern fill, and three tests contained artifacts from 130 to 300 cm below surface. The site is recommended for further Phase 2 investigations.

Since the project will require a US Army Corps of Engineers (USACE) wetland permit, it is following the federal Section 106 process. Carver County has coordinated with USACE and the MnDOT Cultural Resources Unit on the required tribal consultation and will be developing a Memorandum of Agreement (MOA) that will detail the process for mitigating impacted archaeological sites. A copy of all cultural resources investigation reports and correspondences are available for review by contacting the Carver County Contact listed on page 1 of this EAW.

Designated parks, recreation areas or trails

Minnesota River Boat Launch

The Minnesota River Boat Launch is located on the north side of the Minnesota River and directly east on County Road 101. The boat launch was a joint project with the MNDNR, U.S. Fish and Wildlife Service, the Lower Minnesota River Watershed District and the City of Shakopee. The boat launch features a modern access ramp, dedicated parking and handicapped accessible parking.

Shakopee Archery Park

The City of Shakopee relocated their archery range to the north side of the Minnesota River and west of Highway 101. This too was a joint project with the MNDNR, Shakopee Downtown Partnership/ Archer's Committee and the Minnesota River Valley Chapter of the Minnesota Deer Hunter's Association.

Archery Park provides shooting opportunities for local and regional use. The park accommodates all types of shooting and provides different opportunities for both adults and youth to train for the sport of archery. In addition to the standard static traditional range, the Archery Park has interactive three-dimensional targets, separate youth and adult shooting areas, and support facilities like picnic tables.

Minnesota Valley State Trail

The multi-use Minnesota Valley Trail parallels the Minnesota River and is operated and maintained by the MNDNR. The section of trail near Shakopee that crosses under County Road 101 is a paved bituminous surface. The trail provides hiking, biking, birdwatching and other activities year-round.

The proposed improvements include extending an off-street trail from the Shakopee Archery Park and Minnesota Valley State Trail to the north along the west side of the bridge. The trail will pass under County Road 61/Flying Cloud Drive and connect to a trail system along the north side of County Road 61. The new trail will extend west to Bluff Creek Drive where it will continue as an on-street facility providing a connection to the Minnesota River Bluffs Regional LRT Trail.

Minnesota River Bluffs Regional LRT Trail

The Minnesota River Bluffs Regional LRT Trail follows a former railroad grade from Hopkins through Chanhassen. This trail is operated and maintained by the Three Rivers Park District. The Minnesota River Bluffs Regional LRT Trail corridor is approximately 13-miles in length and consists of an aggregate surface. The trail provides hiking, biking, and other activities year-round. Within the project area, the trail can be accessed along Bluff Creek Road or Highway 101.

Minnesota River Water Trail

The Minnesota River, all 332 miles from Big Stone Lake in Ortonville to its confluence with the Mississippi River near Fort Snelling in St. Paul, has been designated by the MNDNR as a State Water Trail. This designation has been applied to 33 rivers consisting of over 4,400 miles of river for recommended canoeing, kayaking, and boating activities.

Minnesota Valley National Wildlife Refuge

The Minnesota Valley National Wildlife Refuge is located immediately to the east of Highway 101. Further details on this resource are included below in the “Other Unique Resources” section.

Raguet Wildlife Management Area (WMA)

The Raguet WMA is located immediately to the west of Highway 101. Further details on this resource are included below in the “Other Unique Resources” section.

Scenic Views and Vistas

The project area is located in the Minnesota River Valley, which provides scenic views of the river valley and bluffs. No adverse impacts to the visual quality of the area are expected since the proposed roadway improvements generally follow the existing roadway alignments. At the maximum height, the proposed bridge across the floodplain area will be approximately 22 feet above the existing roadway.

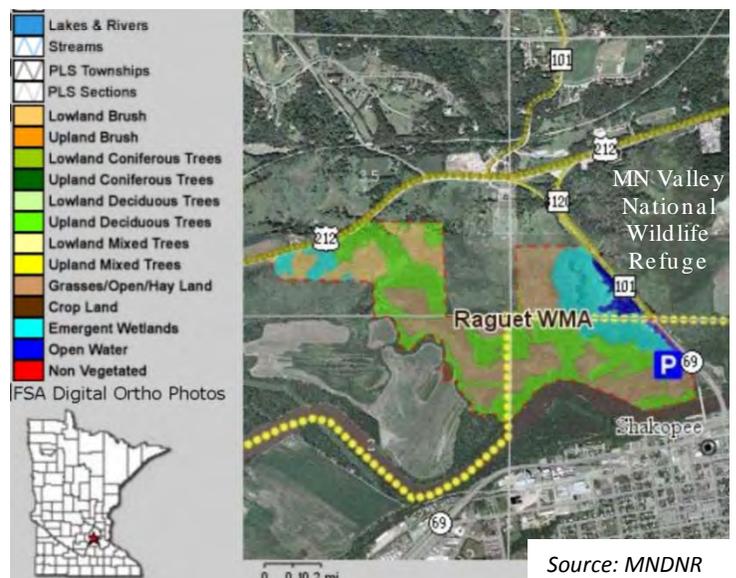
Other Unique Resources

The majority of the bridge improvements are located between the USFWS Minnesota Valley National Wildlife Refuge and the DNR Raguet Wildlife Management Area (WMA). Between a combination of the US FWS, MN DNR, cities, counties, corporations, non-profit organizations, and private land owners there are eight units of refuge areas that stretch 34-miles along the Minnesota River located between historic Fort Snelling and the City of Jordan, MN. This area encompasses the entire managed Refuge.

As defined in the 2004 Minnesota Valley National Wildlife Refuge Comprehensive Conservation Plan (CCP)⁵, the Refuge was established by Congress in 1976 through the Minnesota Valley National Wildlife Refuge Act (Public Law 94-466; October 8, 1976). In general, its purposes are to (1) provide habitat for a large number of migratory waterfowl, fish, and other wildlife species; (2) to provide environmental education, wildlife recreational opportunities, and interpretive programs for hundreds of thousands of Twin Cities residents; (3) to protect important natural resource areas from degradation; and to (4) protect the valley’s unique social, educational, and environmental assets.

Section 9 of the Act entitled “Continued Public Services” acknowledges the Refuge’s urban presence and does not allow the prohibition of vital public services. Vital public services are defined in the Act as the continuation of commercial navigation of the Minnesota River; the construction, improvement, and replacement of highways and bridges; or any other activity that the Secretary of Interior determines to be necessary.

The project will be staged and constructed such to avoid physical occupancy into the land owned by the US Wildlife Service (FWS). This area is along the east side of the bridge in the MN Valley National Wildlife Refuge.



⁵ The 2004 MN Valley National Wildlife Refuge CCP can be found at the following US FWS website: <http://www.fws.gov/midwest/planning/MinnesotaValley/index.html>

The 312 acre Raguet WMA is located west of the existing Highway 101 alignment and causeway. The proposed Minnesota River floodplain bridge will be constructed immediately to the west of the existing roadway. The existing road and causeway will be removed when traffic can be maintained on the newly constructed bridge.

Trails in the area include the DNR MN Valley State Trail, which is located on the Shakopee side of the Minnesota River. There will be no impacts to this trail from the proposed project. The old TH 101 River crossing in Shakopee (Bridge # 4175) has been converted into a pedestrian trail. The project proposes to connect the pedestrian trail to the pedestrian sidewalk on the west side of the project's land bridge across the floodplain to Flying Cloud Drive where a new trail will be constructed to Bluff Creek Drive and provide a safe and efficient connection to the Minnesota River Bluff Regional LRT Trail, refer to Figures 2 and 3 in Appendix A.

Further out from the project area is a Scientific and Natural Area (SNA), which includes a rare calcareous fen with threatened plant species. According to the MNDNR, the establishment of a SNA is intended to preserve and perpetuate the ecological diversity of Minnesota's natural heritage, including landforms, fossil remains, plant and animal communities, rare and endangered species, or other biotic features and geological formations, for scientific study and public edification as components of a healthy environment. The Seminary Fen SNA is located to the west of the project area along County Road 61 and potential for impacts to this resource are not anticipated. Continued coordination with the MNDNR and LMRWD will occur to ensure no adverse effects occur to the Seminary Fen as a result of the proposed improvements.

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.*

Project Area Changes

As discussed above, the project area is located in the Minnesota River Valley, which creates an aesthetically pleasing visual corridor. The bridge deck will vary from approximately 3 feet to 22 feet above the existing roadway surface. The bridge plans anticipate 43 piers will be needed to span the entire floodplain area. On the bridge, new roadway lighting fixtures will be designed to direct lighting at the roadway area and minimize "spillover" lighting onto the floodplain area and surrounding lands. Intersection lighting along CSAH 61 will be consistent with safety requirements.

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.

While state highways are not subject to the plans cited below, the compatibility of the proposed project with local planning efforts is a consideration. This section describes the areas that the proposed project will intersect, specifically the Cities of Chanhassen and Shakopee, and the counties of Carver and Scott.

Chanhassen 2030 Comprehensive Plan, November 10, 2008

The proposed improvement will not affect any land use designations within the city of Chanhassen. The proposed improvements are compatible with the goals and objectives of the local planning document. The Plan identifies the need for safety and capacity improvements along CSAH 61 (Flying Cloud Drive) and recommends a four-lane expansion along the crossing of the Minnesota River between Chanhassen and Shakopee.

Shakopee 2030 Comprehensive Plan Update, August 18, 2009

The proposed improvement will not affect any land use designations within the city of Shakopee. The proposed improvements are compatible with Shakopee's Comprehensive Plan that supports a river crossing that is above the 100-year floodplain elevation and therefore less subject to seasonal flooding.

Carver County 2030 Transportation Plan, February 24, 2010

The jurisdictional turnback of Highway 101 from the State to Carver County is identified in the Plan. Furthermore, the Comprehensive Plan identifies safety and capacity deficiencies along this segment of CSAH 61. The proposed improvements are compatible with the goals and objectives of Carver County's Comprehensive Plan.

Scott County 2030 Transportation Plan, March 24, 2009 (last amendment December 18, 2012)

The Plan identifies the traffic challenges when the Highway 101 crossing of the Minnesota River is temporarily closed during flood events and that the existing two-lane crossing lacks capacity to accommodate the travel demand on the roadway. The proposed improvement is compatible with the 2030 Scott County Comprehensive Plan. The county supports the mobility benefits of the proposed project. They have been actively working with MnDOT, Carver County and the area cities to prepare the project for construction.

Minnesota River Flood Mitigation Study, September 28, 2011

MnDOT initiated the Minnesota River Flood Mitigation Study to investigate lower-cost ways to improve local and regional mobility during seasonal flooding in the Minnesota River Valley. The study recommendations included a preferred Highway 101 concept that called for construction of a land bridge that would raise the elevation of the existing crossing to an elevation of approximately 722.0 feet, which is above the 100-year flood elevation for this segment of the Minnesota River. Therefore, the proposed improvements are a direct result and compatible with the Flood Mitigation study.

