RED RIVER VALLEY COMMITTEE

Fargo Commission Building
Meadow Lark Room

April 16, 2025

1:00 P.M.

A G E N D A

1:00 a.m. I. Call to Order & Roll Call – Ken Vein & Lisa Schafer

1:02 a.m. II. Consideration of Minutes – Ken Vein

A. **>November 27, 2024**

1:03 p.m. III. Red River Valley Water Supply Project

A. 2024 Construction Review – Kip Kovar

1. Change Orders – Kip Kovar

a. **>*Contract 5B, Task Order 5532 – Change Order No. 6**

b. **>*Contract 5C, Task Order 5533 – Change Order No. 1**

B. >Work Plan Update – Kip Kovar

C. 2025 Construction Outlook – Kip Kovar/Kurt Ronnekamp

1. ***Contract 6B/6C Pipeline Plans and Specifications Approval *(link sent)***

2. ***Contract 7A/7B Pipeline Plans and Specifications Approval *(link sent)***

D. MR&I/ENDAWS Task Orders – Kip Kovar/Paul Boersma/Kurt Ronnekamp

1. **>*2150 – McClusky Canal Hydraulic & Water Quality Investigation**
2. **>*2350 – ENDAWS Site Dev., Contract 1, Final Design & Bidding Services**
3. **>*3150 – ENDAWS BWTP Piloting & Treatability Study**
4. **>*3220 – ENDAWS Facilities Supplemental Geotechnical Investigation**
5. **>*5315 – ETP, Contract 1, Partial Final Design Services**
6. **>*5325 – ETP, Contract 2, Partial Final Design Services**

E. **>*2023-2025 Biennium Work Plan/Budget Revisions –** K. Kovar/K. Ronnekamp

F. >2025-2027 Draft Biennium Work Plan/Budget – Kip Kovar/Kurt Ronnekamp

G. Interim Financing Agreement Series F – Merri Mooridian

H. >Program Schedule – Kip Kovar

I. User Engagement Update – Steve Burian

1. >Prospective Users Update
2. Memorandum of Commitment Capacity Maps

2:15 p.m. IV. Adjourn

Items in bold require action *** Requires a roll call vote**

The following minutes are in draft form subject to review and approval by the Red River Valley Committee at its next meeting.

24-59

GARRISON DIVERSION CONSERVANCY DISTRICT

RED RIVER VALLEY COMMITTEE

City Commission - Meadow Lark Room
Fargo, North Dakota
November 27, 2024

A meeting of the Lake Agassiz Water Authority (LAWA) board of directors was held at the Fargo City Commission, Fargo, ND, on November 27, 2024. The meeting was called to order by Chair Vein at 11:30 a.m.

MEMBERS PRESENT

Committee Chairman Ken Vein
Director Jay Anderson
Director Greg Bischoff
Director Jeff LeDoux
Director Jason Siegert
Secretary Duane DeKrey

MEMBERS ABSENT

Board Chairman Alan Walter

Garrison Diversion staff members and others were also present. A copy of the registration sheet is attached to the minutes as Annex I.

The meeting was recorded to assist with compilation of the minutes.

CONSIDERATION OF MINUTES

Motion by Director Bischoff to dispense with a reading of the September 25, 2024, Red River Valley Committee minutes and approve them as distributed. Second by Director J. Anderson. Upon voice vote, motion carried.

AGENDA CHANGE

Motion by Director Bischoff to move the User Engagement Update to the next item on the agenda. Second by Director J. Anderson. Upon voice vote, motion carried.

RED RIVER VALLEY WATER SUPPLY PROJECT UPDATE (RRVWSP)

User Engagement Update - - Steve Burian, Burian & Associates (BA), provided a summary from the update given at the Lake Agassiz Water Authority (LAWA) board meeting earlier today regarding user engagement.

Mr. Burian commented when looking at the balance of what systems are in or out right now, the total cfs for the RRVWSP is close to 159.23. The big hinge point is the City of Jamestown. If the city declines, 11 cfs is freed up, allowing for more room in the pipe. If Jamestown were to sign on to the project, and there are other bigger county nominations, then we are starting to look at pipe sizes.

Mr. Burian stated the engineering team is looking at different ways to raise the latter segments of the pipe to meet the extra needs. Nothing is currently being designed or bid that would limit the ultimate pipeline capacity.

Kip Kovar, District Engineer, Garrison Diversion, asked Black & Veatch (BV) and BA for updated graphics on this discussion, including pipe capacity and locations.

Mr. Kovar added Garrison Diversion would like it documented that others were asked if the pipeline capacity should be increased.

Director LeDoux asked, hypothetically, if there is only capacity for x amount of water, and we end up with a greater need, who makes the ultimate decision as to who gets how much water.

Mr. Burian said because systems have already nominated and signed the MOC and the Series D2 Amendment, it would most likely be first come first serve if we ran out of water.

Director Bischoff said that is also why the committee is having this discussion; so we do not short ourselves and oversell what the engineering team says can be delivered.

Construction Update - - Mr. Kovar reported the total amount of pipeline installed is approximately 13 miles. Recently, the amount of pipe being installed per week across all contracts is 3,000 to 4,000 feet.

Garney Construction (Garney) will more than likely not complete the pipe installation on Contract 5B this year. Oscar Renda Contracting and Carstensen Contracting are sitting pretty good in year one on Contracts 5C and 5D.

Work Plan Update - - Mr. Kovar stated the RRVWSP Work Plan Update dated September 6, 2024, is included in the meeting packet. This is a summary of the RRVWSP construction contracts, consisting of completed and ongoing projects. A copy of the update is attached to these minutes as Annex II.

As of today, including Contract 5A, there is approximately 12.9 miles of pipeline installed on the RRVWSP.

Contract 5B

Garney is the contractor for Contract 5B, which is nine miles of pipeline at 80 percent of completion.

Mr. Kovar commented there will be a couple of change orders coming through one last time for dewatering and top soiling on Contract 5B. These type of change orders are not being seen on Contracts 5C and 5D because the specifications were changed.

Mr. Kovar added a quality control process has been implemented where surveyors are being sent back out and checking the topsoil and checking for any defective work. He also explained a recent dewatering issue that had taken place which upset the landowner.

Red River Valley Transmission Pipeline, Contract 6A

Bid Summary

Mr. Kovar referred to the bid tab information included with the meeting materials. Bid opening for RRVWSP, Red River Valley Transmission Pipeline, Contract 6A, was held on November 7, 2024. Three bids were received: 1) Carstensen Contracting, Inc., 2) Harper Brothers Construction, LLC and 3) Oscar Renda Contracting, Inc. A copy of the bid tab summary is attached to these minutes as Annex III.

Included in the bid package was a base bid for 4.8 miles of 72-inch pipeline, along with alternative one adding 1.3 miles and alternative two adding 1 mile. This comes to a total of 7.1 miles of 72-inch pipe.

Contract 6 moves further east of Carrington. Contract 6A picks up where Contract 5C leaves off. It consists of 7 to 7.3 miles of pipe with no trenchless crossings and includes a large isolation valve.

The engineer's estimate was $54,512,981. Carstensen Contracting, Inc. was the apparent low bidder at $52,512,981.

Recommendation of Award

Mr. Kovar referred to the recommendation of award letter received from BV, which recommends Carstensen be awarded the base bid plus alternates one and two on Contract 6A in the amount of $52,28,500. A copy of BV's letter is attached to these minutes as Annex IV.

Mr. Kovar stated per BV's presentation to the LAWA board today regarding the bid results and programmatic costs, a report back on what the impact of Contract 6A will be per mile, as well as the impact on the entire program, will be presented at the next meeting.
Chairman Vein asked if all the wet areas have been done.

Mr. Kovar said there are other wet sections along the project route, and a task order for geotechnical services was added to better identify those areas. There may be more that need to be completed on the Eastern North Dakota Alternate Water Supply (ENDAWS) section of the project.

Chairman Vein said he is concerned with the low number of bidders and the price gaps between them. He questioned whether there will continue to be competitive bids coming in on contracts.

Paul Boersma, BV, stated they agree with that concern. A few bids have been received from Harper Brothers, and they have always been very high. They were excited when Garney bid and received Contract 5A and 5B since they are the biggest pipeline contractor in the country; however, Garney has really struggled and seem to be moving away from the pipeline business.

There have been two other bidders, which were Carstensen and Oscar Renda. BV is concerned that over the next six months, they need to be encouraging a new group of contractors and enticing them to bid.

Motion by Director Bischoff to recommend approval of the notice of award on RRVWSP Red River Valley Transmission Pipeline, Contract 6A, to Carstensen Contracting in the amount of $52,528,500 and authorize the general manager to move forward on the contract pending submittal of the contractor's documentation. Second by Director LeDoux. Upon roll call vote, the following directors voted aye: J. Anderson, Bischoff, LeDoux, Siegert and Vein. Those voting nay: none. Absent and not voting: Walter. Motion carried.

ENDAWS Electrical Service

Mr. Kovar referred to two letters included with the meeting materials. Garrison Diversion submitted a request to the Bureau of Reclamation (Reclamation) on October 23, 2024, for confirmation in writing that the ENDAWS Project is eligible to receive federal power. Reclamation's written confirmation was received on November 11, 2024. The project will receive firm power through the Dakota Water Resources Act. Copies of the letters are attached to these minutes as Annex V.

Mr. Kovar said Garrison Diversion has begun preliminary discussions with Western Area Power Administration (WAPA), Central Power Electric Cooperative and Verendrye Electric Cooperative on the process to obtain federal power, and it was indicated the transformer alone will take five years. The draft timeline for the entire process is eight years.

Mr. Kovar added WAPA will need to perform an interconnection study, which will cost approximately $20,000 to $30,000.

2023-2025 Biennium Work Plan/Budget - - Mr. Kovar referred to the 2023-2025 Biennium Work Plan/Budget dated November 14, 2024, explaining the highlighted areas are items that were reduced in order to install additional pipe. A copy of the work plan is attached to these minutes as Annex VI.

Motion by Director J. Anderson to recommend approval of the updated 2023-2025 RRVWSP Biennium Work Plan to the full board. Second by Director Bischoff. Upon roll call vote, the following directors voted aye: J. Anderson, Bischoff, LeDoux, Siegert and Vein. Those voting nay: none. Absent and not voting: Walter. Motion carried.

Program Schedule - - Mr. Kovar referred to the RRVWSP Program Schedule dated September 4, 2024, which shows the timeline of the ongoing RRVWSP construction projects.

Financial Update

Federal Funding Update

Series D2 Financing Agreement

Shawn Gaddie, Advanced Engineering and Environmental Services , commented the main thing to get accomplished is getting the MOCs and Series D Small Systems Amendments in

place. There will need to be a strategy put into place letting everyone know which documents require approval by their councils/commissions. This will be discussed during the user meeting later this afternoon.

OTHER

With no further business to come before the committee, the meeting adjourned at 1:00 p.m.

Ken Vein, Chairman

Duane DeKrey, Secretary

REGISTRATION

Annex I
24-64

RED RIVER VALLEY COMMITTEE MEETING
Fargo Commission Building, North Dakota

November 27, 2024

NAME	ADDRESS
Kip Kovar	GDCD
Duane Dekrey	GDCD
Jay Paul Anderson	GDCD
Ken Vein	GDCD
Steven Gadbaw	AE2S
Brandon Johnson	Vogel Law Firm
Steve L. Burian	Burian & Associates
Greg Bischoff	GDCD
Kimberly Cook	GDCD
Tessa Schafer	GDCD
Brent Bogart	AE2S
On Line	
Jeff LeDoux	Garrison Diversion
Dave Anderson	Garrison Diversion
Jason Siegert	Garrison Diversion
Steve Metzger	Garrison Diversion
Paul Boersma	Black & Veatch

CONSTRUCTION

Pipeline Construction

Contract 5B

The original pipe delivery of June 15, 2021, was delayed due to a surface blemish in the steel coil.

In year one (2022), 7,761 feet of pipe was installed out of the total nine miles. High groundwater slowed the pipe installation progress.

In the second year (2023), 21,120 feet of pipe was installed.

In the third year (2024), using two pipe crews, approximately 18,500 feet has been installed, which completes the pipe installation.

To date, $32,151,161.61 has been paid on the original contract amount of $45,961,700.00. Change Orders No. 1, 2, 3 and 4 have been approved, leaving the current contract price at $46,899,055.88.

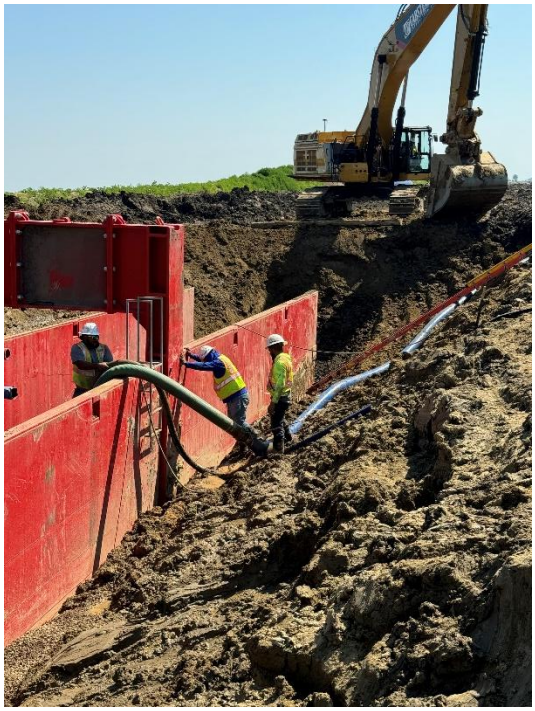
Contract 5C

The contract price is $76,663,355.00 for 8 miles of pipe awarded to Oscar Renda Contracting.

Oscar Renda was not meeting their install targets so a second pipe crew was sent out on July 10. To date, 19,352 feet has been installed. The Kelly Creek tunnel is complete.

To date, $22,389,224.03 has been paid on the original contract amount of $76,663,355.00.

Stripping Topsoil



Trench Box w/ Dewatering Pipes

Contract 5D

The contract price is $61,677,275.00 for 10 miles of pipe awarded to Carstensen Contracting. To date, the contractor has installed 21,618 feet with one pipe crew.

To date, $21,312,129.87 has been paid on the original contract amount of $61,677,275.00. Change Order No. 1 has been approved, leaving the current contract price at $59,375,495.00.

Stored Pipe on Site

Placing Dewatering Pipe

DESIGN

The design team is also working with Reclamation and USFWS on routing the ENDAWS pipeline through wetland and other various existing easements.

Bid opening on Contract 6A was held on November 7, 2024. Final design efforts have started on Contracts 7 and 4. Additional geotechnical data is complete.

RRVWSP Awarded Contracts				
No.	**Contract Name**	**Contractor**	**Bid Price**	**Final Contract Price**
1	Missouri River Intake Wet Well & Site Development	ICS	$4,989,405.88	$4,721,446.47
1	Sheyenne River Outlet Discharge Structure & Site Development	Industrial Builders	$1,516,955.00	$1,521,884.00
2	Missouri River Intake, Screen Structure & Tunnel	Michels	$18,896,900.00	$19,444,156.60
5A	Transmission Pipeline East (TPE)	Garney	$8,366,201.00	$8,393,396.44
5B	TPE Carrington to Bordulac	Garney	$45,961,700.00	
5D	TPE Sykeston to Carrington	Carstensen	$61,677,275.00	
5C	TPE Bordulac to James River	Oscar Renda	$76,663,355.00	

BID TABULATION SUMMARY

Red River Valley Water Supply Project
Red River Valley Transmisson Pipeline
James River to McKinnon Twp, Foster County, ND
Contract 6A, Task Order 5561

Bid Opening 2:00 p.m. CST, Thursday, November 7, 2024

No.	Bidder	Attended Pre-bid Conference	Env 1: Bid Bond Included in the Amount of 5 percent of Bid	Env 1: Contractor's License or Certificate of Renewal Included	Env 1: Non-Collusion Affidavit Included and Completed	Env 1: EJCDC C-451 Qualifications Statement Completed	Env 1: Meets General Contractor Qualification Requirements	Env 1: Meets Tunneling Contracor Qualification Requirements	Env 1: Proposed Subcontractors, Suppliers, and Manufacturers Questionnaire Included and Completed	Env 2: Acknowledged Addendum No. 1	Env 2: Acknowledged Addendum No. 2	Env 2: Acknowledged Addendum No. 3	Env 2: Acknowledged Addendum No. 4	Base Bid	Additive Bid Alt No. 1	Total of Base Bid and Additive Bid Alt No. 1	Additive Bid Alt No. 2	Grand Total of Base Bid and Additive Bid Alt Nos. 1 & 2
1	Carstensen Contracting	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	**$37,389,325.00**	$8,802,500.00	**$46,191,825.00**	$6,336,675.00	**$52,528,500.00**
2	Harper Brothers Construction	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	**$54,872,280.00**	$11,763,064.00	**$66,635,344.00**	$8,295,744.00	**$74,931,088.00**
3	Oscar Renda Contracting*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	**$43,139,550.00**	$9,087,300.00	**$52,226,850.00**	$6,904,800.00	**$59,131,650.00**
4														*** read as $43,053,600.00**				
5																		
6																		
7																		
8																		
	Engineer's Estimate	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	**$37,844,273.00**	$9,488,649.00	**$47,332,922.00**	$7,180,059.00	**$54,512,981.00**

Garrison Diversion Conservancy District
PO Box 140
Carrington, ND 58421
701-652-3194

Kip Kovar, PE
District Engineer / Deputy Director of RRVWSP for Engineering
November 7, 2024

Annex III
24-67

BLACK & VEATCH

Black & Veatch Corporation
8800 Ward Parkway, Suite 400, Kansas City, MO 64114
P +1 913-458-3571 E RonnekampKA@bv.com

November 19, 2024

Garrison Diversion Conservancy District
Red River Valley Water Supply Project
Red River Valley Transmission Pipeline
Task Order 5561, Contract 6A

BV Project 188972/409655
BV File 55.5561.5

Mr. Duane DeKrey
General Manager
PO Box 140
Carrington, ND 58421

Dear Mr. DeKrey:

This letter provides the bid results and a recommendation of award for the Red River Valley Transmission Pipeline, Contract 6A project to Carstensen Contracting, Inc. of Dell Rapids, South Dakota.

Garrison Diversion Conservancy District held a bid opening at its Carrington office on November 7, 2024, at 2 p.m. local time. A total of three bids were received; all bids were opened and read aloud. The bid results are as follows:

Table 1 – Bid Tabulation Summary

Contractor	Base Bid (~4.8 miles of 72" pipe)	Bid Alt 1 (~1.3 miles of 72" pipe)	Bid Alt 2 (~1.0 miles of 72" pipe)	Grand Total Base Bid + Alt 1 + Alt 2 (~7.1 miles of 72" pipe)
Carstensen Contracting, Inc. Dell Rapids, SD	$37,389,325	$8,802,500	$6,336,675*	$52,528,500
Harper Brothers Construction, LLC Houston, TX	$54,872,280	$11,763,064	$8,295,744	$74,931,088
Oscar Renda Contracting, Inc. Grapevine, TX	$43,139,550	$9,087,300	$6,904,800	$59,031,650
Engineer's Estimate	$37,844,273	$9,488,649	$7,180,059	$54,512,981

* In Carstensen's Bid Form, this amount was shown as $6,336,655 in words; however, this was resolved to the amount shown based on the summation of the prices and the figures written.

Table 2 – Bid Price Evaluation Summary

Contractor	Grand Total Base Bid + Alt 1 + Alt 2	Comparison to Engineer's Estimate
Carstensen Contracting, Inc. Dell Rapids, SD	$52,528,500	-$1,984,481: -3.6%
Harper Brothers Construction, LLC Houston, TX	$74,931,088	+20,418,107: +38%
Oscar Renda Contracting, Inc. Grapevine, TX	$59,031,650	+4,518,669: +8.3%
Engineer's Estimate	$54,512,981	- -

Carstensen Contracting, Inc. of Dell Rapids, South Dakota submitted the apparent low bid. Oscar Renda Contracting, Inc. of Grapevine, Texas submitted the apparent second low bid.

EVALUATION OF THE APPARENT LOW BIDDER'S BID

The engineer's opinion of probable construction cost (cost opinion) for the Project prepared by Black & Veatch for the Grand Total of the Base Bid plus Alternatives 1 and 2 was $54,512,981. One bidder had a lower Bid and two bidders had higher Bids than the Black & Veatch's cost opinion. There was a $1,984,481 or 3.64 percent difference between the apparent low bid and Black & Veatch's cost opinion. The cost opinion was $7,650,765 or 14 percent lower than the average of the three bids received.

A comparison of the Bids shows that the overall low Bidder was also the low Bidder for the Base Bid and each of the two Bid Alternatives. For the comparison of the Grand Total of the Base Bid plus Alternatives 1 and 2, there is a difference of $6,503,150 or 12.4 percent between the low Bid and the second low Bid. Because of this noticeable difference, Black & Veatch contacted the apparent low bidder to verify there were no errors made in preparation of its bid. Carstensen confirmed it did not have any errors in its bid and it is standing by its bid of $54,512,981. Bidders were given 24 hours to withdrawal a bid due to a substantiated error, with return of the bid security. Garrison Diversion nor the Engineer received such notice.

Based on discussions with the apparent low bidder following the bid opening, it is Black & Veatch's opinion that Carstensen has a good understanding of the Project and the key elements thereof. A review of their unit prices indicates a distribution like other bidders. The spread between the low and second low came down to Carstensen's estimated efficiency, rate of pipe installation, and favorable terms from its steel pipe supplier, Northwest Pipe. The approximate $7.5 million difference between the low and the second low is captured primarily in the difference in the installed price of the 72-inch transmission pipeline, Bid Item No. 2 in favor of Carstensen, and offset by Carstensen's higher unit prices for gravel road restoration and asphalt road overlay, Bid Items No. 18 and 19.

EVALUATION OF THE APPARENT LOW BIDDER'S QUALIFICATIONS

In 2023, Garrison Diversion undertook a general contractor prequalification process, where seven general contractors were prequalified for its projects, including Carstensen. Hence, a general contractor qualification submittal was not required of Carstensen for the Bid. In addition, Carstensen is currently the contractor performing the construction work on Contract 5D and is performing the work satisfactorily and on schedule.

SUMMARY AND RECOMMENDATION

Given the Engineer's review of the bids, the prequalification of Carstensen as a pipeline general contractor for the Red River Valley Water Supply Project, and their current work on Contract 5D, Black & Veatch recommends Garrison Diversion award the Project to the low bidder, Carstensen Contracting, Inc. for its Total Bid of the Base Bid plus Bid Alternatives 1 and 2 in the amount of $52,528,500. The Total of the Base Bid plus the two alternatives is within the Project's biennium budget allocation and below the Engineer's cost opinion. Should you concur with Black & Veatch's recommendation, a Notice of Award will be prepared and forwarded to Garrison Diversion for signature. In addition, conformed copies of the Contract Documents, including the Agreement and required bonds, will be prepared, and forwarded to Carstensen for execution.

If you have any questions concerning this Recommendation of Award for the subject project, please contact us.

Sincerely,
BLACK & VEATCH CORPORATION

Kurt A. Ronnekamp
Program Manager

Enclosures

cc: Ms. Merri Mooridian, GDCD
Mr. Kip Kovar, GDCD
Mr. Paul Boersma, BV
File

GARRISON DIVERSION
CONSERVANCY DISTRICT
P.O. BOX 140
CARRINGTON, N.D. 58421
(701) 652-3194
gdcd@gdcd.org
www.garrisondiversion.org

BY EMAIL

October 23, 2024

Joe Hall, Area Manager
Bureau of Reclamation
304 East Boardway Ave.
Bismarck, ND 58501

Dear Joe:

Garrison Diversion is requesting written confirmation that the Eastern North Dakota Alternate Water Supply (ENDAWS) Project is eligible for federal power through the Western Area Power Administration (WAPA). The ENDAWS facilities are eligible for funding from the Municipal, Rural and Industrial (MR&I) Water Supply Program. These facilities include but are not limited to the biota water treatment plant, pump stations and break tanks near McClusky, North Dakota.

It is our understanding that Reclamation is to determine eligibility of the ENDAWS Project to receive federal power. If you have questions or need additional information, please contact Garrison Diversion.

Sincerely,

Duane DeKrey
General Manager

DD/las

United States Department of the Interior

BUREAU OF RECLAMATION
2021 4th Avenue North
Billings, MT 59101

IN REPLY REFER TO:

MB-4100
2.2.4.22

Mr. Duane DeKrey, General Manager
Garrison Diversion Conservancy District
PO Box 140
Carrington, ND 58241-0140

Subject: Eastern North Dakota Alternate Water Supply (ENDAWS) Project Eligibility for Federal Power, Garrison Diversion Unit, Pick-Sloan Missouri Basin Program, North Dakota

Dear Mr. DeKrey:

Reclamation is in receipt of your letter dated October 23, 2024, requesting written confirmation of the eligibility for ENDAWS to receive Federal power. This letter is to confirm ENDAWS is eligible to receive Federal power pursuant to the Dakota Water Resource Act (DWRA) of 2000, as amended, particularly, but not limited to, Sections 6 and 7 of the DWRA. The DWRA authorizes power from the Pick-Sloan Missouri Basin Program for operation of municipal, rural, and industrial systems constructed with funds authorized by Section 7 of the DWRA.

If you have any questions, please contact Mr. Nathan Kraft, at (701) 221-1254 or nkraft@usbr.gov. If you are deaf, hard of hearing, or have a speech disability, please dial 7-1-1 to access telecommunications relay services.

Sincerely,

BRENT ESPLIN

Digitally signed by BRENT ESPLIN
Date: 2024.11.19 09:00:14 -07'00'

Brent C Esplin
Regional Director
Bureau of Reclamation

2023 to 2025 Biennium Work Plan

($246 mil Total Funding: $4.5M Federal; $180M State; $61.5M Local Users)

November 14, 2024

No.	Scope of Work	Feature	Date Task Orders Auth	Note	2023-25 Bien ENDAWS Project Development Budget (mil $)			2023-25 Biennium RRVWSP Project Development Budget (mil $)			2023-25 Biennium RRVWSP Project Constr Budget (mil $)[1,2,3]		
					Total	Fed/Sta 75%	Local 25%	Total	State 75%	Local 25%	Total	State 75%	Local 25%
1.	**Garrison Diversion Conservancy District Budget** Scope: Account for all costs for which Garrison Diversion is responsible not included in other Task Orders listed here. Need: Budget allocation for GDCD direct costs associated with the Red River Valley Water Supply Project.	Garrison Diversion's costs for the RRVWSP, including internal mgmt, admin, legal, communication, insurance advisory, misc., etc.		GDCD				$ 1.00	$ 0.75	$ 0.25			
2.	**Property, Easements, and Crop Damage Payments[4]** Scope: Costs to obtain easements and acquire property for associated facilities. Crop damage payments to landowners. Need: Secure land for installing future pipeline segments staying years ahead of pipeline design/construction needs. Purchase property on which to build all remaining facilities so property will be in hand before final design begins.	Acquire easements in Sheridan and Wells County for 32-mi pipeline. Pay bonus payment to all easement holders. Acquire property for Biota WTP, Hydraulic Break Tanks, McClusky Canal Intake, and James River sites. Pay for crop damage.		RRVWSP ENDAWS ENDAWS Facilities Crp Dmg	$ 0.49 $ 2.00	$ 0.37 $ 1.50	$ 0.12 $ 0.50	$ 2.21 $ 0.78	$ 1.66 $ 0.59	$ 0.55 $ 0.20			
3.	**Transmission Pipeline East Contract 5C** Scope: Pipeline installation, including construction phase engineering services by Engineer. Need: Continue progress of transmission pipeline installation for completion of RRVWSP by the target end date.	8± mi of 72" pl, including two 96" tunnels. Pipeline extends eastward from Contract 5B NE of Bordulac to a termination point just east of the James River.	Jul-23 Nov-23	Prof Srvs Const, 2026 Fin							$ 5.64 $ 76.66	$ 4.23 $ 57.50	$ 1.41 $ 19.17
4.	**Transmission Pipeline East Contract 5D** Scope: Pipeline installation, including construction phase engineering services by Engineer. Need: Continue progress of transmission pipeline installation for completion of RRVWSP by the target end date.	10± miles of 72" pl, including several 96" tunnels. Pipeline section extends westward from Contract 5A south of Carrington to a termination point south of Sykeston.	Jul-23 Oct-23	Prof Srvs Const, 2026 Fin							$ 5.47 $ 59.38	$ 4.10 $ 44.53	$ 1.37 $ 14.84
5.	**RRV Transmission Pipeline Contract 6A** Scope: Pipeline installation, including construction phase engineering services by Engineer. Need: Continue progress of transmission pipeline installation for completion of RRVWSP by the target end date.	*6± mi of 72" pl, including several 96" tunnels. Pipeline section extends eastward from Contract 5C just east of the James River to a termination point southwest of Glenfield.*	Jul-23 Dec-24	Prof Srvs Const, 2027 Fin							$ 5.47 $ 52.53	$ 4.10 $ 39.40	$ 1.37 $ 13.13
6.	**ENDAWS Transmission Pipeline Contract 3** Scope: Final design (30% docs to biddable plans and specs) and bidding assistance. Need: Continue progress of transmission pipeline installation for completion of RRVWSP/ENDAWS by the target end date.	11± mi of 72" pipeline, including 96" tunnels. Pipeline section extends west from the west end of Contract 4 to the Sheridan Wells County line.	Aug-23	ENDAWS	$ 3.06	$ 2.29	$ 0.76						

Annex VI
24-73

2023 to 2025 Biennium Work Plan

($246 mil Total Funding: $4.5M Federal; $180M State; $61.5M Local Users)

November 14, 2024

No.	Scope of Work	Feature	Date Task Orders Auth	Note	2023-25 Bien ENDAWS Project Development Budget (mil $)			2023-25 Biennium RRVWSP Project Development Budget (mil $)			2023-25 Biennium RRVWSP Project Constr Budget (mil $)[1,2,3]		
					Total	Fed/Sta 75%	Local 25%	Total	State 75%	Local 25%	Total	State 75%	Local 25%
7.	Transmission Pipeline East Contracts 4A and 4B Scope: Final design (30% docs to biddable plans and specs) and bidding assistance. Need: Have the next pipeline section bid-ready when State funding becomes available (likely the 2025-27 biennium).	27± mi of 72" pl, including several 96" tunnels. Pipeline extends from the west end of Contract 5D south of Sykeston west to a termination point NE of Hurdsfield at HBTs.	Feb-24	Prof Srvs				$ 7.18	$ 5.39	$ 1.80			
8.	RRV Transmission Pipeline Contract 7 Scope: Final design (30% docs to biddable plans and specs) and bidding assistance. Need: Have the next pipeline section bid-ready when State funding becomes available (likely the 2025-27 biennium).	14± mi of 72" pipeline, including several 96" tunnels. Pipeline extends from the east end of Contract 6B to the outfall on the Sheyenne River southeast of Cooperstown.	Aug-23	Prof Srvs				$ 2.93	$ 2.19	$ 0.73			
9.	McClusky Canal Intake and Pumping Station Scope: Conceptual and preliminary design of an intake and pumping station at the McClusky Canal. Need: Preliminary designs are necessary so site acquisition can begin and final design can commence when land is secured.	Siting; passive intake screens, pumping station similar to MRI, and utility extension design can begin for new facility to be located near McClusky, ND.	Feb-24	Prof Srvs	$ 0.75	$ 0.56	$ 0.19						
10.	Biota Water Treatment Plant and Main Pumping Station Scope: Conceptual and preliminary designs for a Biota WTP and Main Pumping Station, including hydraulic surge facility. Need: Complete design to a point where land acquisition can begin and project can move into final design next biennium.	165-cfs biota WTP, with chlorine and UV disinfection to meet NDPDES permit and FEIS requirements per Reclamation. Chloramines for residual disinfectant in pipeline.	Feb-24	Prof Srvs	$ 2.87	$ 2.15	$ 0.72						
11.	Hydraulic Break Tanks Scope: Preliminary design of above-ground tanks and associated facilities at or near the continental divide. Need: Complete design to a point where land acquisition can begin and project can move into final design next biennium.	Two 5 MG above-ground storage tanks and accessories, site piping and valves, monitoring, and utility extensions necessary for a new greenfield site.	Feb-24	Prof Srvs	$ 0.37	$ 0.28	$ 0.09						
12.	PMIS Annual Licenses & Continued Maint/Upgrades Scope: Annual software license renewal for expanded team and consulting support for training and configuration services. Need: Create greater efficiency and documentation for voluminous amount of construction related documents.	Vendor fees (e-Builder & DocuSign) for licenses of expanded team and consulting support for training of contractors/ subcontractors and workflow/report additions and modifications.	Feb-24	Vend & Prof Srvs				$ 0.50	$ 0.37	$ 0.12			
13.	Prg Mgmt to Support Larger Spend and Expanded Team Scope: Overall program management, planning, budgeting, scheduling, and other support for Garrison Diversion. Need: Consulting services of a broad programmatic nature not included under project-specific design or construction TOs.	Overall planning, management, administration, scheduling, budgeting, coordination, meeting preparation/attendance, regulatory interface, reporting, etc.	Aug-23	Prof Srvs				$ 0.65	$ 0.49	$ 0.16			

2023 to 2025 Biennium Work Plan

($246 mil Total Funding: $4.5M Federal; $180M State; $61.5M Local Users)

November 14, 2024

No.	Scope of Work	Feature	Date Task Orders Auth	Note	2023-25 Bien ENDAWS Project Development Budget (mil $)			2023-25 Biennium RRVWSP Project Development Budget (mil $)			2023-25 Biennium RRVWSP Project Constr Budget (mil $)[1,2,3]		
					Total	Fed/Sta 75%	Local 25%	Total	State 75%	Local 25%	Total	State 75%	Local 25%
14.	**Outreach, Plng, and Design to Secure User Commitments** Scope: User briefings and necessary support, including conceptual designs, to secure project commitments. Need: Define pipeline extensions to identify for users how and a what cost water will be delivered to their communities.	Size pipelines, pumping stations, channels, storage, etc. and other necessary infrastructure to deliver raw water to end users. Update capex to reflect current market.	Aug-23	Prof Srvs				$ 1.69	$ 1.27	$ 0.42			
15.	**Operational Planning and Asset Management Phase 3** Scope: System modeling, evaluation, planning, and report development documenting results/findings/outcomes. Need: Finalize Garrison Diversion, State Water Commission, and USACE roles for system operation.	Refine details of diversions to/from Lake Ashtabula. Finalize stakeholder roles and responsibilities as it relates to system operation.	Feb-24	Prof Srvs				$ 0.46	$ 0.35	$ 0.12			
16.	**Financial Planning Support** Scope: Continue to refine the financial model and provide scenarios as required to support users and the program. Need: Accurate water bill estimates and affordability for customers are necessary to gain approval from users.	Update financial models; address state loan and financing program changes; end user funding, financing, and cost-share analyses; continued funding and finance outreach.	Aug-23	Prof Srvs				$ 0.59	$ 0.44	$ 0.15			
17.	**Additional End User Outreach** Scope: Branch pipeline conceptual designs and other consulting assistance to potential end users. Need: Accurate water bill estimates and affordability for customers are necessary to gain approval from users.	Conceptual designs and other consulting support to support end user understanding of core pipeline and applicable branch pipeline CapEx necessary to secure MOU signatures.	Jan-25	Prof Srvs				$ 0.50	$ 0.38	$ 0.13			
18.	**ENDAWS BWTP Site Dev, Grading, and Tunnel Shaft** Scope: Final design and bidding assistance with partial execution of the construction work by GDCD. Need: Provide site access for construction and ready site for substantial facilities construction beginning in 2028.	Access roads to proposed site of new Biota WTP, mass grading to prepare for structure construction, and temporary excavation support system for intake pumping station wetwell.	Jul-25	Prof Srvs	$ 1.40	$ 1.05	$ 0.35						
19.	**ENDAWS Biota Water Treatment Plant Piloting** Scope: water treatment piloting of preliminarily selected treatment processes with a 3-month duration. Need: Process demonstration necessary to make sure water quality treatment objectives can be met with selections.	Pilot scale treatment train consisting of preliminary treatment, UV disinfection, chlorination, and residual chloramine treatment.	Apr-25	Prof Srvs	$ 0.90	$ 0.68	$ 0.23						
20.	**ENDAWS BWTP Geotechnical Investigation Phase 2** Scope: Additional borings and soil sampling expanding upon the initial program implemented during preliminary design. Need: More data needed to properly design foundations, structures, pavement, etc. for the new facilities.	Geotechnical borings; soil charicterization, sampling and testing; and reporting to fully inform design team and contractors of on-site insitu soil charactersitics.	Jul-25	Prof Srvs	$ 0.15	$ 0.11	$ 0.04						

18 18

Annex VI
24-75

2023 to 2025 Biennium Work Plan

($246 mil Total Funding: $4.5M Federal; $180M State; $61.5M Local Users)

November 14, 2024

No.	Scope of Work	Feature	Date Task Orders Auth	Note	2023-25 Bien ENDAWS Project Development Budget (mil $)			2023-25 Biennium RRVWSP Project Development Budget (mil $)			2023-25 Biennium RRVWSP Project Constr Budget (mil $)[1,2,3]		
					Total	Fed/Sta 75%	Local 25%	Total	State 75%	Local 25%	Total	State 75%	Local 25%
21.	**ENDAWS BWTP Electrical Service Extension Study** Scope: Study and report of electrical service extension to serve the new biota water Treatment plant Need: There have been no recent studies of electrical service infrastructure necessary at the McClusky facilities site.	Evaluate substation needs and routing of 15 to 25 miles of high-voltate power lines to serve the new BWTP. Identify permitting and easement requirements.	Apr-25	Prof Srvs	$ 0.45	$ 0.34	$ 0.11						
20.	**ENDAWS TM Contract 2 Final Design and Bidding Asst** Scope: Final design (30% docs to biddable plans and specs) and bidding assistance. Need: Have next pipeline section bid-ready so when Federal funding is secured/allocated construction can proceed.	11± mi of 72" pipeline, including 96" diameter tunnels. Pipeline extends from ND Highway 14 east to the connection point with Contract 3.	Jul-25	Prof Srvs	$ 3.10	$ 2.33	$ 0.78						
19.	***Contingency*** *Scope: A budget reserve for task order additions to professional services, construction, legal, real estate, etc. TOs.* *Need: Address and pay for changes that are sure to occur.*	*Budget flexibility to adapt to work plan changes and to pay for construction change orders typically running from 3 to 5% of original construction costs at bid time.*	*N/A*	*GDCD*	*$ 0.25*	*$ 0.19*	*$ 0.06*	*$ 0.25*	*$ 0.19*	*$ 0.06*	*$ 6.32*	*$ 4.74*	*$ 1.58*
TOTAL PROGRAM BUDGET					**$ 15.79**	**$ 11.84**	**$ 3.95**	**$ 18.75**	**$ 14.06**	**$ 4.69**	**$ 211.46**	**$ 158.60**	**$ 52.87**

Notes:

1. Construction costs include management, engineering services during construction, inspection, field quality control, and construction.
2. Projects indicated for construction funding in a given biennium will be shovel ready for construction at the start of the biennium.
3. Future capital costs are escalated to an anticipated midpoint of construction per Finance Team rates of 7, 6, 5, 5, and 3.5 percent per annum thereafter starting in 2022 with an anticipated 2032 finish. All future RRVWSP construction projects and costs are not shown.
4. Land services costs are the amount likely to be paid for real estate, easements, including bonus payments, crop damage, and field obstructions. Estimates include pipeline easements required for the ENDAWS east/west pipeline and remaining easements from the beginning of the Contract 4 transmission main to the Sheyenne River Outfall, with most located in Wells County.
5. Items appearing in blue bold are progressing with task orders and contracts issued to the engineering team and contractors, respectively. Items appearing in blue italics have been updated to reflect adjustments made for actual amounts contracted. Items shown in black text are pending. Items shown in green are new and were added with the $6M MR&I funding in October 2024. Items highlighted in yellow have changed from the previous version of the Work Plan.

Annex VI
24-76

CHANGE ORDER

Change Order No. 6

DATE OF ISSUANCE April 25, 2025 EFFECTIVE DATE April 25, 2025

Owner: Garrison Diversion Conservancy District
Contractor: Garney Companies
Project: Red River Valley Water Supply Project, Transmission Pipeline East
Owner's Contract No.: 5B
Owner's Task Order No.: 5532

The Contract is modified as follows upon execution of this Change Order:

Change Order Requests (CORs) Description:

1. COR21: Road Maintenance July 2024	$13,016.71
2. COR25: Road Maintenance Aug 2024	$12,868.35
3. COR27: Road Maintenance Sept 2024	$51,755.78
4. COR30: Road Maintenance Oct 2024	$19,780.96
5. COR33: Road Maintenance Nov 2024	$7,841.93
Subtotal	*$105,263.73*
6. COR20: Topsoil Maintenance July 2024	$13,068.68
7. COR23: Topsoil Maintenance Aug 2024	$3,095.15
Subtotal	*$16,163.83*
8. COR19: Offsite Dewatering Disch July '24	$133,003.29
9. COR22: Offsite Dewatering Disch Aug '24	$115,992.76
10. COR28: Offsite Dewatering Disch Sept '24	$115,056.42
11. COR31: Offsite Dewatering Disch Oct '24	$180,560.31
12. COR34: Offsite Dewatering Disch Nov '24	$71,989.42
13. COR36: Offsite Dewatering Disch Dec '24	$59,997.57
Subtotal	$676,599.77
14. COR24: Zink Drain Tile Replacement	$120,001.75
GRAND TOTAL	**$918,029.08**

Attachments: Garney COR Nos. 19 to 25, inclusive, 27, 28, 30, 31, 33, 34, and 36.

CHANGE IN CONTRACT PRICE:

Original Contract Price:

$45,961,700.00

Increase from previously approved Change Orders No. 1 to 5:

$1,657,639.79

Contract Price prior to this Change Order:

$47,619,339.79

Increase of this Change Order:

$918,029.08

Contract Price incorporating this Change Order:

$48,537,368.87
(5.6% Increase Over Original Contract Price)

CHANGE IN CONTRACT TIMES:

Original Contract Times:

Substantial Completion: September 30, 2023
Ready for final payment: November 29, 2023
(days or dates)

Increase from previously approved Change Orders No. 1 to No. 5:

Substantial Completion: 97
Ready for final payment: 97
(days)

Contract Times prior to this Change Order:

Substantial Completion: January 5, 2024
Ready for final payment: March 5, 2024
(days or dates)

Increase of this Change Order:

Substantial Completion: 25
Ready for final payment: 25
(days)

Contract Times with all approved Change Orders:

Substantial Completion: January 30, 2024
Ready for final payment: March 30, 2024
(days or dates)

ACCEPTED:

By: _____
Owner (Authorized Signature)
Printed: Duane DeKrey
Title: General Manager
Date: _____

ACCEPTED:

By: _____
Contractor (Authorized Signature)
Printed: _____
Title _____
Date: _____

CHANGE ORDER

Change Order No. 1

DATE OF ISSUANCE April 25, 2025 EFFECTIVE DATE April 25, 2025

Owner: Garrison Diversion Conservancy District
Contractor: Oscar Renda Contracting, Inc.
Project: Red River Valley Water Supply Project, Transmission Pipeline East
Owner's Contract No.: 5C
Owner's Task Order No.: 5533

The Contract is modified as follows upon execution of this Change Order:

Change Description: This change order will move allowance funds from Bid Item 30 – Artificial Trench Foundation (Allowance), which is underrunning estimated quantities included in the Contract Documents (1% used to date with job about 45% complete), to Bid Item 24 – Road Maintenance (Allowance), which is overrunning estimates included in the Contract Documents (92% used to date with job about 45% complete).

Bid Item 24 Increase – Road Maintenance (Allowance)	$440,000.00
Bid Item 30 Decrease – Artificial Trench Foundation (Allowance)	($440,000.00)
Net Change in Contract Price	$0.00

Attachments: Work Change Directive No. 1.

CHANGE IN CONTRACT PRICE:

Original Contract Price:

$76,663,355.00

No previously approved Change Orders:

$0.00

Contract Price prior to this Change Order:

$76,663,355.00

No change this Change Order:

$0.00

Contract Price incorporating this Change Order:

$76,663,355.00
(0.0% Increase Over Original Contract Price)

CHANGE IN CONTRACT TIMES:

Original Contract Times:

Substantial Completion: May 29, 2026
Ready for final payment: July 31, 2026
(days or dates)

No previously approved Change Orders:

Substantial Completion: 0
Ready for final payment: 0
(days)

Contract Times prior to this Change Order:

Substantial Completion: May 29, 2026
Ready for final payment: July 31, 2026
(days or dates)

No change this Change Order:

Substantial Completion: 0
Ready for final payment: 0
(days)

Contract Times with all approved Change Orders:

Substantial Completion: May 29, 2026
Ready for final payment: July 31, 2026
(days or dates)

ACCEPTED:

By: _____
Owner (Authorized Signature)
Printed: Duane DeKrey
Title: General Manager
Date: _____

ACCEPTED:

By: _____
Contractor (Authorized Signature)
Printed: _____
Title _____
Date: _____

05.2 Work Change Directive

DATE OF ISSUANCE: 10.22.2024 06:29PM EFFECTIVE DATE: 10.01.2024

Owner: Garrison Diversion Conservancy District
Contractor: Oscar Renda Contracting, Inc
Contract: Project: Transmission Pipeline East Contract 5C
Owner's Task Order No.: 5533

The Contractor is directed to proceed promptly with the following:

Description:

Bid Item 24 – Road Maintenance (Allowance) in the amount of $200,000 will be exceeded for road maintenance and repair work directed by Garrison Diversion and/or Black & Veatch. The funds available under this allowance are presently more than 80% spent. Additional funds are therefore necessary for continued road maintenance and repair activities. This WCD directs an increase of the Road Maintenance Allowance by $440,000 and a reduction of Bid Item 30 – Artificial Trench Foundation (Allowance) by $(440,000). The quantity under Bid Item 30 shall be reduced from 16,000 cubic yards to 12,000 cubic yards thereby reducing the extended cost the $(440,000) amount. Less than 1% of Bid Item 30 has been used with nearly 25% of the pipe has already been installed. Black & Veatch expects the actual quantity of rock used for trench bottom stabilization to be a fraction of the allowance quantity.

Purpose for Work Change Directive:
Directive to proceed promptly with the Work described herein, prior to agreeing to changes in Contract Price and Contract Times and other stipulations as so included herein, is issued due to:

Non-Agreement on pricing of proposed change.
X Necessity to proceed for schedule or other Project reasons.

Estimated Change in Contract Price and Contract Times (non-binding, preliminary)
*Estimated increase or decrease in contract pricing:

- Bid Item 24 Increase: $440,000.00
- Bid Item 30 Decrease: $(440,000.00)

Estimated increase or decrease in contract time:

- Substantial Completion: 0 Days
- Ready for final payment: 0 Days

*If the change involves an increase above the amount noted above, the estimated amount is not to be exceeded without further authorization.

Cost of the Work
Define if other

Supporting Documentation:

AUTHORIZED BY:
Docusigned by:
kip kovar
DC2F044B3B184FF...

RRVWSP Work Plan Update
March 6, 2025

CONSTRUCTION

Pipeline Construction

Contract 5B

The original pipe delivery of June 15, 2021, was delayed due to a surface blemish in the steel coil.

In year one (2022), 7,761 feet of pipe was installed out of the total nine miles. High groundwater slowed the pipe installation progress.

In the second year (2023), 21,120 feet of pipe was installed.

In the third year (2024), using two pipe crews, approximately 18,500 feet has been installed, which completes the pipe installation.

To date, $37,493,645.10 has been paid on the original contract amount of $45,961,700.00. Change Orders No. 1, 2, 3 and 4 have been approved, leaving the current contract price at $46,899,055.88.

Contract 5C

The contract price is $76,663,355.00 for 8 miles of pipe awarded to Oscar Renda Contracting.

Oscar Renda was not meeting their install targets so a second pipe crew was sent out on July 10. To date, 19,402 feet has been installed. The Kelly Creek tunnel is complete.

To date, $37,281,590.59 has been paid on the original contract amount of $76,663,355.00.

Stripping Topsoil

Trench Box w/ Dewatering Pipes

Contract 5D

The contract price is $61,677,275.00 for 10 miles of pipe awarded to Carstensen Contracting. To date, the contractor has installed 22,725 feet with one pipe crew.

To date, $28,976,412.48 has been paid on the original contract amount of $61,677,275.00. Change Order No. 1 has been approved, leaving the current contract price at $59,375,495.00.

Stored Pipe on Site

Placing Dewatering Pipe

DESIGN

The design team is also working with Reclamation on the location for the BWTP and pump stations.

Bid opening on Contract 6A was held on November 7, 2024. Final design efforts have started on Contracts 7 and 4. Additional geotechnical data is complete.

RRVWSP Awarded Contracts				
No.	**Contract Name**	**Contractor**	**Bid Price**	**Final Contract Price**
1	Missouri River Intake Wet Well & Site Development	ICS	$4,989,405.88	$4,721,446.47
1	Sheyenne River Outlet Discharge Structure & Site Development	Industrial Builders	$1,516,955.00	$1,521,884.00
2	Missouri River Intake, Screen Structure & Tunnel	Michels	$18,896,900.00	$19,444,156.60
5A	Transmission Pipeline East (TPE)	Garney	$8,366,201.00	$8,393,396.44
5B	TPE Carrington to Bordulac	Garney	$45,961,700.00	
5D	TPE Sykeston to Carrington	Carstensen	$61,677,275.00	
5C	TPE Bordulac to James River	Oscar Renda	$76,663,355.00	
6A	TPE James River to McKinnon Township	Carstensen	$52,528,500.00	

ENDAWS Task Order 2150 – McClusky Canal Hydraulic and Water Quality Investigation

Task Order Effective Date: April 1, 2025

TASK ORDER EXECUTIVE SUMMARY

REQUEST

Consideration and approval of a task order in the amount of $443,000 for study and conceptual design associated with the McClusky Canal as part of the Eastern North Dakota Alternate Water Supply (ENDAWS) project.

NEED AND BENEFIT

Previous task orders have addressed the operational planning for the ENDAWS/RRVWSP project, including the biota water treatment plant, Lake Ashtabula, other reservoirs, and coordination with the Department of Water Resources, and the U.S. Army Corp of Engineers. To date, there has been no operational planning with the McClusky Canal or cost developed for operating the Canal, even though the costs are expected to be minor compared to the rest of the project. Furthermore, there are known hydraulic limitations to the McClusky Canal delivering the required flows to support ENDAWS, which are not considered significant, but need to be addressed. The benefit of this task order will be to develop conceptual designs to address hydraulic limitations, an overall operating plan for the McClusky Canal, and a cost for operations that will be integrated with the overall project operating plan and costs.

TASK ORDER SUMMARY

The services to be provided by the engineering team are fully described in the attached Task Order. The following summarizes each of the major tasks.

Basic Services:

	Fee
1) Task Order Management and Administration	$58,432
2) Special Project and Third-Party Meetings	$22,822
3) Data Collection	$59,702
4) Canal Improvements	$95,887
5) Draft Operating Plan	$49,665
6) Canal Water Quality Improvements	$93,927
7) GIS ArcMap to ArcGIS Pro Conversion	$62,575
Totals	$443,000

Special Services: There are no unique or specialized services required under this Task Order.

PROJECT OVERVIEW

This task order authorizes Engineer and its' Consultants to address the following challenges with the McClusky Canal as currently configured.

1. **The first challenge is water conveyance.** Currently, the Canal cannot convey the approximately 470 cubic feet per second (cfs) of flow necessary to supply all existing canal withdrawals and the future ENDAWS withdrawal as there are several hydraulic limitations that limit water flow in the Canal. This task will evaluate canal hydraulics, ice impacts to canal hydraulics, hydraulic limitations in the Canal, and develop feasibility level designs and capital costs for addressing the hydraulic limitations. The feasibility level design will be used to determine the best contractual method by which Garrison Diversion and/or the U.S. Department of the Interior, Bureau of Reclamation (Reclamation) can complete the hydraulic improvements in the next three years.

2. **The second challenge is the lack of a comprehensive canal operating plan**. Currently, a comprehensive, integrated operating plan for the Canal infrastructure and water supply assets does not exist. This task will assess and develop recommendations regarding Canal operations during ice conditions, develop a draft operating plan, and prepare recommendations for Canal operating improvements so that Garrison Diversion has the operational and monitoring control needed for continuous delivery of water in the Canal to the ENDAWS/RRVWSP water intake.

3. **The third challenge is water quality**. The water quality in the Canal is currently of lower quality than Lake Sakakawea and Lake Audubon. Historic studies have been completed by the Reclamation on canal freshening, which will be used as a reference during this study. This task will focus on operations and use of the Painted Woods Outlet, existing and planned Canal withdrawals, and the Snake Creek pumping plant to improve water quality in the Canal. Recommendations will be developed to identify means by which the McClusky Canal water quality can be improved prior to the ENDAWS/RRVWSP startup. These recommendations are expected to build on the recommendations presented in the Draft Operational Plan for the RRVWSP prepared in 2010 for Garrison Diversion by Black & Veatch and AE2S.

