

STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION

District 1

1123 Mesaba Ave, Duluth, MN 55811

Categorical Exclusion Determination (CATEX)

Review: Draft () Final (X) Date: February 27, 2019 Trunk Highway: 53
State Project Number: Federal Project Number: SP 6920-53
Project Termini: South TH 53/TH 1 Junction to 4.8 Miles North of TH 217 (Ref. Point 87.1 to 151.5)
City(ies): N/A (no work within a city) County(ies): St. Louis, Koochiching
Section, Township, Range:

Table with 3 columns: SECTION, TOWNSHIP, RANGE. Rows include section numbers like 8,9 and township/range codes like 61N 18W.

Program: SC

Brief Project Description: Provide intersection safety improvements at north and south TH 53/TH 1 junctions; add passing lanes at four locations between Cook and International Falls

Letting Date: May 2019 Date Construction Expected to Begin: July 2019

District Determination and Approval

Based on the evaluation of this project and the attached documentation, it is determined that the project meets the criteria of and is properly classified as a Federal Categorical Exclusion (Class II Action Category 23 CFR 771.117 (C) (26). (It is also below the State EAW threshold).

There are no extraordinary circumstances such as:

- 1. Significant impacts on the environment;
2. Substantial controversy on environmental grounds;
3. Significant impacts to Section 4(f) or 106 property;
4. Inconsistency with any federal, state or local law or administrative determination relating to the environment.

It has been determined to be a:

[] PROGRAMMATIC CATEGORICAL EXCLUSION. Does not exceed any threshold in Attachment B of the Programmatic Categorical Exclusion Approval Agreement Between FHWA & MnDOT. (Only District Signature is required)

[X] CATEGORICAL EXCLUSION (CE): It is a CE, but concerns exist regarding one or more thresholds in Attachment B of the Programmatic CE Approval Agreement Between FHWA & MnDOT. (Requires OES and FHWA signatures).

Submitted by (Project Manager): Approved by (District Engineer)
Josie Olson, P.E., Project Manager Date 2/28/19 Duane Hill, P.E., District Engineer Date 2/28/19

OES and FHWA Approvals (OES / FHWA signatures required if the project is NOT a Programmatic categorical exclusion)

Based on the evaluation of this project and the attached documentation, it is determined that the project meets the criteria of and is properly classified as a Categorical Exclusion.

Approved: MnDOT Chief Environmental Officer Date 28 Feb 2019 Approved: FHWA Area Engineer Date 3/5/19

This document is available in alternative formats to individuals with disabilities by calling the Project Manager at the phone number listed above or through the Minnesota Relay Service at 1-800-627-3529.

ATTACHMENTS

Attachment A – Figures

- Figure 1, Project Location
- Figure 2, Location 1 Existing Conditions
- Figure 3, Location 3 Existing Conditions
- Figure 4, Location 4 Existing Conditions
- Figure 5, Location 5 Existing Conditions
- Figure 6, Location 6 Existing Conditions
- Figure 7, Location 1 Proposed Improvements
- Figure 8, Location 1 Wetland Delineation and Impacts
- Figure 9, Resource Management and Recreational Areas

Attachment B – TH 53 Regional Destination and Traffic Map

Attachment C – Automatic Traffic Recorder Location 211 Information

Attachment D – TH 53 Task Force Correspondence

Attachment E – Typical Sections

Attachment F – Environmental Review and Coordination Correspondence

Attachment G – Noise Study

Attachment H – Environmental Justice Data

Report Purpose

This report for this Class II (Categorical Exclusion) action documents the project's need and description, as well as social, economic and environmental impacts.

Project Description

Existing Condition

The project includes improvements to the portion of TH 53 generally between south of Cook, MN and International Falls, MN, an overall distance of approximately 70 miles. TH 53 is the primary north-south arterial roadway serving this portion of Minnesota. As depicted in **Figure 1** (please note that all figures are provided at the end of the text in **Attachment A**), the proposed project is comprised of five non-contiguous locations. It may be noted that the project initially included six locations, but one, the north TH 53/TH 1 junction, was removed due to schedule concerns. To be consistent with information in the previously published Environmental Assessment Worksheet (December 31, 2018 EQB Monitor) for the project, the location numbering was not changed for this Catex document. Existing conditions for each project location are described below.

Location 1 – South TH 53/TH 1 Intersection

See **Figure 2**. The intersection is approximately 3.5 miles south-southeast of Cook. Its westerly leg is County State Aid Highway (CSAH 22). It is in a rural, primarily wooded area. The Superior National Forest is south and east of this project element. At its closest point, the Superior National Forest is approximately 0.8 mile east of the intersection. There is a large equipment yard for a general contractor in the northwest quadrant of the intersection, and a fabricating shop in the southwest quadrant. TH 53 has a four-lane divided design at this location, and TH 1 and CSAH 22 are two-lane undivided. All the roadways have a rural section design (ditching for drainage). It is a thru-stop controlled intersection (stop signs on the minor legs).

Location 3 – Passing Lane Segment A

See **Figure 3**. This segment extends from RP 98.0 to RP 100.5, a distance of 2.5 miles. Its northwest terminus is approximately 0.5 mile southeast of the TH 53/ TH 73 intersection. It is two lane rural section and is within the Superior National Forest and the Kabetogama State Forest. The adjacent areas are forested with scattered rural residential properties and one contractor/aggregate business operation.

Location 4 – Passing Lane Segment B

See **Figure 4**. This segment extends from RP 118.5 to RP 121.0, a distance of 2.5 miles. It is approximately 7.0 miles north-northwest of the City of Orr, with a southerly terminus approximately 0.5 mile north of Townline Road. It is two lane rural section and is within the Superior National Forest and the Kabetogama State Forest. Its surrounding areas are forested. There is only one residence adjacent to this segment, at its southern end. Canadian Northern (CN) railroad tracks are adjacent to the highway on the west side. Based on MnDOT information, this line sees 17 trains per day on average.

Location 5 – Passing Lane Segment C

See **Figure 5**. This segment extends from RP 136.5 to RP 139.0, a distance of 2.5 miles. It is two lane rural section and entirely within the Superior National Forest and the Kabetogama State Forest. CSAH 129 connects to TH 53 from the east approximately 1,000 feet southeast of the southerly terminus of this segment. The surrounding area is forested with scattered rural residential properties and miscellaneous structures (garages/sheds), as well as one commercial property at the CSAH 129 intersection.

Location 6 – Passing Lane Segment D

See **Figure 6**. This segment extends from RP 149.0 to RP 151.5, a distance of 2.5 miles. It is approximately 10.0 miles southeast of International Falls, and approximately 2.5 miles northwest of the TH 53 junction with CSAH 217. It is two lane rural section, and its northwest tip is within the Koochiching State Forest. The area around this segment is primarily wooded, with scattered rural residential properties and miscellaneous structures (garages/sheds). CN railroad tracks are adjacent to the highway on the east side. As referenced previously, this line sees 17 trains per day on average.

Proposed Project

Refer to information provided under the previous heading for project location. General work elements are:

- Location 1: intersection safety improvements
- Locations 3 – 6: passing lane addition

The PPMS Work Type is GRSI (Grade and Surface). Work elements are described in greater detail in the Alternatives section after the Need for Project has been discussed.

Cost and Funding Source

Project Cost: \$9,378,155 (From 90% Plan Engineers Estimate)

Funding Source(s): FHWA: \$3,975,849; TH: \$5,402,306

Schedule and Project Manager

Key Project Milestones:

- Public meeting – December 6, 2018
- Project letting – May 2019
- Begin construction – July 2019
- Highway open to traffic – October 2019

*MnDOT's Project Management System (Primavera P6) will contain the latest estimated letting date and pre-letting activity status information.

The Project Manager is: Name: <u>Josie Olson, P.E.</u> Address: <u>1123 Mesaba Avenue</u> <u>Duluth, MN 55811</u> Phone: <u>(218) 725-2808</u> Email: josie.olson@state.mn.us	This report was prepared by: Name: <u>Peter Langworthy, Bolton & Menk</u> Address: <u>12224 Nicollet Avenue</u> <u>Burnsville, MN 55337</u> Phone: <u>(952) 890-0509</u> Email: peterla@bolton-menk.com
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Need for Project

Background

TH 53 is the primary north-south arterial roadway serving this portion of Minnesota. It directly links International Falls and points north in Canada with the Cities of Virginia, Eveleth, and Duluth. At Virginia, it links with TH 169, a major state-wide highway. In addition to general travel and tourism, it is a critical trucking route, supporting mining, logging, and related operations in the area. In comparison with typical trunk highways, this TH 53 in the project area sees a very high percentage of trucks (generally ranging from 12 to 15 percent of total traffic). It is also a key recreational route for those wishing to visit Voyageurs National Park, Superior National Forest, Arrowhead State Trail, the Lake Vermillion area and other resources in Minnesota and to the north in Canada.

A regional destination and traffic map is provided in **Attachment B**. This visually depicts the many destinations in the TH 53 travelshed and illustrates the high percentage of trucks relative to general traffic. It illustrates what a critical transportation link TH 53 is for this part of the state.

In 1998, the Highway 53 Long Range Improvement Task Force ("Highway 53 Task Force") was formed to promote and guide improvements to TH 53, primarily between Virginia, MN and International Falls, MN. This body was and continues to be made up of representatives of the cities of International Falls, Orr, Cook, and Virginia, as well as representatives of St. Louis County, Koochiching County, the State Patrol, and local businesses and residents. Assisted by the efforts of this Task Force and former US Congressman James Oberstar, Highway 53 between International Falls and Chippewa Falls, WI was designated as the "Falls to Falls" High Priority Trade Corridor (Congressional High Priority Corridor #41) in the Federal Transportation Equity Act (TEA-21) enacted in 1998.

Categorical Exclusion Determination
S.P. 6920-53 (T.H. 53)

The Falls to Falls corridor was awarded approximately \$45 million under the National Corridor Infrastructure Improvement Program (NCIIP), with the funding being fully obligated 2009. Much of this funding has gone toward projects to convert TH 53 from two-lane to four-lane divided between the TH 169/TH 53 interchange north of Virginia to the southern city limit of Cook. The most recent work to accomplish this expansion was completed in 2014. This was an approximately nine-mile project between the Rice River and Cook.

MnDOT has met regularly with the Highway 53 Task Force throughout its existence to discuss and prioritize improvements to the corridor. The proposed project is the outgrowth of close coordination between MnDOT and the Task Force.

Project need is discussed under the following headings based on the primary project components.

Location 1 – South TH 53/TH 1 Junction

Primary Need: Vehicle Safety

Based on 2017 MnDOT counts, traffic volumes at this intersection area are as follows: TH 53 – 3,800 vpd; TH 1 – 495 vpd; CSAH 22 – 485 vpd. As mentioned previously, this stretch of TH 53 was reconstructed from two-lane to four-lane divided in 2014. This project added capacity to the mainline, partially mitigated a skewed condition at this intersection, and was designed in accordance with applicable MnDOT standards. However, since the project was completed, the intersection has experienced a high number of crashes.

Table 1, below, provides a summary of three-year crash data (since the opening of the four-lane section).

Table 1. South TH 53/TH 1 Intersection 2015-2017 Crash Information

Total Crashes	10 ¹
Observed Crash Rate ²	2.09
Statewide Average Crash Rate ³	0.26
Critical Crash Rate ⁴	0.96
Critical Crash Index ⁴	2.18

¹0 fatalities, 0 incapacitating injury, 5 non-incapacitating injury, 2 possible injury, 3 property (includes vehicles) damage only.

²Total crashes per million vehicles entering the intersection area.

³For similar intersection category.

⁴Please see information provided in text.

It can be seen that the observed crash rate is substantially higher than the statewide average for this intersection category. However, this comparison may not be conclusive; since crashes are relatively rare events that are random unless there is an intersection characteristic causing them, traffic engineers use what is termed the critical crash rate. This is calculated with statistical methods to determine what the observed crash rate would need to be to conclude that it is statistically different than the statewide average with a high level of confidence, and therefore not due to random occurrences. The observed crash rate at this intersection for the study period is 118 percent higher than the critical crash rate (2.09 versus 0.96), leading to a critical crash index of 2.18 as shown in **Table 1**. This provides clear evidence of a safety problem at this location which warrants mitigation.

Secondary Need

There are no notable Secondary Needs for this project location.

Additional Considerations

There are no notable Additional Considerations for this project location.

TH 53 Corridor Between Gook and International Falls

Primary Need: Vehicle Mobility

As referenced previously, this corridor sees a very high percentage of trucks (between 12 and 15 percent of total traffic in between Cook and International Falls) and other slow-moving vehicles such recreational vehicles and/or vehicles pulling trailers (boats, campers, ATVs, etc.). These trucks and vehicles are not only slow-moving, but also long and difficult to pass. The recreational destinations in the project area are depicted graphically in **Attachment B**. The recreational travel leads to high concentrations of travel during the summer months and highly directional travel during peak times such as the beginning and ending of weekends/holidays.

Attachment C provides information from Automatic Traffic Recorder (ATR) Station (211), which is approximately 10.5 miles south of Cook. This is the closest available ATR station on TH 53 and it captures the variability of travel along TH 53 due to recreational traffic in the region. Traffic volume at ATR Station 211 during the month of July in 2017 was almost exactly double that of January. In addition, the average volume between June and September was approximately 33 percent higher than for the year overall. Regarding directional travel, it can be seen in the second page of **Attachment C**, for example, that on Friday, June 30 between 4 and 5 pm and on Friday, September 1 between 2 and 3 pm, 65 percent of the traffic is northbound and 35 is southbound. Overall, this seasonal factor indicates that annual averages are not indicative of seasonal/peak conditions in terms of passing opportunities and mobility.

Much of this overall stretch of TH 53 is characterized by rolling terrain and frequent curves, thus limiting passing opportunities. Between Cook and International Falls, a distance of approximately 70 miles, there currently are only two highway segments with dedicated passing lanes: a) approximately four miles south of Orr (approximately one-mile segment), and b) in the northern portion of Orr (approximately one-half mile segment). The problem of delay caused by inadequate passing opportunities has been expressed for years by stakeholder users of the highway. Perhaps most notably, this includes the Highway 53 Task Force referenced previously. A letter from the Highway 53 Task Force addressing existing difficulties is provided as **Attachment D**.

Secondary Need

There are no notable Secondary Needs for these project locations.

Additional Considerations

There are no notable Additional Considerations for these project locations.

Alternatives

"No Build" Alternative

The No Build Alternative was considered. This would consist of limited maintenance activities on a scheduled or as-needed basis. This Alternative would have the following consequences:

- The south TH 53/TH 1 intersection would likely continue to see high numbers of crashes, including severe crashes.
- Mobility in the stretch of TH 53 between Cook and International Falls would continue to be constrained by limited passing opportunities to get around a slow-moving vehicles which are prevalent in this key corridor.

This Alternative was not selected as the Preferred Alternative because it does not meet the Purpose and Need for the project. However, it is being retained through the Social, Economic, and Environmental (SEE) analysis process for comparative purposes.

Build Alternatives Review – Background

Reflecting MnDOT's desire give local stakeholders a voice in highway improvement planning, MnDOT worked extensively with the previously-referenced Highway 53 Task Force to evaluate and select alternatives which would represent the most efficient and effective investments for the remaining NCIIP funding (approximately \$3.9 million). Build Alternatives information organized by project location under the following headings.

Location 1 – South TH 53/TH 1 Junction

Alternatives which could conceivably be implemented at this location to improve safety conditions would include signalization, conversion to a roundabout design, provision of grade separation, and conversion to a Restricted Crossing U-Turn (R-CUT) design. These are addressed below.

Signalization: This is not viable because the traffic levels to not meet applicable warrants and therefore was not selected as the Preferred Alternative. Moreover, based on MnDOT experience with traffic signals, this alternative would likely not provide the desired crash reduction results in this setting.

Conversion to Roundabout: Roundabouts are increasingly prevalent in Minnesota and the rest of the country and are effective safety measures. However, they are not an appropriate option on divided, rural, high-speed highways. The posted speed limit on TH 53 is 65 mph at this location, and typically speeds drop to 20 mph through roundabouts. A roundabout would not be an expected condition for drivers on a road like TH 53. In addition, this would be a costly measure (\$1.5 to \$2.0 million range anticipated) and would have the potential for environmental

Categorical Exclusion Determination S.P. 6920-53 (T.H. 53)

impacts. Due this combination of factors, a roundabout design was not selected as the Preferred Alternative for this location.

Grade Separation: This alternative would greatly improve safety conditions, but would be cost-prohibitive for a relatively low volume intersection such as this one. A grade-separated interchange would likely cost in the range of \$15-20 million and would have a sizable potential for environmental impacts. It was not selected as the Preferred Alternative.

R-CUT Modification: MnDOT has been installing R-CUT intersection modifications on rural divided highways to improve intersection safety conditions since 2010. Other states had been using this approach prior to 2010. This strategy limits the vehicle conflict points with the most potential for serious crashes by prohibiting the following movements:

- Left turns from the minor intersection legs (in this case TH 1 and CSAH 22) onto the mainline (in this case TH 53)
- Through movements on the minor intersection legs across the intersection

With an R-CUT design, drivers on the minor legs who wish to turn left on the mainline highway or cross it do not need to focus on traffic from both directions on the mainline at once. Drivers on the minor legs wishing to turn left onto the mainline first turn right onto the mainline, move to a left turn/U turn lane, and complete a U turn in the direction they wish to proceed. If they wish to make a through movement across the mainline, they move to a right turn lane after U turn referenced above to turn onto the minor leg in the direction they wish to proceed. Cuts are provided in the median for the U turns, typically 400 to 1,000 feet downstream of the intersection. Mainline drivers can make left turns onto the minor legs using channelized turn lanes.

R-CUT conversions represent a high impact, low cost approach that has consistently been documented to be effective in reducing crashes, most notably serious crashes, at this category of intersection. One such study is *A Study of the Traffic Safety at Reduced Conflict Intersections in Minnesota*, MnDOT, 2017. This type of treatment also has relatively minor affect to the overall footprint of the intersection and, therefore, has relatively limited potential for environmental impacts.

Preferred Alternative: Based on cost, effectiveness, and environmental factors, District 1 selected the R-CUT design as the Preferred Alternative for Location 1. A relatively standard R-CUT design is proposed, the layout is provided as **Figure 7**. The typical sections are provided in **Attachment E**.

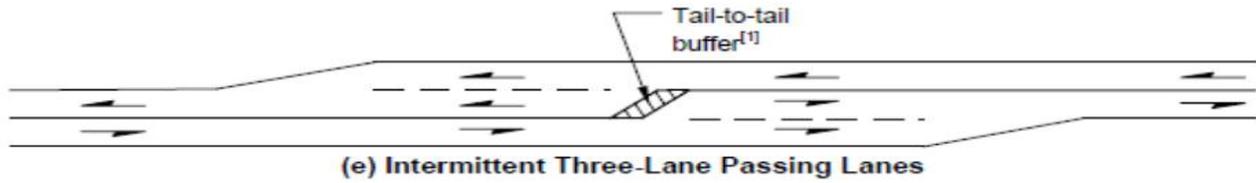
Cook to International Falls – Locations 3-6

The most comprehensive approach to reducing existing delays caused by inadequate passing opportunities as discussed previously would be to extend the four-lane divided design which currently ends south of Cook north to International Falls. However, this was eliminated from further consideration due to high cost and the potential for environmental and local impacts.

A more targeted approach is to provide dedicated passing lanes at strategic locations within this portion of the project area. When reviewing alternatives for such passing lane segments, a key goal for MnDOT and Highway 53 Task Force was to use available funding a cost-effective manner. It was also important to limit the potential for right-of-way and environmental impacts. The selection of locations for the passing lane segments was to an important degree dependent on the design and associated costs of the passing lane segments.

The baseline alternative for the passing lane design was to provide side-by-side passing lane opportunities with a four-lane section – one travel lane and one passing lane in each direction. This is the design for the two existing passing lane segments in the project corridor (one approximately four miles south of Orr, and the other in the northern portion of Orr). This design has proven to function effectively. However, District 1 wished to evaluate an alternate design which would not increase the existing footprint of the roadway – this would limit impacts and minimize costs.

An alternative was identified that is referred to the “2+1” design. This approach is relatively common in Europe and is now being implemented in North America. With this alternative, the two-lane roadway is converted to a three-lane section with the center lane serving as a passing lane. The direction of allowed passing alternates, with tapered transition areas as separating features. In European examples, directional passing lanes range from 1.0 to 2.0 kilometers (0.6 to 1.2 miles) in length. A schematic of this approach is provided below; please note that this is not to scale and is intended only to show the basic design approach.



Source: WSDOT Design Manual, M 22-01. 14, July 2017

One factor favoring the 2+1 design for this project is that TH 53 has wide (10 foot) shoulders throughout the Cook-International Falls corridor available for repurposing as “outside” through lanes to accommodate the central passing lane.

Preferred Alternative: The 2+1 design described above was selected for the project due primarily to low costs and low potential for environmental impact. The selection of this design was an important avoidance component regarding the potential for right-of-way, wetland, and other impacts. The project elements are summarized below:

- All passing lane segments to have the same length (2.5 miles), typical sections, and transition tapers.
- Reconstruct existing paved shoulders to be able to carry through traffic.
- Add 1' paved width to shoulder (reduced gravel shoulder width).
- Perform variable depth mill and overlay to remove roadway crown from the middle of the proposed dedicated passing lane areas.
- Provide transition areas to move motorists from the current typical section at either end of each passing segment to the proposed passing lane typical section, which will include 5' paved shoulders, 12' driving lanes (one either direction), and one 12' center passing lane (see **Attachment E**).
- Half of each proposed passing lane segment length will be dedicated to northbound passing, and half dedicated to southbound passing, with a transition area in between.

The four passing lane segment locations as depicted in **Figure 1** were selected based on the following factors:

- Combine with the two existing passing lane segments referenced previously to provide approximate ten-mile spacing of passing lane segments between Cook and International Falls.
- Avoid horizontal curves where feasible.
- Avoid roadway intersections, driveways, and large culverts where feasible.
- Avoid right-of-way and wetland impacts.

The only passing lane areas where work will be outside the existing gravel shoulder is on curve locations to accommodate superelevation factors. These areas represent approximately three percent of all of the proposed passing lanes combined in terms of linear length. In these areas, sideslope tie-ins will be at a 1:4 grade, steeper than the existing sideslope grades which are 1:6. This will limit the potential for environmental impacts.

SOCIAL, ECONOMIC, AND ENVIRONMENTAL (SEE) IMPACTS

This project has been reviewed for its potential effects on the environment and community. Information is presented for those items checked "yes" and meriting individual discussion. If items are checked in the "no effect" box, they have been considered, relative to appropriate laws, executive orders, rules, and regulations.

Please note: The Early Notification Memo (ENM) process for this project included a project location which has since been removed due to schedule concerns. As referenced above, the location that was removed was the north TH 53/TH 1 junction (Location 2). Comments made during the ENM process on this location are not covered in the following SEE review; however, all other comments are covered.

Social, Economic, and Environmental Impacts				
Issue	Questions	Degree of Impact		
	Will the project . . .	Y e s	N o	Impact Description or Page Reference
NATURAL ENVIRONMENT				
<u>Farmland Impacts</u>	Require any right of way?		X	
<u>Fish and Wildlife</u>	Affect fish or wildlife? (including <u>Migratory Birds</u>)	X		The project will be entirely within roadway right-of-way. There will be no work in public waters. No tree removal will be required. Please see additional relevant information under the Threatened and Endangered Species – Federal heading and the Threatened and Endangered Species, Species of Special Concern, State heading at the end of this table.
<u>Threatened and Endangered Species, Federal</u>	Affect any Federal endangered species due to project location and design?	X		See information under Threatened and Endangered Species Act, Federal heading at the end of this table.
<u>Threatened and Endangered Species, Species of Special Concern, State</u>	Affect any State endangered species due to project location and design?		X	See information under the Threatened and Endangered Species, Species of Special Concern, State heading, at the end of this table.
<u>Visual Quality</u>	Affect visual quality to or from natural visual resources, cultural visual resources, or project environment?		X	The proposed project locations are within an existing highway corridor, surrounded primarily by forested areas. The project will not notably change the visual characteristics of the highway relative to its context. The project will not impair the ability to enjoy the natural features along the overall corridor.
<u>Vegetation</u>	Affect any of the four vegetation categories?		X	See information under the Vegetation heading at the end of this table.
Water-Related Issues				
<u>Floodplains</u>	Cross or lie adjacent to any floodplain area?		X	

Categorical Exclusion Determination
S.P. 6920-53 (T.H. 53)

Social, Economic, and Environmental Impacts				
Issue	Questions	Degree of Impact		
	Will the project . . .	Y e s	N o	Impact Description or Page Reference
<u>Wetlands</u>	Have wetlands present within the construction limits?	X		See information under the Wetlands heading at the end of this table.
	Affect wetland habitat?	X		
<u>Stream or Water Body Modification</u>	Change the course, current, or cross section of any stream?		X	
<u>Special River Concerns</u>	Affect > a state or federal Wild & Scenic River ; > a federal candidate Wild & Scenic River ; > a state Canoe & Boating River ; > MNRRRA		X	
<u>Erosion Control</u>	Involve major soil disturbance (depth or volume) or have erosion potential due to land form, wind patterns, or water volume?		X	The project does not involve conditions or design elements that would notably elevate the potential for erosion impacts. The project will require a National Pollutant Discharge Elimination System (NPDES) construction permit for stormwater. Under this permit, MnDOT will prepare a Stormwater Pollution Prevention Plan (SWPPP) which will define Best Management Practices (BMPs) that will further limit the potential for erosion impacts. See further information under the Water Quality heading at the end of this table.
<u>Water Quality</u>	Affect water quality of lakes, streams, wetlands, etc.?		X	See information under the Water Quality heading at the end of this table.
<u>Section 404 Permit (COE)</u>		X		See information under the Wetlands heading at the end of this table.
<u>Coast Guard Permits</u>			X	
<u>Coastal Zone Impacts</u>	Affect highways along Lake Superior?		X	

Categorical Exclusion Determination
 S.P. 6920-53 (T.H. 53)

Social, Economic, and Environmental Impacts				
Issue	Questions	Degree of Impact		
	Will the project . . .	Y e s	N o	Impact Description or Page Reference
PHYSICAL / CONSTRUCTION				
<u>Air Quality</u>	Affect air quality?		X	Dust will be generated when construction activities disturb existing vegetative ground cover and allow soil material to become airborne. Operation of construction equipment will result in increased levels of engine exhaust emissions. Because these emissions will be intermittent and not concentrated in any one location, they are not expected to adversely affect air quality at receptor locations in the project corridor. The project is not located in an area in which conformity requirements apply, and the nature of the project would not increase traffic volumes. Therefore, the project is not anticipated to have significant impacts or cause a significant decrease in air quality.
<u>Noise</u>	Affect noise sensitive receptors?		X	See information under the Noise heading at the end of this table.
<u>Utilities</u>	Affect utilities?		X	
<u>Construction Impacts</u>	Cause construction impacts (erosion, noise, air, vibration, etc.)?	X		See information under the Construction Impacts heading at the end of this table.
<u>Contaminated Properties or Materials</u>	Involve excavation (including utilities) in any known or potentially contaminated property, or handling of any contaminated materials?		X	See MnDOT Office of Environmental Stewardship Contaminated Properties Early Notification Letter response in Attachment F .
<u>Excess Materials</u>	Involve disposal of excess materials outside planned construction limits?	X		Any excess material will be the property of the Contractor. Project specifications will require that such material be disposed of in compliance with all applicable environmental regulations. This includes no disposal in wetlands, floodplains, or other environmentally sensitive areas.
<u>Groundwater Geology, Earthborne Vibration</u>	Affect groundwater, geology, or cause earthborne vibrations?		X	No karst conditions or other sensitive geologic features are known to exist in the overall project area. The project will not require dewatering.
<u>Traffic Detour</u>	Require a traffic detour?		X	See information under the Traffic – Construction heading at the end of this table.

Categorical Exclusion Determination
S.P. 6920-53 (T.H. 53)

Social, Economic, and Environmental Impacts				
Issue	Questions	Degree of Impact		
	Will the project . . .	Y e s	N o	Impact Description or Page Reference
SOCIAL-ECONOMIC				
<u>Access Control</u>	Change access to properties (close, change location, make one-way, etc.)?		X	
<u>Land Use Impacts</u>	Be inconsistent with local and regional land use plans?		X	
<u>Relocation</u>	Require any relocation of homes or businesses?		X	
<u>Right of Way</u>	Require any right of way (or easements)?		X	
<u>Parks, Recreation, Section 4(f) or 6(f)(LAWCON)</u>	Use any significant public park, recreation, or wildlife or waterfowl refuges, or any historical site? Will the project affect any LAWCON land?		X	See Figure 9 for resource management and recreational areas. The project will not encroach into or otherwise affect these areas.
<u>Economic Impacts</u>	Affect business activity or have other economic impacts?		X	The project will improve mobility and safety conditions for drivers in the overall project area. Detours and access closures will not be required during construction.
<u>Environmental Justice</u>	Have disproportionately high and adverse human health or environmental effects on minority populations and low-income populations?		X	See information under the Environmental Justice heading at the end of this table.
<u>Social</u>	Affect public safety (i.e. police or fire protection)?		X	
	Impact sensitive groups (children, handicapped, minorities, poor, etc.)?		X	
	Affect accessibility to schools, churches, recreation facilities, etc.?		X	
	Affect community cohesion?		X	
<u>Bikeways & Pedestrians</u>	Affect bicycle and/or pedestrian movements?	X		See Accessibility, and Bike and Pedestrian Early Notification responses in Attachment F . Non-motorized connections will be improved with the inclusion of ADA accommodations including curb ramps at Location 1.

**Categorical Exclusion Determination
S.P. 6920-53 (T.H. 53)**

Social, Economic, and Environmental Impacts				
Issue	Questions	Degree of Impact		
	Will the project . . .	Y e s	N o	Impact Description or Page Reference
<u>Accessibility</u>	Affect sidewalk or curb and gutter (design for)?	X		See previous response.
<u>Transit</u>	Affect <u>transit routes</u> ?		X	
<u>Controversy</u>	Be controversial or be likely to cause controversy?		X	
CULTURAL RESOURCES				
<u>Historical Archaeological Cultural</u>	Affect any historical, archaeological, or cultural site?		X	See Section 106 correspondence including MnDOT <i>Cultural Resources No Historic Properties Affected</i> determination letter provided in Attachment F . See also Roadside Historic Properties Early Notification Memo response provided in Attachment F . This response notes that the Orr Wayside Parking Area is on the National Register of Historic Places. None of the five project locations will directly affect this site. The Contractor will be directed not to use the Orr Wayside Parking Area for construction purposes. This includes no material storage, no vehicle storage, no contractor parking, no trailer loading, etc.
<u>Tribal Lands</u>	Affect Tribal Lands?		X	

NOTES CLARIFYING SEE CONCERNS:

Threatened and Endangered Species, Federal

Please see the Endangered Species Act (ESA) Section 7 determination letter (November 14, 2018) by MnDOT's Protected Species Coordinator (from the Office of Environmental Stewardship – OES) in **Attachment F**.

This letter made the following determinations and requested concurrence from the US Fish and Wildlife Service (USFWS):

- Northern long eared bat (*Myotis septentrionalis*) – May affect, not likely to adversely affect
- Gray wolf (*Canis lupus*) – No effect
- Canada lynx (*Lynx canadensis*) – No Effect
- Piping plover (*Charadrius melodus*) and designated Critical Habitat – No effect
- Rufa red knot (*Calidris canutus rufa*) – No effect

Regarding the northern long eared bat, MnDOT's OES identified that there are no documented hibernacula and/or roost trees within the project area. OES made its determination based on this and other project information including committed Avoidance and Mitigation Measures and Additional Conservation Measures (see below). It also relied on the USFWS Programmatic Biological Opinion for FHWA, FRA, FTA Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87Stat. 884, as amended; 16 U.S.C 1531 et seq.).

Categorical Exclusion Determination S.P. 6920-53 (T.H. 53)

The MnDOT OES Section 7 determination and request for concurrence letter identified control measures that MnDOT commits to for the project. These are provided in full in **Attachment F**, and are summarized below:

Avoidance and Minimization Measures (AMMs):

- General AMM 1: Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of FHWA environmental commitments, including applicable AMMs.
- Lighting AMM1 and AMM 2: Direct temporary lighting, if used, away from weeded areas during the bat active season (April 1 through October 31). New or replacement of existing permanent lighting will use downward-facing, full cut-of lens lights (with same intensity or less for replacement lighting). BUG lighting not applicable for this project.

Additional Conservation Measures:

- No tree clearing.
- Rolled erosion control products must be limited to 'bio-netting' or 'natural-netting' (category 3N or 4N) woven type products. Welded plastic mesh netting will specifically not be allowed.
- Revegetation of disturbed soils will follow D1 Vegetation Establishment Recommendations, and use native mixes in areas that are not proposed for mowed turf grass.

MnDOT OES sent its determination letter to USFWS February 1, 2019. Based on information provided by OES to District 1 (see email correspondence dated February 4, 2019 provided in **Attachment F**), no USFWS response after 14 days signifies concurrence with the OES determination. No response was provided within 14 days. Thus, no further Section 7 review or coordination is required for this project.

Threatened and Endangered Species, Species of Special Concern, State

Please see the Minnesota DNR Early Notification Memo response provided in **Attachment F**. DNR queried the Minnesota Natural Heritage Information System (NHIS) to determine if any rare plant or animal species, native plant communities, or other significant natural features are known to occur within and approximate one-mile radius of the project area. Based on this review, DNR identified that Location 5 (Passing Lane Segment C) passes through bogs and wooded wetlands (white cedar swamp) that contain rare plant species, including three of special concern species: White Adder's Mouth (*Malaxis monophyllos var. brachypoda*), Lapland Buttercup (*Ranunculus lapponicus*), and Northern Oak Fern (*Gymocarphium robertianum*). The DNR indicates that there are no known locations of these species within MnDOT right-of-way, where the work will take place. As recommended by DNR, construction plans for Location 5 (Passing Lane Segment C) will include 'Area of Environmental Sensitivity' labeling, and associated construction BMPs will be used. Surficial stormwater flow patterns will not be altered and no changes to culvert elevations are proposed.

Regarding other comments made in the DNR Early Notification Memo response, the following information is provided:

- The project will not involve work in Minnesota Public Waters.
- Cured In Place Plastic (CIPP) liners will not be used as part of culvert work for the project.
- The project construction will not require the withdrawal of more than 10,000 gallons of water per day or 1 million gallons of water per year from surface water or groundwater.
- The project includes no tree removal or trimming.

Vegetation

Please see MnDOT Roadside Vegetation Management Unit Review in the **Attachment F**. It may be noted that the portion of the project requiring tree removal (north TH 53/TH 1 junction) has been removed from the project as noted previously; this removal was subsequent to the circulation of Early Notification Memo. This response identifies that there are not likely to be any impacts to rare species or rare native plant communities as part of this proposed work. As applicable, the project will use tree protection measures based on MnDOT Standard Specifications 2572. When requiring the use of temporary fence and/or clean root cutting, it will be clearly called for in the construction plans, and Standard Plan 50297.302 will be included in the plan package. Areas under or near trees will not become transport or staging areas for equipment or materials. The project will comply with the District 1 Vegetation Establishment Recommendations letter.

Categorical Exclusion Determination
S.P. 6920-53 (T.H. 53)

No significant adverse impacts to natural/native plant communities, landscape and ornamental plantings, vegetation providing an engineering function, or vegetation of exceptional visual quality are anticipated for this project.

Wetlands

Delineated Wetlands

The wetland review for this project applied a Level 3 MnDOT approach for delineation, which is a combination of Level 1 (desktop data review, onsite inspection unnecessary) and Level 2 (requires onsite inspection) procedures. Level 1 delineation procedures were used for highway median areas, and Level 2 procedures for all other project areas. The Level 1 and Level 2 analyses were performed by Short Elliot Hendrickson (SEH) in accordance with applicable federal and state regulatory standards and guidelines.¹ SEH performed the Level 2 fieldwork on October 12, 2018. The results, as well as anticipated impacts, are depicted in **Figure 8**. (It may be noted that the full SEH delineation included a project area (north TH 53/TH 1 junction) which is no longer part of the project, so that information is not summarized in this Catex document.)

Wetland delineations were not performed for Locations 3 through 6 because no impacts are anticipated. The majority of the overall passing lane work will be within the existing roadway footprint, and will not appreciably affect ditch sideslopes. The only instances where construction will be required beyond the existing gravel shoulder would be on curves to address superelevation factors; two curves exist in Location 4 and one in Location 5. The proposed 1:4 ditch tie-ins (steeper than the existing 1:6 grades) will keep ditch work associated with the superelevation conditions well clear of ditch bottoms and potential wetland resources. The length of the passing lane areas affected by curves regarding the sideslope design as identified above is approximately three percent of the combined total passing lane project area length and only on the outside shoulder of the curve.

Table 3 provides summary information for the Level 1 wetland areas and anticipated impacts, and **Table 4** provides this information for Level 2 wetland areas and anticipated impacts. Refer to **Figure 8** for Location 1 delineated wetlands. **Table 5** provides project-wide summary information by Cowardin Wetland Type.

Table 3. Level I Delineation Wetlands Summary

Wetland ID	Eggers & Reed Classification	Circular 39/Cowardin Classification	Temporary Impacts	Permanent Impacts
16	Fresh (wet) Meadow / Wet Ditch	Type 2 / PEM1B	0.19 Acre	0.04 Acre
17	Fresh (wet) Meadow / Wet Ditch	Type 2 / PEM1B	0.07 Acre	0.02 Acre
Total			0.26 Acre	0.06 Acre

Table 4. Level II Delineation Wetlands Summary

Wetland ID	Eggers & Reed Classification	Circular 39/Cowardin Classification	Temporary Impacts	Permanent Impacts
12	Fresh (wet) Meadow	Type 2 / PEM1B	None	None
13	Fresh (wet) Meadow	Type 2 / PEM1B	None	None
14	Fresh (wet) Meadow	Type 2 / PEM1B	None	None
	Hardwood Swamp	Type 7 / PFO1B	None	None
15	Fresh (wet) Meadow	Type 2 / PEM1B	None	None
Total			None	None

¹ *Wetland Delineation Report – Junction of Trunk Highway 1 (County State Aid Highway 22)/Trunk Highway 53 & Junction of Trunk Highway 1 (County Road 115)/Trunk Highway 53*, Short Elliot Hendrickson, November 2018. Fieldwork completed October 12, 2018.