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.)

Although no new or expanded infrastructure or public services are needed for the proposed project, it will require utility relocations and/or modifications.

Overhead and buried utilities (e.g. communication cable, electric, fiber optic, gas, phone, sewer, water) are located within the project area will need to be adjusted and/or relocated to accommodate construction of the proposed roadway improvements. No major service lines (i.e. sewer interceptors, pipelines, etc) are located in the project area. A Gopher State One call has been made to identify potential utility providers in the area. Contact has been made with potentially affected provides and ongoing coordination will occur during the detailed design process. Temporary disruptions in service may occur as utility service lines are being modified and/or relocated.

29 - CUMULATIVE POTENTIAL EFFECTS

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. Such future projects would be those that are actually planned or for which a basis of expectation has been laid. 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 these cumulative effects (or discuss each cumulative effect under appropriate Item(s) elsewhere on this form).

Cumulative potential effects are not necessarily causally linked to the construction of the Minnesota River Floodplain Area bridge or reconstruction of Flying Cloud Drive and related improvements. Rather, cumulative potential effects are the total effect of all known actions (past, present, and future) in the vicinity of the project with impacts on the same types of resources. The purpose of cumulative potential impacts analysis is to look for impacts that may be individually minimal, but which could accumulate and become significant and adverse when combined with the effects of other actions.

SCOPE OF CUMULATIVE POTENTIAL EFFECTS

The cumulative potential effects analysis is limited to those resources, ecosystems, and human communities directly affected by the proposed project, i.e. wetlands, storm water quality and quantity, floodplain, and cultural resources.

The geographic scope of this analysis varies by the resource under examination, as described in each sub-section below. The temporal scope of the analysis attempts to consider previous impacts to the resources that occur over time. The year 2030 is considered the current limit of comprehensive planning activities for the area, as the extent of transportation and land use planning projections are generally available up to that date. Thus, year 2030 is used as the temporal horizon for assessing future cumulative impacts.

Past Actions

Past actions in the project area include decades of agricultural, residential, institutional, industrial and commercial development. In addition, there have been transportation infrastructure improvements. All these have resulted in the current state of built environment in the vicinity of Highway 101 and Carver CSAH 61/Flying Cloud Drive.

Future Actions Anticipated

The projects listed below that were considered as future actions in this analysis are consistent with the recent Minnesota State Supreme Court Ruling regarding cumulative potential effects. The projects: 1)

are either existing, actually planned for, or for which a basis of expectation has been laid; 2) are located in the surrounding area; and 3) might reasonably be expected to affect the same natural resource.

The City of Shakopee and their central business district/downtown area is located immediately south of the Highway 101 crossing of the Minnesota River. As a result, much of this area is fully developed. However, according to the City's Community Development Department there is redevelopment opportunities at the Yarusso Property located south of Highway 101 to the east of the river crossing and on a 3-acre city-owned property on Highway 101 near Marshall Road. No specific redevelopment details have been discussed for either property. The 2030 Comprehensive Plan also identifies large portions of the downtown area as "Mixed Use" which would allow for a combination of commercial/retail, office, and higher density residential developments.

Land development in southern portion of City of Chanhassen has been a mix of office/industrial, low density residential, and large lot residential. Currently, there are no pending large scale development proposals in the proximity of the Southwest Reconnection Project. However, ongoing planning efforts continue with the Moon Valley Property (mineral extraction/gravel pit) for future high density development following reclamation of the site. Furthermore, the Chanhassen 2030 Comprehensive Plan identifies continued office/industrial, higher density residential developments and a small commercial service node in the southern portions of the city limits. City sewer and water services will need to be extended to this portion of the city prior to large scale development occurring on several under-utilized parcels in the vicinity.

As part of the transportation planning process for the development of the Highway 101/CSAH 61 improvements, four reasonably foreseeable transportation improvements were identified in the vicinity of the Southwest Reconnection Project. These reasonably foreseeable projects include:

Hennepin County State Aid Highway (CSAH) 61/Flying Cloud Drive Reconstruction Project, located between the Carver County/Hennepin County line on the west and Charlson Road in Eden Prairie on the east. This project proposes to reconstruct approximately 3.65 miles of county road as a three lane section, while also raising the roadway above the 100-year flood elevation of the Minnesota River. Carver CSAH 61/Flying Cloud Drive, beginning just west of Bluff Creek Drive to near Engler Boulevard in Chaska. The extent of improvements (reconstruction, lane channelization, capacity expansion, etc.) has not yet been defined.

Trunk Highway 101 Reconstruction Project, located between US 212 and Carver CSAH 14/Pioneer Trail. This project includes reconstruction of TH 101 to a four-lane highway section with left- and right-turn lanes at intersections. Construction of this project is scheduled to begin in 2013.

TH 101 Improvements, beginning at CSAH 14/Pioneer Trail and continuing south to CSAH 61/Flying Cloud Drive. The extent of improvements (reconstruction, realignment, lane channelization, capacity expansion, etc.) has not yet been defined.

EVALUATION OF CUMULATIVE POTENTIAL EFFECTS

Potential impacts from future projects have been discussed by the project partners (Carver and Scott Counties, cities of Chanhassen and Shakopee, and MnDOT). The primary impacts associated with the project will likely involve wetlands and stormwater quality and quantity. Cumulative impacts to these resources from the proposed project and from anticipated future projects are discussed in the sections that follow.

WETLANDS

Existing Conditions

Wetlands in the vicinity of the project area have been affected directly or indirectly over time as a result of past human settlement/development.

Impacts from Proposed Action

As described in EAW Item 12 – Physical Impacts on Water Resources (page 19), the proposed project will place fill in several wetland basins, resulting in approximately 5.94 acres of permanent wetland impacts. This impact will be mitigated in accordance with state regulatory requirements through banking. Furthermore, the removal of the existing Highway 101 causeway across the Minnesota River floodplain area will have a positive effect by allowing restoration of natural wetland/floodplain habitat to re-establish in the approximately 11-acre area of the existing roadway.

Impacts from Other Actions

Wetlands in the project vicinity may be affected by anticipated future development and transportation projects listed above. However, these impacts will be mitigated, as required by state and federal regulations.

Cumulative Potential Effects

Wetlands in Minnesota are protected by Federal law (the Clean Water Act – Section 404) and State law (Minnesota Wetland Conservation Act and Executive Orders) that mandate “no net loss” of wetland functions and values. These federal and state laws require the avoidance of wetland impacts when possible, and when avoidance is not possible, impacts must be minimized and compensated. Both federal and state laws require permits. The Minnesota Wetland Conservation Act requires mitigation of wetland impacts be provided at a minimum 2:1 ratio. Therefore, no substantial cumulative wetland impacts are anticipated to result from the Southwest Reconnection Project plus other foreseeable actions in the vicinity.

STORMWATER QUALITY AND QUANTITY

Existing Conditions

Under existing conditions, stormwater runoff from impervious surfaces flows through vegetated slopes or ditches along the outside shoulders of Highway 101 and CSAH 61 and drain to the Minnesota River.

The proposed project will result in approximately 4.0 acres of additional impervious surface area due to expanded lanes and intersection improvements. As discussed in EAW Item 17 (page 28) the proposed project has design features that collect, convey and treat roadway runoff in accordance with state and local requirements. New infiltration and wet ponds are proposed which will improve the existing water quality of the current highway runoff. Impacts and proposed mitigation (temporary and permanent BMPs) are discussed in detail in Item 17.

Impacts from Other Actions

Future developments or roadway projects may result in increased impervious surfaces and stormwater quality/quantity (discharge rate) effects. However, these projects will be required to provide mitigation in conformance with NPDES and/or watershed regulations, minimizing surface water impacts.

Cumulative Potential Effects

Federal, state, and local surface and groundwater management regulations require mitigation be provided in conjunction with proposed development and roadway projects. Given the design standards and management controls available for protecting the quality of surface waters, it is likely that potential impacts of the project, along with other future actions, will be minimized or mitigated to a substantial degree. Therefore, adverse cumulative effects on water quality and quantity rates are not anticipated.

FLOODPLAIN

Existing Conditions

The movement of the Minnesota River across the floodplain area has created a wide array of habitat type suitable for many different plant and animal species. The river floodplain acts as a flood buffer, water filter, and center of biological life in the river ecosystem. However, the floodplain has been affected directly and indirectly over time as a result of past human settlement/development. In some areas the Minnesota River floodplain has been dramatically altered by construction of levees and dams, impacted by livestock grazing, and river channel incision, and filling.

Impacts from Proposed Action

As described in EAW Item 14 – Water Related Land Use Management District (page 24), the existing Highway 101 is located in the Minnesota River floodplain and is prone to closure during 100-year flood events. The proposed project will cross the floodplain on a bridge structure that is designed to be built above the 100-year flood elevation. The fill material from the old roadway is also proposed to be removed from the floodplain, which will allow flood waters to naturally flow through this portion of the floodplain. Some of the material removed from the old roadbed may be disposed of longitudinally within the floodplain at a commercial property (Golf Zone driving range) located along CSAH 61. A hydrodynamic model of the Minnesota River illustrates that following construction of the proposed action that there will be little or no change in flood extents, water surface elevation, velocity profiles, or changes in velocities for each of the modeled events (10-yr., 50-yr., 100-yr., and 500-yr. flood events).

Impacts from Other Actions

The Minnesota River floodplain may be affected by the anticipated future development and transportation projects listed above. In fact, the Hennepin CSAH 61 reconstruction project proposes to raise portions of the roadway to an elevation above the 100-year floodplain. The anticipated floodplain impacts (filling) that will result from this future project have been incorporated in the hydrodynamic modeling efforts completed for the Southwest Reconnection Project. The model results indicate there will be no change in flood extents, water surface elevation, velocity profiles, or changes in velocities for each of the modeled events

Cumulative Potential Effects

Presidential Executive Order 11988 and Minnesota Statute 103F.101-155 on floodplain management set the basis for consideration, evaluation, and mitigation of floodplain impacts. These federal and state requirements protect against substantial increases in flood risk, impacts to a floodplain's natural and beneficial values and prohibit incompatible floodplain development. Therefore, no substantial cumulative floodplain impacts are anticipated to result from the Southwest Reconnection Project plus other foreseeable actions in the vicinity.

CULTURAL RESOURCES

Existing Conditions

Cultural resources in the area include archaeological sites and historic buildings. No historic structures eligible for listing on the NRHP were identified in the immediate study area, but these types of resources are present in the geographic area. Several archaeological resources have been found to exist within the study area. These archaeological sites represent early Archaic or Late Paleoindian habitation and consist of moderate amounts of artifacts.

