

MEMORANDUM

TO: Programs, Projects, and Operations Subcommittee

FROM: Lori Ann Laster, Stormwater Management Engineer

SUBJECT: WP-4 Contract Amendment with HDR, Inc.

DATE: January 3, 2022

In May 2017, the Board selected HDR Engineering, Inc. (HDR) for the preliminary design of West Papillion Regional Basin Number 4 (WP-4), Dam Site 19 (DS19), and Dam Site 12 (DS12) Projects. Preliminary design was completed in 2018. The contract was amended in May 2021 to add final design and construction administration services for the WP-4 project.

The first contract amendment included design elements requested by the City of Gretna to accommodate future sanitary sewer lines. The City needed to move forward with construction of the sewer line earlier than the proposed schedule for WP-4 so that task has been removed.

The proposed contract amendment includes required modifications to the trail, including the replacement of a portion of the trail with a pedestrian bridge, extra geotechnical investigation as a result of a request from the Nebraska Department of Natural Resources and modified trail design, and modifications to the wetland and stream mitigation plan due to the change in trail design.

The proposed amendment, cost estimate and schedule are attached. HDR will provide the professional services on an hourly basis not to exceed the amount of \$68,972 bringing the total contract amount to \$3,547,608.

Management recommends that the Subcommittee recommend to the Board that the General Manager be authorized to execute Amendment #2 with HDR Engineering, Inc. for Professional Engineering Services for modifications to the Final Design of the WP4 Project in an amount not to exceed \$68,972, bringing the total contract amount to \$3,547,608 subject to changes deemed necessary by the General Manager and approval as to form by District Legal Counsel.

This is **EXHIBIT K**, consisting of 2 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated May 22, 2017.

**AMENDMENT TO OWNER-ENGINEER AGREEMENT
Amendment No. 2**

The Effective Date of this Amendment is: _____, 2022.

Background Data

Effective Date of Owner-Engineer Agreement: May 22, 2017

Owner: Papio-Missouri River Natural Resources District (P-MRNRD)

Engineer: HDR Engineering, Inc. (HDR)

Project: Preliminary Design of Dam Site 12, Dam Site 19, and Regional Detention Basin WP-4.

Nature of Amendment: [Check those that are applicable and delete those that are inapplicable.]

- Additional Services to be performed by Engineer
- Modifications to services of Engineer
- Modifications to responsibilities of Owner
- Modifications of payment to Engineer
- Modifications to time(s) for rendering services
- Modifications to other terms and conditions of the Agreement

Description of Modifications:

- a. Modify Article 7 – Definitions, 7.01.A.24 Maximum Amount. Remove “three million four hundred seventy-eight thousand six hundred thirty-six dollars (\$ 3,478,636).” and replace with “three million, five hundred forty-seven thousand, six hundred eight dollars (\$3,547,608.00).”
- b. The Scope of Services currently authorized to be performed by Engineer in accordance with the Agreement and previous amendments, if any, is modified as follows:
 - 1) Exhibit A, “Engineer’s Services”, shall be amended to include Exhibit A-2, Engineer’s Services for Amendment No. 2 and Attachment 1 to Exhibit A-2.
 - 2) Exhibit C, “Payments to Engineer for Services and Reimbursable Expenses” shall be amended to include Appendix 2 to Exhibit C-2.

Agreement Summary:

Original agreement amount: \$ 2,043,823
 Dam Site 12 \$707,140
 Dam Site 19 \$717,403
 Basin WP-4 \$619,280

Net contract change for Amendment No. 1: \$ 1,434,813
 WP-4 Phases II and III Services: \$ 1,498,745
 WP-4 Credit for Remaining Phase I Services -\$ 63,932

Amendment No. 2:
 Phase II Services: \$ 68,972.00

Adjusted Agreement amount: \$ 3,547,608

Change in time for services (days or date, as applicable): No Change.

The foregoing Agreement Summary is for reference only and does not alter the terms of the Agreement, including those set forth in Exhibits C and C-1.

Owner and Engineer hereby agree to modify the above-referenced Agreement as set forth in this Amendment. All provisions of the Agreement not modified by this or previous Amendments remain in effect.

OWNER:

ENGINEER:

Papio-Missouri River Natural Resources District

HDR Engineering, Inc.

By: _____

By: _____

Print

Print

Name: John Winkler

Name: Matthew Tondl, P.E.

Title: General Manager

Title: Senior Vice President

Date Signed: _____

Date Signed: _____

This is **Attachment 1** to **EXHIBIT A-2**, consisting of 5 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated May 22, 2017.

