MONTANA
Department of Transportation

Malcolm "Mack" Long, Director

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Memorandum

To: Kelly Williams, P.E.
Consultant Design Engineer

From: Dave Holien, P.E. DTH
TA Engineer

Date: January 12, 2024

Subject: STPB STWD(749)
Missouri River – Fort Benton
UPN 9319001
Work Type 221 - Bridge Replacement with no added capacity

Please Approve the Alignment and Grade Review for this project.

Approved Kelly M. Williams Date 1/16/2024
Kelly Williams
Consultant Design Engineer

We are requesting those on the distribution list provide any comments within two weeks of the approval date.

Distribution:

Jim Wingerter, Great Falls District Administrator
Andy Cullison, Bridge Engineer
Damian Krings, Highways Engineer
Gabe Priebe, Traffic and Safety Engineer
Jason Gilliam, Right-of-Way Bureau Chief
Rob Stapley, Rail, Transit, & Planning Division Administrator
Joe Green, Construction Bureau – VA Engineer
Jeff Jackson, Geotechnical and Pavement Bureau Chief
Tom Martin, Environmental Services Bureau Chief
Jon Swartz, Maintenance Division Administrator

cc:
Located at the end of this document

Introduction

The Alignment and Grade Review (AGR) meeting for the subject project was held on September 21, 2023 in Great Falls District Office. The Following personnel were in attendance:

J.R. Taylor – MDT Consultant Design
Kevin St. George – MDT Consultant Design
Harry Barnett – MDT GF District
Paul Sturm – MDT Environmental
Rich Hibl – MDT GF District
Jay Manuel – MDT GF District
John Heinley – MDT Environmental
Dustin Hirose – HDR Project Manager
Riley Lubbers – HDR Roadway
Pat Joyce – HDR Bridge
Josh Robbins – HDR Hydraulics

The following personnel attended virtually:

Jimmy Combs – MDT GF District
Derek Fleming – MDT Environmental
Dan Block – MDT GF District
Lee Grosch – MDT Geotechnical
Derek Miller – MDT Utilities
Kate Lamping – MDT Utilities
Brandon Olds – MDT GF District R/W
Lisa Gray – HDR Public Involvement
Jon Schick – HDR Environmental
Melissa Widseth – HDR Public Involvement
Joel Horn – HDR Roadway
Marco Fellin – Tetra Tech
Sam Michalak – Tetra Tech

A field review occurred following the meeting and was attended by:

J.R. Taylor – MDT Consultant Design
Kevin St. George – MDT Consultant Design
Paul Sturm – MDT Environmental
John Heinley – MDT Environmental
Dustin Hirose – HDR
Riley Lubbers – HDR
Pat Joyce – HDR
Josh Robbins - HDR

Scope of Work

The proposed project includes replacing the existing MT-80 bridge over the Missouri River located at the city limits of Fort Benton. The existing bridge is on an oversized load corridor, and a critical connection for regional agriculture. Bridge replacement was selected as the best alternative to address structural deficiencies and long term needs for this corridor. The new bridge will be wider than the existing to provide current standard shoulder widths for a two-lane facility and will be generally oriented on the same horizontal alignment. The new centerline will be shifted south while maintaining the existing northern edge of roadway which best accommodates widening within the existing right of way.

The bridge is located at the edge of town with a short transition from the west end of the bridge to the stop-controlled intersection with Front Street. The proposed design speed off the west end of the bridge is 25-mph. The proposed design speed east of the proposed bridge is 55-mph.