4. **Finally, this Task Order includes the migration of ArcGIS Map to ArcGIS Pro**. ArcGIS Map had a customized GDCD GIS tool developed in a programming language called VB.Net. The functionality of the GDCD GIS Tool will be transitioned to a cloud reporting solutions web map application and ArcGIS Pro desktop application.

Black & Veatch Corporation
Professional Services for Red River Valley Water Supply Project

Under General Agreement dated January 17, 2008 and Subsequent Amendment dated April 14, 2024.

ENDAWS Task Order 2150 – McClusky Canal Hydraulic and Water Quality Investigation

Effective Date – April 1, 2025

Content of this Task Order is as follows:

I. PROJECT BACKGROUND

The McClusky Canal is the preferred intake for the RRVWSP/ENDAWS. As such it needs to reliably convey the required water flows at a preferred water quality. The Canal was studied extensively in the 1980s but there has been little study since that time and there is no overall operational plan for the Canal.

II. TASK ORDER OBJECTIVES

This task order authorizes Engineer and its' Subconsultants to address the following challenges with the McClusky Canal as currently configured.

1. The first challenge is water conveyance. Currently, the Canal cannot convey the approximately 470 cubic feet per second (cfs) of flow necessary to supply all existing canal withdrawals and the future ENDAWS withdrawal as there are several hydraulic limitations that limit water flow in the Canal. This task will evaluate canal hydraulics, ice impacts to canal hydraulics, hydraulic limitations in the Canal, and develop feasibility level designs and capital costs for addressing the hydraulic limitations. The feasibility level design will be used to determine the best contractual method by which Garrison Diversion and/or the Bureau of Reclamation can complete the hydraulic improvements in the next three years.

2. The second challenge is the lack of a comprehensive canal operating plan. Currently, a comprehensive, integrated operating plan for the Canal infrastructure and water supply assets does not exist. This task will assess and develop recommendations regarding canal operations during ice conditions, develop a draft operating plan, and prepare recommendations for Canal operating improvements so that Garrison Diversion has the operational and monitoring control needed for continuous delivery of water in the Canal to the ENDAWS/RRVWSP water intake.

3. The third challenge is water quality. The water quality in the Canal is currently of lower quality than Lake Sakakawea and Lake Audubon. The Bureau of Reclamation has completed historic studies on canal freshening which will be used as a reference during this study. This task will focus on operations and use of the Painted Woods Outlet, existing and planned canal withdrawals, and the Snake Creek pumping plant to improve water quality in the Canal. Recommendations will be developed to identify means by which the McClusky Canal water quality can be improved prior to the ENDAWS/RRVWSP startup. These recommendations are expected to build on the recommendations presented in the Draft Operational Plan for the RRVWSP prepared for Garrison Diversion by Black & Veatch and AE2S in 2010.

4. Finally, this task order also includes the migration of ArcGIS Map to ArcGIS Pro. ArcGIS Map had a customized GDCD GIS tool developed in a programming language called VB.Net. The functionality of the GDCD GIS Tool will be transitioned to a cloud reporting solutions web map application and ArcGIS Pro desktop application.

III. GENERAL REQUIREMENTS

1. Under this Task Order, Engineer will provide services in accordance with the Standard Form of Agreement between Owner and Engineer for Professional Services dated January 17, 2008 (Agreement).

2. General Description of Activities. The Basic Services to be performed by Engineer consist of professional services associated with improving water flow through the McClusky Canal, improving water quality, and develop an initial McClusky Canal Operating Plan.

3. Work outside Basic and Special Services. Engineer agrees to provide the Basic Services and Special Services identified herein. Work not specifically discussed herein as part of Basic Services or Special Services is considered Additional Services. Additional Services will only be performed with proper separate authorization such as an amendment to this Task Order or a new separate Task Order.

4. Document Production Standards and Procedures. Engineer will prepare Geotechnical Reports, GDRs, and GBR using Engineer's standard report formatting, drawing production standards, and AutoCAD drafting standards.

IV. BASIC SERVICES

Basic Services of this Task Order are organized into major tasks as follows:

- Task 1 – Task Order Management and Administration
- Task 2 – Special Project and Third-Party Meetings
- Task 3 – Data Collection

- Task 4 – Canal Improvements
- Task 5 – Draft Operating Plan
- Task 6 – Canal Water Quality Improvements
- Task 7 - GIS ArcMap to ArcGIS Pro Conversion

1. **Task 1 - Task Order Management and Administration**

This task includes overall management and development of a Project Management Plan specific to the Work. The overall objective of this task is to keep the Task Order on schedule and within budget.

A. Project Management. Engineer will provide management services necessary for execution of the Task Order, including efforts required for proper resource allocation, schedule development and monitoring, budget review and control, Owner coordination, Subconsultant coordination and other standard and customary activities required for timely completion of the Work.

B. Administration. Perform general administrative duties associated with the Task Order, including general correspondence, day-to-day contact and coordination, administration, and monthly invoicing in a form that is acceptable to the Owner.

2. **Task 2 - Special Project and Third-Party Meetings**

The overall objective of this task is to keep stakeholders apprised of Task Order status and to provide a forum for stakeholder input. Engineer will prepare an agenda and provide meeting notes documenting discussions and action items. The following meetings are anticipated:

A. Task Order Initiation Meeting. Engineer will conduct a Task Order Initiation Conference Call with the Owner and Subconsultants to review the overall approach to the work (virtual).

B. Third Party Meetings. Up to three meetings (virtual). Potentially LAWA, USACE, and DWR.

C. Bureau of Reclamation Meetings. Three coordination meetings (virtual).

3. **Task 3 – Data Collection**

A. Field Data Collection

i. Survey of focus structures, relevant irrigation intakes, and chain of lakes boat ramps, if deemed necessary.

(a) Assumption: Six canal structures, including the Painted Woods Outlet, five irrigation intakes, and two boat ramps.

ii. Local canal bathymetry to assess sedimentation relative to previously obtained data. This data will be used to identify the need for more extensive bathymetric survey of the canal.

(a) Assumption: Approximately forty cross sections at up to ten unique locations along the canal.

B. Records Review

i. Literature and as-built search and review.

ii. GDCD structures and irrigation intake data review.

iii. Coordinate with Bureau of Reclamation on similar canal operation plan examples and review.

iv. Request relevant Snake Creek Pumping Plant and McClusky Canal operating orders including irrigator, Canadian, ND Game and Fish, US Fish and Wildlife, and Chain of Lakes obligations.

v. Request and review BV/Burian and Associates ENDAWS/RRVWS operating plan.

vi. Review the following relevant BV ENDAWS TO 3210 PDR chapters:

(a) "3" – Regulatory Considerations
(b) "4" - Source Water Quality
(c) "5" – Source Water Availability
(d) "6" – Capacity Requirements
(e) "7" – Hydraulics
(f) "23" – System Operations
(g) "24" – Implementation Plan

C. Site Visits

i. One site visit to canal with two staff from AE2S. Assumed to be a day trip.

ii. Virtual canal tour for Burian and Associates.

4. **Task 4 – Canal Improvements**

A. Meetings

i. One progress meeting with Owner (virtual).

ii. Draft deliverable review meeting with Owner (virtual).

iii. Up to three design coordination meetings with BV (virtual).

B. Alternatives Analysis to Mitigate Flow Restrictions

i. Perform updated HEC-RAS modeling using normal operating conditions.

ii. Assess canal flow restrictions during normal operating conditions and ENDAWS TO 3210 PDR design flows.

iii. In HEC-RAS, assess hydraulic sensitivity to canal sediment accumulation.

iv. Development of up to three improvement alternative scenarios, or up to two improvement alternatives for each identified flow restriction in the canal to achieve flows identified in ENDAWS TO 3210 PDR.

v. Review the potential operational impacts from ice conditions and identify systems, equipment, or capital improvements needed to achieve the necessary operational flexibility during ice conditions.

vi. Prepare preliminary opinions of probable project costs for the identified improvement scenarios.

C. Appraisal Level Design

i. Work with GDCD and BV to select a preferred improvement alternative.

ii. Prepare an appraisal level design of the preferred improvement alternative.

iii. Refine opinions of probable project cost for the preferred alternative.

iv. Develop a Hydraulic Considerations Memorandum that includes Capital Improvement recommendations.

5. **Task 5 – Draft Operating Plan**

A. Meetings

i. One progress meeting with Owner (virtual).

ii. Draft deliverable review meeting with Owner (virtual).

iii. Up to three design coordination meetings with BV (virtual).

B. Draft Operating Plan

i. Identify constraints and develop goals for a McClusky Canal operating plan.

(a) Review and incorporate Lake Audubon operations.

(b) Additional considerations regarding lag times for Lake Sakakawea and Lake Audubon.

(c) Include Lake Ashtabula triggers to enhance the efficiency of canal operations.

(d) Analyze and document pipe freshening flows and net evaporation relative to the range of required Project flows.

(e) Develop an operational profile detailing the hydraulic transfer of water from Lake Sakakawea to the Sheyenne River Outlet.

(f) Develop a draft governance structure for the operation of the McClusky Canal.

(g) Interface with core infrastructure and operations.

ii. Use HEC-RAS modeling developed by others to improve understanding of canal hydraulics and guide the development of an operating plan.

iii. Define systems and equipment to implement an effective and flexible canal operating plan, including considerations related to I&C and integration with operations at the Snake Creek Pumping Plant.

iv. Develop a draft operating plan to achieve flexible and dynamic canal operations. At a minimum, the draft operating plan will consider operating order constraints, operations during ice conditions, Snake Creek Pumping Plant considerations, and the dynamic range of flows necessary for planned canal operations. Operating costs will also be developed.

6. **Task 6 – Canal Water Quality Improvements**

A. Meetings

i. One progress meeting with Owner (virtual).

ii. Draft deliverable review meeting with Owner (virtual).

iii. Up to three design coordination meetings with BV (virtual).

B. Canal Freshening Review

i. Review the Painted Woods Outlet infrastructure and capacity. Includes a general review of channel capacity from Painted Woods Outlet to the Painted Woods Creek confluence with the Missouri River near Washburn to understand capacity and potential flooding impacts.

ii. Define canal freshening goals and desired water quality (up to three scenarios). Review goals relative to current outlet capacity.

iii. Coordinate with GDCD and BV to identify potential constraints in Painted Woods Creek.

iv. Develop a HEC-RAS model of Painted Woods Creek to improve understanding of channel hydraulics, potential downstream constraints, and other limitations.

v. Assess freshening options for the 20 miles of canal between the Painted Woods Outlet and the ENDAWS intake.

vi. Identify up to two improvement alternatives for the Painted Woods Outlet to improve freshening while remaining within acceptable flow constraints in Painted Woods Creek.

vii. Identify up to two additional improvements alternatives for water quality improvements downstream of the Painted Woods Outlet.

viii. Develop a high-level summary of permitting and access considerations for water quality improvements and Painted Woods Outlet modifications.

ix. Prepare opinions of probable project cost for the preferred water quality improvement modifications.

x. Develop a technical memorandum summarizing the water quality improvement recommendations, recommended modifications to the Painted Woods Outlet, and the expected freshening efficacy.

7. Task 7 – GIS ArcMap to ArcGIS Pro Conversion

A. Meetings

i. Two progress meeting with Owner/BV (virtual).

B. Transfer ArcMap file to ArcGIS Pro file.

C. Final migration of data to ArcGIS Online.

D. Transition ArcGIS Map SDK (VB.Net) Water Report Tools to a Cloud Reporting Solution.

i. Transition data input tools, calculations, and reporting tools to a cloud reporting solution with mobile data input capabilities.

ii. Annual fees for cloud reporting solution are $4,500 and are not included in the cost estimate.

E. Transition ArcGIS Map SDK (VB.Net) McClusky V-Ditch Tools to mobile friendly form centric solution (ArcGIS Online Survey123) with reporting capabilities.

i. New Rockford V-Ditch Tool will not be migrated over to the new system.

F. Transition ArcGIS Map SDK (VB.Net) tools listed below to a Web Map App through Experience Builder.

i. Transition Draw Polygon to Calculate Acres button to Draw button in Experience Builder.

ii. Transition Switch Hyperlink to Photo button and switch hyperlink to Drawing button to Attachments for Selected Attributes.

iii. Transition Calculate Acreage for Selected Polygons button to Selected Features Attributes.

iv. Transition Zoom to Extent of Canals buttons to Bookmarks Tab.

v. Transition Add/Remove Layers button to Layer Grouping

vi. Setup Data Editing from ArcGIS Online Layers within Web Map App.

G. Transition ArcGIS Map SDK (VB.Net) Tools to ArcGIS Pro Template Functionality

i. Transition Switch Hyperlink to Photo button and Switch Hyperlink to Drawing button to Attachments for Selected Attributes.

ii. Transition Calculate Acreage for Selected Polygons button to Selected Features Attributes.

iii. Transition Zoom to Extent of Canals buttons to Bookmarks Tab.

iv. Transition Add/Remove Layers button to Layer Grouping, Linked Data Reference Folder and Purpose Drive Maps.

v. Setup data editing from ArcGIS Online Layers within ArcGIS Pro.

vi. Transition Create Layout Button to ArcGIS Pro template with customized layouts.

H. Transition ArcGIS Map SDK (VB.Net) Tools to SharePoint Functionality

i. Transition Fetch Scanned Documents button, View Metadata, and View User Guide to SharePoint Site.

I. Testing and Debugging

i. Thoroughly test migrated functionality within the ArcGIS Online and ArcGIS Pro environment.

ii. Debug any issues that arise during testing.

J. Documentation and Training

i. Update documentation and provide training to users of ArcGIS Pro and ArcGIS Online.

ii. Highlight changes in functionality or workflow.

V. SPECIAL SERVICES

None this Task Order.

VI. DELIVERABLES

The following deliverables will be furnished under this Task Order. Documents or deliverables not included in the list below will be provided as Additional Services as authorized by the Owner.

1. Task 1 – Project Management

   A. Progress Reports (electronic pdf files)

   B. Baseline Schedule and Updates (electronic pdf files)

2. Task 2 – Special Project and Third-Party Meetings. Meeting agenda (included with MS Outlook meeting invitations) and minutes (electronic pdf files)

3. Task 3 – Data Collection

   A. Survey Overview Figure(s)

   B. CSV file of survey data points

4. Task 4 – Canal Improvements

   A. Updated HEC-RAS Model

   B. Canal Hydraulic Improvement Considerations Memorandum with Capital Improvement Recommendations

5. Task 5 – Draft Operating Plan

   A. Draft McClusky Canal Operating Plan

6. Task 6 - Canal Water Quality Improvements

   A. Canal Water Quality Improvements Recommendation Memorandum

7. Task 7 - GIS ArcMap to ArcGIS Pro Conversion

   A. GIS Conversion Updated Documentation.

VII. ADDITIONAL SERVICES

None this Task Order.

VIII. SPECIAL RESPONSIBILITIES OF OWNER

Draft Deliverable Review Requirements. Owner commits to review periods for Draft deliverables of no more than 30 calendar days after receipt of deliverables from Engineer. A review meeting will be scheduled and conducted by Engineer no more than 14 calendar days after receipt of Owner review comments, unless another mutually agreed upon date is selected.

IX. FEE

The total fee for Basic Services provided under this Task Order is Four Hundred Forty-Three Thousand Dollars ($443,000). A worksheet showing the fee estimate and level of effort by task is included in Attachment A.

X. PERFORMANCE SCHEDULE

- Anticipate agreements signed and start work: April 1, 2025
- Draft Hydraulic Considerations Memorandum by July 30, 2025
- Survey Field Work: Spring/Summer 2025
- Final Hydraulic Considerations Memorandum by early October of 2025
- Draft Long-Term Canal Operating Plan by early October 2025
- Draft Canal Freshening Recommendations Memorandum by early October 2025

XI. DOCUMENTS INCORPORATED BY REFERENCE AND ATTACHMENTS

1. Standard Form of Agreement between Owner and Engineer for Professional Services dated January 17, 2008 is incorporated by reference.

2. Attachment A – Fee Estimate Worksheets

XII. ACCEPTANCE

If this satisfactorily sets forth your understanding of this Task Order, please electronically sign this document. An electronic copy of the fully executed document will be provided upon execution by all parties.

By: _____
Duane DeKrey, General Manager
Garrison Diversion Conservancy District

Dated: _____

By: _____
Paul Boersma, Vice President
Black & Veatch Corporation

Dated: _____

ATTACHMENT A

Fee Estimate Worksheets

Garrison Diversion Conservancy District
ENDAWS Task Order 2150 - McClusky Canal Hydraulic and Water Quality Investigation
BV Project No. xxxxxx
Black & Veatch and Subconsultants

Task	Lead Firm	Position	P	PM1	EM1	ADM2	PA1	Labor Detail	Labor Detail	Expense Detail	Sub Consulta	Sub Consult	Expense Detail	Labor Detail	Labor Detail			TOTAL	TOTAL	TOTAL	TOTAL
		Task Description	Principal	Project Manager 1	Engineering Manager 1	Administrator 1	Project Acct 1	BV Level of Effort (hrs)	BV Labor Cost	Hobacca	AE2S Hours	AE2S Sub Costs	AE2S Sub Markup	Burian Level of Effort (hrs)	Burian Labor Cost	Burian Sub Markup	Total Direct Expense	BV Level of Effort (hrs)	BV Labor Cost	Direct Expense	Fee
IV. BASIC SERVICES																					
1	**BV**	**Task Order Management and Administration**	**0**	**36**	**36**	**40**	**40**	**152**	**$30,778**	**$1,392**	**78**	**$16,796**	**$935**	**46**	**$8,125**	**$406**	**$27,654**	**152**	**$30,778**	**$27,654**	**$58,432**
A	BV	Project Management		12	12	24	16	64	$12,618	$586	46	$10,084	$599	21	$3,920	$196	$15,385	64	$12,618	$15,385	$28,003
B	BV	Adminstration		24	24	16	24	88	$18,160	$806	32	$6,712	$336	25	$4,205	$210	$12,269	88	$18,160	$12,269	$30,429
2	**AE2S**	**Special Project Meetings**	**8**	**0**	**0**	**0**	**0**	**8**	**$0**	**$73**	**46**	**$11,514**	**$576**	**56**	**$10,150**	**$509**	**$22,822**	**8**	**$0**	**$22,822**	**$22,822**
A	AE2S	Kickoff Meeting (virtual)	8					8	$0	$73	10	$2,471	$124	8	$1,450	$73	$4,191	8	$0	$4,191	$4,191
B	AE2S	Third Party Meetings (up to three virtual meetings)						0	$0	$0	22	$5,383	$269	24	$4,350	$218	$10,220	0	$0	$10,220	$10,220
C	AE2S	Bureau of Reclamation Meetings (up to three virtual meetings)						0	$0	$0	14	$3,661	$183	24	$4,350	$218	$8,412	0	$0	$8,412	$8,412
3	**AE2S**	**Data Collection**	**8**	**0**	**0**	**0**	**0**	**8**	**$0**	**$73**	**254**	**$49,439**	**$2,472**	**38**	**$7,350**	**$368**	**$59,702**	**8**	**$0**	**$59,702**	**$59,702**
A	AE2S	Field Data Collection	8					8	$0	$73	130	$23,222	$1,161	0	$0	$0	$24,456	8	$0	$24,456	$24,456
B	AE2S	Records Review						0	$0	$0	100	$19,855	$993	30	$5,900	$295	$27,043	0	$0	$27,043	$27,043
C	AE2S	McClusky Canal Site Visit (two AE2S staff)						0	$0	$0	24	$6,362	$318	8	$1,450	$73	$8,203	0	$0	$8,203	$8,203
4	**AE2S**	**Canal Improvements**	**16**	**0**	**0**	**0**	**0**	**16**	**$0**	**$147**	**448**	**$91,182**	**$4,558**	**0**	**$0**	**$0**	**$95,887**	**16**	**$0**	**$95,887**	**$95,887**
A	AE2S	Meetings	16					16	$0	$147	24	$5,370	$268	0	$0	$0	$5,785	16	$0	$5,785	$5,785
B	AE2S	HEC-RAS modeling and canal hydraulics assessment						0	$0	$0	56	$10,710	$536	0	$0	$0	$11,246	0	$0	$11,246	$11,246
C	AE2S	Review of ice and sediment impacts and associated modeling						0	$0	$0	66	$13,162	$658	0	$0	$0	$13,820	0	$0	$13,820	$13,820
D	AE2S	Improvement alternatives development						0	$0	$0	36	$7,174	$359	0	$0	$0	$7,533	0	$0	$7,533	$7,533
E	AE2S	Identify systems, equipment, or capital improvements needed						0	$0	$0	30	$6,459	$323	0	$0	$0	$6,782	0	$0	$6,782	$6,782
F	AE2S	Prepare opinions of probable project costs for improvements						0	$0	$0	26	$5,184	$259	0	$0	$0	$5,443	0	$0	$5,443	$5,443
G	AE2S	Preferred Alternative Selection						0	$0	$0	18	$3,944	$197	0	$0	$0	$4,141	0	$0	$4,141	$4,141
H	AE2S	Appraisal level design of preferred alternative						0	$0	$0	86	$17,908	$895	0	$0	$0	$18,803	0	$0	$18,803	$18,803
I	AE2S	Refined opinions of probable project cost						0	$0	$0	12	$2,488	$124	0	$0	$0	$2,612	0	$0	$2,612	$2,612
J	AE2S	Develop capital improvement recommendations						0	$0	$0	20	$4,344	$217	0	$0	$0	$4,561	0	$0	$4,561	$4,561
K	AE2S	Prepare a Hydraulic Consideration Memorandum						0	$0	$0	74	$14,439	$722	0	$0	$0	$15,161	0	$0	$15,161	$15,161
5	**BA**	**Draft Operating Plan**	**16**	**0**	**0**	**0**	**0**	**16**	**$0**	**$147**	**0**	**$0**	**$0**	**260**	**$47,150**	**$2,358**	**$49,655**	**16**	**$0**	**$49,655**	**$49,655**
A	BA	Meetings	16					16	$0	$147	0	$0	$0	40	$7,250	$363	$7,760	16	$0	$7,760	$7,760
B	BA	Develop Draft Operating Plan						0	$0	$0	0	$0	$0	220	$39,900	$1,995	$41,895	0	$0	$41,895	$41,895
6	**AE2S**	**Canal Water Quality Improvements**	**16**	**0**	**0**	**0**	**0**	**16**	**$0**	**$147**	**290**	**$56,191**	**$37,774**	**185**	**$33,125**	**$1,656**	**$128,893**	**16**	**$0**	**$93,927**	**$93,927**
A	AE2S	Meetings	16					16	$0	$147	24	$5,408	$270	40	$7,400	$370	$13,595	16	$0	$13,595	$13,595
B	AE2S	Review of Painted Woods Outlet (PWO) and Painted Woods Creek (PWC)						0	$0	$0	20	$3,897	$195	0	$0	$0	$4,092	0	$0	$4,092	$4,092
C	AE2S	Define canal freshening goals and desires (up to 3 scenarios)						0	$0	$0	20	$3,897	$195	145	$25,725	$1,286	$31,103	0	$0	$31,103	$31,103
D	AE2S	Work with GDCD and BV to identify contraints in PWC						0	$0	$0	4	$977	$49	0	$0	$0	$1,026	0	$0	$1,026	$1,026
E	AE2S	HEC-RAS modeling of PWC						0	$0	$0	24	$4,228	$211	0	$0	$0	$4,439	0	$0	$4,439	$4,439
F	AE2S	Assess freshening options for the 20-miles of canal after PWO						0	$0	$0	36	$6,419	$321	0	$0	$0	$6,740	0	$0	$6,740	$6,740
G	AE2S	Identify up to two improvement alternatives for PWO to improve freshening						0	$0	$0	36	$7,229	$361	0	$0	$0	$7,590	0	$0	$7,590	$7,590
H	AE2S	Identify up to two improvement alternatives for the 20 miles downstream of PWO						0	$0	$0	36	$7,229	$361	0	$0	$0	$7,590	0	$0	$7,590	$7,590
I	AE2S	High-level summary of permitting and access considerations						0	$0	$0	20	$3,688	$184	0	$0	$0	$3,872	0	$0	$3,872	$3,872
J	AE2S	Prepare opinions of probable project costs for improvements						0	$0	$0	16	$3,110	$156	0	$0	$0	$3,266	0	$0	$3,266	$3,266

Garrison Diversion Conservancy District
ENDAWS Task Order 2150 - McClusky Canal Hydraulic and Water Quality Investigation
BV Project No. xxxxxx
Black & Veatch and Subconsultants

Task	Lead Firm	Position	P	PM1	EM1	ADM2	PA1	Labor Detail	Labor Detail	Expense Detail	Sub Consulta	Sub Consult	Expense Detail	Labor Detail	Labor Detail			TOTAL	TOTAL	TOTAL	TOTAL
		Task Description	Principal	Project Manager 1	Engineering Manager 1	Administrator 1	Project Acct 1	BV Level of Effort (hrs)	BV Labor Cost	Hobacca	AE2S Hours	AE2S Sub Costs	AE2S Sub Markup	Burian Level of Effort (hrs)	Burian Labor Cost	Burian Sub Markup	Total Direct Expense	BV Level of Effort (hrs)	BV Labor Cost	Direct Expense	Fee
K	AE2S	Develop Water Quality Technical Memorandum						0	$0	$0	54	$10,109	$505	0	$0	$0	$10,614	0	$0	$10,614	$10,614
7	**AE2S**	**GIS ArcMap to ArcGIS Pro Conversion**	**0**	**0**	**0**	**0**	**0**	**0**	**$0**	**$0**	**416**	**$59,595**	**$2,980**	**0**	**$0**	**$0**	**$62,575**	**0**	**$0**	**$62,575**	**$62,575**
A	AE2S	Meetings						0	$0	$0	22	$4,975	$249	0	$0	$0	$5,224	0	$0	$5,224	$5,224
B	AE2S	Transfer ArcMap file to ArcGIS Pro file						0	$0	$0	6	$857	$43	0	$0	$0	$900	0	$0	$900	$900
C	AE2S	Final Migration of data to ArcGIS Online						0	$0	$0	24	$3,427	$171	0	$0	$0	$3,598	0	$0	$3,598	$3,598
D	AE2S	Transition ArcGIS Map SDK Water Report Tools to Cloud Reporting						0	$0	$0	250	$33,676	$1,684	0	$0	$0	$35,360	0	$0	$35,360	$35,360
E	AE2S	Transition ArcGIS Map SDK McClusky V-Ditch Tools to mobile centric solution						0	$0	$0	16	$2,169	$108	0	$0	$0	$2,277	0	$0	$2,277	$2,277
F	AE2S	Transition ArcGIS Map SDK Tools to web map app through Experience Builder						0	$0	$0	24	$3,427	$171	0	$0	$0	$3,598	0	$0	$3,598	$3,598
G	AE2S	Transition ArcGIS Map SDK Tools to ArcGIS Pro Template Functionality						0	$0	$0	12	$1,713	$86	0	$0	$0	$1,799	0	$0	$1,799	$1,799
H	AE2S	Transition ArcGIS Map SDK Tools to SharePoint Functionality						0	$0	$0	10	$1,485	$74	0	$0	$0	$1,559	0	$0	$1,559	$1,559
I	AE2S	Testing and Debugging						0	$0	$0	22	$3,372	$169	0	$0	$0	$3,541	0	$0	$3,541	$3,541
J	AE2S	Documentation and Training						0	$0	$0	30	$4,494	$225	0	$0	$0	$4,719	0	$0	$4,719	$4,719
		Totals For Basic Services	**64**	**36**	**36**	**40**	**40**	**216**	**$30,778**	**$1,979**	**1,532**	**$284,717**	**$14,329**	**585**	**$105,900**	**$5,297**	**$412,222**	**216**	**$30,778**	**$412,222**	**$443,000**
		PROJECT TOTALS	**64**	**36**	**36**	**40**	**40**	**216**	**$30,778**	**$1,979**	**1,532**	**$284,717**	**$14,329**	**585**	**$105,900**	**$5,297**	**$412,222**	**216**	**$30,778**	**$412,222**	**$443,000**

Garrison Diversion Conservacy District
Red River Valley Water Supply Project
ENDAWS TO 2150 - McClusky Canal Hydraulic and Water Quality Investigation
BV Project No. xxxxxx
Burian & Associates

Task	Lead Firm	Position / Task Description	PIC Steve Burian	ENG I Betsy Seaver	ENG3 Katue	C2 Kaycie	ENG Jordan Prazak	GIS Jason Helmowski	BSS IV Dani Kelly	Labor Detail Burian Level of Effort (hrs)	Labor Detail Labor Cost	TOTAL Burian Level of Effort (hrs)	TOTAL Burian Labor Cost	TOTAL Direct Expense	TOTAL Fee
IV. BASIC SERVICES															
1		**Task Order Management & Administration**	**11**	**28**	**0**	**0**	**0**	**0**	**7**	**46**	**$8,125**	**46**	**$8,125**	**$0**	**$8,125**
A	All	General Project Management (7 Months)	7	14					0	21	$3,920	21	$3,920	$0	$3,920
B	All	Administration	4	14					7	25	$4,205	25	$4,205	$0	$4,205
2		**Special Project Meetings**	**14**	**28**	**14**	**0**	**0**	**0**	**0**	**56**	**$10,150**	**56**	**$10,150**	**$0**	**$10,150**
A	All	Kickoff Meeting	2	4	2					8	$1,450	8	$1,450	$0	$1,450
B	AE2S	Third Part Meetings	6	12	6					24	$4,350	24	$4,350	$0	$4,350
C	AE2S	Meetings with Bureau of Reclamation	6	12	6					24	$4,350	24	$4,350	$0	$4,350
3		**Data Collection**	**12**	**14**	**12**					**38**	**$7,350**	**38**	**$7,350**	**$0**	**$7,350**
A	AE2S	Field Data Collection								0	$0	0	$0	$0	$0
B	All	Records Review	10	10	10					30	$5,900	30	$5,900	$0	$5,900
C	AE2S	Site Visit (BA Google Earth Tour)	2	4	2					8	$1,450	8	$1,450	$0	$1,450
4		**Canal Improvements**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$0**	**0**	**$0**	**$0**	**$0**
A	All	Coordination Meetings								0	$0	0	$0	$0	$0
B	All	Alternative Analysis to Mitigate Flow Restrictions								0	$0	0	$0	$0	$0
C	All	Appraisal Level Design								0	$0	0	$0	$0	$0
5		**Draft Operational Plan**	**50**	**60**	**130**	**0**	**10**	**10**	**0**	**260**	**$47,150**	**260**	**$47,150**	**$0**	**$47,150**
A	All	Coordination Meetings	10	20	10					40	$7,250	40	$7,250	$0	$7,250
B	BA	Draft Operational Plan	40	40	120		10	10		220	$39,900	220	$39,900	$0	$39,900
6		**Canal Water Quality Improvements**	**30**	**60**	**40**	**50**	**0**	**5**	**0**	**185**	**$33,125**	**185**	**$33,125**	**$0**	**$33,125**
A	All	Coordination Meetings	10	20		10				40	$7,400	40	$7,400	$0	$7,400
B	All	Canal Refreshening Review	20	40	40	40		5		145	$25,725	145	$25,725	$0	$25,725
7		**GIS ArcMap and ArcGIS Pro Conversion**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$0**	**0**	**$0**	**$0**	**$0**
A	All	Coordination Meetings								0	$0	0	$0	$0	$0
B	AE2S	Transfer ArcMap file to ArcGIS Pro File								0	$0	0	$0	$0	$0
C	AE2S	Final Migration of Data to ArcGIS Online								0	$0	0	$0	$0	$0
D	AE2S	Transition ArcGIS Map SDK Water Report Tools to a Cloud Reporting Solution								0	$0	0	$0	$0	$0
E	AE2S	Transition ArcGIS Map SDK McClusky V-Ditch Tools to Mobile Friendly Form Centric Solution with Reporting Capacbilities								0	$0	0	$0	$0	$0
F	AE2S	Transition ArcGIS Map SDK Tool Listed Below to a Web Map App Through Experience Builder								0	$0	0	$0	$0	$0
		PROJECT TOTALS	**117**	**190**	**196**	**50**	**10**	**15**	**7**	**585**	**$105,900**	**585**	**$105,900**	**$0**	**$105,900**

Garrison Diversion Conservancy District
ENDAWS Task Order 2150 - McClusky Canal Hydraulic and Water Quality Investigation
BV Project No. xxxxxx
AE2S

Task	Lead Firm	Position / Task Description	PM6 Project Principal	PM2 Project Manager	E5 Engineer 5	E1 Engineer 1/EIT	E2 Engineer 2/EIT	LS1 Surveyor 1	LS4 Surveyor 4	SD2 CAD	I&C4 I&C	GIS5 GIS 5	GIS1 GIS 1	PC2 Project Coord/Admin	Labor Detail AE2S Level of Effort (hrs)	Labor Detail Labor Cost	Expense Detail Travel	Expense Detail Printing	Expense Detail Misc	Total Expense	TOTAL AE2S Level of Effort (hrs)	TOTAL AE2S Labor Cost	TOTAL Direct Expense	TOTAL Fee
IV. BASIC SERVICES																								
1	**BV**	**Task Order Management and Administration**	**4**	**36**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**0**	**16**	**78**	**$16,796**	**$0**	**$0**	**$0**	**$0**	**78**	**$16,796**	**$0**	**$16,796**
A	BV	Project Management	2	24	4							8		8	46	$10,084				$0	46	$10,084	$0	$10,084
B	BV	Adminstration	2	12	2							8		8	32	$6,712				$0	32	$6,712	$0	$6,712
2	**AE2S**	**Special Project Meetings**	**8**	**22**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**46**	**$11,514**	**$0**	**$0**	**$0**	**$0**	**46**	**$11,514**	**$0**	**$11,514**
A	AE2S	Kickoff Meeting (virtual)	2	4	2							2			10	$2,471				$0	10	$2,471	$0	$2,471
B	AE2S	Third Party Meetings (up to three virtual meetings)	2	12	6							2			22	$5,383				$0	22	$5,383	$0	$5,383
C	AE2S	Bureau of Reclamation Meetings (up to three virtual meetings)	4	6	4										14	$3,661				$0	14	$3,661	$0	$3,661
3	**AE2S**	**Data Collection**	**6**	**42**	**38**	**40**	**0**	**60**	**60**	**0**	**0**	**0**	**0**	**8**	**254**	**$46,939**	**$1,000**	**$0**	**$1,500**	**$2,500**	**254**	**$46,939**	**$2,500**	**$49,439**
A	AE2S	Field Data Collection	2	6	2			60	60						130	$21,222	$500		$1,500	$2,000	130	$21,222	$2,000	$23,222
B	AE2S	Records Review	4	24	24	40								8	100	$19,855				$0	100	$19,855	$0	$19,855
C	AE2S	McClusky Canal Site Visit (two AE2S staff)		12	12										24	$5,862	$500			$500	24	$5,862	$500	$6,362
4	**AE2S**	**Canal Improvements**	**12**	**98**	**44**	**6**	**210**	**0**	**0**	**60**	**10**	**0**	**0**	**8**	**448**	**$91,182**	**$0**	**$0**	**$0**	**$0**	**448**	**$91,182**	**$0**	**$91,182**
A	AE2S	Meetings	2	10	6	6									24	$5,370				$0	24	$5,370	$0	$5,370
B	AE2S	HEC-RAS modeling and canal hydraulics assessment		16			40								56	$10,710				$0	56	$10,710	$0	$10,710
C	AE2S	Review of ice and sediment impacts and associated modeling		20	6		40								66	$13,162				$0	66	$13,162	$0	$13,162
D	AE2S	Improvement alternatives development	2	6	4		24								36	$7,174				$0	36	$7,174	$0	$7,174
E	AE2S	Identify systems, equipment, or capital improvements needed	2	6	4		12				6				30	$6,459				$0	30	$6,459	$0	$6,459
F	AE2S	Prepare opinions of probable project costs for improvements		6	4		16								26	$5,184				$0	26	$5,184	$0	$5,184
G	AE2S	Preferred Alternative Selection	2	4	4		8								18	$3,944				$0	18	$3,944	$0	$3,944
H	AE2S	Appraisal level design of preferred alternative		6	4		16			60					86	$17,908				$0	86	$17,908	$0	$17,908
I	AE2S	Refined opinions of probable project cost		4	2		6								12	$2,488				$0	12	$2,488	$0	$2,488
J	AE2S	Develop capital improvement recommendations	2	4	2		8				4				20	$4,344				$0	20	$4,344	$0	$4,344
K	BA	Prepare a Hydraulic Consideration Memorandum	2	16	8		40							8	74	$14,439				$0	74	$14,439	$0	$14,439
5	**BA**	**Draft Operating Plan**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$0**	**$0**	**$0**	**$0**	**$0**	**0**	**$0**	**$0**	**$0**
A	BA	Meetings													0	$0				$0	0	$0	$0	$0
B	BA	Identify constraints and goals for an operating plan													0	$0				$0	0	$0	$0	$0
6	**AE2S**	**Canal Water Quality Improvements**	**4**	**52**	**68**	**134**	**0**	**0**	**0**	**24**	**0**	**0**	**0**	**8**	**290**	**$56,191**	**$0**	**$0**	**$0**	**$0**	**24**	**$5,408**	**$0**	**$56,191**
A	AE2S	Meetings	2	6	10	6									24	$5,408				$0	24	$5,408	$0	$5,408
B	AE2S	Review of Painted Woods Outlet (PWO) and Painted Woods Creek (PWC)		4	6	10									20	$3,897				$0	20	$3,897	$0	$3,897
C	AE2S	Define canal freshening goals and desires (up to 3 scenarios)		4	6	10									20	$3,897				$0	20	$3,897	$0	$3,897
D	AE2S	Work with GDCD and BV to identify contraints in PWC		2	2										4	$977				$0	4	$977	$0	$977
E	AE2S	HEC-RAS modeling of PWC		8		16									24	$4,228				$0	24	$4,228	$0	$4,228
F	AE2S	Assess freshening options for the 20-miles of canal after PWO		4	8	24									36	$6,419				$0	36	$6,419	$0	$6,419
G	AE2S	Identify up to two improvement alternatives for PWO to improve freshening		4	8	12				12					36	$7,229				$0	36	$7,229	$0	$7,229
H	AE2S	Identify up to two improvement alternatives for the 20 miles downstream of PWO		4	8	12				12					36	$7,229				$0	36	$7,229	$0	$7,229
I	AE2S	High-level summary of permitting and access considerations		4	4	12									20	$3,688				$0	20	$3,688	$0	$3,688
J	AE2S	Prepare opinions of probable project costs for improvements		4	4	8									16	$3,110				$0	16	$3,110	$0	$3,110

Garrison Diversion Conservancy District
ENDAWS Task Order 2150 - McClusky Canal Hydraulic and Water Quality Investigation
BV Project No. xxxxxx
AE2S

Task	Lead Firm	Position / Task Description	PM6 Project Principal	PM2 Project Manager	E5 Engineer 5	E1 Engineer 1/EIT	E2 Engineer 2/EIT	LS1 Surveyor 1	LS4 Surveyor 4	SD2 CAD	I&C4 I&C	GIS5 GIS 5	GIS1 GIS 1	PC2 Project Coord/Admin	Labor Detail AE2S Level of Effort (hrs)	Labor Detail Labor Cost	Expense Detail Travel	Expense Detail Printing	Expense Detail Misc	Total Expense	TOTAL AE2S Level of Effort (hrs)	TOTAL AE2S Labor Cost	TOTAL Direct Expense	TOTAL Fee
K	AE2S	Develop Water Quality Technical Memorandum	2	8	12	24								8	54	$10,109				$0	54	$10,109	$0	$10,109
7	**AE2S**	**GIS ArcMap to ArcGIS Pro Conversion**	**4**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**118**	**278**	**8**	**416**	**$59,595**	**$0**	**$0**	**$0**	**$0**	**416**	**$59,595**	**$0**	**$59,595**
A	AE2S	Meetings	4	8								8	2		22	$4,975				$0	22	$4,975	$0	$4,975
B	AE2S	Transfer ArcMap file to ArcGIS Pro file										2	4		6	$857				$0	6	$857	$0	$857
C	AE2S	Final Migration of data to ArcGIS Online										8	16		24	$3,427				$0	24	$3,427	$0	$3,427
D	AE2S	Transition ArcGIS Map SDK Water Report Tools to Cloud Reporting										60	190		250	$33,676				$0	250	$33,676	$0	$33,676
E	AE2S	Transition ArcGIS Map SDK McClusky V-Ditch Tools to mobile centric solution										4	12		16	$2,169				$0	16	$2,169	$0	$2,169
F	AE2S	Transition ArcGIS Map SDK Tools to web map app through Experience Builder										8	16		24	$3,427				$0	24	$3,427	$0	$3,427
G	AE2S	Transition ArcGIS Map SDK Tools to ArcGIS Pro Template Functionality										4	8		12	$1,713				$0	12	$1,713	$0	$1,713
H	AE2S	Transition ArcGIS Map SDK Tools to SharePoint Functionality										4	6		10	$1,485				$0	10	$1,485	$0	$1,485
I	AE2S	Testing and Debugging										10	12		22	$3,372				$0	22	$3,372	$0	$3,372
J	AE2S	Documentation and Training										10	12	8	30	$4,494				$0	30	$4,494	$0	$4,494
		PROJECT TOTALS	**38**	**258**	**168**	**180**	**210**	**60**	**60**	**84**	**10**	**138**	**278**	**48**	**1,532**	**$282,217**	**$1,000**	**$0**	**$1,500**	**$2,500**	**1,532**	**$282,217**	**$2,500**	**$284,717**

ENDAWS Task Order 2350 – McClusky Canal Intake Pumping Station Wetwell and Biota Water Treatment Plant Site Development Contract 1 Final Design Services and Bidding Assistance

Task Order Effective Date: May 1, 2025

TASK ORDER EXECUTIVE SUMMARY

REQUEST

Consideration and approval of a final design and bidding services task order in the amount of $877,000 for the design associated with the McClusky Canal Intake Pumping Station wetwell structure, biota water treatment plant site development, and access roads. See figure on next page.

NEED AND BENEFIT

The Task Order advances the preliminary design currently being completed under Task Order 2250 and Task Order 3210 by providing final designs and bidding assistance for the following three parts of the BWTP site:

- Improvement of existing roads and construction of new site access roads (about 3 miles long).
- Mass grading of the site and the adjacent slope going down to the McClusky Canal. About 500,000 cubic yards of soil are expected to be moved.
- Construction of the McClusky Intake Pumping Station wetwell (similar in size to what was done for the Missouri River Intake Pump Station wetwell). The wetwell excavation support system will be a performance-based specification with design provided by the construction contractor. The final liner of the wetwell (aka structural walls) will be completed under a future contract and the detailed design of the liner will be prepared by Engineer.

The benefit of this task order is to allow construction to start at the biota water treatment plant site. Construction of these improvements will occur in 2026. It is expected the McClusky Canal intake and intake tunnel will be constructed in 2027. The full biota water treatment plant construction will start as early as Spring 2028. The estimated cost of the construction for the work of this design is $12 million.

TASK ORDER SUMMARY

Basic Services: The services to be provided by the engineering team are fully described in the attached Task Order. The following table summarizes the fee for each of the major tasks:

	Fee	% of Construction
Task Order Management and Administration	$89,241	
Special Project and Third-Party Meetings	$50,338	
Land Services	$20,986	
Field Services	$47,977	
Final Design Services	$566,681	
Bidding Assistance	$101,776	
Totals	$877,000	7.3%

Special Services: There are no special services required of the work of this Task order.

PROJECT OVERVIEW

This project will be located adjacent to the McClusky Canal and the ENDAS BWTP campus site near McClusky, North Dakota. Elements of this final Task Order are:

ENDAWS Task Order 2350 – McClusky Canal Intake Pumping Station Wetwell and Biota Water Treatment Plant Site Development Contract 1 Final Design Services and Bidding Assistance

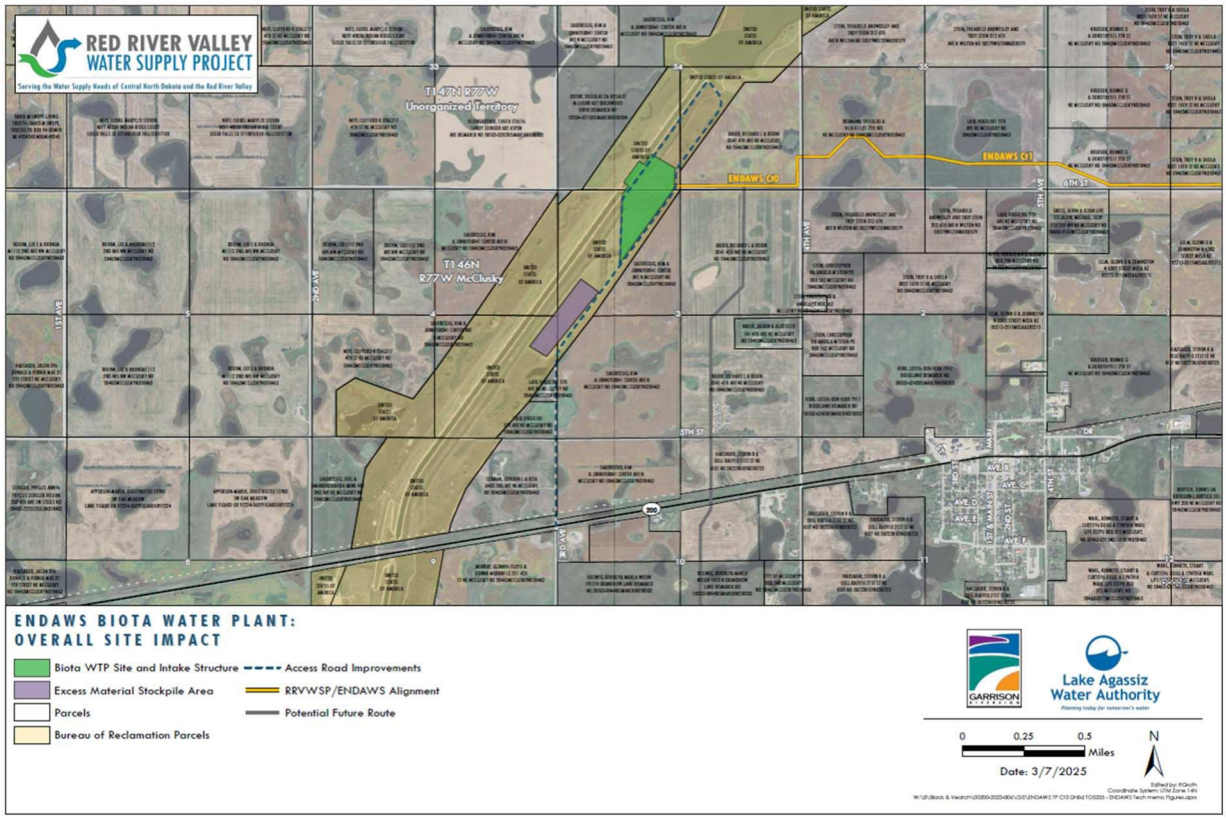
Task Order Effective Date: May 1, 2025

TASK ORDER EXECUTIVE SUMMARY

- Supplemental surveying services to complete the design,
- Coordination with counties, townships, and ND DOT,
- Final design of the McClusky Canal Intake Pumping Station wetwell excavation support system, site mass grading, and access roads,
- Coordination with the U.S. Department of the Interior, Bureau of Reclamation,
- Bidding assistance, and
- Post award services, including a pre-construction conference, and drone videography of the site to document existing conditions right prior to construction.

PROJECT SCHEDULE

The Project's design will be complete within 8 months or by January 2026 so the project can be advertised, and a construction contractor can begin work at the start of the construction season on April 1, 2026 weather permitting.



Black & Veatch Corporation
Professional Services for the Red River Valley Water Supply Project
Under General Agreement dated January 17, 2008

ENDAWS Task Order 2350 – McClusky Canal Intake Pumping Station Wetwell and Biota Water Treatment Plant Site Development Contract 1 Final Design Services and Bidding Assistance

Effective Date – May 1, 2025

Content of this Task Order is as follows:

I. PROJECT BACKGROUND

1. The Red River Valley Water Supply Project (RRVWSP, the Project) will provide a supplemental water supply to eastern and central North Dakota (ND) in the event of drought conditions in the Red River watershed. The Project as envisioned by the Garrison Diversion Conservancy District (Garrison Diversion, the Owner) will also supply additional water to support industrial development as well as provide an environmental benefit to local rivers during drought conditions by augmenting natural stream flows. The source water will be withdrawn from the McClusky Canal Missouri River and conveyed to a new water plant. A multi-county pipeline will then convey flows from the plant 125 miles east to the Sheyenne River. Lake Ashtabula located downstream will provide storage for controlled releases to the Red River Valley.

2. Professional services for design of the Project will be accomplished through the execution of multiple task orders for design and associated activities as well as for engineering services during construction.

3. The U.S. Department of the Interior, Bureau of Reclamation (Reclamation) completed the Eastern North Dakota Alternate Water Supply (ENDAWS) project's environmental impact

statement (EIS), which resulted in the record of decision being signed for the ENDAWS portion of this project. As such, Reclamation is a stakeholder for this project and coordination with them is presumed throughout the effort.

4. Preliminary Design for the McClusky Canal Intake (MCI), McClusky Canal Intake Pumping Station (MCIPS), Biota Water Treatment Plant (BWTP), and McClusky Main Pumping Station (MMPS) were previously authorized under Task Order 2250 and Task Order 3210. A Preliminary Design Report (PDR) for the ENDAWS facilities is anticipated to be completed in mid-by end of May 2025 and will serve as the basis for the final design work in this Task Order.

5. This Task Order includes the final design of the MCIPS wetwell, access road for use by construction vehicles for the MCIPS and BWTP sites, and mass grading of the BTWP site. Construction Contract Documents (CCDs) suitable for public advertisement and bidding will be developed for wetwell and site-civil improvements. The wetwell will be a poured-in-place concrete structure with an open top that will enable the wetwell to be used in the future to launch a micro tunneling machine to connect the wetwell to the McClusky Canal.

II. TASK ORDER OBJECTIVES

1. The Owner would like to begin final design of a portion of the ENDAWS facilities, and this Task Order is for design of the BWTP site grading and the McClusky Canal Intake Pump Station wetwell. Given the current level of funding allocated during the 2023-2025 biennium, only the pumping station wetwell, site grading, and access roads are the only elements of the BWTP included in the final design and preparation of CCDs.

2. The location of the pumping station site is identified in the ENDAWS PDR. The site is located just south of Hoffer Lake in central North Dakota northwest of McClusky, North Dakota.

3. Land acquisition assistance, including property appraisals, landowner contacts, offer/ counteroffer(s), and landowner negotiations are included in this Task Order. Normal property acquisition activities are assumed. Platting, including property surveys, and rezoning as identified in Task Order 7420 and Task Order 7410, is excluded from this Task Order.

4. A geotechnical investigation and reporting of the in-situ soil conditions were completed under Task Order 2550 and supplemental borings will be completed under Task Order 3220.

5. A preliminary sheet list identifying the drawings to be produced under this Task Order is included as Attachment A.

6. A preliminary specification list, including front-end or Division 0 sections identifying specifications to be produced under this Task Order, is included as Attachment B.

7. It is anticipated the MCIPS wetwell, BWTP site development, and access roads designed under this Task Order will be advertised for public bids in the 2025-/2027 funding biennium assuming Garrison Diversion receives sufficient funding from State and local users. The target date for public advertisement is January of 2026. **This task order recognizes that Garrison Diversion may choose to self-perform the site grading portion of the work.**

III. GENERAL REQUIREMENTS

1. Under this Task Order, Engineer will provide services in accordance with the Standard Form of Agreement between Owner and Engineer for Professional Services dated January 17, 2008 (Agreement).

2. General Description of Activities. The Basic Services to be performed by Engineer consist of professional design services associated with development of CCDs for construction of a conventional intake wetwell adjacent to the McClusky Canal Missouri River, site grading and associated access roads.

3. Construction Procurement. CCDs developed by Engineer will be of sufficient detail for the Owner to obtain bids through a conventional bidding process (design-bid-build). The Work will be built under a single construction contract by one Contractor. Garrison Diversion may complete a portion of the work with its own forces. Specific elements included in an Owner-performed package will be identified later.

4. Work outside Basic and Special Services. Engineer agrees to provide the Basic Services and Special Services identified herein. Work not specifically discussed herein as part of Basic Services or Special Services is considered Additional Services. Additional Services will only be performed with proper separate authorization such as an amendment to this Task Order or a new separate Task Order.

