

MEMORANDUM

TO: Programs, Projects, and Operations Subcommittee
FROM: Eric Williams, Natural Resources Planner
DATE: October 7, 2021
SUBJECT: Platte River Bridge Trail Project
Amendment 2 to the Professional Services Agreement with Schemmer

The District is acting as the lead agency according to an Interlocal Agreement with Bellevue, Plattsmouth, Lower Platte South NRD, Sarpy County, Cass County, and working in collaboration with the Nebraska Department of Transportation (NDOT), and the Metropolitan Area Planning Agency (MAPA) to design and construct this project. The trail and bridge will run parallel to US Highway 34/75 over the Platte River, see the attached map.

In January 2019, the District entered into a Program Agreement with NDOT for this project, and Schemmer was selected as the design consultant for the project. District staff have worked with Schemmer, local partner agencies, and NDOT on design work related to the pedestrian bridge features, trail connections, and related services. During the design process, a retaining wall was determined to be necessary to help support the trail, while maintaining a minimal impact to the surrounding area.

The attached Consultant Work Order (CWO) has been reviewed and by NDOT, and documents to amend the original Agreement with Schemmer are being prepared. The CWO contains supporting documentation of additional geotechnical analysis and structural design required for the contractor to construct this large gravity block wall. The retaining wall was identified early in the process to reduce impacts to wetlands in the area and was designed with this in mind. Finalized documents will be provided by NDOT, including a Resolution verifying the approval of the Supplemental Agreement.

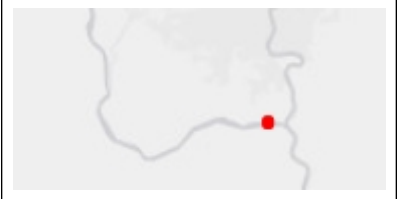
Work on these additional design items will occur in fall 2021 and will be completed along the same timeline as the original project with an expected letting date in fall 2022. Additional costs for this work are \$29,422.40 bringing the total project design costs for this agreement to \$272,788.22. This is a federal aid project, with 80% of the design and construction provided by NDOT, and the remaining 20% split between local partner agencies.

- **Management recommends that the Subcommittee recommend to the Board of Directors that Board adopt the Resolution provided by NDOT authorizing the General Manager to execute a Supplemental Agreement between the District and Schemmer Associates for the Platte River Bridge Trail project, with total cost not to exceed \$272,788.22, subject to changes deemed necessary by the General Manager and approval as to form by District Legal Counsel.**


Attachment 1, US Highway 34 Bike and Walking Trail



Location



Sarpy County GIS

 1210 Golden Gate Dr.
Suite 1130
Papillion, NE 68046
maps.sarpy.com


Legend

Project location
shown in green

1: 4,800

0 200 400 800 1200

Feet



This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the source records and information sources to ascertain the usability of the information.

Consultant Work Order (Local Projects)

Project No.: MAPA-77(62)		Control No.: 22770
Consultant: (Name and Representative) Schemmer Associates, Matt Shimerdla	Agreement No.: BK 1928	Work Order No.: 2
LPA: (Name and Representative) NDOT Local Projects, Jenna Haberger		Constr. Change Order No.: (If applicable)
<p>All parties agree the following described work needs to be performed by the consultant as part of the referenced project. All parties concur and hereby give notice to proceed based on the following: justification to modify contract, scope of services, deliverables, schedule, and estimated total fee. All other terms of existing agreements between the parties are still in effect. It is understood by all parties that the work described herein will become part of a future supplement to the agreement indicated above.</p> <p>Justification to modify agreement: (Include scope of services, deliverables, and schedule) This consultant work order describes the additional geotechnical analysis and structural design required for the contractor to construct this large gravity block wall. The retaining wall was identified early in the process to reduce impacts to wetlands in the area and was designed with this in mind. Scope and Fee are attached to this document.</p>		
Work Title	Summary of Fee	
Retaining Wall - Additional Design	A. Total Direct Labor Cost	= 9,817.70
	B. Overhead (Factor * x A)	= 16,219.82
	C. A + B	= 26,037.52
	D. Profit/Fee (Factor ** x C)	= 3,384.88
*Overhead Factor:	165.21%	E. FCCM (Factor*** x A) = 0.00
**Profit/Fee Factor:	13.00%	F. Direct Non-Labor Cost = 0.00
***Facility Capital Cost of Money (FCCM):	0.00%	G. Subconsultant Services = 0.00
Total Fee Notes: See Attached exhibit for hour and fee breakdown		TOTAL FEE: C + D + E + F + G = \$29,422.40
		<input type="checkbox"/> ESTIMATED TOTAL FEE:
		<input type="checkbox"/> FINAL TOTAL FEE:

Work Order Authorization – May be granted by email and attached to this document.