Project Location and Limits

a. The project is located in Choteau County, partially within the city limits of Fort Benton.

b. Route Information: The signed route is MT-80 (Route ID: C000080A) and is classified as a Minor Arterial.

c. The project begins at Reference Point (RP) 1.9 and extends east to RP 2.6. The total project length is 0.7 miles.

d. The project begins within the city limits of Fort Benton on the west side of Front Street and ends on the east side of Secondary S-228A (Highwood Road).

e. The existing bridge over the Missouri will be replaced. The MDT Structure ID is 06193 (NBI Structure Number P00080002+04331).

f. As-built project number: S 290(12) Geraldine – Fort Benton, 1961

g. Adjacent project numbers:
   i. Fort Benton-South, UPN 10282000, pavement resurfacing on Routes 228, 386, and 387. Construction is tentatively scheduled for Calendar Year 2024.
   ii. Shonkin Creek – Southeast, UPN 9721000, alignment modifications on P-80 from RP 4.72 to 14.7, widen shoulders, and add rumble strips. A construction date is not yet determined.

h. The direction of the proposed project is West to East. Project stationing will increase in the direction of reference posts.

Work Zone Safety and Mobility

At this time, Level 2 construction zone impacts are anticipated for this project as defined in the Work Zone Safety and Mobility (WZSM) guidance. The plans package will include a Transportation Management Plan (TMP) consisting mainly of a Traffic Control Plan (TCP). A limited Transportation Operations (TO) component and a limited Public Information (PI) component to address lane closures and wide load detours will also be included in the plan package. These issues are discussed in more detail under the Traffic Control and Public Involvement sections.

Physical Characteristics

a. The terrain of the roadway is generally level within the vicinity of the proposed project. The roadway embankment on the east side of the bridge is significantly higher than the surrounding area.

b. The project is in an urban location on the west side of the river and a rural location on the east side.

c. The existing bridge has two 12-ft lanes with no additional shoulder width.

d. The 2013 Road Log lists approximately 2.4-in of asphalt over 17-in of base. The existing surfacing section will be confirmed with geotechnical borings.

e. The existing horizontal alignment includes a 1432.5-ft radius curve left that ends right before the beginning of the bridge on the east end. The horizontal alignment is tangent through the bridge length. The as-built plans call out a vertical curve on the west end of the bridge. This vertical curve is 400-ft long with a +4.622% grade on the west side and a -0.283% grade on the east side.

f. West of the bridge, fill heights range from zero at the intersection with Front Street to approximately 8-ft at the bridge end. Fill slopes vary from flat to ±3:1 on the north side of MT-80 and flat to ±2.5:1 on the south side. East of the bridge, fill slopes range from ±25-ft at the bridge end to ±3-ft. Fill slopes vary from ±2.5:1 to 6:1 on the north and south sides of MT-80. Cut slopes do not exist within this section of MT-80.

g. Characteristics of the existing bridge:

	Missouri River Bridge
MDT Structure ID	06193
NBI Structure Number	P00080002+04331
Year Built	1962
Total Length	708-ft
Width (curb to curb)	24-ft
Number of Spans	6 (2 approach, 4 main spans)
Structure Type	Riveted steel girder with floorbeams and substringers. Concrete T-beam approach spans
Sufficiency Rating	56.5
Deck Rating	4
Structure Status	Structurally Deficient

h. The Steamboat Levee Trail runs along the west riverbank and passes under the existing bridge. The trail will be perpetuated with the bridge replacement.

Context Specific Criteria and Scope Specific Considerations

Baseline criteria for the project will be urban minor arterial west of the bridge and rural minor arterial east of the bridge. Variances in the baseline criteria are not anticipated at this time.

Design Speed

Montana State Highway 80 currently has posted speeds of 45, 35, and 25-mph in the vicinity of the bridge as the roadway transitions from a rural minor arterial east of the bridge to an urban minor arterial west of the bridge. The posted speed on the roadway approaching the east end of the bridge is 45-mph; 35 mph is the posted speed for travel along the bridge; 25 mph is the posted speed through the Fort Benton urban limits. A 55-mph design speed will be utilized east of the bridge as the roadway transitions from an urban to rural arterial. A 25-mph design speed for urban minor arterial will be utilized west of the bridge. Design speed will be a consideration in the determination of clear zone widths and guardrail advancement lengths.