AMENDMENT NO. 2

Engineer's Services for Amendment No. 2

PART 1 – BASIC SERVICES

A1.03 Final Design Phase

**Papio-Missouri River Natural Resources District
Final Design and Construction Services for WP-4
Papillion Creek Watershed, Sarpy County, NE**



ENGINEERING PROPOSAL

BACKGROUND AND BASIS OF PROPOSAL

The purposes of Amendment No. 2 is to modify the existing Agreement in order to reflect changes in the scope on the evaluation of fill material for the dam embankment and the design of associated improvements to the WP-4 project.

A1.01 Final Design and Construction Phases

This Scope of Services is to document professional services to the P-MRNRD for a final design and construction of regional detention basin WP-4 (Project). The scope is divided into Phase II – Final Design and Phase III – Construction Management Services.

Amendment No. 2 addresses modifications to the following task series included in Phase II:

- Task Series 200 – Permitting
- Task Series 300 – Geotechnical Investigation and Design
- Task Series 500 – General and Site Civil Design
- Task Series 600 – City of Gretna Design Elements
- Task Series 1000 – Survey and Right-of-Way

The Team proposes to provide the following professional services within the originally estimated 11 months design period.

TASK SERIES 200 – PERMITTING

- Add: **Task 210. Section 404 Permit**
210.4 **Mitigation Plan Amendment**. Prepare stream mitigation amendment to relocate the stream mitigation located upstream of the West Water Quality Basin.
- Modify: **Task 240 Sarpy County Right to Occupy ROW**. Change to **Task 240 City of Gretna Right to Occupy ROW**, as 204th Street is no longer under the jurisdiction of Sarpy County. Result in no change to estimated labor and expenses for this task.

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TASK SERIES 300 – GEOTECHNICAL INVESTIGATION AND DESIGN

Add: **Task 370 Pedestrian Trail Bridge.** Coordinate drilling, sampling, and laboratory testing with sub-consultant for 2 boreholes estimated total depth of 100 LF. Provide subsurface investigation and laboratory testing documentation. Incorporate logs, testing, and findings in the Geotechnical Investigation and Evaluation Report. Compute pile capacity vs. depth charts for bridge abutment H-piles and provide to JEO for design. Prepare construction specification for pile driving.

Add: **Task 380 Dispersive Soils.** Evaluation site soils for potentially dispersive properties. Coordinate drilling, sampling, and laboratory testing with sub-consultant. Review laboratory testing and existing test data. Document findings in the Geotechnical Investigation and Evaluation Report. Provide recommendations for mitigation (if needed) and include specification for construction (if needed).

TASK SERIES 500 – GENERAL AND SITE CIVIL DESIGN

Modify: **Task 550 Wetland and Stream Mitigation.** Shift stream mitigation location downstream to accommodate the new pedestrian bridge trail alignment located upstream of the West WQ Basin and within the preliminary design reach.

Modify: **Task 560 In-Lake Fisheries.**
560.2 In-Lake Design.
➤ NGPC provided a revised layout for in-lake fishery, boat and kayak launches, and angler access features. These updates require significant plan revisions from the 60% phase including development of new details and specifications.

Delete: **Task 570 Recreation and Amenities Design.**
570.1 Recreational Trail.
➤ Provide retaining wall type, size, and location plans.

Add: 570.1 Recreational Trail.
➤ Provide concrete pad for FixIt bike station. P-MRNRD with install hardware.
➤ Provide thermoplastic cross-bike markings at trail and road crossing
➤ Provide for a single permanent pedestrian and bike counter [near the recreation access area.
➤ Design new/additional trail alignment to accommodate the proposed pedestrian trail bridge and requested trail extending across the Schram Road embankment.

Add: 570.3 Pedestrian Trail Bridge. Conduct preliminary and final substructure design for a pedestrian trail bridge located upstream of the West Water Quality Basin. Bridge to be a single span prefabricated bridge.
➤ Design of substructure will be prepared based on approved prefabricated bridge alternative(s) selected by the NRD.

Modify: **Task 585 Technical Specifications.** Include additional specifications for the recreational trail.

TASK SERIES 600 – CITY OF GRETNA DESIGN ELEMENTS

Delete Task Series 600 in its entirety. City of Gretna no longer has a need for the sanitary stubout. Deletes all labor and expenses associated with this task.

TASK SERIES 1000 – SURVEY AND RIGHT-OF-WAY

Modify: **Task 1020 Supplemental Topographic Survey.** Stake additional borings required for pedestrian bridge and survey final locations of borings. Obtain additional topographic survey at the location of the pedestrian bridge.