Table 5. Total Wetland Impacts by Wetland Type

Cowardin Wetland Type	Temporary Impacts	Permanent Impacts
Type 2	0.26 Acre	0.06 Acre
Type 7	None	None
Total	0.26 Acre	0.06 Acre

Permitting and Sequencing Information

The project will comply with all applicable federal and state wetland regulatory requirements. Pending jurisdiction review, it is anticipated that the project will require a Section 404 permit from the US Corps of Engineers (USCOE). Under the Minnesota Wetland Conservation Act (WCA), MnDOT will be the designated Local Government Unit (LGU) with regulatory authority consistent with Minnesota Board of Water and Soil Resources (BWSR) guidelines.

Avoidance:

It is not possible to completely avoid all wetland impacts. The No Action alternative would avoid all impacts but would not address the transportation needs described in Item 6.b, above. As referenced previously, wetlands are prevalent along the project location on both sides of the highway and in the median in the 4-lane section. There are no viable locational or design alternatives meeting the project need that would result no wetland impacts.

Minimization:

The current highway alignment will be used for location 1, which will limit the potential for wetland impacts given the prevalence of wetlands in the vicinity of the highway. Sideslopes of 1:4 will be used per MnDOT’s Road Design Manual.

For Locations 3 – 6 (passing lane segments), existing alignments will be used. As discussed previously, the proposed 1:4 sideslope tie-ins (steeper than the existing 1:6 grades) will keep any sideslope work well clear of potential wetland resources associated with ditch bottoms.

Mitigation:

For unavoidable wetland impacts, replacement requirements and areas will be determined in the permitting process. It is anticipated that mitigation would be at a 1:1 ratio per Section 404 and WCA requirements. Mitigation would be within BWSR Bank Service Area 2.

Water Quality

General

Because the project will disturb more than one acre, it will require a National Pollutant Discharge Elimination System (NPDES) Construction permit as administered by the Minnesota Pollution Control Agency (MPCA). Consistent with NPDES requirements, a Stormwater Pollution Prevention Plan (SWPPP) will be prepared for the project. The SWPPP will define Best Management Practices (BMPs) to be used during construction activities to limit the potential for erosion and water quality impacts. The specific BMP program will be determined through final design activities, but it is anticipated to include some combination of the following:

- Siltation fences, bio-rolls, wood-chip cover
- Temporary outlet protection
- Temporary ponding where appropriate/feasible
- Limiting exposed areas where feasible through construction phasing and other measures
- Timely placement of permanent cover including topsoil, seed and mulch, and sod or hydro-seeding

Because the project will result in less than one acre of new impervious surface, a permanent stormwater management system to control runoff will not be required under NPDES.

Location 4 – Lost River

The southern terminus of Location 4 (Passing Lane Segment B) is approximately 400 feet north of Lost River (see **Figure 4**), which is a designated Trout Stream. Approximately two miles of Location 4 drains south to Lost River.

Categorical Exclusion Determination
S.P. 6920-53 (T.H. 53)

Because Lost River is a Trout Stream, the project will need to comply with Item 23.9 of the August 1, 2018 NPDES Construction Stormwater General Permit:

Permittees must immediately initiate stabilization of exposed soil areas, as described in item 8.4, and complete the stabilization within seven (7) calendar days after the construction activity in that portion of the site temporarily or permanently ceases. [Minn. R. 7090].

Item 23.10 (applicable threshold is not met) and Item 23.11 (Location 4 project limits are greater than 100 feet from Lost River) do not apply for this project.

Noise

Construction Noise

During construction, it is unavoidable that noise levels will increase in the immediate area surrounding the project site. The actual noise levels on and adjacent to the site will vary considerably depending on the numbers and types of equipment being operated at any given time. **Table 6**, below 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 6. Construction Noise Information

Equipment	Manufacturers Sampled	Total No. 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/S	N/A	95-105	101

Source: US Environmental Protection Agency and Federal Highway Administration

Construction activities will be temporary in duration. The contractor will be required to comply with applicable local ordinance requirements regarding noise. Construction equipment will be required to have factory installed mufflers or their equivalents in good working order during the life of the construction contracts. While it is possible that limited night construction may be required for this project, it is anticipated that construction activities will take place during the less noise-sensitive daylight hours. Pile driving will not be required for this project. Jack-hammering and concrete sawing will not take place during the nighttime hours. The loudest construction activities will only take place on a given portion or portions of the corridor at one time. The total duration of the project will be one construction season.

Traffic Noise

Noise Study:

The proposed project qualifies as a "Type I" project because it includes federal funding and it adds new travel lanes (passing lane segments). Therefore, a noise analysis was performed in accordance with MnDOT and FHWA requirements. The noise study (SBP Associates, December 2018) is provided in its entirety as **Attachment G**. Its contents and results are summarized below. It may be noted that the full noise study covered a location, the north TH 53/TH 1 junction, which is no longer part of the project as referenced previously. The information summarized herein covers only the currently proposed project (five locations).

Regulatory Background:

In Minnesota, noise impacts are defined by Federal regulations. In 2016, the Commissioners of the Minnesota Pollution Control Agency (MPCA) and MnDOT agreed that the traffic noise regulations and mitigation requirements from the FHWA are sufficient to determine reasonable mitigation measures for highway noise. By this agreement, existing and newly constructed segments of highway projects under MnDOT's jurisdiction are statutorily exempt from Minnesota State Noise Standards (MN Rule 7030) if the project applies the FHWA traffic noise requirements. As a result, any required noise analysis will follow FHWA criteria and regulations only.

Categorical Exclusion Determination S.P. 6920-53 (T.H. 53)

This project, therefore, will address the noise impacts relative to the Federal Noise Abatement Criteria (NAC). For residential and recreational uses (Federal Land Use Category B), the Federal Leq² standard is 67 “A-weighted decibels” (dBA) for both daytime and nighttime. For commercial areas (Federal Land Use Category C), the Federal Leq standard is 75 dBA for both daytime and nighttime. Locations where noise levels are “approaching” (defined in Minnesota as being within one decibel of the criterion threshold i.e. 66/74 dBA) or exceeding the criterion level must be evaluated regarding the effectiveness, feasibility, and reasonableness of noise abatement measures (e.g. noise walls).

In addition to the comparison against NAC levels as discussed above, the FHWA defines a noise impact as a “substantial increase” in the future noise levels over the existing noise levels. MnDOT considers an increase of five dBA or greater a substantial noise level increase.

Analytical Procedures:

Existing (2019) and future (2039) build and no-build noise levels were modeled using the FHWA Traffic Noise Model (version 2.5) software. 2019 defines existing conditions in this analysis because this is the year the project is to be constructed. The modeled noise levels for this year are representative of current noise levels.

Traffic noise impacts were assessed by modeling loudest hour 2019 and 2039 future build and future no-build Leq noise levels at receptor sites located within the project study areas. Loudest noise hour traffic is based on a modeling analysis of noise levels in order to ascertain the loudest daily hourly traffic flow rate and classification.

In addition to the noise modeling, noise monitoring was also conducted at one location representing a receptor site for each project location. The monitoring was conducted to confirm existing noise levels and to assist in validating the noise model results.

Noise modeling receptors were identified at commercial and residential sites along the six original project locations. Receptor locations were chosen based on guidance provided in Appendix A of the 2017 MnDOT Noise Requirements. A combined total of 19 receptor locations were identified for the full current project (five locations).

Results:

Modeled existing (2019), 2039 build, and 2039 no-build modeled noise levels did not approach the Federal Noise Abatement Criteria at any of the receptor locations (no results equal to or greater than 66 dBA). Additionally, modeled noise level increases between 2019 and 2039 were less than 5 dBA at all modeled receptor locations. Due to these factors, no noise mitigation measures are proposed for this project per MnDOT and FHWA procedures. No further noise analysis is required.

Construction Impacts

The total project duration is anticipated to be from July 2019 through October of 2019. No roadway closures or associated detour routes will be required. No access closures will be required. A construction staging management plan, including stakeholder outreach, will be completed prior to the commencement of construction activities. Stakeholder engagement and coordination will continue throughout both construction phases. This will include, but not be limited to, open house meetings, a project newsletter and website, and individual stakeholder meetings when warranted. MnDOT will coordinate with law enforcement as well as fire control and emergency response providers to ensure that access and response times are not unacceptably compromised.

While it is unavoidable that noise levels will increase in the immediate area surrounding the project locations during construction, the project will not represent unique noise challenges for a roadway project of this nature. Further information is provided under the Noise heading, above.

As discussed under the Water Quality heading, above, the project will require a National Pollutant Discharge Elimination System (NPDES) construction permit. An NPDES Stormwater Pollution Prevention Plan (SWPPP) will be generated for the project defining best management practices (BMPs) which will be used during construction activities to limit the potential for sedimentation and other water quality impacts.

The Early Notification Memo response regarding Regulated Materials Management is provided in **Attachment F**. The considerations raised in this response are not applicable to the proposed project:

- No anticipated asbestos-containing culverts

² The equivalent steady-state sound level which in a stated period of time contains the same acoustic energy as the time-varying sound level during the same time period. In effect it is analogous to the “average” sound level over a given period of time.

Categorical Exclusion Determination
S.P. 6920-53 (T.H. 53)

- No anticipated treated wood disposal (e.g. guardrail posts)
- No material management/disposal associated with signal replacement

Traffic – Construction

Detours will not be required during construction activities. For Location 1, there will be no lane or access closures through use of the following measures:

- Staged construction
- Temporary use of shoulder locations as through lanes
- Shifting lanes as construction is incrementally completed

For Locations 3-6 (passing lane segments), the following approach will be used:

- Staged construction
- During daytime construction activity hours, travel will be reduced to one lane, controlled directionally by flaggers
- At the end of each construction day, temporary roadway striping will be deployed to allow two-way travel
- Use milled surfaces as temporary travel lanes where necessary; ensure no more than 2” differential between milled surface and adjacent pavement in this condition

Environmental Justice

Background:

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations, dated February 11, 1994, directed “each federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs in the United States.... The proposed project has federal funding and federal permit requirements and is considered a federal project for purposes of compliance with the Executive Order.

FHWA Order 6640.23A FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations establishes policies and procedures for the Federal Highway Administration (FHWA) to use in complying with Executive Order 12898. FHWA issued Order 6640.232A on June 12, 2012.

US Census information was reviewed at the Block Group (BG) level. This information is mapped in **Attachment H**. Information was not available at the block level. This information is summarized in Table 7 and Table 8, below.

Table 7. Environmental Justice Information – Block Group Level, Race

Project Location	Block Group (s)	% Minority	% Minority – Host County
Location 1	Tract 152, BG 4	8.6	8.2 (St. Louis County)
Location 3	Tract 151, BG 1, Tract 155, BG 3	7.6	8.2 (St. Louis County)
Location 4	Tract 155, BG 1	41.0	8.2 (St. Louis County)
Location 5	Tract 155, BG 1	41.0	8.2 (St. Louis County)
Location 6	Track 7903, BG 2 and 3	7.2	6.5 (Koochiching County)

Table 8. Environmental Justice Information – Block Group Level, Income

Project Location	Block Group (s)	% of People Below Poverty Rate	% Below Poverty Rate – Host County
Location 1	Tract 152, BG 4	24.1	17.9 (St. Louis County)
Location 3	Tract 151, BG 1, Tract 155, BG 3	27.8	17.9 (St. Louis County)

Categorical Exclusion Determination
S.P. 6920-53 (T.H. 53)

Location 4	Tract 155, BG 1	27.7	17.9 (St. Louis County)
Location 5	Track 155, BG 1	27.7	17.9 (St. Louis County)
Location 6	Track 7903, BG 2 and 3	58.3	18.4 (Koochiching County)

Based on Block Group information as summarized above, all of the project locations potentially are surrounded by Environmental Justice populations based on race and/or income information. However, it can be seen from the block group map in **Attachment H** that the block groups are quite large, given the low population concentrations in the overall area. Environmental Protection Agency’s EJSCREEN database was used to get more detailed information in the direct vicinity of the project locations. A half-mile buffer study area was used to get socio-economic data (see screenshots in **Attachment H**). The resulting summary sheets are provided in **Attachment H**. Summaries by location are provided in Table 9, below.

Table 9. ES EPA EJSCREEN – 0.5 Mile Buffer/Research Area, Race Information (2012-2016 ACS estimates)

Location	Number of residents*	Number Minority (%)
1	4	0 (0.0)
3	0	0 (0.0)
4	0	0 (0.0)
5	0	0 (0.0)
6	17	1 (5.9)
Total	21	1 (4.8)

*Based on summing from individual categories.

Table 10. ES EPA EJSCREEN – 0.5 Mile Buffer/Research Area, Income Information (2012-2016 ACS Estimates)

Income Range (per household)	Number Households				
	Location 1	Location 3	Location 4	Location 5	Location 6
<\$15,000	1	0	0	0	1
\$15K - \$25K	0	0	0	0	1
\$25K - \$50K	1	0	0	0	2
\$50K - \$75K	1	0	0	0	1
>\$75,000	1	0	0	0	1
Total Households*	4	0	0	0	6

*Based on summing from individual categories.

It can be seen from the EPA EJSCREEN information that there are no readily-identifiable minority and/or low income populations in the EJ study area. There is only one minority resident within one half mile of all of the project locations combined. The median household income is \$49,395 St. Louis County and \$44,929 in Koochiching County (Source: Data USA). While the EJSCREEN data indicates the presence of a few low-income households within one half mile of the project Locations 1 and 6, it does not identify concentrations of poverty within the project area.

Finding:

The purpose of Executive Order 12898 is to identify, address, and avoid disproportionately high and adverse human health or environmental effects on minority or low-income populations. The EJSCREEN data shows there are no readily-identifiable minority populations in the project area. While it is possible that some low income households are close enough to the project, all impacts from the project are non-significant and would impact and benefit all residents equally.

Therefore, the proposed project will not have disproportionately high or adverse human health or environmental effects on any minority population or low-income population.

MITIGATION and COMMITMENTS

Natural Environment

- Northern Long Eared Bats
 - Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of FHWA environmental commitments, including applicable Avoidance and Minimization Measures (AMMs).
 - Direct temporary lighting, if used, away from weeded areas during the bat active season (April 1 through October 31). New or replacement of existing permanent lighting will use downward-facing, full cut-off lens lights (with same intensity or less for replacement lighting). BUG lighting not applicable for this project.
 - No tree clearing.
 - Rolled erosion control products must be limited to 'bio-netting' or 'natural-netting' (category 3N or 4N) woven type products. Welded plastic mesh netting will specifically not be allowed.
 - Revegetation of disturbed soils will follow D1 Vegetation Establishment Recommendations, and use native mixes in areas that are not proposed for mowed turf grass.
- Area of Environmental Sensitivity
 - Plan sheets for Location 5 will include Area of Environmental Sensitivity labeling and applicable BMPs will be used including drainage measures as defined in the SWPPP under NPDES (see relevant information below under Water-Related Issues heading).
- Vegetation
 - Where applicable deploy tree protection measures based on Standard Specifications 2572 and Standard Plan 50297.302.
 - Comply with District 1 Vegetation Establishment Recommendations Letter.

Water-Related Issues

- An NPDES permit will be required for the project. NPDES best management practices (BMPs) during construction will be defined in the Stormwater Pollution Prevention Plan (SWPPP) and are anticipated to include:
 - Siltation fences, bio-rolls, wood-chip cover
 - Temporary outlet protection
 - Temporary ponding where appropriate/feasible
 - Limiting exposed areas where feasible through construction phasing and other measures
 - Timely placement of permanent cover including topsoil, seed and mulch, and sod or hydro-seeding
 - Special NPDES requirements associated with Lost River (Trout Stream located approximately 500 feet south of Location 4 (Passing Lane Segment B):
 - *Permittees must immediately initiate stabilization of exposed soil areas, as described in item 8.4, and complete the stabilization within seven (7) calendar days after the construction activity in that portion of the site temporarily or permanently ceases. [Minn. R. 7090]*
- Where work at Location 3 through Location 6 is required beyond the existing gravel shoulder due to superelevation considerations, the tie-in grade of 4:1 will be used rather than the current ditch sideslope grade of 6:1.
- Wetland permitting and notification procedures will be performed in accordance with federal Section 404 requirements and state Wetland Conservation Act requirements. Since the only anticipated impacts are to ditch wetlands, it is not anticipated that mitigation will be required. However unavoidable impacts would be replaced at an anticipated 1:1 ratio per permit requirements within BWSR Bank Service Area 2.

Physical/Construction

- A construction staging management plan, including stakeholder outreach, will be completed prior to the commencement of construction activities.
- Construction specifications will require the Contractor to dispose of any excess materials consistent with applicable environmental regulations, including no disposal in wetlands or other environmentally sensitive locations.
- Contractor will be required to comply with applicable local noise ordinances, and will be required to use equipment with factory installed mufflers or their equivalents in good working order.
- The Contractor will be directed not to use Orr Wayside Parking Area for construction purposes. This includes no material storage, no vehicle storage, no contractor parking, no trailer loading, etc.

PUBLIC AND AGENCY INVOLVEMENT (PERMITS/APPROVALS)

Outreach

As referenced previously, the TH 53 Task Force has been in place since the late 1990s to promote and guide improvements to the TH 53 corridor, primarily between International Falls and Virginia. This body is made up of representatives of the cities of International Falls, Orr, Cook, and Virginia, as well as representatives of St. Louis County, Koochiching County, the State Patrol, and local businesses and residents. MnDOT has frequently met and coordinated with the TH 53 Task Force over the years to discuss needs in the corridor and help prioritize improvements. The proposed project is the outgrowth of close coordination which took place between MnDOT and the Task Force in 2017.

On December 6, 2018, a public open house meeting was held for the project at the Cook, MN Community Center. Poster boards depicting the project locations and elements were provided, as was an overview presentation by project representatives. The Chair of the TH 53 Task Force discussed the history of that group as well as its support for the proposed project. Approximately 20 individuals were in attendance. In general, strong support for the project was expressed by attendees. Project staff fielded questions about project need and expected outcomes, certain design aspects, and the timing of construction activities.

Agency Coordination

As part of the overall early environmental review process, MnDOT District 1 sent an Early Notification Memo to the Minnesota Department of Natural Resources (MnDNR). MnDNR's response is provided in **Appendix H**. Relevant information is provided under the Threatened and Endangered Species, Species of Special Concern, State heading at the end of the Social, Economic, and Environmental (SEE) review table, above.

MnDOT District 1 staff have coordinated with St. Louis County staff regarding the project as it pertains to County highways: CSAH 22 at Location 1, and CSAH 115 at Location 2. Koochiching County staff is also aware of the project, and coordination with the counties regarding construction activities will take place consistent with standard procedures for Trunk Highway projects.

Given that Locations 3, 4, and 5 are within the Superior National Forest, the District 1 Project Manager for the proposed project reached out to the US Forest Service to provide notification and the opportunity to coordinate as needed. The correspondence is included in Attachment H. No response was provided.

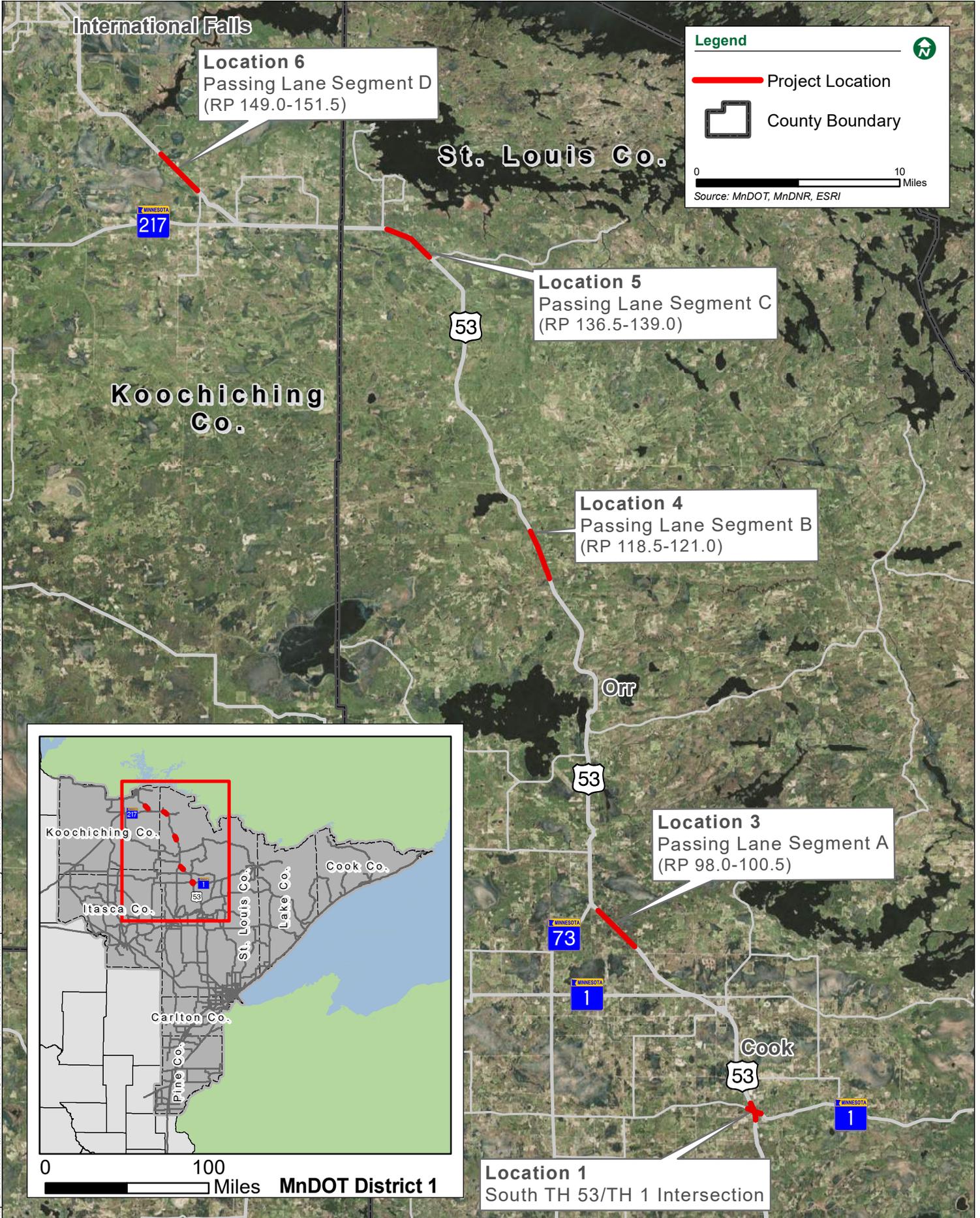
Permits

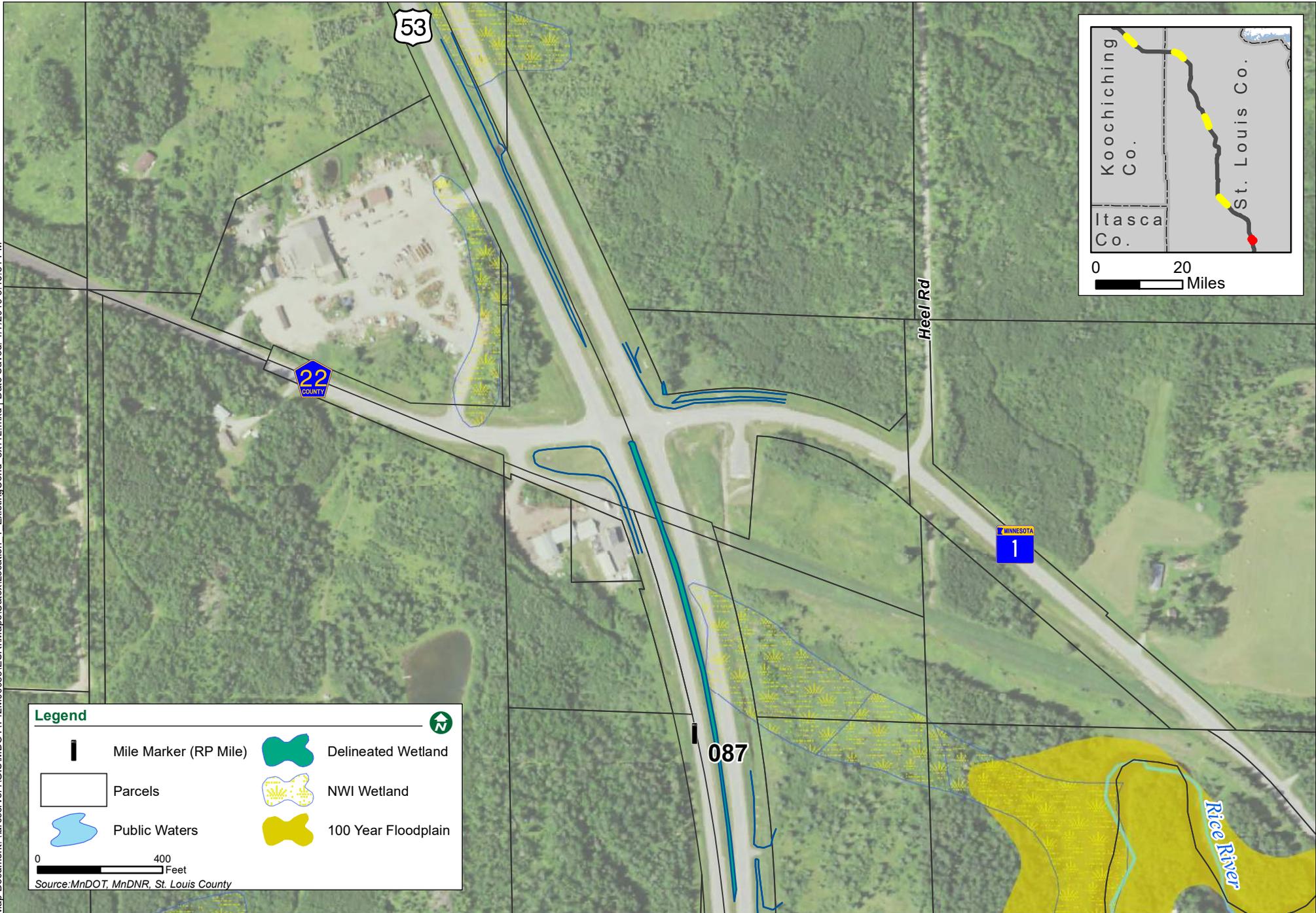
Project will require the following permits:

- National Pollution Discharge Elimination System (NPDES) Construction General Permit for stormwater (Minnesota Pollution Control Agency)
- Section 404 wetland permit (US Corps of Engineers)
- Wetland permitting notification under the Minnesota Wetland Conservation Act; MnDOT will be the Responsible Government Unit following applicable Board of Water and Soil Resources requirements and guidelines.

ATTACHMENT A

Maps





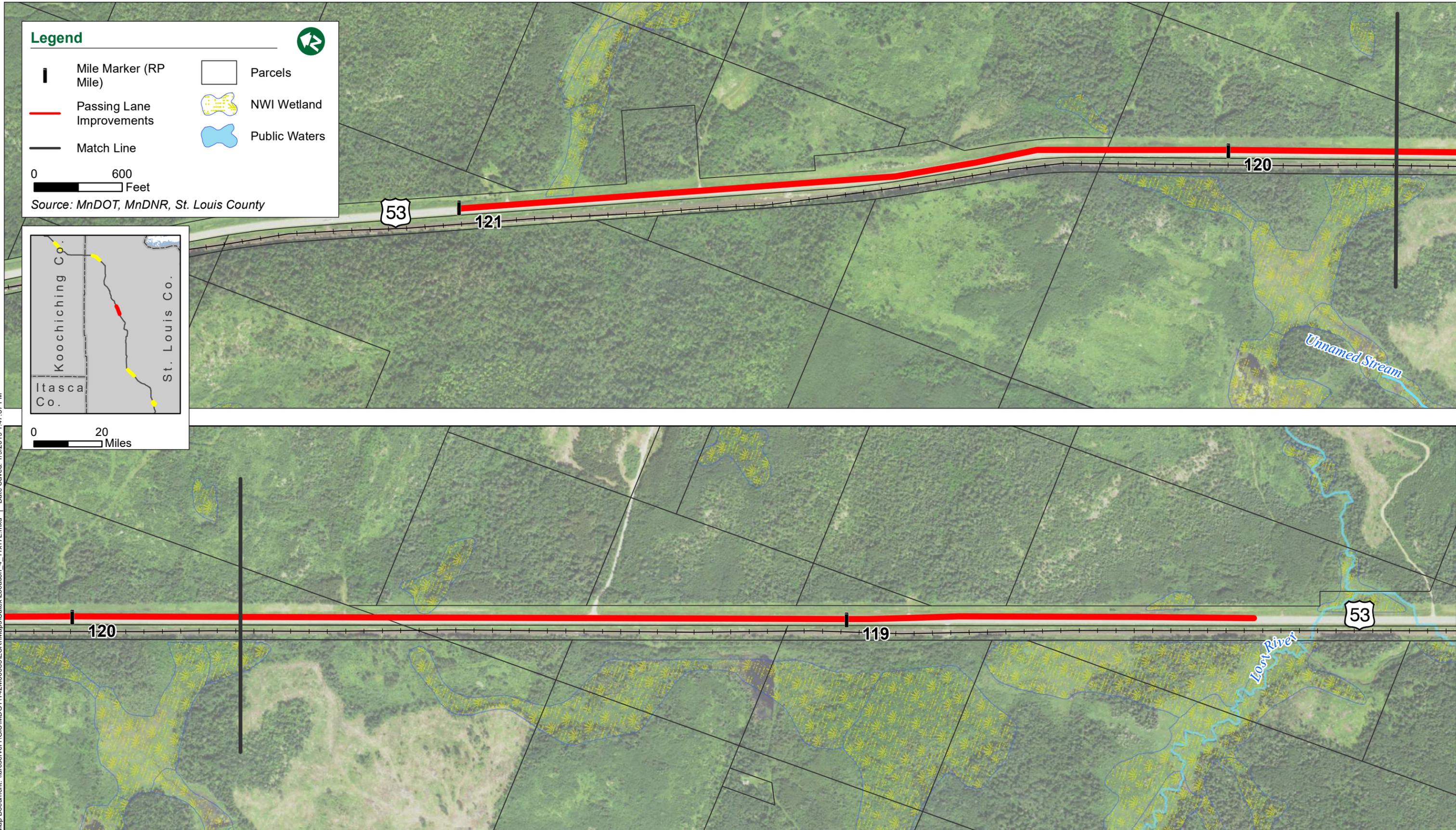
Map Document: \\arcserver1\GIS\IM\DOT\42M\000085\ESR\IMaps\Catex\Location_1_ExistingCond_8x11L.mxd | Date Saved: 1/17/2019 3:46:51 PM

Legend

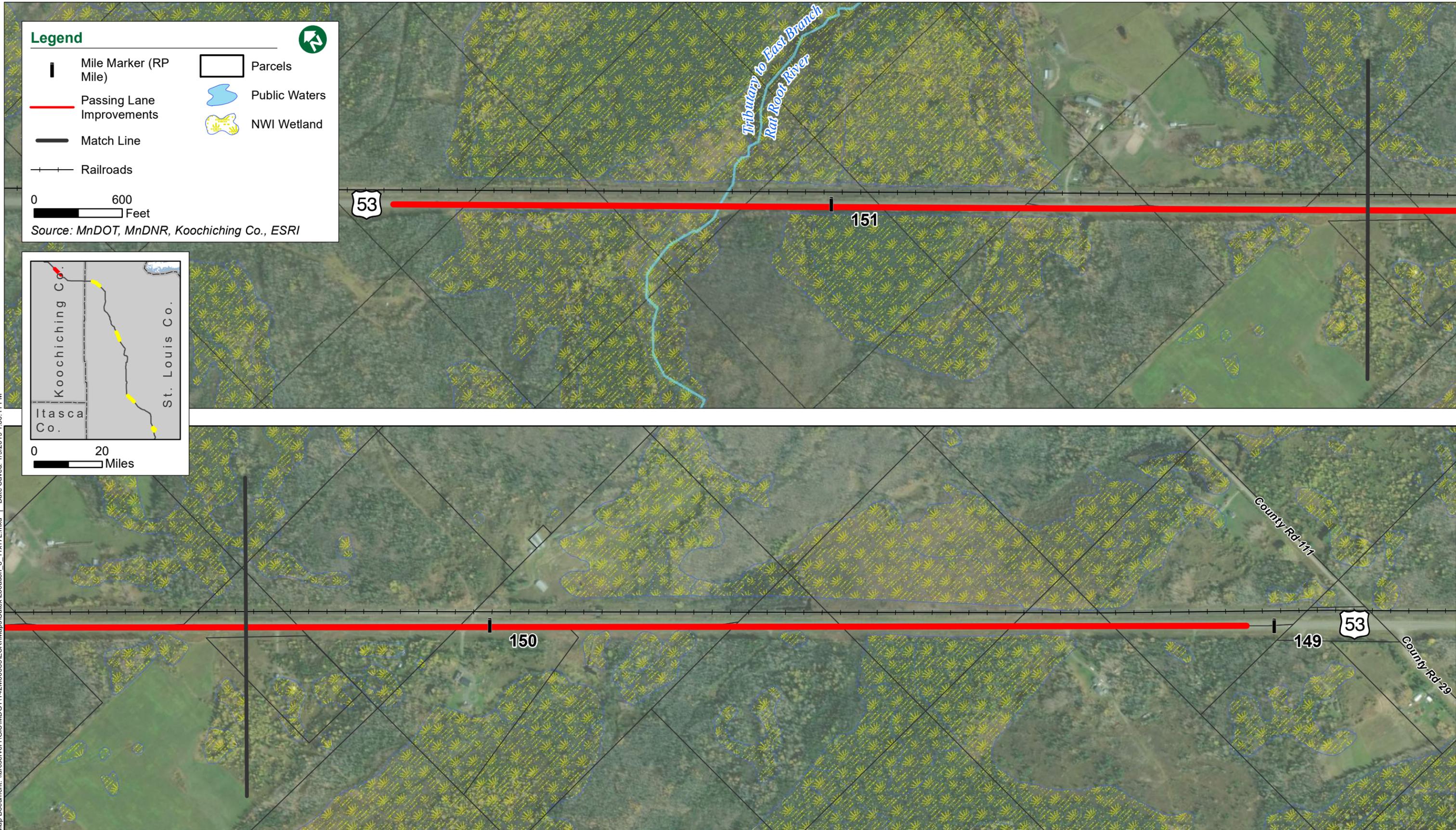
	Mile Marker (RP Mile)		Delineated Wetland
	Parcels		NWI Wetland
	Public Waters		100 Year Floodplain

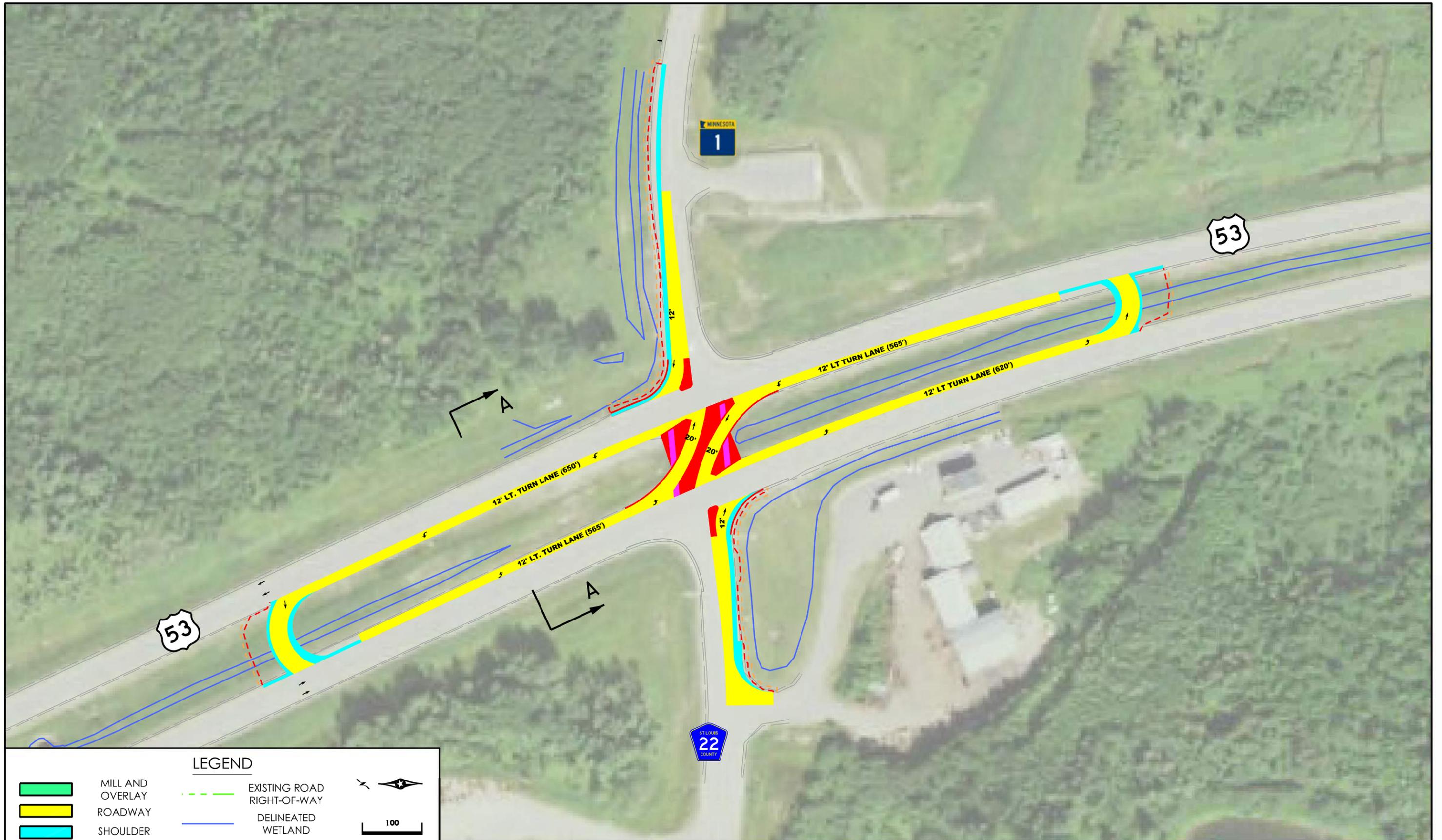
0 400 Feet
Source: MnDOT, MnDNR, St. Louis County