Horizontal Alignment

a. The beginning segment of roadway from about Sta. 100+00 to the west river bank at Sta. 106+50 +/-, is located with the city limits of Fort Benton in an urban environment. From the east side of the river at Sta. 111+00 +/- to the end of the project the roadway is in a rural setting.

b. The horizontal alignment will generally follow the existing alignment but the new centerline will be offset south of the existing to best fit the wider roadway within the existing R/W. Utilizing small deflection angles, a series of two tangents are proposed to tie into the existing 13th Street alignment from the west end of the bridge. The entire bridge will be oriented on a tangent alignment that is parallel to the existing alignment. Off the bridge, about 50-ft from the eastern bridge abutment, the tangent alignment deflects for about 260-ft prior to a 600-ft horizontal curve that transitions the centerline back to the existing location just east of the intersection with S-228.

c. The proposed superelevation for the horizontal curve east of the bridge is 6%, which is steeper than existing conditions. Some flattening of the outside shoulder and/or mill/fill of the S-228 approach may be necessary to accommodate turn movements on and off MT-80.

d. Widening of the roadway to the south, and the proposed superelevation will require some regrading of the private approach located near Sta. 116+85.

Vertical Alignment

a. The vertical alignment will generally follow the existing alignment and is controlled by the existing intersection with Front Street and clearance requirements over the Steamboat Levee Trail on the west side of the river. A slight increase in the profile grade elevation is needed near the west bridge abutment to provide sufficient vertical clearance above the trail that passes below the bridge.

b. A 150-ft vertical sag curve near the beginning of the project at the west side of Front Street (VPI Sta. 104+50) provides the necessary transition to the profile grade over the bridge. Beginning on the east side of Front Street, a short vertical tangent grade of 4.815% transitions to the 200-ft crest curve (VPI Sta. 107+35) near the west side of the river. Moving east to the end of the project, the vertical profile is on a 0.5% constant grade to match the existing conditions.

c. The Steamboat Levee Trail will be regraded (lowered) as it passes below the new bridge to provide approximately 9-ft of vertical clearance. This improves vertical clearance compared to the existing condition of +/-7-ft. Lowering the trail grade is anticipated to cause the trail to be overtopped by high river flows at about the 25-year event.

d. Overall, the new Profile Grade Line (PGL) is about 1-ft higher than the existing PGL as a result of shifting the centerline crown point to the south and maintaining the existing roadway 2% cross slope upward to that point.

e. Front Street requires some minor regrading north and south of the intersection to accommodate the proposed profile grade on 13th Street (MT-80). About 75-ft of mill/fill is

needed on either side of the intersection.

Surfacing
The preliminary geotechnical report recommends 0.3-ft of plant mix surfacing over 8-in of granular base thickness. An additional 0.2-ft of plant mix surfacing and bridge end backfill will be added per the guidance in 30-year Pavement Design at Bridge Ends design memo.

Typical Section
The bridge section will have a total width of 38.4-ft which includes two 12-ft travel lanes, 6-ft shoulders, and curb widths of 1.2-ft. West of the bridge, the typical section will transition to an urban section consisting of 12-ft travel lanes and 5-ft shoulders with curb and gutter. East of the bridge the typical section will transition to the existing rural section of 12-ft lanes and 5-ft shoulders.

Grading
Grading will generally be limited to the excavation at the bridge ends to install the new bridge end abutments and bridge end surfacing section. Clearing, grubbing, and tree removal is anticipated at each bridge end for installation of both the temporary work structure north of the bridge and the temporary detour south of the bridge.

Geotechnical Considerations
At this time, there no critical geotechnical issues identified for this project. Geotechnical borings and recommendations for the bridge are planned but have not yet been obtained. A potential hazardous material (petroleum) site, known as Fort Benton Motor Co., which is currently vacant, is located near the southwest corner of Front Street and 13th Street (MT-80). Additional borings to investigate soil contamination levels adjacent to the existing roadway are also planned.