5. Capital Cost Opinions. All opinions of probable construction cost developed will follow the recommendations of the Association for the Advancement of Cost Engineering (AACE) International Recommended Practice No. 18R about methodology and accuracy. The cost opinions' level of accuracy presented by Engineer for the various deliverables will be as noted in subsequent paragraphs of this Task Order under Basic Services.

6. Document Production Standards and Procedures. Engineer will prepare CCDCDs using the most current version of the three-part Construction Specifications Institute (CSI) MasterFormat for technical specifications; Engineer's drawing standards; and Engineer's design procedures and criteria, AutoCAD drafting standards, and standard construction details.

7. Explicit Responsibilities. Basic Services and Special Services explicitly set forth the services Engineer will perform and do not implicitly put any additional responsibilities or duties upon the Engineer. Deliverables to be provided are explicitly identified in the Deliverables paragraph of this Task Order.

8. Explicitly Identified Quantities. Engineer in development of this Task Order estimates the level of effort required to provide the services discussed. Where specific information is listed as to the quantity of service to be provided, those quantities listed are considered Basic Services or Special Services and are, therefore, included in this Task Order scope of services and associated fee estimate. Services exceeding the written quantities shown below in Basic Services or Special Services are considered Additional Services.

IV. BASIC SERVICES

Basic Services of this Task Order are organized into major tasks as follows:

- Task 1 – Project Management
- Task 2 – Special Project and Third-Party Meetings
- Task 3 – Land Services
- Task 4 – Field Services
- Task 5 – Final Design Phase
- Task 6 – Bidding Services
- Task 7 – Task Order Coordination

1. Task 1 – Project Management

This task includes overall management and development of a Project Management Plan specific to the Work. The overall objective of this task is to keep the Task Order on schedule and on budget.

A. Project Management. Engineer will provide management services necessary for execution of the Task Order, including efforts required for proper resource allocation, schedule development and monitoring, budget review and control, Owner coordination, and other standard and customary activities required for timely completion of the Work.

B. Administration. Perform general administrative duties associated with the Task Order, including general correspondence, day-to-day contact and coordination, administration, and monthly invoicing in a form that is acceptable to the Owner.

C. Progress Reports. Prepare for the Owner progress reports that identify the Work that has been performed in the period, work activities anticipated in the upcoming period, and action items required of the Owner. Identify therein variances or potential variances from the Task Order's Basic and Special Services. The reports will be, in the Engineer's standard format.

D. Schedule Updates. Engineer will prepare a baseline Gantt chart schedule at Task Order's inception. The schedule will be updated periodically comparing actual progress by task/subtask to the baseline schedule.

E. Management of Subconsultants. Engineer will monitor subcontractor progress, review and approve invoices, oversee adherence to the approved quality assurance/quality control (QA/QC) plan, monitor adherence to document preparation standards, and oversee Subconsultants' performance.

2. Task 2 – Special Project and Third-Party Meetings

The overall objective of this task is to keep stakeholders apprised of Task Order status and to provide a forum for stakeholder input. Engineer will prepare an agenda and provide meeting notes documenting discussions and action items. The following meetings are anticipated:

A. Special Project Meetings.

i. Task Order Initiation Meeting. Engineer will conduct a Task Order Initiation Meeting with the Owner and consultants to review the overall approach to the Work, the schedule by which the work will be prosecuted, and other relevant coordination and management items necessary for a successful outcome. Another objective of this meeting will be to finalize the approach to right(s) of entry and to reach an agreement on an approach to obtaining the necessary right(s) of entry.

B. Third-Party Meetings

i. Stakeholder Meetings. Engineer will attend and present Project information for one meeting with the Lake Agassiz Water Authority (LAWA) Technical Advisory Committee (TAC).

ii. Design Coordination Meetings. Engineer will schedule and meet with the following agencies. Engineer will provide summary notes of meetings.

(a) Two meetings with the Bureau of Reclamation.

(b) Two meetings with NDDOT regarding Hwy 200 access.

(c) Two meetings will be held with the Sheridan County Commission or their designated representative(s) and other county entities for approval of construction haul roads and other construction related items.

(d) Two meetings with impacted utilities or stakeholders.

3. **Task 3 – Land Services**

The purpose of the Land Services task is to secure access to the site so that necessary field work can proceed, and property can be obtained on which the MCIPS, BWTP, and related facilities can be built.

A. Right of Entry Agreements. Engineer will obtain right of entry (ROE) agreement(s) from the property owner(s). These ROEs are necessary to complete supplemental topographic surveys and to complete geotechnical borings during preliminary design.

B. Land Acquisition Services. Land acquisition services are included in Task Orders 7410, 7420, and 3210.

4. **Task 4 – Field Services**

This Task Order includes services to collected additional supplemental field data as needed to complete the final design and develop bid packages.

A. A Supplemental Geotechnical Field Investigation is being completed under Task Order 3220 and the results of that investigation will be used to support this Task Order.

B. Limited Topographic Survey. Engineer will provide field topographic surveys for supplemental data needed for final design.

C. Site Visits. Engineer will make visits to the site for the purpose of collecting supplemental information and other data to support the final design efforts.

5. **Task 5 – Final Design Services**

The purpose of final design is to develop CCDs for the MSCIPS wetwell, BWTP mass grading, and access roads by which the Owner will select a Contractor to build the desired facilities. Engineer will provide final design services and CCDCDs for the MSCIPS wetwell, BWTP mass grading, and access roads as defined in the ENDAWS PDR. The CCDCDs will be prepared for the purposes of obtaining competitive bids, selection of the lowest and best bid, and construction of the Work. Intermediate deliverables will be prepared and submitted to the Owner upon achievement of 60- and 90-percent design completion. Final CCDCDs will be prepared for bidding purposes.

A. Design Team Conference Calls. Engineer will schedule and lead conference calls with the Owner and its team. Calls will be scheduled, and content organized to coincide with other Task Orders for efficient utilization of staff time.

i. Owner Conference Calls (up to 8 calls will be held, assuming 4-month design duration). Engineer will conduct bi-weekly conference calls with the Owner to review overall progress, exchange ideas and information, and coordinate activities.

ii. Task Order Coordination Calls (up to 4 calls). Engineer will plan and take part in monthly coordination conference calls with tasks leaders of other Task Orders to share progress and conclusions such that efforts are well coordinated and not duplicated or unnecessary.

B. Geotechnical Baseline Report. Engineer will develop a GBR for the MCIPS wetwell construction under Task Order 3220. A draft report will be furnished for review and comment. Upon disposition of Owner comments concerning the draft report, a final report will be furnished. The GBR will be a CD.

C. Geotechnical Design Memorandum/Geotechnical Data Report. Engineer will develop a memorandum for internal use by Engineer under Task Order 3220 that contains design requirements and geotechnical recommendations for MCIPS wetwell design and construction. The geotechnical design memorandum will not be made available to bidders. Engineer will develop a Geotechnical Data Report (GDR). If additional borings are needed during final design, these will be added to the GDR. The GDR will be furnished to bidders, and it will be considered a CD. All work of this task is being done under Task Order 3220.

D. Front-End Documents Customization

i. Prepare and deliver draft front-end documents using standard documents of the Engineers Joint Contract Document Committee (EJCDC) and Engineer's standard supplements, including general conditions and special conditions. Front-end documents will incorporate Reclamation requirements for Federal projects.

ii. Conduct a review conference call with Owner to discuss and receive comments on the draft front-end documents.

iii. Revise front-end documents addressing Owner's comments and incorporate modifications, if any, into subsequent CD deliverables.

E. Permitting. This subtask encompasses applicable governmental approvals, including counties, townships, and utility permits and approvals necessary to construct the pipeline. The pipeline will comply with overall Federal permit requirements.

i. Engineer will obtain in conjunction with the Owner necessary approvals from the appropriate utilities, city, county, and state agencies having authority over the Work.

ii. Engineer will prepare a permitting schedule identifying action items, decision points, milestones, reviews, and approvals required to complete permitting. Engineer will communicate status of permits to Owner.

iii. Contractor-Provided Permits. Engineer will provide in the CDs a list of the permits that must be obtained by the Contractor. Based upon preliminary design, it is understood that the following permits, at a minimum, will be the responsibility of the Contractor:

- Erosion and sediment control; land disturbance; stormwater permits.
- Dewatering operations discharge

iv. Owner-Provided Permits

(a) Engineer will aid the Owner in obtaining the following permits from government agencies, North Dakota Department of Transportation (NDDOT), utilities, pipeline companies, and other entities as noted below:

- NDDOT for access permits
- County road closing/detours
- Local electric and telecommunications crossings. Scope assumes up to three separate utilities.
- County road crossings
- Township road crossings

(b) Assistance provided by Engineer for the above listed permits will include:

(i) Preparation of applications, exhibits, drawings, and specifications ready for the Owner's execution and transmittal.

(ii) Furnishing additional information about the Project's design as required by the permitting authority.

F. 60-percent CDs (Level 2 Design)

i. The Level 2 design will commence after the Owner accepts the preliminary design set forth in the ENDAWS PDR.

ii. The content of Level 2 deliverables is as follows:

- General drawings,
- Plan and section drawings,
- Draft technical specifications,
- Underground utility drawings,
- Constructability review results,
- Opinion of probable construction cost update,
- Internal quality control review and refinement,
- QA/QC plan and log update, and
- Task Order schedule update.

iii. Provide technical specifications and drawings for Owner review.

iv. Attend a meeting with the Owner to receive and discuss the Owner's review comments. Document the comments received in a log, and distribute the log to meeting attendees.

v. Revise documents as necessary to reflect decisions taken at this level incorporating design modifications into subsequent deliverables.

G. 90-percent CDs (Level 3 Design)

i. The Level 3 design will commence after the Owner has accepted Level 2 deliverables. The content of the Level 3 deliverables is as follows:

- Final drawings review set,
- Final technical specifications review set,
- Front-end documents review set,
- Opinion of probable construction cost update,
- Constructability review results,
- Internal quality control review and refinement,
- QA/QC plan and log update, and
- Task Order schedule update.

ii. Provide specifications and drawings for Owner review.

iii. Attend a meeting with the Owner to receive and discuss the Owner's review comments. Document the comments received in a log, and distribute the log to meeting attendees.

iv. Revise documents according to mutual agreement reflecting decisions taken at this level incorporating design modifications into subsequent deliverables.

H. 100-percent CDs. Prepare CDs starting from the Level 3 design. These documents will include comments received from the Owner. Deliverables include the following:

- Drawings
- Technical specifications
- Front-end documents
- Updated opinion of probable construction cost

I. Final Sealed and Signed CDs

i. Preparation of the final CDs will commence after the Owner has accepted 100-percent deliverables.

ii. Provide the Owner a record copy of Final CDs that are sealed, signed, and dated by the Engineer of Record.

J. Opinions of Probable Construction Costs (aka Cost Opinions or Cost Estimates). Engineer will update the cost opinion presented in the ENDAWS PDR at the various stages of final design submitting updates for the Owner's information and use as follows:

i. After transmittal of the 60-percent deliverable, update cost opinion commensurate with an AACE Class 2 estimate. The expected accuracy will be -5 to -15 percent on the low end and the expected accuracy on the high end will be from +5 to +20 percent.

ii. After transmittal of the 90-percent deliverable, update cost opinion with an accuracy commensurate with an AACE Class 2 estimate. The expected accuracy will be -5 to -15 percent on the low end and the expected accuracy on the high end will be from +5 to +20 percent.

iii. After transmittal of final deliverable, update cost opinion commensurate with an AACE Class 2 estimate. The expected accuracy will be -5 to -15 percent on the low end and the expected accuracy on the high end will be from +5 to +20 percent.

K. Quality Control. Engineer will provide QA/QC services necessary for execution of the Task Order. QA/QC reviews will be provided for each deliverable furnished. Engineer or consultant's independent senior staff will complete reviews. Engineer will log QA/QC reviews and maintain records of said reviews in its files. In addition, Engineer will log comments received from the Owner and provide a log of comments and Engineer responses for the following events:

- 60-percent CDs
- Draft front-end documents
- 90-percent CDs

L. Engineer's services under the Final Design Phase will be considered complete on the date when the final design submittals identified in the Deliverables paragraphs are provided.

6. **Task 6 – Bidding Assistance**

A. Advertisement and Bid Letting

i. Finalize Front-End Documents. Finalize front-end documents incorporating information as it relates to the bid letting date, location, time, and other necessary information.

ii. Invitation to Bid. Provide to the Owner the Invitation to Bid, which Owner will have published in Owner-selected publications. Identify potential contractors and suppliers, review with the Owner, and distribute copies of the Invitation to Bid electronically.

iii. Production of Contract Documents. Produce digital copies of CDs, addenda, and geotechnical reports for Owner's use and distribution.

iv. Pre-bid Conference. Conduct, at a date and time selected, a virtual pre-bid conference to:

(a) Confirm the types of information required by the CDs and the format in which bids must be presented.

(b) Review special Task Order requirements and CDs in general.

(c) Receive requests for interpretations for which responses will be issued to plan holders via addendum.

(d) Prepare agenda for pre-bid conference; issue to plan holders and pre-bid conference attendees along with the pre-bid meeting sign-in sheet.

v. Interpretation of Bidding Documents. Interpret bidding documents; prepare and issue up to two addenda to the CDs, as required. More addenda will be provided as Additional Services.

vi. Update cost opinion and furnish Engineer's OPCC to the Owner for its use at the bid opening.

vii. Bid Opening. Conduct bid opening on behalf of the Owner after bids are received. Make a preliminary tabulation of bids, and review questionnaires, qualifications information, and bids for completeness.

B. Pre-award Services. The level of effort for pre-award services involving a well-qualified bidder and suppliers will be of a limited nature with the level of effort as stipulated in Attachment B – Engineering Fee Estimate Worksheet(s).

i. Questionnaire(s). Examine questionnaire(s) to identify any supplier whose equipment or material may not conform to the CDs. This examination will be based on the knowledge and experience of the Engineer.

ii. Qualifications of Apparent Successful Bidder. Review and evaluate the qualifications of the apparent successful bidder and the proposed major or specialty

subcontractors. The review and evaluation will include financial resources, and a check of up to five references from completed projects similar in size and character.

iii. Bid Tabulations. Prepare and distribute formal bid tabulation sheets, evaluate bids, and make a written recommendation to the Owner concerning contract award.

iv. Services include a review of the Contractor's bonds and forwarding to the Owner for approval; furnishing the Contractor unsigned CDs; and transmitting the CDs to the Owner for signature and distribution. Engineer's review is only for the purpose of determining if the Contractor provided the required bonds; it is not a legal review to determine if Contractor is compliant with CD requirements.

C. Post-award Services. Engineer will provide the following services after the Owner issues the Notice of Award.

i. Prepare Issued-for-Construction Contract Documents. Engineer will incorporate drawing, specification, and geotechnical data and baseline report items made by addendum during the bidding phase, as applicable, into the native files (i.e., AutoCAD, Revit, Word, or Excel files, as applicable) before construction begins. Once addenda items have been incorporated, Engineer will produce and transmit Issued-for-Construction CDs electronically and in hardcopy format, if requested and up to eight copies) to Owner and Contractor for use during construction. Engineer will provide electronic Issued-for-Construction CD files in bookmarked pdf format.

ii. Schedule and Moderate Preconstruction Conference. Conduct a preconstruction conference at a date and time selected by and at a facility provided by Owner. Engineer will prepare an agenda to include, but not limited to, meeting topics such as:

- Discussion of Contractor's tentative schedule,
- Procedures for transmittal and review of Contractor's submittals,
- Processing of payment requests and Owner payments,
- Critical work sequencing,
- Change order requests and change orders,
- Field orders / work change directives,
- Record drawings, and
- Contractor's responsibilities for safety and first aid.

Engineer will prepare and distribute minutes.

iii. Obtain Drone-Based Video. Prior to issuance of the Contractor's notice to proceed Engineer will video record an aerial view of the roads and BWTP site documenting existing pre-construction conditions. Produce aerial drone-based videos of the construction job site using a 12-megapixel minimum resolution camera. Provide a drone and operator with proper certifications and licenses for both Federal and local authorities. Drone video will be collected as follows:

(a) Pre-Construction conditions immediately prior to start of construction.

(b) Construction documentation will be completed via flights under a future construction phase services task order.

Bidding Assistance will be considered complete upon issuance of a construction notice to proceed, commencement of construction, or upon cessation of negotiations with prospective Contractors.

V. SPECIAL SERVICES

None this Task Order.

VI. DELIVERABLES

The following deliverables will be furnished under this Task Order. Documents or deliverables not included in the list below will be provided as Additional Services as authorized by the Owner.

1. Task 1 – Project Management
   - A. Progress Reports (electronic pdf files)
   - B. Baseline Schedule and updates (electronic pdf files)
2. Task 2 – Special Project and Third-Party Meetings. Meeting agenda (included with MS Outlook meeting invitations) and notes (electronic pdf files)
3. Task 3 – Land Services
   - A. Landowner notification figures
4. Task 4 – Field Services
   - A. Updated survey drawings (electronic pdf file)
5. Task 5– Final Design Phase
   - A. Meeting/conference call agenda and notes (electronic pdf files)
   - B. Draft front-end documents (single hard copy and electronic pdf file)
   - C. Level 2 CDs (single hard copy and electronic pdf files)
   - D. Level 2 cost opinion (electronic pdf file)
   - E. Level 2 Owner review comments log (electronic pdf file)
   - F. Level 3 CDs (single hard copy and electronic pdf files)
   - G. Level 3 cost opinion (electronic pdf file)
   - H. Level 3 Owner review comments log (electronic pdf file)
   - I. Final CDs (single hard copy and electronic pdf files)

J. Final cost opinion (electronic pdf file)

6. Task 6 – Bidding Services

A. Invitation to Bid (electronic Word and pdf files)

B. Issued-for-Bid CDs, including associated geotechnical reports (electronic pdf files)

C. Pre-bid Conference Agenda (electronic pdf file)

D. Opinion of Probable Construction Cost (electronic pdf file)

E. Bid Tab – Summary and Detail (electronic Excel and pdf file)

F. Recommendation of Award (electronic pdf file)

G. Notice of Award form (electronic Word file)

H. Agreement, Performance Bond, and Payment Bond forms (electronic Word files)

I. Issued-for-Construction CDs (hard copies and electronic pdf files)

J. Pre-construction Conference Agenda/Minutes (electronic pdf files)

K. Drone video (electronic files)

L. Notice to Proceed form (electronic Word file)

VII. ADDITIONAL SERVICES

The professional services listed below are not included in the scope of this Task Order nor does the fee shown in Article IX include any labor and direct expenses for items identified as Additional Services. Should Owner want to include services listed under Additional Services in Engineer's scope, an amendment to this Task Order, or execution of a separate Task Order with the new scope, will be necessary.

1. The fee specifically excludes any fees associated with permits and the actual property acquisition costs.

2. The fee specifically excludes any subsurface utility locates for existing utilities that may be located on or adjacent to the site.

VIII. SPECIAL RESPONSIBILITIES OF OWNER

1. Interim Deliverable Review Requirements. Owner commits to review periods for interim deliverables of no more than 30 calendar days after receipt of deliverables from Engineer. A review meeting will be scheduled and conducted by Engineer no more than 14 calendar days after receipt of Owner review comments, unless a mutually agreed upon date outside this schedule window is selected.

2. Permit Application Fees. Owner agrees to pay directly to the permitting organization all necessary fees to secure applicable permits, except those permits required to be obtained by the Contractor.

IX. FEE

The total fee for Basic Services provided under this Task Order is Eight Hundred Fifty-One Thousand Dollars ($851,000).

A worksheet showing the fee estimate and level of effort by task is included in Attachment C.

X. PERFORMANCE SCHEDULE

This Task Order will be completed by May 31, 2026. Bidding of this Work is planned in the 2025-2027 biennium. The schedule is shown in Attachment D.

XI. DOCUMENTS INCORPORATED BY REFERENCE AND ATTACHMENTS

1. Standard Form of Agreement between Owner and Engineer for Professional Services dated January 17, 2008 is incorporated by reference.
2. Attachment A – Preliminary Sheet List
3. Attachment B – Preliminary Specification List
4. Attachment C – Engineering Fee Worksheet
5. Attachment D – Schedule

XII. ACCEPTANCE

If this satisfactorily sets forth your understanding of this Consultant Task Order, please electronically sign this document. An electronic copy of the fully executed document will be provided upon execution by all parties.

By: _____	By: _____
Duane DeKrey, General Manager Garrison Diversion Conservancy District	Paul Boersma, Vice President Black & Veatch Corporation
Dated: _____	Dated: _____

ATTACHMENT A

PRELIMINARY SHEET LIST

Drawing Discipline	Sheet Count
General	4
Demolition	1
Civil	20
Structural	35
Total	**60**

ATTACHMENT B

PRELIMINARY SPECIFICATION LIST

CSI Division	Spec Count
Division 0	14
Division 1	14
Division 2	17
Division 3	8
Division 5	4
Appendix	--
Total	57

Notes:

1. Up to 57 specification sections will be produced enabling the MCIPS Wetwell and BWTP Site Development project to be publicly advertised for bids.

ATTACHMENT C

ENGINEERING FEE WORKSHEET

Garrison Diversion Conservancy District
ENDAWS Task Order 2350 - MCIPS Wetwell & BWTP Site Development Ct1
BV Project No. TBD
Black & Veatch & Consultants

		Position	P	PMS	EM1	DE2	CM2	EST1	EST2	PJC2	PA1	ADM2	QC2	Labor Detail	Labor Detail	Expense Detail	Expense Detail	Sub Consult	Sub Consultant	Expense Detail	Sub Consult	Sub Consultan	Expense Detail	Expense Detail		TOTAL	TOTAL	TOTAL	TOTAL
Task	Lead Firm	Task Description	Principal	Project Manager Senior	Engineering Manager 1	Design Engineer 2	Construction Manager 2	Estimator 1	Estimator 2	Project Controls Analyst 2	Project Accountant 1	Administrator 2	QA/QC Manager 2	BV Level of Effort (hrs)	BV Labor Cost	HOBACCA	Misc	AE2S Hrs	AE2S Fee	AE2S Sub Markup	Subs Hrs	Subs Fee (MTS,KLJ, PSC, ETC.)	Sub Markup	Travel Expense	Total Direct Expense	BV Level of Effort (hrs)	BV Labor Cost	Direct Expense	Fee
IV. BASIC SERVICES																													
1	**BV**	**Task Order Management and Administration**	**20**	**100**	**0**	**40**	**0**	**0**	**0**	**38**	**44**	**0**	**0**	**242**	**$59,506**	**$2,217**	**$40**	**108**	**$26,170**	**$1,308**	**-**	**$0**	**$0**	**$0**	**$29,735**	**242**	**$59,506**	**$29,735**	**$89,241**
A	BV	Project Management	8	40										48	$15,696	$440	$40	28	$7,043	$352	-		$0		$7,875	48	$15,696	$7,875	$23,571
B	BV	Administration	8	40						20	26			94	$22,152	$861		16	$4,595	$230	-		$0		$5,686	94	$22,152	$5,686	$27,838
C	AE2S	Progress Reports												0	$0	$0		32	$7,266	$363	-		$0		$7,629	0	$0	$7,629	$7,629
D	AE2S	Schedule Updates												0	$0	$0		32	$7,266	$363	-		$0		$7,629	0	$0	$7,629	$7,629
E	BV	Management of Subconsultants	4	20		40				18	18			100	$21,658	$916		-	$0	$0	-		$0		$916	100	$21,658	$916	$22,574
2	**AE2S**	**Special Project and Third-Party Meetings**	**3**	**16**	**16**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**38**	**$10,607**	**$349**	**$0**	**170**	**$37,506**	**$1,876**	**-**	**$0**	**$0**	**$0**	**$39,731**	**38**	**$10,607**	**$39,731**	**$50,338**
A	AE2S	Special Project Meetings												0	$0	$0		-	$0	$0	-		$0		$0	0	$0	$0	$0
i	AE2S	TO Initiation Meeting	1	4	4							1		10	$2,761	$92		56	$12,436	$622	-		$0		$13,150	10	$2,761	$13,150	$15,911
B	AE2S	Third Party Meetings												0	$0	$0		-	$0	$0	-		$0		$0	0	$0	$0	$0
i	AE2S	Stakeholder Meetings	1	4	4							1		10	$2,761	$92		40	$8,610	$431	-		$0		$9,133	10	$2,761	$9,133	$11,894
ii	AE2S	Design Coordination Meetings	1	8	8							1		18	$5,085	$165		74	$16,460	$823	-		$0		$17,448	18	$5,085	$17,448	$22,533
3	**AE2S**	**Land Services**	**0**	**2**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**$2,178**	**$74**	**$0**	**88**	**$17,842**	**$892**	**-**	**$0**	**$0**	**$0**	**$18,808**	**8**	**$2,178**	**$18,808**	**$20,986**
A	AE2S	Right of Entry Agreements		1	3									4	$1,089	$37		88	$17,842	$892	-		$0		$18,771	4	$1,089	$18,771	$19,860
B	AE2S	Land Acquisition Services		1	3									4	$1,089	$37		-	$0	$0	-		$0		$37	4	$1,089	$37	$1,126
4	**BV**	**Field Services**	**0**	**2**	**32**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**34**	**$8,782**	**$311**	**$0**	**128**	**$35,223**	**$1,761**	**-**	**$0**	**$0**	**$1,900**	**$39,195**	**34**	**$8,782**	**$39,195**	**$47,977**
A	BV	Supplemental Geotechnical Field Investigations												0	$0	$0		56	$14,000	$700	-		$0		$14,700	0	$0	$14,700	$14,700
B	AE2S	Limited Topographic Survey		1	8									9	$2,359	$82		44	$12,154	$608	-		$0		$12,844	9	$2,359	$12,844	$15,203
C	AE2S	Site Visits		1	24									25	$6,423	$229		28	$9,069	$453	-		$0	$1,900	$11,651	25	$6,423	$11,651	$18,074
5	**BV**	**Final Design Services**	**16**	**32**	**92**	**0**	**16**	**80**	**80**	**0**	**0**	**0**	**32**	**348**	**$84,104**	**$3,189**	**$4,000**	**2,142**	**$427,750**	**$21,388**	**143**	**$25,000**	**$1,250**	**$0**	**$482,577**	**348**	**$84,104**	**$482,577**	**$566,681**
A	AE2S	Design Team Conference Calls (12)	4	8										12	$3,924	$110		150	$32,724	$1,636	-		$0		$34,470	12	$3,924	$34,470	$38,394
B	BV	Geotechnical Baseline Report												0	$0	$0		-	$0	$0	-		$0		$0	0	$0	$0	$0
C	BV	Geotechnical Design Memorandum/GDR												0	$0	$0		-	$0	$0	-		$0		$0	0	$0	$0	$0
D	AE2S	Front-End Documents Customization	1		4									5	$1,343	$46		198	$41,340	$2,067	-		$0		$43,453	5	$1,343	$43,453	$44,796
E	AE2S	Permitting		2	8									10	$2,686	$92		88	$19,232	$962	143	$25,000	$1,250		$46,536	10	$2,686	$46,536	$49,222
F	AE2S	60-Percent CDs (Level 2 Design)	2	4	16									22	$6,026	$202		544	$105,616	$5,281	-		$0		$111,099	22	$6,026	$111,099	$117,125
G	AE2S	90-Percent CDs (Level 3 Design)	2	4	16									22	$6,026	$202		544	$105,616	$5,281	-		$0		$111,099	22	$6,026	$111,099	$117,125
H	AE2S	100-Percent CDs	2	4	8									14	$3,994	$128		424	$83,516	$4,176	-		$0		$87,820	14	$3,994	$87,820	$91,814
I	AE2S	Final Sealed and Signed CDs	1	2	8									11	$3,013	$101		52	$10,424	$521	-		$0		$11,046	11	$3,013	$11,046	$14,059
J	BV	OPCCs	2	4	24		16	80	80				8	214	$47,146	$1,960		142	$29,282	$1,464	-		$0		$32,706	214	$47,146	$32,706	$79,852
K	BV	Quality Control	2	4	8								24	38	$9,946	$348		-	$0	$0	-		$0		$348	38	$9,946	$348	$10,294
6	**BV**	**Bidding Assistance**	**2**	**12**	**54**	**0**	**12**	**0**	**0**	**0**	**0**	**44**	**0**	**124**	**$25,162**	**$1,135**	**$5,000**	**312**	**$65,313**	**$3,266**	**-**	**$0**	**$0**	**$1,900**	**$76,614**	**124**	**$25,162**	**$76,614**	**$101,776**
A	BV	Advertisment and Bid Letting												0	$0	$0		-	$0	$0	-		$0		$0	0	$0	$0	$0
i	AE2S	Finalize Front-End Documents	1	1	4									6	$1,670	$55		-	$0	$0	-		$0		$55	6	$1,670	$55	$1,725
ii	AE2S	Invitation to Bid			1									1	$254	$9		8	$2,020	$101	-		$0		$2,130	1	$254	$2,130	$2,384
iii	BV	Production of Contract Documents			2							16		18	$2,268	$165	$1,500	-	$0	$0	-		$0		$1,665	18	$2,268	$1,665	$3,933
iv	Dual	Pre-bid Conference (virtual)		1	2		2					2		7	$1,393	$64		8	$1,548	$77	-		$0		$1,689	7	$1,393	$1,689	$3,082
v	AE2S	Interpretation of Bidding Documents		1	4									5	$1,343	$46		128	$25,620	$1,281	-		$0		$26,947	5	$1,343	$26,947	$28,290
vii	BV	Update Cost Opinion and Furnish OPCC	1	1	4									6	$1,670	$55		-	$0	$0	-		$0		$55	6	$1,670	$55	$1,725
viii	BV	Bid Opening		1	1		2					2		6	$1,139	$55		-	$0	$0	-		$0		$55	6	$1,139	$55	$1,194
B	AE2S	Pre-award Services												0	$0	$0		-	$0	$0	-		$0		$0	0	$0	$0	$0
i	AE2S	Questionairres		1	1									2	$581	$18		12	$3,011	$151	-		$0		$3,180	2	$581	$3,180	$3,761
ii	AE2S	Qualifications of Apparent Successful Bidder		1	1									2	$581	$18		18	$4,185	$209	-		$0		$4,412	2	$581	$4,412	$4,993

Garrison Diversion Conservancy District
ENDAWS Task Order 2350 - MCIPS Wetwell & BWTP Site Development Ct1
BV Project No. TBD
Black & Veatch & Consultants

		Position	P	PMS	EM1	DE2	CM2	EST1	EST2	PJC2	PA1	ADM2	QC2	Labor Detail	Labor Detail	Expense Detail	Expense Detail	Sub Consult	Sub Consultant	Expense Detail	Sub Consult	Sub Consultan	Expense Detail	Expense Detail		TOTAL	TOTAL	TOTAL	TOTAL
Task	Lead Firm	Task Description	Principal	Project Manager Senior	Engineering Manager 1	Design Engineer 2	Construction Manager 2	Estimator 1	Estimator 2	Project Controls Analyst 2	Project Accountant 1	Administrator 2	QA/QC Manager 2	BV Level of Effort (hrs)	BV Labor Cost	HOBACCA	Misc	AE2S Hrs	AE2S Fee	AE2S Sub Markup	Subs Hrs	Subs Fee (MTS,KLJ, PSC, ETC.)	Sub Markup	Travel Expense	Total Direct Expense	BV Level of Effort (hrs)	BV Labor Cost	Direct Expense	Fee
iii	AE2S	Bid Tabulations		1	1									2	$581	$18		6	$1,359	$68	-		$0		$1,445	2	$581	$1,445	$2,026
iv	AE2S	Review of Contractor's Bonds, Insurance, etc.			1									1	$254	$9		18	$4,185	$209	-		$0		$4,403	1	$254	$4,403	$4,657
C	BV	Post-award Services												0	$0	$0		-	$0	$0	-		$0		$0	0	$0	$0	$0
i	BV	Prepare Issued-for-Construction CDs		1	4							16		21	$3,103	$192	$2,500	62	$11,376	$569	-		$0		$14,637	21	$3,103	$14,637	$17,740
ii	Dual	Sched & Mod Preconst Conf (1 2-dy trp)		2	24		8					8		42	$8,982	$385	$1,000	32	$7,476	$374	-		$0	$1,900	$11,135	42	$8,982	$11,135	$20,117
iii	AE2S	Obtain Drone-Based Video		1	4									5	$1,343	$46		20	$4,532	$227	-		$0		$4,805	5	$1,343	$4,805	$6,148
PROJECT TOTALS			**41**	**164**	**200**	**40**	**28**	**80**	**80**	**38**	**44**	**47**	**32**	**794**	**$190,339**	**$7,275**	**$9,040**	**2,948**	**$609,805**	**$30,491**	**143**	**$25,000**	**$1,250**	**$3,800**	**$686,661**	**794**	**$190,339**	**$686,661**	**$877,000**

Garrison Diversion Conservancy District

ENDAWS Task Order 2350 - MCIPS Wetwell & BWTP Site Development Ct1

BV Project No. TBD

AE2S

		Position	PM6	PM5	PM2	ENGIII	ENGI	SD2	ET5	ENGIII	ENGIV	ET3	PMIII	LSIV	GISV	COMIII	ADM III	Labor Detail	Labor Detail	Expense Detail	Expense Detail	Expense Detail		TOTAL	TOTAL	TOTAL	TOTAL
Task	Lead Firm	Task Description	Principal	Project Manager	Technical Expert QA/QC	Civil Engineer	Civil Staff Engineer	Civil Senior Designer	Civil CAD Tech	Strucutral Engineer	Structural Staff Engineer	Strucutral Senior Designer	Surveyor Manager	Land Surveyor	GIS	Communications	Admin	AE2S Level of Effort (hrs)	Labor Cost	Travel	Misc	Survey Equip	Total Expense	AE2S Level of Effort (hrs)	AE2S Labor Cost	Direct Expense	Fee
IV. BASIC SERVICES																											
1		**Task Order Management and Administration**	**32**	**36**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**24**	**108**	**$26,170**	**$0**	**$0**	**$0**	**$0**	**108**	**$26,170**	**$0**	**$26,170**
A	BV	Project Management	8	12													8	28	$7,043	$0			$0	28	$7,043	$0	$7,043
B	BV	Administration	8	8														16	$4,595				$0	16	$4,595	$0	$4,595
C	AE2S	Progress Reports	8	8												8	8	32	$7,266				$0	32	$7,266	$0	$7,266
D	AE2S	Schedule Updates	8	8												8	8	32	$7,266				$0	32	$7,266	$0	$7,266
E	BV	Management of Subconsultants	0	0		0												0	$0				$0	0	$0	$0	$0
2	**AE2S**	**Special Project and Third-Party Meetings**	**12**	**28**	**10**	**36**	**36**	**0**	**0**	**0**	**0**	**0**	**14**	**0**	**16**	**8**	**10**	**170**	**$36,506**	**$1,000**	**$0**	**$0**	**$1,000**	**170**	**$36,506**	**$1,000**	**$37,506**
A	AE2S	Special Project Meetings																0	$0				$0	0	$0	$0	$0
i	AE2S	TO Initiation Meeting	2	12	2	12	12	0	0				12	0	0	0	4	56	$12,436	$0			$0	56	$12,436	$0	$12,436
B	AE2S	Third Party Meetings																0	$0				$0	0	$0	$0	$0
i	AE2S	Stakeholder Meetings	2	8	2	8	8	0	0				2	0	8	0	2	40	$8,610	$0			$0	40	$8,610	$0	$8,610
ii	AE2S	Design Coordination Meetings	8	8	6	16	16								8	8	4	74	$15,460	$1,000			$1,000	74	$15,460	$1,000	$16,460
3		**Land Services**	**0**	**8**	**0**	**2**	**20**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**30**	**0**	**20**	**88**	**$17,342**	**$500**	**$0**	**$0**	**$500**	**88**	**$17,342**	**$500**	**$17,842**
A	AE2S	Right of Entry Agreements		8		2	20						8		30		20	88	$17,342	$500			$500	88	$17,342	$500	$17,842
B	AE2S	Land Acquisition Services																0	$0				$0	0	$0	$0	$0
4		**Field Services**	**2**	**12**	**2**	**8**	**16**	**0**	**0**	**0**	**0**	**0**	**8**	**64**	**16**	**0**	**0**	**128**	**$26,023**	**$8,000**	**$0**	**$1,200**	**$9,200**	**128**	**$26,023**	**$9,200**	**$35,223**
A	BV	Supplemental Geotechnical Field Investigations					4						4	40	8			56	$11,000	$3,000		$0	$3,000	56	$11,000	$3,000	$14,000
B	AE2S	Limited Topographic Survey		4			4						4	24	8			44	$8,954	$2,000		$1,200	$3,200	44	$8,954	$3,200	$12,154
C	AE2S	Site Visits	2	8	2	8	8											28	$6,069	$3,000			$3,000	28	$6,069	$3,000	$9,069
5		**Final Design Services**	**56**	**244**	**126**	**358**	**262**	**138**	**124**	**184**	**338**	**208**	**12**	**12**	**0**	**12**	**68**	**2,142**	**$426,750**	**$0**	**$1,000**	**$0**	**$1,000**	**2,142**	**$426,750**	**$1,000**	**$427,750**
A	AE2S	Design Team Conference Calls (12)	12	48	12	24	14		0				12	12		12	4	150	$32,724				$0	150	$32,724	$0	$32,724
B	BV	Geotechnical Baseline Report																0	$0				$0	0	$0	$0	$0
C	BV	Geotechnical Design Memorandum/GDR																0	$0				$0	0	$0	$0	$0
D	AE2S	Front-End Documents Customization		40	24	40		48	30								16	198	$41,340				$0	198	$41,340	$0	$41,340
E	AE2S	Permitting	4	20	20	20		8	8								8	88	$19,232				$0	88	$19,232	$0	$19,232
F	AE2S	60-Percent CDs (Level 2 Design)	12	40	20	80	80	20	24	60	120	80					8	544	$105,616				$0	544	$105,616	$0	$105,616
G	AE2S	90-Percent CDs (Level 3 Design)	12	40	20	80	80	20	24	60	120	80					8	544	$105,616				$0	544	$105,616	$0	$105,616
H	AE2S	100-Percent CDs	12	40	20	80	80	20	24	20	80	40					8	424	$83,016		$500		$500	424	$83,016	$500	$83,516
I	AE2S	Final Sealed and Signed CDs	2	4	2	4	4	8	4	4	4	8					8	52	$9,924		$500		$500	52	$9,924	$500	$10,424
J	BV	OPCCs	2	12	8	30	4	14	10	40	14						8	142	$29,282				$0	142	$29,282	$0	$29,282
K	BV	Quality Control																0	$0				$0	0	$0	$0	$0
6		**Bidding Assistance**	**8**	**52**	**32**	**74**	**66**	**8**	**32**	**0**	**0**	**0**	**0**	**8**	**0**	**32**	**0**	**312**	**$63,313**	**$1,500**	**$500**	**$0**	**$2,000**	**312**	**$63,313**	**$2,000**	**$65,313**
A	BV	Advertisment and Bid Letting																0	$0				$0	0	$0	$0	$0
i	AE2S	Finalize Front-End Documents																0	$0				$0	0	$0	$0	$0
ii	AE2S	Invitation to Bid		4	4													8	$2,020				$0	8	$2,020	$0	$2,020
iii	BV	Production of Contract Documents																0	$0				$0	0	$0	$0	$0
iv	Dual	Pre-bid Conference (virtual)		2		2	2									2		8	$1,548				$0	8	$1,548	$0	$1,548
v	AE2S	Interpretation of Bidding Documents	4	20	4	40	40	8	8							4		128	$25,620				$0	128	$25,620	$0	$25,620
vii	BV	Update Cost Opinion and Furnish OPCC																0	$0				$0	0	$0	$0	$0
viii	BV	Bid Opening																0	$0	$0			$0	0	$0	$0	$0
B	AE2S	Pre-award Services																0	$0				$0	0	$0	$0	$0
i	AE2S	Questionairres		4	8													12	$3,011				$0	12	$3,011	$0	$3,011
ii	AE2S	Qualifications of Apparent Successful Bidder		2	8	8												18	$4,185				$0	18	$4,185	$0	$4,185
iii	AE2S	Bid Tabulations		2		4												6	$1,359				$0	6	$1,359	$0	$1,359
iv	AE2S	Review of Contractor's Bonds, Insurance, etc.		2	8	8												18	$4,185				$0	18	$4,185	$0	$4,185
C	BV	Post-award Services																0	$0				$0	0	$0	$0	$0

Garrison Diversion Conservancy District

ENDAWS Task Order 2350 - MCIPS Wetwell & BWTP Site Development Ct1

BV Project No. TBD

AE2S

		Position	PM6	PM5	PM2	ENGIII	ENGI	SD2	ET5	ENGIII	ENGIV	ET3	PMIII	LSIV	GISV	COMIII	ADM III	Labor Detail	Labor Detail	Expense Detail	Expense Detail	Expense Detail		TOTAL	TOTAL	TOTAL	TOTAL
Task	Lead Firm	Task Description	Principal	Project Manager	Technical Expert QA/QC	Civil Engineer	Civil Staff Engineer	CivilSenior Designer	Civil CAD Tech	Strucutral Engineer	Structural Staff Engineer	Strucutral Senior Designer	Surveyor Manager	Land Surveyor	GIS	Communications	Admin	AE2S Level of Effort (hrs)	Labor Cost	Travel	Misc	Survey Equip	Total Expense	AE2S Level of Effort (hrs)	AE2S Labor Cost	Direct Expense	Fee
i	BV	Prepare Issued-for-Construction CDs	4	4		4	16		24							10		62	$11,376				$0	62	$11,376	$0	$11,376
ii	Dual	Sched & Mod Preconst Conf (1 2-dy trp)		8		8	8							8				32	$6,476	$1,000			$1,000	32	$6,476	$1,000	$7,476
iii	AE2S	Obtain Drone-Based Video		4												16		20	$3,532	$500	$500		$1,000	20	$3,532	$1,000	$4,532
PROJECT TOTALS			**110**	**380**	**170**	**478**	**400**	**146**	**156**	**184**	**338**	**208**	**42**	**84**	**62**	**68**	**122**	**2,948**	**$596,105**	**$11,000**	**$1,500**	**$1,200**	**$13,700**	**2,948**	**$596,105**	**$13,700**	**$609,805**

ATTACHMENT D

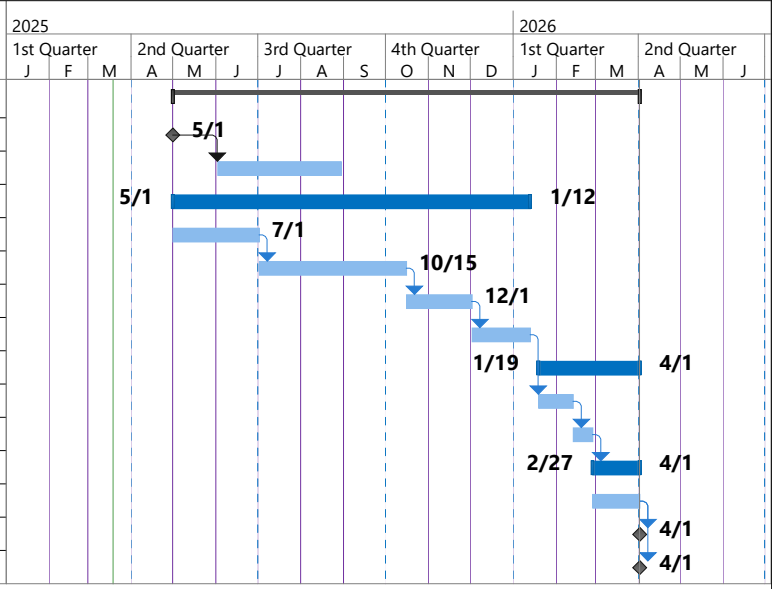
SCHEDULE

ENDAWS TO 2350 - MCIPS WW & BWTP Site Dev Ct 1 Dn & BA Schedule

Final Design and Bidding Assistance Schedule
MCIPS Wetwell and BWTP Site Developement, Contract 1
Eastern North Dakota Alternate Water Supply Project

Wed 3/19/25

ID	Task Name	Duration	Start	Finish
1	**MCIPS Wetwell & BWTP Site Development Ct 1**	**240 days**	**Thu 5/1/25**	**Wed 4/1/26**
2	Notice to Proceed	0 days	Thu 5/1/25	Thu 5/1/25
3	Geotechnical Field Program	65 days	Mon 6/2/25	Fri 8/29/25
4	**Final Design**	**183 days**	**Thu 5/1/25**	**Mon 1/12/26**
5	Prepare & Deliver 60% Docs	44 days	Thu 5/1/25	Tue 7/1/25
6	Prepare & Deliver 90% Docs	76 days	Wed 7/2/25	Wed 10/15/25
7	Prepare & Deliver 100% Docs	33 days	Thu 10/16/25	Mon 12/1/25
8	Prepare & Deliver Final Docs	30 days	Tue 12/2/25	Mon 1/12/26
9	**Bidding Assistance & Award**	**53 days**	**Mon 1/19/26**	**Wed 4/1/26**
10	Advertisement & Bid Letting	19 days	Mon 1/19/26	Thu 2/12/26
11	Pre-Award Services	10 days	Fri 2/13/26	Thu 2/26/26
12	**Post-Award Services**	**24 days**	**Fri 2/27/26**	**Wed 4/1/26**
13	Contracting	24 days	Fri 2/27/26	Wed 4/1/26
14	Pre-Construction Conference	0 days	Wed 4/1/26	Wed 4/1/26
15	Construction Notice to Proceed	0 days	Wed 4/1/26	Wed 4/1/26



ENDAWS Task Order 3150 – Biota Water Treatment Plant Piloting and Treatability Study

Task Order Effective Date: April 1, 2025

TASK ORDER EXECUTIVE SUMMARY

REQUEST

Consideration and approval of a task order in the amount of $872,000 for pilot testing and treatability studies for the Biota Water Treatment Plant as part of the Eastern North Dakota Alternate Water Supply (ENDAWS) project.

NEED AND BENEFIT

The task order builds on the preliminary design completed as part of Task Order 3210 by verifying the sizing and treatment efficiencies of proposed treatment processes. The pilot testing will result in final recommendations for equipment sizing, operating parameters, and chemical use for the final design. Pilot testing is a normal part of the design process for a new water treatment plant and is similar to what Fargo performed for its new water treatment plant design. Pilot testing is also a requirement of the U.S. Department of the Interior, Bureau of Reclamation's Record of Decision. Pilot testing and bench scale testing will use water from the McClusky Canal. See photograph on the next page for a representative view of pilot testing unit.

TASK ORDER SUMMARY

The services to be provided by the engineering team are fully described in the attached Task Order. The following summarizes each of the major tasks.

Basic Services:

	Fee
1) Task Order Management and Administration	$30,404
2) Special Project and Third-Party Meetings	$32,608
3) Pilot Study Protocol	$33,045
4) Pilot Equipment Procurement	$259,242
5) Pilot Preparation and Setup	$123,006
6) Pilot Start-Up and Operation	$315,958
7) Pilot Decommissioning	$15,789
8) Pilot Study and Treatability Report	$61,948
Totals	$872,000

Special Services: There are no unique or specialized services required under this Task Order.

PROJECT OVERVIEW

Task Order 3210 provided for the completion of preliminary design for the Biota Water Treatment Plant. The Biota Water Treatment Plant consists of turbidity removal, ultraviolet (UV) disinfection, and chlorine disinfection. The primary treatment goal of the plant is to limit the likelihood that Aquatic Invasive Species (AIS) would be transferred from the Missouri River watershed to the Hudson Bay watershed. In the Summer of 2024, Garrison Diversion and Black & Veatch started a water quality Sampling program to determine water quality at various points in the McClusky Canal. It was determined that the water quality degraded significantly further along the canal, and it was recommended that a pilot program be developed to test pretreatment technologies to make sure proper water conditioning prior to irradiation with the UV system.

ENDAWS Task Order 3150 – Biota Water Treatment Plant Piloting and Treatability Study

Task Order Effective Date: April 1, 2025

TASK ORDER EXECUTIVE SUMMARY

The objective of this Task Order is to complete an ENDAWS Biota Water Treatment Piloting and Treatability Study verifying the capability of pretreatment technologies to maintain turbidity less than 10 NTU and UVT greater than 70 percent prior to the UV and chlorine disinfection processes. The Task Order will also measure the decay rate of chlorine residual through a series of decay rate tests.

The study will perform pilot testing at two separate locations, representing worst case (startup of the facilities) and normal operating inlet water quality. Pilot testing will be performed on Lake Audubon and along the McClusky Canal near Highway 200. The water quality influent to the pilot at Lake Audubon is expected to be representative of normal operating conditions for the Biota Water Treatment Plant when operating on a regular basis. The water quality influent to the pilot at along the McClusky Canal is expected be representative of initial startup conditions or in situations where minimal flow through the facility has occurred. Pilot testing will include evaluations of all three treatment processes – pretreatment, UV disinfection, and chlorination. The work under this task order will conclude with a pilot study report making final recommendations for process equipment sizing during the plant's final design.

Figure 1 - Representative Pilot Testing Unit

Black & Veatch Corporation
Professional Services for the Red River Valley Water Supply Project
Under General Agreement dated January 17, 2008

ENDAWS Task Order 3150 – Biota Water Treatment Plant Piloting and Treatability Study

Effective Date – April 1, 2025

Content of this Task Order is as follows:

I. PROJECT BACKGROUND

1. The Red River Valley Water Supply Project (RRVWSP, the Project) will provide a supplemental water supply to eastern and central North Dakota (ND) in the event of drought conditions in the Red River watershed. The Project as envisioned by the Garrison Diversion Conservancy District (Garrison Diversion, the Owner) will also supply additional water to support industrial development as well as provide an environmental benefit to local rivers during drought conditions by augmenting natural stream flows. The source water will be withdrawn from the McClusky Canal and conveyed to a new biota water treatment plant. A multi-county pipeline will then convey flows from the plant to the Sheyenne River. Lake Ashtabula located downstream will provide storage for controlled releases to the Red River Valley. The focus of the ENDAWS project is to pilot test the proposed treatment technologies for the Biota Water Treatment Plant (BWTP) and associated facilities.

2. Professional services for design of the Project will be accomplished through the execution of multiple task orders for study, design, and associated activities as well as for engineering services during construction.

3. The U.S. Department of the Interior, Bureau of Reclamation (Reclamation) completed the Eastern North Dakota Alternate Water Supply Environmental Impact Statement (EIS) which resulted in the Record of Decision being signed for the ENDAWS portion of this project. As such, Reclamation is a stakeholder for this project and coordination with them is presumed throughout the effort.

4. Task Order 3210 provides for the completion of preliminary design for the BWTP The BWTP generally consists of turbidity removal, ultraviolet (UV) disinfection, and chlorine disinfection.

5. The primary treatment goal for the BWTP is to limit the likelihood that Aquatic Invasive Species (AIS) would be transferred from the Missouri River watershed to the Hudson Bay watershed.

6. In the Summer of 2024, Owner and Engineer started a Water Quality Sampling program to determine water quality at various points in the canal. It was determined that the water quality degraded significantly further along the canal, and it was recommended that a pilot program be developed to test pretreatment technologies to ensure proper water conditioning prior to irradiation in the UV system.

II. TASK ORDER OBJECTIVES

1. The objective for this Task Order is to complete an ENDAWS BWTP Piloting and Treatability Study verifying the capability of pretreatment technologies to maintain turbidity less than 10 NTU and UVT greater than 70 percent prior to the UV and chlorine disinfection processes. The task order will also measure the decay rate of chlorine residual through a series of decay rate tests.

2. The study will perform pilot testing at two different locations, representing worst case (startup of the facilities) and normal operating influent water quality. Pilot testing will be performed on Lake Audubon and along the McClusky Canal near Highway 200. The water quality influent to the pilot at Lake Audubon is expected to be representative of normal operating conditions for the BWTP when operating on a regular basis. The water quality influent to the pilot at along the McClusky Canal is expected be representative of initial startup conditions for the BWTP or in situations where minimal flow through the facility has occurred. Pilot testing will include evaluations of all three treatment processes – pretreatment, UV disinfection, and chlorination.

3. Specific activities for this Task Order are to:

   A. Develop pilot study protocol.

   B. Procure pilot equipment.

   C. Prepare, deliver, and set up pilot testing equipment at each site.

   D. Start-up and operate the pilot plant at each site.

   E. Decommission and return piloting equipment.

   F. Prepare Pilot Study and Treatability Report.

III. GENERAL REQUIREMENTS

1. Under this Task Order, Engineer will provide services in accordance with the Standard Form of Agreement between Owner and Engineer for Professional Services dated January 17, 2008 (Agreement).

2. General Description of Activities. The Basic Services to be performed by Engineer consist of professional study and report services associated with completion of a pilot study and development of a treatability report.

3. Work Outside Basic and Special Services. Engineer agrees to provide the Basic Services and Special Services identified herein. Work not specifically discussed herein as part of Basic Services or Special Services is considered Additional Services. Additional Services will only be performed with proper separate authorization such as an amendment to this Task Order or a new separate Task Order.