Consultant:		
<u>Matthew Shimerdla</u> Name	<u>Matthew J Shimerdla</u> Signature	<u>9/17/21</u> Date
LPA:		
<u>Eric Williams</u> Name	<u>Eric Williams</u> Signature	<u>2021/09/23</u> Date
LPS PC (for Preliminary Engineering) and State Rep. (for Construction Engineering):		
_____ Name	_____ Signature	_____ Date
LPS Unit Head Review (for PE Phase):		
_____ Name	_____ Signature	_____ Date
LPS Manager or Construction Engineer (Construction Phase):		
_____ Name	_____ Signature	_____ Date
FHWA: (FHWA Approval on Full Oversight Projects Only):		
_____ Name	_____ Signature	_____ Date

Notice to Proceed will be granted by email by:
LPS PC for Preliminary Engineering & CD PC for Construction Engineering.

FMIS Approval Date:

Notice to Proceed Date:

Distribution: Consultant, LPA – RC, State Rep., FHWA, LPS PC, NDOT Agreements Engineer, Highway Funds Manager, CD PC

1. Design of Stone Strong Gravity Block Wall System

On the north side of the US 34 bridge over the Platte River Schemmer is proposing to construct a retaining wall to reduce impacts to the existing wetland and channel resources in the area. This wall sits in a floodplain and will need to incorporate design calculations and soil conditions in both wet and dry conditions. The design of the wall, structural analysis, and geotechnical investigation are necessary for the contractor to build the wall to withstand the specified conditions that are present at this location and reduce the possibility of a change order during construction.

Documentation to submit for design of the large block gravity retaining wall

Structural calculations and LRFD analysis

Wall Plan and Profile Sheet

Wall Detail sheet w/ structural reinforcement

Geotechnical Report with recommendations for fill material and foundation material

Updated Cost Estimate

The tasks associated with these additional required documents includes the following:

- 1) Design the height and length of the wall based on the proposed profile and existing wetland conditions.
- 2) Draft a plan and profile sheet showing the horizontal and vertical information for the large block gravity wall
- 3) Develop a wall typical section that defines the characteristics of the wall and related requirements for this design.
- 4) Complete a geotechnical investigation to define fill soil characteristics to function in different moisture conditions and determine nominal soil strength.
- 5) Based on these soil characteristics, perform calculations using an LRFD standard specification to define strength of the soils based on a slope stability analysis.
- 6) Complete structural analysis to define level of reinforcement and foundation requirements.
- 7) Calculate quantities for these tasks and update the cost estimate for construction.
- 8) Provide shop drawing review for contractor wall details during construction of the wall.

Preliminary and Final Design

Consultant Estimate of Hours

Project Name: Platte River Bridge Trail - Phase 2
 Project Number: MAPA-77(62)
 Control Number: 22770
 LPA Name and County: Papio-Missouri River NRD, Sarpy County
 Firm Name: Schemmer
 Consultant Project Manager: Matt Shimerdia
 Phone/Email: 402-488-2500, mshimerdia@schemmer.com
 LPA Project Liaison: Eric Williams
 Phone/Email: ewilliams@papionrd.org
 NDOT RC:
 Phone/Email:
 Date:

TASKS	PERSONNEL CLASSIFICATIONS**												Total	
	PR	RLS	ENV	PM	SENG	ENG	SDES	ADM	SPC	SUR	LAB			
For Engineering Services:														
Project Management				8								8		
1 Project Management							8							8
Meetings				2								2		
1 Owner Meetings (2)							2							2
Gravity Wall Design				20 42 50 46								158		
1 Develop wall plan and profile design elements							12			2				14
2 Draft plan sheet							4			16				20
3 Draft wall detail							2			6				8
4 Update Cross-sections							2		8	2				12
5 Complete Geotechnical analysis and soil bearing calculations								16	30	8				54
6 Complete Geotechnical report								26	12	12				50
Functional Plans (60%)				3 3 16 6								28		
1 Complete structural calculations for Wall Design								3	16					19
2 Sixty percent plan submittal							2			4				6
3 Quantity Calculations and Cost Estimate							1			2				3
Draft PS&E Submittal (90%) plan review				5 6 8								19		
1 Incorporate review comments							1	6		4				11
2 Opinion of probable cost							2			2				4
3 Draft PS&E package submittal							2			2				4
Bridge Design Services (Construction Phase)				6 4								10		
1 Shop Drawing Review								6	4					10
Total Hours							38	57	70	60				225
Total Days (8 hrs)							4.8	7.1	8.8	7.5				28.1

