

December 5, 2025

Kristopher Keller
City of Dickinson
Engineering Department
38 1st Street West
Dickinson, ND 58601

Re: Additional Scope for Final Design and Permitting – East Broadway Dam Modification Project

Dear Mr. Keller:

This letter presents scope, schedule, and budget for additional scope items that have arisen during the design and permitting phase of the East Broadway Dam Modification Project. These items and their associated estimated costs are summarized in the table below, with additional information on each item in the following paragraphs:

Item No.	Additional Scope Items	Estimated Cost
1	Addition of Recreational Trail	\$5,000.00
2	Additional Cultural Discoveries	\$1,500.00
3	Riffle Adjustment to Tie-In to Culvert	\$7,000.00
4	Design Report	\$10,260.00
5	ND DWR Notification to Remove a Dam	\$3,500.00
6	ND DWR Floodway Review	\$17,800.00
7	ND DWR Water Permit – Calculations Only	\$4,000.00
Total		\$49,060.00

Item 1: Addition of Recreational Trail

The design of a recreational trail and canoe portage along the west bank of the river adjacent to the new riffle structure was added to the planset, at the City’s request. This change required updated civil design, modeling, and planset revisions. These changes were discussed with the City at the time the request was made, and it was agreed the changes to the trail was an additional scope item.

Item 2: Additional Cultural Discoveries

Juniper, LLC (Juniper) completed a cultural resources review for the project. Juniper’s base scope and cost included recording one cultural resource (the existing dam), with “A per unit cost of \$750.00 per cultural resource recorded during the Inventory after the first one recorded.” Two additional cultural resources were discovered and recorded during the investigation, which led to an additional cost of \$1500.00.

Item 3: Riffle Adjustment to Tie-In to Culvert

During final design, the City requested that the rock riffle structure be shifted upstream from where it was originally laid out, so that it could tie-in to an existing stormwater outlet and potentially help alleviate localized flooding in the neighborhood west of the project. Making this change involved re-work to move the riffles and additional design to tie-in to the stormwater outlet.

Item 4: Design Report

Preparation of a design report to support the North Dakota Department of Water Resources (ND DWR) Dam Construction Permit was included in Change Order #1 for the project. However, the \$10,260 budget estimate for the work was erroneously not included in the total budget amount. The work was completed, so this item adds no scope, but amends the budget to the originally intended amount.

Item 5: ND DWR Notification to Remove a Dam

During ND DWR review of the Dam Construction Permit, they indicated that they view the project as removal of the existing dam and then constructing a new dam upstream. For removal of the existing dam they are requiring that from SFN 61403 "Notification to breach/remove a dam, dike, or other water control structure" be completed and submitted to ND DWR. This item is for time for Barr to compile the information requested on the form, complete the form, prepare a required map to attach to the form, and submit to ND DWR on the City's behalf.

Item 6: ND DWR Floodway Review

During ND DWR review of the Dam Construction Permit, they indicated that because the project is causing a mappable (more than 0.1 ft) decrease in the 100-year flood water levels, the project requires a DWR floodplain no-rise review, requiring additional hydraulic modeling and reporting to DWR.

A two-dimensional model was used for the project design. DWR does not currently have the capability to review two-dimensional models for the floodplain no-rise review, so a one-dimensional hydraulic model will need to be prepared for their review. Barr will develop the required one-dimensional hydraulic model files based on the current Flood Information Study model for City of Dickinson and the two-dimensional model used for project design. Barr will submit the model files to DWR for review along with a brief narrative documenting the model changes. This narrative and modeling is in addition to the design report and model results previously submitted to support the project design.

DWR has indicated that the project will also require a Letter of Map Revision (LOMR) after construction of the project to document the lowered floodplain elevation and decreased floodplain extents, based on as-built conditions. The LOMR will require additional hydraulic modeling, reporting and coordination with agencies after construction of the project. Preparation of the LOMR or as-built model is not included in this scope of work.

Item 7: ND DWR Water Permit – Calculations Only

In response to ND DWR review of the Dam Construction Permit, they indicated that a Water Permit is required for low-head dams, and the current structure does not have one. The Water Permit will be for the storage component for the capacity of the reservoir and the requested annual use will be for the annual evaporative losses. The City will prepare and submit this permit application including preparing the required map certified by a professional land surveyor and paying the permit application fee. Barr's scope

will be to prepare the necessary computations for storage amounts and annual use based on evaporation and submit to the City for the City's use in the permit application.

ND DWR also indicated that a temporary water permit may be needed for dust control during construction; this is not included in Barr's scope of work; project Specifications will require that the construction contractor obtain a temporary water permit if they intend to use Heart River water for dust control or other reasons during construction.

We look forward to continuing to work with you on this project. Please contact Jon Ausdemore or Matt Peterson with any questions.

Sincerely,



Jon Ausdemore, PE
Vice President, Principal in Charge



Matt Peterson, PE
Project Manager