4. Explicit Responsibilities. Basic Services and Special Services explicitly set forth the services Engineer will perform and do not implicitly put any additional responsibilities or duties upon the Engineer. Deliverables to be provided are explicitly identified in the Deliverables paragraph of this Task Order.

5. Explicitly Identified Quantities. Engineer in development of this Task Order estimates the level of effort required to provide the services discussed. Where specific information is listed as to the quantity of service to be provided, those quantities listed are considered Basic Services or Special Services and are, therefore, included in this Task Order scope of services and associated fee estimate. Services exceeding the written quantities shown below in Basic Services or Special Services are considered Additional Services.

IV. BASIC SERVICES

Basic Services of this Task Order are organized into major tasks as follows:

- Task 1 – Task Order Management and Administration
- Task 2 – Special Project and Third-Party Meetings
- Task 3 – Pilot Study Protocol
- Task 4 – Pilot Equipment Procurement
- Task 5 – Pilot Preparation and Setup
- Task 6 – Pilot Start-Up and Operation
- Task 7 – Pilot Decommissioning
- Task 8 – Pilot Study and Treatability Report

1. Task 1 – Task Order Management and Administration

This task includes overall management and development of a Project Management Plan specific to the Work. The overall objective of this task is to keep the Task Order on schedule and on budget.

A. Project Management. Engineer will provide management services necessary for execution of the Task Order, including efforts required for proper resource allocation, schedule development and monitoring, budget review and control, Owner coordination, and other standard and customary activities required for timely completion of the Work. Owner coordination will occur through regular project conference calls at least twice monthly throughout the project duration.

B. Administration. Perform general administrative duties associated with the Task Order, including general correspondence, day-to-day contact and coordination, administration, and monthly invoicing in a form that is acceptable to the Owner.

C. Management of Subconsultants. Engineer will monitor subcontractor progress, review and approve invoices, oversee adherence to the approved quality assurance/quality control (QA/QC) plan, monitor adherence to document preparation standards, and generally oversee Subconsultants' performance.

2. Task 2 – Special Project and Third-Party Meetings

The overall objective of this task is to keep stakeholders apprised of Task Order status and to provide a forum for stakeholder input. Engineer will prepare an agenda and provide meeting notes documenting discussions and action items. The following meetings are anticipated:

A. Special Project Meetings

i. Task Order Initiation Meeting. Engineer will conduct a Task Order Initiation Meeting with Garrison Diversion and consultants to review the overall approach to the Work, the schedule by which the work will be prosecuted, and other relevant coordination and management items necessary for a successful outcome.

ii. Coordination meetings with Garrison Diversion. Engineer will conduct regular coordination meetings with Garrison Diversion associated with the pilot testing along McClusky Canal, which is expected to be performed on the Garrison Diversion maintenance garage site.

B. . Stakeholder Meetings. Engineer will attend and present study findings at one meeting with the Lake Agassiz Water Authority (LAWA) Technical Advisory Committee (TAC).

C. Bureau of Reclamation Meetings. Reclamation will be engaged throughout the study and meetings are assumed twice during the pilot study to report the progress of the study in addition to regular onsite meetings as outlined in specific study tasks.

3. Task 3 – Pilot Study Protocol

Engineer will prepare a Pilot Study Protocol document to further define the specific goals of the piloting program, establish procedures for set-up, operation, monitoring, sampling and testing, and cleaning of the pilot study equipment defining roles and responsibilities for all parties involved. The protocol for both pilot study locations will be documented. Garrison Diversion will review the draft Pilot Study Protocol and provide comments. Engineer will participate in a pilot study initiation meeting with the Owner and consultant to review the protocol, address Owner's review comments, and finalize the protocol.

A. Pilot Location Requirements. Pilot testing is planned to occur at two different sites (final location to be determined): one on Lake Audubon and one on the McClusky Canal. The protocol will address required infrastructure such as power, ability to discharge flow from the equipment, access, and Owner support.

B. Testing Durations and Support. It is anticipated that the overall pilot testing will occur first at Lake Audubon and then on the McClusky Canal. The overall timeline for pilot testing is expected as follows:

   i. A week of commissioning and startup at the first site.

   ii. Six weeks of pilot testing. Pilot will run continuously and be monitored by Engineer or its consultant up to 10 hours per day, 7 days per week.

   iii. One week for transfer of equipment to the second site.

   iv. A week of commissioning and startup at the second site.

   v. Six weeks of pilot testing. Pilot will run continuously and be monitored by Engineer or its consultant up to 10 hours per day, 7 days per week.

   vi. One week of decommissioning and final data collection.

C. Testing Goals. The pilot study will be used to define engineering design details that need to be determined to better understand the proper application of the pretreatment, UV, and chlorination processes. In general, the purposes of the proposed pilot study include:

   i. Demonstrate the effectiveness of the proposed processes in meeting the targeted finished water quality goals (turbidity reduction, increase clarity/UVT, observe organic matter reduction, etc.)

   ii. Establish full-scale design and operating parameters for the proposed processes.

   iii. Determine the pretreatment requirements for downstream processes.

   iv. Determine the potential for fouling and means of mitigating fouling of UV sleeves.

   v. Establish the chlorine decay curves to better establish chlorine dose requirements in the full-scale BWTP.

vi. Establish the residuals blowdown rate and frequency and determine solids concentration for sizing of residuals thickener/storage tank and dewatering lagoons.

vii. Record influent and effluent water quality to confirm treatment goals for the plate settlers are being met.

4. Task 4 – Pilot Equipment Procurement

This task includes procuring pilot testing equipment for the pilot study, including a pumping system, plate settling equipment, and UV equipment (which will be a single UV lamp in a pipeline reactor, a UV intensity monitor, and an online UVT analyzer).

A. Engineer will prepare a prequalification document for equipment suppliers and a detailed required scope of supply. The prequalification document will be used to obtain proposals from plate settling and UV equipment suppliers. After receipt of proposals, a vendor will be selected in consultation with Garrison Diversion.

B. Rental of equipment for the pilot is expected to include the rental of a pretreatment unit (rapid mix/flocculation/sedimentation/residuals collection) at approximately 100 gallons per minute capacity, sodium hypochlorite totes, portable restroom, and enclosed truck trailer. An allowance for rental equipment is included in the fee.

C. Purchase of equipment for the pilot is expected to include purchase of a UVT analyzer, chlorine feed equipment, and a small UV testing unit. UV lamp and UV intensity monitor may need to be purchased if rental units are not available from the major UV vendors. Analytical equipment may also be purchased for the piloting. If equipment is purchased, that equipment will be transferred to Owner at completion to possibly be used in the future BWTP laboratory. An allowance for purchased equipment is included in the fee.

i. UV System. UV lamp and intensity monitor. A UVT analyzer will be purchased to measure UV transmittance downstream of the pretreatment system based on a Real Tech M3000 unit with Real-Clean system and debubbler. Estimated cost for these items has been included in the equipment purchase allowance.

ii. Chlorine Feed Equipment. Equipment will include a small peristatic pump, polyurethane storage tanks, and miscellaneous piping, fittings and hoses.

iii. Analytical Equipment. See Subsection 6.D for further description.

iv. Raw Water Pumping. A submersible pump with basket at a capacity of at least 100 gallons per minute and associated equipment.

v. Pretreatment and chlorination chemicals. Chlorination will be in the form of sodium hypochlorite for the pilot.

5. Task 5 – Pilot Preparation and Setup

This task includes the delivery, site preparation, and set up of piloting units.

A. Upon arrival of the pretreatment pilot equipment to the site, Engineer and consultant will set up the pilot at each location and commission its operation. Engineer and consultant will provide staff for the duration of pilot testing to operate and maintain the pilot, including calibration of equipment and modification of testing parameters. Engineer and consultant will perform testing onsite and take samples to be sent for analysis.

B. Equipment is expected to be trailer mounted to the extent possible. Power will be required, and potable water is assumed to be trucked to the sites and stored in tanks. A pad is expected to be needed for location of the pilot near the channel and at Lake Audubon (dependent on final siting).

C. Coordination with Owner staff to provide manpower and equipment to assist in set up, installation, and transportation of equipment is planned for the project.

D. Owner staff is encouraged to assist in operation of pilot plant to gain operational experience and familiarity with equipment.

6. Task 6 – Pilot Start-Up and Operation

A. Engineer will arrange a piloting start-up meeting with Owner to discuss the selected site, pilot set up, start-up and commissioning activities, and day-to-day operations and maintenance of the facility.

B. Bench Scale Testing. Various bench scale tests will be conducted during the pilot to inform decisions regarding pilot set up and/or process design parameters. These bench scale tests will be conducted during pilot operation and test results incorporated into the pilot report.

i. Pretreatment Coagulation Chemical Jar Tests. Engineer will perform jar tests on up to three coagulation chemicals to determine dose response curves for removal of turbidity and increasing UVT to acceptable dose range. Tests will originally be conducted on water from both sites to determine dose for initial startup of the pretreatment pilot.

ii. Residuals Blowdown Testing. Once startup of pretreatment unit is complete, testing of residual blowdown frequency will occur to determine solids production at various operational conditions. The residuals will be tested for settleability, solids percentage, and determination of solids production to be used in the thickening and lagoon design. Samples will be offered to manufacturers for testing of thickening equipment.

iii. Chlorine Decay Testing. Chlorine decay trials will be completed once pilot is in steady state at each of the testing sites. One decay trial is anticipated per testing site.

C. Pilot Testing Parameters. The following testing conditions will be tested on each water source through the adjustment of flow and or chemical.

i. Long-term operational conditions: Pilot will test pretreatment, UV, chlorine disinfection, and residuals for confirmation of design parameters developed in Task Order 3210.

ii. Pretreatment Loading Rate: Pretreatment loading rates will be tested at 0.6, 0.3, and 0.15 gallons per minute per square foot (gpm/sf).

iii. Pretreatment Chemical Rate: Trials with and without coagulant chemical will be performed to determine performance at a low loading rate without chemical (simulating low flow operations) and a chemical dose will also be developed for a high flow/loading rate.

iv. UV Fouling Potential: UV lamp will be operated at 100% ballast power continuously. UV intensity will be monitored continuously to determine fouling impacts of feed water at various pretreatment conditions on the UV lamp sleeve.

D. Water Quality Testing: Water testing will be included in the scope of the pilot and will include the following:

i. Online Monitoring: Data logger and analytical instruments will be purchased. The multiparameter sonde unit purchased in Summer 2024 by the Owner will be modified for online use to measure turbidity, chlorophyll, temperature, pH, and conductivity. An online UVT monitor will be purchased as part of the testing program.

ii. Onsite Testing: Water quality testing will be conducted onsite or at an external lab. The project will purchase a general water quality Hach SL1000 or DR900 to test various water quality parameters.

iii. External Lab: Parameters not covered by online monitoring or onsite testing will be sent to an external lab. An allowance is included in the fee for testing of the following parameters: total organic carbon and dissolved organic carbon.

7. Task 7 – Pilot Decommissioning

A. Upon completion of the required pilot testing, Engineer or its consultant will arrange for and coordinate removal of the pilot units from the site. The Owner will provide labor to disassemble the pilot testing equipment, including disconnecting the temporary electrical power, influent water lines, and effluent permeate, waste, and drain lines. Engineer or its consultant will assist with disassembly of the pilot equipment and arrange for shipping of the pilot equipment to the equipment supplier.

8. Task 8 – Pilot Study and Treatability Report

A. Upon completion of the testing period, Engineer shall prepare a draft Pilot Study Report to summarize the purpose, procedures, results, and conclusions of the pilot testing. Engineer will submit an electronic copy of the draft report to the Owner for review. Engineer will organize and conduct a review meeting with the stakeholders to review the draft Pilot

Study Report and address the review comments. Engineer will revise the draft report and submit an electronic copy of the final Pilot Study Report to the Owner.

B. Any modifications to the process design criteria from piloting will be incorporated in the final design for the BWTP and provided as a supplement to the ENDAWS Preliminary Design Report.

V. DELIVERABLES

The following deliverables will be furnished under this Task Order. Documents or deliverables not included in the list below will be provided as Additional Services as authorized by the Owner.

1. Task 1 – Project Management
   A. Monthly invoices
   B. Baseline Project Schedule
2. Task 2 – Special Project and Third-Party Meetings. Meeting agenda (included with MS Outlook meeting invitations) and minutes (electronic pdf files)
3. Task 3 – Pilot Study Protocol
   A. Pilot Study Protocol Manual
4. Task 6 – Pilot Start-Up and Operation
   A. Summary of operations and data collection for the two piloting locations
5. Task 8 – Pilot Study and Treatability Report
   A. Draft Pilot Study and Treatability Report
   B. Final Pilot Study and Treatability Report

VI. SPECIAL SERVICES

None this Task Order.

VII. ADDITIONAL SERVICES

The professional services listed below are not included in the scope of this Task Order nor does the fee shown in Article IX include any labor and direct expenses for items identified as Additional Services. Should Owner want to include services listed under Additional Services in Engineer's scope, an amendment to this Task Order, or execution of a separate Task Order with the new scope, will be necessary.

1. The fee specifically excludes any fees associated with permits.

2. Costs to transport the pilot from the Lake Audubon to McClusky Canal location have not been included. Costs for construction of pads at the sites are not included.

3. Costs for power extension at piloting sites has not been included.

VIII. SPECIAL RESPONSIBILITIES OF OWNER

1. Interim Deliverable Review Requirements. Owner commits to review periods for interim deliverables of no more than 30 calendar days after receipt of deliverables from Engineer. A review meeting will be scheduled and conducted by Engineer no more than 14 calendar days after receipt of Owner review comments, unless a mutually agreed upon date outside this schedule window is selected.

2. Piloting Set Up, Transport, and Decommissioning. Owner will provide manpower to assist with initial set up of pilot equipment including extension of power and construction of pads, as necessary. Owner will transport pilot equipment between testing sites and will assist with decommissioning and taking ownership of equipment purchased on the project.

IX. FEE

The total fee for Basic Services provided under this Task Order is Eight Hundred Seventy-Two Thousand Dollars ($872,000).

A worksheet showing the fee estimate and level of effort by task is included in Attachment A.

X. PERFORMANCE SCHEDULE

Basic and Special Services of this Task Order will be completed by December 31, 2025.

XI. DOCUMENTS INCORPORATED BY REFERENCE AND ATTACHMENTS

1. Standard Form of Agreement between Owner and Engineer for Professional Services dated January 17, 2008 is incorporated by reference.

2. Attachment A – Engineering Fee Worksheets

XII. ACCEPTANCE

If this satisfactorily sets forth your understanding of this Task Order, please electronically sign this document. An electronic copy of the fully executed document will be provided upon execution by all parties.

By: _____
Duane DeKrey, General Manager
Garrison Diversion Conservancy District

Dated: _____

By: _____
Paul Boersma, Vice President
Black & Veatch Corporation

Dated: _____

ATTACHMENT A

ENGINEERING FEE WORKSHEETS

Client: Garrison Diversion Conservancy District

Project Name: ENDAWS Task Order 3150 – Biota Water Treatment Plant Piloting and Treatability Study

BV PN XXXXXX

Black & Veatch Cost Buildup

		Position	P	PMS	PM1	EMS	TE	DES	SE1	PJC2	PA1	PA2	ADM1	Labor Detail	Labor Detail	Expense Detail	Expense Detail	Expense Detail	Sub	Expense Detail	Total	TOTAL	TOTAL	TOTAL	TOTAL
Task	Lead Firm	Task Description	Principal - Boersma	Project Manager Senior - Ronnekamp	Project Manager 1 - Vogt	Engineering Manager - Johnston	Technical Expert (Tadanier, Townsend)	Design Engineer Senior - Hayes	Staff Engineer 1 - TBD	Project Controls Analyst 2	Project Accountant 1	Project Accountant 2	Administrator 1	BV Level of Effort (hrs)	BV Labor Fee	HOBACCA	Misc	Travel Expense	AE2S	Markup	Total Direct Expense	BV Level of Effort (hrs)	BV Labor Fee	Direct Expense Fee	Total Fee
		2025 Contract Billing Rate	$314	$314	$301	$271	$307	$275	$155	$152	$121	$105	$136			$9.16				5%					
1.		**Task Order Management and Administration**	**4**	**14**	**40**	**0**	**0**	**0**	**0**	**9**	**18**	**6**	**12**	**103**	**$23,500**	**$943**	**$509**	**$0**	**$5,192**	**$260**	**$6,904**	**103**	**$23,500**	**$6,904**	**$30,404**
A.	BV	Project Management	4	8	20									32	$9,788	$293	$509		$0	$0	$802	32	$9,788	$802	$10,590
B.	BV	Administration		2	8					6	12	6	12	46	$7,662	$421			$5,192	$260	$5,873	46	$7,662	$5,873	$13,535
C.	BV	Management of Consultants		4	12					3	6			25	$6,050	$229			$0	$0	$229	25	$6,050	$229	$6,279
2.		**Special Project and Third-Party Meetings**	**14**	**10**	**12**	**42**	**4**	**8**	**16**	**0**	**0**	**0**	**0**	**106**	**$28,438**	**$970**	**$0**	**$3,200**	**$0**	**$0**	**$4,170**	**106**	**$28,438**	**$4,170**	**$32,608**
A.		Special Project Meetings												0	$0	$0			$0	$0	$0	0	$0	$0	$0
i.	BV	TO Initiation	4		4	8	4		8					28	$7,096	$256			$0	$0	$256	28	$7,096	$256	$7,352
ii.	BV/AE2S	Coordination Meetings			8	24		8						40	$11,112	$366		$3,200	$0	$0	$3,566	40	$11,112	$3,566	$14,678
B.	BV/AE2S	Stakeholder Meetings	4	4		4			8					20	$4,836	$183			$0	$0	$183	20	$4,836	$183	$5,019
C.	BV/AE2S	Bureau of Reclamation Meetings	6	6		6								18	$5,394	$165			$0	$0	$165	18	$5,394	$165	$5,559
3.		**Pilot Study Protocol**	**3**	**0**	**0**	**18**	**12**	**20**	**32**	**0**	**0**	**0**	**0**	**85**	**$19,964**	**$778**	**$8,133**	**$0**	**$3,972**	**$198**	**$13,081**	**85**	**$19,964**	**$13,081**	**$33,045**
	BV	Draft Pilot Study Protocol	2			16	12	16	24					70	$16,768	$641	$7,100		$2,388	$119	$10,248	70	$16,768	$10,248	$27,016
	BV	Final Pilot Study Protocol	1			2		4	8					15	$3,196	$137	$1,033		$1,584	$79	$2,833	15	$3,196	$2,833	$6,029
4.		**Pilot Equipment Procurement**	**0**	**0**	**0**	**112**	**22**	**50**	**106**	**0**	**0**	**0**	**0**	**290**	**$67,286**	**$2,656**	**$189,300**	**$0**	**$0**	**$0**	**$191,956**	**290**	**$67,286**	**$191,956**	**$259,242**
A.	BV	Develop Prequalification Documents				4	8		16					28	$6,020	$256			$0	$0	$256	28	$6,020	$256	$6,276
B.	BV	Rental of Pilot Equipment				4	4		16					24	$4,792	$220	$54,400		$0	$0	$54,620	24	$4,792	$54,620	$59,412
C.	BV	Purchase of Equipment/Testing/Chemicals				12	2		24					38	$7,586	$348	$134,900		$0	$0	$135,248	38	$7,586	$135,248	$142,834
i.	BV/AE2S	Pilot Design/Logistics and Coordination for set up				92	8	50	50					200	$48,888	$1,832			$0	$0	$1,832	200	$48,888	$1,832	$50,720
5.		**Pilot Preparation and Setup**	**4**	**0**	**0**	**172**	**8**	**0**	**264**	**0**	**0**	**0**	**0**	**448**	**$91,244**	**$4,103**	**$0**	**$12,200**	**$14,723**	**$736**	**$31,762**	**448**	**$91,244**	**$31,762**	**$123,006**
A.	BV/AE2S	Setup of Equipment (2 locations)	2			112	4		152					270	$55,768	$2,473		$6,800	$14,723	$736	$24,732	270	$55,768	$24,732	$80,500
B.	BV/AE2S	Commisioning (2 locations)	2			60	4		112					178	$35,476	$1,630		$5,400	$0	$0	$7,030	178	$35,476	$7,030	$42,506
6.		**Pilot Start-Up and Operation**	**8**	**16**	**0**	**40**	**8**	**0**	**584**	**0**	**0**	**0**	**0**	**656**	**$111,352**	**$6,009**	**$0**	**$36,000**	**$154,854**	**$7,743**	**$204,606**	**656**	**$111,352**	**$204,606**	**$315,958**
A.	BV	Start-Up Meeting		2		4			8					14	$2,952	$128			$3,796	$190	$4,114	14	$2,952	$4,114	$7,066
B.	BV/AE2S	Bench Scale Testing (Hours in Task 5)												0	$0	$0			$0	$0	$0	0	$0	$0	$0
C.	BV/AE2S	Pilot Testing Parameters (Hours in Task 5)												0	$0	$0			$0	$0	$0	0	$0	$0	$0
D.	BV/AE2S	Water Quality Parameters (Hours below)												0	$0	$0			$0	$0	$0	0	$0	$0	$0
	BV/AE2S	Operation for 6 weeks at Lake Audubon	4	8		16	4		288					320	$53,972	$2,931		$18,000	$69,837	$3,492	$94,260	320	$53,972	$94,260	$148,232
	AE2S/BV	Relocation of Equipment				4								4	$1,084	$37			$11,384	$569	$11,990	4	$1,084	$11,990	$13,074
	BV/AE2S	Operation for 6 weeks at McClusky Canal	4	6		16	4		288					318	$53,344	$2,913		$18,000	$69,837	$3,492	$94,242	318	$53,344	$94,242	$147,586
7.		**Pilot Decommisioning**	**0**	**0**	**0**	**4**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**12**	**$2,324**	**$110**	**$0**	**$0**	**$12,719**	**$636**	**$13,465**	**12**	**$2,324**	**$13,465**	**$15,789**

Client: Garrison Diversion Conservancy District

Project Name: ENDAWS Task Order 3150 – Biota Water Treatment Plant Piloting and Treatability Study

BV PN XXXXXX

Black & Veatch Cost Buildup

50% each

		Position	P	PMS	PM1	EMS	TE	DES	SE1	PJC2	PA1	PA2	ADM1	Labor Detail	Labor Detail	Expense Detail	Expense Detail	Expense Detail	Sub	Expense Detail	Total	TOTAL	TOTAL	TOTAL	TOTAL
Task	Lead Firm	Task Description	Principal - Boersma	Project Manager Senior - Ronnekamp	Project Manager 1 - Vogt	Engineering Manager - Johnston	Technical Expert (Tadanier, Townsend)	Design Engineer Senior - Hayes	Staff Engineer 1 - TBD	Project Controls Analyst 2	Project Accountant 1	Project Accountant 2	Administrator 1	BV Level of Effort (hrs)	BV Labor Fee	HOBACCA	Misc	Travel Expense	AE2S	Markup	Total Direct Expense	BV Level of Effort (hrs)	BV Labor Fee	Direct Expense Fee	Total Fee
A.	AE2S	Arrange and Coordinate removal of equipment				4			8					12	$2,324	$110			$12,719	$636	$13,465	12	$2,324	$13,465	$15,789
8.		**Pilot Study and Treatability Report**	**10**	**8**	**4**	**52**	**8**	**48**	**104**	**0**	**0**	**0**	**0**	**234**	**$52,724**	**$2,143**	**$0**	**$0**	**$6,744**	**$337**	**$9,224**	**234**	**$52,724**	**$9,224**	**$61,948**
A.	BV	Pilot Study Report												0	$0	$0			$3,576	$179	$3,755	0	$0	$3,755	$3,755
		Draft Pilot Study Report	4		4	24	4	24	80					140	$29,192	$1,282			$0	$0	$1,282	140	$29,192	$1,282	$30,474
		Final Pilot Study Report	2	4		4			8					18	$4,208	$165			$0	$0	$165	18	$4,208	$165	$4,373
B.	BV	BWTP PDR Supplement (if required)	4	4		24	4	24	16					76	$19,324	$696			$3,168	$158	$4,022	76	$19,324	$4,022	$23,346
		Totals For Basic and Special Services	**43**	**48**	**56**	**440**	**62**	**126**	**1,114**	**9**	**18**	**6**	**12**	**1,934**	**$396,832**	**$17,712**	**$197,942**	**$51,400**	**$198,204**	**$9,910**	**$475,168**	**1,934**	**$396,832**	**$475,168**	**$872,000**

Client: Garrison Diversion Conservancy District

Project Name: ENDAWS Task Order 3150 – Biota Water Treatment Plant Piloting and Treatability Study

BV PN XXXXXX

AE2S Cost Buildup

		Position	PM6	PM5	ENGIII	ADM III	Labor Detail	Labor Detail	Expense Detail	Expense Detail		TOTAL	TOTAL	TOTAL	TOTAL
Task	Lead Firm	Task Description	Principal	Project Manager	Processt Engineer	Admin	AE2S Level of Effort (hrs)	Labor Cost	Lodging Per Diem	Travel Expense	Total Expense	AE2S Level of Effort (hrs)	AE2S Labor Cost	Direct Expense	Fee
1.		**Task Order Management and Administration**	**8**	**8**	**0**	**8**	**24**	**$5,192**	**$0**	**$0**	**$0**	**24**	**$5,192**	**$0**	**$5,192**
A.	BV	Project Management					0	$0			$0	0	$0	$0	$0
B.	BV	Administration	8	8		8	24	$5,192			$0	24	$5,192	$0	$5,192
C.	BV	Management of Consultants					0	$0			$0	0	$0	$0	$0
2.		**Special Project and Third-Party Meetings**	**0**	**0**	**0**	**0**	**0**	**$0**	**$0**	**$0**	**$0**	**0**	**$0**	**$0**	**$0**
A.	0	Special Project Meetings					0	$0			$0	0	$0	$0	$0
i.		TO Initiation					0	$0			$0	0	$0	$0	$0
ii.	BV/AE2S	Coordination Meetings					0	$0			$0	0	$0	$0	$0
B.	BV/AE2S	Stakeholder Meetings					0	$0			$0	0	$0	$0	$0
C.	BV/AE2S	Bureau of Reclamation Meetings					0	$0			$0	0	$0	$0	$0
3.		**Pilot Study Protocol**	**4**	**8**	**4**	**0**	**16**	**$3,972**	**$0**	**$0**	**$0**	**16**	**$3,972**	**$0**	**$3,972**
	BV	Draft Pilot Study Protocol	2	4	4		10	$2,388			$0	10	$2,388	$0	$2,388
	BV	Final Pilot Study Protocol	2	4			6	$1,584			$0	6	$1,584	$0	$1,584
4.		**Pilot Equipment Procurement**	**0**	**0**	**0**	**0**	**0**	**$0**	**$0**	**$0**	**$0**	**0**	**$0**	**$0**	**$0**
A.	BV	Develop Prequalification Documents					0	$0			$0	0	$0	$0	$0
B.	BV	Rental of Pilot Equipment					0	$0			$0	0	$0	$0	$0
C.	BV	Purchase of Equipment/Testing/Chemicals					0	$0			$0	0	$0	$0	$0
i.	BV/AE2S	Pilot Design/Logistics and Coordination for set up					0	$0			$0	0	$0	$0	$0
5.		**Pilot Preparation and Setup**	**8**	**8**	**48**	**0**	**64**	**$14,024**	**$206**	**$493**	**$699**	**64**	**$14,024**	**$699**	**$14,723**
A.	BV/AE2S	Setup of Equipment (2 locations)	8	8	48		64	$14,024	$206	$493	$699	64	$14,024	$699	$14,723
B.	BV/AE2S	Commisioning (2 locations)					0	$0			$0	0	$0	$0	$0
6.		**Pilot Start-Up and Operation**	**12**	**20**	**632**	**20**	**684**	**$137,596**	**$10,852**	**$6,406**	**$17,258**	**684**	**$137,596**	**$17,258**	**$154,854**
A.	BV	Start-Up Meeting	4	4	8		16	$3,796			$0	16	$3,796	$0	$3,796
B.		Bench Scale Testing (Hours in Task 5)					0	$0			$0	0	$0	$0	$0
i.	BV/AE2S	Coagulation Jar Testing					0	$0			$0	0	$0	$0	$0
ii.	BV/AE2S	Residuals Blowdown Testing					0	$0			$0	0	$0	$0	$0
iii.	BV/AE2S	Chlorine Decay Testing					0	$0			$0	0	$0	$0	$0
C.	BV/AE2S	Pilot Testing Parameters (Hours in Task 5)					0	$0			$0	0	$0	$0	$0
D.	BV/AE2S	Water Quality Parameters (Hours below)					0	$0			$0	0	$0	$0	$0
	BV/AE2S	Operation for 6 weeks at Lake Audubon	4	8	288	8	308	$61,872	$5,009	$2,957	$7,965	308	$61,872	$7,965	$69,837
	AE2S/BV	Relocation of Equipment			48	4	52	$10,056	$835	$493	$1,328	52	$10,056	$1,328	$11,384
	BV/AE2S	Operation for 6 weeks at McClusky Canal	4	8	288	8	308	$61,872	$5,009	$2,957	$7,965	308	$61,872	$7,965	$69,837
7.		**Pilot Decommisioning**	**0**	**4**	**50**	**8**	**62**	**$11,846**	**$257**	**$616**	**$873**	**62**	**$11,846**	**$873**	**$12,719**

Client: Garrison Diversion Conservancy District

Project Name: ENDAWS Task Order 3150 – Biota Water Treatment Plant Piloting and Treatability Study

BV PN XXXXXX

AE2S Cost Buildup

		Position	PM6	PM5	ENGIII	ADM III	Labor Detail	Labor Detail	Expense Detail	Expense Detail		TOTAL	TOTAL	TOTAL	TOTAL
Task	Lead Firm	Task Description	Principal	Project Manager	Processt Engineer	Admin	AE2S Level of Effort (hrs)	Labor Cost	Lodging Per Diem	Travel Expense	Total Expense	AE2S Level of Effort (hrs)	AE2S Labor Cost	Direct Expense	Fee
A.	AE2S	Arrange and Coordinate removal of equipment		4	50	8	62	$11,846	$257	$616	$873	62	$11,846	$873	$12,719
8.		**Pilot Study and Treatability Report**	**8**	**16**	**0**	**4**	**28**	**$6,744**	**$0**	**$0**	**$0**	**28**	**$6,744**	**$0**	**$6,744**
A.	BV	Pilot Study Report	4	8		4	16	$3,576			$0	16	$3,576	$0	$3,576
		Draft Pilot Study Report					0	$0			$0	0	$0	$0	$0
		Final Pilot Study Report					0	$0			$0	0	$0	$0	$0
B.	BV	BWTP PDR Supplement (if required)	4	8			12	$3,168			$0	12	$3,168	$0	$3,168
		Totals For Basic and Special Services	**40**	**64**	**734**	**40**	**878**	**$179,374**	**$11,315**	**$7,515**	**$18,830**	**878**	**$179,374**	**$18,830**	**$198,204**

ENDAWS Task Order 3220 – Facilities Supplemental Geotechnical Investigation

Task Order Effective Date: April 1, 2025

TASK ORDER EXECUTIVE SUMMARY

REQUEST

Consideration and approval of a task order in the amount of $886,000 for a supplemental geotechnical investigation associated with the McClusky Canal Intake and Pumping Station, the Biota Water Treatment Plant, and the McClusky Main Pumping Station as part of the Eastern North Dakota Alternate Water Supply (ENDAWS) project.

NEED AND BENEFIT

A preliminary geotechnical investigation was completed concurrent with these facilities' preliminary design. This Task Order is for supplemental investigations to support development of the final design and Contract Documents. The borings will be used to support design of access roads, the re-grading of the Canal embankment by the McClusky Canal Intake, and foundations of the Biota Water Treatment Plant, the McClusky Canal Intake Pumping Station, McClusky Main Pumping Station, and other facilities and appurtenance located on the common site. In addition, geotechnical borings will be completed on the proposed Ground Storage Reservoir site, which have not been completed to date.

TASK ORDER SUMMARY

The services to be provided by the engineering team are fully described in the attached Task Order. The following summarizes each of the major tasks.

Basic Services:

	Fee
1) Task Order Management and Administration	$34,885
2) Land Services	$30,152
3) Geotechnical Services	$500,877
4) Report Services	$320,086
Totals	$886,000

Special Services: There are no unique or specialized services required under this Task Order.

PROJECT OVERVIEW

The purpose of this Task Order is to complete additional borings and tests to characterize subsurface soil conditions not covered by the ENDAWS preliminary design Task Order 3210. Relevant existing soils data from previous work will be used to in conjunction with the data obtained under this task order to support final design activities. Supplemental geotechnical investigations under this Task Order will be completed for the following:

- Additional geotechnical data at the Biota Water Treatment Plant site for the new intake tunnel, McClusky Canal Intake Pumping Station, Biota Water Treatment Plant facility and backwash pond. A preliminary layout drawing of the facilities developed during preliminary design is included as Figure 1. It shows the previous borings and the locations of the new borings contemplated under this Task Order. Geotechnical data being obtained for onsite and offsite access road construction are shown in Figure 2.
- Geotechnical data at the Ground Storage Reservoir site. The tank arrangement is currently still under development. However, it has been determined that the geotechnical data required will remain the same for either arrangement. A preliminary layout developed under preliminary

design is Figure 3. A final site location and arrangement will be identified prior to performing the field work.

- The information gathered from these geotechnical investigations will be presented and summarized in a Geotechnical Data Report. The information in the Geotechnical Data Report will be used by Engineer in development of the Geotechnical Baseline Reports tailored to specific project bid packages. Geotechnical Data Reports and Geotechnical Baseline Reports will be included in the Contract Documents. A Geotechnical Design Memorandum will also be developed based on the geotechnical data collected and provided to the design team for the Biota Water Treatment Plant and Ground Storage Reservoir facilities.

PROJECT SCHEDULE

Work under this Task Order is expected to be complete by March 31, 2026.

Figure 1 Biota Water Treatment Plant Boring Locations

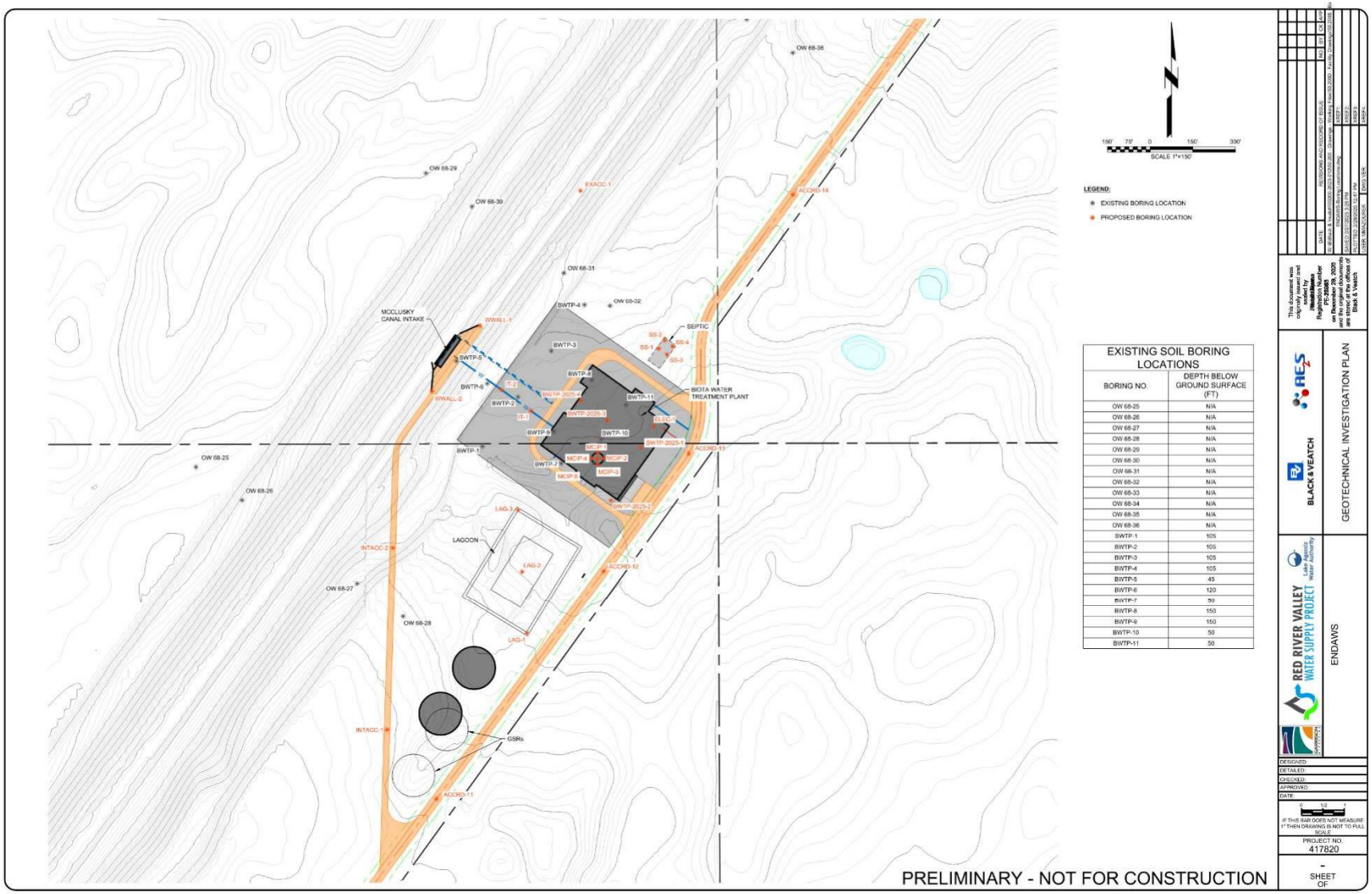


Figure 2 Access Road Boring Locations

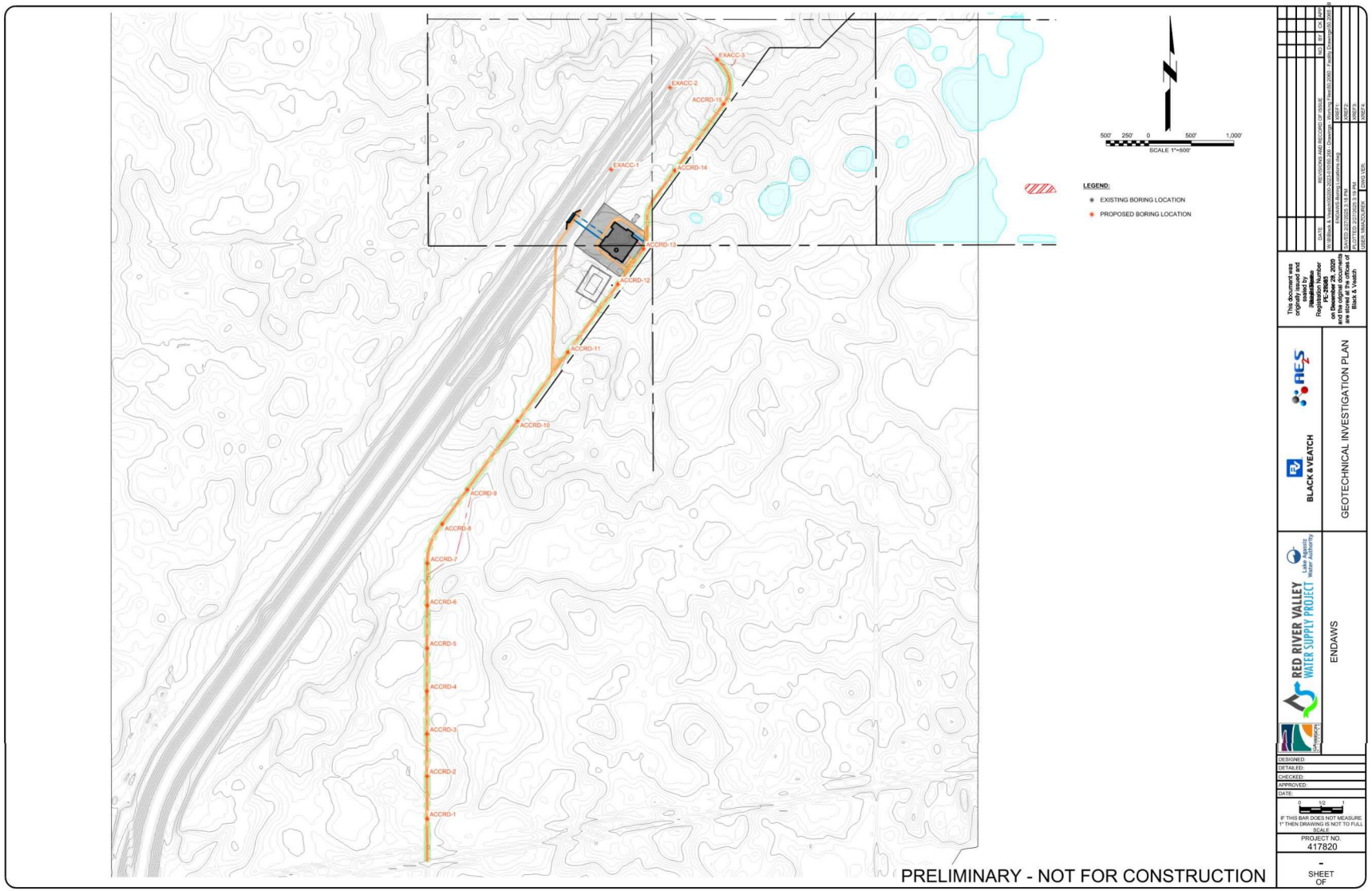
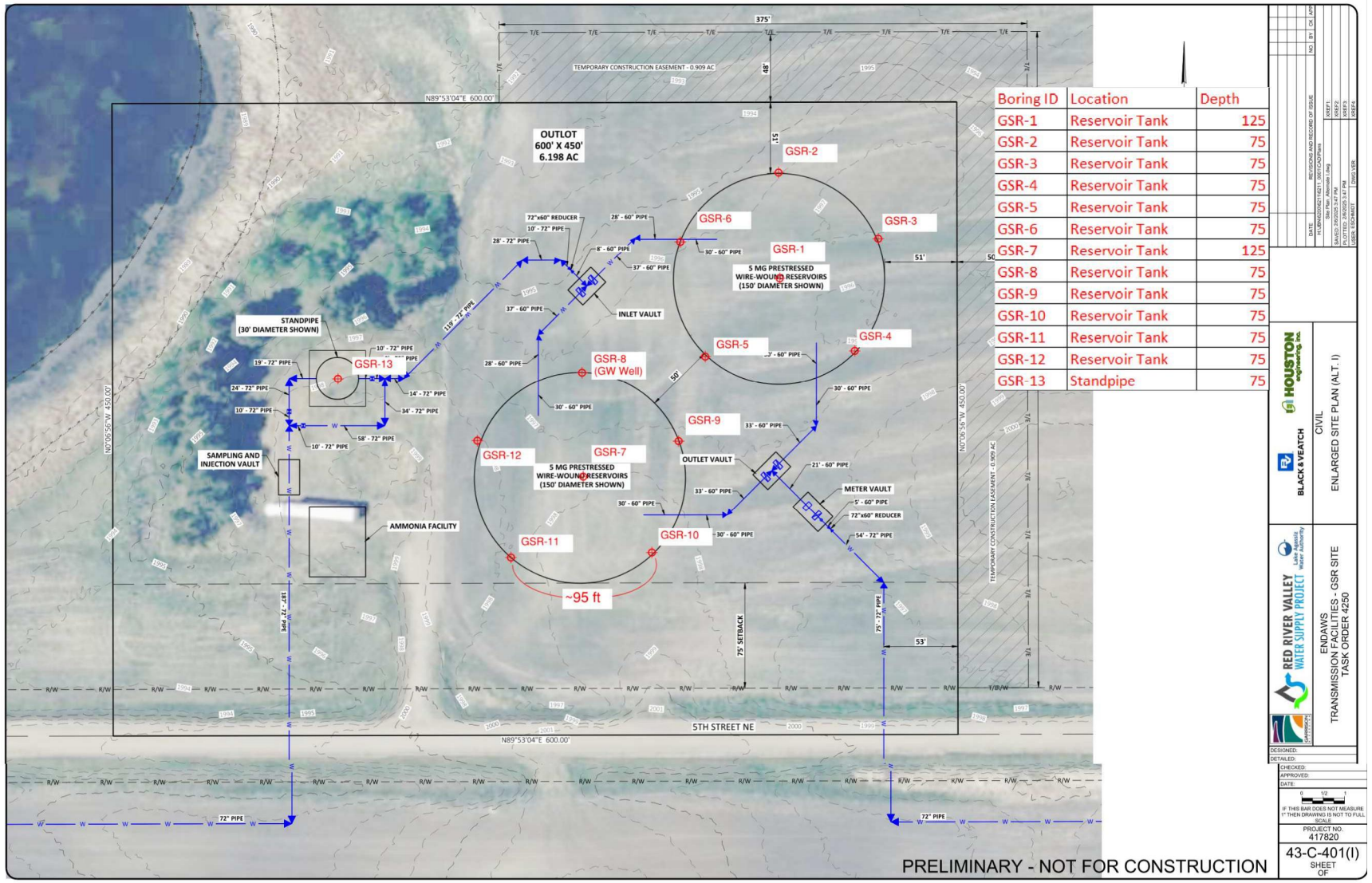


Figure 3 Ground Storage Reservoir Boring Locations



Boring ID	Location	Depth
GSR-1	Reservoir Tank	125
GSR-2	Reservoir Tank	75
GSR-3	Reservoir Tank	75
GSR-4	Reservoir Tank	75
GSR-5	Reservoir Tank	75
GSR-6	Reservoir Tank	75
GSR-7	Reservoir Tank	125
GSR-8	Reservoir Tank	75
GSR-9	Reservoir Tank	75
GSR-10	Reservoir Tank	75
GSR-11	Reservoir Tank	75
GSR-12	Reservoir Tank	75
GSR-13	Standpipe	75

Black & Veatch Corporation

Professional Services for Red River Valley Water Supply Project
Under General Agreement dated January 17, 2008

ENDAWS Task Order 3220 – Facilities Supplemental Geotechnical Investigation

Effective Date – April 1, 2025

Content of this Task Order is as follows:

I. PROJECT BACKGROUND

1. The Red River Valley Water Supply Project (RRVWSP, the Project) will provide a supplemental water supply to eastern and central North Dakota (ND) in the event of drought conditions in the Red River watershed. The Project as envisioned by the Garrison Diversion Conservancy District (Garrison Diversion, the Owner) will withdraw water from the McClusky Canal and convey it to a new biota water treatment plant (BWTP). A 125-mile multi-county pipeline will convey flows east from the Biota WTP to the Sheyenne River for flow augmentation. Along the pipeline route a Ground Storage Reservoir (GSR) will be constructed along 5th Street NE east of Goodrich to maintain pressure on the transmission main and then allow gravity flow from that point on to the Sheyenne River.

2. Professional services for the Project's final design will be accomplished through the execution of multiple task orders for design and associated activities as well as for engineering services during construction. A Preliminary Design Report (PDR) and an appraisal level design report for the Eastern North Dakota Alternate Water Supply project (ENDAWS) each prepared by Engineer and authorized by Owner under previously executed Task Orders is the foundation on which design of Project elements will be based.

3. Planning and engineering work to support future construction of the RRVWSP date back to 2008 with initial geotechnical investigations being undertaken by Engineer in 2008 through a consultant agreement with Zeltinger Geotechnical Engineering, PC having since sold its interests to Materials Testing Services, LLC of Minot, North Dakota.

4. In addition to linear pipeline construction, several other facilities and structures are required as critical components of the Project. Currently, the preliminary design around the McClusky Intake and Pumping Station (MCIPS), the Biota Water Treatment Plant (BWTP) and Main Pumping Station (MMPS) facilities, and Ground Storage Reservoirs (GSR) is ongoing. A geotechnical investigation was performed to support the preliminary design efforts under way for the MCIPS, BWTP, and MMCP facilities. That work was authorized under ENDAWS Task Order 3210.

5. Following that initial investigation, the location of the BWTP facilities has been modified and additional facilities that require geotechnical information have been identified. This Task Order 3220 will supplement the geotechnical information already developed for use in the final design development of the project. Final locations for borings will be identified following execution of this Task Order.

II. TASK ORDER OBJECTIVES

1. The purpose of this Task Order is to authorize Engineer to perform a supplemental geotechnical investigation and completion of a geotechnical data report as a new task order. These supplemental borings and tests are necessary to characterize additional subsurface soil conditions not covered by work authorized under ENDAWS Task Order 3210. Relevant existing soils data from the Task Order 3210 authorization will be used to in conjunction with the data obtained under this task order to support final design activities. Supplemental geotechnical investigations under this Task Order will be completed for the following:

   A. Additional geotechnical data at the BWTP for the new intake tunnel, MCIPS, BWTP facility, and backwash pond. Preliminary layout developed under preliminary design drawing is included in Attachment A Figure 1 showing previous borings and proposed locations for borings under this task order. Geotechnical data for onsite and offsite access road construction as shown in Attachment A Figure 2.

   B. Geotechnical data at the GSR site (final site to be selected prior to execution of the borings) along the pipeline. The tank arrangement is currently still under development. However, it has been determined that the geotechnical data required will remain the same for either arrangement. Preliminary layout developed under preliminary design drawing is included in Attachment A Figure 3. A final site location and arrangement will be identified prior to performing the field work.

2. The information gathered from these geotechnical investigations shall be presented and summarized in a Geotechnical Data Report (GDR). The information in the GDR will be used by Engineer in development of GDRs and Geotechnical Baseline Reports (GBR) tailored to specific project bid packages. GDRs and GBRs will be included in project Contract Documents.

Geotechnical Design Memorandum will also be developed based on the geotechnical data collected and provided to the design team.

III. GENERAL REQUIREMENTS

1. Under this Task Order, Engineer will provide services in accordance with the Standard Form of Agreement between Owner and Engineer for Professional Services dated January 17, 2008 (Agreement).

2. General Description of Activities. The Basic Services to be performed by Engineer consist of professional services associated with development of Geotechnical Reports, a GDR and a GBR.

3. Work outside Basic and Special Services. Engineer agrees to provide the Basic Services and Special Services identified herein. Work not specifically discussed herein as part of Basic Services or Special Services is considered Additional Services. Additional Services will only be performed with proper separate authorization such as an amendment to this Task Order or a new separate Task Order.

4. Document Production Standards and Procedures. Engineer will prepare Geotechnical Reports, GDRs, and GBR using Engineer's standard report formatting, drawing production standards, and AutoCAD drafting standards.

5. Explicit Responsibilities. Basic Services and Special Services explicitly set forth the services Engineer will perform and do not implicitly put any additional responsibilities or duties upon the Engineer. Deliverables to be provided are explicitly identified in the Deliverables paragraph of this Task Order.

6. Explicitly Identified Quantities. Engineer in development of this Task Order estimates the level of effort required to provide the services discussed. Where specific information is listed as to the quantity of service to be provided, those quantities listed are considered Basic Services or Special Services and are, therefore, included in this Task Order scope of services and associated fee estimate. Services exceeding the written quantities shown below in Basic Services or Special Services are considered Additional Services.

IV. BASIC SERVICES

Task 2 efforts of Basic Services described below will be completed by Engineer's consultant Advanced Engineering and Environmental Services, Inc. (AE2S); Task 3 will be completed by Engineer's geotechnical consultant Materials Testing Services, LLC (MTS) and Engineer, and Task 4 by Engineer and MTS.

Basic Services of this Task Order are organized into major tasks as follows:

- Task 1 – Project Management
- Task 2 – Land Services
- Task 3 – Geotechnical Services
- Task 4 – Report Services

1. Task 1 – Project Management

   This task includes overall management and development of a Project Management Plan specific to the Work. The overall objective of this task is to keep the Task Order on schedule and within budget.

   A. Project Management. Engineer will provide management services necessary for execution of the Task Order, including efforts required for proper resource allocation, schedule development and monitoring, budget review and control, Owner coordination, Consultant coordination and other standard and customary activities required for timely completion of the Work.

   B. Administration. Perform general administrative duties associated with the Task Order, including general correspondence, day-to-day contact and coordination, administration, and monthly invoicing in a form that is acceptable to the Owner.

   C. Management of Consultants. Engineer will monitor subcontractor progress, review and approve invoices, oversee adherence to the approved quality assurance/quality control (QA/QC) plan, monitor adherence to document preparation standards, and oversee the Consultants' performance.

   D. Hold a Task Order Initiation Meeting. Engineer will conduct a Task Order Initiation Conference Call with the Owner and Consultants to coordinate the activities associated with the geotechnical investigation and reporting.

