SP 7212-21 (TH 93) – Flood Mitigation Project

Constructability review request

MnDOT is asking potential contractors to assist with evaluating construction staging/scheduling and risks to delivering this project. MnDOT requests on-on-one meetings with potential construction contractors to review the draft plans and draft CPM schedule and provide feedback.

The meetings are expected to last approximately 90 minutes. September 18-22, 2023 has been selected as the Department's desired time period for constructability reviews. We are planning to have electronic meetings/teleconferencing using 'Microsoft TEAMS' software. Please contact Forrest Hasty, Project Manager, at 507-508-4018 or forrest.hasty@state.mn.us to schedule a meeting.

MnDOT cannot compensate contractors for the one-on-one meetings. 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 Overview and Major Project Elements

MnDOT is preparing plans for the project (to begin construction in early Spring, 2024). Major project components include:

- A grade raise of the entire project corridor (between US 169 and Henderson). Grade Raise is approximately 8' for much of the corridor.
- Re-aligning the Henderson Flood Levee just south of the City limits. The Levee is currently made up of concrete stop logs. The stop log infrastructure will be removed (after the proposed levee is certified). The proposed levee will consist of an earthen embankment thru TH 93 and to the east, and a floodwall to the west.
- Two Span Bridges will be placed:
    - One is a replacement of the current bridge over the Rush River.
    - The second is a "relief bridge" just north of the Rush River crossing to facilitate additional flow under TH 93.
- Two box culverts will be placed, one under Ridge Road and one under TH 93. These are just south of the proposed Levee Location.
- Numerous geotechnical strategies (surcharging, surcharging/wick drains, column supported embankment) with varying durations of surcharge settlement is being proposed. The draft plans provided show these areas.
- Sand Totes (4'x4'x4' sand bags) are being explored in lieu of redundant perimeter control for controlling erosion. These qualify as redundant perimeter control and are shown in the erosion control plans and a standalone version of the cross sections.
- This roadway is subject to routine flooding. The dashed lines in the standalone cross sections show the 2-yr, 5-yr, and 10-yr river stages throughout the project.
- All drainage infrastructure will be replaced throughout the project.

The project is currently scheduled to be let in December of 2023 with tree clearing prior to March of 2024. The draft special provisions show a project completion of June 2026.

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

http://www.dot.state.mn.us/d7/projects/hwy93henderson/industryreview.html

The additional information includes:

- Draft Plan Set that includes draft quantities. See directly below for a summary of major quantities

Item No.	Description	Unit	Quantity
2101.502	CLEARING	EACH	190
2101.502	GRUBBING	EACH	190
2101.505	CLEARING	ACRE	15
2101.505	GRUBBING	ACRE	15
2106.507	EXCAVATION - COMMON	CU YD	189,000
2106.507	SELECT GRANULAR EMBANKMENT (CV)	CU YD	42,000
2106.507	SELECT GRANULAR EMBANKMENT MOD 5% (CV)	CU YD	40,000
2106.507	COMMON EMBANKMENT (CV)	CU YD	500,000
2106.603	WICK DRAIN	LIN FT	645,000
2211.507	AGGREGATE BASE (CV) CLASS 6	CU YD	42,000
2360.509	TYPE SP 12.5 WEARING COURSE MIXTURE (4,F)	TON	22,000
2412.502	14X6 PRECAST CONCRETE BOX CULVERT END SECTION	EACH	4
2412.503	14X6 PRECAST CONCRETE BOX CULVERT	LIN FT	208
2452.503	TREATED TIMBER PILING DELIVERED	LIN FT	192,000
2452.503	TREATED TIMBER PILING DRIVEN	LIN FT	192,000
2511.504	GEOTEXTILE FILTER TYPE 4	SQ YD	11,000
2511.504	GEOTEXTILE FILTER TYPE 7	SQ YD	1,600
2511.507	RANDOM RIPRAP CLASS III	CU YD	900
2511.507	RANDOM RIPRAP CLASS IV	CU YD	15,000
2573.602	SAND TOTE BAG	EACH	4,500
2575.504	TEMPORARY GEOTEXTILE COVERING	SQ YD	96,000
2575.504	ROLLED EROSION PREVENTION CATEGORY 76	SQ YD	5,000

- Standalone Cross Sections showing sand tote locations and river stages
- Draft Section 1803, 1806, 1807 special provisions.
- Draft Foundations report (FADR) and supporting documentation
- Sand Totes Special Provisions

SP 7212-21 (TH 93) Constructability Review Questions

1. Given the provided 1803, 1806, 1807 draft special provisions, what risks do you see for completing construction by June 2026? Do you have any recommendations to mitigate these risks?
    a. Please note the critical path area from approx. STA 172-199. What mitigation opportunities do you see for this area?
    b. Would the implied staging (in the 1803, 1806, 1807 special provisions) impact costs and constructability options? If so, how?
2. The sand totes qualify as "redundant perimeter control" (in lieu of a combination of conventional erosion control devices). What is your experience using sand totes? What do you see for pros and cons of such a system? Would these be considered more cost effective than redundant perimeter controls (bioroll/silt fence)? If so, why?
3. Maintenance/Access:
    a. Winter suspension will include maintaining access for properties along the corridor (utilizing an aggregate surface). What risks and challenges would you see (for both the contractor and MnDOT) if MnDOT was responsible for plowing the surface during winter suspension? How would you mitigate these?
    b. Local access will be a challenge and will need to be accommodated within the construction zone. What risks to maintaining local and emergency vehicle access would you anticipate? How would you mitigate those?
4. Temporary Drainage will be needed during surcharging operations and is shown in the provided draft plans. What risks do you see with maintaining drainage through the site, and how would you mitigate those?
5. Given the quantity of piling on the project, are you aware of any material sourcing issues with either timber or steel piles? Do you have a preference on timber versus steel piles? If you do have a preference, can you explain why?