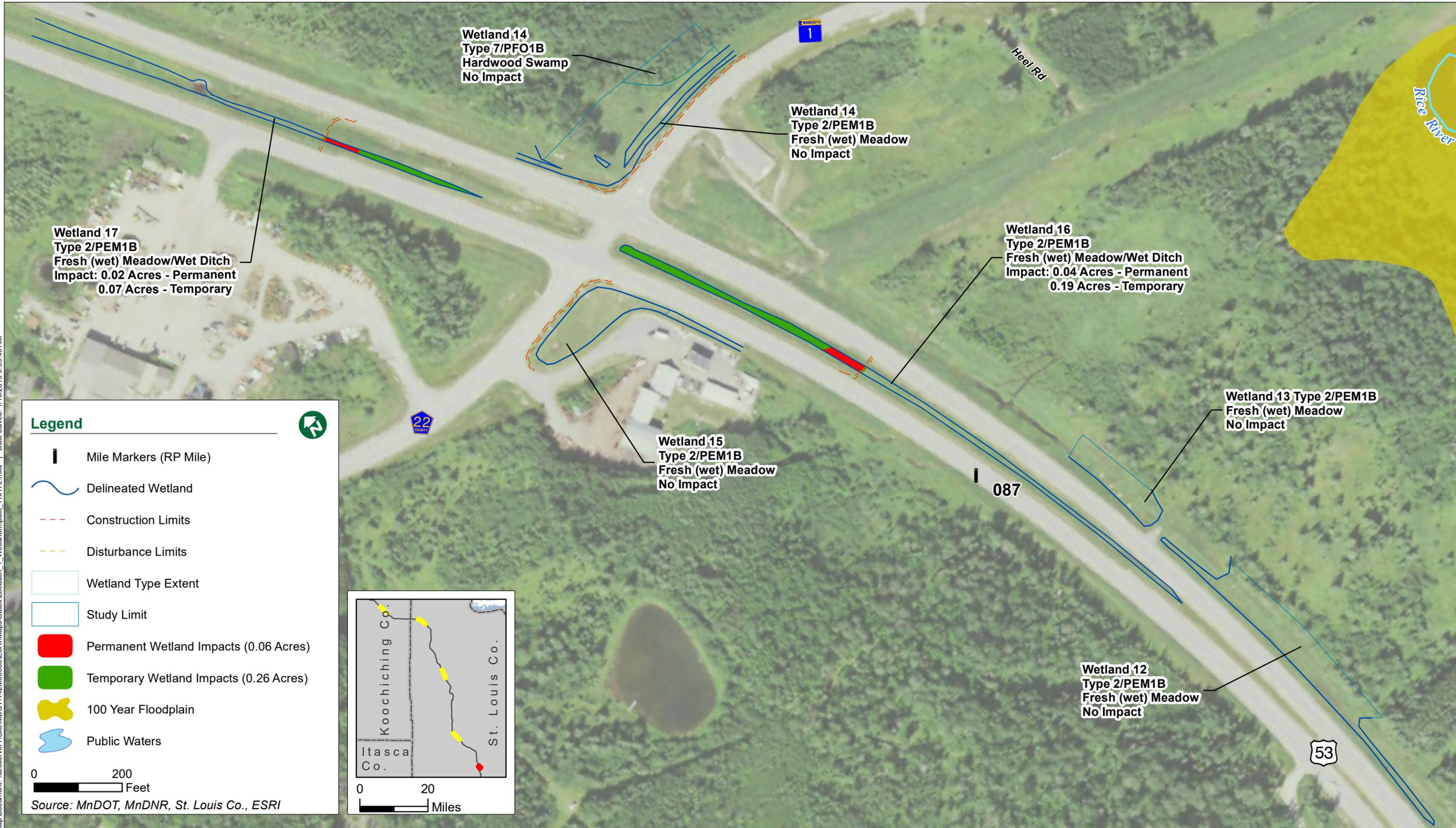
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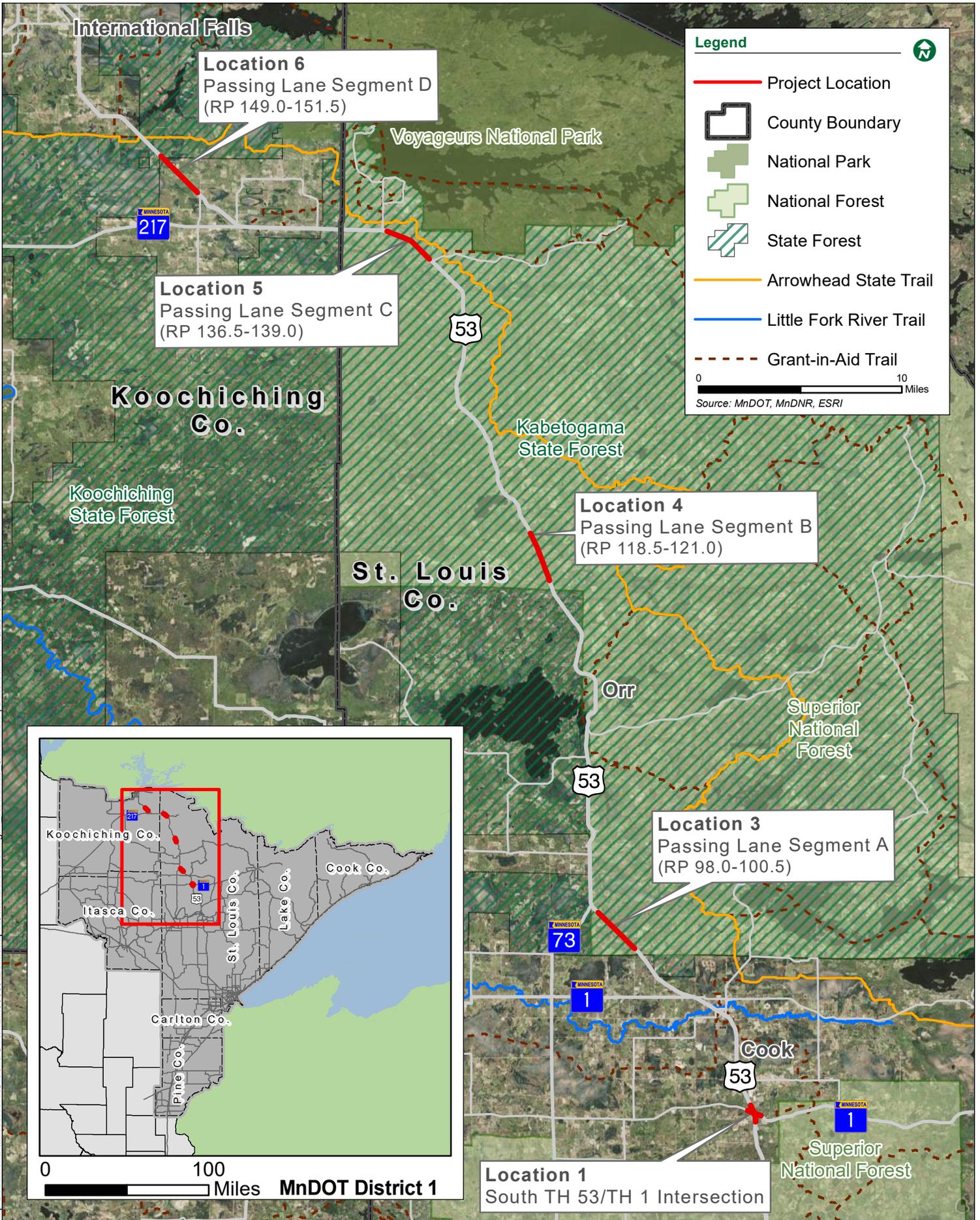
	MILL AND OVERLAY		EXISTING ROAD RIGHT-OF-WAY	
	ROADWAY		DELINEATED WETLAND	
	SHOULDER		CONSTRUCTION LIMITS	SCALE IN FEET
	CURB AND GUTTER		TEMP. DISTURBANCE LIMITS (for placement of stormwater BMPs, etc.)	

Figure 7: South TH 53/TH 1 Junction Proposed Improvements

TH 53 Intersection and Passing Lane Improvements

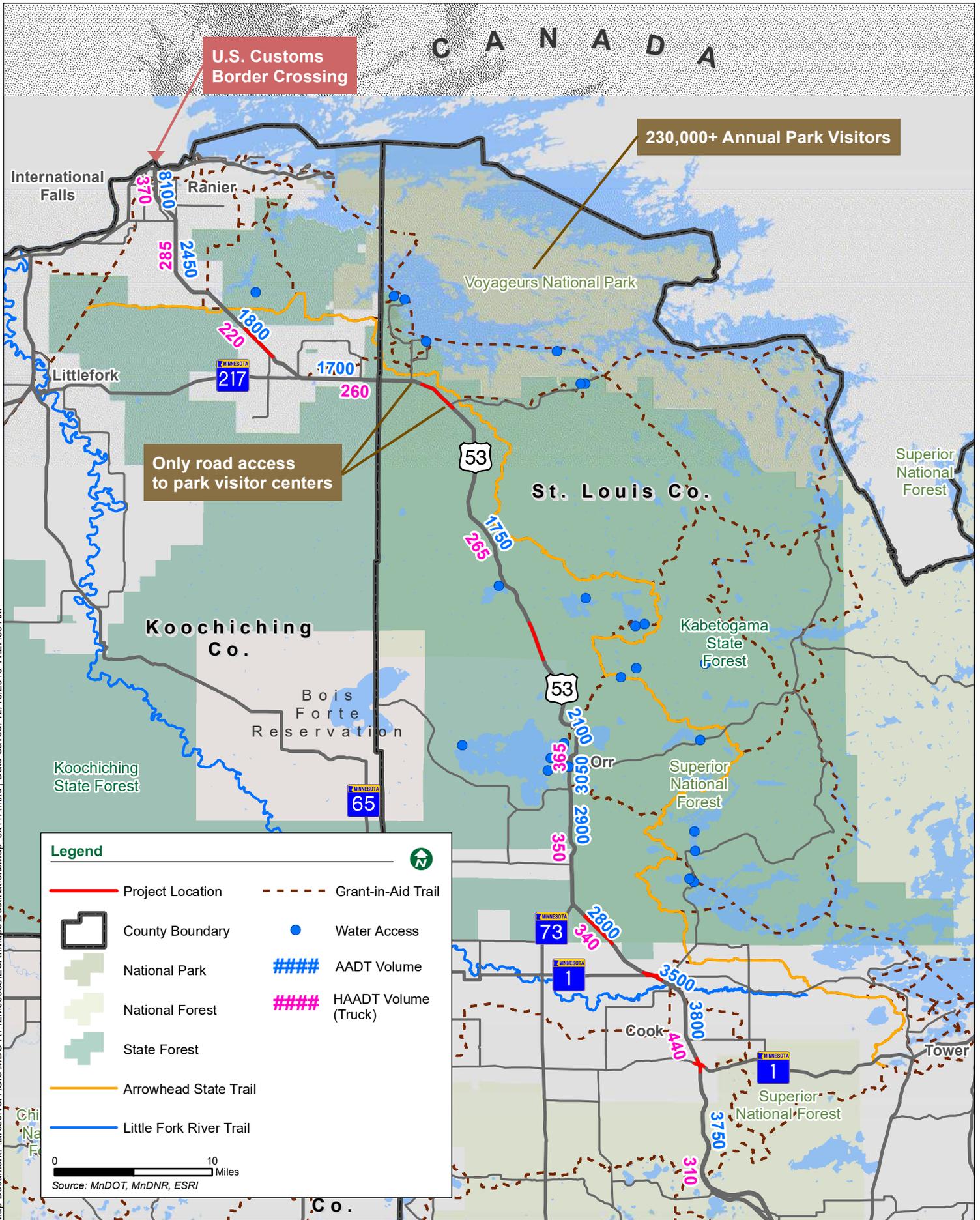






ATTACHMENT B

TH 53 Regional Destinations and Traffic Map



Map Document: \\arcserver1\GIS\MDOT\T42M000095\ESRI\Maps\DestinationsMap_8x11P.mxd | Date Saved: 12/13/2018 11:27:50 AM

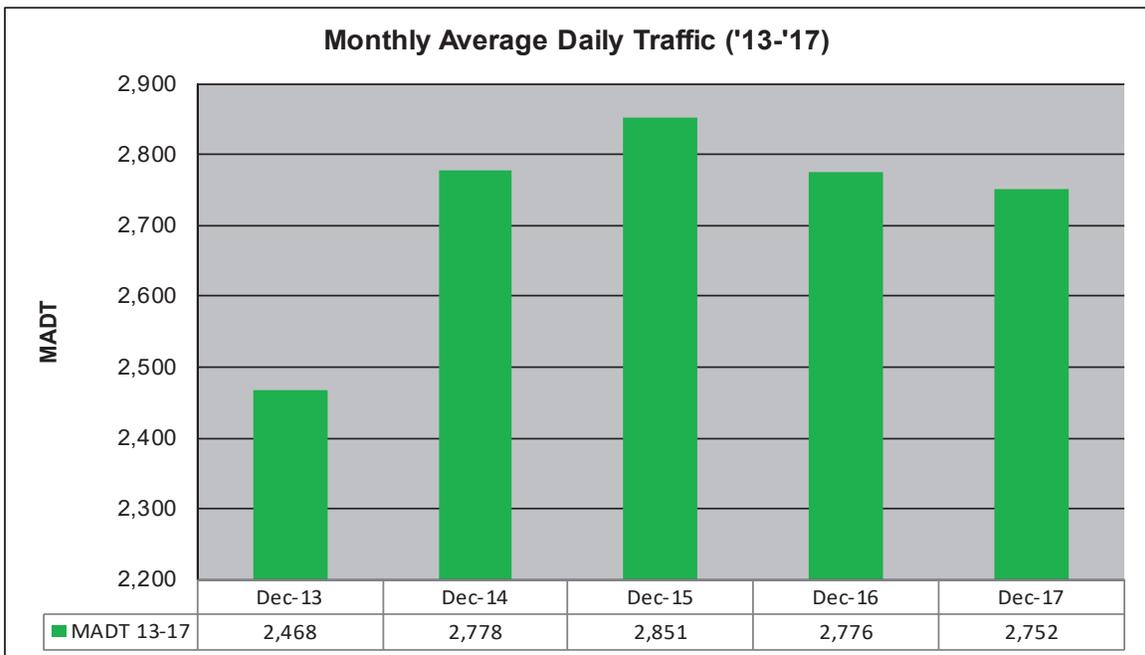
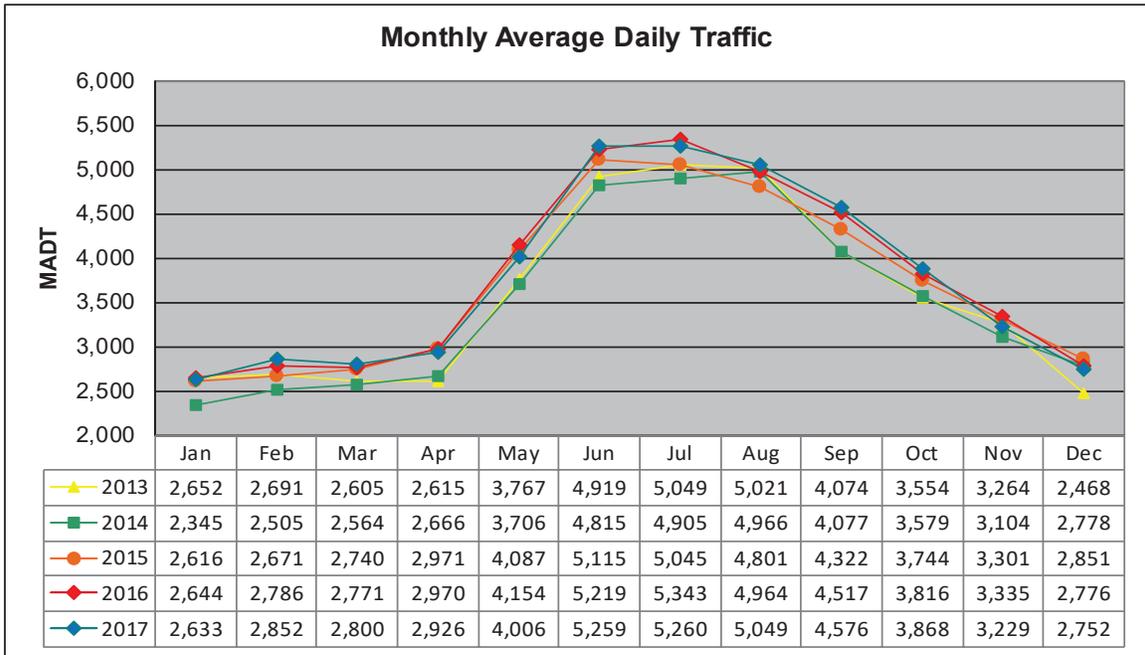
ATTACHMENT C

Automatic Traffic Recorder (ATR) 211 Data

MONTHLY REPORT, STATION NO. 211 (ATR)

DECEMBER 2017

Station Measurement: VOLUME/SPEED/CLASS		
Route: TH 53	Route Direction: N/S	Lanes: 4
County: St Louis	Closest City: Virginia	
Functional Class: Rural Principal Arterial - Other		
Location: 1 MI NW OF CSAH65 (BISS RD), NW OF VIRGINIA		
Ref Post: 079+00.690	True Mile: 79.965	Sequence No. 6760
Volume: 85,318		MADT: 2,752
Weekday (M-F) MADT: 2,752		Weekend (Sa-Su) MADT: 2,288



Station 211, TH 53, 1 MI NW OF CSAH65 (BISS RD), NW OF VIRGINIA in VIRGINIA, ST LOUIS County, District 1.

Northbound							Southbound					Both Directions							
Highest Hour	Traffic Volume	Date	Day	Hour	Percent of AADT		Traffic Volume	Date	Day	Hour	Percent of AADT		Traffic Volume	Date	Day	Hour	Percent of AADT	Percent Dir. Distr.	
1	422	05/26	Fri	04-05 PM	22.6		485	05/29	Mon	12-01 PM	25.5		685	06/10	Sat	11-12 PM	18.2	53/47	
2	413	05/26	Fri	05-06 PM	22.1		483	05/29	Mon	11-12 PM	25.3		659	06/10	Sat	10-11 AM	17.5	55/45	
3	406	06/30	Fri	04-05 PM	21.8		457	09/04	Mon	12-01 PM	24.0		649	06/30	Fri	02-03 PM	17.2	55/45	
4	405	09/01	Fri	02-03 PM	21.7		415	09/04	Mon	11-12 PM	21.8		640	06/10	Sat	12-01 PM	17.0	58/42	
5	395	11/03	Fri	02-03 PM	21.2		414	05/29	Mon	10-11 AM	21.7		638	06/17	Sat	11-12 PM	16.9	45/55	
6	392	05/26	Fri	03-04 PM	21.0		407	09/04	Mon	01-02 PM	21.4		627	07/01	Sat	10-11 AM	16.6	54/46	
7	385	09/01	Fri	03-04 PM	20.6		392	06/24	Sat	10-11 AM	20.6		625	06/10	Sat	09-10 AM	16.6	47/53	
8	377	05/26	Fri	01-02 PM	20.2		390	05/29	Mon	01-02 PM	20.5		625	06/17	Sat	01-02 PM	16.6	57/43	
9	374	11/03	Fri	04-05 PM	20.0		374	09/04	Mon	10-11 AM	19.6		623	06/10	Sat	01-02 PM	16.5	50/50	
10	372	06/10	Sat	12-01 PM	19.9		369	05/29	Mon	02-03 PM	19.4		620	06/30	Fri	04-05 PM	16.4	65/35	
11	372	06/30	Fri	03-04 PM	19.9		364	06/24	Sat	09-10 AM	19.1		619	09/01	Fri	02-03 PM	16.4	65/35	
12	371	09/01	Fri	01-02 PM	19.9		364	07/05	Wed	11-12 PM	19.1		610	06/02	Fri	02-03 PM	16.2	58/42	
13	369	05/26	Fri	02-03 PM	19.8		364	07/22	Sat	10-11 AM	19.1		609	06/23	Fri	02-03 PM	16.1	51/49	
14	368	07/01	Sat	01-02 PM	19.7		360	07/08	Sat	11-12 PM	18.9		608	06/16	Fri	03-04 PM	16.1	53/47	
15	363	06/10	Sat	11-12 PM	19.5		355	08/20	Sun	12-01 PM	18.6		608	08/05	Sat	10-11 AM	16.1	42/58	
16	362	06/10	Sat	10-11 AM	19.4		354	06/17	Sat	09-10 AM	18.6		607	07/01	Sat	11-12 PM	16.1	57/43	
17	362	07/01	Sat	12-01 PM	19.4		354	10/01	Sun	11-12 PM	18.6		605	07/29	Sat	10-11 AM	16.0	42/58	
18	359	06/30	Fri	02-03 PM	19.2		354	10/22	Sun	12-01 PM	18.6		600	05/29	Mon	12-01 PM	15.9	19/81	
19	357	06/02	Fri	03-04 PM	19.1		352	07/29	Sat	10-11 AM	18.5		600	06/30	Fri	01-02 PM	15.9	57/43	
20	357	09/01	Fri	04-05 PM	19.1		352	08/05	Sat	10-11 AM	18.5		598	07/22	Sat	02-03 PM	15.9	60/40	
21	356	07/22	Sat	02-03 PM	19.1		351	06/17	Sat	11-12 PM	18.4		598	07/29	Sat	11-12 PM	15.9	42/58	
22	355	06/02	Fri	02-03 PM	19.0		348	07/08	Sat	10-11 AM	18.3		597	08/05	Sat	11-12 PM	15.8	42/58	
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30	349	07/14	Fri	04-05 PM	18.7		341	07/30	Sun	11-12 PM	17.9		588	06/16	Fri	12-01 PM	15.6	44/56	
30TH																			
31	348	09/01	Fri	05-06 PM	18.6		340	10/22	Sun	01-02 PM	17.8		588	07/15	Sat	11-12 PM	15.6	47/53	
32	345	07/01	Sat	02-03 PM	18.5		339	06/17	Sat	10-11 AM	17.8		587	06/16	Fri	01-02 PM	15.6	49/51	
33	345	08/04	Fri	03-04 PM	18.5		336	09/04	Mon	02-03 PM	17.6		586	06/16	Fri	02-03 PM	15.5	60/40	
34	344	11/03	Fri	05-06 PM	18.4		335	07/29	Sat	09-10 AM	17.6		585	09/01	Fri	03-04 PM	15.5	66/34	
35	341	06/30	Fri	01-02 PM	18.3		334	08/12	Sat	09-10 AM	17.5		584	08/05	Sat	12-01 PM	15.5	45/55	
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40	338	06/09	Fri	05-06 PM	18.1		327	09/04	Mon	03-04 PM	17.2		580	06/17	Sat	12-01 PM	15.4	41/59	
50	327	07/28	Fri	05-06 PM	17.5		313	10/01	Sun	12-01 PM	16.4		573	07/01	Sat	12-01 PM	15.2	63/37	
60	314	08/11	Fri	03-04 PM	16.8		305	08/27	Sun	12-01 PM	16.0		560	08/05	Sat	02-03 PM	14.8	53/47	
80	298	07/21	Fri	10-11 AM	16.0		295	07/30	Sun	12-01 PM	15.5		549	07/28	Fri	12-01 PM	14.6	51/49	
100	286	07/14	Fri	01-02 PM	15.3		287	08/05	Sat	01-02 PM	15.1		537	07/01	Sat	02-03 PM	14.2	64/36	
130	273	11/03	Fri	06-07 PM	14.6		271	06/17	Sat	01-02 PM	14.2		516	06/24	Sat	01-02 PM	13.7	45/55	
500	188	06/12	Mon	05-06 PM	10.1		198	10/15	Sun	01-02 PM	10.4		378	07/21	Fri	06-07 PM	10.0	68/32	
1000	154	06/25	Sun	05-06 PM	8.3		165	06/20	Tue	01-02 PM	8.7		322	08/16	Wed	05-06 PM	8.5	44/56	

AADT: 1,867
 Hour1 /AADT: 22.6 %
 Hour30 /AADT: 18.7 %
 Hour100/AADT: 15.3 %

AADT: 1,906
 Hour1 /AADT: 25.4 %
 Hour30 /AADT: 17.9 %
 Hour100/AADT: 15.1 %

AADT: 3,772
 Hour1 /AADT: 18.2 %
 Hour30 /AADT: 15.6 %
 Hour100/AADT: 14.2 %

ATTACHMENT D

Hwy 53 Task Force Correspondence



CITY OF INTERNATIONAL FALLS

600 FOURTH STREET
INTERNATIONAL FALLS, MN 56649

Telephone 218/283-9484
Cell 218/240-4233
FAX 218/283-3590

OFFICE OF MAYOR
Robert (Bob) W. Anderson

December 28, 2018

Mr. Duane Hill, Transportation District Engineer
Minnesota Department of Transportation, District 1
1123 Mesaba Avenue
Duluth, MN 55811

Dear Mr. Hill:

This letter is written on behalf of the Highway 53 Long Range Improvement Task Force and the City of International Falls. The task force includes citizens who live and work on the corridor, business owners, state patrol officers and elected federal, state, county and city officials. The task force has been working in a most successful partnership with MN/DOT District 1 to improve Highway 53. For two decades, members of the task force have been meeting regularly with federal and state officials to improve the safety and efficiency of this important thoroughfare.

The City of International Falls is the largest city from Virginia north for the 100 miles that separates the two communities. The 53 corridor also serves the cities of Cook, Orr and many others where state and county highways branch off to including the Native American communities of the Bois Forte Band at Tower and Nett lake. The 53 corridor begins or terminates at the International Bridge and port of entry from Fort Frances, Ontario, Canada in International Falls.

Significant improvements have been made to the 20-mile section between Virginia and Cook in the past 20 years. These include an interchange with MN Highway 169 and U.S. 53 and the route has been upgraded from two-lane to a four-lane highway with some of those miles being new right-of-way. The Congress and President of the United States dubbed the corridor "The Falls to the Falls" because it connected International Falls to Chippewa Falls in the state of Wisconsin. The highway was also designated a business transportation corridor because of the number of trucks with trailers carrying cargo between the United States and Canada. The water shipping port of Duluth, industry, businesses and cities on the corridor generate high volumes of truck traffic.

The task force has been seeking further improvements to the highway between the city's of Cook and International Falls, a distance of 70 miles. Presently there are only two passing lanes serving that distance. The task force is seeking four additional passing lanes to assist motorists in safely traversing the two-lane roadway. Some of the reasons for the passing lanes include the innumerable no passing zones and limited sight areas within those 70 mile

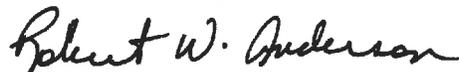
Summer time brings thousands of visitors to the northland traveling to Canada and Voyageurs National Park for outdoor recreation, most towing boats and many with camper trailers some moving at slower speeds and causing other motorists to take chances in passing. The wintertime brings a new set of hazards when the timber and forest product industry harvest 75% of their needed raw material. Logging trucks with 22 wheels carry 10 -11 cords of timber, many tree length with a bob-tail reaching beyond the end of the truck by 10 - 15 feet. These vehicles with their many tires cause snow to billow up behind them on the roadway creating a blizzard like condition making passing a near impossibility. The winter conditions in northern Minnesota can last from late October to the first days of May in the spring. These tree-hauling trucks are bringing their loads to wood using plants in Two Harbors, Duluth, Cloquet, International Falls and some in Wisconsin. These trucks do not include the hundreds of others that serve the communities on the corridor with food, gasoline, propane and chemicals for paper mills.

Many of the citizens that live in this northern climate travel U.S. 53 to the large regional trade centers in Duluth and Minneapolis-St. Paul with T.H. 53 connecting to I-35. Many citizens are traveling to these same centers because they have a need for tertiary health care where heart, cancer and other specialists serve patients. Further, still others travel to these centers for entertainment at their large capacity auditoriums to see national artists perform. Many school buses are traveling this highway especially in the long dark nights from fall to spring carrying students to visit other schools to participate in sporting and academic activities.

The city of International Falls operates the paramedic EMS service for the area with four ambulances. U.S. 53 serves as the major route for transporting emergency patients to facilities in Duluth, Minneapolis-St. Paul and Rochester. A typical month will have dozens of ambulances traveling this roadway in all weather conditions because many times fixed wing and helicopter services cannot serve those in need. The units can use emergency lights and sirens with a patient on board, if justified, however the return (dead-head) travel back to the base as-soon as-possible doesn't allow their use.

The numbers in traffic counts may not reach the arbitrary levels set to justify the highway having additional passing-lanes, however, the traffic, weather and the high percentage of truck-trailer units per those counts do add to the justification for the need.

Thank you for considering this information in determining the safety and value of lives of our northland citizens and visitors.



Robert "Bob" W. Anderson
Mayor of International Falls
Chair of the T.H. 53 Long Range Improvement Task Force

ATTACHMENT E

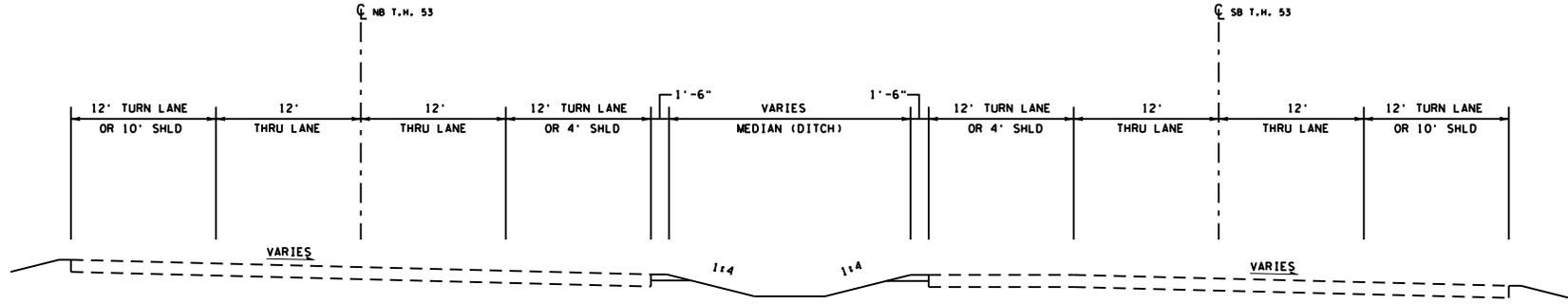
Typical Sections

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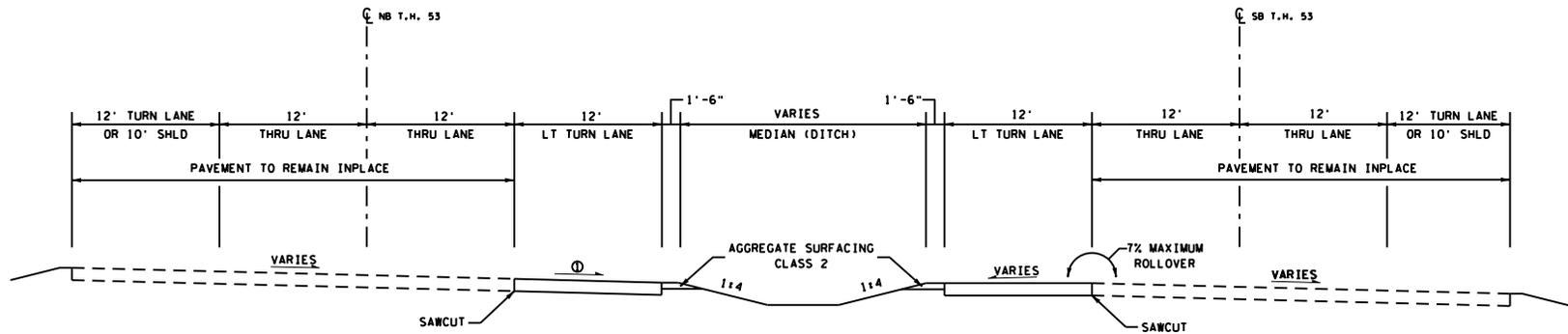
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morganba
11/30/2018

LOCATION 1
EXISTING TYPICAL SECTION - T.H. 53
STA 1463+47.16 - 1476+72.05



LOCATION 1
PROPOSED TYPICAL SECTION - T.H. 53
STA 1463+47.16 - 1476+72.05



12224 NICOLLET AVENUE
BURNSVILLE, MINNESOTA 55337
Phone: (952) 890-0509
Email: Burnsville@bolton-menk.com
www.bolton-menk.com

REV.	BY	DATE

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

ENGINEER SIGNATURE 1

ENGINEER _____
LIC. NO. 12345 DATE XX-XX-XXXX

DESIGNED	
DRAWN	
CHECKED	

S.P. 6920-53	
TH 53 ALTERNATE INTERSECTIONS AND PASSING LANES	
SHEET NAME	

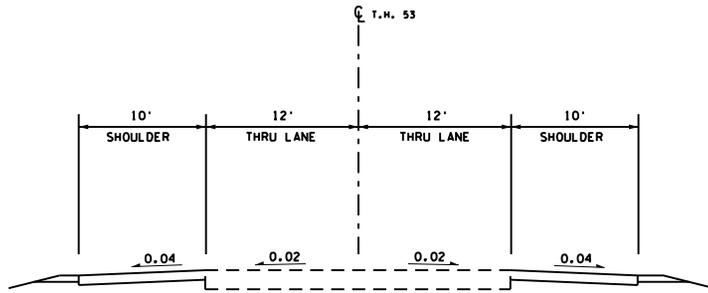
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OF	
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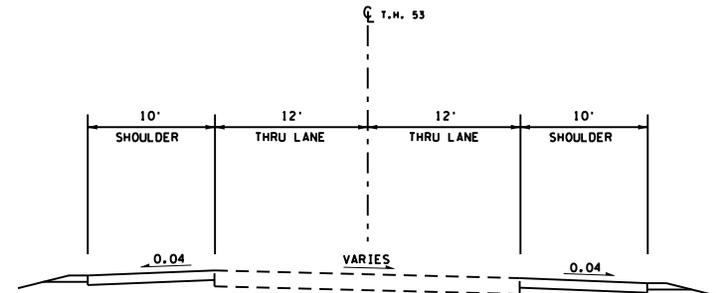
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morganba
 11/30/2018

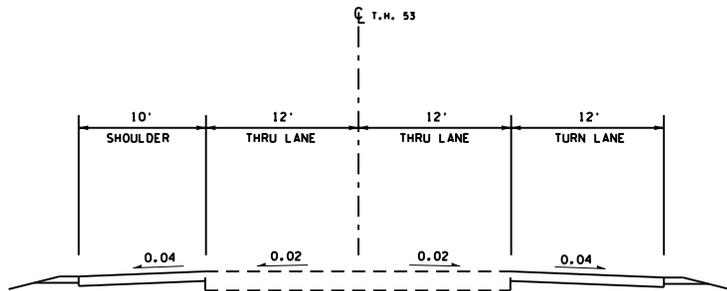
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 STA 1114+82.54 - 1121+28.85



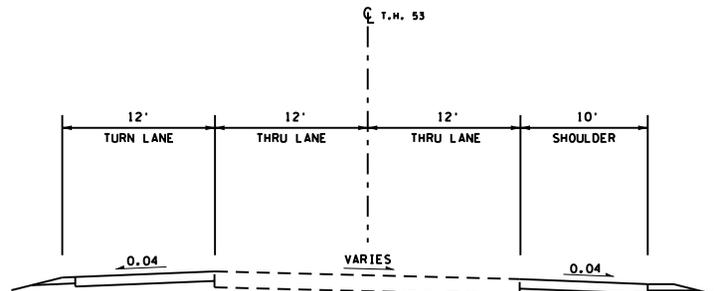
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 EXISTING TYPICAL SECTION - T.H. 53
 STA 1129+37.37 - 1132+71.55



LOCATION 2
 EXISTING TYPICAL SECTION - T.H. 53
 STA 1121+28.85 - 1129+37.37



LOCATION 2
 EXISTING TYPICAL SECTION - T.H. 53
 STA 1132+71.55 - 1136+46.00



12224 NICOLLET AVENUE
 BURNSVILLE, MINNESOTA 55337
 Phone: (952) 890-0509
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 www.bolton-menk.com

REV.	BY	DATE

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

ENGINEER SIGNATURE 1

ENGINEER _____
 LIC. NO. 12345 DATE XX-XX-XXXX

DESIGNED
 XXXX
 DRAWN
 XXXX
 CHECKED
 XXXX

S.P. 6920-53
TH 53 ALTERNATE INTERSECTIONS AND PASSING LANES
 SHEET NAME

SHEET
 X
 OF
 XX

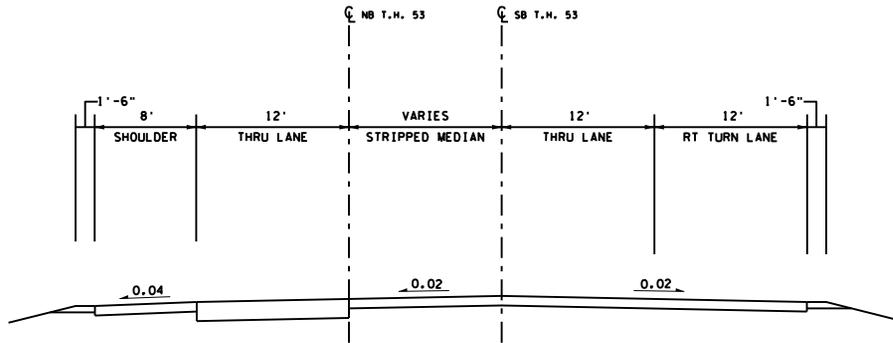
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 11/30/2018

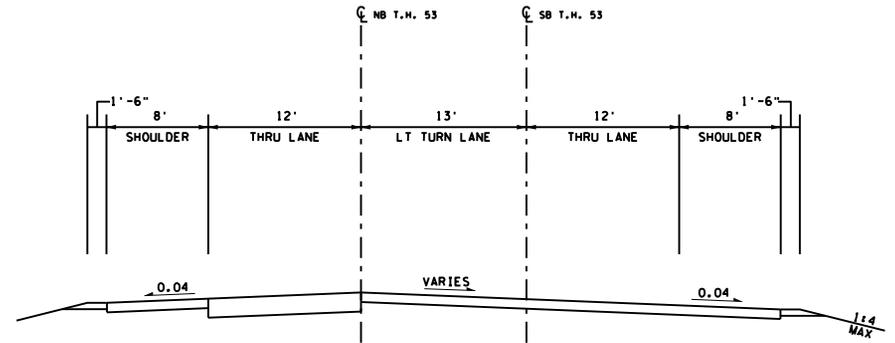
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 PROPOSED TYPICAL SECTION - T.H. 53