2. Task 2 – Land Services

   A. Prepare GIS figures to identify boring locations for the BWTP, offsite roadway borings for the BWTP and the final GRS site. Owner will use the GIS figure to notify property owner(s) where supplemental geotechnical borings are proposed. Record dates of surveying and drilling operations on the property.

   B. Locate and stake borings for the geotechnical field program in the field using the coordinates shown in Table 1 of the Consultant Task Order with MTS (Attachment B). Provide horizontal and vertical control for each boring.

   C. Following drilling operation, survey actual location for all borings that deviated from those shown in the boring location table. Perform site clean up to pull boring location stakes.

3. Task 3 – Geotechnical Services

   A. Provide geotechnical engineering services, including exploratory work and laboratory and field testing, based on preliminary drawings and designs, and including professional interpretations of exploratory and test data.

   B. Soil borings and associated testing to be completed under this Task Order are as follows:

i. 50 borings ranging from 5 to 125 feet deep as outlined in detail in the Table 1 of the Consultant Task Order with MTS

ii. 1 piezometer

iii. Testing as outlined in detail in Table 2 of the Consultant Task Order with MTS

C. MTS will complete exploratory work, field testing, and laboratory testing services as defined in Attachment B to this Task Order. Field services include planned geotechnical exploratory work, such as soil borings, standard penetration tests, soundings, laboratory tests of soils and rock samples. The field work will provide information for detailed design, and other field and laboratory tests and analyses that are required to provide design information.

4. Task 4 – Report Services

A. MTS developed Geotechnical Data Reports. Engineer's consultant MTS will prepare separate boring and testing reports for the Project elements noted and will include the information in two Geotechnical Data Reports (GDRs). Geotechnical boring and testing reports for the BWTP site and the GSR sites will be separate reports. Draft reports will be furnished for review and comment. Upon disposition of Owner and Engineer comments to the draft report, final reports will be furnished for use. These reports will be provided for information only to bidders associated with the BWTP and GSR construction.

B. Engineer developed Geotechnical Data Reports and Geotechnical Baseline Reports. Engineer will develop GDRs and GBRs for both the Intake Tunnel and MCIPS. The GDRs and GBRs will incorporate information from both the geotechnical data obtained under ENDAWS Task Order 3210 authorization and the supplemental borings obtained under this task order. Draft reports will be furnished for review and comment. Upon disposition of Owner comments concerning the draft reports, final reports will be furnished. The GDRs and GBRs will be Contract Documents for the ENDAWS Intake Tunnel and MCIPS facilities.

C. Geotechnical Design Memorandum. Engineer will develop a memorandum for internal use by Engineer and its consultants that contains design requirements and geotechnical recommendations for design of the BWTP and the GSR. The memorandum will incorporate information from both the geotechnical data obtained under ENDAWS Task Order 3210 authorization and the supplemental borings obtained under this task order for the BWTP site. The geotechnical design memorandum will not be made available to bidders.

V. SPECIAL SERVICES

Not used this Task Order.

VI. DELIVERABLES

The following deliverables will be furnished under this Task Order. Documents or deliverables not included in the list below will be provided as Additional Services as authorized by the Owner.

1. Task 1 – Project Management
    A. Baseline Schedule (electronic pdf files)
    B. Meeting agenda (included with MS Outlook meeting invitations) and minutes (electronic pdf files) for Task Order Initiation Meeting
2. Task 2 – Land Services
    A. Boring GIS figures
3. Task 4 – Report Services
    A. Draft Geotechnical boring and testing reports, GDRs, and GBRs (electronic pdf files)
    B. Final Geotechnical boring and testing reports, GDRs, and GBRs (single hard copies for each and electronic pdf files)

VII. ADDITIONAL SERVICES

Not used this Task Order.

VIII. SPECIAL RESPONSIBILITIES OF OWNER

1. Draft Deliverable Review Requirements. Owner commits to review periods for Draft deliverables of no more than 30 calendar days after receipt of deliverables from Engineer. A review meeting will be scheduled and conducted by Engineer no more than 14 calendar days after receipt of Owner review comments, unless another mutually agreed upon date is selected.

IX. FEE

The total fee for Basic Services provided under this Task Order is Eight Hundred Forty-Six Thousand Dollars ($846,000). A worksheet showing the fee estimate and level of effort by task is included in Attachment C.

X. PERFORMANCE SCHEDULE

Basic and Special Services of this Task Order will be completed by March 31, 2026.

XI. DOCUMENTS INCORPORATED BY REFERENCE AND ATTACHMENTS

1. Standard Form of Agreement between Owner and Engineer for Professional Services dated January 17, 2008 is incorporated by reference.
2. Attachment A – Preliminary Drawings

3. Attachment B – Geotechnical Boring and Testing Summary Tables

4. Attachment C – Fee Estimate Worksheets

XII. ACCEPTANCE

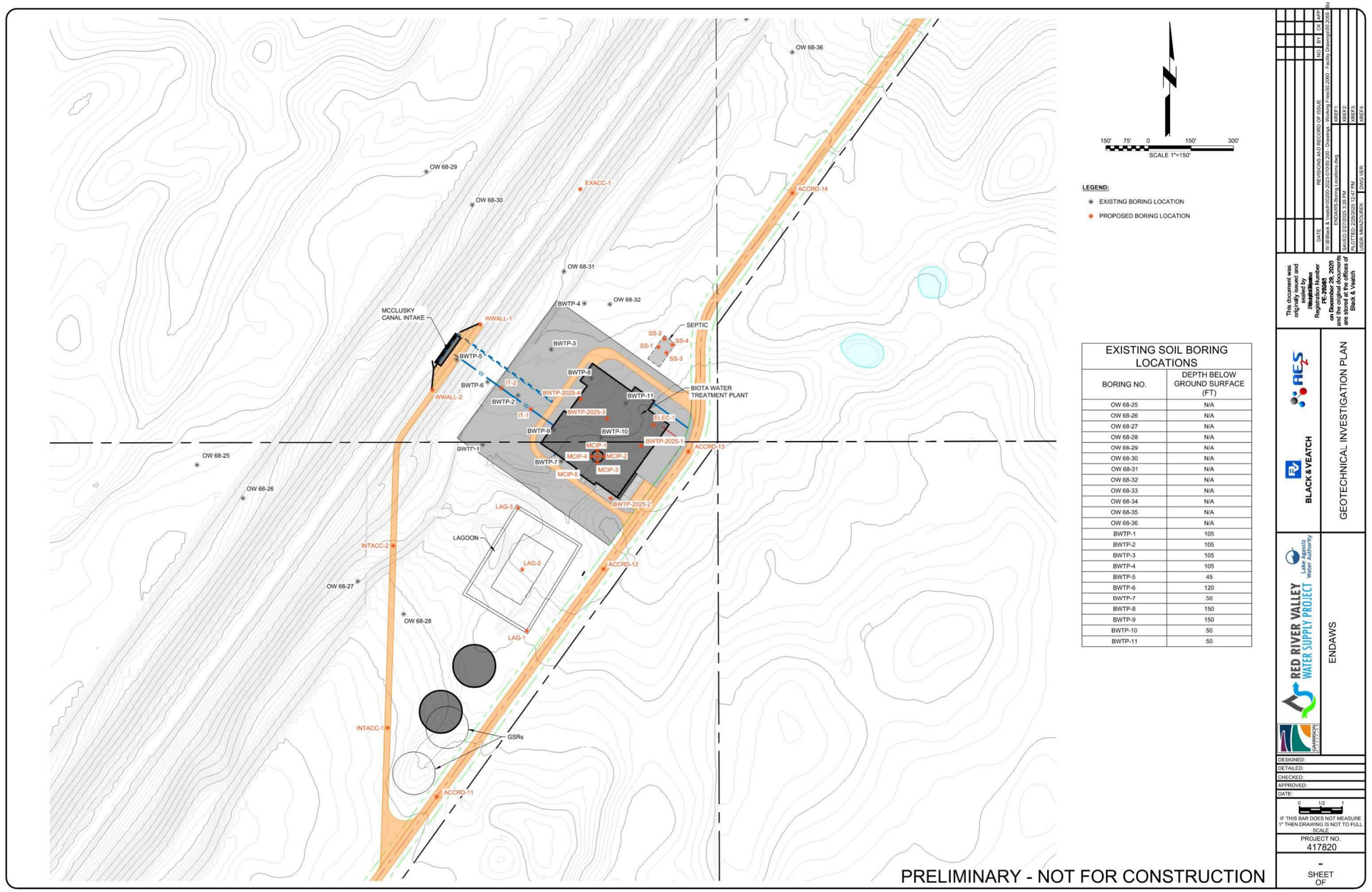
If this satisfactorily sets forth your understanding of this Consultant Task Order, please electronically sign this document. An electronic copy of the fully executed document will be provided upon execution by all parties.

By: _____	By: _____
Duane DeKrey, General Manager Garrison Diversion Conservancy District	Paul Boersma, Vice President Black & Veatch Corporation
Dated: _____	Dated: _____

ATTACHMENT A

Preliminary Drawings

Figure 1 BWTP Boring Locations



EXISTING SOIL BORING LOCATIONS

BORING NO.	DEPTH BELOW GROUND SURFACE (FT)
OW 68-25	N/A
OW 68-26	N/A
OW 68-27	N/A
OW 68-28	N/A
OW 68-29	N/A
OW 68-30	N/A
OW 68-31	N/A
OW 68-32	N/A
OW 68-33	N/A
OW 68-34	N/A
OW 68-35	N/A
OW 68-36	N/A
BWTP-1	105
BWTP-2	105
BWTP-3	105
BWTP-4	105
BWTP-5	45
BWTP-6	120
BWTP-7	50
BWTP-8	150
BWTP-9	150
BWTP-10	50
BWTP-11	50

REVISIONS AND RECORD OF ISSUE

NO	DATE	BY	CK	APP

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ENDAWS-Boring Locations.dwg
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BLACK & VEATCH

GEOTECHNICAL INVESTIGATION PLAN

RED RIVER VALLEY WATER SUPPLY PROJECT

Lake Agassiz Water Authority

ENDAWS

DESIGNED:
DETAILED:
CHECKED:
APPROVED:
DATE:

0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

PROJECT NO.
417820

-
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OF

PRELIMINARY - NOT FOR CONSTRUCTION

Figure 2 BWTP Access Road Boring Locations

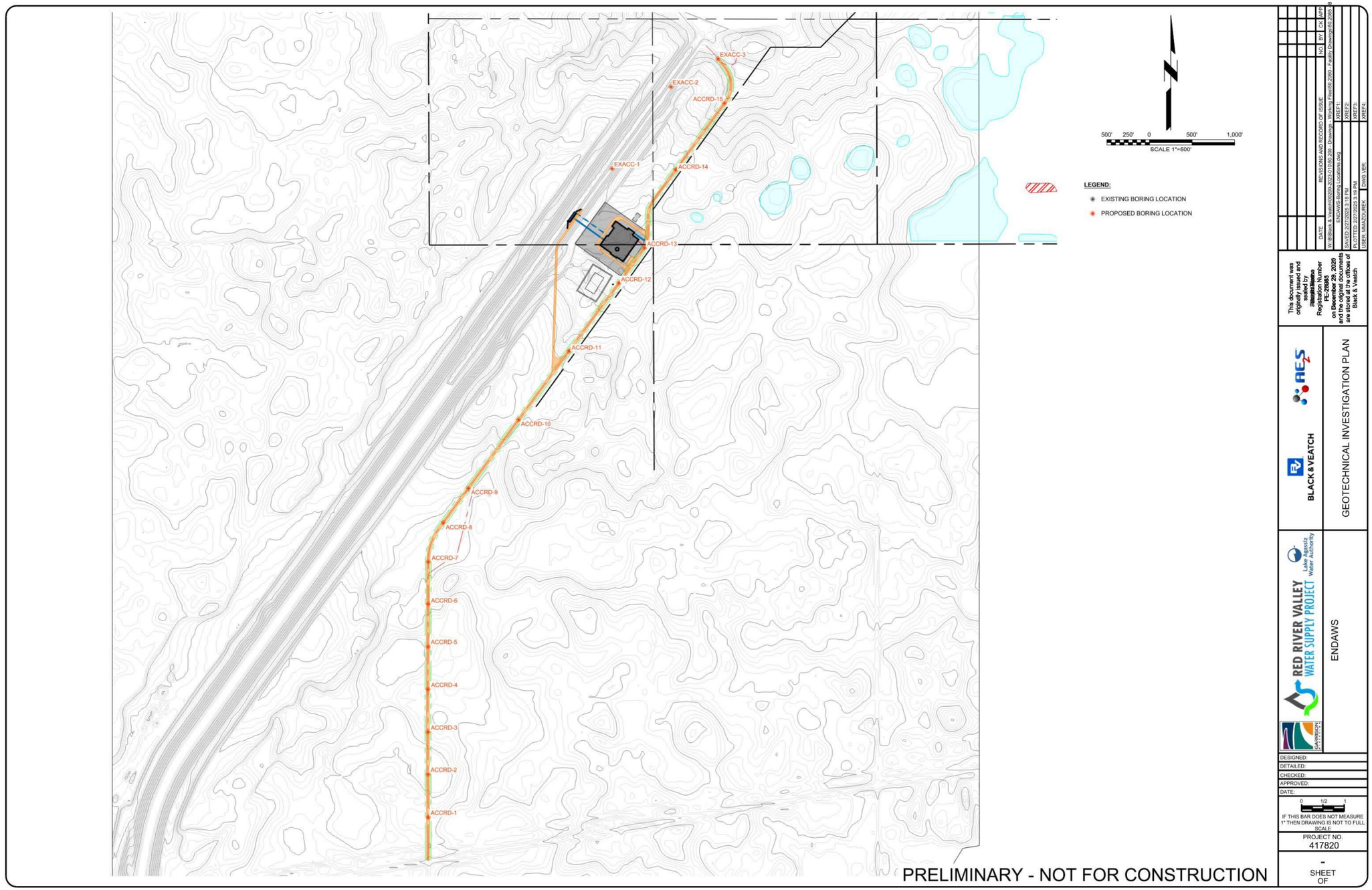
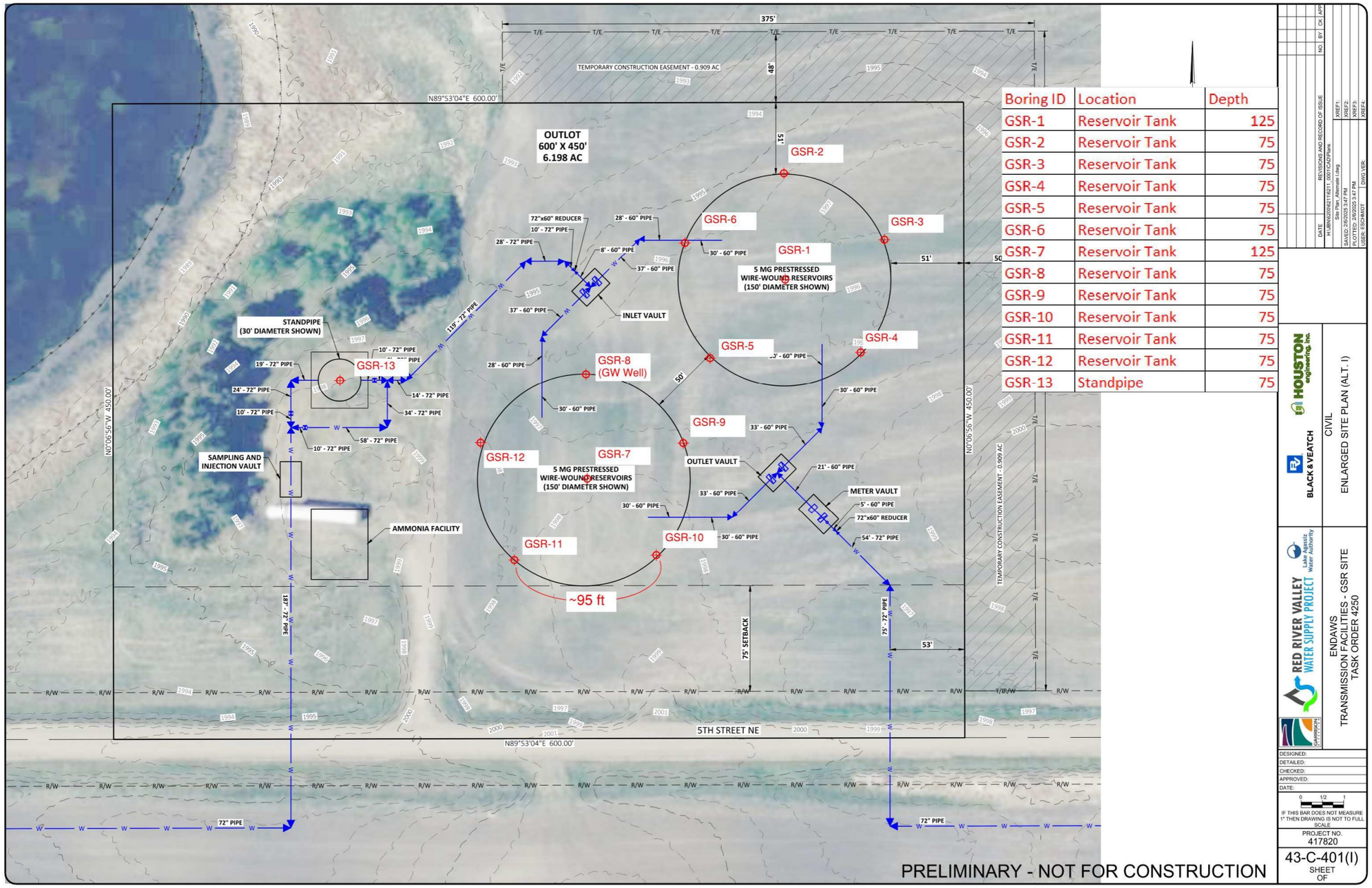


Figure 3 GSR Boring Locations



Boring ID	Location	Depth
GSR-1	Reservoir Tank	125
GSR-2	Reservoir Tank	75
GSR-3	Reservoir Tank	75
GSR-4	Reservoir Tank	75
GSR-5	Reservoir Tank	75
GSR-6	Reservoir Tank	75
GSR-7	Reservoir Tank	125
GSR-8	Reservoir Tank	75
GSR-9	Reservoir Tank	75
GSR-10	Reservoir Tank	75
GSR-11	Reservoir Tank	75
GSR-12	Reservoir Tank	75
GSR-13	Standpipe	75

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XREF2:
XREF3:
XREF4:

HOUSTON engineering, Inc.
BLACK & VEATCH
CIVIL
ENLARGED SITE PLAN (ALT. 1)

RED RIVER VALLEY WATER SUPPLY PROJECT
Lake Agassiz Water Authority
ENDAWS
TRANSMISSION FACILITIES - GSR SITE
TASK ORDER 4250

DESIGNED:
DETAILED:
CHECKED:
APPROVED:
DATE:

0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

PROJECT NO.
417820

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ATTACHMENT B

Geotechnical Boring and Testing Summary Tables

Table 1 - Soil Borings

Boring Number	Northing (Y)	Easting (X)	Depth Below Ground Surface (ft)	Observation Well/Hydraulic Permeability Testing
BWTP Site				
ACCRD-1	176263.2404	1973211.966	10	No
ACCRD-2	176763.2392	1973210.842	10	No
ACCRD-3	177263.2379	1973209.719	10	No
ACCRD-4	177763.2363	1973209.243	10	No
ACCRD-5	178263.2339	1973210.820	10	No
ACCRD-6	178763.2314	1973212.397	10	No
ACCRD-7	179263.2289	1973213.974	10	No
ACCRD-8	179723.0044	1973388.625	10	No
ACCRD-9	180126.4863	1973683.892	10	No
ACCRD-10	180933.4500	1974274.4250	10	No
ACCRD-11	181740.4363	1974864.975	10	No
ACCRD-12	182545.1828	1975453.887	10	No
ACCRD-13	182958.5365	1975753.303	10	No
ACCRD-14	183872.6682	1976120.595	10	No
ACCRD-15	184658.7882	1976693.119	10	No
BWTP-2025-1	182981.0128	1975585.524	100	No
BWTP-2025-2	182794.4271	1975479.265	75	No
BWTP-2025-3	183076.6663	1975466.359	125	No
BWTP-2025-4	183145.3232	1975372.594	75	No
ELEC-1	183054.7398	1975630.285	50	No
EXACC-1	183885.9860	1975372.055	10	No
EXACC-2	184850.9328	1976064.710	10	No
EXACC-3	185180.3996	1976616.103	10	No
INTACC-1	181984.5558	1974691.348	50	No
INTACC-2	182627.1765	1974711.625	50	No
IT-1	183110.0962	1975196.930	80	No
IT-2	183184.1455	1975093.173	70	No
LAG-1	182325.3404	1975183.263	30	No
LAG-2	182543.5966	1975166.809	30	No
LAG-3	182760.8553	1975152.414	30	No
MCIP-1	182961.8671	1975432.653	80	No
MCIP-2	182941.8671	1975452.653	80	No
MCIP-3	182921.8671	1975432.653	80	No

Boring Number	Northing (Y)	Easting (X)	Depth Below Ground Surface (ft)	Observation Well/Hydraulic Permeability Testing
MCIP-4	182941.8671	1975412.653	80	No
MCIP-5	182941.8671	1975432.653	150	Yes
SS-1	183328.7297	1975648.125	8	No(1)
SS-2	183357.1034	1975668.617	8	No(1)
SS-3	183308.2375	1975676.499	8	No(1)
SS-4	183336.6112	1975696.991	8	No(1)
WWALL-1	183408.8727	1975018.725	100	No
WWALL-2	183177.6285	1974849.478	25	No
GSR Site				
GSR-1	Reservoir Tank		125	No
GSR-2	Reservoir Tank		75	No
GSR-3	Reservoir Tank		75	No
GSR-4	Reservoir Tank		75	No
GSR-5	Reservoir Tank		75	No
GSR-6	Reservoir Tank		75	No
GSR-7	Reservoir Tank		125	No
GSR-8	Reservoir Tank		75	Yes
GSR-9	Reservoir Tank		75	No
GSR-10	Reservoir Tank		75	No
GSR-11	Reservoir Tank		75	No
GSR-12	Reservoir Tank		75	No
GSR-13	Standpipe		75	No

Notes:

1. Perform percolation tests per Section IV.3.K.

Table 2 – Required Soil Sample Analysis

Laboratory Test	ASTM	Estimated Number of Tests
ENDAWS BWTP Site		
Moisture Content	ASTM D2216	195
Grain Size Distribution	ASTM D6913	120
Hydrometer	ASTM D7928	30
Atterberg Limits	ASTM D4318	115
Organic Content	ASTM D2974	20
Dry Density and Moisture Content	ASTM D7263	10
Laboratory Compaction Characteristics of Soil	ASTM D698	15
California Bearing Ratio	ASTM D1883	5
1D consolidation	ASTM D2435	10
Swell Test	ASTM D4546	25
CU Triaxial	ASTM D4767	10
UU Triaxial	ASTM D2850	10
ENDAWS GSR Site		
Moisture Content	ASTM D2216	100
Grain Size Distribution	ASTM D6913	65
Hydrometer	ASTM D7928	10
Atterberg Limits	ASTM D4318	65
Organic Content	ASTM D2974	15
1D consolidation	ASTM D2435	20
UCS	ASTM D2166	15
UU Triaxial	ASTM D2850	15

ATTACHMENT C

Fee Estimate Worksheets

Client: Garrison Diversion Conservancy District
Project Name: ENDAWS Task Order 3220 – Facilities Supplemental Geotechnical Investigation
BV PN XXXXXX
Black & Veatch Cost Buildup

		Position	PMS	PM	PM	EM	TE	DES	DE1	DE2	DE3	SE1	SE2	EM2	BIM1	PJC2	PA1	PA2	ADM 1	Labor Detail	Labor Detail	Expense Detail	Expense Detail	Expense Detail	Sub	Expense Detail	Sub	Expense Detail	Total	TOTAL	TOTAL	TOTAL	TOTAL
Task	Lead Firm	Task Description	Principal	Project Manager Senior	Project Manager 1	Engineering Manager	Technical Expert	Design Engineer Senior	Design Engineer 1	Design Engineer 2	Design Engineer 3	Staff Engineer 1	Staff Engineer 2	Elec/Mech Engineer 2	BIM-3D Technician 1	Project Controls Analyst 2	Project Accountant 1	Project Accountant 2	Administrator 1	BV Level of Effort (hrs)	BV Labor Fee	HOBACCA	Misc	Travel Expense	AE2S	Markup	MTS	Markup	Total Direct Expense	BV Level of Effort (hrs)	BV Labor Fee	Direct Expense Fee	Total Fee
1.		**Task Order Management and Administration**	**4**	**16**	**42**	**0**	**0**	**2**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**10**	**26**	**10**	**10**	**122**	**$26,858**	**$1,118**	**$0**	**$0**	**$6,580**	**$329**	**$0**	**$0**	**$8,027**	**122**	**$26,858**	**$8,027**	**$34,885**
A.	BV	Project Management	4	8	20															32	$9,788	$293			$3,984	$199		$0	$4,476	32	$9,788	$4,476	$14,264
B.	BV	Administration		2	8											10	26	10	10	66	$10,112	$605			$0	$0		$0	$605	66	$10,112	$605	$10,717
C.	BV	Management of Consultants		4	12															16	$4,868	$147			$0	$0		$0	$147	16	$4,868	$147	$5,015
D.	BV	Task Order Initiation Meeting		2	2			2				2								8	$2,090	$73			$2,596	$130		$0	$2,799	8	$2,090	$2,799	$4,889
2.		**Land Services**	**0**	**0**	**1**	**4**	**0**	**8**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**19**	**$4,515**	**$173**	**$0**	**$0**	**$24,252**	**$1,212**	**$0**	**$0**	**$25,637**	**19**	**$4,515**	**$25,637**	**$30,152**
A.	AE2S	Preparation of GIS Parcel Exhibits			1	1														2	$572	$18			$4,164	$208		$0	$4,390	2	$572	$4,390	$4,962
B.	AE2S	Locate Borings				2		8				4								14	$3,362	$128			$11,720	$586		$0	$12,434	14	$3,362	$12,434	$15,796
C.	AE2S	Post-Drilling Survey of Borings				1						2								3	$581	$27			$8,368	$418		$0	$8,813	3	$581	$8,813	$9,394
3.		**Geotechnical Services**	**0**	**0**	**2**	**8**	**0**	**50**	**0**	**0**	**0**	**200**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**260**	**$47,520**	**$2,382**	**$0**	**$12,600**	**$0**	**$0**	**$417,500**	**$20,875**	**$453,357**	**260**	**$47,520**	**$453,357**	**$500,877**
A.	BV/MTS	Field Services and Laboratory Analyses			2	8		50				200								260	$47,520	$2,382		$12,600	$0	$0	$417,500	$20,875	$453,357	260	$47,520	$453,357	$500,877
4.		**Report Services**	**12**	**10**	**16**	**32**	**96**	**212**	**576**	**0**	**0**	**440**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,394**	**$307,120**	**$12,769**	**$197**	**$0**	**$0**	**$0**	**$0**	**$0**	**$12,966**	**1,394**	**$307,120**	**$12,966**	**$320,086**
A.	BV	Draft Reports																		0	$0	$0			$0	$0		$0	$0	0	$0	$0	$0
i.		BWTP Geotechnical Reports (2 GBRs, 2GDRs)	4	2	2	8	64	128	248	0	0	280								736	$159,198	$6,742			$0	$0		$0	$6,742	736	$159,198	$6,742	$165,940
ii.		GSR Geotechnical Report	4	2	2	8	0	8	40	0	0	0								64	$15,934	$586			$0	$0		$0	$586	64	$15,934	$586	$16,520
B.	BV	Final Reports																		0	$0	$0			$0	$0		$0	$0	0	$0	$0	$0
i.		BWTP Geotechnical Reports (2 GBRs, 2GDRs)		1	2	2	32	56	136	0	0	160								389	$82,354	$3,563			$0	$0		$0	$3,563	389	$82,354	$3,563	$85,917
ii.		GSR Geotechnical Report		1	2	2	0	8	32	0	0	0								45	$10,922	$412			$0	$0		$0	$412	45	$10,922	$412	$11,334
C.	BV	Geotechnical Design Memorandums for BWTP and GSRs	4	4	8	12	0	12	120	0	0	0								160	$38,712	$1,466	$197		$0	$0		$0	$1,663	160	$38,712	$1,663	$40,375
																				0	$0	$0			$0	$0		$0	$0	0	$0	$0	$0
		Totals For Basic and Special Services	**16**	**26**	**61**	**44**	**96**	**272**	**576**	**0**	**0**	**648**	**0**	**0**	**0**	**10**	**26**	**10**	**10**	**1,795**	**$386,013**	**$16,442**	**$197**	**$12,600**	**$30,832**	**$1,541**	**$417,500**	**$20,875**	**$499,987**	**1,795**	**$386,013**	**$499,987**	**$886,000**

Client: Garrison Diversion Conservancy District
Project Name: ENDAWS Task Order 3220 – Facilities Supplemental Geotechnical Investigation
BV PN 415054
AE2S Cost Buildup

	Position	PM6	PM5	PMIII	LSIV	LS2	GISV	COMIII	ADM III	Labor Detail	Labor Detail	Expense Detail	Expense Detail		TOTAL	TOTAL	TOTAL	TOTAL
Task	Task Description	Principal	Project Manager	Surveyor Manager	Land Surveyor	Land Surveyor	GIS	Communications	Admin.	AE2S Level of Effort (hrs)	Labor Cost	Survey Equip	Travel Expense	Total Expense	AE2S Level of Effort (hrs)	AE2S Labor Cost	Direct Expense	Fee
1.	**Task Order Management and Administration**	**2**	**12**	**12**	**0**	**0**	**0**	**0**	**0**	**26**	**$6,580**	**$0**	**$0**	**$0**	**26**	**$6,580**	**$0**	**$6,580**
A.	Project Management		8	8						16	$3,984			$0	16	$3,984	$0	$3,984
B.	Administration									0	$0			$0	0	$0	$0	$0
C.	Management of Consultants									0	$0			$0	0	$0	$0	$0
D.	Task Order Initiation Meeting	2	4	4						10	$2,596			$0	10	$2,596	$0	$2,596
2.	**Land Services**	**0**	**0**	**4**	**48**	**32**	**16**	**0**	**0**	**100**	**$17,652**	**$3,600**	**$3,000**	**$6,600**	**100**	**$17,652**	**$6,600**	**$24,252**
A.	Preparation of GIS Parcel Exhibits			4			16			20	$4,164			$0	20	$4,164	$0	$4,164
B.	Locate Borings				24	24				48	$7,920	$1,800	$2,000	$3,800	48	$7,920	$3,800	$11,720
C.	Post-Drilling Survey of Borings				24	8				32	$5,568	$1,800	$1,000	$2,800	32	$5,568	$2,800	$8,368
3.	**Geotechnical Services**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$0**	**$0**	**$0**	**$0**	**0**	**$0**	**$0**	**$0**
A.	Field Services and Laboratory Analyses									0	$0			$0	0	$0	$0	$0
4.	**Report Services**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$0**	**$0**	**$0**	**$0**	**0**	**$0**	**$0**	**$0**
A.	Draft Reports									0	$0			$0	0	$0	$0	$0
i.	BWTP Geotechnical Reports (2 GBRs, 2GDRs)									0	$0			$0	0	$0	$0	$0
ii.	GSR Geotechnical Report									0	$0			$0	0	$0	$0	$0
B.	Final Reports									0	$0			$0	0	$0	$0	$0
i.	BWTP Geotechnical Reports (2 GBRs, 2GDRs)									0	$0			$0	0	$0	$0	$0
ii.	GSR Geotechnical Report									0	$0			$0	0	$0	$0	$0
C.	Geotechnical Design Memorandums for BWTP and GSRs									0	$0			$0	0	$0	$0	$0
	Totals For Basic and Special Services	**2**	**12**	**16**	**48**	**32**	**16**	**0**	**0**	**126**	**$24,232**	**$3,600**	**$3,000**	**$6,600**	**126**	**$24,232**	**$6,600**	**$30,832**

ENDAWS Task Order 5315 – Eastern North Dakota Alternate Water Supply
Transmission Pipeline Contract 1
Partial Final Design Services

Task Order Effective Date: May 1, 2025

TASK ORDER EXECUTIVE SUMMARY

REQUEST

Consideration and approval of a partial final design services task order in the amount of $1,950,000 for the design of the Eastern North Dakota Alternate Water Supply (ENDAWS) Transmission Pipeline (ETP) Contract 1 project.

The Task Order advances the ETP Contract 1 preliminary design to a 90-percent complete final design for the 11-mile portion of the ENDAWS segment along with four trenchless crossing of wetland easements. Services will begin in May of 2025 with a 90-percent submittal package delivered mid-2026. These professional services are provided on an hourly basis, and the fee is an estimate based on the scope and nature of the work.

TASK ORDER SUMMARY

Basic Services: The services provided by the engineering team (Black & Veatch, AE2S, Materials Testing Services, and Ulteig) are fully described in the attached Task Order. The following table summarizes the fee for each of the major tasks and provides the fee as an estimated percentage of construction for the estimated $84 million project.

	Fee	% of Const
Task Order Management and Administration	$215,087	
Special Project and Third-Party Meetings	$82,338	
Landowner and Easement Modifications	$48,570	
Field Services	$489,163	
Final Design Services	$1,114,842	
Totals	$1,950,000	2.4%

Special Services: There are no unique or specialized services required under this Task Order.

PROJECT OVERVIEW

The adjacent map shows the limits of the ETP Contract 1 project and is included in the background information of the attached Task Order. Elements of this final design Task Order are:

- Supplemental surveying services to complete the design,
- Coordination with counties, townships, and the ND DOT,
- Soil borings and a completion of geotechnical reports,
- Final design of the open cut portions of pipeline and final design of four trenchless crossings under USFWS easements, and
- Coordination with the U.S. Department of the Interior, Bureau of Reclamation.

PROJECT SCHEDULE

The duration of this Task Order is 15 months from the effective date of the Task Order finishing in mid-2026.

ENDAWS Task Order 5315 – Eastern North Dakota Alternate Water Supply
Transmission Pipeline Contract 1
Partial Final Design Services

Task Order Effective Date: May 1, 2025

TASK ORDER EXECUTIVE SUMMARY

PROJECT LOCATION

The Project is in Sheridan County as shown in Figure 1 below.

Figure 1 – ENDAWS Transmission Pipeline Contract 1 Location Map

Black & Veatch Corporation
Professional Services for the Red River Valley Water Supply Project
Under General Agreement dated January 17, 2008

RRVWSP Task Order 5315 – Eastern North Dakota Alternate Water Supply Transmission Pipeline Contract 1 Partial Final Design Services

Effective Date – May 1, 2025

Content of this Task Order is as follows:

I. PROJECT BACKGROUND

1. The Red River Valley Water Supply Project (RRVWSP, the Project) will provide a supplemental water supply to eastern and central North Dakota (ND) in the event of drought conditions in the Red River watershed. The Project as envisioned by the Garrison Diversion Conservancy District (Garrison Diversion, the Owner) will also supply additional water to support industrial development as well as provide an environmental benefit to local rivers during drought conditions by augmenting natural stream flows. The source water will be withdrawn from the Missouri River and conveyed to a new biota water treatment plant (WTP). A multi-county pipeline will then convey flows from the biota WTP east to the Sheyenne River. Lake Ashtabula located downstream will provide storage allowing for controlled releases to the Red River Valley when flow augmentation is needed.

2. Professional services for final design of the Project will be accomplished through the execution of multiple task orders for design and associated activities as well as for engineering services during construction. Engineer has prepared a Preliminary Design Report (PDR) for the RRVWSP and appraisal-level designs for the Eastern North Dakota Alternate Water Supply (ENDAWS)

project as authorized by Owner under previously executed Task Orders. These documents are the foundation on which Project design elements will be based.

3. This Task Order is for final design of an approximate 11-mile pipeline segment called ETP Contract 1. The outcome of this Task Order will be 90-percent complete plans and specifications. The Project will be shelved at that stage until funding is secured. A design wrap-up and bidding assistance task order or amendment will be necessary to complete the design and publicly advertise for bids.

4. The award of a construction contract to a Contractor to build the Engineer-designed pipeline will depend on future Project funding. If funding is not available to build the entire ETP Contract 1 transmission main, it may be bid in separate smaller packages. Trenchless crossings will be included within the CDs, including the open-cut portions of the Project.

II. TASK ORDER OBJECTIVES

1. The objective of this task order is to have a segment of the pipeline progressed to a 90-percent design submittal by July 2026. The alignment and limits of the pipeline being designed under this Task Order are shown in **Attachment A**. ETP Contract 1 starts at the Biota Water Treatment Plant adjacent to the McClusky Canal in Sheridan County and progresses east approximately 58,000 feet to connect to ETP Contract 2 east of Highway 14. In addition to the 11 miles of new pipeline, there are four trenchless crossings of U.S. Fish and Wildlife Service (USFWS) easements and a potential trenchless crossing of Highway 14.

2. Routing of the pipeline from the Missouri River and the McClusky Canal to the Sheyenne River was developed during preliminary design and the ENDAWS appraisal-level design. The final design of ETP Contract 1 will follow this route, but some adjustments to the route are anticipated as part of the final design process. Preliminary design of this pipeline segment was done under Task Order 5280 completed in 2024.

3. Preparation of easement agreements and associated exhibits along with easement negotiations and acquisition are included in Task Order 7420. Easement acquisition is ongoing and will continue through the final design phase.

4. Geotechnical field work to supplement the original 2009 geotechnical investigation is included in this task order. These new borings will provide subsurface data where the pipeline alignment deviated from the 2009 alignment due to wetland avoidance, landowner requests, and other reasons.

5. This Task Order includes the scope of the remaining geotechnical investigations that are required to support final design. Where possible, the 2009 soil borings will be incorporated in the geotechnical analysis as they are sufficiently close to the current pipeline alignment. Geotechnical reports will be prepared under this Task Order including incorporation of 2009 geotechnical work where still applicable plus the supplemental work completed under this task order. These reports will include a Geotechnical Report for the open-cut pipeline and a Geotechnical Data Report (GDR) and a Geotechnical Baseline Report (GBR) for the trenchless

crossing being designed hereunder. The GDR and GBR will be Contract Documents (CDs). The GDR will include information gathered during the project investigation and will be prepared to summarize the subsurface information collected under this Task Order. The GBR establishes a single-source document where contractual statements describing the geotechnical conditions anticipated to be encountered during construction can be found. The GBR will be prepared in this Task Order during the design document preparation since it depends on the design being significantly advanced.

6. A preliminary sheet list identifying the drawings to be produced under this task order is included as **Attachment B**.

7. A preliminary specification list, including front-end or Division 0 specifications, identifying specifications to be produced under this task order is included as **Attachment C**. ETP Contract 1 funding will include procurement and technical requirements that are different than the State RRVWSP program requirements. Potential additional requirements are fund agency supplemental provisions, Buy American Build American (BABA) material requirements, WBE/DBE requirements, Davis Bacon Wage Requirements, and environmental clearances of material supply sources.

8. The pipeline will be 84-inch diameter steel pipeline for the initial approximately 3 miles and the remainder will be 72-inch diameter steel pipeline primarily installed with cut-and-cover methods.

III. GENERAL REQUIREMENTS

1. Under this Task Order, Engineer will provide services in accordance with the Standard Form of Agreement between Owner and Engineer for Professional Services dated January 17, 2008 (Agreement).

2. General Description of Activities. The Basic Services to be performed by Engineer consist of professional design services associated with development of CDs for installation of a multi-county water supply pipeline in east central ND.

3. Construction Procurement. CDs developed by Engineer will be of sufficient detail for the Owner to obtain bids through a conventional bidding process (design-bid-build). CDs will be prepared assuming one construction package ETP Contract 1.

4. Work outside Basic and Special Services. Engineer agrees to provide the Basic Services and Special Services identified herein. Work not specifically discussed herein as part of Basic Services or Special Services is considered Additional Services. Additional Services will only be performed with proper separate authorization such as an amendment to this Task Order or a new separate Task Order.

5. Explicitly Identified Quantities. Engineer in development of this Task Order estimates the level of effort required to provide the services discussed. Where specific information is listed as to the quantity of service to be provided by Engineer, those quantities listed are considered Basic Services or Special Services and are, therefore, included in this Task Order scope of service and

associated fee estimate. Services exceeding the written quantities shown below in Basic Services or Special Services are considered Additional Services.

6. Capital Cost Opinions. All opinions of probable construction cost developed will follow the recommendations of the Association for the Advancement of Cost Engineering (AACE) International Recommended Practice No. 18R regarding methodology and accuracy. The cost opinions' level of accuracy presented by Engineer for the various deliverables will be as noted in subsequent paragraphs of this Task Order.

7. Document Production Standards and Procedures. Engineer will prepare CDs using the 50-division, three-part Construction Specifications Institute (CSI) format for technical specifications; Engineer's drawing standards; and Engineer's design procedures and criteria, AutoCAD drafting standards, and standard construction details.

IV. BASIC SERVICES

Basic Services of this Task Order are organized into major tasks as follows:

- Task 1 – Task Order Management and Administration
- Task 2 – Special Project and Third-Party Meetings
- Task 3 – Landowner Communication
- Task 4 – Field Services
- Task 5 – Final Design Services

1. Task 1 – Task Order Management and Administration

This task includes overall management and development of a Project Management Plan specific to the Work. The overall objective of this task is to keep the Task Order on schedule and on budget.

A. Project Management. Engineer will provide management services necessary for execution of the Task Order, including efforts required for proper resource allocation, schedule development and monitoring, budget review and control, Owner coordination, and other standard and customary activities required for timely completion of the Work.

B. Administration. Perform general administrative duties associated with the Task Order, including general correspondence, day-to-day contact and coordination, administration, and monthly invoicing in a form that is acceptable to the Owner.

C. Progress Reports. Prepare for the Owner progress reports that identify the Work that has been performed, upcoming work activities anticipated, and action items required of the Owner. Identify therein variances or potential variances from the Task Order's Basic and Special Services. The reports will be in the Engineer's standard format unless the Owner requires otherwise.

D. Schedule Updates. Engineer will prepare a baseline Gantt chart schedule at Task Order's inception. The schedule will be updated comparing actual progress by task/subtask to the baseline schedule.

E. Management of Subconsultants. Engineer will monitor subcontractor progress, review and approve invoices, oversee adherence to the approved quality assurance/quality control (QA/QC) plan, monitor adherence to document preparation standards, and oversee subconsultants' performance.

2. **Task 2 – Special Project and Third-Party Meetings**

The overall objective of this task is to keep stakeholders apprised of Task Order status and to provide a forum for stakeholder input. Engineer will prepare an agenda. The following meetings are anticipated:

A. Special Project Meetings

i. Task Order Initiation Meeting. Engineer will conduct a virtual Task Order Initiation Meeting with the Owner and subconsultants to review the overall approach for final design and bidding assistance. Another objective of this meeting will be to finalize the approach to securing rights of entry from landowners.

ii. Post Field Investigation Alignment Update Meeting. A virtual meeting will be held with Owner after supplemental field work has been completed and after initial discussions have been undertaken with local officials and landowners. The impact of field findings and/or negotiations with landowners on the pipeline alignment and appurtenance locations will be discussed. The outcome of the meeting will be to identify any required alignment changes to the 30-percent design. An updated set of alignment drawings will be prepared before the meeting and finalized during the workshop.

B. Third-Party Meetings

i. Stakeholder Meetings. Engineer will attend and present Project information for meetings with the LAWA Technical Advisory Committee (TAC). One meeting is expected to present the final design.

ii. Design Meetings for Utility Coordination. Engineer will schedule and meet utilities that own parallel easements or easements that the pipeline will cross. Engineer will provide summary notes of meetings. The following utility coordination meetings are anticipated.

(a) Up to four meetings with the NDDOT for access approaches from Hwy 200 for the construction traffic.

(b) One meeting each will be held with the county commission or designated representative(s) of Sheridan County.

(c) One meeting for each impacted township with the elected officials if desired by that township.

(d) One meeting will be held with each of the electric/communications utilities impacted. This scope item assumes there will be three electric/communications crossings.

(e) One meeting will be held each of the pipeline companies impacted. There are expected to be:

(i) Rural Water Providers

(ii) One other Utility

(f) No meetings are anticipated with any railroads.

iii. Funding Agency Meetings. Engineer will coordinate with Garrison Diversion staff to hold regular meetings with the Bureau of Reclamation (Reclamation). It is assumed that these Reclamation meetings will, when necessary, include other Federal agencies. It is assumed that there will be 10 virtual meetings with Reclamation or other Federal agencies.

3. **Task 3 – Landowner Communication and Easement Modifications**

A. Landowner Notifications. This segment of pipeline covers approximately 22 individual easements and 13 individual property owners. Engineer will support Garrison Diversion's communications with individual landowners for the purposes of gaining access for the field investigations by developing GIS graphics and other supporting documentation.

B. Landowner Coordination. Provide engineering team support to Owner to meet with landowners as required for the purposes of establishing the final pipeline alignment and for establishing fixed locations of appurtenances for incorporation into the CDs developed during the final design phase.

4. **Task 4 – Field Services**

A. Soil Borings. Engineer's consultant will complete an additional geotechnical investigation, if necessary, and will include up to approximately 23 soil borings at an average depth of 30 feet. The soil borings, if needed, will support the final design of the open-cut and tunneled portions of ETP Contract 1 due to any alignment changes implemented during final design. In addition, various soil resistivity and corrosivity tests will be completed to support the design. Ground surveys will be completed to locate the boring(s) and to confirm the actual location of drilling so that they can accurately be placed on drawings and documented in the geotechnical reports.

B. Limited Topographic Surveying. Where necessary to reduce change order risk by more precisely locating utilities crossing or paralleling the proposed pipeline alignment, provide limited field surveys to establish horizontal coordinates and vertical elevations of utilities

and other topographic features impacting pipeline design. For fee development, this task assumes four surveys.

C. Stray Current Field Investigations. Where necessary to mitigate direct current (DC) stray currents from foreign systems or induced alternating current (AC) voltages at proposed high-voltage power lines crossings, provide field investigations to support detailed modeling of soil and crossing appurtenances. Modeling will be used to simulate induced AC potentials and current densities in support of the final design of the Project's pipeline corrosion protection system. Develop and submit a report documenting the findings and conclusions of the field investigation and simulations. For fee development, this task assumes one stray current analysis will be completed.

D. Alignment Site Visits for ETP Contract 1. The design engineers will visit the 11-mile alignment before beginning work on the 60-percent deliverable. The purpose of the site visit is to verify and document existing facilities along the alignment, evaluate potential constructability issues, and document potential construction access locations along the alignment. This task will be done current with the Post Field Investigation Alignment Meeting discussed above.

E. USFWS Permits and/or Licenses. The Engineer will coordinate with the USFWS to obtain the necessary approvals to allow for temporary construction impact to USFWS wetland easements identified in ENDAWS TM302 and subsequent final design activities.

F. Supplemental EIS Memorandum. The Engineer, through their environmental subconsultant, will provide supplemental EIS memorandum or documentation necessary to support minor pipeline alignment reroutes or as requested by the Reclamation. It is assumed that the Engineer will need to make two field visits and generate four supplemental EIS memoranda.

5. **Task 5 – Final Design Services**

The purpose of final design is to develop CDs by which the Owner will select Contractor to build the desired facilities. Engineer will provide final design services and CDs for the recommended pipeline alignment identified in the EIS, shown in **Attachment A**, and as adjusted with minor adjustments as the work under this task order progresses. The CDs will be prepared for the purposes of obtaining competitive bids, selection of the lowest and best bid, and construction of the Work. Intermediate deliverables will be prepared and submitted to the Owner upon development of the 60-, 90-, and 100-percent design completion stages. Final CDs will be prepared for bidding purposes.

A. Design Team Conference Calls. Engineer will schedule and lead monthly conference calls with the Owner to review overall progress, exchange ideas and information, and coordinate activities with other task orders. Calls will be scheduled, and content organized, to coincide with other Task Orders for efficient utilization of staff time. Assuming a 12-month schedule (from completion of preliminary design), up to 24 calls will be held with the Owner.

B. Design Guidance Manual Minor Update. A Design Guidance Manual was previously developed under Task Order 5330 and updated under Task Order 5360. It will be used to guide this design, and it will be updated to capture changes to the design approach made by the Owner and its engineering team during this task order and re-issued, if necessary.

C. Geotechnical Baseline Report. Engineer will develop a GBR for the trenchless crossing of this pipeline segment. A draft report will be furnished for review and comment. Upon disposition of Owner comments concerning the draft report, a final report will be furnished. The GBR will be a CD.

D. Geotechnical Design Memorandum/Geotechnical Data Report. Engineer will develop a memorandum for internal use by Engineer that contains design requirements and geotechnical recommendations for open-cut design and the geotechnical data for the trenchless crossing. The geotechnical design memorandum will not be made available to bidders. The Engineer will develop a GDR. If additional borings are needed during final design, these will be added to the GDR. The GDR will be furnished to bidders, and it will be considered a CD.

E. Soils Classifications and Quantities. Engineer using a ND-licensed professional soil classifier will characterize topsoil and subsoil along the alignment. The professional soil classifier will review applicable excavation and trenching, easement restoration, and vegetative technical specifications providing comments to Engineer to incorporate into the CDs. Soil layer thickness will be estimated from ND soil surveys and augmented by Consultant with limited field investigations. Thicknesses will be used to compute Bid Form quantities. A technical memorandum documenting the soil classification work completed and the findings of that effort will be developed.

F. Utility Coordination. Engineer will perform utility coordination services, including identifying utility conflicts and facilitating the resolution of utility conflicts. It is expected that the pipeline will be below existing utilities so that the Utility Coordination will consist of identification and coordination but not relocation. Engineer will perform the following activities:

   i. Provide initial notification letters for Owner to send to affected utility companies, owners, and other concerned parties, as applicable.

   ii. Engineer will develop a utility contact list with information such as: (a) owner's name; (b) contact person; (c) telephone numbers; (d) emergency contact number; (e) e-mail addresses; and (f) other pertinent information concerning affected utilities and facilities.

   iii. Advise utility companies and owners of the typical characteristics of the Work and provide an illustration of the Project footprint for delineation of the utilities/facilities that are in the Project area.

iv. Create and maintain a utility layout in AutoCAD. This layout will include existing utilities that are to remain in place or be abandoned and adjusted/relocated utilities.

v. Review utilities adjustment proposals if the pipeline cannot be installed under the existing utilities.

G. Subsurface Utility Engineering

i. Provide subsurface utility engineering (SUE), utility designating, and locating surveys along the proposed pipeline alignment in areas where utility marking services are available. The subsurface utility surveys will be a combination of Utility Quality Level A, B, and C, depending on the specific utility, as defined in CI/ASCE 38. Vertical elevations of sewers and drains, as applicable, will be taken at manholes and inlets.

ii. Up to 5 vacuum excavations or potholes no deeper than 10 feet will be excavated at proposed utility crossings and other locations to better define locations of utilities or other potential conflicts where field-discovered conflicts will adversely impact pipeline installation. Potholes/vacuum excavations will mostly be needed in the event of open cutting across roads instead of tunneling. Engineer will coordinate with and manage the services provided by a pot holing or vacuum excavation contractor to uncover potentially conflicting utilities.

H. Utility Relocations Coordination. Few conflicts between the pipeline and water and sewer lines, as well as minor drainage structures and irrigation facilities, are anticipated due to the depth of the pipeline. The scope assumes that the utility owners will design relocations and will then be paid by directly by the Owner. Relocations will be scheduled for completion in advance of pipeline excavation and installation.

i. If the utility owners prepare relocation designs, they will be coordinated with the ENDAWS project and reviewed by Engineer for compatibility with the work proposed.

ii. If drain tiles need to be relocated or field modified as part of pipeline construction, engineering services will be addressed as Additional Services.

I. Permitting. This subtask encompasses applicable governmental approvals, including counties, townships, and utility permits and approvals necessary to construct the pipeline. The pipeline will comply with overall Federal permit requirements.

i. Engineer will obtain in conjunction with the Owner necessary approvals from the appropriate utilities, City, County, and State agencies having authority over the Work.

ii. Engineer will prepare a permitting schedule identifying action items, decision points, milestones, reviews, and approvals required to complete permitting. Engineer will communicate status of permits to Owner.

iii. Contractor-Provided Permits. Engineer will provide in the CDs a list of the permits that must be obtained by the Contractor. Based upon preliminary design, it is understood that the following permits, at a minimum, will be the responsibility of the Contractor:

- Erosion and sediment control; land disturbance; stormwater permits, and
- Dewatering operations discharge.

iv. Owner-Provided Permits

(a) Engineer will aid the Owner in obtaining the following permits from government agencies, North Dakota Department of Transportation (NDDOT), utilities, pipeline companies, and other entities as noted below:

- NDDOT for access permits,
- County road closing/detours,
- Local electric and telecommunications crossings. Scope assumes up to three separate utilities,
- County road crossings, and
- Township road crossings.