Impacts from Proposed Action

As described in EAW Item 25 – Nearby Resource: Archaeological, Historical, or Architectural Resources, four identified precontact archaeological sites will be potentially affected by the proposed action. Phase I and II investigations are being completed and a Memorandum of Agreement is being completed that will define the Phase III (Data Recovery Plan). The Phase III is mitigation to be completed for impacts to these cultural resources.

Impacts from Other Actions

The proposed future actions (developments and transportation infrastructure) considered in this potential cumulative effects analysis are planned to occur in areas beyond the study limits of the Phase I/II investigations completed for the Southwest Reconnection Project. Therefore, additional cultural resources (archaeological, historical, or architectural) may exist that could potentially be affected by these future actions.

Cumulative Potential Effects

The proposed action, in combination with past and future actions, is not expected to result in substantial cumulative impacts to cultural resources in the vicinity of the project area or beyond. If federal funds, licenses, or permits are required on future actions, the federal Section 106 process and associated federal requirements would apply. As it relates to cultural resources, privately funded developments are not regulated under the federal process and would be reviewed and subject to state and local regulations.

CONCLUSION

The potential impacts to resources identified can be avoided or minimized through existing regulatory controls, as described above. During the development of this EAW, no potentially significant cumulative potential effects to the resources affected by the project have been identified.

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.

RIGHT OF WAY –

The proposed project requires the acquisition of private land for permanent right of way and easements. There will also be temporary right of way impacts that would require temporary easements. Permanent property impacts will primarily result from the widening and intersection improvements proposed along CSAH 61 (Flying Cloud Drive). Other minor right of way impacts may result from improvements along the north leg of Highway 101 due to the proposed changes at the intersection with

CSAH 61. Based on preliminary design plans, there are no commercial or residential relocations required. However, the completion of the right of way process will determine the final extent of property impacts. Figures 2 & 3 in Appendix A shows the parcels located adjacent to CSAH 61 and Highway 101 that will be impacted by the proposed improvements. Table 11 identifies the parcel impacts associated with the proposed Southwest Reconnection Project.

Table 11: Right-of-Way Impacts

Parcel ID #	Area to be acquired	Land Use	Type of Easement Required
1	0.33 acres	Open space	Permanent
	0.24 acres		Temporary
2	0.77 acres	Open space	Permanent
	2.06 acres		Temporary
3	0.45 acres	Commercial & Open space	Permanent
	0.32 acres		Temporary
4	0.43 acres	Commercial & Open space	Temporary
5	0.94 acres	Commercial & Open space	Temporary
6	0.11 acres	Open space	Temporary
7	0.13 acres	Commercial	Permanent
	0.31 acres		Temporary
8	0.73 acres	Commercial	Temporary
Totals	1.68 acres	N/A	Permanent Acquisition
	5.14 acres		Temporary Easements

A total of 4 parcels will require permanent acquisitions totaling 1.68 acres. Eight (8) parcels will have temporary easement totaling approximately 5.14 acres. Figures 2 and 3 show the project layout and the parcel impacts; refer to Appendix A. In addition to the private property impacts, MnDOT has been coordinating with the MNDNR on a land transfer for a narrow strip of publicly owned land located on the southwest side of the Highway 101 Bridge from the Scott County line to the southern construction limit on Highway 101.

MITIGATION

The acquisition of property due to the proposed project will be conducted in accordance with the Uniform Relocation and Real Property Acquisition Act of 1970, as amended by the Surface Transportation and Uniform Relocation Assistance Act of 1987 and 49 Code of Federal Regulations, Part 24, and effective April 1989 (revised January 2005).

When acquisition of right of way occurs, minimum compensation⁶ for total acquisitions may be required. In addition, property owners may be reimbursed for actual reasonable moving costs, certain re-establishment expenses and costs incurred in identifying replacement sites. Carver County will be

⁶ 2008 Minnesota Statutes 117.187 Minimum Compensation states that “When an owner must relocate, the amount of damages payable, at a minimum, must be sufficient for an owner to purchase a comparable property in the community and not less than the condemning authority’s payment or deposit under section 117.042, to the extent that the damagers will not be duplicated in the compensation otherwise awarded to the owner of the property. For the purposes of this section, ‘owner’ is defined as the person or entity that holds fee title to the property.

acquiring the needed right of way for this proposed project. Based on preliminary design plans, there are no commercial or residential relocations required. However, the completion of the right of way process will determine the final extent of property impacts.

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 mitigation 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.

EAW Item-11 - Fish, Wildlife and Ecologically Sensitive Resources

A segment of the project area lies adjacent to two wildlife management areas; US Fish and Wildlife Service (FWS) MN Valley National Wildlife Refuge and the DNR Raquet Wildlife Management Area. The floodplain habitat found adjacent to the highway corridor primarily consists of forested wetlands and grasslands. The project proposes to bridge the floodplain area and in return remove the fill from the exiting highway thus providing a benefit to wildlife passage and the surrounding wetlands. The project also proposes to add water quality treatment features that will collect, convey, and treat surface water prior to discharging to receiving water bodies. Vegetation protection measures will also be applied and will be based on MnDOT Standard Specification for Construction 2572 (Protection and Restoration of Vegetation) and specific requests from the MNDNR.

EAW Item-12 - Physical Impacts on Water Resources

This project will have approximately 5.94 acres of wetland impacts. A wetland mitigation plan for replacement of the affected wetland areas will be developed consistent with the current WCA regulatory requirements. The intent of the wetland mitigation plan will be to replace lost wetland functions in the project area where possible, however that is not feasible for this project.

Wetland impacts for this project will be mitigated by using Board of Water & Soil Resources (BWSR) wetland bank credits from a bank site as close to the project area as feasible. Replacement of lost wetlands will be in accordance with current Wetland Conservation Act (WCA) criteria, and will occur prior to or concurrent with the impacts. Efforts will be made to replace all lost wetland functions and values with similar wetland types.

EAW Item-13 Water Use

There are several wells located within the project area. The exact location of the wells will be known when possession of the property has been completed by Carver County and a survey of the property can be completed. If necessary, any impacted wells will be sealed per Minnesota Statutes, section 1031.301, by a contractor licensed or registered according to Minnesota Administrative Rules Chapter 4725.3850.

During construction, the process of dewatering an area may need to occur in order to remove poor (muck) soils and replace these areas with a select granular material that is suitable for roadway construction. A DNR Water Appropriations permit will be required if such activities occur.

EAW Item-16 - Erosion and Sedimentation

Erosion and sedimentation of all exposed soils within the project corridor will be minimized by employing BMPs during construction. Implementation of BMPs during construction greatly reduces the

amount of construction-related sedimentation and helps to control erosion and runoff. Ditches, dikes, silt fences, bale checks, sedimentation basins, and temporary seeding are some of the typical temporary erosion control measures that will be used during construction. Temporary and permanent erosion control plans will be identified in the final site grading and in construction plans for each stage of construction, as required by the NPDES permit. Erosion control measures will be in place and maintained throughout the entire construction period. Removal of erosion measures will not occur until all disturbed areas have been stabilized.

In addition, at the start of the project adequate practices to prevent sediment from entering Bluff Creek and the Minnesota River will be installed concurrently or within 24hrs of the start of the project. These practices will be maintained or improved as needed for the duration of the project. Erosion control practices defined in the Minnesota Pollution Control Agency's General Stormwater Permit for Construction Activity will be followed.

EAW Item-17 - Water Quality: Surface Water Runoff

The proposed project will generate additional stormwater runoff from the approximately 4.0 acres of additional impervious area that will be created. The quality and quantity of the additional runoff will be controlled by new collection, conveyance and treatment features that will include drainage ditches, grass swales, infiltration ponds, and wet detention ponds. The ponds will be designed to treat runoff from the added impervious area and will be constructed consistent with the NPDES permit requirements.

As a result of the proposed water quality treatment features and various best management practices on this proposed project, the water quality and quantity of the off-site drainage is expected to be improved to that of the existing condition.

EAW Item-20 - Solid Wastes, Hazardous Wastes, Storage Tanks

All regulated materials/wastes, including hazardous waste, will be removed under separate contract. Regulated materials can include concrete, brick, bituminous, untreated wood, glass, trees, rock, and plastics. All material must be disposed of in an MPCA-permitted demolition landfill, or separated and recycled. Management of this material will be in accordance with state guidelines and regulations.

EAW Item-24 - Odors, Noise and Dust

Dust generated during construction will be minimized through standard dust control measures, such as applying water to exposed soils and limiting the extent and duration of exposed soil conditions. Construction contractors will be required to control dust and other airborne particulates in accordance with MnDOT State Aid construction specifications.

Carver County will require that construction equipment be properly muffled and in proper working order. Carver County will require the contractor(s) to comply with applicable local noise restrictions and ordinances to the extent that is reasonable. Advanced notice will be provided to the cities of Shakopee and Chanhassen of any planned, abnormally loud construction activities. It is anticipated that night construction may sometimes be required to minimize traffic impacts and to improve safety. However, construction will be limited to daytime hours as much as possible. The use of pile drivers will be prohibited during nighttime hours.

EAW Item 30-Right of Way Impacts

Eight privately owned parcels, totaling 1.68 acres in permanent easements and 5.14 acres in temporary easements, will be impacted as a result of the proposed project. Figures 2 and 3 show the project layout and the parcel impacts; refer to Appendix A. Furthermore, MnDOT has been coordinating with the

MNDNR on a land transfer for a narrow strip of publicly owned land located on the southwest side of the Highway 101 Bridge from the Scott County line to the southern construction limit on Highway 101.

All acquisition and relocation of property due to the proposed project will be conducted in accordance with the Uniform Relocation and Real Property Acquisition Act of 1970, as amended by the Surface Transportation and Uniform Relocation Assistance Act of 1987 and 49 Code of Federal Regulations, Part 24, and effective April 1989 (revised January 2005). When acquisition of right of way occurs, minimum compensation for total acquisitions may be required. In addition, property owners may be reimbursed for actual reasonable moving costs, certain re-establishment expenses and costs incurred in identifying replacement sites. Carver County will be acquiring the needed right of way for this proposed project. Based on preliminary design plans, there are no commercial or residential relocations required. However, the completion of the right of way process will determine the final extent of property impacts.