SECTION A-A
 STA 1114+82.54 - 1121+28.85



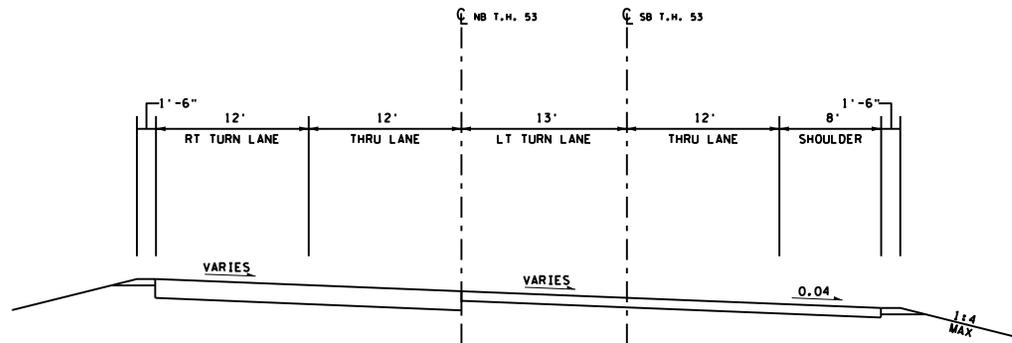
LOCATION 2
 PROPOSED TYPICAL SECTION - T.H. 53

SECTION B-B
 STA 1121+28.85 - 1129+37.37



LOCATION 2
 PROPOSED TYPICAL SECTION - T.H. 53

SECTION C-C
 STA 1129+37.37 - 1136+46.00



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 BURNSVILLE, MINNESOTA 55337
 Phone: (952) 890-0509
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 www.bolton-menk.com

REV.	BY	DATE

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

ENGINEER SIGNATURE 1

ENGINEER
 LIC. NO. 12345 DATE XX-XX-XXXX

DESIGNED	XXX
DRAWN	XXX
CHECKED	XXX
	XXX

S.P. 6920-53	
TH 53 ALTERNATE INTERSECTIONS AND PASSING LANES	X
SHEET NAME	OF
	XX

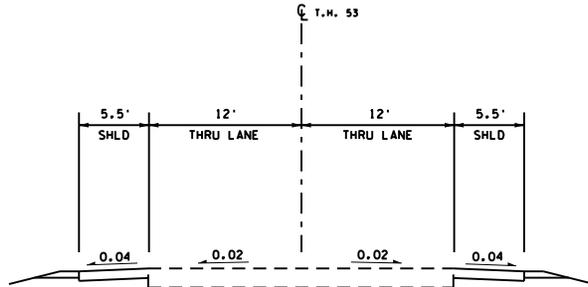
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 OF
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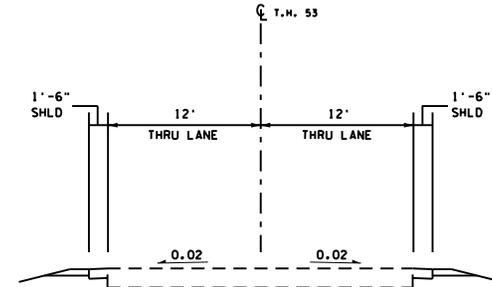
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morganba
11/30/2018

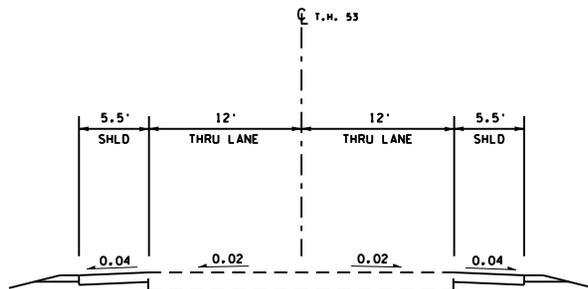
LOCATION 2
EXISTING AND PROPOSED TYPICAL SECTION - T.H. 1*
STA 2343+40.5 - 2344+10.88



LOCATION 2
EXISTING AND PROPOSED TYPICAL SECTION - C.R. 937*
STA 31+98.66 - 33+17.54



LOCATION 2
EXISTING AND PROPOSED TYPICAL SECTION - C.R. 115*
STA 10+39.81 - 12+19.79



***NOTE**
GEOMETRY BETWEEN EXISTING AND PROPOSED SECTIONS
AT T.H. 1, C.R. 937, AND C.R.115
DOES NOT CHANGE



12224 NICOLLET AVENUE
BURNSVILLE, MINNESOTA 55337
Phone: (952) 890-0509
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REV.	BY	DATE

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

ENGINEER SIGNATURE 1

ENGINEER _____
LIC. NO. 12345 DATE XX-XX-XXXX

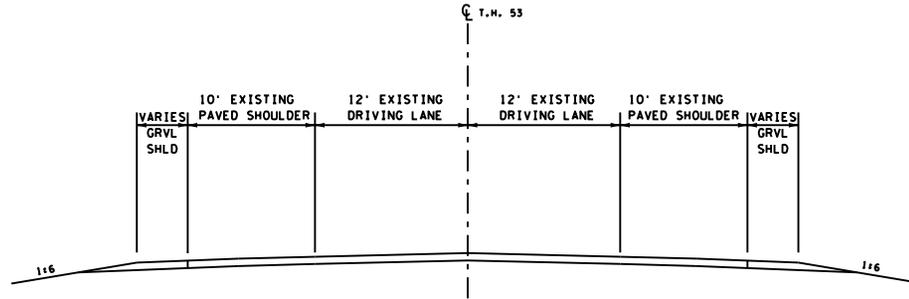
DESIGNED XXX
DRAWN XXX
CHECKED XXX

S.P. 6920-53
TH 53 ALTERNATE INTERSECTIONS AND PASSING LANES
SHEET NAME

SHEET
X
OF
XX

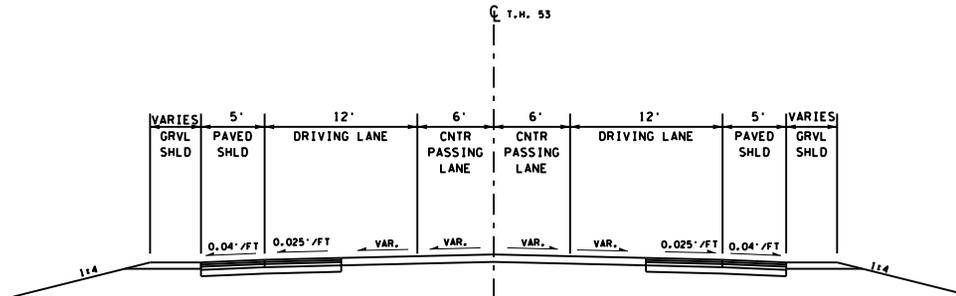
LOCATIONS 3-6
 EXISTING TYPICAL SECTION - T.H. 53

R.P. 98+00.000 - 100+00.500
 R.P. 118+00.500 - 121+00.000
 R.P. 136+00.500 - 139+00.000
 R.P. 149+00.000 - 151+00.500



LOCATIONS 3-6
 PROPOSED TYPICAL SECTION - T.H. 53

R.P. 98+00.000 - 100+00.500
 R.P. 118+00.500 - 121+00.000
 R.P. 136+00.500 - 139+00.000
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ENGINEER SIGNATURE 1

ENGINEER _____
 LIC. NO. 12345 DATE XX-XX-XXXX

DESIGNED XXX
DRAWN XXX
CHECKED XXX

S.P. 6920-53
TH 53 ALTERNATE INTERSECTIONS AND PASSING LANES
SHEET NAME

SHEET
X
OF
XX

ATTACHMENT F

Environmental Review and Coordination Correspondence

- Endangered Species Act
- MN Department of Natural Resources
- Roadside Vegetation
- Regulated Materials
- Contaminated Properties
- Bike/Pedestrian and ADA
- Cultural Resources - Historic/Archeological
- US Forest Service notification

February 1, 2019

Andrew Horton
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Minnesota-Wisconsin ES Field Office
4101 American Blvd East
Bloomington, MN 55425-1665

S.P. 6920-53, TH 53

S.P. 6921-24, 6922-60, 3608-54

Koochiching and St. Louis counties, Minnesota

Notice of Determination – May affect, not likely to adversely affect – northern long-eared bat (*Myotis septentrionalis*)

No Effect Determination – Gray wolf (*Canis lupus*) and designated Critical Habitat

No Effect Determination – Canada lynx (*Lynx canadensis*) and designated critical habitat

No Effect Determination – Piping plover (*Charadrius melodus*) and designated Critical Habitat

No Effect Determination – Rufa red knot (*Calidris canutus rufa*)

Project Description: The proposed project will reconstruct one existing intersections, and construct passing lanes at multiple locations. Additional activities include: lighting upgrades; culvert repairs or replacements; ditch grading; and associated activities. No bridge work and no tree clearing is anticipated.



Action Area identified for the proposed project.

Conservation Measures:

Required Avoidance and Minimization Measures (AMMs) - Northern long-eared bat:

- **General AMM 1:** Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs. *Notify contractor(s) during the pre-construction meeting. Bat sightings (including sick, injured, and/or dead bats) on the project must be reported to OES wildlife ecologist (651-366-3605).*
- **Lighting AMM 1 & AMM 2:** Direct temporary lighting, if used, away from wooded areas during the bat active season (April 1 to Oct 31, inclusive). If installing new or replacing existing permanent lights, use downward-facing, full cut-off lens lights (with same intensity or less for replacement lighting); or for those transportation agencies using the BUG system developed by the Illuminating Engineering Society, be as close to 0 for all three ratings with a priority of "uplight" of 0 and "backlight" as low as practicable. *Please contact Susan Zarling (MnDOT Lighting Engineer) at 651-234-7052 with questions about approved products.*

Additional Conservation Measures:

- No tree clearing.
- If rolled erosion control products (EG erosion control blanket) are to be utilized, must be limited to 'bio-netting', 'natural-netting' (category 3N or 4N) woven type products, and specifically not allow welded plastic mesh netting. See Best Practices for Meeting GP 2004-0001 (page 25), at http://www.dnr.state.mn.us/waters/watermgmt_section/pwpermits/gp_2004_0001_manual.html and DNR's factsheet at <http://files.dnr.state.mn.us/eco/nongame/wildlife-friendly-erosion-control.pdf>.
- Revegetation of disturbed soils should follow D1 Vegetation Establishment Recommendations (http://www.dot.state.mn.us/environment/erosion/pdf/vegetation/D1_2016.pdf), and use native mixes in areas that are not proposed for mowed turf grass. For additional information, visit: <http://www.dot.state.mn.us/environment/erosion/seedmixes.html>

Species List for the Project County

According to the official County Distribution of Minnesota's Federally-Listed Threatened, Endangered, Proposed, and Candidate Species list (revised in January 2018), maintained by the Service, the project county is within the range of the following:

Revised January 2018

County	Species	Status	Habitat
Koochiching	Canada lynx <i>Lynx canadensis</i>	Threatened & Critical Habitat	Northern forest
	Gray wolf <i>Canis lupus</i>	Threatened & Critical Habitat	Northern forest
	Northern long-eared bat <i>Myotis septentrionalis</i>	Threatened	Hibernates in caves and mines - swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests during spring and summer.
St. Louis	Canada lynx <i>Lynx canadensis</i>	Threatened & Critical Habitat	Northern forest
	Gray wolf <i>Canis lupus</i>	Threatened & Critical Habitat	Northern forest

	Northern long-eared bat <i>Myotis septentrionalis</i>	Threatened	Hibernates in caves and mines - swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests during spring and summer.
	Piping Plover <i>Charadrius melodus</i>	Endangered & Critical Habitat	Sandy beaches, islands
	Rufa Red knot <i>Calidris canutus rufa</i>	Threatened	Coastal areas along Lake Superior

MnDOT consults the Minnesota Department of Natural Resources Natural Heritage Information System (Copyright 2018 State of Minnesota, Department of Natural Resources), and other resources as available, to determine if proposed projects may affect listed species.

Endangered Species Act – Section 7 Consultation

Section 7 of Endangered Species Act of 1973, as amended (Act), requires each Federal agency to review any action that it funds, authorizes or carries out to determine whether it may affect threatened, endangered, proposed species or listed critical habitat. Federal agencies (or their designated representatives) must consult with the U.S. Fish and Wildlife Service (Service) if any such effects may occur as a result of their actions. Consultation with the Service is not necessary if the proposed action will not directly or indirectly affect listed species or critical habitat. If a federal agency finds that an action will have no effect on listed species or critical habitat, it should maintain a written record of that finding that includes the supporting rationale.

Notice of Determination

Northern long-eared bat – May affect, not likely to adversely affect

No documented NLEB hibernacula and/or roost trees are documented within the project Action Area (https://files.dnr.state.mn.us/eco/ereview/minnesota_nleb_township_list_and_map.pdf).

This project review relies on the USFWS Programmatic Biological Opinion for FHWA, FRA, FTA Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C 1531 et seq.). The review was completed using the U.S. Fish and Wildlife Service's Information for Planning and Consultation (IPaC) system (Consultation Code: 03E19000-2019-I-0187). The U.S. Fish and Wildlife Service's concurrence verification letter is attached (Attachment 1).

No Effect Determinations

No Effect Determination – Gray wolf (*Canis lupus*) and designated Critical Habitat

No Effect Determination – Canada lynx (*Lynx canadensis*) and designated critical habitat

No Effect Determination – Piping plover (*Charadrius melodus*) and designated Critical Habitat

No Effect Determination – Rufa red knot (*Calidris canutus rufa*)

Canada lynx and Gray wolf, and designated Critical Habitats – *No effect determination.*

Designated critical habitat does not occur within the project Action Area. Suitable habitat is not anticipated to be impacted by the proposed project. **Therefore, MnDOT on behalf of the FHWA has made a determination of no effect for this designated critical habitat.**

Piping plover – *No effect determination.*

No documented occurrences or critical habitat for this species exist within the Action Area. Suitable habitat is not anticipated to be impacted by the proposed project. **Therefore, MnDOT on behalf of the FHWA has made a determination of no effect for this species.**

Rufa red knot – *No effect determination.*

No documented occurrences for this species exist within the Action Area. Suitable habitat is not anticipated to be impacted by the proposed project. **Therefore, MnDOT on behalf of the FHWA has made a determination of no effect for this species.**

Please contact me if there are questions or concerns.

Thank you,



Digitally signed by Christopher E Smith
Date: 2019.02.01 16:25:19 -06'00'

Christopher E. Smith, M.Sc., C.W.B.

Wildlife Ecologist | Protected Species Coordinator

Minnesota Department of Transportation

Office of Environmental Stewardship

395 John Ireland Blvd., M.S. 620

St. Paul, Minnesota 55155

O: 651-366-3605

mndot.gov





United States Department of the Interior



FISH AND WILDLIFE SERVICE

Minnesota-Wisconsin Ecological Services Field Office
4101 American Blvd E

Bloomington, MN 55425-1665

Phone: (952) 252-0092 Fax: (952) 646-2873

<http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html>

In Reply Refer To:

February 01, 2019

Consultation Code: 03E19000-2019-I-0187

Event Code: 03E19000-2019-E-00903

Project Name: S.P. 6920-53, TH 53

Subject: Concurrence verification letter for the 'S.P. 6920-53, TH 53' project under the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request dated to verify that the **S.P. 6920-53, TH 53** (Proposed Action) may rely on the concurrence provided in the February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C 1531 *et seq.*).

Based on the information you provided (Project Description shown below), you have determined that the Proposed Action is within the scope and adheres to the criteria of the PBO, including the adoption of applicable avoidance and minimization measures, may affect, but is not likely to adversely affect (NLAA) the endangered Indiana bat (*Myotis sodalis*) and/or the threatened Northern long-eared bat (*Myotis septentrionalis*).

The Service has 14 calendar days to notify the lead Federal action agency or designated non-federal representative if we determine that the Proposed Action does not meet the criteria for a NLAA determination under the PBO. If we do not notify the lead Federal action agency or designated non-federal representative within that timeframe, you may proceed with the Proposed Action under the terms of the NLAA concurrence provided in the PBO. This verification period allows Service Field Offices to apply local knowledge to implementation of the PBO, as we may identify a small subset of actions having impacts that were unanticipated. In such instances, Service Field Offices may request additional information that is necessary to verify inclusion of the proposed action under the PBO.

For Proposed Actions that include bridge/structure removal, replacement, and/or maintenance activities: If your initial bridge/structure assessments failed to detect Indiana bats, but you later detect bats during construction, please submit the Post Assessment Discovery of Bats at Bridge/Structure Form (User Guide Appendix E) to this Service Office. In these instances, potential incidental take of Indiana bats may be exempted provided that the take is reported to the Service.

If the Proposed Action is modified, or new information reveals that it may affect the Indiana bat and/or Northern long-eared bat in a manner or to an extent not considered in the PBO, further review to conclude the requirements of ESA Section 7(a)(2) may be required. If the Proposed Action may affect any other federally-listed or proposed species, and/or any designated critical habitat, additional consultation is required. If the proposed action has the potential to take bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act may also be required. In either of these circumstances, please contact this Service Office.

The following species may occur in your project area and **are not** covered by this determination:

- Canada Lynx, *Lynx canadensis* (Threatened)
 - Gray Wolf, *Canis lupus* (Threatened)
-

Project Description

The following project name and description was collected in IPaC as part of the endangered species review process.

Name

S.P. 6920-53, TH 53

Description

The proposed project will reconstruct one existing intersections, and construct passing lanes at multiple locations. Additional activities include: lighting upgrades; culvert repairs or replacements; ditch grading; and associated activities. No bridge work and no tree clearing is anticipated.

Determination Key Result

Based on your answers provided, this project(s) may affect, but is not likely to adversely affect the endangered Indiana bat and/or the threatened Northern long-eared bat. Therefore, consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required. However, also based on your answers provided, this project may rely on the concurrence provided in the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

Qualification Interview

1. Is the project within the range of the Indiana bat^[1]?

[1] See [Indiana bat species profile](#)

Automatically answered

No

2. Is the project within the range of the Northern long-eared bat^[1]?

[1] See [Northern long-eared bat species profile](#)

Automatically answered

Yes

3. Which Federal Agency is the lead for the action?

A) Federal Highway Administration (FHWA)

4. Are *all* project activities limited to non-construction^[1] activities only? (examples of non-construction activities include: bridge/abandoned structure assessments, surveys, planning and technical studies, property inspections, and property sales)

[1] Construction refers to activities involving ground disturbance, percussive noise, and/or lighting.

No

5. Does the project include *any* activities that are **greater than** 300 feet from existing road/rail surfaces^[1]?

[1] Road surface is defined as the actively used [e.g. motorized vehicles] driving surface and shoulders [may be pavement, gravel, etc.] and rail surface is defined as the edge of the actively used rail ballast.

No

6. Does the project include *any* activities **within** 0.5 miles of an Indiana bat and/or NLEB hibernaculum^[1]?

[1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

No

7. Is the project located **within** a karst area?

No

8. Is there *any* suitable^[1] summer habitat for Indiana Bat or NLEB **within** the project action area^[2]? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

[1] See the Service's [summer survey guidance](#) for our current definitions of suitable habitat.

[2] The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR Section 402.02). Further clarification is provided by the [national consultation FAQs](#).

Yes

9. Will the project remove *any* suitable summer habitat^[1] and/or remove/trim any existing trees **within** suitable summer habitat?

[1] See the Service's [summer survey guidance](#) for our current definitions of suitable habitat.

No

10. Does the project include activities **within documented NLEB habitat**^{[1][2]}?

[1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

[2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

No

11. Does the project include maintenance of the surrounding landscape at existing facilities (e.g., rest areas, stormwater detention basins)?

No

12. Does the project include wetland or stream protection activities associated with compensatory wetland mitigation?

No

13. Does the project include slash pile burning?

No

14. Does the project include *any* bridge removal, replacement, and/or maintenance activities (e.g., any bridge repair, retrofit, maintenance, and/or rehabilitation work)?

No

15. Does the project include the removal, replacement, and/or maintenance of *any* structure other than a bridge? (e.g., rest areas, offices, sheds, outbuildings, barns, parking garages, etc.)

No

16. Will the project involve the use of **temporary** lighting *during* the active season?

Yes

17. Is there *any* suitable habitat **within** 1,000 feet of the location(s) where **temporary** lighting will be used?

Yes

18. Will the project install new or replace existing **permanent** lighting?

Yes

19. Is there *any* suitable habitat **within** 1,000 feet of the location(s) where **permanent** lighting will be installed or replaced?

Yes

20. Does the project include percussives or other activities (**not including tree removal/trimming or bridge/structure work**) that will increase noise levels above existing traffic/background levels?

Yes

21. Will the activities that use percussives (**not including tree removal/trimming or bridge/structure work**) and/or increase noise levels above existing traffic/background levels be conducted *during* the active season^[1]?

[1] Coordinate with the local Service Field Office for appropriate dates.

Yes

22. Will *any* activities that use percussives (**not including tree removal/trimming or bridge/structure work**) and/or increase noise levels above existing traffic/background levels be conducted *during* the inactive season^[1]?

[1] Coordinate with the local Service Field Office for appropriate dates.

Yes

23. Are *all* project activities that are **not associated with** habitat removal, tree removal/trimming, bridge or structure removal, replacement, and/or maintenance, lighting, or use of percussives, limited to actions that DO NOT cause any stressors to the bat species, including as described in the BA/BO (i.e. activities that do not involve ground disturbance, percussive noise, temporary or permanent lighting, tree removal/trimming, nor bridge/structure activities)?

Examples: lining roadways, unlighted signage, rail road crossing signals, signal lighting, and minor road repair such as asphalt fill of potholes, etc.

Yes

24. Will the project raise the road profile **above the tree canopy**?

No

25. Are the project activities that use percussives (not including tree removal/trimming or bridge/structure work) consistent with a Not Likely to Adversely Affect determination in this key?

Automatically answered

Yes, because the activities are within 300 feet of the existing road/rail surface, greater than 0.5 miles from a hibernacula, and are not within documented habitat

26. Are the project activities that use percussives (not including tree removal/trimming or bridge/structure work) and/or increase noise levels above existing traffic/background levels consistent with a No Effect determination in this key?

Automatically answered

Yes, because the activities are within 300 feet of the existing road/rail surface, greater than 0.5 miles from a hibernacula, and conducted during the inactive season

27. **General AMM 1**

Will the project ensure *all* operators, employees, and contractors working in areas of known or presumed bat habitat are aware of *all* FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable Avoidance and Minimization Measures?

Yes

28. **Lighting AMM 1**

Will *all* **temporary** lighting be directed away from suitable habitat during the active season?

Yes

29. **Lighting AMM 2**

Does the lead agency use the BUG (Backlight, Uplight, and Glare) system developed by the Illuminating Engineering Society^{[1][2]} to rate the amount of light emitted in unwanted directions?

[1] Refer to [Fundamentals of Lighting - BUG Ratings](#)

[2] Refer to [The BUG System—A New Way To Control Stray Light](#)

Yes

30. **Lighting AMM 2**

Will the **permanent** lighting be designed to be as close to 0 for all three BUG ratings as possible, with a priority of "uplight" of 0 and "backlight" as low as practicable?

Yes

Project Questionnaire

1. Have you made a No Effect determination for *all* other species indicated on the FWS IPaC generated species list?

Yes

2. Have you made a May Affect determination for *any* other species on the FWS IPaC generated species list?

No

Avoidance And Minimization Measures (AMMs)

These measures **were accepted** as part of this determination key result:

GENERAL AMM 1

Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs.

LIGHTING AMM 1

Direct temporary lighting away from suitable habitat during the active season.

LIGHTING AMM 2

When installing new or replacing existing permanent lights, use downward-facing, full cut-off lens lights (with same intensity or less for replacement lighting); or for those transportation agencies using the BUG system developed by the Illuminating Engineering Society, be as close to 0 for all three ratings with a priority of "uplight" of 0 and "backlight" as low as practicable.

Determination Key Description: FHWA, FRA, FTA Programmatic Consultation For Transportation Projects Affecting NLEB Or Indiana Bat

This key was last updated in IPaC on March 16, 2018. Keys are subject to periodic revision.

This decision key is intended for projects/activities funded or authorized by the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and/or Federal Transit Administration (FTA), which require consultation with the U.S. Fish and Wildlife Service (Service) under Section 7 of the Endangered Species Act (ESA) for the endangered **Indiana bat** (*Myotis sodalis*) and the threatened **Northern long-eared bat** (NLEB) (*Myotis septentrionalis*).

This decision key should only be used to verify project applicability with the Service's [February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects](#). The programmatic biological opinion covers limited transportation activities that may affect either bat species, and addresses situations that are both likely and not likely to adversely affect either bat species. This decision key will assist in identifying the effect of a specific project/activity and applicability of the programmatic consultation. The programmatic biological opinion is not intended to cover all types of transportation actions. Activities outside the scope of the programmatic biological opinion, or that may affect ESA-listed species other than the Indiana bat or NLEB, or any designated critical habitat, may require additional ESA Section 7 consultation.

From: Smith, Christopher E (DOT) <christopher.e.smith@state.mn.us>
Sent: Monday, February 4, 2019 12:55 PM
To: Alcott, Jason (DOT)
Cc: Olson, Josie (DOT); Peter Langworthy
Subject: RE: 6920-53, TH 53, ESA consultation
Attachments: 6920-53_et.al_ESA(Section_7)-PBO_NLAA.pdf

This review was updated per updated scope and sent out last week. There is a 14 day clock after which we can assume concurrence and move forward.

-Chris

--

Christopher E. Smith, M.Sc., C.W.B.®
Wildlife Ecologist | Protected Species Program Coordinator

Minnesota Department of Transportation

Office of Environmental Stewardship
395 John Ireland Blvd., M.S. 620
St. Paul, Minnesota 55155
O: 651-366-3605
mndot.gov



From: Alcott, Jason (DOT)
Sent: Monday, February 04, 2019 12:54 PM
To: Smith, Christopher E (DOT) <christopher.e.smith@state.mn.us>
Cc: Olson, Josie (DOT) <Josie.Olson@state.mn.us>; Peter Langworthy <Peter.Langworthy@bolton-menk.com>
Subject: 6920-53, TH 53, ESA consultation

Hi Chris,

I am wondering where this may be on the USFWS list of priorities. I am sure the USFWS is overwhelmed right now and we hate to ask, but letting is fast approaching (scheduled for April 2019) and we will need to send the environmental document in for OES/ FHWA approval. Again, I do feel bad for asking, but anything that you could find out would be great.

Thank you,

jason

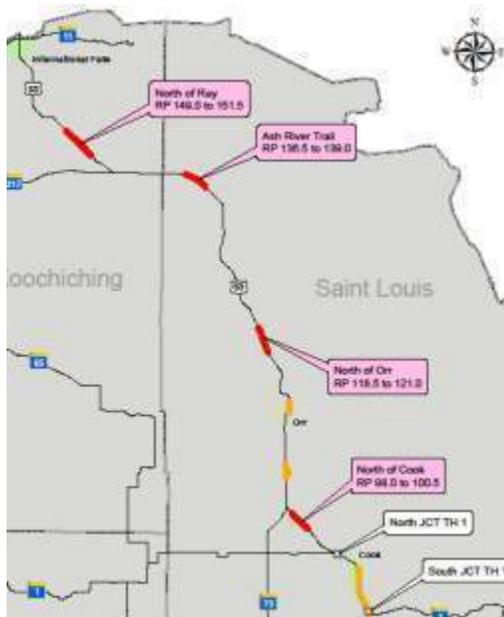
This email has been scanned by the Symantec Email Security.cloud service.
For more information please visit <http://www.symanteccloud.com>

Peter Langworthy

From: Leete, Peter (DOT)
Sent: Friday, November 16, 2018 4:21 PM
To: Alcott, Jason (DOT)
Cc: Meyer, Matthew (DOT); Straumanis, Sarma (DOT); Smith, Christopher E (DOT); Joyal, Lisa (DNR); Orne, Benjamin G MVP; Coyle, Margi (Anne) (DNR); Peterson, Kevin E (DNR); Crozier, Gaea (DNR); Boland, Kim (DNR); Reed, Rian H (DNR)
Subject: DNR Comments on MnDOT Early Notification Memo, TH53 passing lanes and intersection work (SP6920-53) St Louis and Kooch Co.
Attachments: 8_29_18, 6920-53, ENM.PDF; DNRbasemap.pdf; AES.PDF

Jason,

This email is the DNR response for your project records. I have not sent this Early Notification Memo (ENM) out for full DNR review. The following comments are based on information provided in the submitted documents regarding the proposed passing lane construction on 4 segments of TH53 between Cook and International Falls and reconstruction of the two TH53 –TH1 Junctions.



Please incorporate the following comments into final designs and special provisions as they are developed:

1. For MnDOT planning purposes, attached to this email is a map of the project area (DNRbasemap.pdf) showing nearby locations of DNR areas concern (if they exist), such as Public Waters (in blue), waterbodies designated as infested with aquatic invasive species (AIS), snowmobile Trails (in pink), and various green shaded polygons for Sites of Biodiversity Significance. This map may be shared or included in project documentation, as all information is from publically available data layers. Most of this information is also available on the MnDOT georilla website (<http://georilla/metrogis/#>) in the natural resources catalog (DNR ENM).

The Natural Heritage Information System (NHIS) database has been reviewed, though in order to prevent the inadvertent release of a rare features location, those details are not shown on the map. Comments on potential impacts to rare features listed in the NHIS comments are below. If you have questions regarding proposed work near any of the data shown, please give me a call.

2. The DNR Public Waters that are in or near the project area are:
 - Lost River (Bridge 95515) and an Unnamed Stream (culvert crossing) on the passing lane segment north of Cook. These also a designated Trout Streams
 - Unnamed Stream (bridge 8207) on the Ash River Trail Passing lane segment
 - Unnamed Stream (bridge 8209) on the passing lane segment north of Ray

Should plans not avoid impacting DNR Public Waters at any of the above locations, please contact me as further review will be required. Resetting aprons or replacing 'in kind' (no change to length, diameter, invert elevations) typically will not require field review, though be aware the project may need to be reviewed/authorized under GP2004-0001 and that the design and timing of the work will need to follow DNR standard requirements, including use of natural net erosion control blanket, use of native vegetation, crossings designed for fish passage requirements, and limits to work in the water (Work Exclusion dates) for allowing undisturbed fish migration and spawning. No work in the water will be allowed from April 1 through June30 or for the trout streams September 15 through June 30. While we may revise these dates for a particular project, there may still be limitations on the types of work during this time. Also, Regardless of potential impact, DNR Public Waters should be identified as an 'Area of Environmental Sensitivity' on plans. See the attached AES best practices guidance.

Please be aware that the MPCA NPDES general permit for authorization to discharge stormwater associated with construction activities (permit MN R10001) recognizes the DNR "work in water restrictions" during specified fish migration and spawning time frames for areas adjacent to water. This applies to all Public Waters locations regardless of the need for a Public Waters work permit. During the restriction period, all exposed soil areas that are within 200 feet of the water's edge and drain to these waters, must have erosion prevention stabilization activities initiated immediately after soil disturbing activity has ceased (and be completed within 24 hours).

3. It is unknown what repairs may be proposed to any culverts. A general comment on repairs that may utilize Cured In Place Plastic liners (CIPP) is that installation methods may temporarily alter the chemical or thermal properties in the receiving water during the installation process, curing process, or initial flush. These by-products of installation have potential for adverse impacts to receiving waters. In extreme cases, impacts may result in a localized fish kill. To help assure suitable containment or treatment prior to discharge to Public Waters, Special Provisions in the construction specifications should be written to prevent hot water precipitate or chemical containing precipitate (e.g. styrene or cement waste) from discharging into receiving waters.
4. Please remind contractors that a separate water use permit is required if the projects construction will require the withdrawal of more than 10,000 gallons of water per day or 1 million gallons per year from surface water or ground water. GP1997-0005 (temporary water appropriations) covers a variety of activities associated with road construction and should be applied of if applicable. An individual appropriations permit may be required for projects lasting longer than one year or exceeding 50 million gallons. Information is located at: http://www.dnr.state.mn.us/waters/watermgmt_section/appropriations/permits.html
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. There were rare features identified in this query. In order to prevent the inadvertent release of the location of specific listed or rare species contained in the NHIS, I have not identified the species or their location on the attached 'DNRbasemap.pdf'. If these details are needed for documentation, please contact me. Please note that the following rare features were identified in the query and *may* be impacted by the proposed project. Suggested avoidance and/or protection measures are also identified:
 - a. The Ash River Trail passing lane segment is through bogs and wooded wetlands (white cedar swamp) that contain rare plant species, including three special concern species: White Adder's Mouth (*Malaxis monophyllos var. brachypoda*), Lapland Buttercup (*Ranunculus lapponicus*), and Northern Oak Fern

(*Gymnocarpium robertianum*). There are no known locations within the MnDOT right of way, though the plant communities of Tamarac Swamps and White Cedar Swamps are vulnerable to changes in water level regimes particularly within the upper foot of the peat layer. **Altering surficial flow with ditch work or changes to culvert elevations should be avoided. Should there be such work proposed, please contact me as further review and guidance may be required.**

These areas should be identified as 'Area of Environmental Sensitivity' on plans. See the attached AES best practices for guidance on minimizing soil disturbance, incidental herbicide exposure, hydrologic alterations, tree disturbance, competition from non-native, sod-forming grasses, or introduction of weed seeds, that can all lead to degradation of these sites.

- b. It is unknown how much tree clearing will be required for this project. The northern long-eared bat (*Myotis septentrionalis*), federally listed as threatened and state-listed as special concern, can be found throughout Minnesota. During the winter this species hibernates in caves and mines, and during the active season (approximately April-October) it roosts underneath bark, in cavities, or in crevices of both live and dead trees. Pup rearing is during June, July, and early August. Activities that may impact this species include, but are not limited to, any disturbance to hibernacula and destruction/degradation of habitat (including tree removal).

The U.S. Fish and Wildlife Service (USFWS) has published a final 4(d) rule that identifies prohibited take. To determine whether you need to contact the USFWS, please refer to the USFWS Key to the Northern Long-Eared Bat 4(d) Rule (see links below). Please note that the NHIS does not contain any known occurrences of northern long-eared bat roosts or hibernacula within an approximate one-mile radius of the proposed project.

Links: USFWS Key to the Northern Long-Eared Bat 4(d) Rule for Non-Federal Activities
<http://www.fws.gov/midwest/endangered/mammals/nleb/KeyFinal4dNLEB.html>
USFWS Key to the Northern Long-Eared Bat 4(d) Rule for Federal Actions
<http://www.fws.gov/midwest/endangered/mammals/nleb/KeyFinal4dNLEBFedProjects.html>
USFWS Northern Long-eared Bat Website
<http://www.fws.gov/midwest/endangered/mammals/nleb/index.html>
USFWS Northern Long-eared Bat Fact Sheet
<http://www.fws.gov/midwest/endangered/mammals/nleb/nlebFactSheet.html>

Please contact Chris Smith (MnDOT Wildlife Ecologist) at 651-366-3605 or christopher.e.smith@state.mn.us in regards to USFWS protection measures for the northern long-eared bat.

The Natural Heritage Information System (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.

This ENM has not been circulated to DNR field staff for comment. I will let you know if any additional comments on design requirements are returned to me due to this email.

DNR folks, if I've missed anything, or have any suggestions for MnDOT to consider, please respond ASAP to Jason, and myself.