(b) Assistance provided by Engineer for the above listed permits will include:

(i) Preparation of applications, exhibits, drawings, and specifications ready for the Owner's execution and transmittal.

(ii) Furnishing additional information about the Project's design, as required by the permitting authority.

J. Pipeline Corrosion Protection System Services. A multi-pronged approach to pipeline corrosion protection, including pipe coatings and an impressed- current corrosion protection system is being implemented on this project. The following services specifically related to the ETP Contract 1, 11- mile segment will be provided.

i. Stray current field investigations for the Project element will be completed as indicated in the Field Services article of this Task Order, if required. Prepare report as indicated in the Field Services article of this Task Order documenting field investigations and simulations at any high voltage power line crossing. A mitigation design will be developed and incorporated into the corrosion protection system drawings based on the simulations.

ii. Engineer has formulated a detailed approach for the Project's corrosion protection system in the Corrosion Protection Design Guide (CPDG) prepared under Task Order 5310. The corrosion protection system will be based on an impressed current design. Engineer will also develop drawings and specifications for the corrosion protection system incorporating them into the Project's CDs for the element covered by this Task Order. Drawings and specifications will be developed for 60-, 90, and 100-percent design deliverables. The 60-percent deliverable consists of design of the essential

components of the corrosion protection system and identification of field investigation locations indicated in the Field Services article of this Task Order. Stray current mitigation design and impacts of detailed pipeline design will be incorporated into the 90-percent deliverable. Final client comments will be incorporated into the 100-percent deliverable. In addition, the Project element's corrosion protection system design will provide stand-alone corrosion protection for idle Project elements while subsequent pipeline segments are constructed.

K. Hydraulic Modeling Refinement Outcome. The Project's hydraulic and surge-transient models are being generated and refined during the development of the PDR. The previous work will be updated in consideration of the ENDAWS modifications to the original RRVWSP alignment.

L. Pipeline Basis of Design Memorandum Update

i. Draft Basis of Design Memorandum (BDM). A BDM was prepared for previous pipeline segments. This BDM will be updated for the design and construction of the ETP Contract 1 pipeline, including pipeline design parameters, a preliminary route map indicating the proposed alignment, pipeline material selection, pipeline design working pressure and test pressure, joint restraint, accessories, and appurtenances. Engineer will review the Draft BDM for accuracy and completeness prior to submitting to the Owner for review and comment.

ii. Review and Finalize BDM. Engineer will confer with Owner's staff to review the Draft Updated BDM and obtain Owner's comments. Engineer will address Owner comments and develop a Final Updated BDM. The Final Updated BDM will be the document followed by the design team to develop CDs for solicitation of bids from general contractors.

M. Front-End Documents Customization

i. Prepare and deliver draft front-end documents using standard documents of the Engineers Joint Contract Document Committee (EJCDC) and Engineer's standard supplements, including general conditions and supplementary conditions. The documents will be based on the Contract Documents for Segment 6.

ii. Conduct a review conference call with Owner to discuss and receive comments on the draft front-end documents.

iii. Conduct a review conference call with Owner and Reclamation to and receive comments on the draft front-end documents.

iv. Revise front-end documents addressing Owner's and Reclamation's comments and incorporate modifications, if any, into subsequent CD deliverables.

N. 60-percent CDs (Level 2 Design)

i. Level 2 design will commence after the Owner accepts the preliminary design as modified from the Post Field Investigation Workshop.

ii. The content of Level 2 deliverables is as follows:

- General drawings,
- Plan and profile drawings,
- Most technical specifications,
- Underground utility drawings,
- Constructability review results,
- Opinion of probable construction cost update,
- Internal quality control review and refinement,
- QA/QC plan and log update, and
- Task Order schedule update.

iii. Provide technical specifications and drawings for Owner review.

iv. Attend a meeting with the Owner to receive and discuss the Owner's review comments. Document comments received in a log and distribute to meeting attendees.

v. Revise documents as necessary to reflect decisions taken at this level incorporating design modifications into subsequent deliverables.

O. 90-percent CDs (Level 3 Design)

i. Level 3 design will commence after the Owner has accepted Level 2 deliverables. The content of the Level 3 deliverables is as follows:

- Drawings review set,
- Technical specifications review set,
- Front-end documents review set,
- Opinion of probable construction cost update,
- Constructability review results,
- Internal quality control review and refinement,
- QA/QC plan and log update, and
- Task Order schedule update.

ii. Provide specifications and drawings for Owner review.

iii. Attend a meeting with the Owner to receive and discuss the Owner's review comments. Document comments received in a log and distribute to meeting attendees.

iv. Revise documents according to mutual agreement reflecting decisions taken at this level incorporating design modifications into subsequent deliverables.

Q. Opinions of Probable Construction Cost (aka Cost Opinions or Cost Estimates). Engineer will update the cost opinion presented in the PDR at the various stages of final design submitting updates for the Owners information and use as follows:

i. After transmittal of the 60-percent deliverable, update cost opinion commensurate with an AACE Class 3 estimate with standard accuracy.

ii. After transmittal of the 90-percent deliverable, update cost opinion commensurate with an AACE Class 2 estimate with standard accuracy.

R. Quality Assurance/Quality Control. Engineer will provide QA/QC services necessary for execution of the Task Order. QA/QC reviews will be provided for each deliverable furnished. Engineer's or Engineer's Subcontractor's independent senior staff will complete reviews. Engineer will log QA/QC reviews and maintain records of said reviews in its files. In addition, Engineer will log comments received from the Owner and provide a log of comments and Engineer responses for the following events:

- 60-percent CDs
- Draft front-end documents
- 90-percent CDs

Engineer's services under the Final Design Phase will be considered complete on the date when the final design submittals identified in Deliverables are provided.

V. SPECIAL SERVICES

None this Task Order.

VI. DELIVERABLES

The following deliverables will be furnished under this Task Order. Documents or deliverables not included in the list below will be provided as Additional Services as authorized by the Owner.

1. **Task 1 – Task Order Management and Administration**

- Progress reports (electronic pdf files)
- Baseline schedule and updates (electronic pdf files)

2. **Task 2 – Special Project and Third-Party Meetings**.

- Meeting agenda (typically included with MS Outlook meeting invitations)
- Meeting notes (electronic pdf files)

3. **Task 3 – Landowner Communication and Easement Modifications**

- Landowner GIS exhibits (electronic pdf file for each affected parcel)

4. **Task 4 – Field Services**

- Updated drawings for supplemental surveys (electronic pdf file)
- Stray current field report (electronic pdf file)
- Supplemental EIS memorandum (electronic pdf file)

5. **Task 5 – Final Design Services**

- Meeting/conference call agendas (attached to MS Outlook meeting invitations) and notes (electronic pdf files)
- Updated Design Guidance Manual (draft and final single hard copy and electronic pdf files)
- Geotechnical baseline report (electronic pdf file)
- Soils classification and quantities memorandum (electronic pdf files)
- Utility notification letters (electronic pdf file)
- Utility contact list (electronic pdf file)
- SUE drawing and summary table (DWG electronic and excel/pdf electronic)
- Permit applications (electronic pdf files for applications identified in the Permitting paragraph)
- Draft front-end documents (electronic pdf files)
- 60-percent CDs (hard copies and electronic pdf files)
- 60-percent cost opinion (electronic pdf file)
- 60-percent Owner review comments log (electronic pdf file)
- 90-percent CDs (hard copies and electronic pdf files)
- 90-percent cost opinion (electronic pdf file)
- 90-percent Owner review comments log (electronic pdf file)

VII. ADDITIONAL SERVICES

The professional services listed below are not included in the scope of this Task Order nor does the fee shown in Article IX include any labor and direct expenses for items identified as Additional Services. Should Owner want to include services listed under Additional Services in Engineer's scope an amendment to this Task Order or execution of a separate Task Order with the new scope of services will be necessary.

1. The pipeline alignment was finalized previously under the preliminary design task orders, and survey certificates were prepared for each parcel under other task orders. Limited additional certificates of survey will be necessary over the 10-mile length, to reflect the final disposition of certain disputed parcels and to reflect final alignment and easements associated with these to prepare CDs for bidding. If the alignment is changed during these Final Design Services, new survey certificates will be necessary and those would be considered Additional Services if the effort falls beyond the allowance amount set forth in this Task Order.

2. Addenda. Engineer will prepare up to two addenda under Basic Services. Should additional addenda be required beyond the Engineer's control, Engineer will prepare as Additional Services.

3. Pre-award Services to be Provided as Additional Services. If the apparent successful bidder is not qualified or if substantive changes to the design are proposed by the Bidder or the Contractor after award, substantial and unpredictable levels of effort by Engineer may be required to resolve issues and answer questions. These services will be provided according to the Owner's request as Additional Services.

4. Design of the relocation of utilities in conflict with the proposed location of ETP Contract 1 pipeline as presented in the PDR, except as explicitly identified herein. Relocation design for the following utilities and facilities is considered Additional Services:

    - Overhead and buried telephone lines,
    - Fiber optic cable and other communication lines,
    - Natural gas pipelines, and
    - Petroleum pipelines.

6. Preparation of traffic control plans, excluding haul routes and detour plans that are included with Basic Services.

7. Progressing the design from 90-percent complete to biddable plans and specifications is not included in the work of this Task Order. Bidding assistance is also considered Additional Services.

VIII. SPECIAL RESPONSIBILITIES OF OWNER

1. Permit and License Fees. Owner agrees to pay directly to affected utilities, railroads, or other public entities fees assessed to secure crossing permits, licenses, or easements.

2. Easements. Pay directly to landowners the real estate costs for all required easements. In addition, retain and pay for legal services necessary to secure easements through negotiation or other means. Several landowners in this 24-mile section have declined to sign voluntary easements so legal intervention will be necessary to get the necessary right-of-way. The Owner will manage and oversee legal services provided by others to support easement acquisition.

IX. FEE

The total fee for the Basic Services under this Task Order is One Million Nine Hundred Fifty Thousand Dollars ($1,950,000). Worksheet(s) showing the fee estimate and level of effort by task are included as **Attachment D**.

X. PERFORMANCE SCHEDULE

This Task Order will be completed by mid-2026 with delivery of 90-percent complete plans and specifications. A subsequent design wrap-up task order or amendment will be necessary to complete the design and provide bidding assistance. If funding becomes available earlier than currently anticipated, Contract Documents will be completed as necessary to meet that accelerated schedule as directed by Garrison Diversion via separate authorization**.**

XI. DOCUMENTS INCORPORATED BY REFERENCE AND ATTACHMENTS

1. Standard Form of Agreement between Owner and Engineer for Professional Services dated January 17, 2008, is incorporated by reference.
2. Attachment A – ENDAWS Contract 1 Alignment and Trenchless Crossing Locations
3. Attachment B – Preliminary Sheet List
4. Attachment C – Preliminary Specification List
5. Attachment D – Fee Estimate Worksheets
6. Attachment E – Partial Final Design Services Schedule

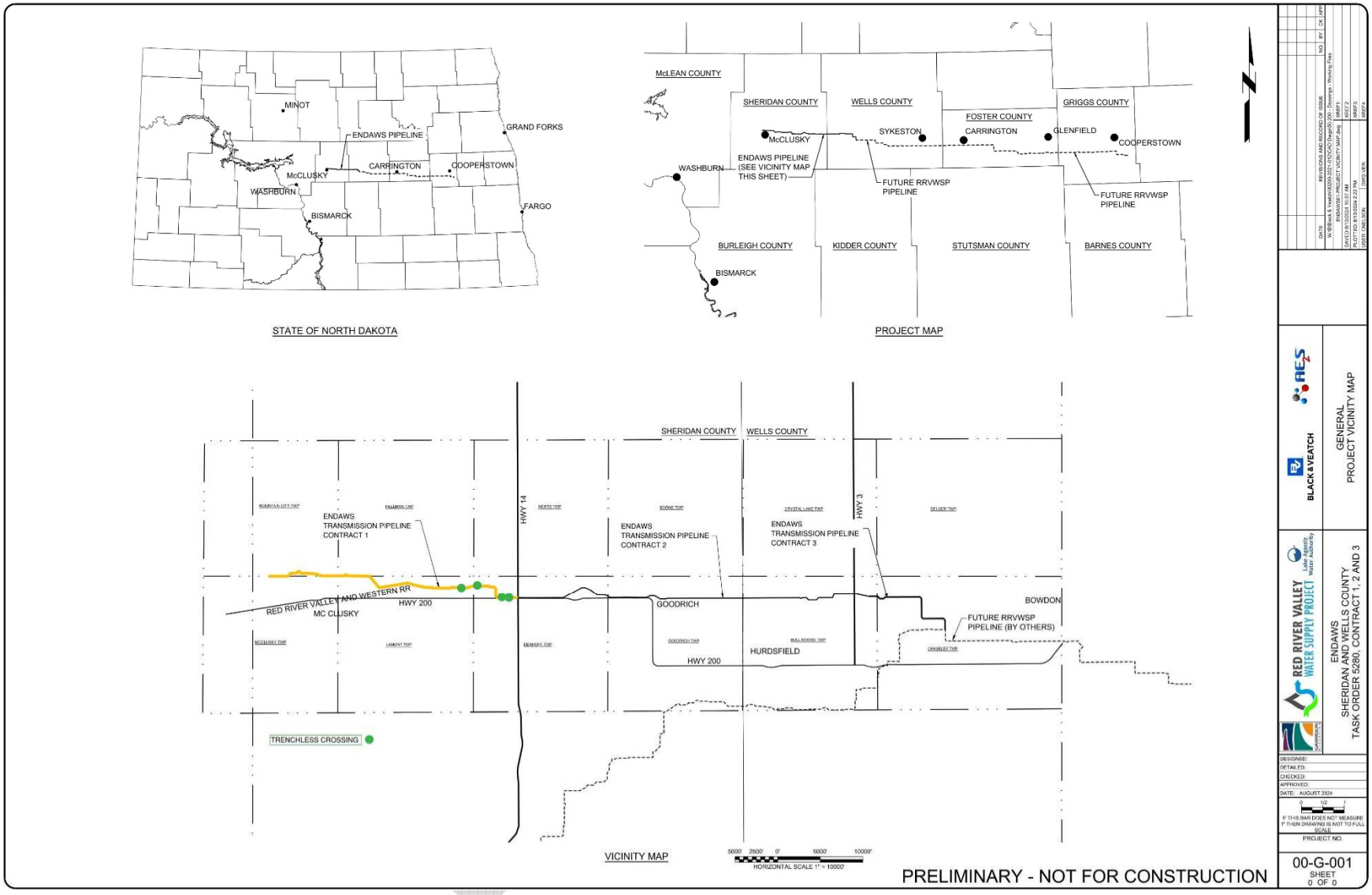
XII. ACCEPTANCE

If this satisfactorily sets forth your understanding of this Task Order, please electronically sign this document. An electronic copy of the fully executed document will be provided upon execution by all parties.

By: _____	By: _____
Duane DeKrey, General Manager Garrison Diversion Conservancy District	Paul Boersma, Vice President Black & Veatch Corporation
Dated: _____	Dated: _____

ATTACHMENT A

ETP CONTRACT 1 ALIGNMENT AND TRENCHLESS CROSSING LOCATIONS


MINOT
GRAND FORKS
ENDAWS PIPELINE
CARRINGTON
COOPERSTOWN
McCLUSKY
WASHBURN
BISMARCK
FARGO
STATE OF NORTH DAKOTA
McLEAN COUNTY
SHERIDAN COUNTY
WELLS COUNTY
FOSTER COUNTY
GRIGGS COUNTY
McCLUSKY
SYKESTON
CARRINGTON
GLENFIELD
COOPERSTOWN
WASHBURN
ENDAWS PIPELINE (SEE VICINITY MAP THIS SHEET)
FUTURE RRVWSP PIPELINE
FUTURE RRVWSP PIPELINE
BURLEIGH COUNTY
KIDDER COUNTY
STUTSMAN COUNTY
BARNES COUNTY
BISMARCK
PROJECT MAP
SHERIDAN COUNTY
WELLS COUNTY
HWY 14
HWY 3
ENDAWS TRANSMISSION PIPELINE CONTRACT 1
ENDAWS TRANSMISSION PIPELINE CONTRACT 2
ENDAWS TRANSMISSION PIPELINE CONTRACT 3
RED RIVER VALLEY AND WESTERN RR
MC CLUSKY
HWY 200
GOODRICH
BOWDON
FUTURE RRVWSP PIPELINE (BY OTHERS)
HURDSFIELD
HWY 200
TRENCHLESS CROSSING
VICINITY MAP
HORIZONTAL SCALE 1" = 10000'
PRELIMINARY - NOT FOR CONSTRUCTION
BLACK & VEATCH
GENERAL
PROJECT VICINITY MAP
RED RIVER VALLEY WATER SUPPLY PROJECT
ENDAWS
SHERIDAN AND WELLS COUNTY
TASK ORDER 5280, CONTRACT 1, 2 AND 3
DESIGNED:
DETAILED:
CHECKED:
APPROVED:
DATE: AUGUST 2024
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE
PROJECT NO.
00-G-001
SHEET
0 OF 0

ATTACHMENT B

PRELIMINARY SHEET LIST

Type of Drawing	**52 Sheets Total**
Contract 1 (11 miles)	
Cover	1
General	9
Plan & Profile	29
Details	12
Specialty	4

ATTACHMENT C

PRELIMINARY SPECIFICATION LIST

Specification Topic	**70 Sections**
Division 00 – Procurement and Contracting Requirements	26
Division 01 – General Requirements	15
Division 03 – Concrete	1
Division 05 – Metals	1
Division 09 – Finishes	2
Division 13 – Special Construction	1
Division 26 – Electrical	1
Division 31 – Earthwork	7
Division 32 – Exterior Improvements	2
Division 33 – Utilities	7
Division 40 – Process Interconnections	7

ATTACHMENT D

FEE ESTIMATE WORKSHEETS

Garrison Diversion Conservancy District
Task Order 5315 - ENDAWS Transmission Pipeline Contract 1, Partial Final Design Services
BV Project No. TBD
Black & Veatch & Consultants

Task	Lead Firm	Task Description	Position	P	PMS	PM1	EMS	EM1	TE	DE2	SE1	DES	DES	SE1	EM1	EM1	EM1	CAD2	CM2	EST1	EST2	PJC2	PA1	ADM1	ADM2	QC1	Labor Detail	Labor Detail
				Principal	Project Manager Senior	Project Manager 1	Engineering Manager Sr	Engineering Manager 1	Technical Expert	Design Engineer 2 (Pipeline)	Staff Engineer 1 (Pipeline)	Design Engineer Senior (Geotech)	Design Engineer Senior (Geotech/Trenchless)	Staff Engineer 1 (Geotech/Trenchless)	Electrical Engineer (Corrosion)	Electrical Engineer (Corrosion)	Electrical Engineer (Corrosion)	CAD Technician 2	Construction Manager 2	Estimator 1	Estimator 2	Project Controls Analyst 2	Project Accountant 1	Administrator 1	Administrator 2	QA/QC Manager 1	BV Level of Effort (hrs)	BV Labor Cost
IV. BASIC SERVICES																												
1	**BV**	**Task Order Management and Administration**		**56**	**170**	**20**	**0**	**0**	**0**	**0**	**0**	**4**	**24**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**52**	**71**	**35**	**0**	**8**	**440**	**$112,891**
A	BV	Project Mgmt (1 2-dy trp; x2)		16	40																					8	64	$20,864
B	BV	Administration		16	40								16									52	44				168	$36,700
C	AE2S	Progress Reports			30																			35			65	$14,745
D	AE2S	Schedule Updates			20																						20	$6,540
E	BV	Management of Subconsultants		24	40	20						4	8										27				123	$34,042
2	**BV**	**Special Project and Third-Party Meetings**		**4**	**34**	**0**	**60**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**98**	**$29,346**
A	BV	Special Project Meetings																									0	$0
i	BV	TO Initiation Meeting			4		8																				12	$3,564
ii	AE2S	Post Fld Invest Alignment Update Mtg			4		16																				20	$5,820
B	BV	Third Party Meetings																									0	$0
i	BV	Stakeholder Meetings (LAWA TAC x 1)		4	12																						16	$5,232
ii	AE2S	Design Meetings for Utility Coordination			4		16																				20	$5,820
iii	BV	Funding Agency Meetings			10		20																				30	$8,910
3	**AE2S**	**Landowner Comm & Easement Modifications**		**0**	**8**	**0**	**16**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**24**	**$7,128**
A	AE2S	Landowner Notifications			4		8																				12	$3,564
B	AE2S	Landowner Coordination			4		8																				12	$3,564
C	AE2S	Modifications to Signed Easements																									0	$0
4	**BV**	**Field Services**		**24**	**32**	**0**	**64**	**0**	**0**	**0**	**80**	**2**	**2**	**120**	**40**	**68**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**448**	**$100,476**
A	MTS	Soil Borings			2		6				80	2	2	120		8		8								8	236	$41,562
B	AE2S	Limited Topographic Surveying			2		6																				8	$2,346
C	BV	Stray Current Fld Investigation (1 3-dy trp; x1)			2		16								40	60											118	$30,066
D	AE2S	Alignment Site Visits for Contract 2			2		16																				18	$5,166
E	Ultieg	USFWS Permits and/or Licenses		12	12		20																				44	$13,488
F	Ultieg	Supplemental EIS Memorandum		12	12																						24	$7,848
5	**BV**	**Final Design Services**		**24**	**144**	**0**	**132**	**44**	**64**	**24**	**16**	**128**	**332**	**514**	**28**	**120**	**80**	**60**	**8**	**60**	**144**	**0**	**0**	**0**	**48**	**64**	**2,034**	**$479,784**
A	AE2S	Design Team Conference Calls (12)		24	24		12						8														68	$21,368
B	BV	Design Guidance Manual Update			2		40																		24		66	$14,574
C	BV	Geotechnical Baseline Report			4				12			16	40	120												16	208	$45,708
D	BV	Geotechnical Design Memorandum/GDR			4			4	12			8	20	60											24	8	140	$29,084
E	PSC	Soils Classifications and Quantities			4																						4	$1,308
F	AE2S	Utility Coodination			4																						4	$1,308
G	AE2S	Subsurface Utility Engineering																									0	$0
i	AE2S	SUE Surveys			2			4																			6	$1,670
ii	AE2S	Vacuum Extractions (5)			2			4																			6	$1,670

Garrison Diversion Conservancy District
Task Order 5315 - ENDAWS Transmission Pipeline Contract 1, Partial Final Design Services
BV Project No. TBD
Black & Veatch & Consultants

Task	Lead Firm	Task Description	Position	P	PMS	PM1	EMS	EM1	TE	DE2	SE1	DES	DES	SE1	EM1	EM1	EM1	CAD2	CM2	EST1	EST2	PJC2	PA1	ADM1	ADM2	QC1	Labor Detail	Labor Detail
				Principal	Project Manager Senior	Project Manager 1	Engineering Manager Sr	Engineering Manager 1	Technical Expert	Design Engineer 2 (Pipeline)	Staff Engineer 1 (Pipeline)	Design Engineer Senior (Geotech)	Design Engineer Senior (Geotech/Trenchless)	Staff Engineer 1 (Geotech/Trenchless)	Electrical Engineer (Corrosion)	Electrical Engineer (Corrosion)	Electrical Engineer (Corrosion)	CAD Technician 2	Construction Manager 2	Estimator 1	Estimator 2	Project Controls Analyst 2	Project Accountant 1	Administrator 1	Administrator 2	QA/QC Manager 1	BV Level of Effort (hrs)	BV Labor Cost
H	AE2S	Utility Relocations Coordination			2			4																			6	$1,670
I	AE2S	Permitting			8		8	0																			16	$4,872
J	BV	Pipeline Corrosion Protection System Services			8			4							28	120	80	60									300	$68,864
K	BV	Hydraulic Modeling Refinement			24		24		40																		88	$27,416
L	BV	Pipeline Basis of Design Memorandum Update			8			16		24																	48	$11,888
M	AE2S	Front-End Documents Customization			16		16																				32	$9,744
N	AE2S	60-Percent CDs (Level 2 Design)			12		16					60	144	190													422	$97,560
O	AE2S	90-Percent CDs (Level 3 Design)			12		16					44	80	120													272	$63,340
P	BV	OPCCs			8			8			16		40	24					8	60	144						308	$64,980
Q	BV	Quality Assurance/Quality Control																								40	40	$12,760
PROJECT TOTALS				**108**	**388**	**20**	**272**	**44**	**64**	**24**	**96**	**134**	**358**	**634**	**68**	**188**	**80**	**68**	**8**	**60**	**144**	**52**	**71**	**35**	**48**	**80**	**3,044**	**$729,625**

Garrison Diversion Conservency District
Task Order 5315 - ENDAWS Transmission Pip
BV Project No. TBD
Black & Veatch & Consultants

Task	Lead Firm	Position / Task Description	Expense Detail HOBACCA	Expense Detail Misc	Sub Consult AE2S Hrs	Sub Consultant AE2S Fee	Expense Detail AE2S Sub Markup	Sub Consult Subs Hrs	Sub Consultant Subs Fee (MTS,KLJ, PSC, ETC.)	Expense Detail Sub Markup	Expense Detail Travel Expense	Total Direct Expense	TOTAL BV Level of Effort (hrs)	TOTAL BV Labor Cost	TOTAL Direct Expense	TOTAL Fee
IV. BASIC SERVICES																
1	**BV**	**Task Order Management and Administration**	**$4,030**	**$611**	**282**	**$86,289**	**$4,316**	**18**	**$3,000**	**$150**	**$3,800**	**$102,196**	**440**	**$112,891**	**$102,196**	**$215,087**
A	BV	Project Mgmt (1 2-dy trp; x2)	$586	$611	28	$8,627	$431	6	$1,000	$50	$3,800	$15,105	64	$20,864	$15,105	$35,969
B	BV	Administration	$1,539		26	$7,993	$400	6	$1,000	$50		$10,982	168	$36,700	$10,982	$47,682
C	AE2S	Progress Reports	$595		56	$17,254	$863	6	$1,000	$50		$19,762	65	$14,745	$19,762	$34,507
D	AE2S	Schedule Updates	$183		56	$17,254	$863	-		$0		$18,300	20	$6,540	$18,300	$24,840
E	BV	Management of Subconsultants	$1,127		16	$4,872	$244	-		$0		$6,243	123	$34,042	$6,243	$40,285
2	**BV**	**Special Project and Third-Party Meetings**	**$898**	**$0**	**211**	**$49,614**	**$2,480**	**-**	**$0**	**$0**	**$0**	**$52,992**	**98**	**$29,346**	**$52,992**	**$82,338**
A	BV	Special Project Meetings	$0		-	$0	$0	-		$0		$0	0	$0	$0	$0
i	BV	TO Initiation Meeting	$110		56	$13,129	$656	-		$0		$13,895	12	$3,564	$13,895	$17,459
ii	AE2S	Post Fld Invest Alignment Update Mtg	$183		40	$9,141	$457	-		$0		$9,781	20	$5,820	$9,781	$15,601
B	BV	Third Party Meetings	$0		-	$0	$0	-		$0		$0	0	$0	$0	$0
i	BV	Stakeholder Meetings (LAWA TAC x 1)	$147		8	$1,995	$100	-		$0		$2,242	16	$5,232	$2,242	$7,474
ii	AE2S	Design Meetings for Utility Coordination	$183		107	$25,348	$1,267	-		$0		$26,798	20	$5,820	$26,798	$32,618
iii	BV	Funding Agency Meetings	$275		-	$0	$0	-		$0		$275	30	$8,910	$275	$9,185
3	**AE2S**	**Landowner Comm & Easement Modifications**	**$220**	**$0**	**158**	**$39,259**	**$1,963**	**-**	**$0**	**$0**	**$0**	**$41,442**	**24**	**$7,128**	**$41,442**	**$48,570**
A	AE2S	Landowner Notifications	$110		88	$16,880	$844	-		$0		$17,834	12	$3,564	$17,834	$21,398
B	AE2S	Landowner Coordination	$110		70	$22,380	$1,119	-		$0		$23,609	12	$3,564	$23,609	$27,173
C	AE2S	Modifications to Signed Easements	$0		-	$0	$0	-		$0		$0	0	$0	$0	$0
4	**BV**	**Field Services**	**$4,104**	**$1,000**	**382**	**$89,079**	**$4,454**	**1,527**	**$267,000**	**$13,350**	**$9,700**	**$388,687**	**448**	**$100,476**	**$388,687**	**$489,163**
A	MTS	Soil Borings	$2,162		122	$28,524	$1,426	1,229	$215,000	$10,750	$7,800	$265,662	236	$41,562	$265,662	$307,224
B	AE2S	Limited Topographic Surveying	$73		156	$34,333	$1,717	-		$0		$36,123	8	$2,346	$36,123	$38,469
C	BV	Stray Current Fld Investigation (1 3-dy trp; x1)	$1,081	$1,000	-	$0	$0	-		$0	$1,900	$3,981	118	$30,066	$3,981	$34,047
D	AE2S	Alignment Site Visits for Contract 2	$165		104	$26,222	$1,311	-		$0		$27,698	18	$5,166	$27,698	$32,864
E	Ultieg	USFWS Permits and/or Licenses	$403		-	$0	$0	172	$30,000	$1,500		$31,903	44	$13,488	$31,903	$45,391
F	Ultieg	Supplemental EIS Memorandum	$220		-	$0	$0	126	$22,000	$1,100		$23,320	24	$7,848	$23,320	$31,168
5	**BV**	**Final Design Services**	**$18,633**	**$2,000**	**2,380**	**$525,167**	**$26,258**	**344**	**$60,000**	**$3,000**	**$0**	**$635,058**	**2,034**	**$479,784**	**$635,058**	**$1,114,842**
A	AE2S	Design Team Conference Calls (12)	$623		264	$61,335	$3,067	-		$0		$65,025	68	$21,368	$65,025	$86,393
B	BV	Design Guidance Manual Update	$605		-	$0	$0	-		$0		$605	66	$14,574	$605	$15,179
C	BV	Geotechnical Baseline Report	$1,905		-	$0	$0	-		$0		$1,905	208	$45,708	$1,905	$47,613
D	BV	Geotechnical Design Memorandum/GDR	$1,282		-	$0	$0	-		$0		$1,282	140	$29,084	$1,282	$30,366
E	PSC	Soils Classifications and Quantities	$37		34	$7,010	$350	172	$30,000	$1,500		$38,897	4	$1,308	$38,897	$40,205
F	AE2S	Utility Coodination	$37		162	$34,146	$1,707	-		$0		$35,890	4	$1,308	$35,890	$37,198
G	AE2S	Subsurface Utility Engineering	$0		-	$0	$0	-		$0		$0	0	$0	$0	$0
i	AE2S	SUE Surveys	$55		154	$37,164	$1,858	-		$0		$39,077	6	$1,670	$39,077	$40,747
ii	AE2S	Vacuum Extractions (5)	$55		96	$22,357	$1,118	172	$30,000	$1,500		$55,030	6	$1,670	$55,030	$56,700

Garrison Diversion Conservency District
Task Order 5315 - ENDAWS Transmission Pip
BV Project No. TBD
Black & Veatch & Consultants

		Position	Expense Detail	Expense Detail	Sub Consult	Sub Consultant	Expense Detail	Sub Consult	Sub Consultant	Expense Detail	Expense Detail		TOTAL	TOTAL	TOTAL	TOTAL
Task	Lead Firm	Task Description	HOBACCA	Misc	AE2S Hrs	AE2S Fee	AE2S Sub Markup	Subs Hrs	Subs Fee (MTS,KLJ, PSC, ETC.)	Sub Markup	Travel Expense	Total Direct Expense	BV Level of Effort (hrs)	BV Labor Cost	Direct Expense	Fee
H	AE2S	Utility Relocations Coordination	$55		70	$14,162	$708	-		$0		$14,925	6	$1,670	$14,925	$16,595
I	AE2S	Permitting	$147		304	$69,447	$3,472	-		$0		$73,066	16	$4,872	$73,066	$77,938
J	BV	Pipeline Corrosion Protection System Services	$2,748		-	$0	$0	-		$0		$2,748	300	$68,864	$2,748	$71,612
K	BV	Hydraulic Modeling Refinement	$806		-	$0	$0	-		$0		$806	88	$27,416	$806	$28,222
L	BV	Pipeline Basis of Design Memorandum Update	$440		-	$0	$0	-		$0		$440	48	$11,888	$440	$12,328
M	AE2S	Front-End Documents Customization	$293		112	$28,232	$1,412	-		$0		$29,937	32	$9,744	$29,937	$39,681
N	AE2S	60-Percent CDs (Level 2 Design)	$3,866	$1,000	620	$130,074	$6,504	-		$0		$141,444	422	$97,560	$141,444	$239,004
O	AE2S	90-Percent CDs (Level 3 Design)	$2,492	$1,000	500	$106,239	$5,312	-		$0		$115,043	272	$63,340	$115,043	$178,383
P	BV	OPCCs	$2,821		64	$15,000	$750	-		$0		$18,571	308	$64,980	$18,571	$83,551
Q	BV	Quality Assurance/Quality Control	$366		-	$0	$0	-		$0		$366	40	$12,760	$366	$13,126
PROJECT TOTALS			**$27,885**	**$3,611**	**3,413**	**$789,408**	**$39,471**	**1,889**	**$330,000**	**$16,500**	**$13,500**	**$1,220,375**	**3,044**	**$729,625**	**$1,220,375**	**$1,950,000**

Garrison Diversion Conservancy District

Task Order 5315 - ENDAWS Transmission Pipeline Contract 1, Partial Final Design Services

BV Project No. TBD

AE2S

		Position	PM6	PM5	PM4	ENGIII	ENGII	SD2	ET5	PMIII	LSIV	LS2	GISV	COMIII	ADM III	Labor Detail	Labor Detail	Expense Detail	Expense Detail		TOTAL	TOTAL	TOTAL	TOTAL
Task	Lead Firm	Task Description	Principal	Project Manager	Technical Expert QA/QC	Design Engineer	Staff Engineer	Senior Designer	CAD Tech	Surveyor Manager	Land Surveyor	Land Surveyor	GIS	Communications	Admin	AE2S Level of Effort (hrs)	Labor Cost	Travel	Survey Equip	Total Expense	AE2S Level of Effort (hrs)	AE2S Labor Cost	Direct Expense	Fee
IV. BASIC SERVICES																								
1		**Task Order Management and Administration**	**70**	**192**	**20**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**282**	**$86,289**	**$0**	**$0**	**$0**	**282**	**$86,289**	**$0**	**$86,289**
A	BV	Project Mgmt (1 2-dy trp; x2)	8	20												28	$8,627	$0		$0	28	$8,627	$0	$8,627
B	BV	Administration	6	20												26	$7,993			$0	26	$7,993	$0	$7,993
C	AE2S	Progress Reports	16	40												56	$17,254			$0	56	$17,254	$0	$17,254
D	AE2S	Schedule Updates	16	40												56	$17,254			$0	56	$17,254	$0	$17,254
E	BV	Management of Subconsultants		16												16	$4,872			$0	16	$4,872	$0	$4,872
2	**BV**	**Special Project and Third-Party Meetings**	**12**	**48**	**10**	**46**	**46**	**0**	**0**	**14**	**0**	**0**	**16**	**9**	**10**	**211**	**$48,614**	**$1,000**	**$0**	**$1,000**	**211**	**$48,614**	**$1,000**	**$49,614**
A	BV	Special Project Meetings														0	$0			$0	0	$0	$0	$0
i	BV	TO Initiation Meeting	2	12	2	12	12	0	0	12	0	0	0	0	4	56	$13,129	$0		$0	56	$13,129	$0	$13,129
ii	AE2S	Post Fld Invest Alignment Update Mtg	2	8	2	8	8	0	0	2	0	0	8	0	2	40	$9,141	$0		$0	40	$9,141	$0	$9,141
B	BV	Third Party Meetings														0	$0			$0	0	$0	$0	$0
i	BV	Stakeholder Meetings (LAWA TAC x 1)		4		2	2									8	$1,995	$0		$0	8	$1,995	$0	$1,995
ii	AE2S	Design Meetings for Utility Coordination	8	24	6	24	24						8	9	4	107	$24,348	$1,000		$1,000	107	$24,348	$1,000	$25,348
iii	BV	Funding Agency Meetings														0	$0			$0	0	$0	$0	$0
3		**Landowner Comm & Easement Modifications**	**0**	**38**	**0**	**6**	**24**	**0**	**0**	**16**	**0**	**0**	**50**	**0**	**24**	**158**	**$34,259**	**$5,000**	**$0**	**$5,000**	**158**	**$34,259**	**$5,000**	**$39,259**
A	AE2S	Landowner Notifications		8		2	20			8			30		20	88	$16,880			$0	88	$16,880	$0	$16,880
B	AE2S	Landowner Coordination		30		4	4			8			20		4	70	$17,380	$5,000		$5,000	70	$17,380	$5,000	$22,380
C	AE2S	Modifications to Signed Easements														0	$0	$0	$0	$0	0	$0	$0	$0
4		**Field Services**	**2**	**38**	**2**	**24**	**48**	**0**	**0**	**24**	**100**	**100**	**40**	**0**	**4**	**382**	**$76,079**	**$8,000**	**$5,000**	**$13,000**	**382**	**$76,079**	**$13,000**	**$89,079**
A	MTS	Soil Borings		10			16			8	40	40	8			122	$23,524	$3,000	$2,000	$5,000	122	$23,524	$5,000	$28,524
B	AE2S	Limited Topographic Surveying		4			8			16	60	60	8			156	$29,333	$2,000	$3,000	$5,000	156	$29,333	$5,000	$34,333
C	BV	Stray Current Fld Investigation (1 3-dy trp; x1)														0	$0			$0	0	$0	$0	$0
D	AE2S	Alignment Site Visits for Contract 2	2	24	2	24	24						24		4	104	$23,222	$3,000		$3,000	104	$23,222	$3,000	$26,222
E	Ultieg	USFWS Permits and/or Licenses														0	$0	$0		$0	0	$0	$0	$0
F	Ultieg	Supplemental EIS Memorandum														0	$0	$0		$0	0	$0	$0	$0
5		**Final Design Services**	**42**	**234**	**174**	**386**	**454**	**456**	**194**	**54**	**80**	**80**	**140**	**44**	**42**	**2,380**	**$512,667**	**$6,500**	**$6,000**	**$12,500**	**2,380**	**$512,667**	**$12,500**	**$525,167**
A	AE2S	Design Team Conference Calls (12)	12	48	12	24	14	56	14	28	28			28		264	$61,335			$0	264	$61,335	$0	$61,335
B	BV	Design Guidance Manual Update														0	$0			$0	0	$0	$0	$0
C	BV	Geotechnical Baseline Report														0	$0			$0	0	$0	$0	$0
D	BV	Geotechnical Design Memorandum/GDR														0	$0			$0	0	$0	$0	$0
E	PSC	Soils Classifications and Quantities		2	0	4	8						20			34	$7,010			$0	34	$7,010	$0	$7,010
F	AE2S	Utility Coodination		20	4	20	40	20			12		40		6	162	$34,146			$0	162	$34,146	$0	$34,146
G	AE2S	Subsurface Utility Engineering														0	$0			$0	0	$0	$0	$0
i	AE2S	SUE Surveys		4	2	4	20	20		20	40	40			4	154	$30,164	$4,000	$3,000	$7,000	154	$30,164	$7,000	$37,164
ii	AE2S	Vacuum Extractions (5)		4	2	4	40			2	0	40			4	96	$16,857	$2,500	$3,000	$5,500	96	$16,857	$5,500	$22,357
H	AE2S	Utility Relocations Coordination		4	2	20	40			4						70	$14,162			$0	70	$14,162	$0	$14,162
I	AE2S	Permitting	4	20	80	80	40	20					40	16	4	304	$69,447			$0	304	$69,447	$0	$69,447

Garrison Diversion Conservancy District

Task Order 5315 - ENDAWS Transmission Pipeline Contract 1, Partial Final Design Services

BV Project No. TBD

AE2S

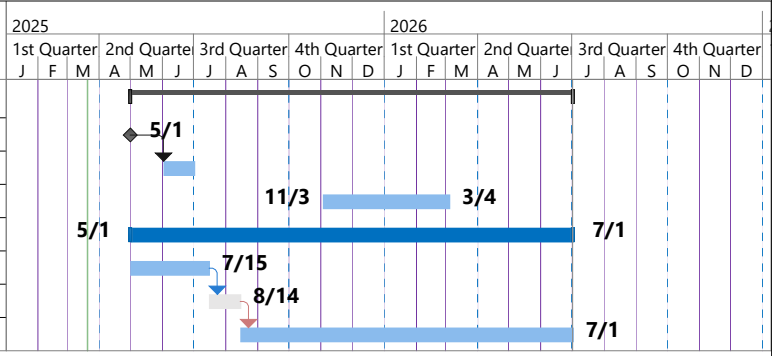
		Position	PM6	PM5	PM4	ENGIII	ENGII	SD2	ET5	PMIII	LSIV	LS2	GISV	COMIII	ADM III	Labor Detail	Labor Detail	Expense Detail	Expense Detail		TOTAL	TOTAL	TOTAL	TOTAL
Task	Lead Firm	Task Description	Principal	Project Manager	Technical Expert QA/QC	Design Engineer	Staff Engineer	Senior Designer	CAD Tech	Surveyor Manager	Land Surveyor	Land Surveyor	GIS	Communications	Admin	AE2S Level of Effort (hrs)	Labor Cost	Travel	Survey Equip	Total Expense	AE2S Level of Effort (hrs)	AE2S Labor Cost	Direct Expense	Fee
J	BV	Pipeline Corrosion Protection System Services														0	$0			$0	0	$0	$0	$0
K	BV	Hydraulic Modeling Refinement														0	$0			$0	0	$0	$0	$0
L	BV	Pipeline Basis of Design Memorandum Update														0	$0			$0	0	$0	$0	$0
M	AE2S	Front-End Documents Customization		40	24	40									8	112	$28,232			$0	112	$28,232	$0	$28,232
N	AE2S	60-Percent CDs (Level 2 Design)	12	40	20	80	140	200	100				20		8	620	$130,074			$0	620	$130,074	$0	$130,074
O	AE2S	90-Percent CDs (Level 3 Design)	12	40	20	80	100	140	80				20		8	500	$106,239			$0	500	$106,239	$0	$106,239
P	BV	OPCCs	2	12	8	30	12									64	$15,000			$0	64	$15,000	$0	$15,000
Q	BV	Quality Assurance/Quality Control														0	$0			$0	0	$0	$0	$0
PROJECT TOTALS			**126**	**550**	**206**	**462**	**572**	**456**	**194**	**108**	**180**	**180**	**246**	**53**	**80**	**3,413**	**$757,908**	**$20,500**	**$11,000**	**$31,500**	**3,413**	**$757,908**	**$31,500**	**$789,408**

ATTACHMENT E

FINAL DESIGN AND BIDDING ASSISTANCE SCHEDULE

Partial Final Design Services Schedule
ENDAWS Transmission Pipeline Contract 1
Eastern North Dakota Alternate Water Supply Project

ID	Task Name	Duration	Start	Finish
1	**MCIPS Wetwell & BWTP Site Development Ct 1**	**305 days**	**Thu 5/1/25**	**Wed 7/1/26**
2	Notice to Proceed	0 days	Thu 5/1/25	Thu 5/1/25
3	Alignment Site Visits	22 days	Mon 6/2/25	Tue 7/1/25
4	Geotechnical Field Program	88 days	Mon 11/3/25	Wed 3/4/26
5	**Final Design**	**305 days**	**Thu 5/1/25**	**Wed 7/1/26**
6	Prepare & Deliver 60% Docs	54 days	Thu 5/1/25	Tue 7/15/25
7	Garrison Diversion Review & Comment	22 days	Wed 7/16/25	Thu 8/14/25
8	Prepare & Deliver 90% Docs	229 days	Fri 8/15/25	Wed 7/1/26



ENDAWS Task Order 5325 – Eastern North Dakota Alternate Water Supply
Transmission Pipeline Contract 2
Partial Final Design Services

Task Order Effective Date: May 1, 2025

TASK ORDER EXECUTIVE SUMMARY

REQUEST

Consideration and approval of a partial final design services task order in the amount of $1,780,000 for the design of the Eastern North Dakota Alternate Water Supply (ENDAWS) Transmission Pipeline (ETP) Contract 2 project.

The Task Order advances the ETP Contract 2 preliminary design to a 90-percent completion stage for a 10-mile portion of the ENDAWS segment along with one trenchless crossing of a wetland easement. Services will begin in May of 2025 with a 90-percent submittal package delivered mid-2026. These professional services are provided on an hourly basis, and the fee is an estimate based on the scope and nature of the work.

TASK ORDER SUMMARY

Basic Services: The services provided by the engineering team (Black & Veatch, AE2S, Materials Testing Services, and Ulteig) are fully described in the attached Task Order. The following table summarizes the fee for each of the major tasks and provides the fee as an estimated percentage of construction for the estimated $64 million project.

	Fee	% of Const
Task Order Management and Administration	$187,266	
Special Project and Third-Party Meetings	$86,180	
Landowner and Easement Modifications	$46,391	
Field Services	$467,304	
Final Design Services	$992,859	
Totals	$1,780,000	2.8%

Special Services: There are no unique or specialized services required under this Task Order.

PROJECT OVERVIEW

The adjacent map shows the limits of ETP Contract 2 and is included in the background information of the attached Task Order. Elements of this final design Task Order are:

- Supplemental surveying services to complete the design,
- Coordination with counties, townships, and the ND DOT,
- Soil borings and a completion of geotechnical reports,
- Final design of the open-cut portions of pipeline and final design of one trenchless crossing under a U.S. Fish and Wildlife Service easement, and
- Coordination with the U.S. Department of the Interior, Bureau of Reclamation.

PROJECT SCHEDULE

The duration of this Task Order is 15 months from the effective date of the Task Order finishing in mid-2026.

ENDAWS Task Order 5325 – Eastern North Dakota Alternate Water Supply
Transmission Pipeline Contract 2
Partial Final Design Services

Task Order Effective Date: May 1, 2025

TASK ORDER EXECUTIVE SUMMARY

PROJECT LOCATION

The Project is in eastern Sheridan County as shown in Figure 1 below.

Figure 1 – ENDAWS Transmission Pipeline Contract 2 Location Map

Black & Veatch Corporation
Professional Services for the Red River Valley Water Supply Project
Under General Agreement dated January 17, 2008

RRVWSP Task Order 5325 – Eastern North Dakota Alternate Water Supply
Transmission Pipeline Contract 2
Partial Final Design Services

Effective Date – May 1, 2025

Content of this Task Order is as follows:

I. PROJECT BACKGROUND

1. The Red River Valley Water Supply Project (RRVWSP, the Project) will provide a supplemental water supply to eastern and central North Dakota (ND) in the event of drought conditions in the Red River watershed. The Project as envisioned by the Garrison Diversion Conservancy District (Garrison Diversion, the Owner) will also supply additional water to support industrial development as well as provide an environmental benefit to local rivers during drought conditions by augmenting natural stream flows. The source water will be withdrawn from the Missouri River and conveyed to a new biota water treatment plant (WTP). A multi-county pipeline will then convey flows from the biota WTP east to the Sheyenne River. Lake Ashtabula located downstream will provide storage allowing for controlled releases to the Red River Valley when flow augmentation is needed.

2. Professional services for final design of the Project will be accomplished through the execution of multiple task orders for design and associated activities as well as for engineering services during construction. A Preliminary Design Report (PDR) for the RRVWSP and appraisal-level designs for Eastern North Dakota Water Supply (ENDAWS) have been prepared by Engineer as

authorized by Owner under previously executed Task Orders. These documents are the foundation on which Project design elements will be based.

3. This Task Order is for final design of an approximate 10-mile pipeline segment called ETP Contract 2. The outcome of this Task Order will 90-percent complete plans and specifications. The project will be shelved at that stage until funding is secured. A design wrap-up and bidding assistance task order or amendment will be necessary to complete the design and publicly advertise for bids.

4. The award of a construction contract to a Contractor to build the Engineer-designed pipeline will depend on future project funding. If funding is not available to build the entire ETP Contract 2 transmission main, it may be bid in separate smaller packages. Trenchless crossings will be included within the CDs, including the open-cut portions of the Project.

II. TASK ORDER OBJECTIVES

1. The objective of this task order is to have this segment of the ENDAWS pipeline progressed to a 90-percent completion stage by 2026. Completion of final design and bidding assistance will be completed later when funding is secured for pipeline construction. The alignment and limits of the pipeline being designed under this Task Order are shown in **Attachment A**. ETP Contract 2 starts at the east side of the NDDOT Hwy 14 crossing in Sheridan County and progresses east approximately 54,000 feet to connect to ETP Contract 3 at 24th Avenue. In addition to the 10 miles of new pipeline, there is one trenchless crossing of a U.S. Fish and Wildlife Service (USFWS) easement.

2. Routing of the pipeline from the Missouri River and the McClusky Canal to the Sheyenne River was developed during preliminary design and the ENDAWS appraisal-level design. The final design of ETP Contract 2 will follow this route, but some adjustments to the route are anticipated as part of the final design process. Preliminary design of this pipeline segment was done under Task Order 5280 and was completed in 2024.

3. Preparation of easement agreements and associated exhibits along with easement negotiations and acquisition are included in Task Order 7420. Easement acquisition is ongoing and will continue through the final design phase.

4. Geotechnical field work to supplement the original 2009 geotechnical investigation is included in this task order. These new borings will provide subsurface data where the pipeline alignment deviated from the 2009 alignment mainly due to wetlands avoidance.

5. This Task Order includes the scope of the remaining geotechnical investigations that are required to support final design. Where possible, the 2009 soil borings are incorporated in the geotechnical analysis where they are sufficiently close to the current pipeline alignment. Geotechnical reports will be prepared under this Task Order including incorporation of 2009 geotechnical work where still applicable plus the supplemental work completed under this Task Order. These reports will include a Geotechnical Report for the open-cut pipeline and a Geotechnical Data Report (GDR) and a Geotechnical Baseline Report (GBR) for the trenchless crossing(s) being designed hereunder. The GDR and GBR will be Contract Documents (CDs). The GDR will include information gathered during the project investigation and will be prepared to

summarize the subsurface information collected under this Task Order. The GBR establishes a single-source document where contractual statements describing the geotechnical conditions anticipated to be encountered during construction can be found. The GBR will be prepared in this Task Order during the design document preparation since it depends on the design being significantly advanced.

6. A preliminary sheet list identifying the drawings to be produced under this task order is included as **Attachment B**.

7. A preliminary specification list, including front-end or Division 0 specifications, identifying specifications to be produced under this task order is included as **Attachment C**. ETP Contract 2 funding will likely include procurement and technical requirements that are different than the State RRVWSP program requirements. Potential additional requirements are funding agency supplemental provisions, Buy American Build American (BABA) material requirements, WBE/DBE requirements, Davis Bacon Wage Requirements, and/or environmental clearances of material supply sources.

8. The pipeline will be a 72-inch diameter steel pipeline primarily installed with cut-and-cover methods.

III. GENERAL REQUIREMENTS

1. Under this Task Order, Engineer will provide services in accordance with the Standard Form of Agreement between Owner and Engineer for Professional Services dated January 17, 2008 (Agreement).

2. General Description of Activities. The Basic Services to be performed by Engineer consist of professional design services associated with development of CDs for installation of a multi-county water supply pipeline in east central ND.

3. Construction Procurement. CDs developed by Engineer will be of sufficient detail for the Owner to obtain bids through a conventional bidding process (design-bid-build). CDs will be prepared assuming one construction package – ETP Contract 2.

4. Work outside Basic and Special Services. Engineer agrees to provide the Basic Services and Special Services identified herein. Work not specifically discussed herein as part of Basic Services or Special Services is considered Additional Services. Additional Services will only be performed with proper separate authorization such as an amendment to this Task Order or a new separate Task Order.

5. Explicitly Identified Quantities. Engineer in development of this Task Order estimates the level of effort required to provide the services discussed. Where specific information is listed as to the quantity of service to be provided by Engineer, those quantities listed are considered Basic Services or Special Services and are, therefore, included in this Task Order scope of service and associated fee estimate. Services exceeding the written quantities shown below in Basic Services or Special Services are considered Additional Services.

6. Capital Cost Opinions. All opinions of probable construction cost developed will generally follow the recommendations of the Association for the Advancement of Cost Engineering (AACE)

International Recommended Practice No. 18R regarding methodology and accuracy. The cost opinions' level of accuracy presented by Engineer for the various deliverables will be as noted in subsequent paragraphs of this Task Order.

7. Document Production Standards and Procedures. Engineer will prepare CDs using the 50-division, three-part Construction Specifications Institute (CSI) format for technical specifications; Engineer's drawing standards; and Engineer's design procedures and criteria, AutoCAD drafting standards, and standard construction details.