Hydraulics
a. A 730-ft long structure is proposed over the Missouri River. The bridge will reduce the number of piers within the channel and will provide a larger bridge opening. Therefore, the proposed structure will not increase flood hazards to adjacent landowners.
b. The existing mainline culvert near station 116+75 will be protected in place.
c. Existing approach pipes will be protected in place where possible.
d. There is not a floodplain delineated for the Missouri River in Chouteau County and a floodplain permit is not anticipated.
e. MDT had no comments on the Preliminary Hydraulics Report included in the AGR submittal. For this project, a hydraulic analysis was not performed prior to AGR as bathymetric channel survey data was not available. Detailed hydraulic analysis and recommendations will be provided at PIH.
f. Existing drainage for the bridge deck drops directly into the Missouri River. The proposed design will eliminate stormwater discharging directly into the river. Where feasible, runoff will be directed along the bridge to outfall into the proposed stormwater system described below. Possible requirements for treating stormwater will be resolved as the project develops.
g. The existing storm drain system from the intersection of Front Street and 13th Street to the outfall that discharges into the Missouri River will be replaced due to impacts associated with the new bridge and roadway construction.

Permanent Erosion and Sediment Control (PESC) Features
The project is not located within an MS4 boundary. The existing roadside ditches will be perpetuated and evaluated for the additional paved surface area. The section of roadway between Front Street and the west bridge end will be curbed and will drain downgrade (west) toward the intersection and be captured in the existing storm inlets. Stormwater from the bridge deck will be discharged outside of the active river channel and likely require a closed drainage system to some extent. The profile grade on the bridge will convey stormwater from at least part of the bridge deck toward the west side of the river and be captured in bridge deck inlets prior to the expansion joint. The inlets will discharge into pipe network supported on the bridge that conveys stormwater into the outfall pipe near the abutment.

Bridges

a. The existing bridge over the Missouri River will be replaced with this project. The new bridge will be located on the same horizontal alignment and approximately the same vertical profile grade.

b. The proposed bridge is a four span continuous steel plate girder structure with a total length of 730-ft. The girders will be haunched to maximize vertical clearance over the trail on the west riverbank and to enhance aesthetics.

c. The new bridge is slightly longer than the existing structure and maintains the same number of piers in the active river channel. The new piers and abutments will be skewed 13° to match the direction of flow.

d. Freestanding abutments with turnback wingwalls are proposed at both bridge ends. The intermediate piers may either consist of multiple columns or a solid wall pending final geotechnical and hydraulic recommendations.

e. Drilled shafts are currently anticipated for the new bridge foundations. Final geotechnical borings and recommendations are forthcoming.

f. The new bridge deck will be wider than the existing to meet current design standards. The new bridge will maintain the location of the existing bridge deck on the north side, and be wider to the south by approximately 10-ft.

g. The bridge will provide two 12-ft lanes with 6-ft shoulders with a total roadway width of 36.0-ft measured from face to face of rail. MDT MASH compliant 42-in Open Bridge Rail will be provided on the bridge.

h. The bridge will be constructed in one phase while traffic is maintained on a detour structure located to the south of the existing alignment.

i. In response to public comments, whether bicycle/pedestrians are accommodated on the new bridge is under evaluation. This could be accomplished through wider shoulders or a dedicated path on the bridge. Bridge cross sections and cost impacts for wider shoulders or the addition of a dedicated pedestrian path have been provided for review.

Traffic

a. The design year for this project is 2047 with a letting year of 2027.

b. The horizontal alignment shift of 13th Street (MT-80) will impact existing intersection of Front Street and 13th Street. The horizontal location of existing curb lines and striping along Front Street will be maintained. South of the intersection, 13th Street will be widened to the south to match the new bridge width. North of the intersection, the width of 13th Street will remain the same as existing.

c. The Front Street and 13th Street intersection will be regraded to match the new profile grade of MT-80 (13th Street). The finished grade of the intersection will be about 1-ft higher than existing conditions.

d. Front Street traffic is required to stop at the intersection. New stop signs and other roadside signs at the intersection will be replaced to meet current design standards.