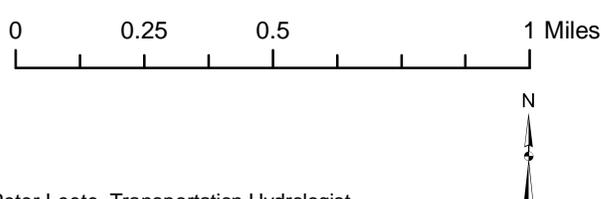
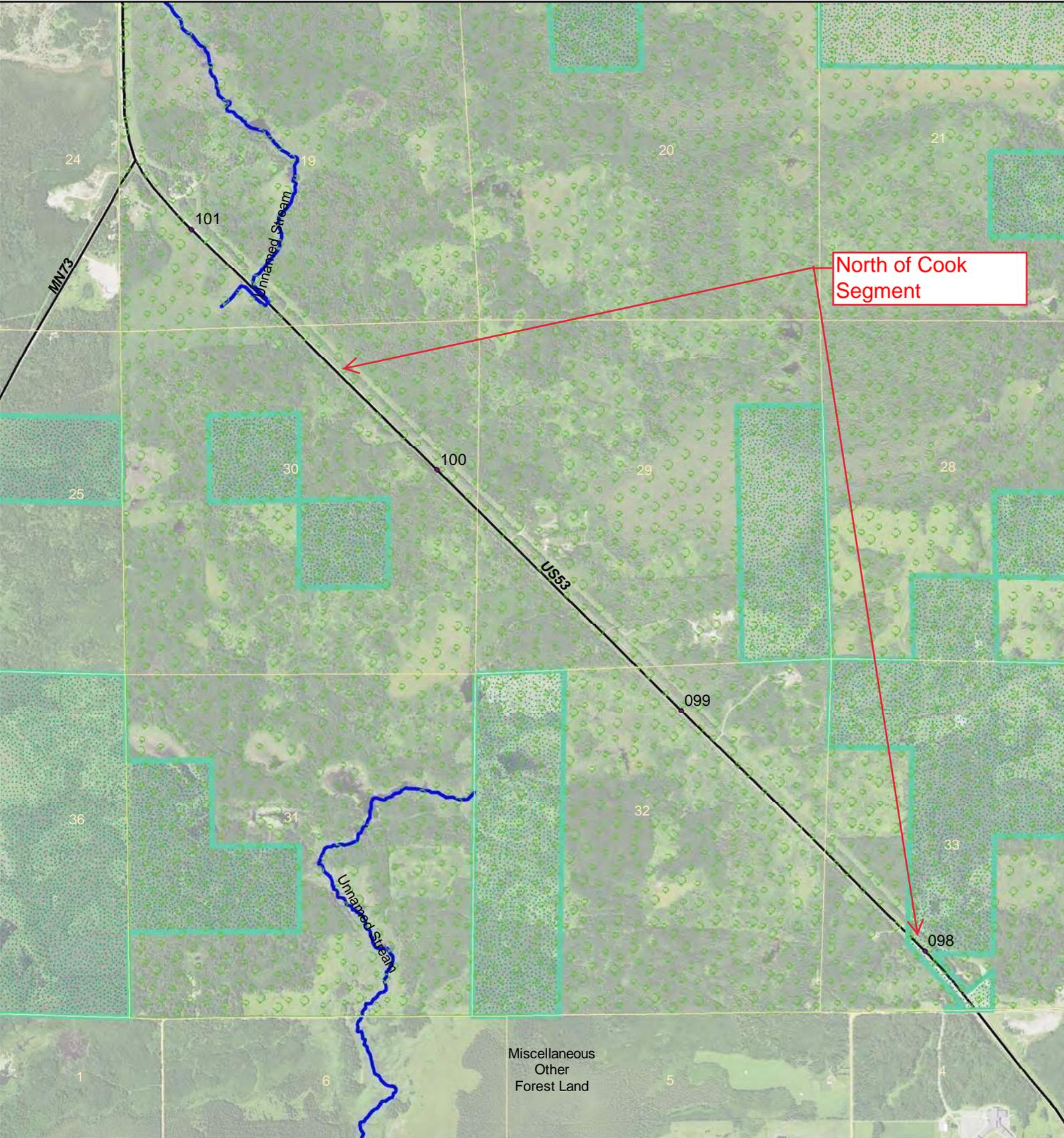
Peter Leete

Transportation Hydrologist (DNR-MnDOT Liaison) | Division of Ecological & Water Resources

Minnesota Department of Natural Resources

Office location: MnDOT Office of Environmental Stewardship
395 John Ireland Blvd., MS 620
St. Paul, MN 55155
Phone: 651-366-3634
Email: peter.lee@state.mn.us

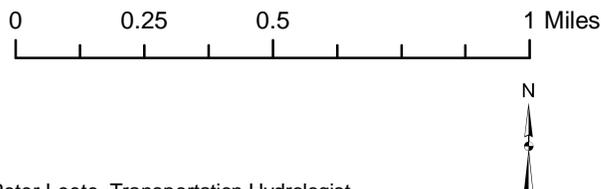
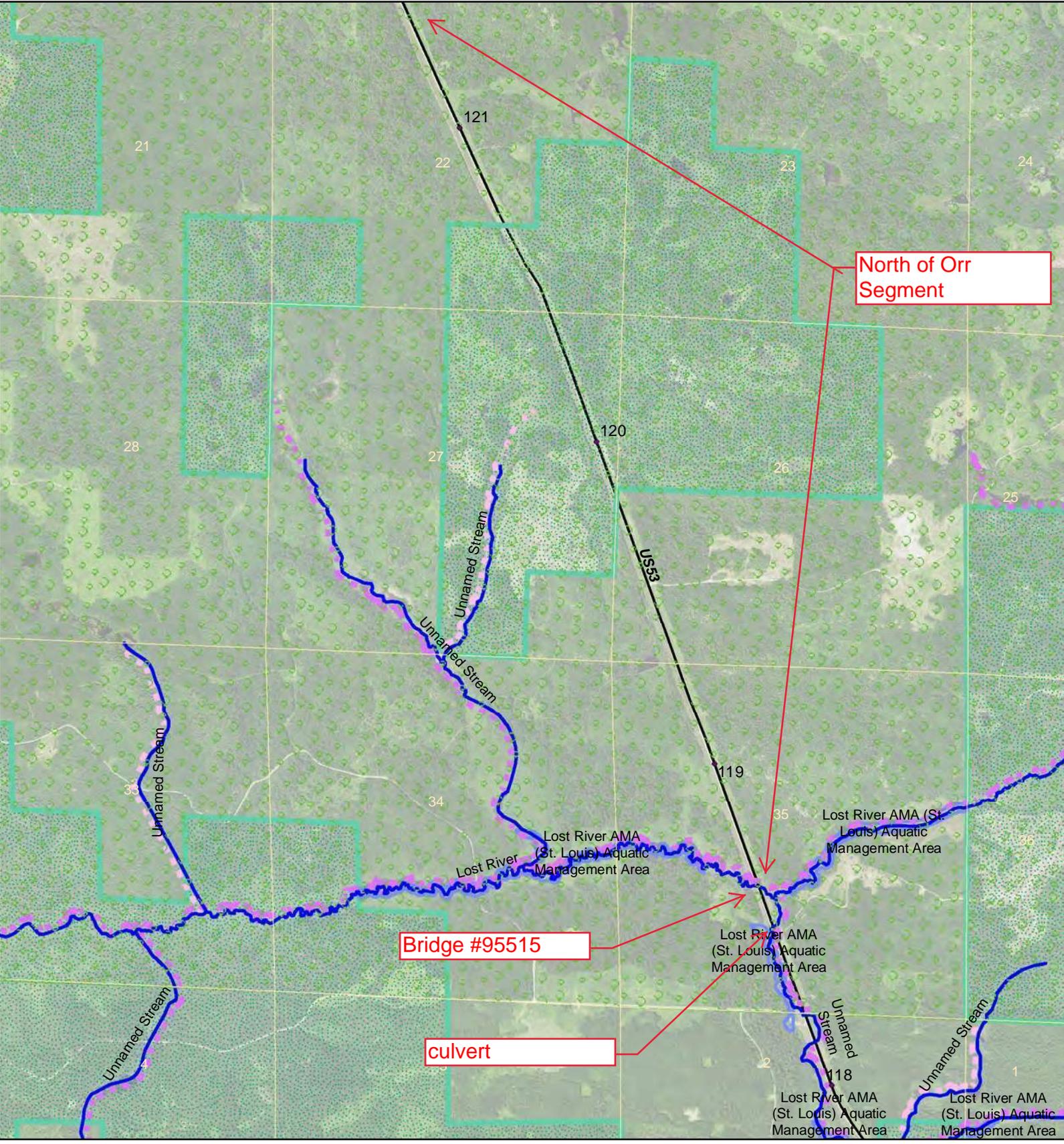




**TH53 passing lane project (RP98.0 - 100.5)
(SP6920-53)**

- Superior National Forest
- Public Water Watercourse
- State Forest Land

Peter Leete, Transportation Hydrologist
(MnDNR-MnDOT Liaison)
Date: 10/23/2018

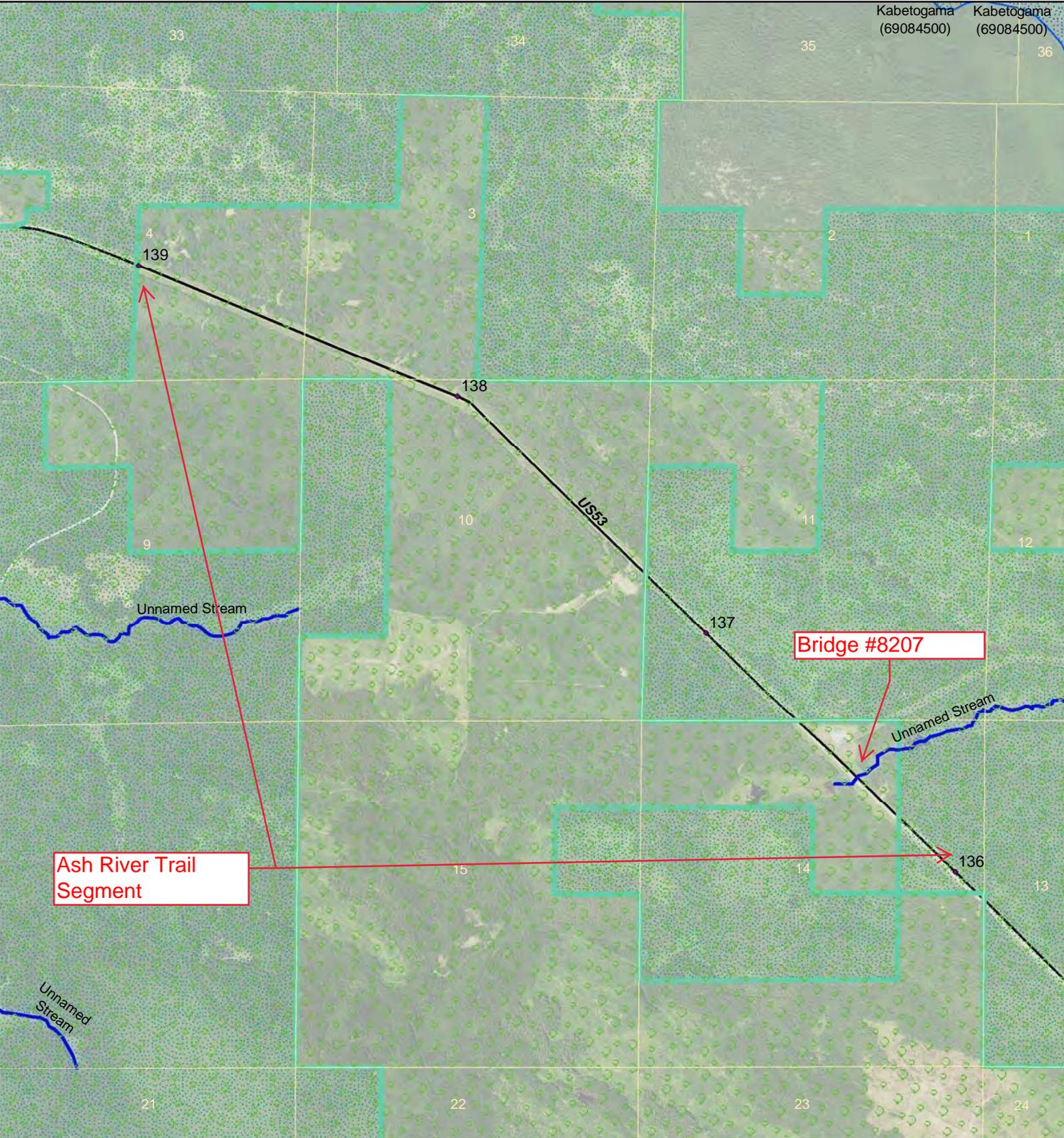


TH53 passing lane project (RP118.5-121.0) (SP6920-53)

- Superior National Forest
- Public Water Watercourse
- Designated Trout Stream
- Protected Tributary to Designated Trout Stream
- Aquatic Management Area - AMA
- State Forest Land

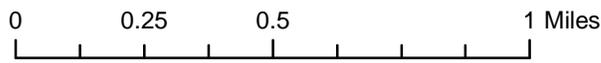
Peter Leete, Transportation Hydrologist
(MnDNR-MnDOT Liaison)

Date: 10/23/2018



Ash River Trail Segment

Bridge #8207

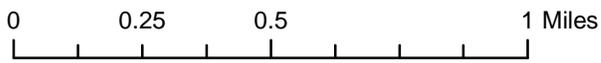
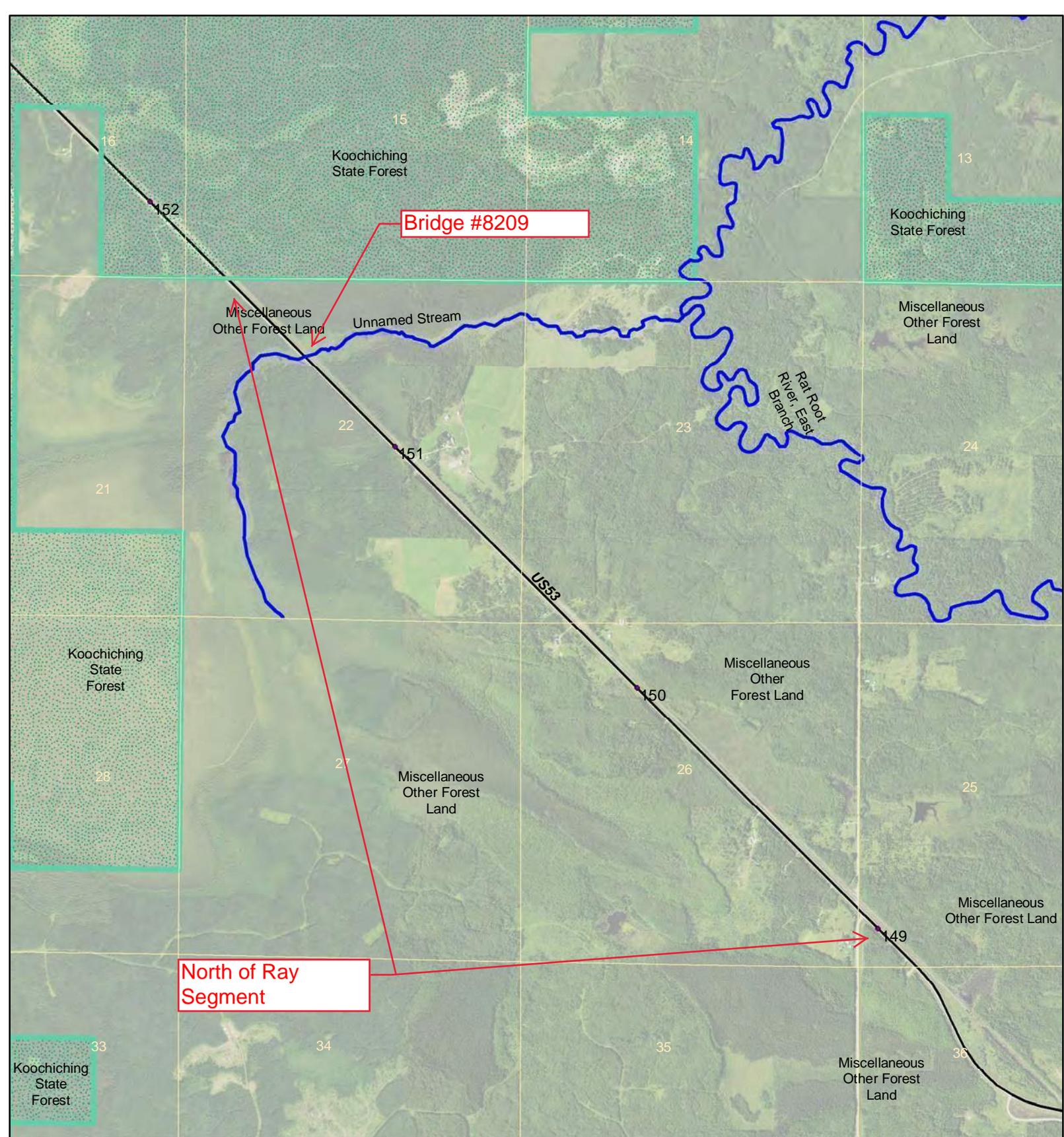


TH53 passing lane project (RP136.5 - 139.0) (SP6920-53)

-  Superior National Forest
-  Public Water Watercourse
-  Public Waters Basins
-  State Forest Land

Peter Leete, Transportation Hydrologist (MnDNR-MnDOT Liaison)

Date: 10/23/2018

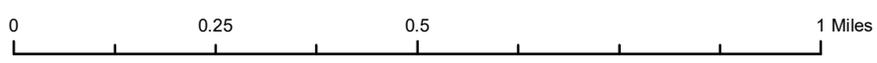


**TH53 passing lane project (RP136.5 - 139.0)
(SP6920-53)**

-  Public Water Watercourse
-  State Forest Land

Peter Leete, Transportation Hydrologist
(MnDNR-MnDOT Liaison)

Date: 10/23/2018

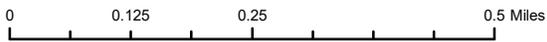


**TH53 - TH1 intersection reconstruction (RP94.0 - 94.4)
(SP6920-53)**

-  Public Water Watercourse
-  mussel survey site

Peter Leete, Transportation Hydrologist
(MnDNR-MnDOT Liaison)

Date: 11/16/2018



**TH53 - TH1 intersection reconstruction (RP87.0 - 88.0)
(SP6920-53)**

- Public Water Watercourse
- Public Access - Carry-In

Peter Leete, Transportation Hydrologist
(MnDNR-MnDOT Liaison)

Date: 11/16/2018

Protection Measures for Areas of Environmental Sensitivity (AES)

An Area of Environmental Sensitivity (AES) is a generic term to be utilized on plans to identify an area as containing unique characteristics that needs specific protection during construction. These areas may be any area that is identified for added protection due to habitat, wildlife, cultural resources/properties, ecological significance, geological features, visual quality, or its sensitivity to disturbance.

Areas identified on plans as an AES shall not be disturbed during construction. Commonly the actual area to be protected is adjacent to the right of way corridor and the AES identifier is utilized as a buffer. The concern is that soil disturbance, incidental herbicide exposure, hydrologic alterations, tree disturbance, competition from non-native, sod-forming grasses, introduction of weed seeds, or shading by encroaching shrubs can all lead to degradation of these sites.

MnDOT projects must adhere to processes and application of measures consistent with, but limited to, the MnDOT Highway Project Development Process Handbook (HPDP), 2014 Standard Specifications For Construction; Section 2572 (Protection and Restoration of Vegetation), and Section 2101 (Clearing and Grubbing), of which key aspects are listed below:

Examples of an Area of Environmental Sensitivity:

Not all Areas of Environmental Sensitivity (AES) are equal. Many may have stringent levels of regulatory protection on their own, such as Threatened and Endangered Species. However, identifying a site as an AES is to be considered as a generic “stay out of this area” for construction purposes and does not have to reveal the reason for the designation.

Typical examples are:

- Wetlands that are not permitted for construction activities.
- Open Water (such as DNR Public Waters, and other perennial streams and waterbodies)
- Trout Lakes and Streams along with their source springs.
- Calcareous Fens. These are identified in ‘native plant communities’ though due to their unique relationship with groundwater. Impacts to groundwater may also require separate analysis and protection.
- Impaired waters, Special Waters, and/or Outstanding Resource Value Waters (ORVW) as designated by the MPCA. <http://pca-gis02.pca.state.mn.us/CSW/index.html>.
- Wooded areas with Specimen Trees, or other permanent vegetation designated for preservation.
- Prairie remnants, including but not limited to areas adjacent to Railroad Rights-of-way Prairies.
- ‘Sites of Biodiversity Significance’ areas designated by the DNR Biological Survey. These sites contain varying levels of native biodiversity such as high quality ‘Native Plant Communities’, rare plants, rare animals, and/or animal aggregations. http://www.dnr.state.mn.us/eco/mcbs/biodiversity_guidelines.html.
- ‘Native Plant Community’ areas designated by the DNR Biological Survey. Native plant communities are classified and described by considering vegetation, hydrology, landforms, soils, and natural disturbance regimes. <http://www.dnr.state.mn.us/npc/index.html>.
- Federal or State listed species, and their habitat.
- Historical sites
- Any natural scenic elements, such as geological features not to be disturbed as designated by project planners, project managers, or project inspectors

Best Practices:

1. Design the project to avoid impacts to identified Area of Environmental Sensitivity.
2. Design and construction should incorporate protection and/or enhancement of adjacent AES features.
3. Label identified Areas of Environmental Sensitivity on all plans.
4. Drainage into Areas of Environmental Sensitivity may also have limitations on impacts.

In situations where work in or adjacent to an AES is authorized:

1. Prior to in-water work in an AES, check to see if a Mussel Survey is required.
2. Protect and preserve vegetation from damage in accordance with MnDOT Spec 2572.3
3. Prohibit vehicle and construction activities, including the location of field offices, storage of equipment and other supplies at least 25 feet outside the dripline of trees or other identified Area of Environmental Sensitivity to be preserved, also in accordance with MnDOT spec 2572.3
4. In areas where there are large or numerous separate of areas to protect, it may be preferred to identify those areas that are OK to be utilized, and have all other areas designated off limits for parking, staging, and/or stockpiling of materials.

5. Walk the perimeter of a sensitive area with the grading foreman so that all personnel understand and agree on the hard edge of the sensitive area.
6. Redundant sediment/erosion control Best Management Practices (BMP's) may be required for protection of areas of environmental sensitivity.
7. Revegetate disturbed soils with native species suitable to the local habitat. Revegetation plans may include woody vegetation (trees and shrubs) in addition to grasses and/or forbs.
8. Coordinate with MnDOT Office of Environmental Stewardship and/or the DNR if an Area of Environmental sensitivity is accidentally disturbed or damaged.
9. Relocate plants if harm is unavoidable (see Information on Transplanting Wildflowers and Other Plants).

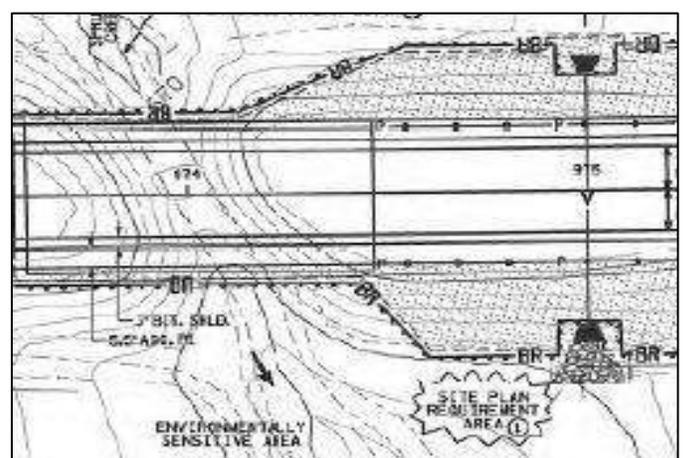
For more information:

MnDOT Highway Project Development Process (HPDP): <http://www.dot.state.mn.us/planning/hpdp/environment.html>

MnDOT 2014 Standard specifications: <http://www.dot.state.mn.us/pre-letting/spec/>

DNR Sites of Biodiversity Significance: http://www.dnr.state.mn.us/eco/mcbs/biodiversity_guidelines.html

DNR Rare Species Guide: <http://www.dnr.state.mn.us/rsg/index.html>



Memo

To: Doug Kerfeld
MnDOT District 1 – Project Manager

From: Paul Voigt
MnDOT O.E.S. - NRS/Program Coordinator- Horticulturist

Date: October 4th, 2018

Subject: SP 6920-53 - T.H. 53 (and associated S.P. 6921-24, 6922-60, 3608-54) vegetation review for ENM.

I reviewed the areas along T.H. 53 at the proposed project locations to determine potential impacts to the vegetation. My review is based on the information you supplied in your Early Notification Memo dated August 29th, 2018. The following are my observations and recommendations based on a Google Earth and GIS review of the areas.

Project Description:

This project includes two intersection revisions (south junction of T.H. 53 and T.H. 1 & north junction of T.H. 53 and T.H. 1) as well as the construction of 2.5 mile passing lanes at 4 different locations along the project corridor (RP 98.0 – 100.5, RP 118.5 - 121.0, RP 136.5 – 139.0, RP 149.0 – 151.5). Other work items will include intersection lighting and utility relocation at the 2 intersection revisions.

Vegetation:

The woody vegetation within and close to the proposed areas of work consists of mainly naturally occurring, native deciduous and coniferous trees and shrubs (Category 1-Native Plant Communities in the HPDP) and is mostly located at the edges of or adjacent to MnDOT rights of way. Herbaceous vegetation consists of both native and non-native grasses and other herbaceous plants.

Potential Impacts:

There are not likely to be any impacts to rare species or rare native plant communities as part of the proposed work. However, there will likely be some tree impacts, including tree removal (estimate on ENM states less than .5 acres of trees to be removed). Overall, impacts to trees should be minimal. There may be the opportunity to protect some trees. This would be accomplished by utilizing tree protection measures based on MnDOT Standard Specifications 2572, including but not limited to the use of temporary fence and clean root cutting. Where there are trees and/or shrubs directly adjacent to the limits of construction that warrant protection, the placement of temporary fence along the limits of construction is highly recommended (based on MnDOT Standard Specification 2572.3A.1). If there will be soil excavation at those locations and adjacent tree roots would be impacted, the use of clean root cutting may also be warranted (based on MnDOT Standard Specification 2572.3A.2). When requiring the use of temporary fence and/or clean root cutting, it should be clearly called for in the construction plans, and the Standard Plan 5-297.302 (see image on last page) should be included in the plan package.

During the design process, every effort should be made to create a design that will minimize tree loss due to construction activities.

In terms of project staging and equipment routes to and from the work areas, those areas near or under trees (on or off Right of Way) should not become staging or transport areas for equipment or materials. Activities of that nature compact soils resulting in the potential for long term health impacts to those trees.

In terms of impacts to herbaceous vegetation, proper erosion control and reseeding practices where soil disturbance occurs is important for projects of this type. For those areas in need of turf establishment, seed mix recommendations can be satisfied by reviewing the District's "Vegetation Establishment Recommendations" letter. These letters can be found at:

<http://www.dot.state.mn.us/environment/erosion/vegetation.html>.

For detailed recommendations related to turf establishment and erosion & sediment control, it is recommended the District contact MnDOT's Erosion Control and Stormwater management Unit in the Office of Environmental Stewardship (under the supervision of Ken Graeve).

Noxious Weeds:

Minnesota State listed noxious weeds can be found at the following web address:

<http://www.mda.state.mn.us/plants-insects/minnesota-noxious-weed-list>

While I am not aware of the presence of noxious weeds within the limits of this project, noxious weeds could be present. The following are some general guidelines that can help to limit the spread of noxious weeds during the construction phase:

- identify where weeds are present
- prioritize these areas for weed control before construction begins
- prevent movement of soil harboring a strong seed bank (soil under a weed infestation)
- prevent the spread of reproductive weed parts (seed and roots) by cleaning equipment before it is moved from one site to another.
- post construction, monitor for noxious weeds and control as necessary.

Vegetation Replacement:

A general discussion of vegetation protection and replacement can be found in:

[HPDP Vegetation Subject Guidance](#).

For more specific recommendations please contact the Roadside Vegetation Management unit Once construction limits are clearly defined.

As project initiation draws near and construction limits have been defined a site visit could be made if one is deemed necessary. At this time, such a site visit is not anticipated.

P6 Scheduling and Activities:

Unless the scope of work changes, further review of the project will not be needed. Project activities VGT1020, VGT1030, and VGT1040 should NOT be included in the project schedule.

From: Canino, Mary (DOT)
Sent: Thursday, September 13, 2018 2:44 PM
To: Alcott, Jason (DOT)
Cc: Kerfeld, Douglas (DOT); Erickson, Daniel J (DOT); Boben, Carolyn (DOT)
Subject: TH 53 SP 6920-53 RCI and Passing Lanes ENM – CMMT Response

ENM Due Date: 10/3/2018

Letting Date: 4/26/2019

T number: T1834

Report Writer: Jason Alcott

Project Manager: Doug Kerfeld

Project Designer: Daniel Erickson

TH 53 SP 6920-53 RCI and Passing Lanes ENM – CMMT Response

The Contaminated Materials Management Team (CMMT) reviewed the Minnesota Pollution Control Agency (MPCA) and Minnesota Department of Agriculture (MDA) databases to check for known contaminated sites in the project area. The databases searched included: leaking underground storage tank facilities, landfills, salvage yards, voluntary investigation and cleanup (VIC) sites, Superfund sites and dump sites. A review of these MPCA files is a component of a Phase I Environmental Site Assessment (Phase I ESA). A complete Phase I ESA includes at least two other components: research on historic land use, and site reconnaissance. It should be noted that the MPCA database files are continually being updated. Although this information is the most up-to-date available, some of the information may be incomplete or inaccurate. There is also a possibility that undiscovered contaminated and/or regulated materials exist in the project area.

Based on the database review, one closed unpermitted dump site is located in the vicinity of Reference Post 136.6 within approximately 500 feet of the project area.

Given the nature and location of the project area, and based on the HPDP threshold criteria as summarized below, this project has a low risk of impacting potentially contaminated sites. Therefore, no additional evaluation of the project area for potential contamination is necessary:

1. The project involves acquisition of right-of-way.
2. Project excavation and grading will be moderate for intersection and lane construction. However, because the work is in a rural, minimally developed area, this decreases the chances of encountering contaminants that may have originated from an off-site source and migrated into the right of way.
3. The project is in a rural, minimally developed area. This decreases the chances of encountering contaminants that may have originated from an off-site source and migrated into the right of way.
4. The project requires no groundwater dewatering.

No additional evaluation is necessary at this time with respect to the currently proposed construction activities. This response does **not** provide approval for any acquisition activities. Those activities require separate review and approval under the EDD process.

If new information obtained during project development or construction indicates a contaminated site may be impacted by the project, the property will be evaluated, and soil and groundwater testing completed, as appropriate. If necessary, a plan will be developed for properly handling and treating contaminated soil and/or groundwater during construction in accordance with all applicable state and federal requirements.

Based on our review of the Early Notification Memo and subsequent additional evaluations noted above and MnDOT's commitment to implementation of any necessary management of contaminated materials during construction, the project will not have a high risk of causing direct or indirect impacts to human health or sensitive environmental resources due to encountering contaminated materials.

Mary Canino, PG
Consultant for Office of Environmental Stewardship
Minnesota Department of Transportation
395 John Ireland Blvd
St. Paul, MN 55155
Office: 651-366-4293 (Mon & Thur)
Cell: 612-599-5234
mary.canino@state.mn.us



From: Grugel, Todd (DOT)
Sent: Wednesday, August 29, 2018 7:41 PM
To: Alcott, Jason (DOT)
Cc: Chng, Dick (DOT)
Subject: RE: 6920-53, TH 53, ENM for Review

Jason,

Please include median curb ramps at these proposed RCUT locations as described in the RCUT Tech Memo. Also please route the preliminary layouts when they are available.

Thanks,
Todd

From: Alcott, Jason (DOT)
Sent: Wednesday, August 29, 2018 10:43 AM
To: Leete, Peter (DOT) <peter.leete@state.mn.us>; Smith, Christopher E (DOT) <christopher.e.smith@state.mn.us>; Boben, Carolyn (DOT) <carolyn.boben@state.mn.us>; Vogel, Mark (DOT) <mark.vogel@state.mn.us>; Voigt, Paul (DOT) <paul.voigt@state.mn.us>; Roseen, Melvin (DOT) <melvin.roseen@state.mn.us>; Bistodeau, Lucas (DOT) <lucas.bistodeau@state.mn.us>; Straumanis, Sarma (DOT) <sarma.straumanis@state.mn.us>; Tiedeken, Nicklas (DOT) <nick.tiedeken@state.mn.us>; MN_DOT_CulturalResources <CulturalResources.dot@state.mn.us>; McFadden, Kathryn (DOT) <kathryn.mcfadden@state.mn.us>; Williams, Robert H (DOT) <robert.williams@state.mn.us>; Dallman, Amber (DOT) <amber.dallman@state.mn.us>; Grugel, Todd (DOT) <todd.grugel@state.mn.us>; DeLaRosa, Paul (DOT) <paul.delarosa@state.mn.us>; Gaug, Ryan (DOT) <ryan.gaug@state.mn.us>; Moynihan, Debra (DOT) <debra.moynihan@state.mn.us>
Cc: Kerfeld, Douglas (DOT) <douglas.kerfeld@state.mn.us>; Hinzmann, John (DOT) <john.hinzmann@state.mn.us>; Meyer, Matthew (DOT) <matthew.m.meyer@state.mn.us>; Miles, James (DOT) <james.miles@state.mn.us>; Mohar, David J (DOT) <david.mohar@state.mn.us>
Subject: 6920-53, TH 53, ENM for Review

Hello Everyone,

Attached is an Early Notification Memorandum for the above referenced project. The District is requesting comments by October 3, 2018.

Projectwise Link: [8_29_18_6920-53_ENM.pdf](#)

Thanks in advance for your assistance,

Jason

ENM Pedestrian and Bicycle Resources

Date: 08/31/2018

To: Jason Alcott

From: Amber Dallman, Office of Transit and Active Transportation

RE: ENM for SP 6920-53, TH 53

MnDOT offers resources for integrating safe walking and bicycling into projects. [Minnesota Walks](#) identifies destinations people want to walk and priority populations that face additional challenges with the transportation system. The [Statewide Bicycle System Plan](#) identifies state goals and priorities for bicycling. Generally speaking, if a project area is near schools, foods, parks/green space, employment centers or transit safe accommodations for people walking and bicycling should be included. Please refer to the following resources for more information.

- [MnDOT Traffic Engineering Manual, Chapter 13 Non-Motorized Facilities](#) and includes guidance on pedestrian crossings
- [MnDOT Bicycle Design and Engineering Guidance](#)
- [Pedestrian accommodations through work zones](#)

For RCUTs, refer to the [MnDOT Technical Memo 17-03-TS-01](#) Pedestrian and Bicycle Considerations.

Additional Resources

Please contact Amber Dallman, Pedestrian, Bicycle and Transit Planning Supervisor (amber.dallman@state.mn.us) or Sonja Piper, Pedestrian and Bicycle Safety Engineer (sonja.piper@state.mn.us) with questions.

CC: Sonja Piper, Pedestrian and Bicycle Safety Engineer, Office of Traffic Engineering

From: Barnes, Renee (DOT)
Sent: Monday, September 17, 2018 11:31 AM
To: Bev Miller; cchavers@boisforte-nsn.gov;
'maryann@grandportage.com'; 'rtrudell@santedakota.org'; pegasixx
(pegasixx@yahoo.com); 'brucefnadeau@gmail.com';
'kevinj@uppersiouxcommunity-nsn.gov'; Samantha Odegard
Subject: SP 6920-53 Tribal Consultation letter
Attachments: S.P. 6920-53 Tribal Consultation 30-day 9-12-2018.pdf

Dear Tribal Representative,
Please find attached a letter regarding a project in St. Louis and Koochiching
Counties. If you have any concerns regarding the project as proposed, please
contact our office within 30 days.

Thank you for your time and consideration,
~Renee

Renée L. H. Barnes, Historian
Cultural Resources Unit, Office of Environmental Stewardship, MnDOT
Mail Stop 620, 395 John Ireland Boulevard, St. Paul, MN 55155
Office: 651-366-4291



From: Barnes, Renee (DOT)
Sent: Monday, September 17, 2018 11:32 AM
To: Jill M. Hoppe (jillhoppe@fdlrez.com)
Subject: SP 6920-53
Attachments: S.P. 6920-53 Tribal Consultation 45-day 9-12-2018.pdf

Dear Tribal Representative,
Please find attached a letter regarding a project in St. Louis and Koochiching Counties. If you have any concerns regarding the project as proposed, please contact our office within 45 days.

Thank you for your time and consideration,
~Renee

Renée L. H. Barnes, Historian
Cultural Resources Unit, Office of Environmental Stewardship, MnDOT
Mail Stop 620, 395 John Ireland Boulevard, St. Paul, MN 55155
Office: 651-366-4291





Office of Environmental Stewardship

Mail Stop 620
395 John Ireland Boulevard
St. Paul, MN 55155-1800

Office Tel: (651) 366-4291

September 17, 2018

Re: S.P. 6920-53, Trunk Highway 53 Improvements, Angora and Field Townships, Unorganized Territories of NW St. Louis and Rainy Lake, Koochiching and St. Louis Counties T69N, R23W, Sections 15, 22, 23, and 26; T68N, R21W, Sections 3, 4, 10, and 11; T66N, R20W, Sections 22, 26, 27, and 35; T63N, R19W, Sections 19, 29, 30, 32, and 33; T62N, R19W, Sections 11 and 14; and T61N, R18W, Section 8

Dear Tribal Representative:

The Minnesota Department of Transportation is proposing improvements to Trunk Highway (TH) 53 with federal funds administered by the Federal Highway Administration (FHWA). This undertaking is subject to review under Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, and under the National Environmental Policy Act (NEPA). Section 106 of the NHPA requires Federal agencies to take into account the effects of their undertakings on historic properties (i.e., those properties eligible for or listed on the National Register of Historic Places). This process involves efforts to identify historic properties potentially affected by the undertaking, assess its effects and seek ways to avoid, minimize or mitigate any adverse effects on historic properties. On behalf of the FHWA, which has designated its Section 106 responsibilities to the Minnesota Department of Transportation (MnDOT) Cultural Resources Unit (CRU), we are now initiating review to determine the possible effects of the undertaking (if any) on historic properties. In accordance with 36 CFR 800.2(c) of the NHPA and as per the terms of the Programmatic Agreement between the Tribe and the FHWA, we are contacting you to see if you know of any historic properties of religious or historic significance in the area, and to see if you would like to participate in the Section 106 process for this project (i.e., to be a consulting party).

This project consists of improvements to TH 53 in six different locations between its south junction with TH 1 and R.P. 151.5, north of Ray. The improvements will include intersection revisions at the south junction with TH 1 and the north junction with TH 1. The remaining improvements are passing lanes to be constructed between R.P.s 98.0 and 100.5, 118.5 and 121.0, 136.5 and 139.0, and 149.0 to 151.5. The intersection at the south junction with TH 1 will be redesigned using an R-CUT intersection layout. The majority of the work will take place within the median, with minor changes to the approaches to TH 53. These approaches include TH 1 and County State Aid Highway 122. Intersection lighting, utility relocation, and sight line corrections will be incorporated. The intersection at the north junction with TH 1 will be realigned from an acute skew intersection to an offset tee. It will include intersection lighting and sight line corrections. Each passing lane will consist of a three-lane roadway that will provide a passing opportunity for one direction of traffic at a time. Guardrail will be evaluated and a determination of

replacement made as design advances. The project will require permanent right-of-way acquisition.

Our office has defined the area of potential effect (APE) for the project as the proposed construction limits. The APE is defined as the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. Once the APE was established, we examined the SHPO database for the list of previously recorded resources in the area. Based on these queries, no previously recorded archaeological resources are within the APE, or adjacent to it.

We would appreciate any comments you may have about historic, cultural, and archaeological resources and other concerns regarding this project. Our planning schedule is such that we must initiate work on our environmental and historic preservation studies, so we hope to hear from you within **30 days** of receipt of this letter. If you indicate that you are not aware of any historic properties with religious or cultural significance and that you do not wish to comment on the project, or if our office does not receive a response within 30 days, we will conclude that you do not wish to be a consulting party for this project and no further project information will be forwarded.

Thank you for your attention to this request. We look forward to working with you on this project.