IV. BASIC SERVICES

Basic Services of this Task Order are organized into major tasks as follows:

- Task 1 – Task Order Management and Administration
- Task 2 – Special Project and Third-Party Meetings
- Task 3 – Landowner Communication
- Task 4 – Field Services
- Task 5 – Final Design Services

1. Task 1 – Task Order Management and Administration

This task includes overall management and development of a Project Management Plan specific to the Work. The overall objective of this task is to keep the Task Order on schedule and on budget.

A. Project Management. Engineer will provide management services necessary for execution of the Task Order, including efforts required for proper resource allocation, schedule development and monitoring, budget review and control, Owner coordination, and other standard and customary activities required for timely completion of the Work.

B. Administration. Perform general administrative duties associated with the Task Order, including general correspondence, day-to-day contact and coordination, administration, and monthly invoicing in a form that is acceptable to the Owner.

C. Progress Reports. Prepare for the Owner progress reports that identify the Work that has been performed, upcoming work activities anticipated, and action items required of the Owner. Identify therein variances or potential variances from the Task Order's Basic and Special Services. The reports will be in the Engineer's standard format unless the Owner requires otherwise.

D. Schedule Updates. Engineer will prepare a baseline Gantt chart schedule at Task Order's inception. The schedule will be updated comparing actual progress by task/subtask to the baseline schedule.

E. Management of Subconsultants. Engineer will monitor subcontractor progress, review and approve invoices, oversee adherence to the approved quality assurance/quality control (QA/QC) plan, monitor adherence to document preparation standards, and oversee subconsultants' performance.

2. **Task 2 – Special Project and Third-Party Meetings**

The overall objective of this task is to keep stakeholders apprised of Task Order status and to provide a forum for stakeholder input. Engineer will prepare an agenda. The following meetings are anticipated:

A. Special Project Meetings

i. Task Order Initiation Meeting. Engineer will conduct a virtual Task Order Initiation Meeting with the Owner and subconsultants to review the overall approach for final design and bidding assistance. Another objective of this meeting will be to finalize the approach to securing rights of entry from landowners.

ii. Post Field Investigation Alignment Update Meeting. A virtual meeting will be held with Owner after supplemental field work has been completed and after initial discussions have been undertaken with local officials and landowners. The impact of field findings and/or negotiations with landowners on the pipeline alignment and appurtenance locations will be discussed. The outcome of the meeting will be to identify any required alignment changes to the 30-percent design. An updated set of alignment drawings will be prepared before the meeting and finalized during the workshop.

B. Third-Party Meetings

i. Stakeholder Meetings. Engineer will attend and present Project information for meetings with the LAWA Technical Advisory Committee (TAC). One meeting is expected to present the final design.

ii. Design Meetings for Utility Coordination. Engineer will schedule and meet utilities that own parallel easements or easements that the pipeline will cross. Engineer will provide summary notes of meetings. The following utility coordination meetings are anticipated.

(a) Up to four meetings with the NDDOT for access approaches from Hwy 200 for the construction traffic.

(b) One meeting each will be held with the county commission or designated representative(s) of Sheridan County.

(c) One meeting for each impacted township with the elected officials if desired by that township.

(d) One meeting will be held with each of the electric/communications utilities impacted. This scope item assumes there will be three electric/communications crossings.

(e) One meeting will be held each of the pipeline companies impacted. There are expected to be:

(i) Rural Water Providers

(ii) One other Utility

(f) No meetings are anticipated with any railroads.

iii. Funding Agency Meetings. Engineer will coordinate with Garrison Diversion staff to hold regular meetings with the Bureau of Reclamation (Reclamation). It is assumed that these Reclamation meetings will, when necessary, include other Federal agencies. It is assumed that there will be 10 virtual meetings with Reclamation or other Federal agencies.

3. **Task 3 – Landowner Communication and Easement Modifications**

A. Landowner Notifications. This segment of pipeline covers approximately 22 individual easements and 13 individual property owners. Engineer will support Garrison Diversion's communications with individual landowners for the purposes of gaining access for the field investigations by developing GIS graphics and other supporting documentation.

B. Landowner Coordination. Provide engineering team support to Owner to meet with landowners as required for the purposes of establishing the final pipeline alignment and for establishing fixed locations of appurtenances for incorporation into the CDs developed during the final design phase.

4. **Task 4 – Field Services**

A. Soil Borings. Engineer's consultant will complete an additional geotechnical investigation. It will include up to approximately 14 soil borings at an average depth of 20 feet. The soil borings will support the final design of the open-cut and tunneled portions of ETP Contract 2 due to any alignment changes implemented during final design. In addition, various soil resistivity and corrosivity tests will be completed to support the design. Ground surveys will be completed to locate the boring(s) and to confirm the actual location of drilling so that they can accurately be placed on drawings and documented in the geotechnical reports.

B. Limited Topographic Surveying. Where necessary to reduce change order risk by more precisely locating utilities crossing or paralleling the proposed pipeline alignment, provide limited field surveys to establish horizontal coordinates and vertical elevations of utilities and other topographic features impacting pipeline design. For fee development, this task assumes four surveys.

C. Stray Current Field Investigations. Where necessary to mitigate direct current (DC) stray currents from foreign systems or induced alternating current (AC) voltages at proposed high-voltage power lines crossings, provide field investigations to support detailed modeling of soil and crossing appurtenances. Modeling will be used to simulate induced AC potentials and current densities in support of the final design of the Project's pipeline corrosion protection system. Develop and submit a report documenting the findings and conclusions of the field investigation and simulations. For fee development, this task assumes one stray current analysis will be completed.

D. Alignment Site Visits for ETP Contract 2. The design engineers will visit the 10-mile alignment before beginning work on the 60-percent deliverable. The purpose of the site

visit is to verify and document existing facilities along the alignment, evaluate potential constructability issues, and document potential construction access locations along the alignment. This task will be done current with the Post Field Investigation Alignment Meeting discussed above.

E. USFWS Permits and/or Licenses. The Engineer will coordinate with the USFWS to obtain the necessary approvals to allow for temporary construction impact to USFWS wetland easements identified in ENDAWS TM302 and subsequent final design activities.

F. Supplemental EIS Memorandum. The Engineer, through their environmental subconsultant, will provide supplemental EIS memorandum or documentation necessary to support minor pipeline alignment reroutes or as requested by the Reclamation. It is assumed that the Engineer will need to make two field visits and generate four supplemental EIS memoranda.

5. **Task 5 – Final Design Services**

The purpose of final design is to develop CDs by which the Owner will select Contractor to build the desired facilities. Engineer will provide final design services and CDs for the recommended pipeline alignment identified in the EIS, shown in **Attachment A**, and as adjusted with minor adjustments as the work under this task order progresses. The CDs will be prepared for the purposes of obtaining competitive bids, selection of the lowest and best bid, and construction of the Work. Intermediate deliverables will be prepared and submitted to the Owner upon development of the 60-, 90-, and 100-percent design completion stages. Final CDs will be prepared for bidding purposes.

A. Design Team Conference Calls. Engineer will schedule and lead monthly conference calls with the Owner to review overall progress, exchange ideas and information, and coordinate activities with other task orders. Calls will be scheduled, and content organized, to coincide with other Task Orders for efficient utilization of staff time. Assuming a 12-month schedule (from completion of preliminary design), up to 12 calls will be held with the Owner.

B. Design Guidance Manual Minor Update. A Design Guidance Manual was previously developed under Task Order 5330 and updated under Task Order 5360. It will be used to guide this design, and it will be updated to capture changes to the design approach made by the Owner and its engineering team during this task order and re-issued, if necessary.

C. Geotechnical Baseline Report. Engineer will develop a GBR for the trenchless crossing of this pipeline segment. A draft report will be furnished for review and comment. Upon disposition of Owner comments concerning the draft report, a final report will be furnished. The GBR will be a CD.

D. Geotechnical Design Memorandum/Geotechnical Data Report. Engineer will develop a memorandum for internal use by Engineer that contains design requirements and geotechnical recommendations for open-cut design and the geotechnical data for the trenchless crossing. The geotechnical design memorandum will not be made available to bidders. A GDR will be developed by the Engineer. If additional borings are needed during

final design, these will be added to the GDR. The GDR will be furnished to bidders, and it will be considered a CD.

E. Soils Classifications and Quantities. Engineer using a ND-licensed professional soil classifier will characterize topsoil and subsoil along the alignment. The professional soil classifier will review applicable excavation and trenching, easement restoration, and vegetative technical specifications providing comments to Engineer to incorporate into the CDs. Soil layer thickness will be estimated from ND soil surveys and augmented by consultant with limited field investigations. Thicknesses will be used to compute Bid Form quantities. A technical memorandum documenting the soil classification work completed and the findings of that effort will be developed.

F. Utility Coordination. Engineer will perform utility coordination services, including identifying utility conflicts and facilitating the resolution of utility conflicts. It is expected that the pipeline will be below existing utilities so that the Utility Coordination will consist of identification and coordination but not relocation. Engineer will perform the following activities:

   i. Provide initial notification letters for Owner to send to affected utility companies, owners, and other concerned parties, as applicable.

   ii. Engineer will develop a utility contact list with information such as: (a) owner's name; (b) contact person; (c) telephone numbers; (d) emergency contact number; (e) e-mail addresses; and (f) other pertinent information concerning affected utilities and facilities.

   iii. Advise utility companies and owners of the general characteristic of the Work and provide an illustration of the Project footprint for delineation of the utilities/facilities that are in the Project area.

   iv. Create and maintain a utility layout in AutoCAD. This layout will include existing utilities that are to remain in place or be abandoned and adjusted/relocated utilities.

   v. Review utilities adjustment proposals if the pipeline cannot be installed under the existing utilities.

G. Subsurface Utility Engineering

   i. Provide subsurface utility engineering (SUE), utility designating, and locating surveys along the proposed pipeline alignment in areas where utility marking services are available. The subsurface utility surveys will be a combination of Utility Quality Level A, B, and C, depending on the specific utility, as defined in CI/ASCE 38. Vertical elevations of sewers and drains, as applicable, will be taken at manholes and inlets.

   ii. Up to 5 vacuum excavations or potholes no deeper than 10 feet will be excavated at proposed utility crossings and other locations to better define locations of utilities or other potential conflicts where field-discovered conflicts will adversely impact pipeline installation. Potholes/vacuum excavations will mostly be needed in the event of open cutting across roads instead of tunneling. Engineer will coordinate with and manage

the services provided by a pot holing or vacuum excavation contractor to uncover potentially conflicting utilities.

H. Utility Relocations Coordination. Few conflicts between the pipeline and water and sewer lines, as well as minor drainage structures and irrigation facilities, are anticipated due to the depth of the pipeline. The scope assumes that the utility owners will design relocations and will then be paid by directly by the Owner. Relocations will be scheduled for completion in advance of pipeline excavation and installation.

i. If relocation designs are prepared by the utility owners, they will be coordinated with the ENDAWS project and reviewed by Engineer for compatibility with the work proposed.

ii. If drain tile needs to be relocated or field modified as part of pipeline construction, engineering services will be addressed as Additional Services.

I. Permitting. This subtask encompasses applicable governmental approvals, including counties, townships, and utility permits and approvals necessary to construct the pipeline. The pipeline will comply with overall Federal permit requirements.

i. Engineer will obtain in conjunction with the Owner necessary approvals from the appropriate utilities, city, county, and state agencies having authority over the Work.

ii. Engineer will prepare a permitting schedule identifying action items, decision points, milestones, reviews, and approvals required to complete permitting. Engineer will communicate status of permits to Owner.

iii. Contractor-Provided Permits. Engineer will provide in the CDs a list of the permits that must be obtained by the Contractor. Based upon preliminary design, it is understood that the following permits, at a minimum, will be the responsibility of the Contractor:

- Erosion and sediment control; land disturbance; stormwater permits, and
- Dewatering operations discharge.

iv. Owner-Provided Permits

(a) Engineer will aid the Owner in obtaining the following permits from government agencies, North Dakota Department of Transportation (NDDOT), utilities, pipeline companies, and other entities as noted below:

- NDDOT for access permits,
- County road closing/detours,
- Local electric and telecommunications crossings. Scope assumes up to three separate utilities,
- County road crossings, and
- Township road crossings.

(b) Assistance provided by Engineer for the above listed permits will include:

(i) Preparation of applications, exhibits, drawings, and specifications ready for the Owner's execution and transmittal.

(ii) Furnishing additional information about the Project's design, as required by the permitting authority.

J. Pipeline Corrosion Protection System Services. A multi-pronged approach to pipeline corrosion protection, including pipe coatings and an impressed-current corrosion protection system is being implemented on this project. The following services specifically related to the ETP Contract 2, 10- mile segment will be provided.

i. Stray current field investigations for the Project element will be completed as indicated in the Field Services article of this Task Order, if required. Prepare report as indicated in the Field Services article of this Task Order documenting field investigations and simulations at any high voltage power line crossing. A mitigation design will be developed and incorporated into the corrosion protection system drawings based on the simulations.

ii. Engineer has formulated a detailed approach for the Project's corrosion protection system in the Corrosion Protection Design Guide (CPDG) prepared under Task Order 5310. The corrosion protection system will be based on an impressed current design. Engineer will also develop drawings and specifications for the corrosion protection system incorporating them into the Project's CDs for the element covered by this Task Order. Drawings and specifications will be developed for 60-, 90, and 100-percent design deliverables. The 60-percent deliverable consists of design of the essential components of the corrosion protection system and identification of field investigation locations indicated in the Field Services article of this Task Order. Stray current mitigation design and impacts of detailed pipeline design will be incorporated into the 90-percent deliverable. Final client comments will be incorporated into the 100-percent deliverable. In addition, the Project element's corrosion protection system design will provide stand-alone corrosion protection for idle Project elements while subsequent pipeline segments are constructed.

K. Hydraulic Modeling Refinement Outcome. The Project's hydraulic and surge-transient models are being generated and refined during the development of the PDR. The previous work will be updated in consideration of the ENDAWS modifications to the original RRVWSP alignment.

L. Pipeline Basis of Design Memorandum Update

i. Draft Basis of Design Memorandum (BDM). A BDM was prepared for previous pipeline segments. This BDM will be updated for the design and construction of the ETP Contract 2 pipeline, including pipeline design parameters, a preliminary route map indicating the proposed alignment, pipeline material selection, pipeline design working pressure and test pressure, joint restraint, accessories, and appurtenances. Engineer will review the Draft BDM for accuracy and completeness prior to submitting to the Owner for review and comment.

ii. Review and Finalize BDM. Engineer will confer with Owner's staff to review the Draft Updated BDM and obtain Owner's comments. Engineer will address Owner comments and develop a Final Updated BDM. The Final Updated BDM will be the document followed by the design team to develop CDs for solicitation of bids from general contractors.

M. Front-End Documents Customization

i. Prepare and deliver draft front-end documents using standard documents of the Engineers Joint Contract Document Committee (EJCDC) and Engineer's standard supplements, including general conditions and supplementary conditions. The documents will be based on the Contract Documents for Segment 6.

ii. Conduct a review conference call with Owner to discuss and receive comments on the draft front-end documents.

iii. Conduct a review conference call with Owner and Reclamation to and receive comments on the draft front-end documents.

iv. Revise front-end documents addressing Owner's and Reclamation's comments and incorporate modifications, if any, into subsequent CD deliverables.

N. 60-percent CDs (Level 2 Design)

i. Level 2 design will commence after the Owner accepts the preliminary design as modified from the Post Field Investigation Workshop.

ii. The content of Level 2 deliverables is as follows:

- General drawings
- Plan and profile drawings,
- Most technical specifications,
- Underground utility drawings,
- Constructability review results,
- Opinion of probable construction cost update,
- Internal quality control review and refinement,
- QA/QC plan and log update, and
- Task Order schedule update.

iii. Provide technical specifications and drawings for Owner review.

iv. Attend a meeting with the Owner to receive and discuss the Owner's review comments. Document comments received in a log and distribute to meeting attendees.

v. Revise documents as necessary to reflect decisions taken at this level incorporating design modifications into subsequent deliverables.

O. 90-percent CDs (Level 3 Design)

i. Level 3 design will commence after the Owner has accepted Level 2 deliverables. The content of the Level 3 deliverables is as follows:

- Drawings review set,
- Technical specifications review set,
- Front-end documents review set,
- Opinion of probable construction cost update,
- Constructability review results,
- Internal quality control review and refinement,
- QA/QC plan and log update, and
- Task Order schedule update.

ii. Provide specifications and drawings for Owner review.

iii. Attend a meeting with the Owner to receive and discuss the Owner's review comments. Document comments received in a log and distribute to meeting attendees.

i. Revise documents according to mutual agreement reflecting decisions taken at this level incorporating design modifications into subsequent deliverables.

R. Opinions of Probable Construction Cost (aka Cost Opinions or Cost Estimates). Engineer will update the cost opinion presented in the PDR at the various stages of final design submitting updates for the Owners information and use as follows:

i. After transmittal of the 60-percent deliverable, update cost opinion commensurate with an AACE Class 3 estimate with standard accuracy.

ii. After transmittal of the 90-percent deliverable, update cost opinion commensurate with an AACE Class 2 estimate with standard accuracy.

S. Quality Assurance/Quality Control. Engineer will provide QA/QC services necessary for execution of the Task Order. QA/QC reviews will be provided for each deliverable furnished. Engineer's or Engineer's consultant's independent senior staff will complete reviews. Engineer will log QA/QC reviews and maintain records of said reviews in its files. In addition, Engineer will log comments received from the Owner and provide a log of comments and Engineer responses for the following events:

- 60-percent CDs
- Draft front-end documents
- 90-percent CDs

Engineer's services under the Final Design Phase will be considered complete on the date when the final design submittals identified in Deliverables are provided.

V. SPECIAL SERVICES

None this Task Order.

VI. DELIVERABLES

The following deliverables will be furnished under this Task Order. Documents or deliverables not included in the list below will be provided as Additional Services as authorized by the Owner.

1. **Task 1 – Task Order Management and Administration**

   - Progress reports (electronic pdf files)
   - Baseline schedule and updates (electronic pdf files)

2. **Task 2 – Special Project and Third-Party Meetings**.

   - Meeting agenda (typically included with MS Outlook meeting invitations)
   - Meeting notes (electronic pdf files)

3. **Task 3 – Landowner Communication and Easement Modifications**

   - Landowner GIS exhibits (electronic pdf file for each affected parcel)

4. **Task 4 – Field Services**

   - Updated drawings for supplemental surveys (electronic pdf file)
   - Stray current field report (electronic pdf file)
   - Supplemental EIS memorandum (electronic pdf file)

5. **Task 5 – Final Design Services**

   - Meeting/conference call agendas (attached to MS Outlook meeting invitations) and notes (electronic pdf files)
   - Updated Design Guidance Manual (draft and final single hard copy and electronic pdf files)
   - Geotechnical baseline report (electronic pdf file)
   - Soils classification and quantities memorandum (electronic pdf files)
   - Utility notification letters (electronic pdf file)
   - Utility contact list (electronic pdf file)
   - SUE drawing and summary table (DWG electronic and excel/pdf electronic)
   - Permit applications (electronic pdf files for applications identified in the Permitting paragraph)
   - Draft front-end documents (electronic pdf files)
   - 60-percent CDs (hard copies and electronic pdf files)
   - 60-percent cost opinion (electronic pdf file)
   - 60-percent Owner review comments log (electronic pdf file)
   - 90-percent CDs (hard copies and electronic pdf files)
   - 90-percent cost opinion (electronic pdf file)
   - 90-percent Owner review comments log (electronic pdf file)

VII. ADDITIONAL SERVICES

The professional services listed below are not included in the scope of this Task Order nor does the fee shown in Article IX include any labor and direct expenses for items identified as Additional Services. Should

Owner want to include services listed under Additional Services in Engineer's scope an amendment to this Task Order or execution of a separate Task Order with the new scope of services will be necessary.

1. The pipeline alignment was finalized previously under the preliminary design task orders, and survey certificates were prepared for each parcel under other task orders. Limited additional certificates of survey will be necessary over the 10-mile length, to reflect the final disposition of certain disputed parcels and to reflect final alignment and easements associated with these to prepare CDs for bidding. If the alignment is changed during these Final Design Services, new survey certificates will likely be necessary and those would be considered Additional Services if the effort falls beyond the allowance amount set forth in this Task Order.

2. Addenda. Engineer will prepare up to two addenda under Basic Services. Should additional addenda be required beyond the Engineer's control, Engineer will be prepare as Additional Services.

3. Pre-award Services to be Provided as Additional Services. If the apparent successful bidder is not qualified or if substantive changes to the design are proposed by the Bidder or the Contractor after award, substantial and unpredictable levels of effort by Engineer may be required to resolve issues and answer questions. These services will be provided according to the Owner's request as Additional Services.

4. Design of the relocation of utilities in conflict with the proposed location of ETP Contract 2 pipeline as presented in the PDR, except as explicitly identified herein. Relocation design for the following utilities and facilities is considered Additional Services:

    - Overhead and buried telephone lines
    - Fiber optic cable and other communication lines
    - Natural gas pipelines
    - Petroleum pipelines

6. Preparation of traffic control plans, excluding haul routes and detour plans that are included with Basic Services.

7. Progressing the design from 90-percent complete to biddable plans and specifications is not included in the work of this Task Order. Bidding assistance is also considered Additional Services.

VIII. SPECIAL RESPONSIBILITIES OF OWNER

1. Permit and License Fees. Owner agrees to pay directly to affected utilities, railroads, or other public entities fees assessed to secure crossing permits, licenses, or easements.

2. Easements. Pay directly to landowners the real estate costs for all required easements. In addition, retain and pay for legal services necessary to secure easements through negotiation or other means. Several landowners in this 24-mile section have declined to sign voluntary easements so legal intervention will likely be necessary to get the necessary right-of-way. The Owner will manage and oversee legal services provided by others to support easement acquisition.

IX. FEE

The total fee for the Basic Services under this Task Order is One Million Seven Hundred Eighty Thousand Dollars ($1,780,000). Worksheet(s) showing the fee estimate and level of effort by task are included as **Attachment D**.

X. PERFORMANCE SCHEDULE

This Task Order will be completed by mid-2026 with delivery of 90-percent complete plans and specifications. A subsequent design wrap-up task order or amendment will be necessary to complete the design and provide bidding assistance. If funding becomes available earlier than currently anticipated, Contract Documents will be completed as necessary to meet that accelerated schedule as directed by Garrison Diversion via separate authorization.

XI. DOCUMENTS INCORPORATED BY REFERENCE AND ATTACHMENTS

1. Standard Form of Agreement between Owner and Engineer for Professional Services dated January 17, 2008, is incorporated by reference.
2. Attachment A – ETP Contract 2 Alignment and Trenchless Crossing Locations
3. Attachment B – Preliminary Sheet List
4. Attachment C – Preliminary Specification List
5. Attachment D – Fee Estimate Worksheets
6. Attachment E – Partial Final Design Services Schedule

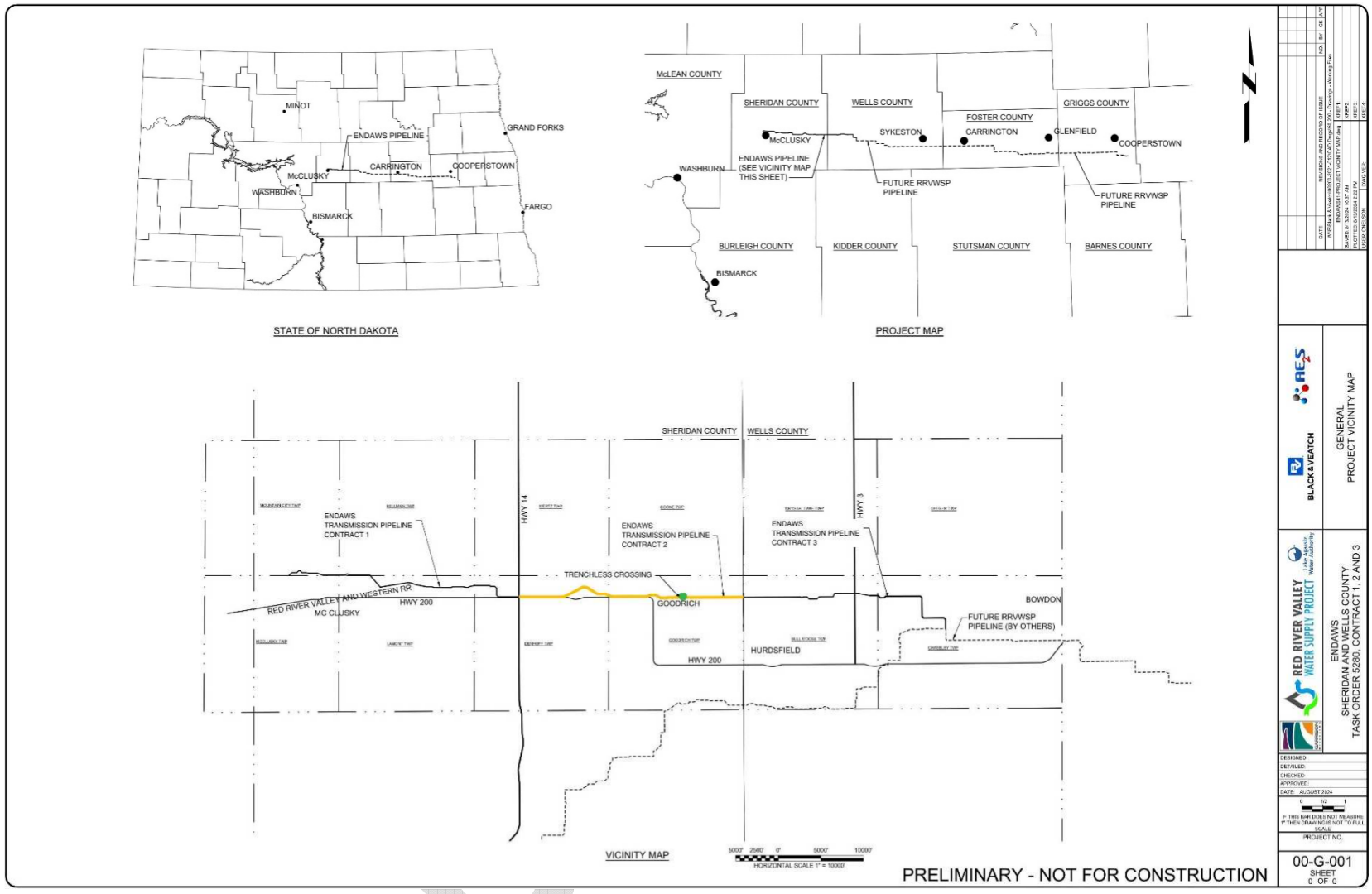
XII. ACCEPTANCE

If this satisfactorily sets forth your understanding of this Task Order, please electronically sign this document. An electronic copy of the fully executed document will be provided upon execution by all parties.

By: _____	By: _____
Duane DeKrey, General Manager Garrison Diversion Conservancy District	Paul Boersma, Vice President Black & Veatch Corporation
Dated: _____	Dated: _____

ATTACHMENT A

ETP CONTRACT 2 ALIGNMENT AND TRENCHLESS CROSSING LOCATIONS


MINOT
GRAND FORKS
ENDAWS PIPELINE
CARRINGTON
COOPERSTOWN
McCLUSKY
WASHBURN
BISMARCK
FARGO
STATE OF NORTH DAKOTA
McLEAN COUNTY
SHERIDAN COUNTY
WELLS COUNTY
FOSTER COUNTY
GRIGGS COUNTY
SYKESTON
GLENFIELD
ENDAWS PIPELINE (SEE VICINITY MAP THIS SHEET)
FUTURE RRVWSP PIPELINE
BURLEIGH COUNTY
KIDDER COUNTY
STUTSMAN COUNTY
BARNES COUNTY
PROJECT MAP
SHERIDAN COUNTY
WELLS COUNTY
HWY 14
HWY 3
ENDAWS TRANSMISSION PIPELINE CONTRACT 1
ENDAWS TRANSMISSION PIPELINE CONTRACT 2
ENDAWS TRANSMISSION PIPELINE CONTRACT 3
TRENCHLESS CROSSING
RED RIVER VALLEY AND WESTERN RR
HWY 200
MC CLUSKY
GOODRICH
HURDSFIELD
BOWDON
FUTURE RRVWSP PIPELINE (BY OTHERS)
VICINITY MAP
HORIZONTAL SCALE 1" = 10000'
PRELIMINARY - NOT FOR CONSTRUCTION
BLACK & VEATCH
GENERAL
PROJECT VICINITY MAP
RED RIVER VALLEY WATER SUPPLY PROJECT
ENDAWS
SHERIDAN AND WELLS COUNTY
TASK ORDER 5280, CONTRACT 1, 2 AND 3
DESIGNED:
DETAILED:
CHECKED:
APPROVED:
DATE: AUGUST 2024
PROJECT NO.
00-G-001
SHEET
0 OF 0

ATTACHMENT B

PRELIMINARY SHEET LIST

Type of Drawing	**52 Sheets Total**
Contract 2 (10 miles)	
Cover	1
General	9
Plan & Profile	29
Details	12
Specialty	4

ATTACHMENT C

PRELIMINARY SPECIFICATION LIST

Specification Topic	**70 Sections**
Division 00 – Procurement and Contracting Requirements	26
Division 01 – General Requirements	15
Division 03 – Concrete	1
Division 05 – Metals	1
Division 09 – Finishes	2
Division 13 – Special Construction	1
Division 26 – Electrical	1
Division 31 – Earthwork	7
Division 32 – Exterior Improvements	2
Division 33 – Utilities	7
Division 40 – Process Interconnections	7

ATTACHMENT D

FEE ESTIMATE WORKSHEETS

Garrison Diversion Conservancy District
Task Order 5325 - ENDAWS Transmission Pipeline Contract 2 Partial Final Design Services
BV Project No. TBD
Black & Veatch & Consultants

Task	Lead Firm	Task Description	Position	P	PMS	PM1	EMS	EM1	TE	DE2	SE1	DES	DES	SE1	EM1	EM1	EM1	CAD2	CM2	EST1	EST2	PJC2	PA1	ADM1	ADM2	QC1	Labor Detail	Labor Detail
				Principal	Project Manager Senior	Project Manager 1	Engineering Manager Sr	Engineering Manager 1	Technical Expert	Design Engineer 2 (Pipeline)	Staff Engineer 1 (Pipeline)	Design Engineer Senior (Geotech)	Design Engineer Senior (Geotech/Trenchless)	Staff Engineer 1 (Geotech/Trenchless)	Electrical Engineer (Corrosion)	Electrical Engineer (Corrosion)	Electrical Engineer (Corrosion)	CAD Technician 2	Construction Manager 2	Estimator 1	Estimator 2	Project Controls Analyst 2	Project Accountant 1	Administrator 1	Administrator 2	QA/QC Manager 1	BV Level of Effort (hrs)	BV Labor Cost
IV. BASIC SERVICES																												
1	**BV**	**Task Order Management and Administration**		**56**	**170**	**20**	**0**	**0**	**0**	**0**	**0**	**4**	**24**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**52**	**71**	**35**	**0**	**8**	**440**	**$112,673**
A	BV	Project Mgmt (1 3-dy trp; x2)		16	40																					8	64	$20,848
B	BV	Administration		16	40								16									52	44				168	$36,608
C	AE2S	Progress Reports			30																			35			65	$14,715
D	AE2S	Schedule Updates			20																						20	$6,520
E	BV	Management of Subconsultants		24	40	20						4	8										27				123	$33,982
2	**BV**	**Special Project and Third-Party Meetings**		**4**	**34**	**0**	**60**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**98**	**$29,312**
A	BV	Special Project Meetings																									0	$0
i	BV	TO Initiation Meeting			4		8																				12	$3,560
ii	AE2S	Post Fld Invest Alignment Update Mtg			4		16																				20	$5,816
B	BV	Third Party Meetings																									0	$0
i	BV	Stakeholder Meetings (LAWA TAC x 1)		4	12																						16	$5,220
ii	AE2S	Design Meetings for Utility Coordination			4		16																				20	$5,816
iii	BV	Funding Agency Meetings			10		20																				30	$8,900
3	**AE2S**	**Landowner Comm & Easement Modifications**		**0**	**8**	**0**	**16**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**24**	**$7,120**
A	AE2S	Landowner Notifications			4		8																				12	$3,560
B	AE2S	Landowner Coordination			4		8																				12	$3,560
4	**BV**	**Field Services**		**24**	**32**	**0**	**64**	**0**	**0**	**0**	**80**	**2**	**2**	**120**	**40**	**68**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**448**	**$100,268**
A	MTS	Soil Borings			2		6				80	2	2	120		8		8								8	236	$41,384
B	AE2S	Limited Topographic Surveying			2		6																				8	$2,344
C	BV	Stray Current Fld Investigation (1 3-dy trp; x1)			2		16								40	60											118	$30,064
D	AE2S	Alignment Site Visits for Contract 2			2		16																				18	$5,164
E	Ultieg	USFWS Permits and/or Licenses		12	12		20																				44	$13,476
F	Ultieg	Supplemental EIS Memorandum		12	12																						24	$7,836
5	**BV**	**Final Design Services**		**24**	**144**	**0**	**132**	**44**	**64**	**24**	**16**	**60**	**180**	**308**	**28**	**120**	**80**	**60**	**8**	**60**	**144**	**0**	**0**	**0**	**48**	**64**	**1,608**	**$383,020**
A	AE2S	Design Team Conference Calls (12)		24	24		12						8														68	$21,344
B	BV	Design Guidance Manual Update			2		40																		24		66	$14,548
C	BV	Geotechnical Baseline Report			4				12			16	40	120												16	208	$45,620
D	BV	Geotechnical Design Memorandum/GDR			4			4	12			8	20	60											24	8	140	$29,008
E	PSC	Soils Classifications and Quantities			4																						4	$1,304
F	AE2S	Utility Coodination			4																						4	$1,304
G	AE2S	Subsurface Utility Engineering																									0	$0
i	AE2S	SUE Surveys			2			4																			6	$1,668
ii	AE2S	Vacuum Extractions (5)			2			4																			6	$1,668
H	AE2S	Utility Relocations Coordination			2			4																			6	$1,668

Garrison Diversion Conservancy District
Task Order 5325 - ENDAWS Transmission Pipeline Contract 2 Partial Final Design Services
BV Project No. TBD
Black & Veatch & Consultants

Task	Lead Firm	Task Description	Position	P	PMS	PM1	EMS	EM1	TE	DE2	SE1	DES	DES	SE1	EM1	EM1	EM1	CAD2	CM2	EST1	EST2	PJC2	PA1	ADM1	ADM2	QC1	Labor Detail	Labor Detail
				Principal	Project Manager Senior	Project Manager 1	Engineering Manager Sr	Engineering Manager 1	Technical Expert	Design Engineer 2 (Pipeline)	Staff Engineer 1 (Pipeline)	Design Engineer Senior (Geotech)	Design Engineer Senior (Geotech/Trenchless)	Staff Engineer 1 (Geotech/Trenchless)	Electrical Engineer (Corrosion)	Electrical Engineer (Corrosion)	Electrical Engineer (Corrosion)	CAD Technician 2	Construction Manager 2	Estimator 1	Estimator 2	Project Controls Analyst 2	Project Accountant 1	Administrator 1	Administrator 2	QA/QC Manager 1	BV Level of Effort (hrs)	BV Labor Cost
I	AE2S	Permitting			8		8	0																			16	$4,864
J	BV	Pipeline Corrosion Protection System Services			8			4							28	120	80	60									300	$68,856
K	BV	Hydraulic Modeling Refinement			24		24		40																		88	$27,352
L	BV	Pipeline Basis of Design Memorandum Update			8			16		24																	48	$11,856
M	AE2S	Front-End Documents Customization			16		16																				32	$9,728
N	AE2S	60-Percent CDs (Level 2 Design)			12		16					20	48	64													160	$38,176
O	AE2S	90-Percent CDs (Level 3 Design)			12		16					16	24	40													108	$26,304
P	BV	OPCCs			8			8			16		40	24					8	60	144						308	$64,872
Q	BV	Quality Assurance/Quality Control																								40	40	$12,880
PROJECT TOTALS				**108**	**388**	**20**	**272**	**44**	**64**	**24**	**96**	**66**	**206**	**428**	**68**	**188**	**80**	**68**	**8**	**60**	**144**	**52**	**71**	**35**	**48**	**80**	**2,618**	**$632,393**

Garrison Diversion Conservency District
Task Order 5325 - ENDAWS Transmission Pip
BV Project No. TBD
Black & Veatch & Consultants

Task	Lead Firm	Position / Task Description	Expense Detail HOBACCA	Expense Detail Misc	Sub Consult AE2S Hrs	Sub Consultant AE2S Fee	Expense Detail AE2S Sub Markup	Sub Consult Subs Hrs	Sub Consultant Subs Fee (MTS,KLJ, PSC, ETC.)	Expense Detail Sub Markup	Expense Detail Travel Expense	Total Direct Expense	TOTAL BV Level of Effort (hrs)	TOTAL BV Labor Cost	TOTAL Direct Expense	TOTAL Fee
IV. BASIC SERVICES																
1	**BV**	**Task Order Management and Administration**	**$4,030**	**$858**	**230**	**$59,766**	**$2,989**	**18**	**$3,000**	**$150**	**$3,800**	**$74,593**	**440**	**$112,673**	**$74,593**	**$187,266**
A	BV	Project Mgmt (1 3-dy trp; x2)	$586	$858	28	$8,627	$431	6	$1,000	$50	$3,800	$15,352	64	$20,848	$15,352	$36,200
B	BV	Administration	$1,539		26	$7,993	$400	6	$1,000	$50		$10,982	168	$36,608	$10,982	$47,590
C	AE2S	Progress Reports	$595		88	$21,573	$1,079	6	$1,000	$50		$24,297	65	$14,715	$24,297	$39,012
D	AE2S	Schedule Updates	$183		88	$21,573	$1,079	0		$0		$22,835	20	$6,520	$22,835	$29,355
E	BV	Management of Subconsultants	$1,127		0	$0	$0	0		$0		$1,127	123	$33,982	$1,127	$35,109
2	**BV**	**Special Project and Third-Party Meetings**	**$898**	**$0**	**232**	**$53,305**	**$2,665**	**0**	**$0**	**$0**	**$0**	**$56,868**	**98**	**$29,312**	**$56,868**	**$86,180**
A	BV	Special Project Meetings	$0		0	$0	$0	0		$0		$0	0	$0	$0	$0
i	BV	TO Initiation Meeting	$110		56	$13,129	$656	0		$0		$13,895	12	$3,560	$13,895	$17,455
ii	AE2S	Post Fld Invest Alignment Update Mtg	$183		40	$9,141	$457	0		$0		$9,781	20	$5,816	$9,781	$15,597
B	BV	Third Party Meetings	$0		0	$0	$0	0		$0		$0	0	$0	$0	$0
i	BV	Stakeholder Meetings (LAWA TAC x 1)	$147		14	$2,936	$147	0		$0		$3,230	16	$5,220	$3,230	$8,450
ii	AE2S	Design Meetings for Utility Coordination	$183		122	$28,098	$1,405	0		$0		$29,686	20	$5,816	$29,686	$35,502
iii	BV	Funding Agency Meetings	$275		0	$0	$0	0		$0		$275	30	$8,900	$275	$9,175
3	**AE2S**	**Landowner Comm & Easement Modifications**	**$220**	**$0**	**148**	**$37,191**	**$1,860**	**0**	**$0**	**$0**	**$0**	**$39,271**	**24**	**$7,120**	**$39,271**	**$46,391**
A	AE2S	Landowner Notifications	$110		82	$15,639	$782	0		$0		$16,531	12	$3,560	$16,531	$20,091
B	AE2S	Landowner Coordination	$110		66	$21,552	$1,078	0		$0		$22,740	12	$3,560	$22,740	$26,300
4	**BV**	**Field Services**	**$4,104**	**$1,000**	**382**	**$89,079**	**$4,454**	**1,441**	**$252,000**	**$12,600**	**$3,800**	**$367,037**	**448**	**$100,268**	**$367,037**	**$467,305**
A	MTS	Soil Borings	$2,162		122	$28,524	$1,426	1,143	$200,000	$10,000		$242,112	236	$41,384	$242,112	$283,496
B	AE2S	Limited Topographic Surveying	$73		156	$34,333	$1,717	0		$0		$36,123	8	$2,344	$36,123	$38,467
C	BV	Stray Current Fld Investigation (1 3-dy trp; x1)	$1,081	$1,000	0	$0	$0	0		$0	$3,800	$5,881	118	$30,064	$5,881	$35,945
D	AE2S	Alignment Site Visits for Contract 2	$165		104	$26,222	$1,311	0		$0		$27,698	18	$5,164	$27,698	$32,862
E	Ultieg	USFWS Permits and/or Licenses	$403		0	$0	$0	172	$30,000	$1,500		$31,903	44	$13,476	$31,903	$45,379
F	Ultieg	Supplemental EIS Memorandum	$220		0	$0	$0	126	$22,000	$1,100		$23,320	24	$7,836	$23,320	$31,156
5	**BV**	**Final Design Services**	**$14,730**	**$2,000**	**2,280**	**$504,866**	**$25,243**	**344**	**$60,000**	**$3,000**	**$0**	**$609,839**	**1,608**	**$383,020**	**$609,839**	**$992,859**
A	AE2S	Design Team Conference Calls (12)	$623		164	$41,034	$2,052	0		$0		$43,709	68	$21,344	$43,709	$65,053
B	BV	Design Guidance Manual Update	$605		0	$0	$0	0		$0		$605	66	$14,548	$605	$15,153
C	BV	Geotechnical Baseline Report	$1,905		0	$0	$0	0		$0		$1,905	208	$45,620	$1,905	$47,525
D	BV	Geotechnical Design Memorandum/GDR	$1,282		0	$0	$0	0		$0		$1,282	140	$29,008	$1,282	$30,290
E	PSC	Soils Classifications and Quantities	$37		34	$7,010	$350	172	$30,000	$1,500		$38,897	4	$1,304	$38,897	$40,201
F	AE2S	Utility Coodination	$37		162	$34,146	$1,707	0		$0		$35,890	4	$1,304	$35,890	$37,194
G	AE2S	Subsurface Utility Engineering	$0		0	$0	$0	0		$0		$0	0	$0	$0	$0
i	AE2S	SUE Surveys	$55		154	$37,164	$1,858	0		$0		$39,077	6	$1,668	$39,077	$40,745
ii	AE2S	Vacuum Extractions (5)	$55		96	$22,357	$1,118	172	$30,000	$1,500		$55,030	6	$1,668	$55,030	$56,698
H	AE2S	Utility Relocations Coordination	$55		70	$14,162	$708	0		$0		$14,925	6	$1,668	$14,925	$16,593

Garrison Diversion Conservency District
Task Order 5325 - ENDAWS Transmission Pip
BV Project No. TBD
Black & Veatch & Consultants

Task	Lead Firm	Position / Task Description	Expense Detail HOBACCA	Expense Detail Misc	Sub Consult AE2S Hrs	Sub Consultant AE2S Fee	Expense Detail AE2S Sub Markup	Sub Consult Subs Hrs	Sub Consultant Subs Fee (MTS,KLJ, PSC, ETC.)	Expense Detail Sub Markup	Expense Detail Travel Expense	Total Direct Expense	TOTAL BV Level of Effort (hrs)	TOTAL BV Labor Cost	TOTAL Direct Expense	TOTAL Fee
I	AE2S	Permitting	$147		304	$69,447	$3,472	0		$0		$73,066	16	$4,864	$73,066	$77,930
J	BV	Pipeline Corrosion Protection System Services	$2,748		0	$0	$0	0		$0		$2,748	300	$68,856	$2,748	$71,604
K	BV	Hydraulic Modeling Refinement	$806		0	$0	$0	0		$0		$806	88	$27,352	$806	$28,158
L	BV	Pipeline Basis of Design Memorandum Update	$440		0	$0	$0	0		$0		$440	48	$11,856	$440	$12,296
M	AE2S	Front-End Documents Customization	$293		112	$28,232	$1,412	0		$0		$29,937	32	$9,728	$29,937	$39,665
N	AE2S	60-Percent CDs (Level 2 Design)	$1,466	$1,000	620	$130,074	$6,504	0		$0		$139,044	160	$38,176	$139,044	$177,220
O	AE2S	90-Percent CDs (Level 3 Design)	$989	$1,000	500	$106,239	$5,312	0		$0		$113,540	108	$26,304	$113,540	$139,844
P	BV	OPCCs	$2,821		64	$15,000	$750	0		$0		$18,571	308	$64,872	$18,571	$83,443
Q	BV	Quality Assurance/Quality Control	$366		0	$0	$0	0		$0		$366	40	$12,880	$366	$13,246
PROJECT TOTALS			**$23,982**	**$3,858**	**3,272**	**$744,206**	**$37,211**	**1,803**	**$315,000**	**$15,750**	**$7,600**	**$1,147,607**	**2,618**	**$632,393**	**$1,147,607**	**$1,780,000**

Garrison Diversion Conservancy District

Task Order 5325 - ENDAWS Transmission Pipeline Contract 2 Partial Final Design Services

BV Project No. TBD

AE2S

		Position	PM6	PM5	PM4	ENGIII	ENGII	SD2	ET5	PMIII	LSIV	LS2	GISV	COMIII	ADM III	Labor Detail	Labor Detail	Expense Detail	Expense Detail	Expense Detail		TOTAL	TOTAL	TOTAL	TOTAL
Task	Lead Firm	Task Description	Principal	Project Manager	Technical Expert QA/QC	Design Engineer	Staff Engineer	Senior Designer	CAD Tech	Surveyor Manager	Land Surveyor	Land Surveyor	GIS	Communications	Admin	AE2S Level of Effort (hrs)	Labor Cost	Travel	Misc	Survey Equip	Total Expense	AE2S Level of Effort (hrs)	AE2S Labor Cost	Direct Expense	Fee
IV. BASIC SERVICES																									
1		**Task Order Management and Administration**	**30**	**120**	**0**	**40**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**20**	**20**	**230**	**$59,766**	**$0**	**$0**	**$0**	**$0**	**230**	**$59,766**	**$0**	**$59,766**
A	BV	Project Mgmt (1 3-dy trp; x2)	8	20												28	$8,627	$0			$0	28	$8,627	$0	$8,627
B	BV	Administration	6	20												26	$7,993				$0	26	$7,993	$0	$7,993
C	AE2S	Progress Reports	8	40		20								10	10	88	$21,573				$0	88	$21,573	$0	$21,573
D	AE2S	Schedule Updates	8	40		20								10	10	88	$21,573				$0	88	$21,573	$0	$21,573
E	BV	Management of Subconsultants														0	$0				$0	0	$0	$0	$0
2	**BV**	**Special Project and Third-Party Meetings**	**12**	**48**	**10**	**46**	**46**	**0**	**0**	**14**	**0**	**0**	**26**	**18**	**12**	**232**	**$52,305**	**$1,000**	**$0**	**$0**	**$1,000**	**232**	**$52,305**	**$1,000**	**$53,305**
A	BV	Special Project Meetings														0	$0				$0	0	$0	$0	$0
i	BV	TO Initiation Meeting	2	12	2	12	12	0	0	12	0	0	0	0	4	56	$13,129	$0			$0	56	$13,129	$0	$13,129
ii	AE2S	Post Fld Invest Alignment Update Mtg	2	8	2	8	8	0	0	2	0	0	8	0	2	40	$9,141	$0			$0	40	$9,141	$0	$9,141
B	BV	Third Party Meetings														0	$0				$0	0	$0	$0	$0
i	BV	Stakeholder Meetings (LAWA TAC x 1)		4		2	2						2	2	2	14	$2,936	$0			$0	14	$2,936	$0	$2,936
ii	AE2S	Design Meetings for Utility Coordination	8	24	6	24	24						16	16	4	122	$27,098	$1,000			$1,000	122	$27,098	$1,000	$28,098
iii	BV	Funding Agency Meetings														0	$0				$0	0	$0	$0	$0
3		**Landowner Comm & Easement Modifications**	**0**	**38**	**0**	**6**	**24**	**0**	**0**	**16**	**0**	**0**	**40**	**0**	**24**	**148**	**$32,191**	**$5,000**	**$0**	**$0**	**$5,000**	**148**	**$32,191**	**$5,000**	**$37,191**
A	AE2S	Landowner Notifications		8		2	20			8			24		20	82	$15,639				$0	82	$15,639	$0	$15,639
B	AE2S	Landowner Coordination		30		4	4			8			16		4	66	$16,552	$5,000			$5,000	66	$16,552	$5,000	$21,552
4		**Field Services**	**2**	**38**	**2**	**24**	**48**	**0**	**0**	**24**	**100**	**100**	**40**	**0**	**4**	**382**	**$76,079**	**$8,000**	**$0**	**$5,000**	**$13,000**	**382**	**$76,079**	**$13,000**	**$89,079**
A	MTS	Soil Borings		10			16			8	40	40	8			122	$23,524	$3,000		$2,000	$5,000	122	$23,524	$5,000	$28,524
B	AE2S	Limited Topographic Surveying		4			8			16	60	60	8			156	$29,333	$2,000		$3,000	$5,000	156	$29,333	$5,000	$34,333
C	BV	Stray Current Fld Investigation (1 3-dy trp; x1)														0	$0				$0	0	$0	$0	$0
D	AE2S	Alignment Site Visits for Contract 2	2	24	2	24	24						24		4	104	$23,222	$3,000			$3,000	104	$23,222	$3,000	$26,222
E	Ultieg	USFWS Permits and/or Licenses														0	$0	$0			$0	0	$0	$0	$0
F	Ultieg	Supplemental EIS Memorandum														0	$0	$0			$0	0	$0	$0	$0
5		**Final Design Services**	**42**	**234**	**174**	**386**	**464**	**400**	**180**	**50**	**52**	**80**	**152**	**20**	**46**	**2,280**	**$492,366**	**$6,500**	**$0**	**$6,000**	**$12,500**	**2,280**	**$492,366**	**$12,500**	**$504,866**
A	AE2S	Design Team Conference Calls (12)	12	48	12	24	24			24			12	4	4	164	$41,034				$0	164	$41,034	$0	$41,034
B	BV	Design Guidance Manual Update														0	$0				$0	0	$0	$0	$0
C	BV	Geotechnical Baseline Report														0	$0				$0	0	$0	$0	$0
D	BV	Geotechnical Design Memorandum/GDR														0	$0				$0	0	$0	$0	$0
E	PSC	Soils Classifications and Quantities		2	0	4	8						20			34	$7,010				$0	34	$7,010	$0	$7,010
F	AE2S	Utility Coodination		20	4	20	40	20			12		40		6	162	$34,146				$0	162	$34,146	$0	$34,146
G	AE2S	Subsurface Utility Engineering														0	$0				$0	0	$0	$0	$0
i	AE2S	SUE Surveys		4	2	4	20	20		20	40	40			4	154	$30,164	$4,000		$3,000	$7,000	154	$30,164	$7,000	$37,164
ii	AE2S	Vacuum Extractions (5)		4	2	4	40			2	0	40			4	96	$16,857	$2,500		$3,000	$5,500	96	$16,857	$5,500	$22,357
H	AE2S	Utility Relocations Coordination		4	2	20	40			4						70	$14,162				$0	70	$14,162	$0	$14,162

Garrison Diversion Conservancy District

Task Order 5325 - ENDAWS Transmission Pipeline Contract 2 Partial Final Design Services

BV Project No. TBD

AE2S

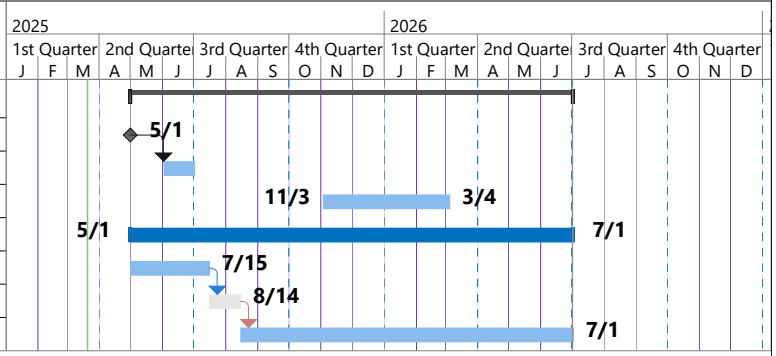
		Position	PM6	PM5	PM4	ENGIII	ENGII	SD2	ET5	PMIII	LSIV	LS2	GISV	COMIII	ADM III	Labor Detail	Labor Detail	Expense Detail	Expense Detail	Expense Detail		TOTAL	TOTAL	TOTAL	TOTAL
Task	Lead Firm	Task Description	Principal	Project Manager	Technical Expert QA/QC	Design Engineer	Staff Engineer	Senior Designer	CAD Tech	Surveyor Manager	Land Surveyor	Land Surveyor	GIS	Communications	Admin	AE2S Level of Effort (hrs)	Labor Cost	Travel	Misc	Survey Equip	Total Expense	AE2S Level of Effort (hrs)	AE2S Labor Cost	Direct Expense	Fee
I	AE2S	Permitting	4	20	80	80	40	20					40	16	4	304	$69,447				$0	304	$69,447	$0	$69,447
J	BV	Pipeline Corrosion Protection System Services														0	$0				$0	0	$0	$0	$0
K	BV	Hydraulic Modeling Refinement														0	$0				$0	0	$0	$0	$0
L	BV	Pipeline Basis of Design Memorandum Update														0	$0				$0	0	$0	$0	$0
M	AE2S	Front-End Documents Customization		40	24	40									8	112	$28,232				$0	112	$28,232	$0	$28,232
N	AE2S	60-Percent CDs (Level 2 Design)	12	40	20	80	140	200	100				20		8	620	$130,074				$0	620	$130,074	$0	$130,074
O	AE2S	90-Percent CDs (Level 3 Design)	12	40	20	80	100	140	80				20		8	500	$106,239				$0	500	$106,239	$0	$106,239
P	BV	OPCCs	2	12	8	30	12									64	$15,000				$0	64	$15,000	$0	$15,000
Q	BV	Quality Assurance/Quality Control														0	$0				$0	0	$0	$0	$0