e. Existing luminaire poles are located at each corner of the intersection of Front Street and 13th Street. The existing wooden pole at the southeast corner will be impacted due to the widening of 13th Street and will need to be replaced. An evaluation of lighting levels or replacing all four of the luminaries is currently not included in the project scope.

f. Woodmansy Drive is a private approach south of MT-80 and will be reconstructed to match the

new MT-80 alignment and guardrail transitions.

g. The stop controlled Hwy-228 approach on the south side of MT-80 will be reconfigured to accommodate turning through the intersection. The Hwy-228 approach grade will be raised to match the edge of roadway on MT-80 which will have a steeper superelevation compared to existing conditions. This may be accomplished by adjusting the profile grade of Hwy-228 near the intersection and/or flattening the superelevation of the outside shoulder of MT-80. Approach intersection radii will be revised to meet current design standards. The intersection will remain stop controlled.

h. The Hwy-228 approach on the north side of MT-80 is used as a private approach as it dead ends on private property. This approach will be regraded to match the new elevation of MT-80.

Intelligent Transportation Systems (ITS) Features
No ITS features are currently proposed for this project.

Miscellaneous
The Steamboat Levee Trail runs along the west bank of the Missouri River and under the bridge. This project will perpetuate the trail under the bridge. Some realignment of the trail both vertical and horizontal will be necessary to accommodate the new bridge. Some of the existing landscaping adjacent to the trail will be impacted and restored with the project. Input from the City of Fort Benton will be required as part of the trail restoration.

Design Exceptions and Variances
No design exceptions are anticipated at this time.

Right-of-Way
A cadastral survey is planned but not yet complete for the project. Some permanent R/W impacts may be needed on the south side of the roadway due to the widening. No permanent R/W impacts are anticipated on the north side of the roadway. Temporary construction permits will be needed through the project limits and to a greater extent on the south side of the roadway to accommodate the traffic detour.

A DNRC Land Use License or easement on navigable waters may be required for the new bridge.

Utilities/Railroads
A Phase I SUE was completed in July 2022. Fiber optic and telephone communication lines are attached to the existing bridge under the upstream side of the bridge. These will be relocated due to the bridge replacement. The fiber and communication lines also extend across the intersection at Front Street and 13th Street. Overhead power lines exist near both ends of the bridge, and streetlight/power poles are located at each corner of the intersection of 13th Street and Front Street. At least one pole will be impacted with the project. Underground landscape irrigation line(s) and a control box were identified near the pedestrian pathway and green space to the south of the west end of the existing bridge. A storm drain manhole is located just east of the intersection with Front Street with an existing storm drain outfall pipe running northeasterly from the manhole. The outlet for this storm drain is on the west riverbank north of the bridge. Coordination between MDT, private utilities, City of Fort Benton, and HDR will continue as the design progresses. A Phase II SUE may be required to provide more detailed locations of some utilities. The need for a Phase II SUE will be resolved as the design develops and the project scope of work are finalized.

No railroads will be affected by this project. The closest rail line is over 1-mile way from the west end of the bridge.

Maintenance Items
No significant impacts to existing maintenance items are anticipated for this project. If advanced, the bridge stormwater drainage system will be an additional maintenance item.

Agreements

Agreements will be needed for the impacted utilities, and for temporary and permanent R/W impacts on the project.

Environmental Considerations

a. Environmental Document. The project meets the criteria to be processed as a Categorical Exclusion in accordance with 23 CFR 771.117(d). Due to one or more Programmatic Agreement thresholds being exceeded, FHWA will need to concur with the CE determination.

b. Environmental Permitting. The project will require a Clean Water Act Section 404 permit. Minor and unavoidable impacts to wetlands may occur to a narrow fringe of emergent wetland on the east bank of the Missouri River. The project is anticipated to be permitted under a Nationwide Permit. Wetland impacts will be avoided and minimized to the extent possible as design progresses. Wetland mitigation, if needed, will be determined during the permitting phase of the project. Stream mitigation is not anticipated.