CLASSIFICATIONS*:

PR = Principal
 RLS = Registered Land Surveyor
 ENV = Environmental Scientist
 ADM = Administrative

PM = Project Manager
 ENG = Engineer
 SDES = Senior Designer/Technician
 SENG = Senior Engineer

SPC = Survey Party Chief
 SUR = Surveyor I
 LAB = Lab Tech

* For Project Manager, use one of the technical classifications

** For User-Defined Classifications, you will need to edit the Classifications Legend located above. To enter a new classification, replace "UD1" with its abbreviation (ex. GRA) and replace "User Defined 1" with the

Preliminary and Final Design Labor Rates

Project Name: Platte River Bridge Trail - Phase 2
Project Number: MAPA-77(62)
Control Number: 22770
LPA Name and County: Papio-Missouri River NRD, Sarpy County
Firm Name: Schemmer
Consultant Project Manager: Matt Shimerdla
Phone/Email: 402-488-2500, mshimerdla@schemmer.com
LPA Project Liaison: Eric Williams
Phone/Email: ewilliams@papionrd.org
NDOR RC:
Phone/Email:
Date:

Labor Costs:		Hours	Blended Rate	Amount
Code	Classification Title			
PR	Principal		\$61.24	
RLS	Registered Land Surveyor		\$40.81	
ENV	Environmental Scientist			
PM	Project Manager	38	\$53.00	\$2,014.00
SENG	Senior Engineer	57	\$52.30	\$2,981.10
ENG	Engineer	70	\$41.86	\$2,930.20
SDES	Senior Designer/Technician	60	\$31.54	\$1,892.40
ADM	Administrative		\$20.00	
SPC	Survey Party Chief		\$29.25	
SUR	Surveyor I		\$18.93	
LAB	Lab Tech		\$20.88	
TOTALS		225		\$9,817.70

Overhead Rate: 165.21%

Fixed Fee: 13.00%

FCCM (if applicable)

CLASSIFICATIONS:

PR = Principal	PM = Project Manager	SPC = Survey Party Chief
RLS = Registered Land Surveyor	ENG = Engineer	SUR = Surveyor I
ENV = Environmental Scientist	SDES = Senior Designer/Technician	LAB = Lab Tech
ADM = Administrative	DES = Designer/Technician	

Blended Rates Worksheet

STAFFING PLAN			
EMPLOYEE NAME	CLASSIFICATION ¹	SALARY RATE	% ASSIGNED ²
Principal			
Doug Holle	Senior Registered Engineer	\$61.24	100.00%
		Blended Rate:	\$61.24
Registered Land Surveyor			
Dan Marti	Registered Land Surveyor	\$40.81	100.00%
		Blended Rate:	\$40.81
Environmental Scientist			
			25.00%
			25.00%
			25.00%
			25.00%
Consultant Independent Cost Estimate		Blended Rate:	

Labor Rates

Exhibit ____

Project Manager			
	Matt Shimerdla	Registered Engineer	\$53.00 100.00%
			Blended Rate: \$53.00
Senior Engineer			
	Tim Steffen	Registered Engineer-Transp.	\$49.65 20.00%
	Darin Brown	Registered Engineer-Structural	\$53.35 62.00%
	Loras Klostermann	Registered Engineer - Geotech	\$51.65 18.00%
			Blended Rate: \$52.30
Engineer			
	Tyler Lerdahl	Registered Engineer-Transp	\$36.42 25.00%
	Matt Rassmussen	Registered Engineer-Structural	\$43.67 75.00%
			Blended Rate: \$41.86
Senior Designer/Technician			
	Kevin Snook	Designer-Transp	\$41.16 40.00%
	Megan Starnier	CADD_Tech-Transportation	\$25.13 60.00%
			Blended Rate: \$31.54
Administrative			
	Dawn Kirchert	Administrative Assistant	\$20.00 100.00%
			Blended Rate: \$20.00
Survey Party Chief			
	Tony Bruckner	Registered Land Surveyor	\$33.65 50.00%
	Ray Flock		\$24.85 50.00%
			Blended Rate: \$29.25
Surveyor I			
	Kevin Owen	Survey Technician	\$15.00 50.00%
	Nick Olmsted	Survey Technician	\$22.85 50.00%
			Blended Rate: \$18.93
Lab Tech			
	Karley Arman	Tech-Geotechnical	\$19.40 50.00%
	Rob McClenahan	Tech-Material Testing	\$22.35 50.00%
			Blended Rate: \$20.88

¹ Input actual employee classification as designated by firm.