Sincerely,



Renée Hutter Barnes
Historian
Cultural Resources Unit

Encl.

cc: Bev Miller, THPO, Bois Forte Band of Chippewa Indians (email)
Cathy Chavers, Tribal Chair, Bois Forte Band of Chippewa Indians (email)
Floyd Azure, Chairman, Fort Peck Tribes
Maryann Gagnon, THPO, Grand Portage Band of Lake Superior Chippewa (email)
Norman Deschampe, Chairman, Grand Portage Band of Lake Superior Chippewa
Roger Trudell, Chairman, Santee Sioux Nation (email)
Duane Whipple, THPO Office, Santee Sioux Nation (email)
Bruce Nadeau, THPO, Turtle Mountain Band of Chippewa (email)
Kevin Jensvold, Chairman, Upper Sioux Community (email)
Samantha Odegard, THPO Coordinator, Upper Sioux Community (email)
Jason Alcott, MnDOT District 1 (email)
Douglas Kerfeld, MnDOT District 1 (email)
MnDOT CRU Project File



Office of Environmental Stewardship

Mail Stop 620
395 John Ireland Boulevard
St. Paul, MN 55155

Office Tel: (651) 366-4291

September 17, 2018

Melissa Cerda and Jim Jones
Minnesota Indian Affairs Council
1819 Bemidji Avenue N, Suite 2
Bemidji, MN 56601

Amanda Gronhovd
Office of the State Archaeologist
Fort Snelling History Center
200 Tower Avenue, Saint Paul, MN 55111

Re: S.P. 6920-53, Trunk Highway 53 Improvements, Angora and Field Townships, Unorganized Territories of NW St. Louis and Rainy Lake, Koochiching and St. Louis Counties
T69N, R23W, Sections 15, 22, 23, and 26; T68N, R21W, Sections 3, 4, 10, and 11; T66N, R20W, Sections 22, 26, 27, and 35; T63N, R19W, Sections 19, 29, 30, 32, and 33; T62N, R19W, Sections 11 and 14; and T61N, R18W, Section 8

Dear Ms. Cerda, Mr. Jones, and Ms. Gronhovd,

The Minnesota Department of Transportation is proposing improvements to TH 53 in six different locations between its south junction with TH 1 and R.P. 151.5, north of Ray. The improvements will include intersection revisions at the south junction with TH 1 and the north junction with TH 1. The remaining improvements are passing lanes to be constructed between R.P.s 98.0 and 100.5, 118.5 and 121.0, 136.5 and 139.0, and 149.0 to 151.5. The intersection at the south junction with TH 1 will be redesigned using an R-CUT intersection layout. The majority of the work will take place within the median, with minor changes to the approaches to TH 53. These approaches include TH 1 and County State Aid Highway 122. Intersection lighting, utility relocation, and sight line corrections will be incorporated. The intersection at the north junction with TH 1 will be realigned from an acute skew intersection to an offset tee. It will include intersection lighting and sight line corrections. Each passing lane will consist of a three-lane roadway that will provide a passing opportunity for one direction of traffic at a time. Guardrail will be evaluated and a determination of replacement made as design advances. The project will require permanent right-of-way acquisition.

As part of our review of known archaeological sites and cemeteries as part of our Section 106 responsibilities as per our delegation from FHWA, we examined the SHPO database for previously recorded resources in the area. The database indicates that no previously recorded archaeological resources or burial sites are within the project area, or adjacent to it.

We are providing your offices with the location and proposed activities for this project. If you are aware of any archaeological resources or burial sites not contained within the SHPO database, please consult with us within 30 days of receipt of this letter. If we do not hear back from your offices within 30 days of your receipt of this email, we will proceed under the assumption that you are not aware of any additional archaeological resources or burial sites.

Sincerely,

A handwritten signature in black ink that reads 'Renée Hutter Barnes'.

Renée Hutter Barnes
Historian
Cultural Resources Unit

Encl.

cc: Jason Alcott, MnDOT District 1 (email)
Douglas Kerfeld, MnDOT District 1 (email)
MnDOT CRU Project File



Office of Environmental Stewardship

Mail Stop 620
395 John Ireland Boulevard
St. Paul, MN 55155-1800

Office Tel: (651) 366-3616

November 16, 2018

Re: S.P. 6920-53 & 6921-24, TH 53 Improvements, Cities of Angora, Fields and Cook, St. Louis and Koochiching Counties

Dear Mr. Alcott,

We have reviewed the above-referenced undertaking pursuant to our FHWA-delegated responsibilities for compliance with Section 306108 (previously known as Section 106 of the National Historic Preservation Act [54 USC 300101 et. seq.] and its implementing regulations, 36 CFR 800, and as per the terms of the 2015 Section 106 Programmatic Agreement between the FHWA and the Minnesota State Historic Preservation Office (SHPO). We have also reviewed the above-referenced undertaking pursuant to MnDOT's responsibilities under the Minnesota Historic Sites Act (MS 138.665-.666), the Field Archaeology Act of Minnesota (MS 138.40); and the Private Cemeteries Act (MS 307.08, Subd. 9 and 10).

This project consists of improvements to TH 53 in six different locations between its south junction with TH 1 and R.P. 151.5, north of Ray. The improvements will include intersection revisions at the south junction with TH 1 and the north junction with TH 1. The remaining improvements are passing lanes to be constructed between R.P.s 98.0 and 100.5, 118.5 and 121.0, 136.5 and 139.0, and 149.0 to 151.5. The intersection at the south junction with TH 1 will be redesigned using an R-CUT intersection layout. The majority of the work will take place within the median, with minor changes to the approaches to TH 53. These approaches include TH 1 and County State Aid Highway 122. Intersection lighting, utility relocation, and sight line corrections will be incorporated. The intersection at the north junction with TH 1 will be realigned from an acute skew intersection to an offset tee. It will include intersection lighting and sight line corrections. Each passing lane will consist of a three-lane roadway that will provide a passing opportunity for one direction of traffic at a time. Guardrail will be evaluated and a determination of replacement made as design advances. The project will require permanent right-of-way acquisition at the north junction with TH 1, as shown in the plan provided on September 11, 2018.

Our office consulted with the following tribal groups, as per 36 CFR 800 or existing agreement between FHWA and certain tribes: Bois Forte Band of Chippewa, Fond du Lac Band of Lake Superior Chippewa, Fort Peck Tribes, Grand Portage Band of Lake Superior Chippewa, Santee Sioux Tribe, Turtle Mountain Band of Chippewa, and Upper Sioux Community. None of the tribes responded to our consultation requests. In addition, consultation letters were sent to the Office of the State Archaeologist and the Minnesota Indian Affairs Council, and they did not respond within the allotted time.

The area of potential effects (APE) for direct and indirect effects of the project consists of the proposed construction limits. There are no known archaeological sites in the APE. Much of the APE has been disturbed by previous roadway construction. The APE has low potential for containing unidentified significant archaeological resources. There are no eligible or potentially-eligible buildings or structures in the APE.

The finding of this office is that there will be **no historic properties affected** by the project as currently proposed. If the project scope changes, please provide our office with the revised information and we will conduct an additional review.

Sincerely,

A handwritten signature in black ink that reads "Renée Hutter Barnes". The signature is written in a cursive style with a long horizontal flourish at the end.

Renée Hutter Barnes, Historian
Cultural Resources Unit
renee.barnes@state.mn.us

cc: Douglas Kerfeld, MnDOT District 1
MnDOT CRU Project File

From: Olson, Josie (DOT) <Josie.Olson@state.mn.us>
Sent: Tuesday, October 2, 2018 7:51 AM
To: Peter Langworthy
Cc: Peter Lemke
Subject: FW: 6920-53, TH 53, ENM for Review

ENM response from Historic Roadside Properties is below.

Josie Olson, P.E.
Project Manager | District 1
Josie.Olson@state.mn.us

Minnesota Department of Transportation
1123 Mesaba Ave.
Duluth, MN 55811
218-725-2808



From: Alcott, Jason (DOT)
Sent: Monday, October 1, 2018 4:13 PM
To: Olson, Josie (DOT) <Josie.Olson@state.mn.us>
Subject: FW: 6920-53, TH 53, ENM for Review

See comments below

From: Weber, Andrea (DOT)
Sent: Monday, October 1, 2018 4:06 PM
To: Alcott, Jason (DOT) <jason.alcott@state.mn.us>
Subject: RE: 6920-53, TH 53, ENM for Review

Hi Jason,
Here are my comments regarding your ENM 6920-53

Your project locations do not directly affect historic properties, but contractors should be aware of the historic wayside between them north of Orr on the west side of Hwy 53.

The Orr Wayside Parking Area is listed on the National Register of Historic Places. It has historic stone masonry walls overlooking Crane Lake adjacent to the city park and beach at approx. ¼ mile north of RP110.

Please inform your contractors that no construction use of the wayside parking area may be included in the project. This means no material storage, no vehicle storage, no contractor parking no trailer loading etc. is allowed in this wayside site.

Please let me know if you have any questions.

Thanks,
Andrea
Weber

Historic Roadside Property Program Manager, Site Development Unit | Project Management and Technical Support |
MnDOT Transportation Building | 395 John Ireland Blvd, St. Paul, MN 55155 Phone: 651-366-4643

From: McFadden, Kathryn (DOT)
Sent: Wednesday, August 29, 2018 11:27 AM
To: Weber, Andrea (DOT) <andrea.weber@state.mn.us>
Cc: Wyczawski, Steven (DOT) <steve.wyczawski@state.mn.us>; Williams, Robert H (DOT) <robert.williams@state.mn.us>
Subject: FW: 6920-53, TH 53, ENM for Review

Please arrange for the ENM coordinator to replace my nme with Andreas for the ENM's.

Thanks, Kat

From: Alcott, Jason (DOT)
Sent: Wednesday, August 29, 2018 10:43 AM
To: Leete, Peter (DOT) <peter.leete@state.mn.us>; Smith, Christopher E (DOT) <christopher.e.smith@state.mn.us>; Boben, Carolyn (DOT) <carolyn.boben@state.mn.us>; Vogel, Mark (DOT) <mark.vogel@state.mn.us>; Voigt, Paul (DOT) <paul.voigt@state.mn.us>; Roseen, Melvin (DOT) <melvin.roseen@state.mn.us>; Bistodeau, Lucas (DOT) <lucas.bistodeau@state.mn.us>; Straumanis, Sarma (DOT) <sarma.straumanis@state.mn.us>; Tiedeken, Nicklas (DOT) <nick.tiedeken@state.mn.us>; MN_DOT_CulturalResources <CulturalResources.dot@state.mn.us>; McFadden, Kathryn (DOT) <kathryn.mcfadden@state.mn.us>; Williams, Robert H (DOT) <robert.williams@state.mn.us>; Dallman, Amber (DOT) <amber.dallman@state.mn.us>; Grugel, Todd (DOT) <todd.grugel@state.mn.us>; DeLaRosa, Paul (DOT) <paul.delarosa@state.mn.us>; Gaug, Ryan (DOT) <ryan.gaug@state.mn.us>; Moynihan, Debra (DOT) <debra.moynihan@state.mn.us>
Cc: Kerfeld, Douglas (DOT) <douglas.kerfeld@state.mn.us>; Hinzmann, John (DOT) <john.hinzmann@state.mn.us>; Meyer, Matthew (DOT) <matthew.m.meyer@state.mn.us>; Miles, James (DOT) <james.miles@state.mn.us>; Mohar, David J (DOT) <david.mohar@state.mn.us>
Subject: 6920-53, TH 53, ENM for Review

Hello Everyone,

Attached is an Early Notification Memorandum for the above referenced project. The District is requesting comments by October 3, 2018.

Projectwise Link: [8_29_18_6920-53_ENM.pdf](#)

Thanks in advance for your assistance,

Jason

This email has been scanned by the Symantec Email Security.cloud service.
For more information please visit <http://www.symanteccloud.com>

From: Olson, Josie (DOT) <Josie.Olson@state.mn.us>
Sent: Tuesday, October 16, 2018 3:42 PM
To: prtaylor@fs.fed.us
Cc: Kerfeld, Douglas (DOT); Olson, Josie (DOT)
Subject: MnDOT TH 53 Passing Lane Project
Attachments: MDOT_AerialRegionalOverviewMap11X17P.PDF

Hello Peter,

I'm writing to notify you of a planned 2019 MnDOT project that includes the addition of passing lanes on TH 53 between Cook and International Falls in St. Louis and Koochiching Counties at locations shown on the attached map. The passing lane sections will each be 2.5 miles in length and consist of a three-lane roadway to provide a passing opportunity for one direction of traffic at a time. The width of the existing pavement will not change, and all construction will remain within the roadway surface.

My contact information follows and I encourage you to let me know if you have any questions about the project.

Thank you,

Josie Olson, P.E.
Project Manager | District 1
Josie.Olson@state.mn.us

Minnesota Department of Transportation
1123 Mesaba Ave.
Duluth, MN 55811
218-725-2808



ATTACHMENT G

Noise Study

SBP ASSOCIATES, INC.

22502 Beach Road
Deerwood, MN 56444
Phone: 952-920-1500

Trunk Highway 53 Intersection and Passing Lane Improvement Project

**Noise Impact Study
December 2018**

A. INTRODUCTION

This report presents the noise impact analysis for the proposed Trunk Highway 53 Intersection and Passing Lane Improvement Project extending from approximately 3.5 miles south-southeast of Cook, Minnesota to approximately ten miles southeast of International Falls, Minnesota. The project consists of intersection improvements at the south and north junctions of Trunk Highway (TH) 53 in the vicinity of Cook, as well as four 2.5 mile passing lane segments between Cook and International Falls. One of the passing lane segments is between Cook and Orr, and three are between Orr and International Falls. **Figure 1** depicts the overall project location.

Because of the lane miles added with the passing lane portions of the project, the project is a Type 1 project under MnDOT and FHWA policy. Therefore, a noise impact study is required for all portions of the project, including the intersection improvements.

Improvements at each project location are described under the following headings. Project locations run from south to north in the overall project corridor.

Location 1 – South TH 53/TH 1 Junction

Proposed improvements are depicted in **Figure 2**. Currently, TH 53 is 4-lane divided at this intersection. TH 1 is the east leg of the intersection, and County State Aid Highway (CSAH) 22 is the west leg; both of these are 2-lane highways. To address a high crash rate at this intersection, MnDOT proposes to make Restricted Crossing U Turn (R-CUT) improvements. With this approach, left turns from the minor roadways onto to the mainline (in this case TH 53) are prohibited, as are movements directly crossing the mainline from one minor leg to the other. Instead, drivers make right turns on the mainline and then downstream U turns at newly constructed median crossings to proceed in the desired location on the mainline, or to make a right turn on the opposing minor leg.

Location 2 – North TH 53/TH 1 Junction

Proposed improvements are depicted in **Figure 3**. TH 1 is the west leg of this intersection area, and CSAH 115 is the east leg. All roadways in this area are 2-lane highways. Under current conditions, this intersection can be challenging to drivers to negotiate due to uncommon and unexpected design conditions:

- Severe skew
- TH 1 and CSAH 115 legs are off-set by approximately 175 feet
- Presence of County Road (CR) 937 directly to the east, intersecting both CSAH 115 and TH 53

To improve mobility and safety conditions for drivers through this intersection area, MnDOT proposes to construct off-set T intersections as depicted in **Figure 3**. The intersections will be at 90°, leading to significantly improved sight lines and improved ability for drivers on the minor intersection legs to scan both directions before safely proceeding onto TH 53. Separating the TH 1 and CSAH 115 legs will lead to improved and safer driving conditions as compared with the

legs being close to each other but not aligned directly. Left turn lanes will also be added to improve operational and safety conditions.

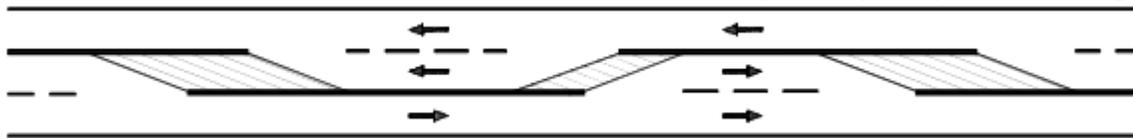
Locations 3-6 – Passing Lane Segments A-D

There is a high percentage of trucks and other slow-moving vehicles, such as vehicles with recreational trailers, in the overall project corridor. Thus, it is important to provide safe passing opportunities for travelers along this stretch of TH 53, which is the key north-south highway in this part of the state.

The passing lane segment locations are depicted in **Figure 1**. Each of these segments are proposed to be 2.5 miles in length. The four individual passing lane locations, respectively, are presented in greater detail in **Figure 4** through **Figure 7**. The existing and proposed typical section for all of the proposed passing lane segments are provided in **Figure 8**. The general approach is summarized below:

- Reconstruct existing paved shoulders to be able to carry through traffic.
- Provide transition areas to move motorists from the current typical section at either end of each passing segment to the proposed passing lane typical section, which will include 4' paved shoulders, 12' driving lanes (one either direction), and one 12' center passing lane (see **Figure 8**).
- Half of each proposed passing lane segment will be dedicated to northbound passing, and half dedicated to southbound passing, with a transition area in the middle.

A general schematic of this approach, known as the “2+1” design, is provided below. It should be noted that this is not to scale and is intended to show the general principal of the design.



Source: Application of European 2+1 Roadway Designs, National Cooperative Highway

B. NOISE AND NOISE DESCRIPTORS

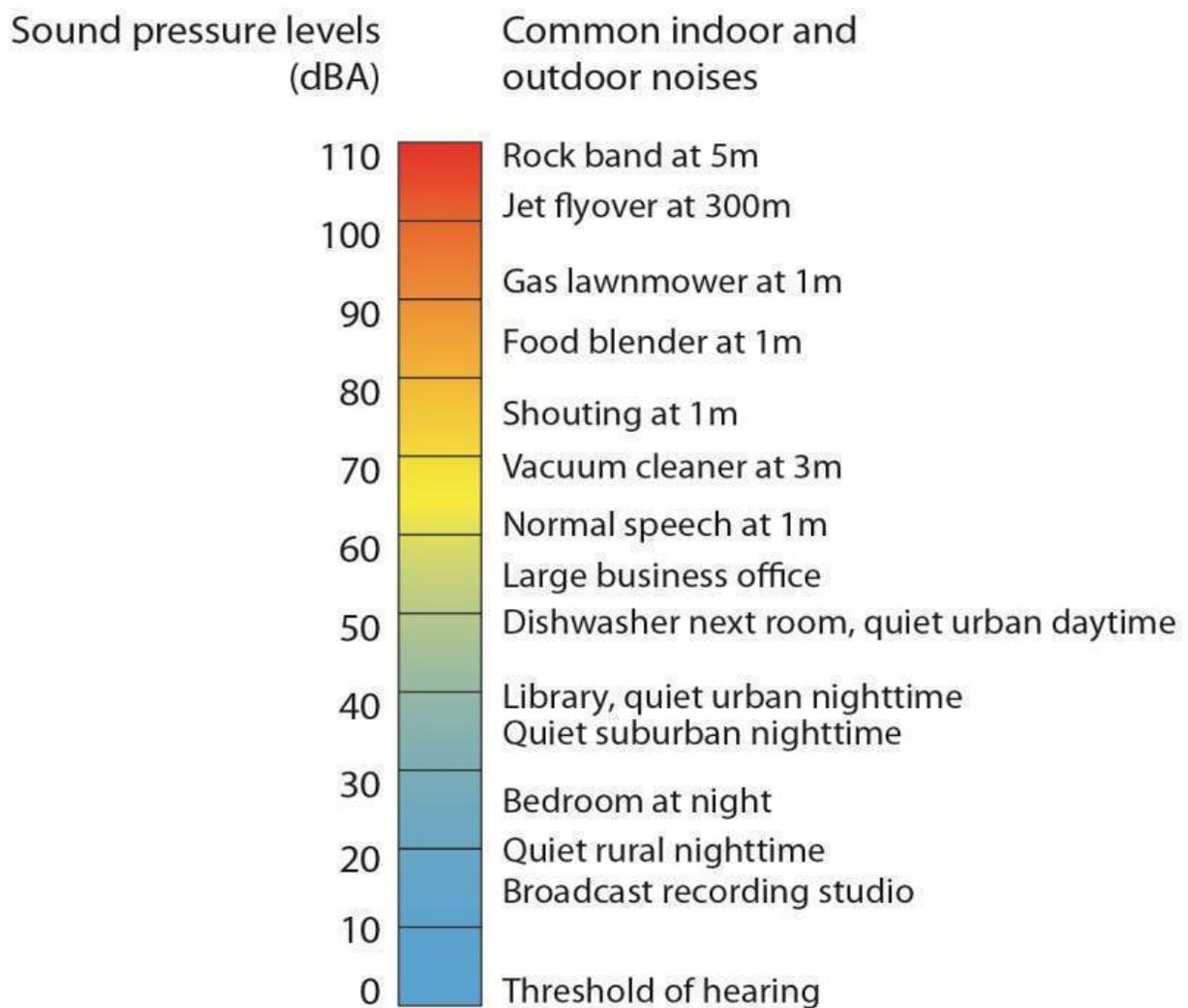
This noise impact assessment is consistent with MnDOT and FHWA requirements and includes results of the monitoring of the existing noise levels as well as the modeling of existing, future no-build, and future build scenario noise levels.

Noise is defined as any unwanted sound. Sound travels in a wave motion and produces a sound pressure level. This sound pressure level is commonly measured in decibels. Decibels (dB) represent the logarithmic measure of sound energy relative to a reference energy level. For highway traffic noise, an adjustment, or weighting, of the high- and low-pitched sounds is made to approximate the way that an average person hears sounds. The adjusted sound levels are stated in units of "A-weighted decibels" (dBA). A sound increase of three dBA is barely perceptible to the human ear, a five dBA increase is clearly noticeable, and a 10 dBA increase is heard as twice as loud. For example, if the sound energy is doubled (e.g. the amount of traffic doubles), there is a three dBA increase in noise, which is just barely noticeable to most people. On the other hand,

if traffic increases to where there is 10 times the sound energy level over a reference level, then there is a 10 dBA increase and it is heard as twice as loud.

In Minnesota, traffic noise impacts are evaluated by measuring and/or modeling the traffic noise levels during the loudest traffic hour of the day. This is expressed in terms of the L_{eq} noise level for a one-hour period. The L_{eq} is defined as “the equivalent steady-state sound level which in a stated period of time contains the same acoustic energy as the time-varying sound level during the same time period.” The L_{eq} is compared to FHWA noise abatement criteria.

The following chart (Minnesota Pollution Control Agency, <https://www.pca.state.mn.us/air/noise-pollution>) provides a rough comparison of the noise levels of some common noise sources.



Source: Minnesota Pollution Control Agency, “A Guide to Noise Control in Minnesota”, November 2015.

Along with the volume of traffic and other factors (i.e., topography of the area and vehicle speed) that contribute to the loudness of traffic noise, the distance of a receptor from a sound's source is also an important factor. Sound levels decrease as distance from a source increases. The following rule of thumb regarding how sound decreases with distance is commonly used. Beyond approximately 50 feet, each time the distance between a line source (such as a road) and a receptor is doubled, sound levels decrease by three decibels over hard ground, such as pavement or water, and by four and one half decibels over vegetated areas (soft ground).

C. REGULATORY CONTEXT

Overview

The following rules and regulations govern highway noise impacts for this project:

- A traffic noise impact analysis is required for all Type I Federal-aid projects. Type I projects are defined in 23 CFR 772.5. The proposed project meets the definition of a Type I project because it involves the addition of passing lanes.
- FHWA Noise Standards 23 CFR 772 and 23 CFR 774: includes requirements for traffic noise modeling, noise analysis, noise abatement criteria, and informing local officials.
- Minnesota Statute 116.076 Subd. 2a: lists the following exemptions from the state noise standards: "No standards adopted by any state agency for limiting levels of noise in terms of sound pressure level which may occur in the outdoor environment shall apply to (1) segments of trunk highways constructed with federal interstate substitution money, provided that all reasonably available noise mitigation measures are employed to abate noise, (2) an existing or newly constructed segment of a highway, provided that all reasonably available noise mitigation measures, as approved by the commissioners of the department of transportation and pollution control agency, are employed to abate noise .. and (3) except for the cities of Minneapolis and St. Paul, an existing or newly constructed segment of a road, street, or highway under the jurisdiction of a road authority of a town, statutory or home rule charter city, or county, except for roadways for which full control of access has been acquired."
- In 2016, the Commissioners of the MPCA and MnDOT agreed that the traffic noise regulations and mitigation requirements from the FHWA are sufficient to determine reasonable mitigation measures for highway noise. By this agreement, existing and newly constructed segments of highway projects, under MnDOT's jurisdiction, are statutorily exempt from Minnesota State Noise Standards (MN Rule 7030). As a result, any required noise analysis will follow FHWA criteria and regulations only. Projects will no longer directly address Minnesota Rule 7030.
- Therefore, noise impacts of this project will be addressed using the Federal Noise Abatement Criteria and regulations.

Federal Noise Abatement Criteria (NAC)

In the Federal NAC, for residential and recreational uses (Federal Land Use Categories B and C, respectively), the Federal L_{eq} standard is 67 dBA. For commercial areas (Federal Land Use Category E), the Federal L_{eq} standard is 72 dBA. Locations where noise levels are “approaching” (defined in Minnesota as being within one decibel of the criterion threshold, i.e. 66/71 dBA) or exceeding the criterion level must be evaluated for noise abatement (e.g. noise walls) feasibility and reasonableness. The Federal NAC are shown in **Table 1**.

In addition to the identified noise criteria, the FHWA also defines a noise impact as a “substantial increase” in the future noise levels over existing noise levels. MnDOT considers an increase of five dBA or greater a substantial noise level increase.

Table 1 – Federal Noise Abatement Criteria

Activity Category	Activity Criteria(1,2) $L_{eq}(h)$ dBA	Evaluation Location	Activity Description
A	57	Exterior	Exterior Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B(3)	67	Exterior	Residential
C(3)	67	Exterior	Exterior active sport areas, amphitheatres, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings
D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios
E(3)	72	Exterior	Exterior Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F.

Activity Category	Activity Criteria(1,2) Leq(h) dBA	Evaluation Location	Activity Description
F	-----	-----	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing
G	-----	-----	Undeveloped lands that are not permitted
<p>(1) The one-hour Leq shall be used for impact assessment.</p> <p>(2) The Leq(h) Activity Criteria values are for impact determination only, and are not design standards for noise abatement measures.</p>			

D. PROJECT IMPACT ASSESSMENTS – METHODOLOGY

Existing (2019) and future (2039) build and no-build noise levels were modeled using the FHWA Traffic Noise Model (version 2.5) software. 2019 defines existing conditions in this analysis because this is the year the project is to be constructed. The modeled noise levels for this year are representative of current noise levels.

Traffic noise impacts were assessed by modeling loudest hour 2019 and 2039 build and 2039 no-build noise levels at receptor sites located within the project study areas. Loudest noise hour traffic is based on a modeling analysis of noise levels in order to ascertain the loudest daily hourly traffic flow rate and classification.

In addition to the noise modeling, noise monitoring was also conducted at one site representing a residential receptor for each project location. The monitoring was conducted to confirm existing noise levels and to assist in validating the noise model results. The monitoring sites are shown in **Figures 2** through **7**. It can be seen that the monitoring sites for Location 3 (Passing Lane Segment A) and for Location 5 (Passing Lane Segment C), respectively, are south of the segment termini. The monitoring sites are representative of conditions within the segment.

Noise modeling receptors were selected at commercial and residential sites along the segment corridor. Receptor locations were chosen based on guidance provided in Appendix A of the 2017 MnDOT Noise Requirements. Receptor locations are shown in **Figures 2** through **7**. Residential receptor sites are classified within the definition of Federal Land Use Category B. Commercial receptor sites are classified within the definition of Federal Land Use Categories C and E.

E. HIGH NOISE HOUR EVALUATION

In general, higher traffic speeds, higher traffic volumes, and higher numbers of heavy trucks increase traffic noise impacts. The loudest noise hour typically occurs when traffic is free flowing and heavy truck volumes are at their highest. A modeling analysis was conducted for two or three time periods for each of the six segments to identify the worst case noise hour. The

model results showed that traffic during the noon to 1:00pm hour generated the highest noise impacts for Locations 1 and 2, traffic during the 1:00 pm to 2:00 pm generated the highest noise impacts for project Locations 3 and 4, traffic during the 11:00 am to noon hour generated the highest noise impacts for project Location 5, and traffic during the 9:00 am to 10:00 am hour generated the highest noise impacts for Location 6.

F. NOISE MONITORING

Noise monitoring was conducted at one representative site in each of the six project locations. The noise monitoring sites are shown in **Figures 2** through **7**. Noise levels were monitored at each site twice; during different times of the day. A trained noise monitoring technician was present at each session for the entire monitoring session to ensure correct operation of the sound level meter (SLM). The monitoring results were compared with modeling results for traffic conditions encountered during the monitoring. **Table 2**, below, presents the results of this comparison.

Table 2 – Noise Monitoring Results Compared to Modeling Results

Project Location Number	Site ID	Date	Time	Monitored L_{eq} Noise Level (dBA)	Modeled L_{eq} Noise Level (dBA)	Difference Between Monitored and Modeled L_{eq} Noise Level (dBA)
1	M1	10/29/2018	10:38 am to 11:08 am	57.0	56.8	-0.2
		10/29/2018	1:05 pm to 1:35 pm	57.4	56.8	-0.6
2	M2	10/30/2018	11:30 am to 12:00 pm	61.0	58.3	-2.7
		10/30/2018	12:06 pm to 12:36 pm	62.8	60.8	-2.0
3	M3	10/29/2018	3:20 pm to 3:50 pm	49.2	51.0	1.8
		10/23/2018	8:42 am to 9:12 am	51.7	49.3	-2.4

4	M4	10/23/2018	2:35 pm - 3:05 pm	58.1	55.4	-2.7
		10/23/2018	11:08 am - 11:38 am	56.2	54.0	-2.2
5	M5	10/29/2018	5:05 pm to 5:35 pm	53.6	52.1	-1.5
		10/30/2018	9:05 am to 9:35 am	53.5	50.1	-3.4
6	M6	10/23/2018	4:16 pm to 4:36 pm	53.0	48.7	-4.3
		10/23/2018	1:17 pm to 1:37 pm	51.6	51.1	-0.5

Generally, the L_{eq} monitored noise levels show good agreement (within about 3 dBA) with the modeling results. The exceptions were one of the two measurements conducted for Location 5, and one of the two measurements conducted for Location 6. The measurement for Location 5 is near a retail facility. Noise from activities at the retail facility were noted and may have contributed to the higher measured levels at this location. For the measurement at Location 6, wind gusts were noted during the monitoring period, causing rustling of nearby high grass and leaves, likely contributing to the higher measured noise level.

G. NOISE IMPACTS ASSESSMENT

Existing (2019) and 2039 no-build and build noise impacts were modeled at receptor locations along each of the six project locations. The results of this analysis are provided in **Table 3**, next page. Following the summary table is a discussion of the modeling results for each of the project locations.

Table 3 – Noise Impact Assessment Modeling Results

Project Location Number	Receptor ID	Modeled Existing	Modeled 2039 No Build	Difference Existing to 2039 No Build	Modeled 2039 Build (1)	Difference Existing to 2039 Build (2)
		Leq	Leq	Leq	Leq	Leq
1	R1-01	56.8	57.2	0.4	57.9	1.1
2	R2-01	52.9	53.3	0.4	54.1	1.2
	R2-02	57.7	58.1	0.4	58.6	0.9
	R2-03	53.8	54.1	0.3	56.1	2.3
	R2-04	47.8	48.2	0.4	49.2	1.4
3	R3-01	51.1	51.5	0.4	53.2	2.1
	R3-02	48.4	48.9	0.5	49.8	1.4
	R3-03	51	51.5	0.5	53.4	2.4
4	R4-01	38.7	39.1	0.4	40.2	1.5
	R4-02	55.8	56.2	0.4	58.2	2.4
5	R5-01	37.0	37.5	0.5	40.2	3.2
	R5-02	54.2	54.6	0.4	57.1	2.9
	R5-03	56.4	56.9	0.5	58.8	2.4
	R5-04	58.0	58.4	0.4	59.9	1.9
6	R6-01	47.9	48.4	0.5	50.1	2.2
	R6-02	51.2	51.7	0.5	53.5	2.3
	R6-03	56.8	57.3	0.5	59	2.2
	R6-04	51.6	52.1	0.5	54.6	3
	R6-05	50.7	51.2	0.5	52.9	2.2
	R6-06	49	49.5	0.5	50.9	1.9
	R6-07	49.8	50.3	0.5	51.9	2.1
	R6-08	49.0	49.5	0.5	50.9	1.9

(1) No modeled receptor location approached (66 dBA or greater) the Federal Noise Abatement Criteria.

(2) Predicted noise level increases are less than 5 dBA at all receptor locations.

Location 1

Receptor R1-01 (Figure 2)

The one receptor in the vicinity of the construction for this segment is an industrial plant that includes a building with offices. The 2039 modeled build noise levels do not approach the Federal Noise Abatement Criteria at this location. Under the 2039 build scenario, the modeled peak-hour L_{eq} noise level is 57.9 dBA. This is 0.4 dBA higher than the modeled 2039 No-build scenario, and 1.1 dBA higher than the existing 2019 modeled noise level.

Location 2

Receptors R2-01, R2-02, R2-03, and R2-04 (Figure 3)

Receptor R2-02 is a commercial business, and the others are residences. The 2039 modeled future build noise levels do not approach the Federal Noise Abatement Criteria at any of the

modeled receptor locations. Under the 2039 build scenario, modeled peak-hour L_{eq} noise levels at the four modeled receptor locations range from 49.2 dBA to 58.6 dBA.

Under the build scenario, modeled peak-hour 2039 L_{eq} noise levels exceed existing noise levels by 0.9 dBA to 2.3 dBA.

Location 3

Receptors R3-01, R3-02, and R3-03 (Figure 4)

These receptors each represent residences. The 2039 modeled build noise levels do not approach the Federal Noise Abatement Criteria at any of the modeled receptor locations. Under the 2039 build scenario, modeled peak-hour L_{eq} noise levels at the 3 modeled receptor locations range from 49.8 dBA to 53.4 dBA.

Under the build scenario, modeled peak-hour 2039 L_{eq} noise levels exceed existing noise levels by 1.4 dBA to 2.4 dBA.

Location 4

Receptors R4-01 and R4-02 (Figure 5)

Both receptors represent residential locations. The 2039 modeled build noise levels do not approach the Federal Noise Abatement Criteria at either of the modeled receptor locations. Under the 2039 build scenario, modeled peak-hour L_{eq} noise levels at the two modeled receptor locations range from 40.2 dBA to 58.2 dBA.

Under the build scenario, modeled peak-hour 2039 L_{eq} noise levels exceed existing noise levels by 1.5 dBA to 2.4 dBA.

Location 5

Receptors R5-01, R5-02, R5-03, and R5-04 (Figure 6)

The receptors all represent residential locations. The 2039 modeled future build noise levels do not approach the Federal Noise Abatement Criteria at any of the modeled receptor locations. Under the 2039 future build scenario, modeled peak-hour L_{eq} noise levels at the four modeled receptor locations range from 40.2 dBA to 59.9 dBA.

Under the build scenario, modeled peak-hour 2039 L_{eq} noise levels exceed existing noise levels by 1.9 dBA to 3.2 dBA.

Location 6

Receptors R6-01, R6-02, R6-03, R6-04, R6-05, R6-06, R6-07, and R6-08 (Figure 7)

The receptors all represent residential locations. The 2039 modeled future build noise levels do not approach the Federal Noise Abatement Criteria at any of the modeled receptor locations. Under the 2039 future build scenario, modeled peak-hour L_{eq} noise levels at the four modeled receptor locations range from 50.1 dBA to 54.6 dBA.

Under the build scenario, modeled peak-hour 2039 L_{eq} noise levels exceed existing noise levels by 1.9 dBA to 3.0 dBA.

H. CONSTRUCTION NOISE

During construction, it is unavoidable that noise levels will increase in the immediate area surrounding the project site. The actual noise levels on and adjacent to the site will vary considerably depending on the numbers and types of equipment being operated at any given time. **Table 4**, below, 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 4: Typical Construction Equipment Noise Levels at 50 Feet

Equipment	Manufacturers Sampled	Total No. 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/S	N/A	95-105	101

Source: US Environmental Protection Agency and Federal Highway Administration

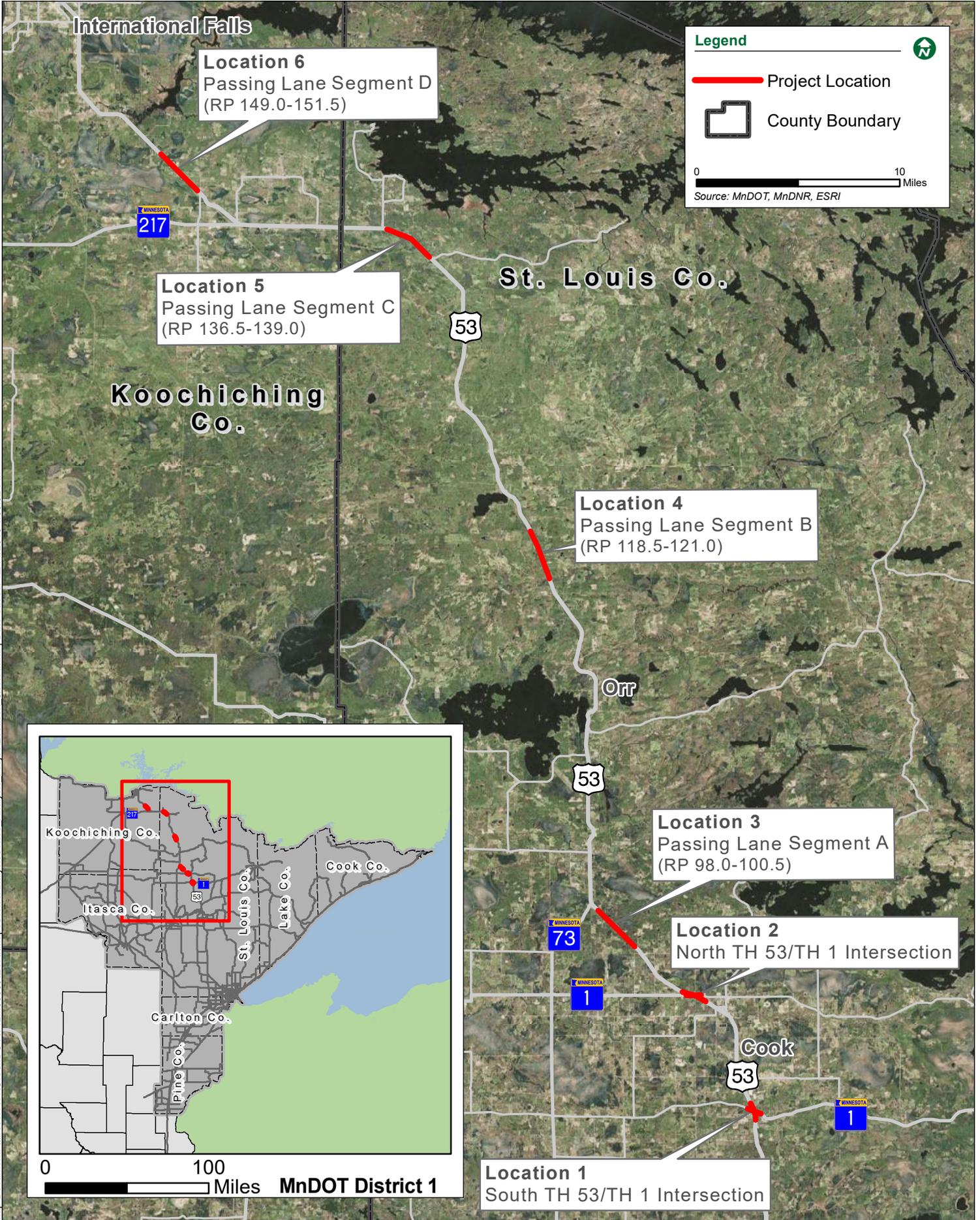
Construction activities will be temporary in duration. The contractor will be required to comply with applicable local ordinance requirements regarding noise. Construction equipment will be required to have factory installed mufflers or their equivalents in good working order during the life of the construction contracts. While it is possible that limited night construction may be required for this project, it is anticipated that construction activities will take place during the less noise-sensitive daylight hours. Pile driving will not be required for this project. Jack-hammering and concrete sawing will not take place during the nighttime hours. The loudest construction activities will only take place on a given portion or portions of the corridor at one time. The total duration of the project will be one construction season.