**JEO CONSULTING GROUP INC - ESTIMATED HOURS/COSTS
 PAPIO-MISSOURI RIVER NATURAL RESOURCES DISTRICT
 Amendment #2
 FEE ESTIMATE - December 21, 2021**

JEO Consulting Group Inc. Estimated Hours/Costs										Est. Total Cost
TASKS	Project Manager	Sr. PE and QC	PE	EIT	CAD/GIS	Surveyor	Admin/ Clerical	Total Hours	Totals	
TASK SERIES 500 GENERAL AND SITE CIVIL DESIGN										
Task 550	Wetland and Stream Mitigation	1			2	10			13	\$1,920
Task 560	In-Lake Fisheries									
Subtask 560.2	In-Lake Design	2	2		8	40			52	\$7,180
Task 570	Recreation and Amenities Design									
Subtask 570.1	Recreational Trail	4	5		18	24			51	\$7,760
Subtask 570.3	Pedestrian Bridge	6	40		52				98	\$16,820
Task 585	Technical Specifications		2						2	\$440
Estimated Task Hours Subtotal		13	49	0	80	74	0	0	216	
Estimated Task Cost Subtotal		\$2,730	\$10,780	\$0	\$10,400	\$10,730	\$0	\$0	\$34,640	\$34,120
TASK SERIES 1000 SURVEY AND RIGHT-OF-WAY										
Task 1020	Supplemental Topographic Survey	1				2	36		39	\$4,460
Estimated Task Hours Subtotal		1	0	0	0	2	36	0	39	
Estimated Task Cost Subtotal		\$210	\$0	\$0	\$0	\$290	\$3,960	\$0	\$4,460	\$4,460
TOTAL HOURS		14	49	0	80	76	36	0	255	
TOTAL COST (ROUNDED)		\$ 2,940	\$ 10,780	\$ -	\$ 10,400	\$ 11,020	\$ 3,960	\$ -	\$ 39,100	\$ 38,580

Total Amendment #2 \$38,580

SUMMARY

Add Tasks:		
Task 550	Wetland and Stream Mitigation	\$ 1,920
Task 560.2	In-Lake Design	\$ 7,180
Task 570.1	Recreation Trail - Alignment Revisions	\$ 7,760
Task 570.3	Pedestrian Bridge - Structural	\$ 16,820
Task 585	Technical Specs	\$ 440
Task 1020	Supplemental Topo Survey	\$ 4,460
Total		\$ 38,580

Remove Tasks:		
Task 570.1.1	Recreation Trail - Retaining Wall	\$ (2,600)
Task 600	City of Gretna Elements	\$ (9,920)
Total		\$ (12,520)
Net Change		\$ 26,060

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Attachment 1 to Exhibit A-1 – Proposed Scope of Services for Amendment No. 2

Drilling Cost Estimate Worksheet

Exhibit A

**West Papio Basin 4
Sarpy County, NE**

11/16/2021

Description		Estimated Quantity	Unit Rate	Estimated Cost
Pre-Exploration Services				
Project Geologist (/hr.)	<i>project coordination/utilities</i>	4.0	140.00	560.00
Exploratory Borings				
Mobilization (Zone 1)		2.0	178.00	356.00
Exploratory Drilling (hollow stem augers) (/ft.)		100.0	20.00	2,000.00
Exploratory Drilling (hollow stem aug	<i>contingency</i>	20.0	20.00	400.00
Exploratory Drilling (flight augers) (/ft.)		18.0	15.00	270.00
Trip Charge - Zone 1 Metro Area (/tri	<i>support truck</i>	2.0	72.00	144.00
Project Geologist (/hr.)	<i>extruding/logging soil</i>	3.0	140.00	420.00
Grout boreholes (/ft)		118.0	11.00	1,298.00
Grout boreholes (/ft)	<i>contingency</i>	20.0	11.00	220.00
Laboratory Analysis				
Atterberg Limits (/set)		2.0	96.00	192.00
Unit Weight Test (ea.)		4.0	25.00	100.00
Unconfined Compression Test (ea.)		4.0	38.00	152.00
Pinhole Test on undisturbed sample (ASTM D4647) (ea.)		3.0	150.00	450.00
Pinhole Test on remolded sample (ASTM D4647) (ea.)		1.0	210.00	210.00
Geotechnical Report				
Project Geologist (/hr.)	<i>Geotechnical Exploration Data Report</i>	2.0	140.00	280.00
Senior Project Engineer (/hr.)	<i>Data Report Review</i>	1.0	180.00	180.00
			Total	7,232.00

T h i e l e G e o t e c h I n c

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Attachment 1 to Exhibit A-1 – Proposed Scope of Services for Amendment No. 2