RGU CERTIFICATION

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 _____

5-07-2013

Title Carver County Public Works Director/County Engineer

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 <http://www.eqb.state.mn.us>

APPENDIX A – OUTHWEST RECONNECTION PROJECT FIGURES

Figure 1 - USGS Location Map

Figure 2 – Preliminary Layout (1)

Figure 3 – Preliminary Layout (2)

Figure 4 – Roadway and Bridge Typical Sections

Figure 5 – 2010 Met Council Land Use

Figure 6 – Flood Insurance Rate Map (Chanhassen/Carver County)

Figure 7 – Flood Insurance Rate Map (Shakopee/Scott County)

Figure 8 – Steep Slope

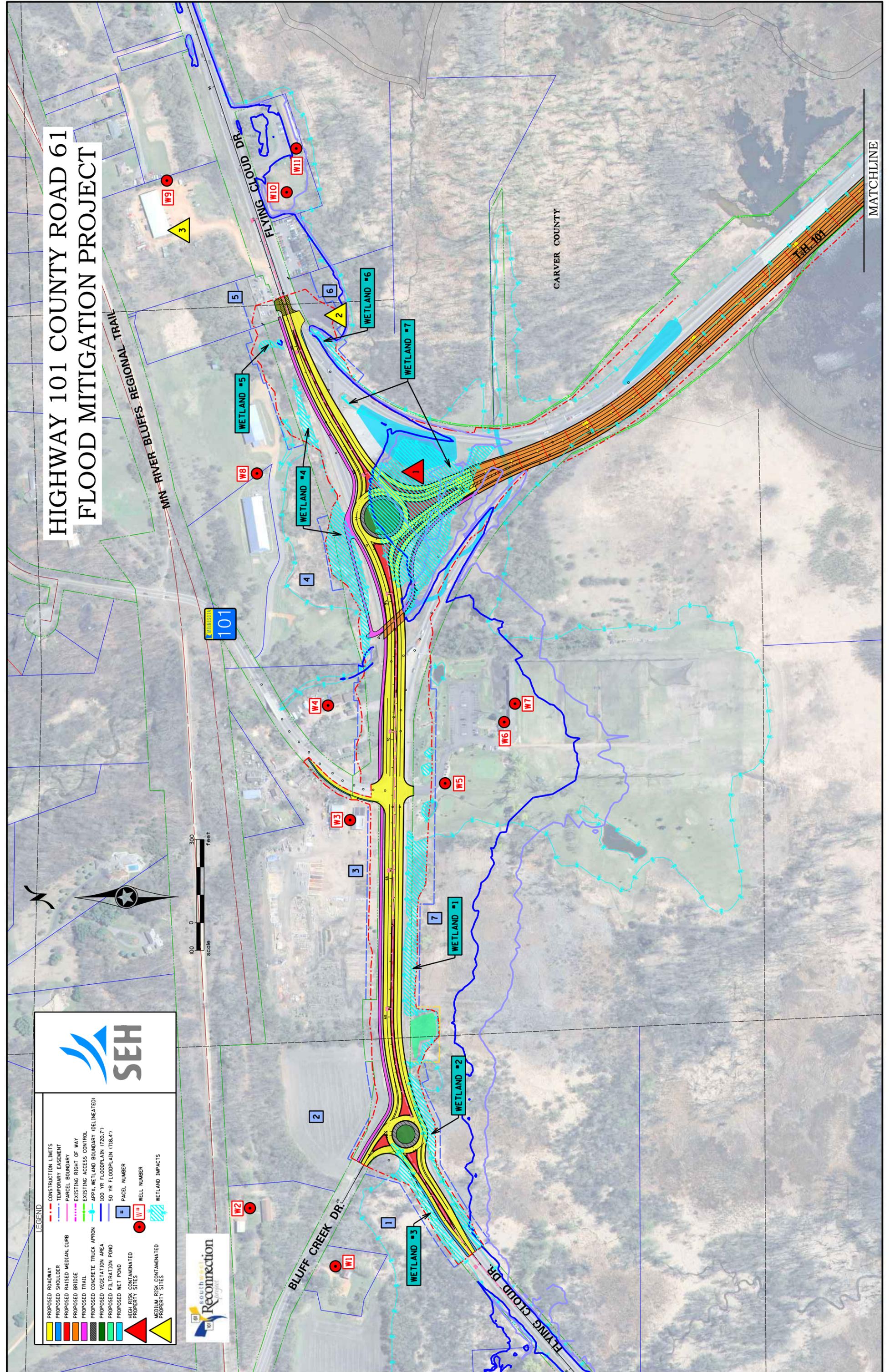
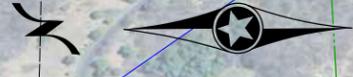
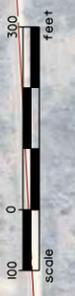
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HIGHWAY 101 COUNTY ROAD 61 FLOOD MITIGATION PROJECT



LEGEND

	PROPOSED ROADWAY		CONSTRUCTION LIMITS
	PROPOSED SHOULDER		TEMPORARY EASEMENT
	PROPOSED RAISED MEDIAN, CURB		PARCEL BOUNDARY
	PROPOSED BRIDGE		EXISTING RIGHT OF WAY
	PROPOSED TRAIL		APPX. WETLAND BOUNDARY (DELINEATED)
	PROPOSED CONCRETE TRUCK APRON		100 YR FLOODPLAIN (20.7')
	PROPOSED VEGETATION AREA		50 YR FLOODPLAIN (18.4')
	PROPOSED FILTRATION POND		PACEL NUMBER
	PROPOSED WET POND		WELL NUMBER
	HIGH RISK CONTAMINATED PROPERTY SITES		WETLAND IMPACTS
	MEDIUM RISK CONTAMINATED PROPERTY SITES		



MATCHLINE

CARVER COUNTY

SCOTT COUNTY

MN DNR AND
MnDOT LAND
TRANSFER

T.H. 101

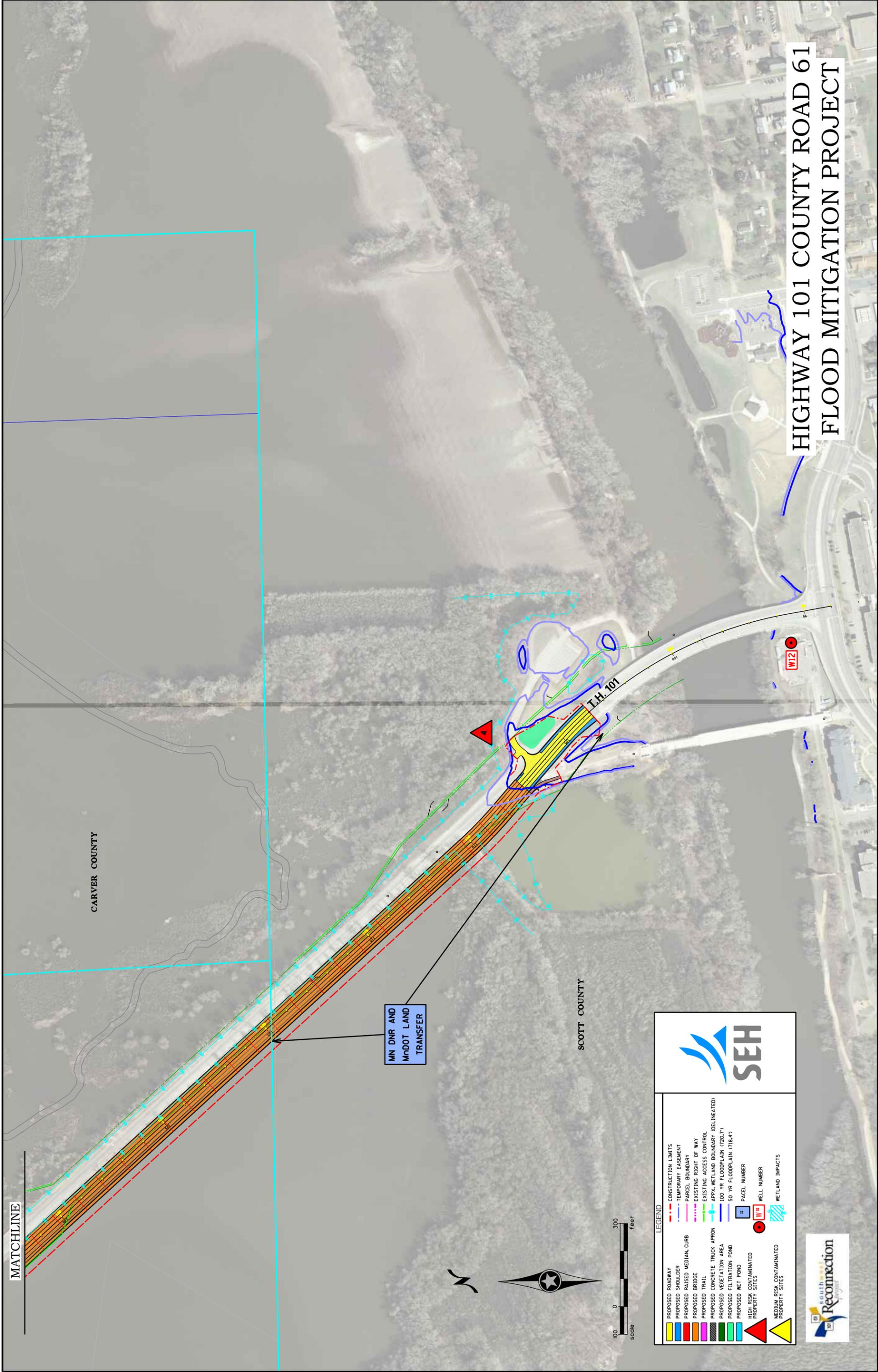
HIGHWAY 101 COUNTY ROAD 61 FLOOD MITIGATION PROJECT