   The Missouri River is federally designated as a navigable water of the United States and is regulated under Section 10 of the River and Harbors Appropriation Act of 1899. Accordingly, a Section 10 permit will be required.

c. Wildlife Accommodations. Wildlife accommodations were evaluated in the Biological Resources Report (BRR) completed on December 6, 2022. Based on a review of wildlife-vehicle conflicts and crash data, no significant spatial trends or hotspot areas were identified, and preparation of a Wildlife Accommodation Recommendation Memo (WARM) was determined unnecessary. The following include general recommendations that will be incorporated into project design considerations:

   i. Should any existing ROW fencing be replaced by the project, or any new fencing proposed, wildlife-friendly ROW fence should be used to help facilitate wildlife movements in the project area. The use of wildlife-friendly fence must be agreed upon by the adjacent landowner.

   ii. Similar or increased horizontal and vertical clearances should be provided on the east side of the Missouri River along the riparian/floodplain corridor to allow for wildlife passage through the project site.

d. Threatened and Endangered Species. The Preliminary Biological Assessment (PBA) was completed on December 6, 2022, in conjunction with the BRR. The proposed project rendered a "May Affect" determination for grizzly bear and pallid sturgeon. Based on the "May Affect" determination for these two species, a Biological Assessment (BA) will be prepared, and a final determination of effect will be made for each species at a later phase in project development in coordination/consultation with the USFWS.

e. Hazardous Materials. The MT-80 bridge was tested for lead-based paint and asbestos on September 24, 2022. No asbestos was detected on any samples. Lead paint was detected on several components of the bridge. As such, a Lead-Based Paint special provision will be developed and included in the final bid package.

   In addition, a Preliminary Site Investigation will occur in December 2023 to collect soil and groundwater samples on the property on the southwest quadrant of the MT-80 bridge on the former Fort Benton Motor Co. property. Four borings will be conducted on the Fort Benton Motor Co. property to a depth of 20 feet and analyzed for Volatile Organic Carbons, Total Petroleum Hydrocarbons, and metals. The potential impact from contamination on the adjacent property is not anticipated to be significant. Once the extent of contamination is known, special provisions will be developed that address the handling and disposal of contaminated media anticipated to be encountered during construction.

f. Farmland. Farmland (as defined in 7 CFR 658.2) may be converted as a result of the project. A farmland impact analysis will be conducted in accordance with the most current NRCS procedures and will be documented in the file.

g. Historic and Archaeological Resources. MDT conducted a cultural resources inventory for the project that identified eight historic properties within the area of potential effect (APE). The Missouri River Bridge (Structure 06193), aka MT-80 bridge, has been determined as eligible for the NRHP under Criterion C. Removal of the bridge will result in an adverse effect. It is anticipated that Section 106 compliance and mitigation of the adverse effect will be accomplished using the Historic Roads and Bridges Programmatic Agreement signed by MDT, SHPO, ACHP, and FHWA. A historical marker or interpretive sign will be included with the project to help mitigate the adverse effect.

h. Section 4(f). Removal of the MT-80 bridge will result in a "use" of a Section 4(f) resource. Compliance will be achieved through use of the Historic Bridges Programmatic Section 4(f) Evaluation.

   There are other Section 4(f) resources potentially affected by the project: the Upper Missouri River Breaks National Monument managed by the BLM, the Lewis & Clark National Historic Trail managed by the NPS, and the Steamboat Levee Walk managed by the City of Fort Benton. A "use" of these resources will be avoided to the greatest extent possible. Any temporary occupancy of these sites, if required, is not anticipated to result in a "use" as defined in 23 CFR 774.13(d).

i. Section 6(f). The BLM Upper Missouri River Breaks National Monument is crossed by the project and has received past funding through the Land and Water Conservation Fund (LWCF). No property acquisition is anticipated.

j. Wild and Scenic Rivers. The project will require work in and across the Upper Missouri National Wild and Scenic River. This portion of the wild and scenic river is designated "Recreational," with bank-to-bank boundary limitations. A Section 7 (of the Wild and Scenic Rivers Act) evaluation is required for the project. Work will be coordinated and documented with the BLM, Lewistown Field Office.

