

SP 3808-44 - (TH 61) Little Manitou River Culvert replacement south of the Lake/Cook County Line

MnDOT is developing a project approximately 2 Miles south of the Lake/Cook County line beneath TH 61 to replace the Little Manitou Culvert.

Summary of Work

The Little Manitou Culvert was constructed in 1955 and is a 72" corrugated steel culvert, 260' long with a maximum embankment height of 70' over the pipe. This culvert provides passage for the Little Manitou River under 2 lanes of TH 61 traffic. The in-place culvert has a severely corroded floor and has partially collapsed near the inlet. A portion of the inlet and out of the in-place culvert were CIPP lined in the Fall of 2025. The Little Manitou River is a designated trout stream and Public Water within the Lake Superior Watershed. This culvert provides drainage for approximately 1.4 square miles upstream. The anticipated flow rates for the river are shown in the table below:

Event (Year)	Flow(CFS)
2	77.3
10	236
50	518

Due to the depth of the embankment over the culvert and lack of a feasible detour for TH 61, MnDOT is developing a project requiring trenchless technology to replace this culvert. MnDOT is investigating two possible alternatives for the replacement of the culvert. Because of the lack of a feasible detour for TH 61, it will be a requirement of the project to maintain traffic on TH 61 at all times during construction.

The first option consists of utilizing trenchless technology to construct a new culvert parallel to the existing culvert.

The second option is to tunnel around the existing pipe and install a larger pipe in place of the existing pipe.

Constructability Review Request

MnDOT is asking potential contractors to assist with evaluating construction means, methods and risks prior to delivering this project. Contractors who wish to participate in providing feedback are asked to do their due diligence to learn about the project and come prepared to discuss the questions provided. The meetings are expected to last approximately 2 hours.

MnDOT's desire is to hold the constructability reviews prior to the end of April, 2026. MnDOT is planning to have options to meet either in person at the Duluth Headquarters located at 1123 Mesaba Ave, Duluth or by electronic meetings/teleconferencing using 'Microsoft TEAMS' software. Please contact Andrew Deming at andrew.deming@state.mn.us to schedule a meeting.

MnDOT cannot compensate contractors for the one-on-one meetings, or accommodations to and from the meeting. Contractors will not be disqualified from submitting bids for construction if they attend. A summary of discussions will be posted on the project website listed below after the meetings (names and company titles will not be available for viewing).

Project Delivery and Preliminary Schedule:

- The project delivery method is yet to be determined
- The project letting date is tentatively scheduled to be let by September of 2028, but due to the existing condition of the culvert MnDOT is developing a project to be let as soon as possible.

The primary reason for the constructability review is to gain insight into options for:

- Construction access
- Construction staging
- Possible construction challenges/concerns
- Construction timing/duration

In addition to the above summary, MnDOT has posted information to the following website:

https://edocs-public.dot.state.mn.us/edocs_public/DMResultSet/Urlsearch?columns=docnumber,docname&folderid=39091641

Constructability Review Documents

The posted information includes the following:

- Boring Logs
- Concept Inlet Access
- Concept Outlet Access
- Existing Culvert Cross Section
- Test Pit Observations
- Original culvert plan
- Topography and Approximate MnDOT RW

The concept level access roads are provided for information only to help demonstrate the site and steep terrain challenges and should not be viewed as constraints or restrictions on access imposed by MnDOT. As part of this constructability review, MnDOT is specifically requesting Contractor feedback and input on the location, routing, and requirements for a suitable access road to perform the work.

Questions

1. Access to the inlet and outlet of the culvert is difficult given the existing topography
 - a. At what grade, width and structure would a temporary access road(s) need to be constructed?
 - b. Would you prefer MnDOT design an alignment, profile and structure of an access road? Or would a lump sum item for construction access be preferred?
 - c. What size area is needed for construction and construction staging at the inlet and outlet of the culvert? What size area is needed adjacent to TH 61 for a staging and laydown area?
 - i. Please give approximate area, as well as an offset distance from the existing culvert's inlet and outlet.
2. Excess material generated from construction of a new culvert will need to be hauled off site. Given the difficulty of access, how would you propose to haul excavated material from the culvert site?

3. If construction were to take place during the winter, what challenges would winter storms present in terms of access to the site?
4. What are the pros and cons to each design option proposed: construction on the current culvert alignment vs. construction of a new culvert parallel to the existing culvert?
5. MnDOT is preparing a design to replace the existing culvert with a 96" to 120" culvert.
 - a. Given this size culvert what material lead times should be anticipated following award of a contract?
 - b. Can you provide pros and cons to different culvert material types that could be utilized for this project?
 - c. What other factors would influence a construction start date following award of a contract?
6. What is a reasonable duration to construct this project?
 - a. What is your recommended sequence and timing (including seasonal constraints) for construction including: site preparation, construction of site access road(s), installing the trenchless pipe, and constructing cast-in-place headwalls at the inlet and outlet while protecting the work from site conditions (stream flows, seasonal runoff, snow melt, erosion, etc.).
 - b. Do you have a preference of a working day contract or a completion date contract? If so, please explain why.
7. This region is known for shallow bedrock. MnDOT does not have additional as built information on the existing embankment material beyond what has been provided.
 - a. What geotechnical data would you recommend MnDOT gather prior to construction of this project?
 - b. What would it mean to your operation if bedrock were encountered during tunneling? What would encountering bedrock mean to the projects schedule and budget?
 - c. If boulders or other rubble are encountered while tunnelling, what ability do you have to remove them? And does removal come at additional cost?
 - d. What is the best way to address this risk in the contract? Would it be preferred that MnDOT include pay items for removal, or handle boulder/rubble removal as extra work if encountered?
8. Given the steep embankment and potential for saturated soils, what temporary shoring systems do you anticipate being necessary for the launch and receiving pits or other aspects of the work?
 - a. What is the anticipated size and configuration of the launching / receiving pits including thrust blocks or reaction walls, if required?
9. What methods do you recommend for maintaining flow of the river during construction? What risks are there with the method(s) provided?
10. Given the lack of alternative routes to TH 61, one of the project's goals will be to minimize impacts to traffic during construction. What impacts to traffic will be necessary during construction of this project?
11. What are the pros and cons of different delivery methods for a future contract (Design-Bid-Build, Design-Build, or CMGC)?
12. Are there any other project risks that have not been discussed that MnDOT should be aware of as this project is developed?