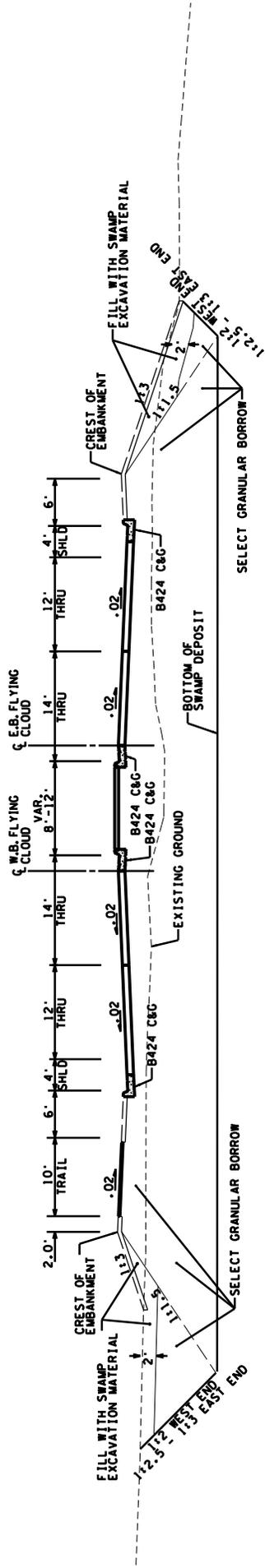
SEH

LEGEND

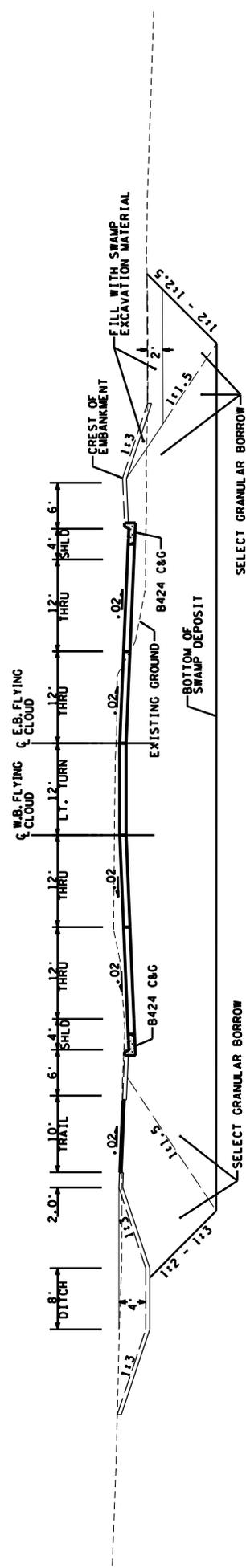
	PROPOSED ROADWAY		CONSTRUCTION LIMITS
	PROPOSED SHOULDER		TEMPORARY EASEMENT
	PROPOSED RAISED MEDIAN, CURB		PARCEL BOUNDARY
	PROPOSED BRIDGE		EXISTING RIGHT OF WAY
	PROPOSED TRAIL		EXISTING ACCESS CONTROL
	PROPOSED CONCRETE TRUCK APRON		APPX. WETLAND BOUNDARY (DELINEATED)
	PROPOSED VEGETATION AREA		100 YR FLOODPLAIN (20.7')
	PROPOSED FILTRATION POND		50 YR FLOODPLAIN (78.4')
	PROPOSED WET POND		PACEL NUMBER
	HIGH RISK CONTAMINATED PROPERTY SITES		WELL NUMBER
	MEDIUM RISK CONTAMINATED PROPERTY SITES		WETLAND IMPACTS



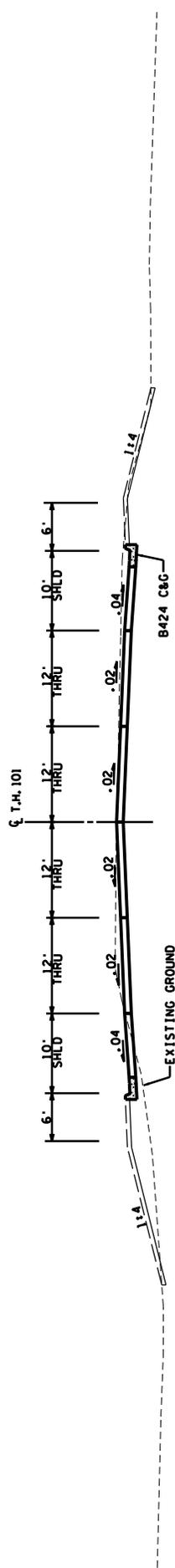
FLYING CLOUD DRIVE TYPICAL SECTION 1



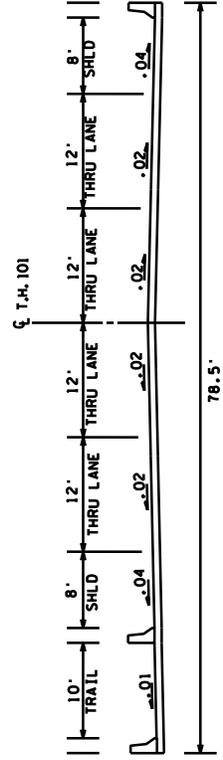
FLYING CLOUD DRIVE TYPICAL SECTION 2 - NEAR T.H. 101 INTERSECTION



T.H. 101 TYPICAL SECTION



BRIDGE TYPICAL SECTION

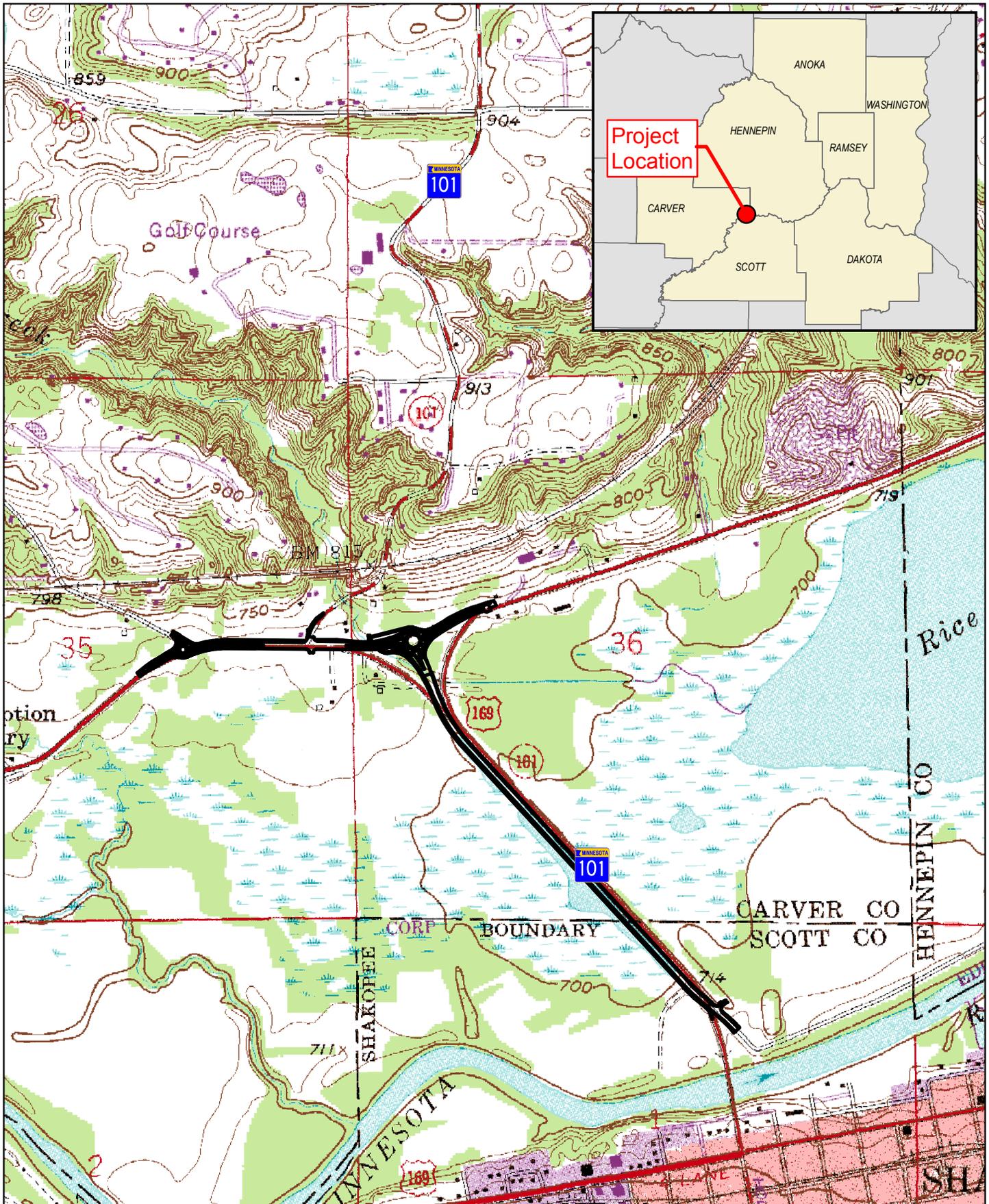


Carver County

TH 101 / FLYING CLOUD DR.
CHANHASSEN, MINNESOTA

TYPICAL SECTIONS

EXHIBIT
4



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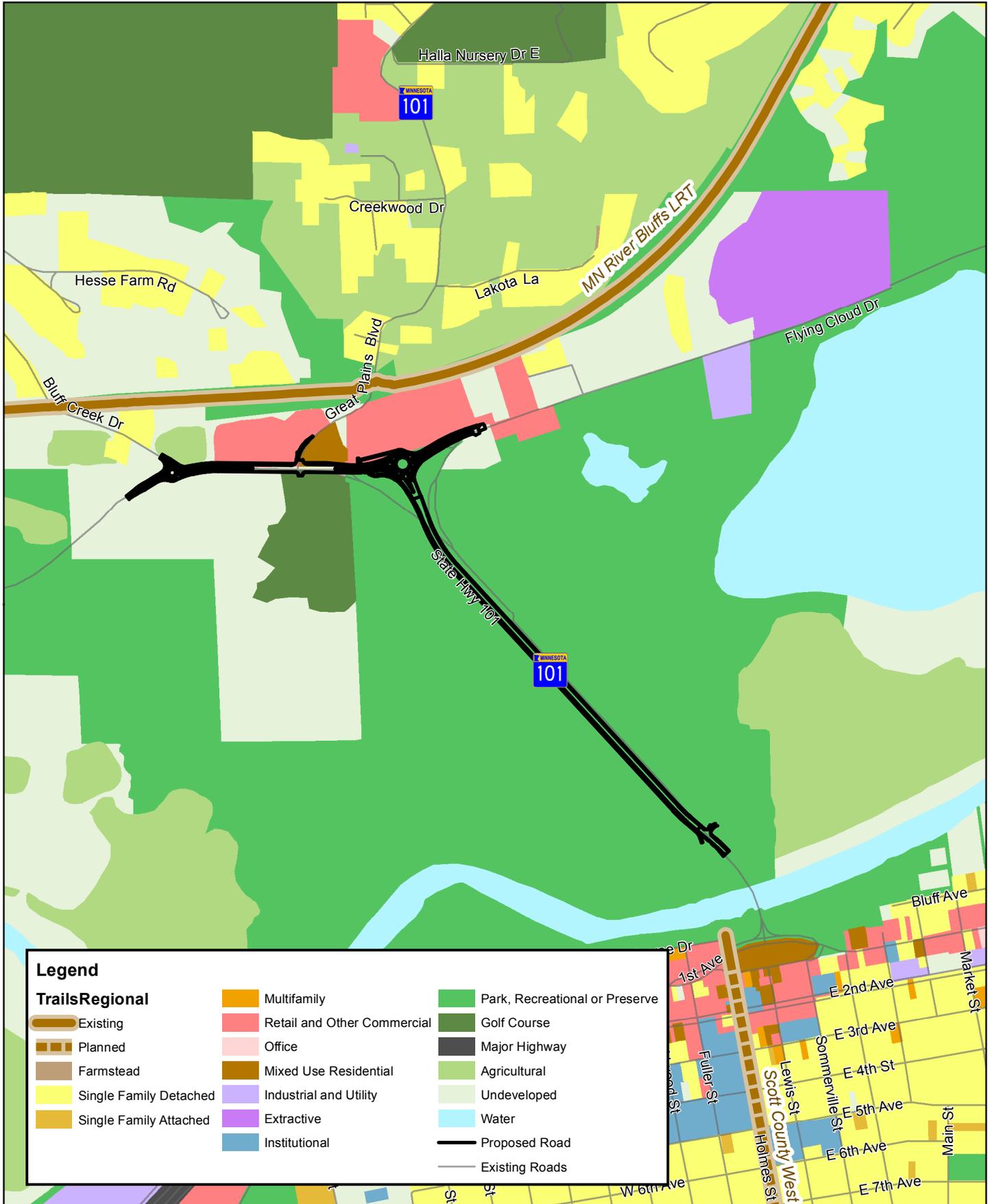


Project: CARVR 119938
 Print Date: 5/6/2013
 Map by: shack
 Projection: Carver County Coords
 Source: LMIC (Met Council), ESRI, MnDOT

Location Map
 Southwest Reconnection Project
 Carver County, Minnesota

Figure
 1

This map is neither a legally recorded map nor a survey map and is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources listed on this map and is to be used for reference purposes only. SEH does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. The user of this map acknowledges that SEH shall not be liable for any damages which arise out of the user's access or use of data provided.