Experimental Features and Proprietary Products

No experimental or proprietary products are currently proposed for the project.

Traffic Control

MT-80 serves as an oversized load corridor and is a critical route for the local community and agriculture. Closing the roadway would result in a substantial detour of approximately 90-miles utilizing paved roads. There is a shorter detour distance of about 40-miles through Loma, but that route is an unimproved gravel road that may take longer to travel or lack year-round maintenance. Therefore, closing the roadway during construction is currently not being considered due to the significant impacts.

Maintaining traffic on the existing bridge while constructing the new bridge in phases was evaluated as part of an alternatives analysis for replacing the bridge. A phased construction strategy requires shifting the new alignment farther south to provide enough room to build the first phase wide enough to maintain traffic after the existing bridge is demolished. Building the bridge in phases was not advanced due to the increased construction duration and the increased R/W impacts associated with a greater alignment shift.

Currently, the project is moving forward with traffic being maintained on a temporary detour bridge located to the south (upstream) of the existing alignment. The detour will be wide enough to maintain 2-way, 2-lane traffic.

Public Involvement

The project Level of Impact (LOI) has been determined to be Moderate, and level of public involvement C, as defined by MDT's Public Involvement Plan.

A project website and a stakeholder contact and issues list/database (Excel) has been developed. A project stakeholder group was assembled and one stakeholder meeting to discuss project alternatives and capture feedback was held prior to AGR. The project team setup a meeting with local media and an article about the project was published.

Subsequent stakeholder meetings will be scheduled prior to PIH and as determined necessary as the project develops. Two open house format public meetings are currently planned. One meeting will occur prior to the PIH submittal and another will occur near the completion of the design phase. Providing a booth and public involvement staff at community events is also being considered. The Choteau County Fair, and Summer Celebration are events that could be attended to help promote project awareness and answer questions.

Preliminary Construction Cost Estimate

At the time of the preliminary field review the project scoped as a bridge deck rehabilitation and the cost estimate was $2,763,400 for total CN+CE costs.

	Estimated cost	Inflation (INF) (from PPMS)	TOTAL costs w/INF + IDC (from PPMS)
STPB CN	**$23,635,000**	**$1,145,177**	**$ 28,140,369**
TOTAL CN	**$23,635,000**	**$1,145,177**	**$ 28,140,369**
CE (13.5% - Includes PI)	**$3,190,725**	**$154,598**	**$ 3,798,984**

Project TOTAL from all the funding types above:

Project TOTAL CN+CE	**$26,825,725**	**$1,299,775**	**$ 31,939,353**

The estimate above includes $3,000,000 to construct, maintain and remove detour, $100,000 for traffic control, 30% allowance for contingency, and 10% for mobilization.

Note: Inflation is calculated in PPMS to the letting date. If there is no letting date, the project is assumed to be inside the current TCP and is given a maximum of 5 years until letting. IDC is calculated at 13.56% for FY 2024.

Preliminary Engineering

The percent PE expended is 100%. A review of the expended preliminary engineering and hours used compared to the anticipated amounts required for completing the project design indicates that a modification is needed. The project was originally scoped to alignment and grade milestone so that the assessment between a deck rehab and a full bridge replacement could be made and decision on the appropriate scope moving forward was determined. Due to this scoping plan the PE was only programmed for the initial project nomination and scoping. A contract amendment is currently being negotiated with HDR Engineering Inc. and a PE modification will be requested with the amendment.

Ready Date

The Ready Date is September 1, 2026. The Letting Date is January 1, 2027. The current PE End Date is October 31, 2027. A review of the remaining EPS schedule, critical path activities, and target letting date indicates that a modification to the PE End Date isn't needed.

cc:
J.R. Taylor, PE, EPS Project Manager

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