I. CONCLUSION

Modeled existing (2019), 2039 build, and 2039 no-build modeled noise levels do not approach the Federal Noise Abatement Criteria. Additionally, modeled noise level increases over existing noise levels are less than 5 dBA at all modeled receptor locations. Therefore, no noise mitigation measures are proposed for this project.

Construction noise will be typical for roadway construction projects of this nature and special or unique mitigation measures will not be required.

Figures



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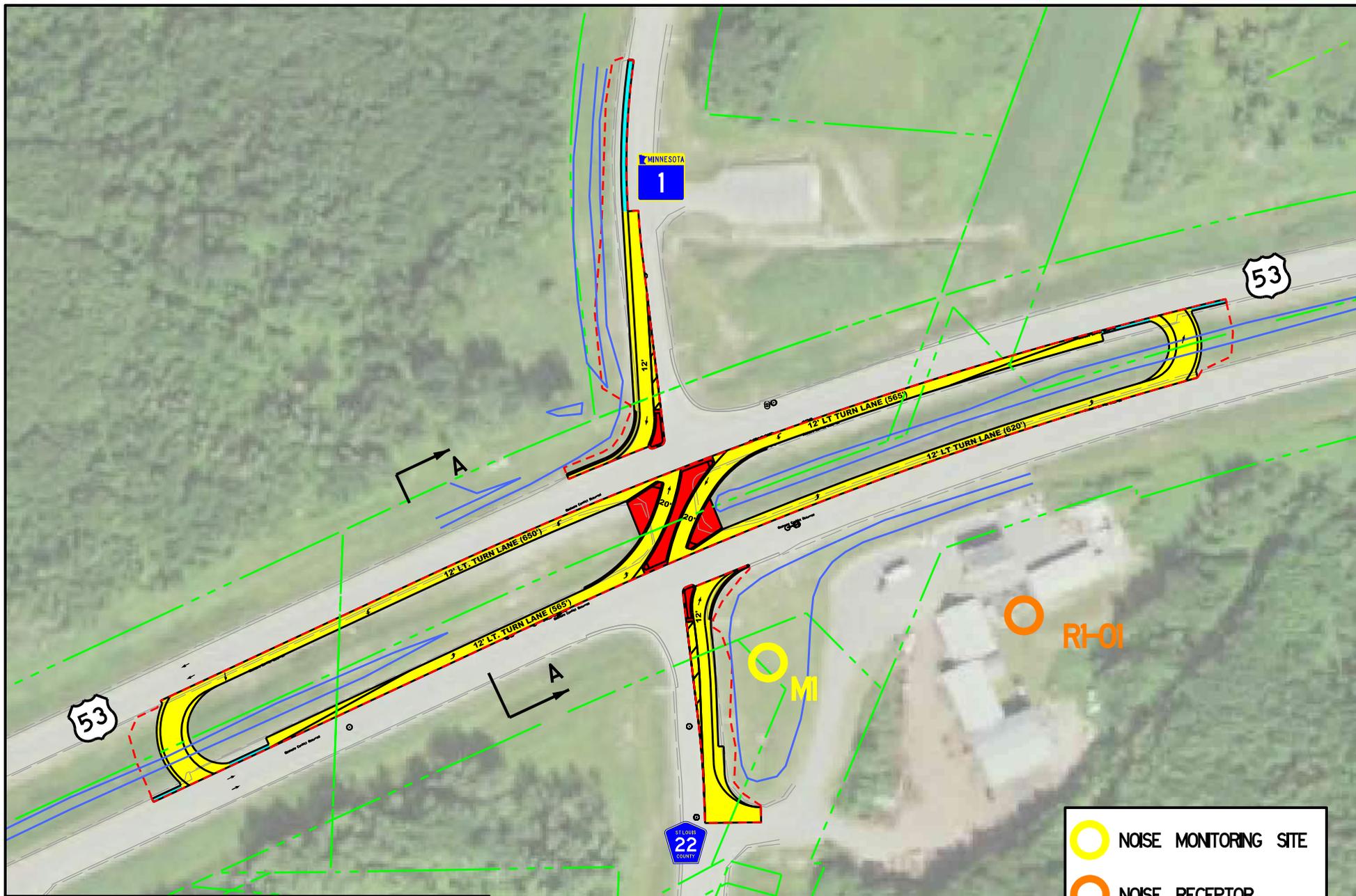


Figure 2: South TH 53/TH 1 Junction Proposed Improvements

TH 53 Intersection and Passing Lane Improvements

	NOISE MONITORING SITE
	NOISE RECEPTOR

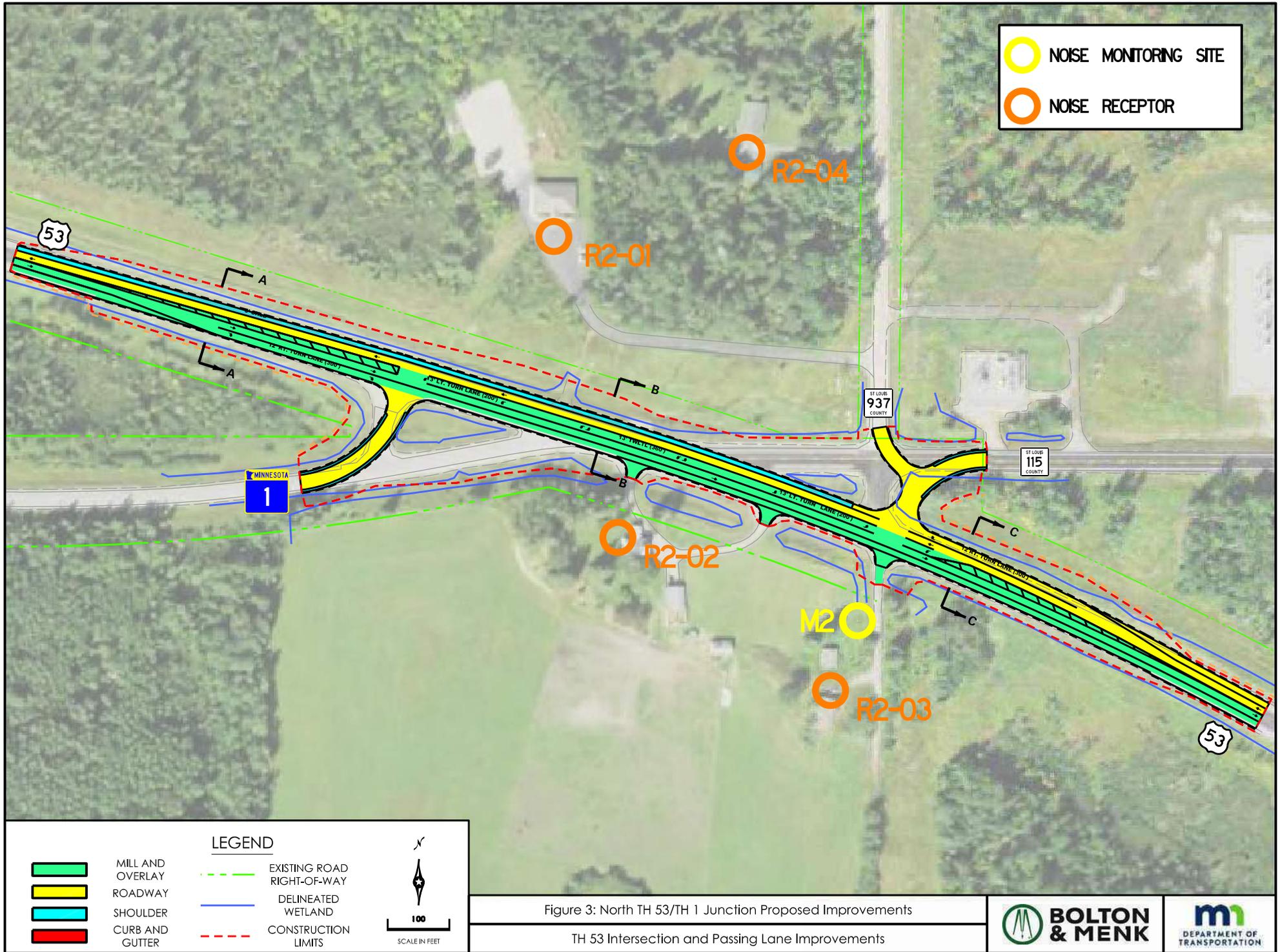
LEGEND	
	ROADWAY
	SHOULDER
	CURB AND GUTTER
	EXISTING ROAD RIGHT-OF-WAY
	DELINEATED WETLAND
	CONSTRUCTION LIMITS



100

SCALE IN FEET

	BOLTON & MENK	
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○ NOISE MONITORING SITE
○ NOISE RECEPTOR

- MILL AND OVERLAY
- ROADWAY
- SHOULDER
- CURB AND GUTTER

LEGEND

- EXISTING ROAD RIGHT-OF-WAY
- DELINEATED WETLAND
- CONSTRUCTION LIMITS

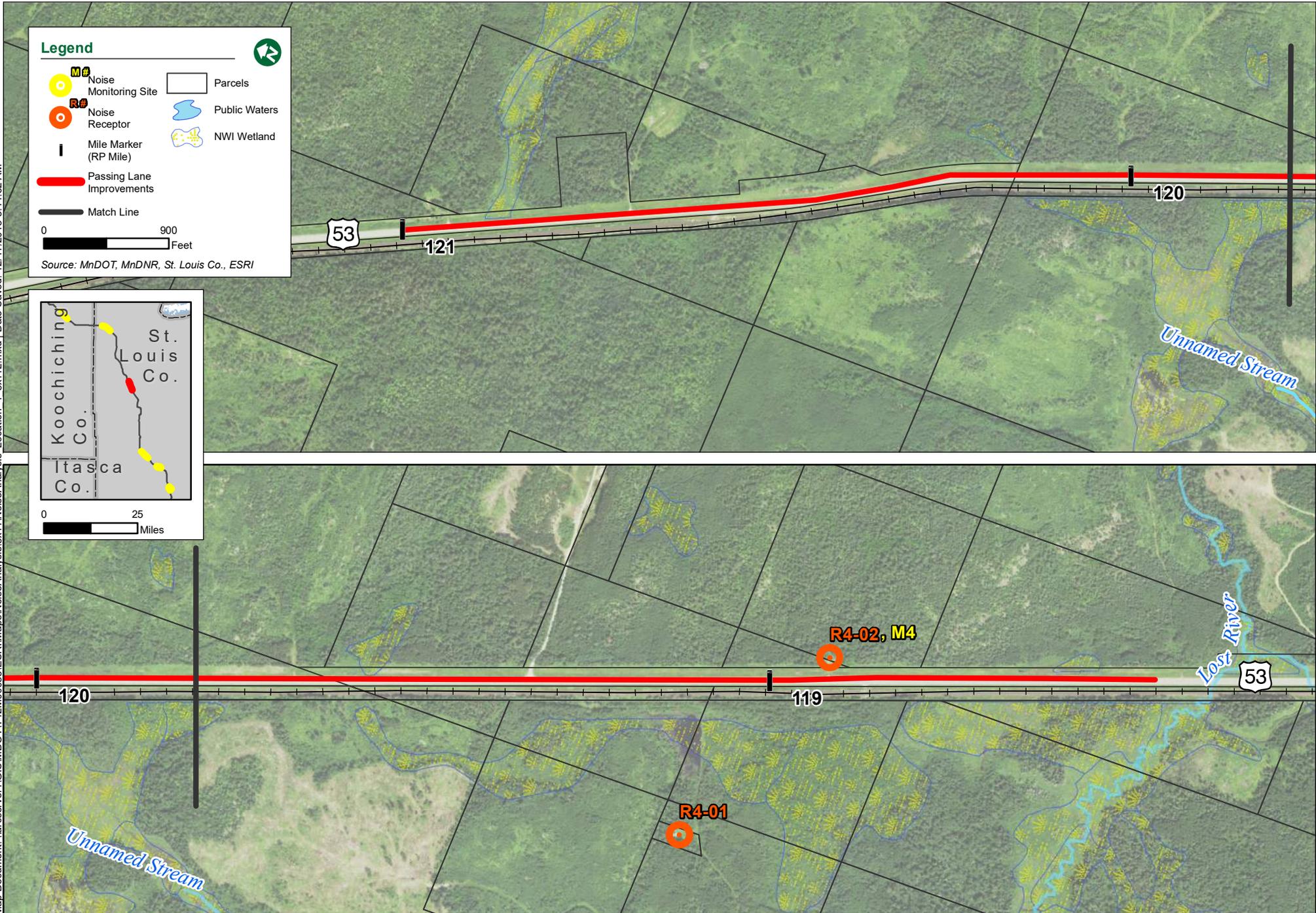

 100
 SCALE IN FEET

Figure 3: North TH 53/TH 1 Junction Proposed Improvements

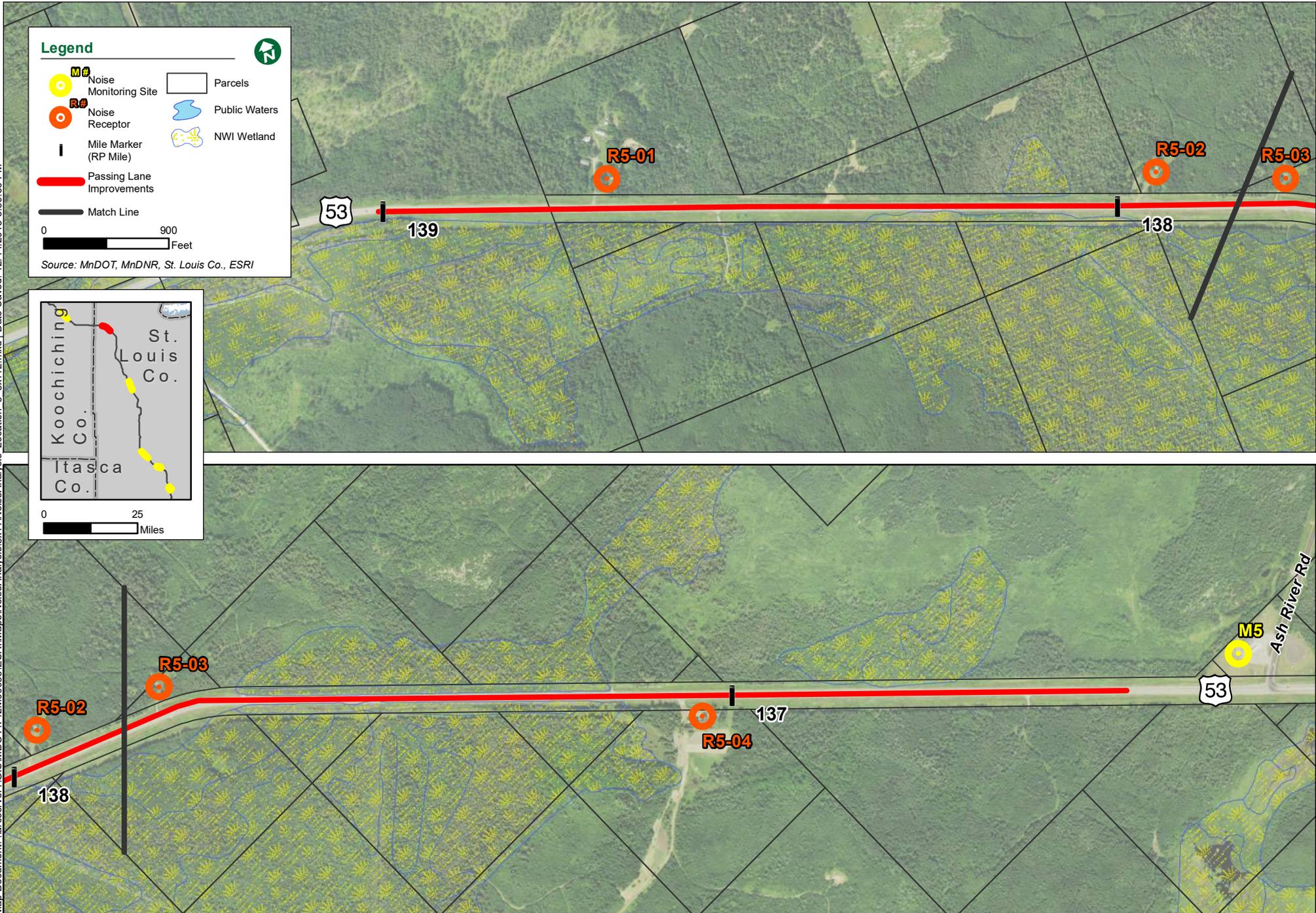
TH 53 Intersection and Passing Lane Improvements

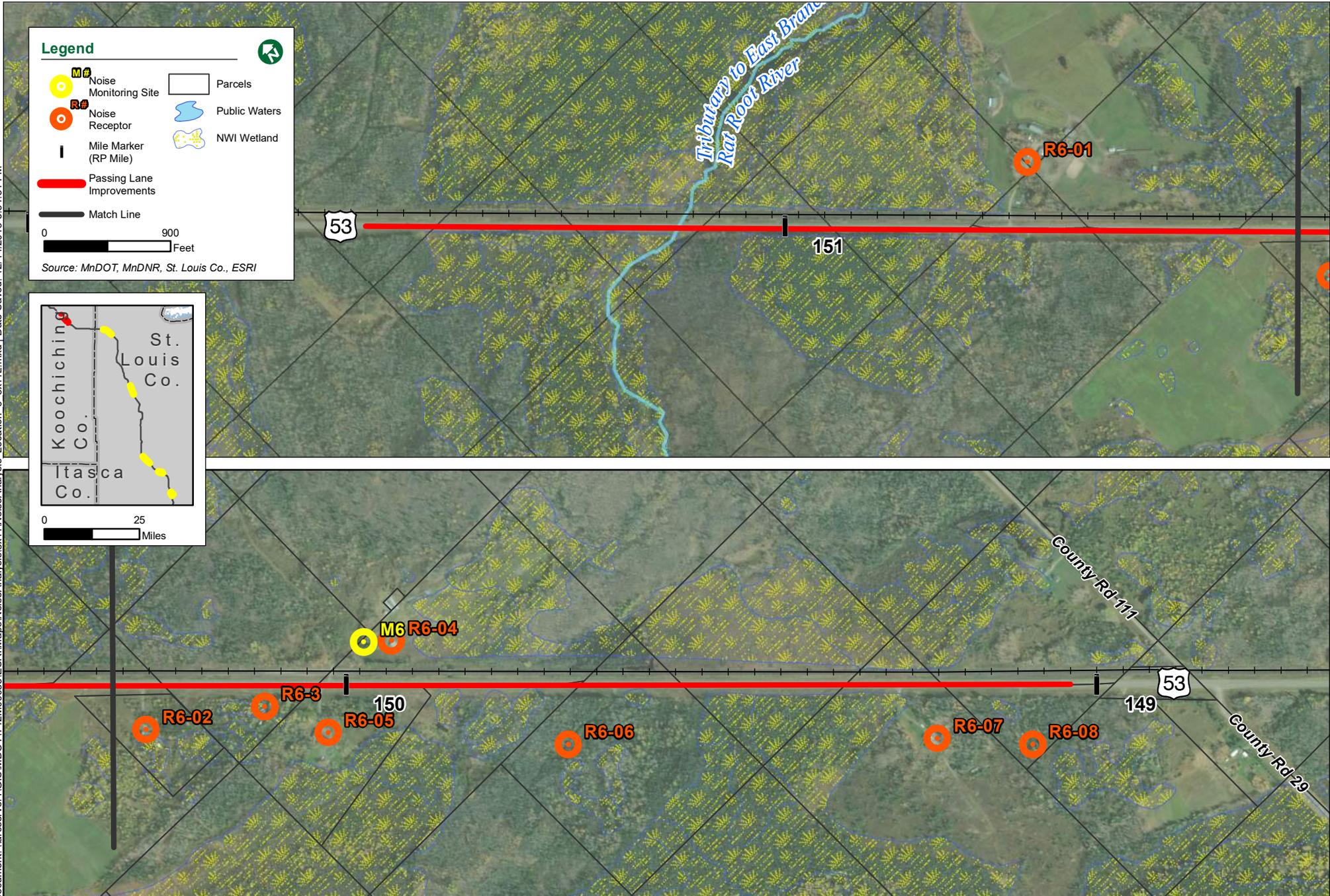






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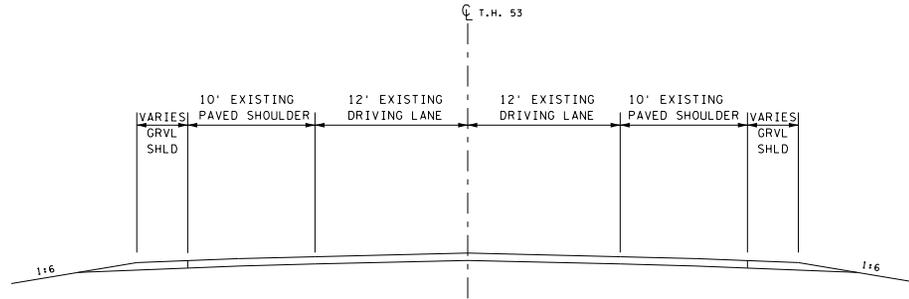


TH 53 Intersection & Passing Lane Noise Analysis

Figure 8: Typical Sections

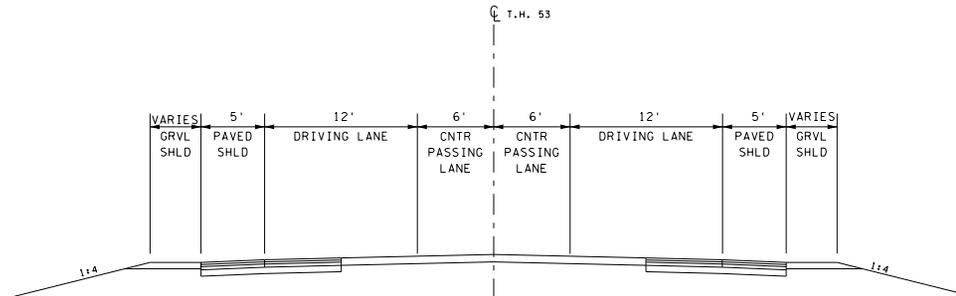
LOCATIONS 3-6 EXISTING TYPICAL SECTION - T.H. 53

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 R.P. 118+00.500 - 121+00.000
 R.P. 136+00.500 - 139+00.000
 R.P. 149+00.000 - 151+00.500



LOCATIONS 3-6 PROPOSED TYPICAL SECTION - T.H. 53

R.P. 98+00.000 - 100+00.500
 R.P. 118+00.500 - 121+00.000
 R.P. 136+00.500 - 139+00.000
 R.P. 149+00.000 - 151+00.500



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REV.	BY	DATE

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

ENGINEER SIGNATURE 1

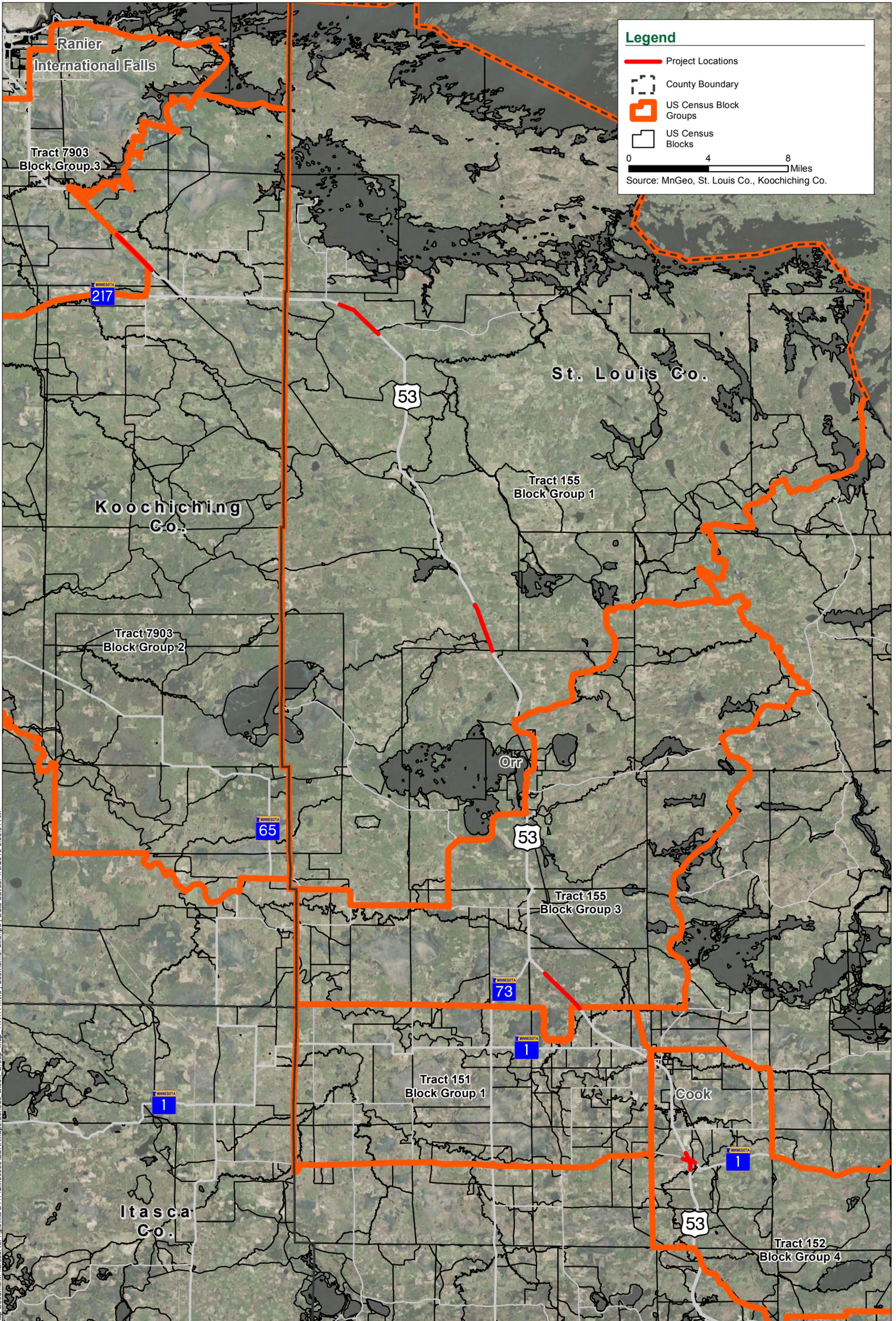
ENGINEER
 LIC. NO. 12345 DATE XX-XX-XXXX

DESIGNED XXX
DRAWN XXX
CHECKED XXX

S.P. 6920-53
TH 53 ALTERNATE INTERSECTIONS AND PASSING LANES
SHEET NAME

SHEET X
OF XX

ATTACHMENT H
Environmental Justice Data



Legend

- Project Locations
- County Boundary
- US Census Block Groups
- US Census Blocks

0 4 8 Miles

Source: MnGeo, St. Louis Co., Koochiching Co.

Map Document: \\arseserver1\gis\MDOT\42M00085\ESRI\Map\Census_Block_Group_Map_11X17P.mxd | Username: dillonpe | Date Saved: 1/8/2019 8:35:01 AM

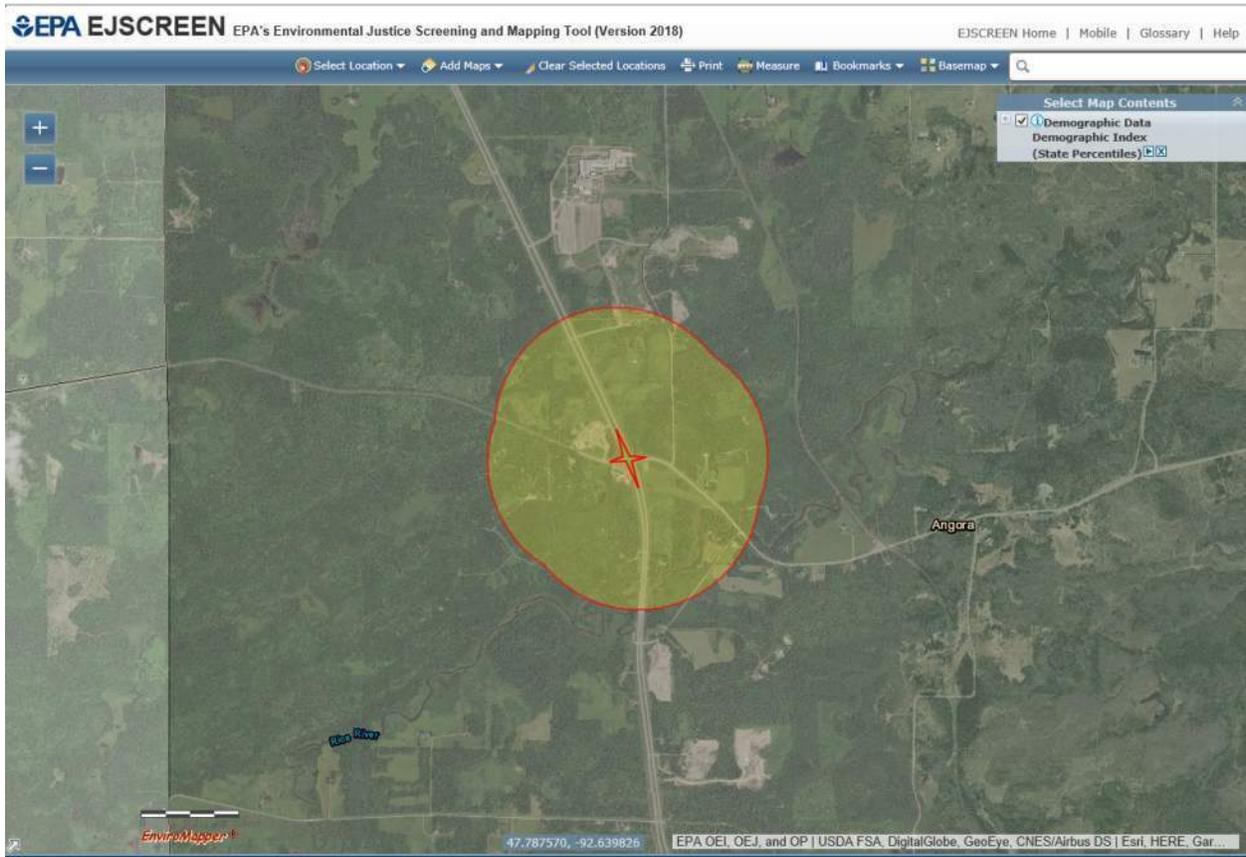
Table A – Population and Race – American Community Survey 2012-2016 5-Year Data

Census Tract #	Census Block #	Total Population	White Non-Hispanic	Black or African American Non-Hispanic	American Indian and Alaska Native Non-Hispanic	Asian Non-Hispanic	Native Hawaiian and Other Pacific Islander Non-Hispanic	Other Non-Hispanic	Multi Race Non-Hispanic	Hispanic or Latino	Not Hispanic	Total number of all minorities residing in block group	Minority % as total block group population or city/county population (per line item)
151	Group 1	786	754	0	9	3	0	0	8	12	774	32	4.0
152	Group 4	1144	1046	4	18	0	0	2	67	7	1137	98	8.6
155	Group 1	1102	650	5	260	0	0	0	181	6	1096	452	41.0
155	Group 3	668	589	2	30	0	0	0	33	14	654	79	11.8
7903	Group 2	1223	1110	0	75	0	0	0	34	4	1219	113	9.2
7903	Group 3	713	686	0	27	0	0	0	0	0	713	27	3.8
Project Area Total/Average		5636	4835	11	419	3	0	2	323	43	5593	801	14.2
	Koochiching Co	12,930	12,091	119	471	50	0	0	174	25	12,905	1,082	6.5
	St. Louis Co	200,353	183,515	3,003	3,689	2,110	77	66	4,950	2,943	197,410	16,838	8.2
	Combined Co's	213,283	195,606	3,122	4,160	2,160	77	66	5,124	2,968	210,315	17,677	8.3
	Minnesota	5,621,958	4,594,563	306,458	52,904	246,884	1,639	7,022	133,030	279,458	5,342,500	1,027,395	18.3

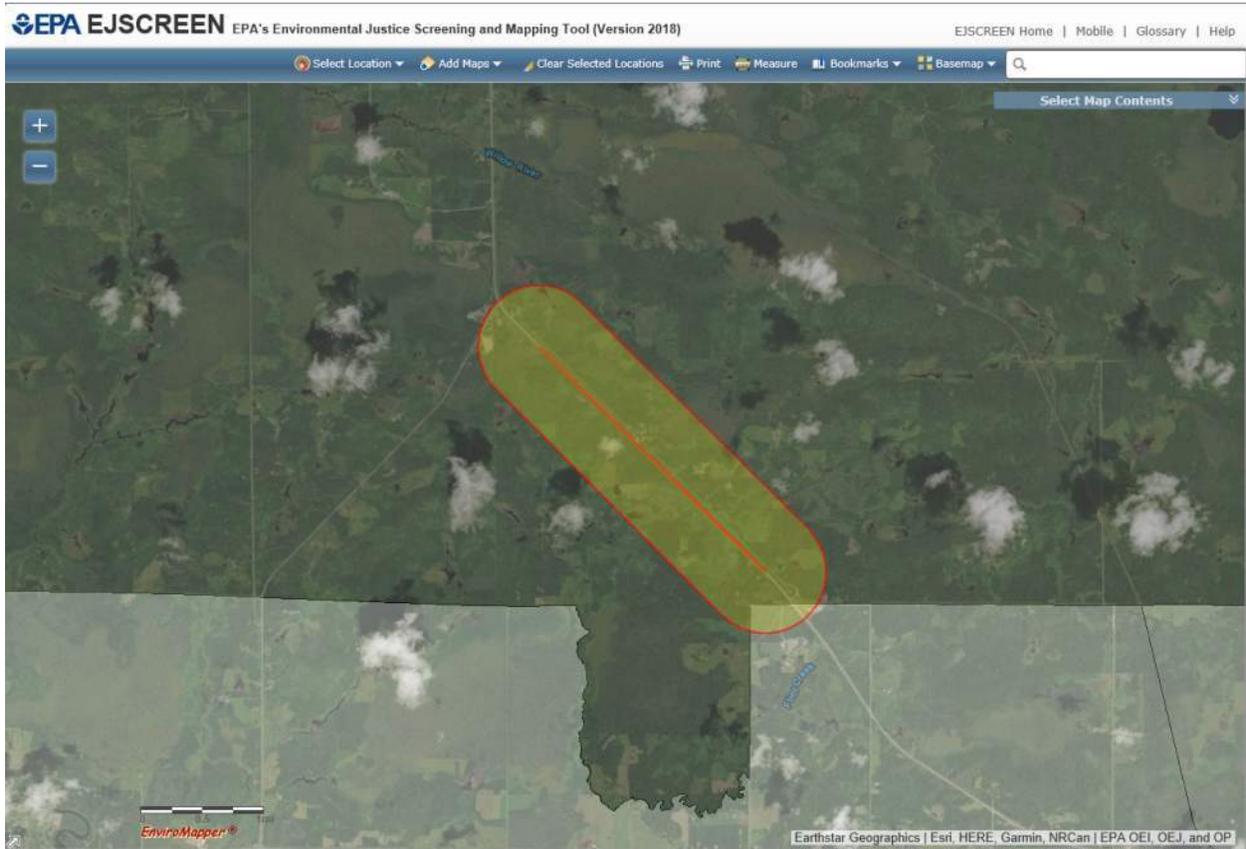
Table B – Poverty Evaluation – American Community Survey 2012-2016 5-Year Data

US Census Tract ID	US Census Block Group ID # or City	Block Group or City total population	Population for which poverty status is determined	Average household size	Number of people at or below the poverty rate* within the defined area (block group, city, or county)	Share of population with income 0-100% of poverty threshold (HHS)
151	Group 1	786	786	2.2	221	28.1
152	Group 4	1144	1113	1.94	276	24.1
155	Group 1	1102	1088	2.4	305	27.7
155	Group 3	668	668	1.93	183	27.4
7903	Group 2	1223	1177	2.2	681	55.7
7903	Group 3	713	713	2.42	447	62.7
Project Area Total/Average		5636	5545	2.18	2113	37.6
	Koochiching Co	12,930	12,620	2.22	2,139	18.4
	St. Louis Co	200,353	190,928	2.23	29,875	17.9
	Combined Co's	213,283	203,548	2.22	32,014	15.0
	Minnesota	5,621,958	5,483,509	2.47	590,869	9.1