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Legend

TrailsRegional		
	Existing	
	Planned	
	Farmstead	
	Single Family Detached	
	Single Family Attached	
	Multifamily	
	Retail and Other Commercial	
	Office	
	Mixed Use Residential	
	Industrial and Utility	
	Extractive	
	Institutional	
	Park, Recreational or Preserve	
	Golf Course	
	Major Highway	
	Agricultural	
	Undeveloped	
	Water	
	Proposed Road	
	Existing Roads	



Project: CARVR 119938
 Print Date: 5/6/2013
 Map by: shack
 Projection: Carver County Coords
 Source: LMIC (Met Council), ESRI, MnDOT

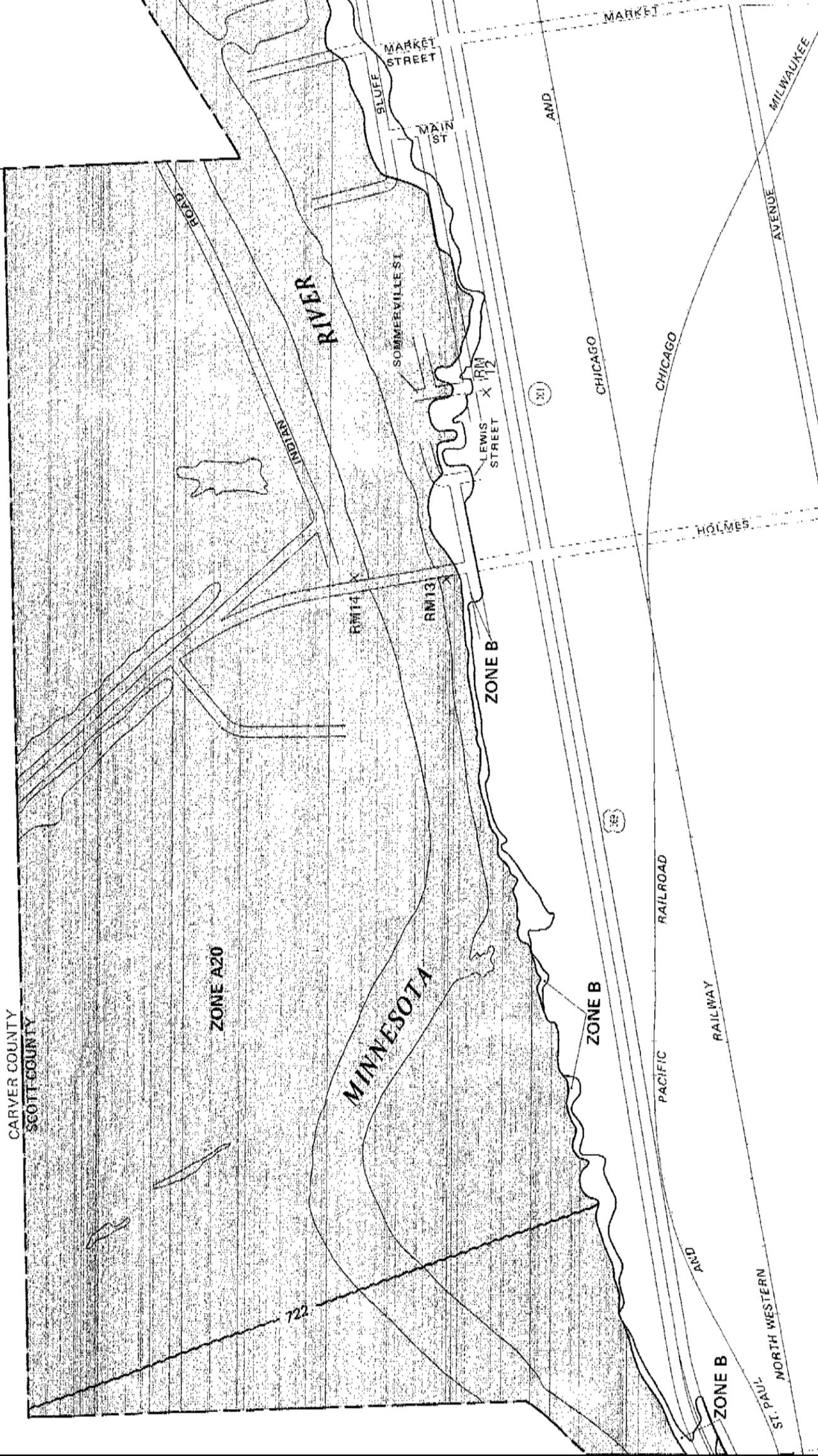
2010 Met Council Land Use
 Southwest Reconnection Project
 Carver County, Minnesota

Figure 5

This map is neither a legally recorded map nor a survey map and is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources listed on this map and is to be used for reference purposes only. SEH does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. The user of this map acknowledges that SEH shall not be liable for any damages which arise out of the user's access or use of data provided.



APPROXIMATE SCALE



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

CITY OF
SHAKOPEE, MINNESOTA
SCOTT COUNTY

COMMUNITY PANEL NUMBER
278434 0001 C

PAGE 1 OF 7

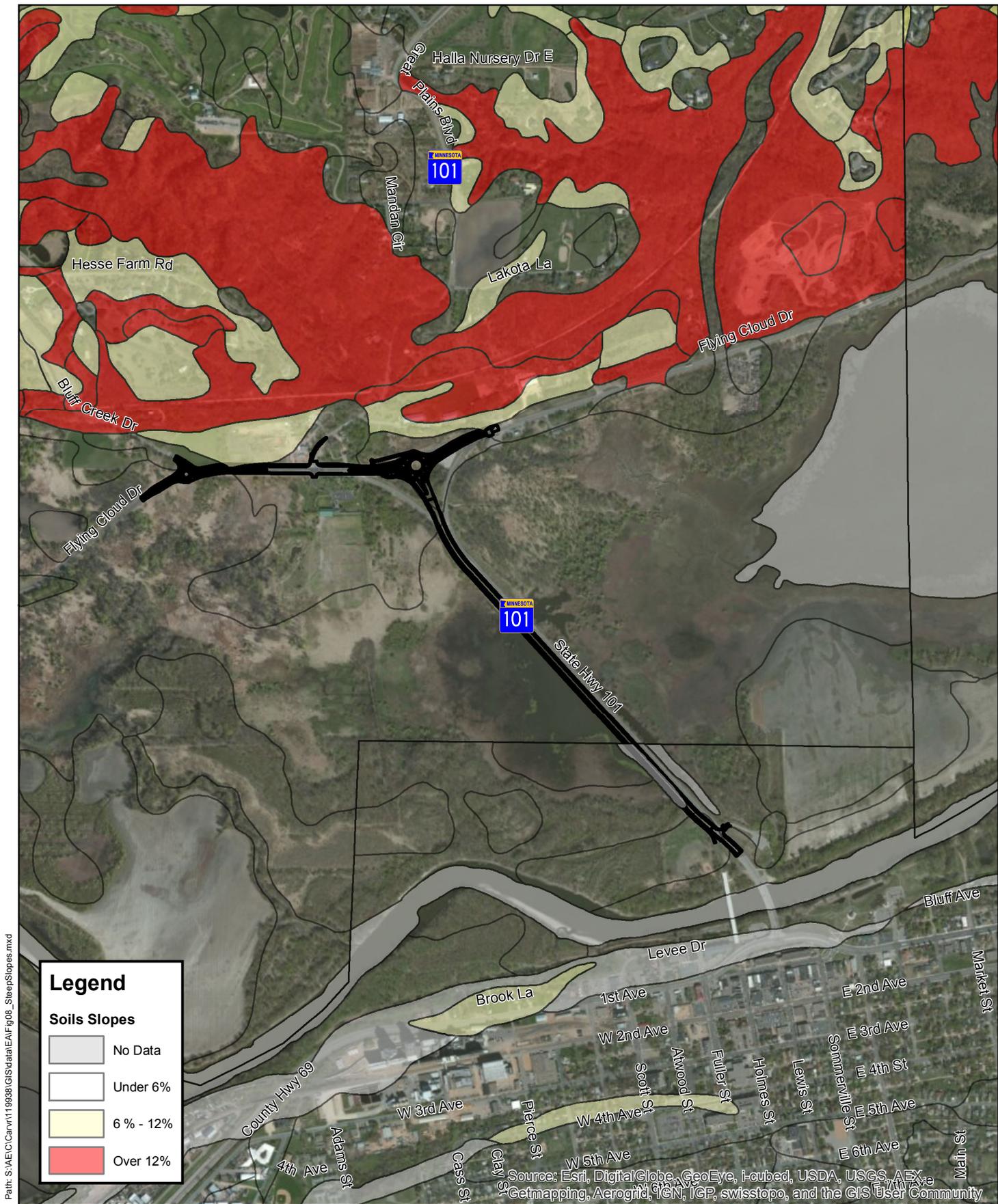
SEE MAP INDEX FOR PAGES NOT SHOWN

EFFECTIVE
SEPTEMBER 29, 1978



U.S. DEPARTMENT OF HOUSING
AND URBAN DEVELOPMENT
FEDERAL INSURANCE ADMINISTRATION

This is an official copy of a portion of the above referenced flood map. It was extracted using F-111 On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



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Legend

Soils Slopes

- No Data
- Under 6%
- 6% - 12%
- Over 12%

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Project: CARVR 119938
 Print Date: 5/6/2013
 Map by: shack
 Projection: Carver County Coords
 Source: SSURGO, ESRI, MnDOT

Steep Slope Map
 Southwest Reconnection Project
 Carver County, Minnesota

Figure
 8

This map is neither a legally recorded map nor a survey map and is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources listed on this map and is to be used for reference purposes only. SEH does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. The user of this map acknowledges that SEH shall not be liable for any damages which arise out of the user's access or use of data provided.