ATTACHMENT E

PARTIAL FINAL DESIGN SERVICES SCHEDULE

Partial Final Design Services Schedule
ENDAWS Transmission Pipeline Contract 2
Eastern North Dakota Alternate Water Supply Project

ID	Task Name	Duration	Start	Finish
1	**MCIPS Wetwell & BWTP Site Development Ct 1**	**305 days**	**Thu 5/1/25**	**Wed 7/1/26**
2	Notice to Proceed	0 days	Thu 5/1/25	Thu 5/1/25
3	Alignment Site Visits	22 days	Mon 6/2/25	Tue 7/1/25
4	Geotechnical Field Program	88 days	Mon 11/3/25	Wed 3/4/26
5	**Final Design**	**305 days**	**Thu 5/1/25**	**Wed 7/1/26**
6	Prepare & Deliver 60% Docs	54 days	Thu 5/1/25	Tue 7/15/25
7	Garrison Diversion Review & Comment	22 days	Wed 7/16/25	Thu 8/14/25
8	Prepare & Deliver 90% Docs	229 days	Fri 8/15/25	Wed 7/1/26



RED RIVER VALLEY WATER SUPPLY PROJECT

Lake Agassiz Water Authority

2023 to 2025 Biennium Work Plan

($246 mil Total Funding: $4.5M Federal; $180M State; $61.5M Local Users)

April 8, 2025

No.	Scope of Work	Feature	Date Task Orders Auth	Note	2023-25 Bien ENDAWS Project Development Budget (mil $)			2023-25 Biennium RRVWSP Project Development Budget (mil $)			2023-25 Biennium RRVWSP Project Constr Budget (mil $)[1,2,3]		
					Total	Fed/Sta 75%	Local 25%	Total	State 75%	Local 25%	Total	State 75%	Local 25%
1.	**Garrison Diversion Conservancy District Budget** Scope: Account for all costs for which Garrison Diversion is responsible not included in other Task Orders listed here. Need: Budget allocation for GDCD direct costs associated with the Red River Valley Water Supply Project.	Garrison Diversion's costs for the RRVWSP, including internal mgmt, admin, legal, communication, insurance advisory, misc., etc.		GDCD				$ 1.00	$ 0.75	$ 0.25			
2.	**Property, Easements, and Crop Damage Payments[4]** Scope: Costs to obtain easements and acquire property for associated facilities. Crop damage payments to landowners. Need: Secure land for installing future pipeline segments staying years ahead of pipeline design/construction needs. Purchase property on which to build all remaining facilities so property will be in hand before final design begins.	Acquire easements in Sheridan and Wells County for 32-mi pipeline. Pay bonus payment to all easement holders. Acquire property for Biota WTP, Hydraulic Break Tanks, McClusky Canal Intake, and James River sites. Pay for crop damage.		RRVWSP ENDAWS ENDAWS Facilities Crp Dmg	$ 0.49 $ 2.00	$ 0.37 $ 1.50	$ 0.12 $ 0.50	$ 2.21 $ 0.78	$ 1.66 $ 0.59	$ 0.55 $ 0.20			
3.	**Transmission Pipeline East Contract 5C** **Scope: Pipeline installation, including construction phase engineering services by Engineer.** **Need: Continue progress of transmission pipeline installation for completion of RRVWSP by the target end date.**	**8± mi of 72" pl, including two 96" tunnels. Pipeline extends eastward from Contract 5B NE of Bordulac to a termination point just east of the James River.**	**Jul-23** **Nov-23**	**Prof Srvs** **Const, 2026 Fin**							**$ 5.64** **$ 76.66**	**$ 4.23** **$ 57.50**	**$ 1.41** **$ 19.17**
4.	**Transmission Pipeline East Contract 5D** **Scope: Pipeline installation, including construction phase engineering services by Engineer.** **Need: Continue progress of transmission pipeline installation for completion of RRVWSP by the target end date.**	**10± miles of 72" pl, including several 96" tunnels. Pipeline section extends westward from Contract 5A south of Carrington to a termination point south of Sykeston.**	**Jul-23** **Oct-23**	**Prof Srvs** **Const, 2026 Fin**							**$ 5.47** **$ 59.38**	**$ 4.10** **$ 44.53**	**$ 1.37** **$ 14.84**
5.	**RRV Transmission Pipeline Contract 6A** **Scope: Pipeline installation, including construction phase engineering services by Engineer.** **Need: Continue progress of transmission pipeline installation for completion of RRVWSP by the target end date.**	***6± mi of 72" pl, including several 96" tunnels. Pipeline section extends eastward from Contract 5C just east of the James River to a termination point southwest of Glenfield.***	**Jul-23** **Dec-24**	**Prof Srvs** **Const, 2027 Fin**							**$ 5.47** **$ 52.53**	**$ 4.10** **$ 39.40**	**$ 1.37** **$ 13.13**
6.	**ENDAWS Transmission Pipeline Contract 3** **Scope: Final design (30% docs to biddable plans and specs) and bidding assistance.** **Need: Continue progress of transmission pipeline installation for completion of RRVWSP/ENDAWS by the target end date.**	**11± mi of 72" pipeline, including 96" tunnels. Pipeline section extends west from the west end of Contract 4 to the Sheridan Wells County line.**	**Aug-23**	**ENDAWS**	**$ 3.06**	**$ 2.29**	**$ 0.76**						

RED RIVER VALLEY WATER SUPPLY PROJECT

GARRISON DIVERSION

Lake Agassiz Water Authority

2023 to 2025 Biennium Work Plan

($246 mil Total Funding: $4.5M Federal; $180M State; $61.5M Local Users)

April 8, 2025

No.	Scope of Work	Feature	Date Task Orders Auth	Note	2023-25 Bien ENDAWS Project Development Budget (mil $)			2023-25 Biennium RRVWSP Project Development Budget (mil $)			2023-25 Biennium RRVWSP Project Constr Budget (mil $)[1,2,3]		
					Total	Fed/Sta 75%	Local 25%	Total	State 75%	Local 25%	Total	State 75%	Local 25%
7.	Transmission Pipeline East Contracts 4A and 4B Scope: Final design (30% docs to biddable plans and specs) and bidding assistance. Need: Have the next pipeline section bid-ready when State funding becomes available (likely the 2025-27 biennium).	27± mi of 72" pl, including several 96" tunnels. Pipeline extends from the west end of Contract 5D south of Sykeston west to a termination point NE of Hurdsfield at HBTs.	Feb-24	Prof Srvs				$ 7.18	$ 5.39	$ 1.80			
8.	RRV Transmission Pipeline Contract 7 Scope: Final design (30% docs to biddable plans and specs) and bidding assistance. Need: Have the next pipeline section bid-ready when State funding becomes available (likely the 2025-27 biennium).	14± mi of 72" pipeline, including several 96" tunnels. Pipeline extends from the east end of Contract 6B to the outfall on the Sheyenne River southeast of Cooperstown.	Aug-23	Prof Srvs				$ 2.93	$ 2.19	$ 0.73			
9.	McClusky Canal Intake and Pumping Station Scope: Conceptual and preliminary design of an intake and pumping station at the McClusky Canal. Need: Preliminary designs are necessary so site acquisition can begin and final design can commence when land is secured.	Siting; passive intake screens, pumping station similar to MRI, and utility extension design can begin for new facility to be located near McClusky, ND.	Feb-24	Prof Srvs	$ 0.75	$ 0.56	$ 0.19						
10.	Biota Water Treatment Plant and Main Pumping Station Scope: Conceptual and preliminary designs for a Biota WTP and Main Pumping Station, including hydraulic surge facility. Need: Complete design to a point where land acquisition can begin and project can move into final design next biennium.	165-cfs biota WTP, with chlorine and UV disinfection to meet NDPDES permit and FEIS requirements per Reclamation. Chloramines for residual disinfectant in pipeline.	Feb-24	Prof Srvs	$ 2.87	$ 2.15	$ 0.72						
11.	Hydraulic Break Tanks Scope: Preliminary design of above-ground tanks and associated facilities at or near the continental divide. Need: Complete design to a point where land acquisition can begin and project can move into final design next biennium.	Two 5 MG above-ground storage tanks and accessories, site piping and valves, monitoring, and utility extensions necessary for a new greenfield site.	Feb-24	Prof Srvs	$ 0.37	$ 0.28	$ 0.09						
12.	PMIS Annual Licenses & Continued Maint/Upgrades Scope: Annual software license renewal for expanded team and consulting support for training and configuration services. Need: Create greater efficiency and documentation for voluminous amount of construction related documents.	Vendor fees (e-Builder & DocuSign) for licenses of expanded team and consulting support for training of contractors/ subcontractors and workflow/report additions and modifications.	Feb-24	Vend & Prof Srvs				$ 0.50	$ 0.37	$ 0.12			
13.	Prg Mgmt to Support Larger Spend and Expanded Team Scope: Overall program management, planning, budgeting, scheduling, and other support for Garrison Diversion. Need: Consulting services of a broad programmatic nature not included under project-specific design or construction TOs.	Overall planning, management, administration, scheduling, budgeting, coordination, meeting preparation/attendance, regulatory interface, reporting, etc.	Aug-23	Prof Srvs				$ 0.65	$ 0.49	$ 0.16			

RED RIVER VALLEY WATER SUPPLY PROJECT

2023 to 2025 Biennium Work Plan

($246 mil Total Funding: $4.5M Federal; $180M State; $61.5M Local Users)

April 8, 2025

No.	Scope of Work	Feature	Date Task Orders Auth	Note	2023-25 Bien ENDAWS Project Development Budget (mil $)			2023-25 Biennium RRVWSP Project Development Budget (mil $)			2023-25 Biennium RRVWSP Project Constr Budget (mil $)[1,2,3]		
					Total	Fed/Sta 75%	Local 25%	Total	State 75%	Local 25%	Total	State 75%	Local 25%
14.	**Outreach, Plng, and Design to Secure User Commitments** Scope: User briefings and necessary support, including conceptual designs, to secure project commitments. Need: Define pipeline extensions to identify for users how and a what cost water will be delivered to their communities.	Size pipelines, pumping stations, channels, storage, etc. and other necessary infrastructure to deliver raw water to end users. Update capex to reflect current market.	Aug-23	Prof Srvs				$ 1.69	$ 1.27	$ 0.42			
15.	**Operational Planning and Asset Management Phase 3** Scope: System modeling, evaluation, planning, and report development documenting results/findings/outcomes. Need: Finalize Garrison Diversion, State Water Commission, and USACE roles for system operation.	Refine details of diversions to/from Lake Ashtabula. Finalize stakeholder roles and responsibilities as it relates to system operation.	Feb-24	Prof Srvs				$ 0.46	$ 0.35	$ 0.12			
16.	**Financial Planning Support** Scope: Continue to refine the financial model and provide scenarios as required to support users and the program. Need: Accurate water bill estimates and affordability for customers are necessary to gain approval from users.	Update financial models; address state loan and financing program changes; end user funding, financing, and cost-share analyses; continued funding and finance outreach.	Aug-23	Prof Srvs				$ 0.59	$ 0.44	$ 0.15			
17.	**Additional End User Outreach** Scope: Branch pipeline conceptual designs and other consulting assistance to potential end users. Need: Accurate water bill estimates and affordability for customers are necessary to gain approval from users.	Conceptual designs and other consulting support to support end user understanding of core pipeline and applicable branch pipeline CapEx necessary to secure MOU signatures.		Prof Srvs				$ -	$ -	$ -			
18.	**McClusky Canal Hydraulic & Water Quality Investigation** Scope: Study and report on operation of the McClusky Canal to reliably supply flow to irrigators and the ENDAWS project. Need: The McClusky Canal and the Snake Creek Pumping Plant are critial components of the ENDAWS/RRVWSP system.	Evaluate canal improvements necessary to deliver flows. Develop operational plan to supply irrigators and ENDAWS/RRVWPS system while improving delivered water quality.	Apr-25	Prof Srvs	$ 0.44	$ 0.33	$ 0.11						
19.	**ENDAWS Facilities Site Development Contract 1** Scope: Final design and bidding assistance with partial execution of the construction work by GDCD. Need: Provide site access for construction and ready site for substantial facilities construction beginning in 2028.	Access roads to proposed site of new Biota WTP, mass grading to prepare for structure construction, and temporary excavation support system for intake pumping station wetwell.	Apr-25	Prof Srvs	$ 0.88	$ 0.66	$ 0.22						
20.	**ENDAWS BWTP Piloting and Treatability Study** Scope: water treatment piloting of preliminarily selected treatment processes with a 3-month duration. Need: Process demonstration necessary to make sure water quality treatment objectives can be met with selections.	Pilot scale treatment train consisting of preliminary treatment, UV disinfection, chlorination, and residual chloramine treatment.	Apr-25	Prof Srvs		$ -	$ -	$ 0.87	$ 0.65	$ 0.22			

RED RIVER VALLEY WATER SUPPLY PROJECT

2023 to 2025 Biennium Work Plan

($246 mil Total Funding: $4.5M Federal; $180M State; $61.5M Local Users)

April 8, 2025

No.	Scope of Work	Feature	Date Task Orders Auth	Note	2023-25 Bien ENDAWS Project Development Budget (mil $)			2023-25 Biennium RRVWSP Project Development Budget (mil $)			2023-25 Biennium RRVWSP Project Constr Budget (mil $)[1,2,3]		
					Total	Fed/Sta 75%	Local 25%	Total	State 75%	Local 25%	Total	State 75%	Local 25%
21.	**ENDAWS Facilities Supplemental Geotechnical Invest.** Scope: Additional borings and soil sampling expanding upon the initial program implemented during preliminary design. Need: More data needed to properly design foundations, structures, pavement, etc. for the new facilities.	Geotechnical borings; soil charicterization, sampling and testing; and reporting to fully inform design team and contractors of on-site insitu soil charactersitics.	Apr-25	Prof Srvs	$ 0.89	$ 0.66	$ 0.22						
22.	**ENDAWS Facilities Utility Extensions Study** Scope: Study and report of electrical service extension to serve the new biota water Treatment plant Need: There have been no recent studies of electrical service infrastructure necessary at the McClusky facilities site.	Evaluate substation needs and routing of 15 to 25 miles of high-voltate power lines to serve the new BWTP. Identify permitting and easement requirements.		Prof Srvs	$ -	$ -	$ -						
23.	**ENDAWS Transmission Pipeline Contract 2** Scope: Final design (30% docs to 90% plans and specs). Need: Have next pipeline section nearly ready so when Federal funding is secured/allocated design can quickly be completed and construction can proceed.	10± mi of 72" pipeline, including one 96" diameter tunnels. Pipeline extends from ND Highway 14 east to the connection point with Contract 3.	Apr-25	Prof Srvs	$ 1.78	$ 1.34	$ 0.45						
24.	**ENDAWS Transmission Pipeline Contract 1** Scope: Final design (30% docs to biddable plans and specs) and bidding assistance. Need: Have next pipeline section bid-ready so when Federal funding is secured/allocated construction can proceed.	11± mi of 72" pipeline, including uup to five 96" diameter tunnels. Pipeline extends from BWTP at McClusky Canal east to ND Highway 14 connection point with Contract 2.	Apr-25	Prof Srvs	$ 1.95	$ 1.46	$ 0.49						
25.	***Contingency*** *Scope: A budget reserve for task order additions to professional services, construction, legal, real estate, etc. TOs.* *Need: Address and pay for changes that are sure to occur.*	*Budget flexibility to adapt to work plan changes and to pay for construction change orders typically running from 3 to 5% of original construction costs at bid time.*	*N/A*	*GDCD*	$ -	$ -	$ -	$ -	$ -	$ -	$ 6.51	$ 4.88	$ 1.63
TOTAL PROGRAM BUDGET					**$ 15.48**	**$ 11.61**	**$ 3.87**	**$ 18.87**	**$ 14.15**	**$ 4.72**	**$ 211.65**	**$ 158.74**	**$ 52.91**

Notes:

1. Construction costs include management, engineering services during construction, inspection, field quality control, and construction.
2. Projects indicated for construction funding in a given biennium will be shovel ready for construction at the start of the biennium.
3. Future capital costs are escalated to an anticipated midpoint of construction per Finance Team rates of 7, 6, 5, 5, and 3.5 percent per annum thereafter starting in 2022 with an anticipated 2032 finish. All future RRVWSP construction projects and costs are not shown.
4. Land services costs are the amount likely to be paid for real estate, easements, including bonus payments, crop damage, and field obstructions. Estimates include pipeline easements required for the ENDAWS east/west pipeline and remaining easements from the beginning of the Contract 4 transmission main to the Sheyenne River Outfall, with most located in Wells County.
5. Items appearing in blue bold are progressing with task orders and contracts issued to the engineering team and contractors, respectively. Items appearing in blue italics have been updated to reflect adjustments made for actual amounts contracted. Items shown in black text are pending. Items shown in green are new and were added with the $6M MR&I funding in October 2024. Items highlighted in yellow have changed from the previous version of the Work Plan.

RED RIVER VALLEY WATER SUPPLY PROJECT

Lake Agassiz Water Authority

Draft 2025 to 2027 Biennium Work Plan

($346M Total Funding: $0 Federal; $259.5M State; $86.5M Local Users)

April 9, 2025

No.	Scope of Work	Feature	Date Task Orders Auth	Note	2025-27 Bien ENDAWS Project Development Budget (mil $)			2025-27 Biennium RRVWSP Project Development Budget (mil $)			2025-27 Biennium RRVWSP Project Constr Budget (mil $)[1,2,3]		
					Total	Fed/Sta 75%	Local 25%	Total	State 75%	Local 25%	Total	State 75%	Local 25%
1.	**Garrison Diversion Conservancy District Budget** Scope: Account for all costs for which Garrison Diversion is responsible not included in other Task Orders listed here. Need: Budget allocation for GDCD direct costs associated with the Red River Valley Water Supply Project.	Garrison Diversion's costs for the RRVWSP.	--	GDCD				$ 1.00	$ 0.75	$ 0.25			
2.	**Property, Easements, and Crop Damage Payments**[4] Scope: Crop damage payments to landowners. Need: Treat landowners right and live up to commitments.	Easements for Washburn transmission main. Pay for crop damages program wide.	--	Crp Dmg				$ 1.82	$ 1.37	$ 0.46			
3.	**Red River Valley Transmission Pipeline Contract 6B** Scope: Pipeline installation, including construction phase engineering services by Engineer. Need: Continue progress of transmission pipeline installation for completion of RRVWSP by the target end date.	9.2± mi of 72" pl, including one 96" tunnel. Pipeline extends east from Contract 6A northeast of Kensal to a termination point southeast of Glenfield.	Jul-25 Jul-25	Prof Srvs Const, 2028 Fin							$ 5.70 $ 64.26	$ 4.28 $ 48.20	$ 1.43 $ 16.07
4.	**Red River Valley Transmission Pipeline Contract 6C** Scope: Pipeline installation, including construction phase engineering services by Engineer. Need: Continue progress of transmission pipeline installation for completion of RRVWSP by the target end date.	8.4± miles of 72" pl, including three 96" tunnels. Pipeline section extends east from Ct 6B near Glenfield to a termination point south of Sutton.	Jul-25 Jul-25	Prof Srvs Const, 2028 Fin							$ 5.70 $ 73.78	$ 4.28 $ 55.34	$ 1.43 $ 18.45
5.	**Red River Valley Transmission Pipeline Contract 7A** Scope: Pipeline installation, including construction phase engineering services by Engineer. Need: Continue progress of transmission pipeline installation for completion of RRVWSP by the target end date.	6.5± mi of 72" pl, including three 96" tunnels. Pl section extends east from Ct 6C near Sutton to a termination point south of Cooperstown.	Jul-25 Jul-25	Prof Srvs Const, 2028 Fin							$ 5.70 $ 59.82	$ 4.28 $ 44.87	$ 1.43 $ 14.96
6.	**Red River Valley Transmission Pipeline Contract 7B** Scope: Pipeline installation, including construction phase engineering services by Engineer. Need: Continue progress of transmission pipeline installation for completion of RRVWSP by the target end date.	7.1± mi of 72" pl, including one 96" tunnel. Pl section extends east from Ct 7A south of Cooperstown to a termination point at the Outfall to the Sheyenne River near bible camp.	Jul-25 Jul-25	Prof Srvs Const, 2028 Fin							$ 5.70 $ 64.18	$ 4.28 $ 48.14	$ 1.43 $ 16.05
7.	**Transmission Pipeline East Contract 4C** Scope: Pipeline installation, including construction phase engineering services by Engineer. Need: Continue progress of transmission pipeline installation for completion of RRVWSP by the target end date.	9± mi of 72" pl, including 96" tunnels. Pipeline section extends west from Ct 5D near Sykeston to a termination point 9 miles west.		Prof Srvs								$ - $ -	$ - $ -

RED RIVER VALLEY WATER SUPPLY PROJECT

Lake Agassiz Water Authority

Draft 2025 to 2027 Biennium Work Plan

($346M Total Funding: $0 Federal; $259.5M State; $86.5M Local Users)

April 9, 2025

No.	Scope of Work	Feature	Date Task Orders Auth	Note	2025-27 Bien ENDAWS Project Development Budget (mil $)			2025-27 Biennium RRVWSP Project Development Budget (mil $)			2025-27 Biennium RRVWSP Project Constr Budget (mil $)[1,2,3]		
					Total	Fed/Sta 75%	Local 25%	Total	State 75%	Local 25%	Total	State 75%	Local 25%
8.	**McClusky Facilities Final Design Services & Bidding Assist** Scope: Final designs for McClusky Intake Pumping Station, Biota WTP, and McClusky Main Pumping Station. Need: Complete design so bids can be obtained for constructing the facilities.	165-cfs biota WTP, with chlorine and UV disinfection to meet NDPDES permit and FEIS requirements per Reclamation. Chloramines for residual disinfectant in pipeline.	Oct-25	Prof Srvs	$ 15.00	$ 11.25	$ 3.75						
9.	**MO River Intake Pump Sta, Trans Main, & Utilities Ext Contr 3** Scope: Final design, construction, and construction phase services for pumping station and transmission pl for Washburn. Need: Advance design, obtain bids, and construct new raw water supply for City of Washburn.	Raw water pumping station and transmission main from Missouri River Pumping Station to the City of Washburn water treatment plant.	Jul-25 Jan-27 Jan-27	Prof Srvs Prof Srvs Const				$ 0.40	$ 0.30	$ 0.10	$ 0.40 $ 4.00	$ 0.30 $ 3.00	$ 0.10 $ 1.00
10.	**McClusky Facilities Wetwell Excavation & Site Dev Contr 1** Scope: Construction and construction phase services. Need: Prepare site and ready it for future construction of the biota water treatment plant.	Access road improvements from Highway 200 north to the future bwtp site. Mass excavation of site and excavation of intake ps shaft and temp excavation support system.	Apr-26 Apr-26	Prof Srvs Const							$ 1.20 $ 12.00	$ 0.90 $ 9.00	$ 0.30 $ 3.00
11.	**McClusky Facilities Intake, Tunnel, & Shaft Liner Contr 2** Scope: Final design and bidding assistance. Need: Complete specialty work ahead of the main biota water treatment plant construction.	Passive intake screens and structure on the McClusky Canal along with a 72" tunnel to the shaft/pumping station wetwell. Concrete shaft liner inside circular shaft excavated under Contr 1.	Jan-26 Jan-27 Jan-27	Prof Srvs Prof Srvs Const	$ 2.00	$ 1.50	$ 0.50				$ - $ -	$ - $ -	$ - $ -
12.	**McClusky Facilities Utility Extensions Design** Scope: Final design services and bidding assistance. Need: There is not 3-phase power available at the site so one needs to be developed to supply power needs of new facility.	Electrical system design to support a new power supply to the bwtp and associated pumping stations.	Jan-26	Prof Srvs	$ 1.50	$ 1.13	$ 0.38						
13.	**PMIS Annual Licenses & Continued Maint/Upgrades** Scope: Annual software license renewal for expanded team and consulting support for training and configuration services. Need: Create greater efficiency and documentation for voluminous amount of construction related documents.	Vendor fees (e-Builder & DocuSign) for licenses of expanded team and consulting support for training of contractors/ subcontractors and workflow/report additions and mods.	Oct-25	Prof Srvs				$ 0.50	$ 0.38	$ 0.13			
14.	**Program Management Support** Scope: Overall program management, planning, budgeting, scheduling, and other support for Garrison Diversion. Need: Consulting services of a broad programmatic nature not included under project-specific design or construction TOs.	Overall planning, management, administration, scheduling, budgeting, coordination, meeting preparation/attendance, regulatory interface, reporting, etc.	Jul-25	Prof Srvs				$ 0.75	$ 0.56	$ 0.19			

RED RIVER VALLEY WATER SUPPLY PROJECT

Lake Agassiz Water Authority

Draft 2025 to 2027 Biennium Work Plan

($346M Total Funding: $0 Federal; $259.5M State; $86.5M Local Users)

April 9, 2025

No.	Scope of Work	Feature	Date Task Orders Auth	Note	2025-27 Bien ENDAWS Project Development Budget (mil $)			2025-27 Biennium RRVWSP Project Development Budget (mil $)			2025-27 Biennium RRVWSP Project Constr Budget (mil $)[1,2,3]		
					Total	Fed/Sta 75%	Local 25%	Total	State 75%	Local 25%	Total	State 75%	Local 25%
15.	**Project Participation Agreement Support** Scope: User briefings and necessary support, including conceptual designs, to secure project commitments. Need: Define pipeline extensions to identify for users how and a what cost water will be delivered to their communities.	Size pipelines, pumping stations, channels, storage, etc. and other necessary infrastructure to deliver raw water to end users. Update capex to reflect current market.	Jul-25	Prof Srvs				$ 2.00	$ 1.50	$ 0.50			
16.	**Operational Planning Phase 4** Scope: System modeling, evaluation, planning, and report development documenting results/findings/outcomes. Need: Finalize Garrison Diversion, State Water Commission, and USACE roles for system operation.	Refine details of diversions to/from Lake Ashtabula. Finalize stakeholder roles and responsibilities as it relates to system operation.		Prof Srvs				$ 1.50	$ 1.13	$ 0.38			
17.	**Financial Planning Support** Scope: Continue to refine the financial model and provide scenarios as required to support users and the program. Need: Accurate water bill estimates and affordability for customers are necessary to gain approval from users.	Update financial models; address state loan and financing program changes; end user funding, financing, and cost-share analyses; continued funding and finance outreach.		Prof Srvs				$ 0.60	$ 0.45	$ 0.15			
18.	**Contingency** Scope: A budget reserve for task order additions to professional services, construction, legal, real estate, etc. TOs. Need: Address and pay for changes that are sure to occur.	Budget flexibility to adapt to work plan changes and to pay for construction change orders typically running from 3 to 5% of original construction costs at bid time.	N/A	GDCD	$ 0.93	$ 0.70	$ 0.23	$ 0.43	$ 0.32	$ 0.11	$ 15.13	$ 11.35	$ 3.78
TOTAL PROGRAM BUDGET					**$ 19.43**	**$ 14.57**	**$ 4.86**	**$ 9.00**	**$ 6.75**	**$ 2.25**	**$ 317.57**	**$ 238.18**	**$ 79.39**

Notes:

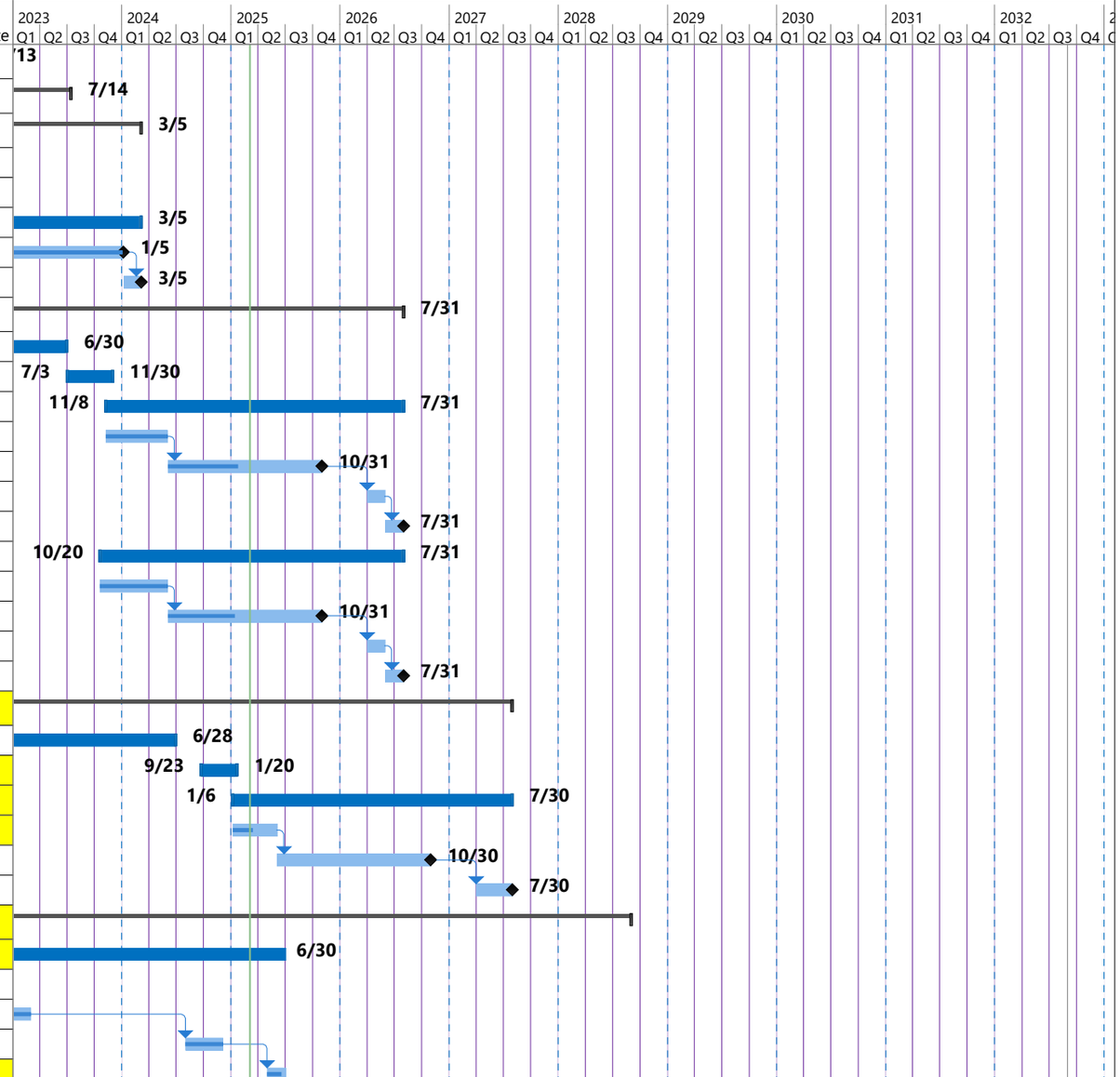
1. Construction costs include management, engineering services during construction, inspection, field quality control, and construction.
2. Projects indicated for construction funding in a given biennium will be shovel ready for construction at the start of the biennium.
3. Future capital costs are escalated to an anticipated midpoint of construction per Finance Team rates of 7, 6, 5, 5, and 3.5 percent per annum thereafter starting in 2022 with an anticipated 2032 finish. All future RRVWSP construction projects and costs are not shown.
4. Land services costs are the amount likely to be paid for real estate, easements, including bonus payments, crop damage, and field obstructions. Estimates include pipeline easements required for the ENDAWS east/west pipeline and remaining easements from the beginning of the Contract 4 transmission main to the Sheyenne River Outfall, with most located in Wells County.
5. Green text indicates priority 1 items totaling approximately $200M. Blue text indicates priority 2 items and when added to Priority 1 items totals approximately $266.7 million. Orange text indicates priority 3 items and when totaled with Priority 1 and Priority 2 items totals approximately $294.8 million. Purple text indicates priority 4 items summing to the funding ceiling of $346M.

2023-2032 Schedule
Red River Valley Water Supply Project

25-3 GDCD RRVWSP 2020-32 Schedule

Wed 3/5/25

ID	Task Name	Duration	Start	Finish	% Complete
1	**EARLY-OUT PROJECTS**	**497 days**	**Mon 10/19/20**	**Tue 9/13/22**	**100%**
32	**MRI, SCREEN STRUCTURE & TUNNEL, CT 2**	**727 days**	**Thu 10/1/20**	**Fri 7/14/23**	**100%**
48	**TRANSMISSION PIPELINE EAST, CT 5B**	**699 days**	**Thu 7/1/21**	**Tue 3/5/24**	**93%**
49	**Final Design Wrap-up**	**107 days**	**Thu 7/1/21**	**Fri 11/26/21**	**100%**
52	**Bidding Assistance & Award**	**65 days**	**Mon 11/29/21**	**Fri 2/25/22**	**100%**
59	**Construction 5B - Garney (9 miles)**	**527 days**	**Mon 2/28/22**	**Tue 3/5/24**	**91%**
60	Substantial Completion	485 days	Mon 2/28/22	Fri 1/5/24	99%
61	Final Completion	42 days	Mon 1/8/24	Tue 3/5/24	0%
62	**TRANSMISSION PIPELINE EAST, CTS 5C&D**	**1261 days**	**Fri 10/1/21**	**Fri 7/31/26**	**65%**
63	**Final Design Wrap-up**	**456 days**	**Fri 10/1/21**	**Fri 6/30/23**	**100%**
67	**Bidding Assistance & Award**	**109 days**	**Mon 7/3/23**	**Thu 11/30/23**	**100%**
74	**Construction 5C - Oscar Renda (8 miles)**	**713 days**	**Wed 11/8/23**	**Fri 7/31/26**	**52%**
75	Initial Pipe Submittals, Fab, & Delivery	148 days	Wed 11/8/23	Fri 5/31/24	100%
76	Pipe Installation	370 days	Mon 6/3/24	Fri 10/31/25	45%
77	Testing and Substantial Completion	43 days	Wed 4/1/26	Fri 5/29/26	0%
78	Final Completion	45 days	Mon 6/1/26	Fri 7/31/26	0%
79	**Construction 5D - Carstensen (10 miles)**	**726 days**	**Fri 10/20/23**	**Fri 7/31/26**	**52%**
80	Initial Pipe Submittals, Fab, & Delivery	161 days	Fri 10/20/23	Fri 5/31/24	100%
81	Pipe Installattion	370 days	Mon 6/3/24	Fri 10/31/25	43%
82	Testing and Substantial Completion	43 days	Wed 4/1/26	Fri 5/29/26	0%
83	Restoration and Final Completion	45 days	Mon 6/1/26	Fri 7/31/26	0%
84	**RRV TRANSMISSION PIPELINE, CT 6A**	**1500 days**	**Mon 11/1/21**	**Fri 7/30/27**	**51%**
85	**Final Design**	**695 days**	**Mon 11/1/21**	**Fri 6/28/24**	**100%**
90	**Bidding Assistance & Award**	**86 days**	**Mon 9/23/24**	**Mon 1/20/25**	**100%**
97	**Construction - Carstensen (7 miles)**	**670 days**	**Mon 1/6/25**	**Fri 7/30/27**	**8%**
98	Submittals; Initial Pipe Fab & Delivery	106 days	Mon 1/6/25	Mon 6/2/25	45%
99	Pipe Installation	369 days	Tue 6/3/25	Fri 10/30/26	0%
100	Testing, Final Restoration, & Cleanup	87 days	Thu 4/1/27	Fri 7/30/27	0%
101	**RRV TRANSMISSION PIPELINE, CTS 6B&C**	**1784 days**	**Mon 11/1/21**	**Thu 8/31/28**	**41%**
102	**Final Design**	**956 days**	**Mon 11/1/21**	**Mon 6/30/25**	**98%**
103	Prepare & Deliver 60% Docs	215 days	Mon 11/1/21	Fri 8/26/22	100%
104	Prepare & Deliver 90% Docs	132 days	Mon 8/29/22	Tue 2/28/23	100%
105	Prepare & Deliver 100% Docs	88 days	Thu 8/1/24	Mon 12/2/24	100%
106	Prepare & Deliver Final Docs	43 days	Thu 5/1/25	Mon 6/30/25	75%

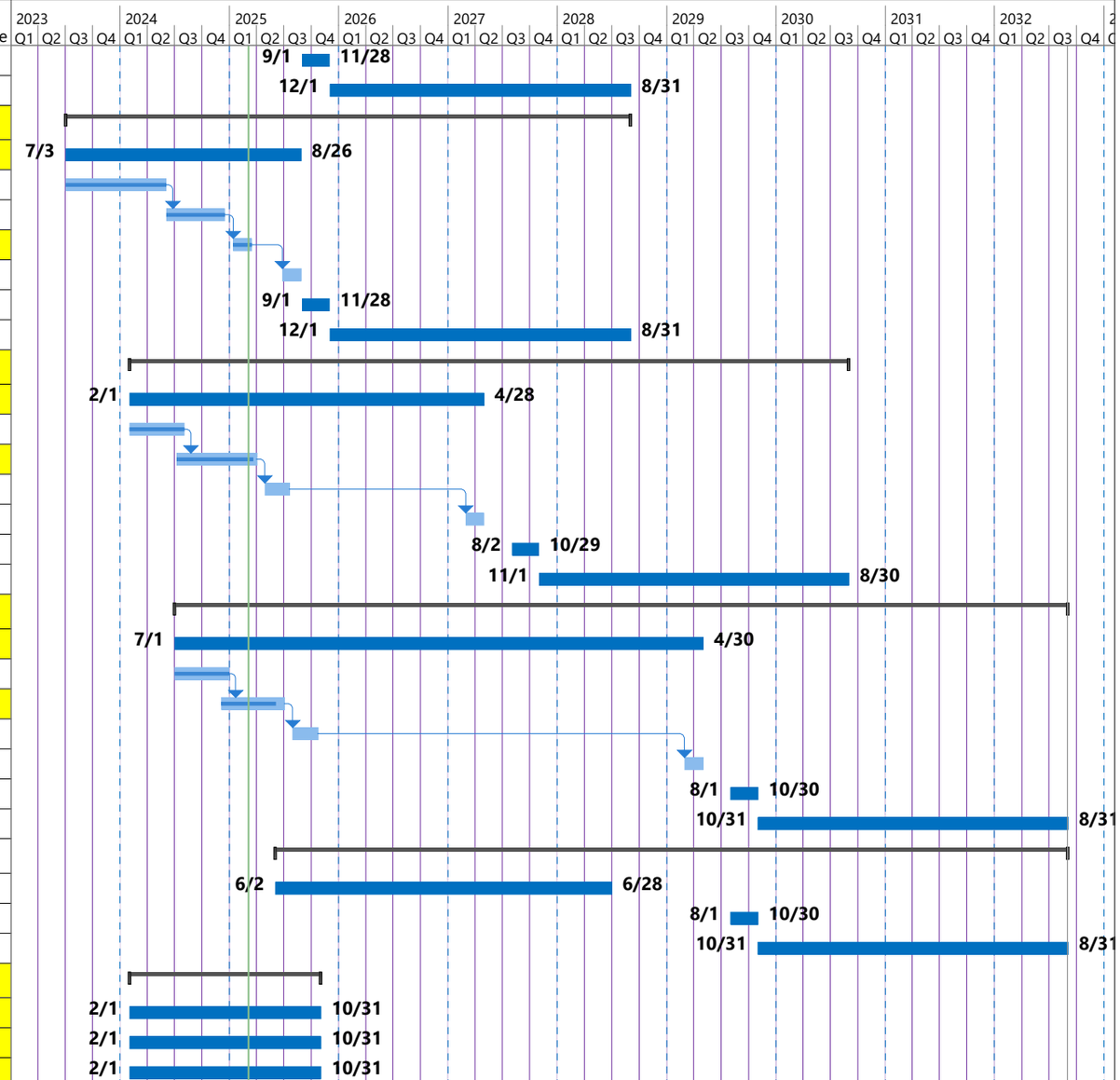


2023-2032 Schedule
Red River Valley Water Supply Project

25-3 GDCD RRVWSP 2020-32 Schedule

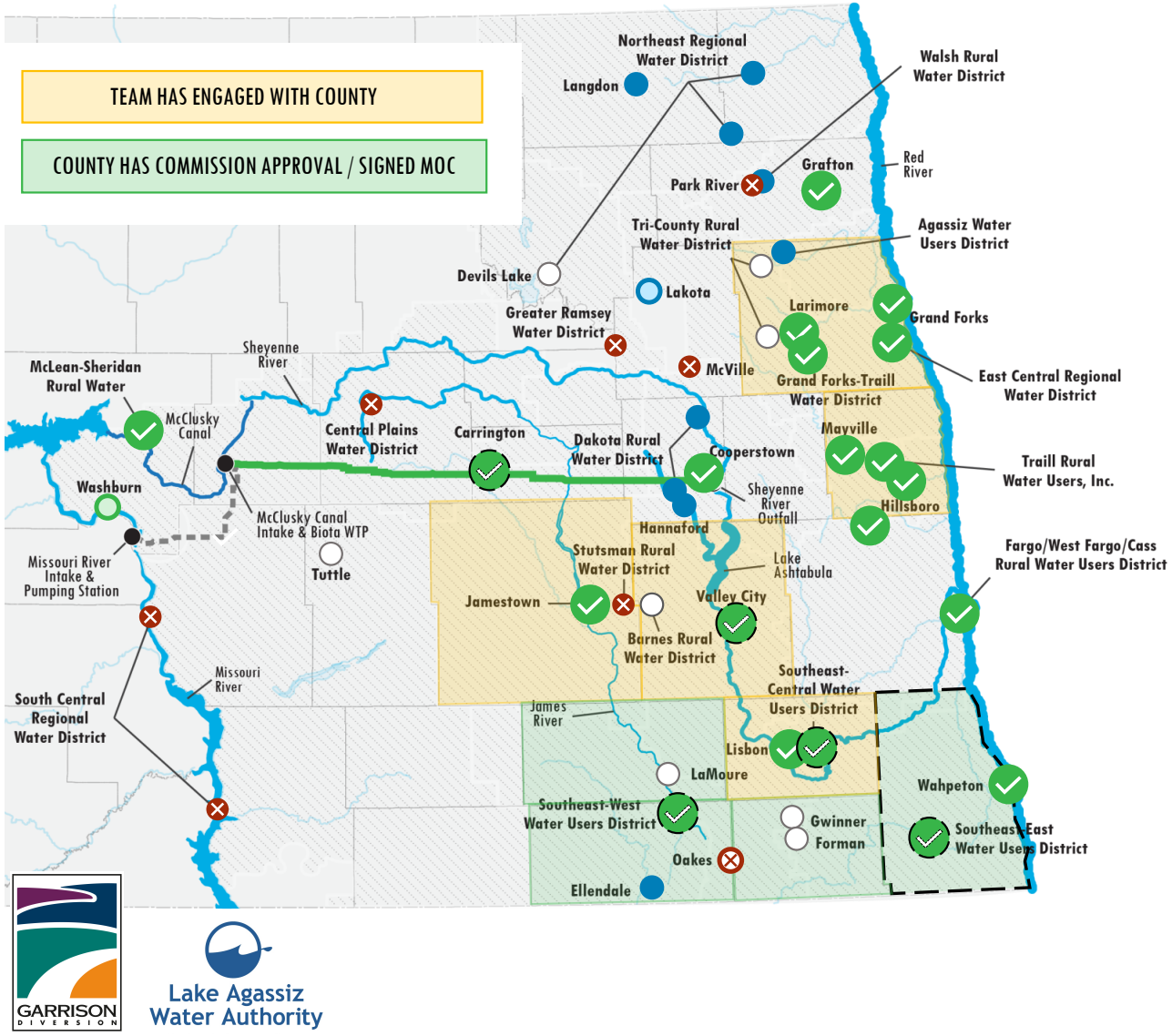
Wed 3/5/25

ID	Task Name	Duration	Start	Finish	% Complete
107	**Bidding Assistance & Award**	**65 days**	**Mon 9/1/25**	**Fri 11/28/25**	**0%**
114	**Construction**	**719 days**	**Mon 12/1/25**	**Thu 8/31/28**	**0%**
118	**RRV TRANSMISSION PIPELINE, CTS 7A&B**	**1349 days**	**Mon 7/3/23**	**Thu 8/31/28**	**37%**
119	**Final Design**	**562 days**	**Mon 7/3/23**	**Tue 8/26/25**	**91%**
120	Prepare& Deliver 60% Docs	240 days	Mon 7/3/23	Fri 5/31/24	100%
121	Prepare& Deliver 90% Docs	140 days	Mon 6/3/24	Fri 12/13/24	100%
122	Prepare& Deliver 100% Docs	44 days	Mon 1/13/25	Thu 3/13/25	100%
123	Prepare& Deliver Final Docs	44 days	Thu 6/26/25	Tue 8/26/25	0%
124	**Bidding Assistance & Award**	**65 days**	**Mon 9/1/25**	**Fri 11/28/25**	**0%**
131	**Construction**	**719 days**	**Mon 12/1/25**	**Thu 8/31/28**	**0%**
135	**TRANSMISSION PIPELINE EAST, CT 4**	**1717 days**	**Thu 2/1/24**	**Fri 8/30/30**	**28%**
136	**Final Design**	**845 days**	**Thu 2/1/24**	**Wed 4/28/27**	**73%**
137	Prepare& Deliver 60% Docs	130 days	Thu 2/1/24	Wed 7/31/24	100%
138	Prepare& Deliver 90% Docs	191 days	Mon 7/8/24	Mon 3/31/25	95%
139	Prepare& Deliver 100% Docs	60 days	Mon 4/28/25	Fri 7/18/25	0%
140	Prepare& Deliver Final Docs	43 days	Mon 3/1/27	Wed 4/28/27	0%
141	**Bidding Assistance & Award**	**65 days**	**Mon 8/2/27**	**Fri 10/29/27**	**0%**
148	**Construction**	**740 days**	**Mon 11/1/27**	**Fri 8/30/30**	**0%**
152	**ENDAWS TRANSMISSION PIPELINE, CT 3**	**2132 days**	**Mon 7/1/24**	**Tue 8/31/32**	**24%**
153	**Final Design**	**1261 days**	**Mon 7/1/24**	**Mon 4/30/29**	**67%**
154	Prepare& Deliver 60% Docs	130 days	Mon 7/1/24	Fri 12/27/24	100%
155	Prepare& Deliver 90% Docs	151 days	Wed 12/4/24	Wed 7/2/25	85%
156	Prepare& Deliver 100% Docs	60 days	Wed 7/30/25	Tue 10/21/25	0%
157	Prepare& Deliver Final Docs	43 days	Thu 3/1/29	Mon 4/30/29	0%
158	**Bidding Assistance & Award**	**65 days**	**Wed 8/1/29**	**Tue 10/30/29**	**0%**
165	**Construction**	**740 days**	**Wed 10/31/29**	**Tue 8/31/32**	**0%**
169	**ENDAWS TRANSMISSION PIPELINE, CTS 1&2**	**1892 days**	**Mon 6/2/25**	**Tue 8/31/32**	**0%**
170	**Final Design**	**803 days**	**Mon 6/2/25**	**Wed 6/28/28**	**0%**
175	**Bidding Assistance & Award**	**65 days**	**Wed 8/1/29**	**Tue 10/30/29**	**0%**
182	**Construction**	**740 days**	**Wed 10/31/29**	**Tue 8/31/32**	**0%**
186	**FACILITY ASSETS PRELIMINARY DESIGN**	**457 days**	**Thu 2/1/24**	**Fri 10/31/25**	**45%**
187	**McClusky Canal Intake & Pumping Station**	**457 days**	**Thu 2/1/24**	**Fri 10/31/25**	**55%**
189	**Biota WTP and Main Pumping Station**	**457 days**	**Thu 2/1/24**	**Fri 10/31/25**	**45%**
191	**Ground Storage Reservoirs**	**457 days**	**Thu 2/1/24**	**Fri 10/31/25**	**35%**



RRVWSP Prospective Users Update

RED RIVER VALLEY WATER SUPPLY PROJECT
Serving the Water Supply Needs of Central North Dakota and the Red River Valley



GENERAL PROJECT RESPONSE	PREVIOUS ASSUMPTION	PROJECTED
Signed MOCs	142.15 cfs	144.32 cfs*
Board/Commission Approval	2.00 cfs	4.00 cfs*
Nomination Change*	----	---
Positive	5.95 cfs	5.95 cfs
Unknown/Has Concerns	2.53 cfs	0.00 cfs
Declined	6.60 cfs	0.00 cfs
Subtotal: 2016 Development Agreements	**159.23 cfs**	**154.27 cfs**
NEW USER ADDITIONS		
County Additions	8.00 cfs	8.00 cfs
Signed New Municipalities	0.45 cfs	0.45 cfs
Interested Municipalities	0.20 cfs	0.20 cfs
New Municipality Declinations**	(0.60) cfs	(0.60) cfs
Engaged Counties	0.00 cfs	TBD
To Be Engaged Counties	0.00 cfs	TBD
Subtotal: Potential Additions	**8.65 cfs**	**8.65 cfs**
TOTAL	**167.88 cfs**	**162.92 cfs**

*Nomination Changes Included in Projected Values
**Not Included in Total

April 8, 2025

RRVWSP Prospective Users Update

April 8, 2025

ANTICIPATED PROJECT PARTICIPANTS	NOMINATION (CFS)	GENERAL RESPONSE
Fargo/ West Fargo/ Cass Rural Water District	83.70	Signed Series D2 MOC
Grand Forks	28.10	Signed Series D2 MOC
Jamestown	11.00	Signed Series D2 MOC
Wahpeton	6.00	Signed MOC
East Central Regional Water District (Grand Forks Traill, Traill Rural, Larimore)	4.40 (3.00, 1.10, 0.30)	Signed MOC
Stutsman Rural Water District	4.00	Declined
Southeast Water Users District	4.00	Signed MOC
Richland County	4.00	Approved with Nomination Increase
Northeast Regional Water District / Langdon	3.20	Positive
Grafton	2.00	Signed Series D2 MOC
Valley City	2.00	Signed Series D2 MOC with Nomination Increase
Lisbon	1.00	Signed Series D2 MOC with Nomination Increase
Walsh Rural Water District	1.00	Positive
Agassiz Water District	1.00	Positive
Tri-County Rural Water District	1.00	On the Fence
Devils Lake	1.00	On the Fence with Discussion of Branch Pipeline Terminations
Greater Ramsey Rural Water	1.00	Declined
Dakota Rural Water District	0.70	Positive
Central Plains Water District	0.60	Declined
Oakes	0.60	Previously a Potential Addition, but has Now Declined
Carrington	**0.50**	Signed Series D2 MOC with Nomination Decrease
Mayville	0.50	Signed Series D2 MOC
Hillsboro	0.50	Signed Series D2 MOC
Barnes Rural Water District	0.50	Previously Withdrew but Reconsidering
South Central Regional Water District	0.50	Declined
Washburn	0.45	Signed MOC
McLean-Sheridan Water District	0.42	Signed MOC
Park River	0.40	Declined
Lakota	0.20	Potential Addition with Discussion of Branch Pipeline Terminations
Cooperstown	0.20	Signed Series D2 MOC
McVille	0.10	Declined
Hannaford	0.05	Will be served by Dakota Rural Water District in the future
Tuttle	0.02	On the fence
Forman	0.01	Considering
Sargent County	1.00	Signed MOC
LaMoure County	3.00	Signed MOC
Dickey County	4.00	Signed MOC
Ransom County	----	Team has Engaged with the County
Grand Forks County	----	Team has Engaged with the County
Traill County	----	Team has Engaged with the County
Stutsman County	----	Team has Engaged with the County
Barnes County	----	Team has Engaged with the County

RED RIVER VALLEY WATER SUPPLY PROJECT
Serving the Water Supply Needs of Central North Dakota and the Red River Valley

Lake Agassiz Water Authority

GARRISON DIVERSION