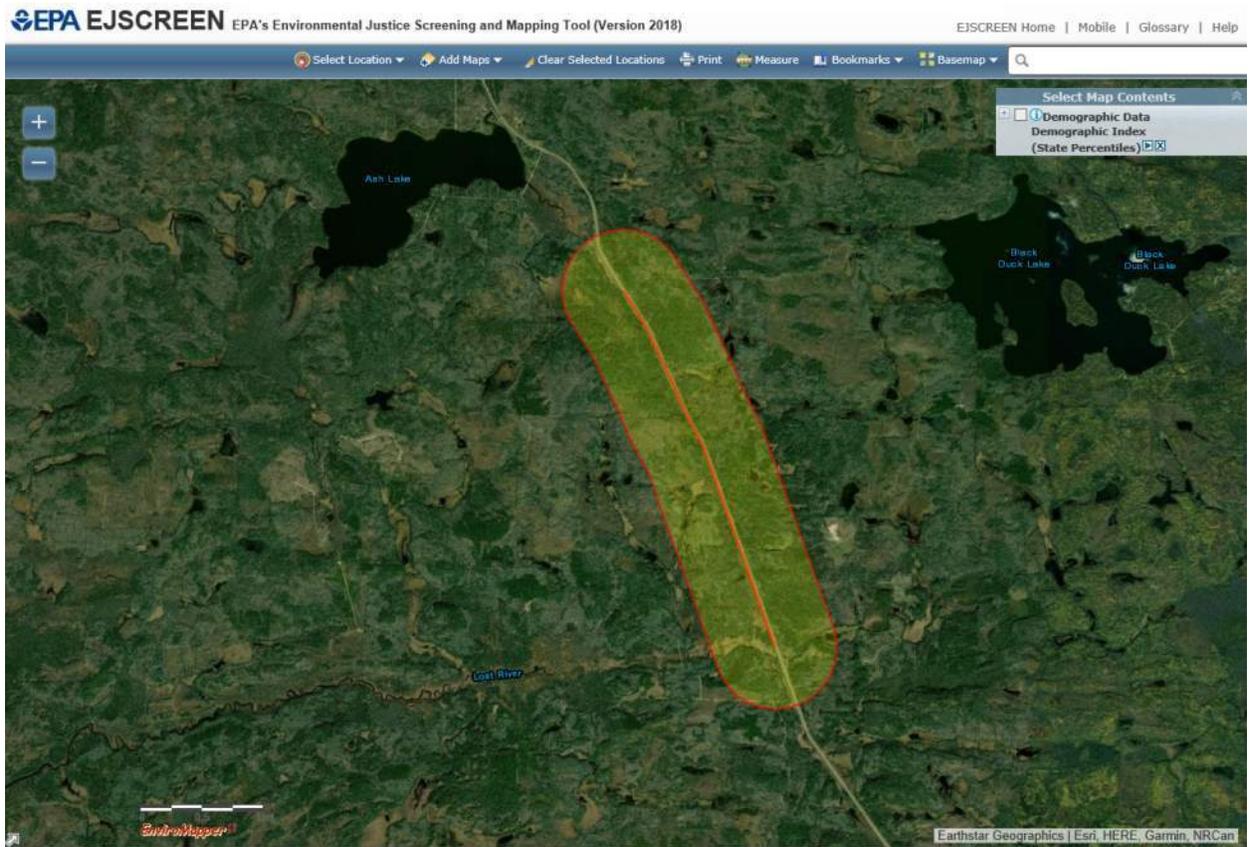
Location 1 – South TH 53/TH 1 Intersection



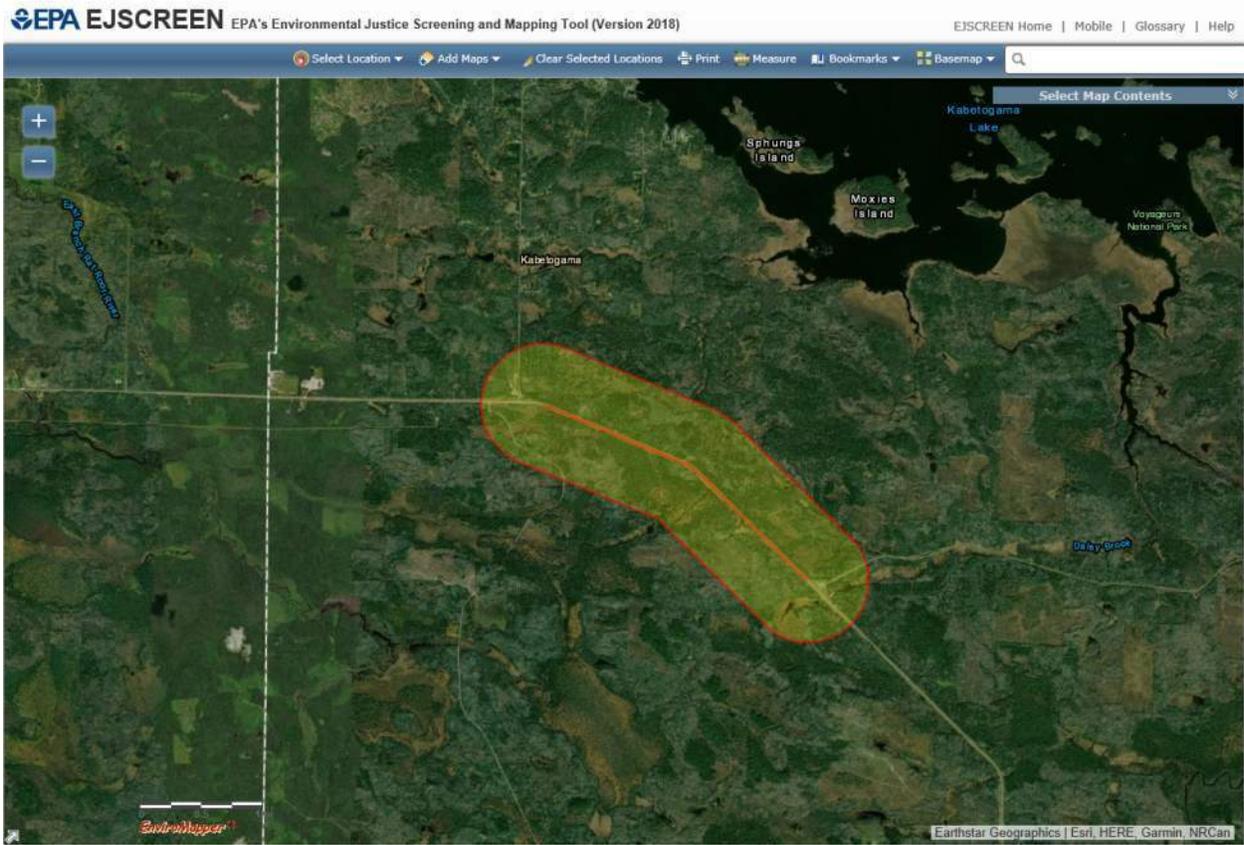
Location 3 – Passing Lane Segment A



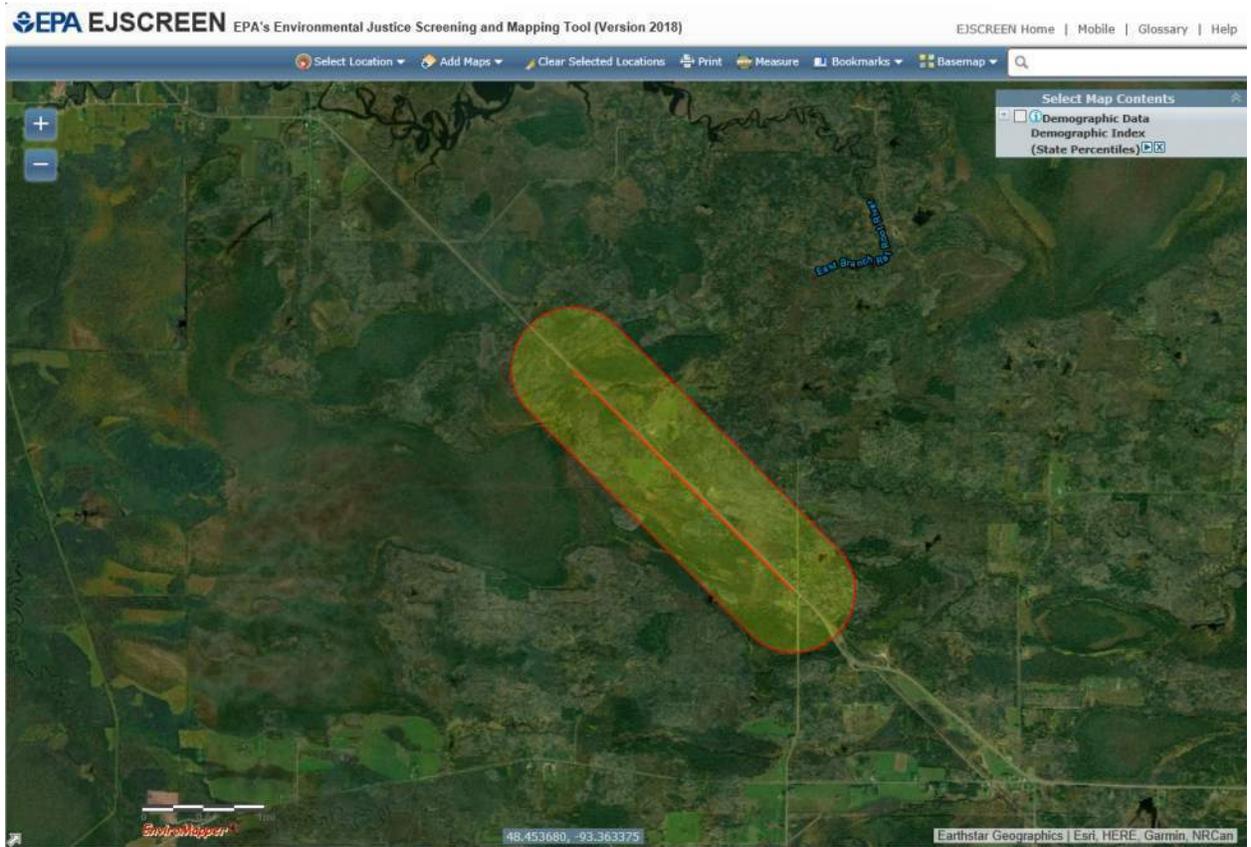
Location 4 – Passing Lane Segment B



Location 5 – Passing Lane Segment C



Location 6 – Passing Lane Segment D



Location: User-specified polygonal location
 Ring (buffer): 0.5-mile radius
 Description: South TH 53/TH 1 Intersection

Summary of ACS Estimates		2012 - 2016
Population		4
Population Density (per sq. mile)		28
Minority Population		0
% Minority		9%
Households		3
Housing Units		4
Housing Units Built Before 1950		1
Per Capita Income		24,486
Land Area (sq. miles) (Source: SF1)		0.16
% Land Area		97%
Water Area (sq. miles) (Source: SF1)		0.00
% Water Area		3%

	2012 - 2016 ACS Estimates	Percent	MOE (±)
Population by Race			
Total	4	100%	114
Population Reporting One Race	4	94%	147
White	4	92%	106
Black	0	0%	6
American Indian	0	2%	13
Asian	0	0%	9
Pacific Islander	0	0%	9
Some Other Race	0	0%	4
Population Reporting Two or More Races	0	6%	44
Total Hispanic Population	0	1%	6
Total Non-Hispanic Population	4		
White Alone	4	91%	106
Black Alone	0	0%	6
American Indian Alone	0	2%	12
Non-Hispanic Asian Alone	0	0%	9
Pacific Islander Alone	0	0%	9
Other Race Alone	0	0%	4
Two or More Races Alone	0	6%	44
Population by Sex			
Male	2	49%	65
Female	2	51%	63
Population by Age			
Age 0-4	0	3%	17
Age 0-17	1	15%	38
Age 18+	4	85%	84
Age 65+	1	25%	47

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
 N/A means not available. Source: U.S. Census Bureau, American Community Survey (ACS) 2012 - 2016 .



Location: User-specified polygonal location
 Ring (buffer): 0.5-mile radius
 Description: South TH 53/TH 1 Intersection

	2012 - 2016 ACS Estimates	Percent	MOE (±)
Population 25+ by Educational Attainment			
Total	3	100%	73
Less than 9th Grade	0	1%	11
9th - 12th Grade, No Diploma	0	5%	14
High School Graduate	2	43%	54
Some College, No Degree	1	36%	48
Associate Degree	0	13%	23
Bachelor's Degree or more	1	15%	34
Population Age 5+ Years by Ability to Speak English			
Total	4	100%	105
Speak only English	4	98%	96
Non-English at Home ¹⁺²⁺³⁺⁴	0	2%	13
¹ Speak English "very well"	0	1%	12
² Speak English "well"	0	0%	10
³ Speak English "not well"	0	0%	10
⁴ Speak English "not at all"	0	0%	9
³⁺⁴ Speak English "less than well"	0	0%	10
²⁺³⁺⁴ Speak English "less than very well"	0	1%	10
Linguistically Isolated Households*			
Total	0	100%	11
Speak Spanish	0	0%	9
Speak Other Indo-European Languages	0	17%	3
Speak Asian-Pacific Island Languages	0	0%	9
Speak Other Languages	0	83%	5
Households by Household Income			
Household Income Base	3	100%	50
< \$15,000	1	17%	25
\$15,000 - \$25,000	0	13%	24
\$25,000 - \$50,000	1	31%	41
\$50,000 - \$75,000	1	17%	31
\$75,000 +	1	22%	29
Occupied Housing Units by Tenure			
Total	3	100%	50
Owner Occupied	2	74%	44
Renter Occupied	1	26%	32
Employed Population Age 16+ Years			
Total	4	100%	86
In Labor Force	2	51%	73
Civilian Unemployed in Labor Force	0	3%	13
Not In Labor Force	2	49%	51

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.

N/A means not available. Source: U.S. Census Bureau, American Community Survey (ACS)

*Households in which no one 14 and over speaks English "very well" or speaks English only.



EJSCREEN ACS Summary Report



Location: User-specified polygonal location

Ring (buffer): 0.5-mile radius

Description: South TH 53/TH 1 Intersection

	2012 - 2016 ACS Estimates	Percent	MOE (±)
Population by Language Spoken at Home*			
Total (persons age 5 and above)	N/A	N/A	N/A
English	N/A	N/A	N/A
Spanish	N/A	N/A	N/A
French	N/A	N/A	N/A
French Creole	N/A	N/A	N/A
Italian	N/A	N/A	N/A
Portuguese	N/A	N/A	N/A
German	N/A	N/A	N/A
Yiddish	N/A	N/A	N/A
Other West Germanic	N/A	N/A	N/A
Scandinavian	N/A	N/A	N/A
Greek	N/A	N/A	N/A
Russian	N/A	N/A	N/A
Polish	N/A	N/A	N/A
Serbo-Croatian	N/A	N/A	N/A
Other Slavic	N/A	N/A	N/A
Armenian	N/A	N/A	N/A
Persian	N/A	N/A	N/A
Gujarathi	N/A	N/A	N/A
Hindi	N/A	N/A	N/A
Urdu	N/A	N/A	N/A
Other Indic	N/A	N/A	N/A
Other Indo-European	N/A	N/A	N/A
Chinese	N/A	N/A	N/A
Japanese	N/A	N/A	N/A
Korean	N/A	N/A	N/A
Mon-Khmer, Cambodian	N/A	N/A	N/A
Hmong	N/A	N/A	N/A
Thai	N/A	N/A	N/A
Laotian	N/A	N/A	N/A
Vietnamese	N/A	N/A	N/A
Other Asian	N/A	N/A	N/A
Tagalog	N/A	N/A	N/A
Other Pacific Island	N/A	N/A	N/A
Navajo	N/A	N/A	N/A
Other Native American	N/A	N/A	N/A
Hungarian	N/A	N/A	N/A
Arabic	N/A	N/A	N/A
Hebrew	N/A	N/A	N/A
African	N/A	N/A	N/A
Other and non-specified	N/A	N/A	N/A
Total Non-English	N/A	N/A	N/A

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
 N/A means not available. Source: U.S. Census Bureau, American Community Survey (ACS) 2012 - 2016.
 *Population by Language Spoken at Home is available at the census tract summary level and up.

Location: User-specified linear location
 Ring (buffer): .5-mile radius
 Description: Location 3

Summary of ACS Estimates		2012 - 2016
Population		0
Population Density (per sq. mile)		0
Minority Population		0
% Minority		0%
Households		0
Housing Units		0
Housing Units Built Before 1950		0
Per Capita Income		24,088
Land Area (sq. miles) (Source: SF1)		0.00
% Land Area		97%
Water Area (sq. miles) (Source: SF1)		0.00
% Water Area		3%

	2012 - 2016 ACS Estimates	Percent	MOE (±)
Population by Race			
Total	0	0%	121
Population Reporting One Race	0	0%	153
White	0	0%	106
Black	0	0%	3
American Indian	0	0%	17
Asian	0	0%	9
Pacific Islander	0	0%	9
Some Other Race	0	0%	9
Population Reporting Two or More Races	0	0%	25
Total Hispanic Population	0	0%	21
Total Non-Hispanic Population	0		
White Alone	0	0%	100
Black Alone	0	0%	3
American Indian Alone	0	0%	17
Non-Hispanic Asian Alone	0	0%	9
Pacific Islander Alone	0	0%	9
Other Race Alone	0	0%	9
Two or More Races Alone	0	0%	25
Population by Sex			
Male	0	0%	58
Female	0	0%	68
Population by Age			
Age 0-4	0	0%	17
Age 0-17	0	0%	31
Age 18+	0	0%	62
Age 65+	0	0%	32

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
 N/A means not available. Source: U.S. Census Bureau, American Community Survey (ACS) 2012 - 2016 .



Location: User-specified linear location
 Ring (buffer): .5-mile radius
 Description: Location 3

	2012 - 2016 ACS Estimates	Percent	MOE (±)
Population 25+ by Educational Attainment			
Total	0	0%	72
Less than 9th Grade	0	0%	17
9th - 12th Grade, No Diploma	0	0%	13
High School Graduate	0	0%	32
Some College, No Degree	0	0%	40
Associate Degree	0	0%	23
Bachelor's Degree or more	0	0%	23
Population Age 5+ Years by Ability to Speak English			
Total	0	0%	110
Speak only English	0	0%	89
Non-English at Home ¹⁺²⁺³⁺⁴	0	0%	20
¹ Speak English "very well"	0	0%	19
² Speak English "well"	0	0%	9
³ Speak English "not well"	0	0%	10
⁴ Speak English "not at all"	0	0%	9
³⁺⁴ Speak English "less than well"	0	0%	10
²⁺³⁺⁴ Speak English "less than very well"	0	0%	10
Linguistically Isolated Households*			
Total	0	0%	9
Speak Spanish	0	0%	9
Speak Other Indo-European Languages	0	0%	9
Speak Asian-Pacific Island Languages	0	0%	9
Speak Other Languages	0	0%	3
Households by Household Income			
Household Income Base	0	0%	49
< \$15,000	0	0%	16
\$15,000 - \$25,000	0	0%	16
\$25,000 - \$50,000	0	0%	31
\$50,000 - \$75,000	0	0%	24
\$75,000 +	0	0%	19
Occupied Housing Units by Tenure			
Total	0	0%	49
Owner Occupied	0	0%	36
Renter Occupied	0	0%	33
Employed Population Age 16+ Years			
Total	0	0%	92
In Labor Force	0	0%	72
Civilian Unemployed in Labor Force	0	0%	10
Not In Labor Force	0	0%	37

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.

N/A means not available. Source: U.S. Census Bureau, American Community Survey (ACS)

*Households in which no one 14 and over speaks English "very well" or speaks English only.



EJSCREEN ACS Summary Report



Location: User-specified linear location

Ring (buffer): .5-mile radius

Description: Location 3

	2012 - 2016 ACS Estimates	Percent	MOE (±)
Population by Language Spoken at Home*			
Total (persons age 5 and above)	N/A	N/A	N/A
English	N/A	N/A	N/A
Spanish	N/A	N/A	N/A
French	N/A	N/A	N/A
French Creole	N/A	N/A	N/A
Italian	N/A	N/A	N/A
Portuguese	N/A	N/A	N/A
German	N/A	N/A	N/A
Yiddish	N/A	N/A	N/A
Other West Germanic	N/A	N/A	N/A
Scandinavian	N/A	N/A	N/A
Greek	N/A	N/A	N/A
Russian	N/A	N/A	N/A
Polish	N/A	N/A	N/A
Serbo-Croatian	N/A	N/A	N/A
Other Slavic	N/A	N/A	N/A
Armenian	N/A	N/A	N/A
Persian	N/A	N/A	N/A
Gujarathi	N/A	N/A	N/A
Hindi	N/A	N/A	N/A
Urdu	N/A	N/A	N/A
Other Indic	N/A	N/A	N/A
Other Indo-European	N/A	N/A	N/A
Chinese	N/A	N/A	N/A
Japanese	N/A	N/A	N/A
Korean	N/A	N/A	N/A
Mon-Khmer, Cambodian	N/A	N/A	N/A
Hmong	N/A	N/A	N/A
Thai	N/A	N/A	N/A
Laotian	N/A	N/A	N/A
Vietnamese	N/A	N/A	N/A
Other Asian	N/A	N/A	N/A
Tagalog	N/A	N/A	N/A
Other Pacific Island	N/A	N/A	N/A
Navajo	N/A	N/A	N/A
Other Native American	N/A	N/A	N/A
Hungarian	N/A	N/A	N/A
Arabic	N/A	N/A	N/A
Hebrew	N/A	N/A	N/A
African	N/A	N/A	N/A
Other and non-specified	N/A	N/A	N/A
Total Non-English	N/A	N/A	N/A

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
 N/A means not available. Source: U.S. Census Bureau, American Community Survey (ACS) 2012 - 2016.
 *Population by Language Spoken at Home is available at the census tract summary level and up.

Location: User-specified linear location
 Ring (buffer): .5-mile radius
 Description: Location 4

Summary of ACS Estimates		2012 - 2016
Population		0
Population Density (per sq. mile)		0
Minority Population		0
% Minority		0%
Households		0
Housing Units		0
Housing Units Built Before 1950		0
Per Capita Income		19,320
Land Area (sq. miles) (Source: SF1)		0.25
% Land Area		82%
Water Area (sq. miles) (Source: SF1)		0.05
% Water Area		18%

	2012 - 2016 ACS Estimates	Percent	MOE (±)
Population by Race			
Total	0	0%	143
Population Reporting One Race	0	0%	215
White	0	0%	110
Black	0	0%	6
American Indian	0	0%	72
Asian	0	0%	9
Pacific Islander	0	0%	9
Some Other Race	0	0%	9
Population Reporting Two or More Races	0	0%	61
Total Hispanic Population	0	0%	7
Total Non-Hispanic Population	0		
White Alone	0	0%	110
Black Alone	0	0%	6
American Indian Alone	0	0%	72
Non-Hispanic Asian Alone	0	0%	9
Pacific Islander Alone	0	0%	9
Other Race Alone	0	0%	9
Two or More Races Alone	0	0%	62
Population by Sex			
Male	0	0%	76
Female	0	0%	83
Population by Age			
Age 0-4	0	0%	21
Age 0-17	0	0%	38
Age 18+	0	0%	102
Age 65+	0	0%	35

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
 N/A means not available. Source: U.S. Census Bureau, American Community Survey (ACS) 2012 - 2016 .



Location: User-specified linear location
 Ring (buffer): .5-mile radius
 Description: Location 4

	2012 - 2016 ACS Estimates	Percent	MOE (±)
Population 25+ by Educational Attainment			
Total	0	0%	105
Less than 9th Grade	0	0%	15
9th - 12th Grade, No Diploma	0	0%	16
High School Graduate	0	0%	70
Some College, No Degree	0	0%	62
Associate Degree	0	0%	25
Bachelor's Degree or more	0	0%	26
Population Age 5+ Years by Ability to Speak English			
Total	0	0%	138
Speak only English	0	0%	116
Non-English at Home ¹⁺²⁺³⁺⁴	0	0%	33
¹ Speak English "very well"	0	0%	32
² Speak English "well"	0	0%	11
³ Speak English "not well"	0	0%	9
⁴ Speak English "not at all"	0	0%	9
³⁺⁴ Speak English "less than well"	0	0%	9
²⁺³⁺⁴ Speak English "less than very well"	0	0%	11
Linguistically Isolated Households*			
Total	0	0%	9
Speak Spanish	0	0%	9
Speak Other Indo-European Languages	0	0%	9
Speak Asian-Pacific Island Languages	0	0%	9
Speak Other Languages	0	0%	9
Households by Household Income			
Household Income Base	0	0%	60
< \$15,000	0	0%	40
\$15,000 - \$25,000	0	0%	25
\$25,000 - \$50,000	0	0%	33
\$50,000 - \$75,000	0	0%	49
\$75,000 +	0	0%	26
Occupied Housing Units by Tenure			
Total	0	0%	60
Owner Occupied	0	0%	54
Renter Occupied	0	0%	25
Employed Population Age 16+ Years			
Total	0	0%	115
In Labor Force	0	0%	99
Civilian Unemployed in Labor Force	0	0%	54
Not In Labor Force	0	0%	65

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.

N/A means not available. Source: U.S. Census Bureau, American Community Survey (ACS)

*Households in which no one 14 and over speaks English "very well" or speaks English only.



EJSCREEN ACS Summary Report



Location: User-specified linear location

Ring (buffer): .5-mile radius

Description: Location 4

	2012 - 2016 ACS Estimates	Percent	MOE (±)
Population by Language Spoken at Home*			
Total (persons age 5 and above)	N/A	N/A	N/A
English	N/A	N/A	N/A
Spanish	N/A	N/A	N/A
French	N/A	N/A	N/A
French Creole	N/A	N/A	N/A
Italian	N/A	N/A	N/A
Portuguese	N/A	N/A	N/A
German	N/A	N/A	N/A
Yiddish	N/A	N/A	N/A
Other West Germanic	N/A	N/A	N/A
Scandinavian	N/A	N/A	N/A
Greek	N/A	N/A	N/A
Russian	N/A	N/A	N/A
Polish	N/A	N/A	N/A
Serbo-Croatian	N/A	N/A	N/A
Other Slavic	N/A	N/A	N/A
Armenian	N/A	N/A	N/A
Persian	N/A	N/A	N/A
Gujarathi	N/A	N/A	N/A
Hindi	N/A	N/A	N/A
Urdu	N/A	N/A	N/A
Other Indic	N/A	N/A	N/A
Other Indo-European	N/A	N/A	N/A
Chinese	N/A	N/A	N/A
Japanese	N/A	N/A	N/A
Korean	N/A	N/A	N/A
Mon-Khmer, Cambodian	N/A	N/A	N/A
Hmong	N/A	N/A	N/A
Thai	N/A	N/A	N/A
Laotian	N/A	N/A	N/A
Vietnamese	N/A	N/A	N/A
Other Asian	N/A	N/A	N/A
Tagalog	N/A	N/A	N/A
Other Pacific Island	N/A	N/A	N/A
Navajo	N/A	N/A	N/A
Other Native American	N/A	N/A	N/A
Hungarian	N/A	N/A	N/A
Arabic	N/A	N/A	N/A
Hebrew	N/A	N/A	N/A
African	N/A	N/A	N/A
Other and non-specified	N/A	N/A	N/A
Total Non-English	N/A	N/A	N/A

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
 N/A means not available. Source: U.S. Census Bureau, American Community Survey (ACS) 2012 - 2016.
 *Population by Language Spoken at Home is available at the census tract summary level and up.

Location: User-specified linear location
 Ring (buffer): .5-mile radius
 Description: Location 5

Summary of ACS Estimates		2012 - 2016
Population		0
Population Density (per sq. mile)		0
Minority Population		0
% Minority		0%
Households		0
Housing Units		0
Housing Units Built Before 1950		0
Per Capita Income		19,320
Land Area (sq. miles) (Source: SF1)		0.05
% Land Area		82%
Water Area (sq. miles) (Source: SF1)		0.01
% Water Area		18%

	2012 - 2016 ACS Estimates	Percent	MOE (±)
Population by Race			
Total	0	0%	143
Population Reporting One Race	0	0%	215
White	0	0%	110
Black	0	0%	6
American Indian	0	0%	72
Asian	0	0%	9
Pacific Islander	0	0%	9
Some Other Race	0	0%	9
Population Reporting Two or More Races	0	0%	61
Total Hispanic Population	0	0%	7
Total Non-Hispanic Population	0		
White Alone	0	0%	110
Black Alone	0	0%	6
American Indian Alone	0	0%	72
Non-Hispanic Asian Alone	0	0%	9
Pacific Islander Alone	0	0%	9
Other Race Alone	0	0%	9
Two or More Races Alone	0	0%	62
Population by Sex			
Male	0	0%	76
Female	0	0%	83
Population by Age			
Age 0-4	0	0%	21
Age 0-17	0	0%	38
Age 18+	0	0%	102
Age 65+	0	0%	35

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
 N/A means not available. Source: U.S. Census Bureau, American Community Survey (ACS) 2012 - 2016 .



Location: User-specified linear location
 Ring (buffer): .5-mile radius
 Description: Location 5

	2012 - 2016 ACS Estimates	Percent	MOE (±)
Population 25+ by Educational Attainment			
Total	0	0%	105
Less than 9th Grade	0	0%	15
9th - 12th Grade, No Diploma	0	0%	16
High School Graduate	0	0%	70
Some College, No Degree	0	0%	62
Associate Degree	0	0%	25
Bachelor's Degree or more	0	0%	26
Population Age 5+ Years by Ability to Speak English			
Total	0	0%	138
Speak only English	0	0%	116
Non-English at Home ¹⁺²⁺³⁺⁴	0	0%	33
¹ Speak English "very well"	0	0%	32
² Speak English "well"	0	0%	11
³ Speak English "not well"	0	0%	9
⁴ Speak English "not at all"	0	0%	9
³⁺⁴ Speak English "less than well"	0	0%	9
²⁺³⁺⁴ Speak English "less than very well"	0	0%	11
Linguistically Isolated Households*			
Total	0	0%	9
Speak Spanish	0	0%	9
Speak Other Indo-European Languages	0	0%	9
Speak Asian-Pacific Island Languages	0	0%	9
Speak Other Languages	0	0%	9
Households by Household Income			
Household Income Base	0	0%	60
< \$15,000	0	0%	40
\$15,000 - \$25,000	0	0%	25
\$25,000 - \$50,000	0	0%	33
\$50,000 - \$75,000	0	0%	49
\$75,000 +	0	0%	26
Occupied Housing Units by Tenure			
Total	0	0%	60
Owner Occupied	0	0%	54
Renter Occupied	0	0%	25
Employed Population Age 16+ Years			
Total	0	0%	115
In Labor Force	0	0%	99
Civilian Unemployed in Labor Force	0	0%	54
Not In Labor Force	0	0%	65

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.

N/A means not available. Source: U.S. Census Bureau, American Community Survey (ACS)

*Households in which no one 14 and over speaks English "very well" or speaks English only.



EJSCREEN ACS Summary Report



Location: User-specified linear location

Ring (buffer): .5-mile radius

Description: Location 5

	2012 - 2016 ACS Estimates	Percent	MOE (±)
Population by Language Spoken at Home*			
Total (persons age 5 and above)	N/A	N/A	N/A
English	N/A	N/A	N/A
Spanish	N/A	N/A	N/A
French	N/A	N/A	N/A
French Creole	N/A	N/A	N/A
Italian	N/A	N/A	N/A
Portuguese	N/A	N/A	N/A
German	N/A	N/A	N/A
Yiddish	N/A	N/A	N/A
Other West Germanic	N/A	N/A	N/A
Scandinavian	N/A	N/A	N/A
Greek	N/A	N/A	N/A
Russian	N/A	N/A	N/A
Polish	N/A	N/A	N/A
Serbo-Croatian	N/A	N/A	N/A
Other Slavic	N/A	N/A	N/A
Armenian	N/A	N/A	N/A
Persian	N/A	N/A	N/A
Gujarathi	N/A	N/A	N/A
Hindi	N/A	N/A	N/A
Urdu	N/A	N/A	N/A
Other Indic	N/A	N/A	N/A
Other Indo-European	N/A	N/A	N/A
Chinese	N/A	N/A	N/A
Japanese	N/A	N/A	N/A
Korean	N/A	N/A	N/A
Mon-Khmer, Cambodian	N/A	N/A	N/A
Hmong	N/A	N/A	N/A
Thai	N/A	N/A	N/A
Laotian	N/A	N/A	N/A
Vietnamese	N/A	N/A	N/A
Other Asian	N/A	N/A	N/A
Tagalog	N/A	N/A	N/A
Other Pacific Island	N/A	N/A	N/A
Navajo	N/A	N/A	N/A
Other Native American	N/A	N/A	N/A
Hungarian	N/A	N/A	N/A
Arabic	N/A	N/A	N/A
Hebrew	N/A	N/A	N/A
African	N/A	N/A	N/A
Other and non-specified	N/A	N/A	N/A
Total Non-English	N/A	N/A	N/A

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
 N/A means not available. Source: U.S. Census Bureau, American Community Survey (ACS) 2012 - 2016.
 *Population by Language Spoken at Home is available at the census tract summary level and up.

Location: User-specified linear location
 Ring (buffer): .5-mile radius
 Description: Location 6

Summary of ACS Estimates	2012 - 2016
Population	18
Population Density (per sq. mile)	7
Minority Population	2
% Minority	9%
Households	8
Housing Units	11
Housing Units Built Before 1950	2
Per Capita Income	20,311
Land Area (sq. miles) (Source: SF1)	2.70
% Land Area	98%
Water Area (sq. miles) (Source: SF1)	0.05
% Water Area	2%

	2012 - 2016 ACS Estimates	Percent	MOE (±)
Population by Race			
Total	18	100%	196
Population Reporting One Race	17	97%	260
White	16	91%	191
Black	0	0%	9
American Indian	1	6%	33
Asian	0	0%	9
Pacific Islander	0	0%	9
Some Other Race	0	0%	9
Population Reporting Two or More Races	0	3%	30
Total Hispanic Population	0	0%	8
Total Non-Hispanic Population	18		
White Alone	16	91%	191
Black Alone	0	0%	9
American Indian Alone	1	6%	33
Non-Hispanic Asian Alone	0	0%	9
Pacific Islander Alone	0	0%	9
Other Race Alone	0	0%	9
Two or More Races Alone	0	3%	30
Population by Sex			
Male	9	52%	109
Female	9	48%	114
Population by Age			
Age 0-4	1	5%	35
Age 0-17	3	18%	63
Age 18+	15	82%	134
Age 65+	4	23%	75

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
 N/A means not available. Source: U.S. Census Bureau, American Community Survey (ACS) 2012 - 2016 .



Location: User-specified linear location
 Ring (buffer): .5-mile radius
 Description: Location 6

	2012 - 2016 ACS Estimates	Percent	MOE (±)
Population 25+ by Educational Attainment			
Total	14	100%	149
Less than 9th Grade	0	2%	15
9th - 12th Grade, No Diploma	2	14%	59
High School Graduate	5	37%	64
Some College, No Degree	5	37%	81
Associate Degree	2	13%	45
Bachelor's Degree or more	2	11%	40
Population Age 5+ Years by Ability to Speak English			
Total	17	100%	186
Speak only English	16	92%	165
Non-English at Home ¹⁺²⁺³⁺⁴	1	8%	69
¹ Speak English "very well"	1	7%	68
² Speak English "well"	0	0%	9
³ Speak English "not well"	0	1%	13
⁴ Speak English "not at all"	0	0%	12
³⁺⁴ Speak English "less than well"	0	1%	15
²⁺³⁺⁴ Speak English "less than very well"	0	1%	15
Linguistically Isolated Households*			
Total	0	100%	10
Speak Spanish	0	0%	9
Speak Other Indo-European Languages	0	100%	5
Speak Asian-Pacific Island Languages	0	0%	9
Speak Other Languages	0	0%	9
Households by Household Income			
Household Income Base	8	100%	78
< \$15,000	1	20%	32
\$15,000 - \$25,000	1	18%	52
\$25,000 - \$50,000	2	28%	45
\$50,000 - \$75,000	1	19%	36
\$75,000 +	1	16%	30
Occupied Housing Units by Tenure			
Total	8	100%	78
Owner Occupied	5	71%	70
Renter Occupied	2	29%	50
Employed Population Age 16+ Years			
Total	15	100%	162
In Labor Force	7	46%	99
Civilian Unemployed in Labor Force	0	3%	22
Not In Labor Force	8	54%	108

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.

N/A means not available. Source: U.S. Census Bureau, American Community Survey (ACS)

*Households in which no one 14 and over speaks English "very well" or speaks English only.



EJSCREEN ACS Summary Report



Location: User-specified linear location

Ring (buffer): .5-mile radius

Description: Location 6

	2012 - 2016 ACS Estimates	Percent	MOE (±)
Population by Language Spoken at Home*			
Total (persons age 5 and above)	N/A	N/A	N/A
English	N/A	N/A	N/A
Spanish	N/A	N/A	N/A
French	N/A	N/A	N/A
French Creole	N/A	N/A	N/A
Italian	N/A	N/A	N/A
Portuguese	N/A	N/A	N/A
German	N/A	N/A	N/A
Yiddish	N/A	N/A	N/A
Other West Germanic	N/A	N/A	N/A
Scandinavian	N/A	N/A	N/A
Greek	N/A	N/A	N/A
Russian	N/A	N/A	N/A
Polish	N/A	N/A	N/A
Serbo-Croatian	N/A	N/A	N/A
Other Slavic	N/A	N/A	N/A
Armenian	N/A	N/A	N/A
Persian	N/A	N/A	N/A
Gujarathi	N/A	N/A	N/A
Hindi	N/A	N/A	N/A
Urdu	N/A	N/A	N/A
Other Indic	N/A	N/A	N/A
Other Indo-European	N/A	N/A	N/A
Chinese	N/A	N/A	N/A
Japanese	N/A	N/A	N/A
Korean	N/A	N/A	N/A
Mon-Khmer, Cambodian	N/A	N/A	N/A
Hmong	N/A	N/A	N/A
Thai	N/A	N/A	N/A
Laotian	N/A	N/A	N/A
Vietnamese	N/A	N/A	N/A
Other Asian	N/A	N/A	N/A
Tagalog	N/A	N/A	N/A
Other Pacific Island	N/A	N/A	N/A
Navajo	N/A	N/A	N/A
Other Native American	N/A	N/A	N/A
Hungarian	N/A	N/A	N/A
Arabic	N/A	N/A	N/A
Hebrew	N/A	N/A	N/A
African	N/A	N/A	N/A
Other and non-specified	N/A	N/A	N/A
Total Non-English	N/A	N/A	N/A

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
 N/A means not available. Source: U.S. Census Bureau, American Community Survey (ACS) 2012 - 2016.
 *Population by Language Spoken at Home is available at the census tract summary level and up.