APPENDIX B – AGENCY CORRESPONDENCE

MNDNR Correspondence, dated October 12, 2012

MPCA Noise Coordination Letter, dated February 4, 2013

Memorandum of Understanding Between MnDOT and Carver County for MN/CSAH 101 Bridge and
CSAH 61 “Y” Construction

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Gombold, Brigid (DOT)

From: Leete, Peter (DOT)
Sent: Friday, October 12, 2012 12:06 PM
To: Dalton, Rick (DOT); Gombold, Brigid (DOT)
Cc: Jiwani, Suzanne (DNR); Sullivan, Dan (MPCA); Kauppi, Sheila (DOT); Straumanis, Sarma (DOT); Troyer, Brett (DOT); Stenlund, Dwayne (DOT); Yearwood, Terri L (DNR); Colvin, Steve E (DNR); Joyal, Lisa (DNR); Jiwani, Suzanne (DNR); Doperalski, Melissa (DNR); Cleveland, Mark L (DNR); Berg, Jeffrey J. (DNR); Gleason, John (DNR); Hintzman, Rachel (DNR); Ellison, Daryl G (DNR); Regenscheid, Diana H (DNR); Hanson, Michele (DNR)
Subject: DNR comments on MnDOT Early Notification Memo, TH101 reconstruction of Minn R crossing (SP1009-24)
Attachments: DNRbasemap.pdf; ENM-TH101_SP1009-24.pdf; Executive Summary.pdf

Rick/Brigid,

I am not sure how best to comment on this project. This project has been developed following a specialized Minnesota River flood study. The DNR was very involved in that process. Thus the DNR has had input since its inception (and will continue to do so through the various groups involved in the project). There is not much new to review in this ENM, other than to fit prior comments into your ENM process. Overall we have supported this project. Additional comments on details will obviously arise as details become known. Some generic comments:

1. The project will remove the TH101 causeway across the Minnesota River floodplain. Removing the road from flooding and restoring the natural flood flows along the river bottom is a win-win combination for our agencies interests.
2. The Minnesota River is a Public Water, as such a Public Waters Work permit will be required. As the project moves forward, design of the crossing should meet the conditions listed in GP 2004-0001: http://files.dnr.state.mn.us/waters/watermgmt_section/pwpermits/General_Permit_2004-0001.pdf
3. I have attached a maps of the project area (DNRbasemap.pdf) showing locations of DNR concern such as Public Waters (basins in light blue, watercourse in dark blue), designated aquatic invasive species (red), snowmobile Trails (in pink), and various polygons of rare features from the NHIS database. Your GIS folks also can access most of this data from the DNR's Data Deli website at <http://deli.dnr.state.mn.us/>. The following files will allow the creation of the same map and ease your cross reference for road locations.
 - MCBS Railroad Rights-of-Way Prairies
 - MCBS Native Plant Communities
 - MCBS Sites of Biodiversity Significance
 - Public Waters Inventory (PWI) Watercourse Delineations
 - Public Waters Inventory (PWI) Basin Delineations
 - Trout streams
 - Wildlife Management Areas
 - Snowmobile Trails
4. There are DNR properties in the area, specifically the Reguet WMA and the Public Access. We also have nearby State Parks and State Trails. It is my understanding that MnDOT is aware of these properties and has already been in contact with the appropriate folks regarding avoidance or potential impacts of various design options as they proposed.
5. The Minnesota Natural Heritage Information System (NHIS) has been queried to determine if any rare plant or animal species, native plant communities, or other significant natural features are known to occur within an approximate one-mile radius of the project area. Based on this query, rare features have been documented within the search area. See the attached files 'DNRbasemap.pdf'. For details on any of the polygons identified, please contact me.

- a. The Minnesota River contains several types of rare species (fish and native mussel species). A restoration of the floodway should ultimately provide aspects for their benefit, precautions should be taken not to cause adverse impact during construction.

With appropriate sediment control measures during construction, we do not believe the project will negatively affect any known occurrences of rare features. The NHIS is not an exhaustive inventory and thus does not represent all of the occurrences of rare features within the state. If information becomes available indicating additional listed species or other rare features, further review may be necessary.

6. There are many additional DNR folks already involved in this project. They are primarily:
 - Mark Cleveland (Parks and Trails)
 - Michele Hanson (Regional Planning)
 - Diana Regenscheid (WMA impacts)
 - Suzanne Jiwani (flood modeling)

DNR folks, if I've missed anything, please respond ASAP to Rick, Brigid, and myself.

Contact me if you have questions

peter

Peter Leete
Transportation Hydrologist
DNR Ecological & Water Resources
Ph: 651-366-3634

Office location: MnDOT's Office of Environmental Stewardship

From: Leete, Peter (DOT)
Sent: Tuesday, August 21, 2012 11:11 AM
To: Hanson, Michele (DNR); Regenscheid, Diana H (DNR); Doperalski, Melissa (DNR); Ellison, Daryl G (DNR); Cleveland, Mark L (DNR); Hintzman, Rachel (DNR); Berg, Jeffrey J. (DNR); Gleason, John (DNR); Jiwani, Suzanne (DNR)
Cc: Jiwani, Suzanne (DNR); Sullivan, Dan (MPCA); Gombold, Brigid (DOT); Kauppi, Sheila (DOT); Straumanis, Sarma (DOT); Troyer, Brett (DOT); Stenlund, Dwayne (DOT); Yearwood, Terri L (DNR); Colvin, Steve E (DNR); Joyal, Lisa (DNR)
Subject: MnDOT Early Notification Memo, TH101 reconstruction of Minn R crossing (SP1009-24)

Hi,
Attached is a MnDOT Early Notification Memo (ENM) for the reconstruction of the TH 101 crossing of the Minnesota River. However this is not a new proposal. The project was studied over the past couple years. In addition to the ENM, I have attached the executive summary for the flood mitigation study. If you want to see a copy of the entire study, let me know. I can email it, though it is 16mb, and I did not want to overwhelm your inbox.... The proposed project is to remove the causeway and replace it with a low bridge. The bridge deck will be at a higher elevation, thus less likely to be closed during high water. It will also be 4-lane. Final details are still being worked on. The project was recently awarded \$20M in state flood mitigation funding. An EAW will be completed for documentation on this project (so you will see it again during that process). A Public Waters permit (GP 2004-0001 authorization) will required too. The Project is scheduled for letting in May 2014. While the project will require a Public Waters permit, I believe the project will have an overall benefit to the area's resources. They will be trying to complete this project within the existing right of way, though there may be temporary impacts that will need to be coordinated. I think having DNR contacts identified for the project managers is the main question I have for this project.

These are the DNR primary contacts I know that have been involved in the past. Am I missing anyone?
Mark Cleveland (Parks and Trails)

Michele Hanson (Regional Planning)
Diana Regenscheid (WMA impacts)
Suzanne Jiwani (flood modeling)

Are these still the correct ones for MnDOT to contact as they work through designs? I know I am usually a point person for MnDOT projects, though with the speed of the design, I'd like to give them a direct contact list in case I am not available when they call....

As expected a search of the NHIS shows that there are rare features in the project area (see DNRbasemap.pdf attached), though I see no surprises. Maintaining impacts to within the existing right of way, the boat access, and WMA impacts/access are the general areas of concern that I see. Any other issues out there?

Please respond by Sept 21 and I will pass any comments on to MnDOT. Please contact me if you have questions

peter

Peter Leete
Transportation Hydrologist
DNR Ecological & Water Resources
Ph: 651-366-3634

Office location: MnDOT's Office of Environmental Stewardship



Minnesota Pollution Control Agency

520 Lafayette Road North | St. Paul, Minnesota 55155-4194 | 651-296-6300

800-657-3864 | 651-282-5332 TTY | www.pca.state.mn.us | Equal Opportunity Employer

February 4, 2013

Robert Rogers
SEH
3535 Vadnais Center Drive
St. Paul, MN 55110-5196

RE: SP 1009-24 (TH 101) Minnesota River Flood Plain Bridge Replacement and Improvements

As a county road, presuming the road undergoes the jurisdictional turnback, Highway 101 would be subject to the statutory exemptions from noise standards, as described in Minn. Stat. § 116.07, Subpart 2a. The stretch of Highway 101 crossing the river is shown on the December 17, 2012 concept layout map to have controlled access, which would categorize the project segment as not exempt from noise standards. However, there are no sensitive receptors along this segment. Therefore, MPCA staff concurs with the determination that a noise analysis is not necessary for the segment of Highway 101 crossing the Minnesota River.

Also, MPCA staff concurs with the determination that the project segment along County Road 61 is exempt from the noise standards because there is not full control of access and noise analysis is not necessary for state rule compliance.

Sincerely,

A handwritten signature in cursive script that reads "Anne Claflin".

Anne Claflin

Memorandum of Understanding (MOU)
between
Minnesota Department of Transportation
And
County of Carver
For MN/CSAH 101 Bridge and CSAH 61 “Y” Construction

THIS MEMORANDUM OF UNDERSTANDING is made and entered into by and between the State of Minnesota, acting through its Commissioner of Transportation (“MnDOT”) and the County of Carver, a political subdivision of the State of Minnesota (“Carver County”)

WHEREAS, MnDOT and Carver County, along with their partners, wish to construct a 4-lane river bridge over the Minnesota River floodplain between the Cities of Shakopee and Chanhassen along the County State Aid Highway (“CSAH”) 61 and Minnesota (“MN”) 101 corridor in order to minimize traffic disruption during flooding events; and,

WHEREAS, Carver County wishes to reconstruct CSAH 61 in the vicinity of the MN 101 intersections (commonly referred to as the “Y” intersection) to accommodate the new floodplain bridge and plan for future MN 101 improvements north of CSAH 61; and,

WHEREAS, MnDOT is preparing plans and environmental documentation to construct the new CSAH/MN 101 river bridge and road approaches, hereinafter referred to as the “Bridge Project”, and Carver County is preparing plans and environmental documentation to reconstruct CSAH 61 (Flying Cloud Drive), hereinafter referred to as the “Y Project”; and,

WHEREAS, MnDOT and Carver County have agreed to combine the Bridge Project and Y Project into one construction letting to achieve cost savings and minimize traffic disruption. The combined project depicted in Exhibit A is hereinafter referred to as the “Combined Project”; and,

WHEREAS, design, right-of-way acquisition, construction and maintenance of these improvements will be governed by separate Cooperative Agreements between MnDOT and Carver County and other parties as necessary, and:

WHEREAS, preliminary to producing a Cooperative Agreement for project development, construction, and construction administration, MnDOT and Carver County wish to enter into a Memorandum of Understanding to outline the responsibilities of each party; and,

WHEREAS, the parties agree that the Cooperative Agreements will be generally consistent with the terms of this Memorandum of Understanding;

NOW THEREFORE, the parties agree as follows:

- 1. Purpose and Scope:** The purpose of this Memorandum of Understanding(MOU) is: to organize and coordinate agency roles and responsibilities; and to identify subjects requiring execution of a Cooperative Construction Agreement for project development and construction of State Aid Project 010-661-002 (State Project 1009-24).
- 2. Term of MOU:** This MOU will be effective when all appropriate signatures have been obtained by MnDOT and Carver County whichever is later. This MOU will remain in effect until project construction is completed unless terminated earlier by mutual agreement of the parties.
- 3. Contractual Obligations.**
This Memorandum of Understanding is not a legally binding agreement and creates no legally binding obligations for any party. Either party may, upon written notice, amend, or discontinue its role outlined in the MOU. Because of this mutual desire to proceed, each party fully intends to make a good faith effort to achieve the goals described above including working together to find mutually beneficial solutions when problems arise.
- 4. Government Data.**
The parties acknowledge that this MOU, as well as any data created, collected, stored, or received under the terms of this MOU, are "Government Data" within the meaning of the Minnesota Government Data Practices Act (Minnesota Statutes chapter 13), and that they must comply with the provisions of the Act as it relates to such data.