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Fee Schedule

APPENDIX 2 PAPIO-MISSOURI RIVER NATURAL RESOURCES DISTRICT PHASE II: FINAL DESIGN AND PHASE III: CONSTRUCTION CONTRACT ADMINISTRATION OF WP-4 FEE ESTIMATE - AMENDMENT NO. 2 - JANUARY 2022																			
HDR Engineering, Inc. Estimated Hours/Costs															Subconsultants			Est. Total Cost	
TASKS	Project Manager	Specialist	Principal Staff	Senior Staff	Technical Staff	Tech Support	Admin/ Clerical	Total Hours	Total Labor Cost	Printing	Travel	Misc.	Total Expenses	Totals	JEO	Thiele Geotech	Total Sub-Consult.		
TASK SERIES 200 PERMITTING																			
Task 210	Section 404 Permit																		
Subtask 210.4	Mitigation Plan Amendment	2		4	8	24	10	6	54	\$8,690	\$100			\$100	\$8,790	\$0		\$0	\$8,790
Task 240	City of Gretna Right to Occupy ROW (no change to hours)								0	\$0				\$0	\$0			\$0	\$0
Estimated Task Hours Subtotal		2	0	4	8	24	10	6	54										
Estimated Task Cost Subtotal		\$540	\$0	\$1,060	\$1,800	\$3,480	\$1,150	\$660	\$8,690	\$8,690	\$100	\$0	\$0	\$100	\$8,790	\$0	\$0	\$0	\$8,790
TASK SERIES 300 GEOTECHNICAL INVESTIGATION AND DESIGN																			
Task 370	Pedestrian Trail Bridge	2	12	6		24		4	48	\$9,530				\$0	\$9,530		\$5,416	\$5,416	\$14,946
Task 380	Dispersive Soils	2	16	6		32		4	60	\$11,850				\$0	\$11,850		\$1,816	\$1,816	\$13,666
Estimated Task Hours Subtotal		4	28	12	0	56	0	8	108										
Estimated Task Cost Subtotal		\$1,080	\$8,120	\$3,180	\$0	\$8,120	\$0	\$880	\$21,380	\$21,380	\$0	\$0	\$0	\$0	\$21,380	\$0	\$7,232	\$7,232	\$28,612
TASK SERIES 500 GENERAL AND SITE CIVIL DESIGN																			
Task 550	Wetland and Stream Mitigation	2		2					4	\$1,070				\$0	\$1,070	\$1,920		\$1,920	\$2,990
Task 560	In-Lake Fisheries																		
Subtask 560.2	In-Lake Design	2		2					4	\$1,070				\$0	\$1,070	\$7,180		\$7,180	\$8,250
Task 570	Recreation and Amenities Design																		
Subtask 570.1	Recreational Trail (net change from retaining wall to ped bridge)								0	\$0				\$0	\$0	\$5,160		\$5,160	\$5,160
Subtask 570.3	Pedestrian Trail Bridge	2		2		2		2	8	\$1,580				\$0	\$1,580	\$16,820		\$16,820	\$18,400
Task 585	Technical Specifications		2					2	4	\$800				\$0	\$800	\$440		\$440	\$1,240
Estimated Task Hours Subtotal		6	2	6	0	2	0	4	20										
Estimated Task Cost Subtotal		\$1,620	\$580	\$1,590	\$0	\$290	\$0	\$440	\$4,520	\$4,520	\$0	\$0	\$0	\$0	\$4,520	\$31,520	\$0	\$31,520	\$36,040
TASK SERIES 600 CITY OF GRETNNA DESIGN ELEMENTS (THIS TASK DELETED)																			
Task 610	City Coordination								0	\$0				\$0	\$0	-\$620		-\$620	-\$620
Task 620	Stub from Lakeview Development to North Side of Dam																		
Subtask 620.1	Capacity Requirements								0	\$0				\$0	\$0	-\$420		-\$420	-\$420
Subtask 620.2	Sanitary Sewer Design								0	\$0				\$0	\$0	-\$8,880		-\$8,880	-\$8,880
Estimated Task Hours Subtotal		0	0	0	0	0	0	0	0										
Estimated Task Cost Subtotal		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-\$9,920	\$0	-\$9,920	-\$9,920
TASK SERIES 1000 SURVEY AND RIGHT-OF-WAY																			
Task 1020	Supplemental Topographic Survey	2			2				4	\$990				\$0	\$990	\$4,460		\$4,460	\$5,450
Estimated Task Hours Subtotal		2	0	0	2	0	0	0	4										
Estimated Task Cost Subtotal		\$540	\$0	\$0	\$450	\$0	\$0	\$0	\$990	\$990	\$0	\$0	\$0	\$0	\$990	\$4,460	\$0	\$4,460	\$5,450
TOTAL HOURS		14	30	22	10	82	10	18	186										
TOTAL COST		\$3,780	\$8,700	\$5,830	\$2,250	\$11,890	\$1,150	\$1,980	\$35,580	\$35,580	\$ 100.00	\$ -	\$ -	\$ 100.00	\$35,680	\$26,060	\$ 7,232.00	\$ 33,292.00	\$ 68,972.00

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Appendix 2 to Exhibit C-2 – Engineer’s Fee Estimate for Amendment No. 2