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5. Responsibilities:

- A. Carver County will be the lead agency for project development and construction of the combined Project. Carver County will let the Combined Project by the end of May 2014 unless the parties mutually agree to a different schedule. The parties understand that there is risk in delivering a Combined Project by the end of May 2014 given the environmental concerns in the "Y" area. The parties agree that a contingency plan is required to ensure the construction of the Bridge Project begins in 2014. Carver County will develop a project schedule showing critical path items and project milestones along with a list or table of roles and responsibilities. The schedule and list of roles and responsibilities will be reviewed at monthly project management meetings to ensure the Combined Project is on track to meet the letting date. The parties agree that if the letting date is in jeopardy, and a delay is unacceptable, that the Combined Project will be split to allow Carver County sufficient time to deliver the Y Project separately. In this case Carver County will still be the lead agency for the Bridge Project utilizing MnDOT support.
- B. MnDOT will transfer ("turnback") MN 101 from CSAH 61 to the Scott County line as shown in Exhibit B prior to the construction contract letting. This subject will be included in the Cooperative Construction Agreement for the project.
- C. MnDOT will transfer 100% of the approved State construction funds (\$20,035,000) and Local Road Improvement Program funds (\$9,000,000) to Carver County prior to the construction letting of the Combined Project. MnDOT will consider providing additional funding for the Combined Project from other state funding sources. Carver County will be responsible to secure all the remaining funding from various sources to fully fund the Combined Project. Transfer of funds will be included in the Cooperative Construction Agreement for the project.
- D. MnDOT will perform construction administration, surveying and oversight for the Combined Projects, or provide money to the project to hire a consultant to perform these services, at no cost to Carver County. Supplemental Agreements (SA) and Change Orders (CO) will be approved by MnDOT and Carver County. The additional costs associated with SAs and COs for the Y Project will be paid by Carver County. The additional costs associated with SAs and COs for the Bridge Project will be paid by MnDOT. Any additional costs for delay or acceleration claims during construction will be shared equally by the parties. If the construction project bid award is lower than the estimate and provided funding, the parties agree to set that money aside to be used equally for SAs and COs on the project. This subject will be included in the Cooperative Construction Agreement for the Combined Project.
- E. If the projects are constructed separately, Carver County will still lead and let the projects, and MnDOT will provide contract administration and construction oversight for the Bridge Project, however, Carver County will have sole responsible for contract administration of the Y Project.
- F. As former state highways, improvements on CSAH 61 and MN 101, once transferred to Carver County, are eligible for County Turnback (CTB) funds. The amount of eligibility will be determined during detailed design. County Turnback Account funds (CTB) funds are

unavailable to fully fund the Combined Project for the next several years. Carver County will have to finance the majority of the CTB eligible share until funds become available. Funds are estimated to be available by 2022. A portion of the turnback funds may be available prior to letting.

- G. The Combined Project will be designed to State Aid standards and project development will follow the State Aid project development, review, and approval process.
- H. MnDOT will assign a project manager to assist the Carver County with administration and management of the Combined Project.
- I. Carver County will prepare a geometric layout to define the preliminary design of the Combined Project; however, the layout will not go through the MnDOT Layout Staff Approval process. MnDOT will perform a courtesy review of the layout in a timely manner to assist Carver County with the proposed geometrics.
- J. Carver County will complete the traffic modeling and associated documentation for either project.
- K. MnDOT will design the CSAH/MN 101 bridge. The bridge will be designed so that CSAH/MN 101 can stay open during construction to the extent possible. Short term closures may occur as necessary to switch traffic or complete critical construction stages. The Y improvements will be phased to accommodate traffic during construction with the 101 river crossing remaining open most of the time. It is understood that each phase will require total road closures for portions of the roadways.
- L. MnDOT will perform geotechnical investigation and engineering for the Bridge Project. All geotechnical reports will be given to Carver County to be incorporated into the Combined Project's documentation.
- M. MnDOT will complete floodplain and floodway modeling and documentation and bridge hydraulics necessary to receive DNR approval.
- N. It is understood that Carver County is not required to perform a noise evaluation for CSAH 61 as county highways are exempt from state noise abatement requirements. As TH 101 will be turned back prior to construction, Carver County will determine whether a noise evaluation is necessary for the Bridge Project. If it is deemed necessary, MnDOT will perform a noise evaluation for the Bridge Project.
- O. MnDOT will complete drainage and water quality design for the Bridge Project. Design details will be submitted to Carver County to include in the construction plans.
- P. MnDOT will perform wetland delineation and prepare the necessary wetland reports, permitting information, mitigation and/or restoration design for the Bridge Project, to be included in the construction plans.

- Q. MnDOT will prepare all necessary construction plans, specifications and cost estimates for design elements under their responsibility and submit them to Carver County for inclusion in the Combined Project bid documents.
- R. Preliminary and final design for CSAH 101 and trail south of the bridge will be performed by Carver County, excluding the geotechnical investigation and design, which will be completed by MnDOT. The materials and pavement recommendation will be completed by Carver County.
- S. Carver County will perform all other design related functions for the Combined Project.
- T. Carver County will complete an Environmental Assessment Worksheet for the Combined Project. MnDOT will provide applicable information and documentation it has prepared or will be preparing for the Bridge Project. Carver County will be the RGU for the EAW and MnDOT will delegate that authority to Carver County for the State Highway portion of the assessment. Carver County will request the same from Scott County for CSAH 101.
- U. Carver County will prepare and submit the necessary permit applications for the Combined Project. MnDOT will assist in any way it can with information, expertise and coordination efforts to procure the permits.
- V. Carver County will prepare a right of way plat and acquire right of way and easements as required for the "Y" Project. MnDOT will secure all necessary right- of-way way and easements for the Bridge Project including securing the necessary permits and or permission documentation from the DNR to construct the bridge.
- W. Carver County will assemble all construction bidding documents and let the Combined Project.
- X. Carver County will assign a project manager/engineer to assist MnDOT and/or its consultant with administration and management of the Combined Project during construction.

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I concur with this Memorandum of Understanding

Minnesota Department of Transportation:

By: Scott McBride
Scott McBride

Title: District Engineer

Date: 3/21/13

By: Amr Jabr
Amr Jabr

Title: Engineering Services Assistant
Division Director

Date: 3/22/12

County of Carver, Minnesota:

By: James Dack
Title: Chair, County Board of Commissioners

Date: 3/12/13

Attest: County Administrator

Date: 3/12/13

Exhibit A

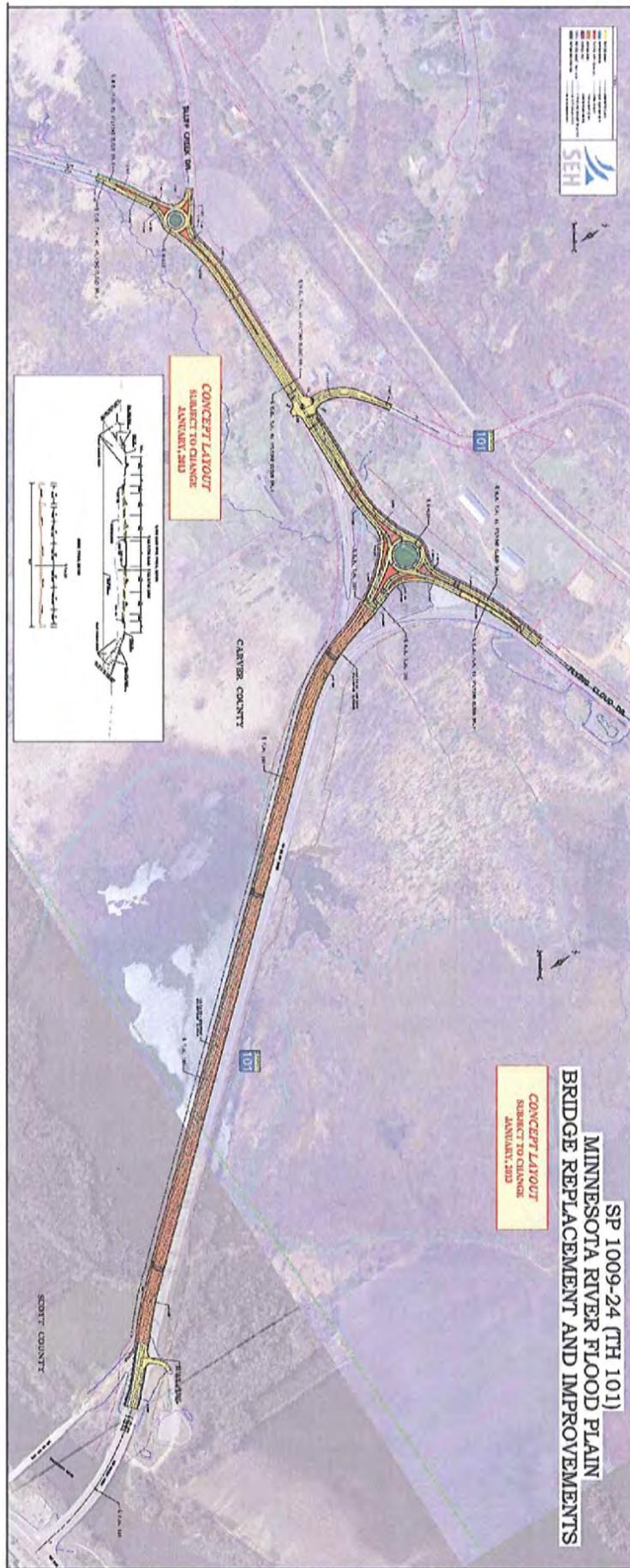


Exhibit B