² Total of "% Assigned" must equal 100% for each personnel classification category. If one person in classification, list them as 100% for "% Assigned".

Preliminary and Final Design

Direct Expenses

Project Name: Platte River Bridge Trail - Phase 2
Project Number: MAPA-77(62)
Control Number: 22770
LPA Name and County: Papio-Missouri River NRD, Sarpy County
Firm Name: Schemmer
Consultant Project Manager: Matt Shimerdla
Phone/Email: 402-488-2500, mshimerdla@schemmer.com
LPA Project Liaison: Eric Williams
Phone/Email: ewilliams@papiornrd.org
NDOR RC:
Phone/Email:
Date:

Subconsultants:	Quantity	Unit Cost	Amount
Potholing Contractor			
Soil Boring and Sampling, O'Malley Drilling Inc.		\$4,380.00	
Subtotal			

Printing and Reproduction:	Quantity	Unit Cost	Amount
Public Meeting Displays		\$150.00	
Legal Notice			
Misc. Printing		\$300.00	
Postage			
Title Search			
Subtotal			

Mileage/Travel:	Quantity	Unit Cost	Amount
Survey		\$0.580	
General		\$0.580	
Geotechnical		\$0.580	
Subtotal			

Lodging/Meals:	Quantity	Unit Cost	Amount
Subtotal			

Other Miscellaneous Costs:	Quantity	Unit Cost	Amount
Subtotal			
TOTAL DIRECT EXPENSES			

Per Diem Rates: <http://www.gsa.gov/portal/category/104711>
 Mileage Rates: <http://www.gsa.gov/portal/category/104715>

2011 Standard Rates*	
Type	Rate
Black and White Copies	Actual reasonable cost
Color Copies	Actual reasonable cost
Miscellaneous Postage, Mailing, Deliveries Etc.	Actual reasonable cost
Equipment	Actual reasonable cost
Privately Owned Vehicle	Actual reimbursement amount to employee, not to exceed rates for company vehicles outlined above
Automobile Rental	Actual reasonable cost
Air fare	Actual reasonable cost, giving the State all discounts
	Statewide Omaha/Douglas County
Breakfast	
Lunch	
Dinner	
Incidentals	
Totals	

* A full list of rates can be found at the following website: www.gsa.gov/perdiem
 Consultant Independent Cost Estimate
 Direct Expenses

Exhibit ____

Preliminary and Final Design

Project Cost

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Project Number: MAPA-77(62)
Control Number: 22770
LPA Name and County: Papio-Missouri River NRD, Sarpy County
Firm Name: Schemmer
Consultant Project Manager: Matt Shimerdla
Phone/Email: 402-488-2500, mshimerdla@schemmer.com
LPA Project Liaison: Eric Williams
Phone/Email: ewilliams@papionrd.org
NDOR Project Coordinator:
Phone/Email:
Date:

Direct Labor Costs:			
Personnel Classification	Hours	Rate	Amount
Principal		\$61.24	
Registered Land Surveyor		\$40.81	
Environmental Scientist			
Project Manager	38	\$53.00	\$2,014.00
Senior Engineer	57	\$52.30	\$2,981.10
Engineer	70	\$41.86	\$2,930.20
Senior Designer/Technician	60	\$31.54	\$1,892.40
Administrative		\$20.00	
Survey Party Chief		\$29.25	
Surveyor I		\$18.93	
Lab Tech		\$20.88	
TOTALS	225		\$9,817.70

Direct Expenses:	Amount
Subconsultants	
Printing and Reproduction Costs	
Mileage/Travel	
Lodging/ Meals	
Other Miscellaneous Costs	
TOTALS	

Total Project Costs:	Amount
Direct Labor Costs	\$9,817.70
Overhead @ 165.21%	\$16,219.82
Total Labor Costs	\$26,037.52
Fixed Fee @ 13.00%	\$3,384.88
Facility Capital Cost of Money (FCCM) @ (direct labor cost x FCCM%)	
Direct Expenses	
PROJECT COST	\$29,422.40

Preliminary and Final Design Assumptions - Notes

Schemmer

Matt Shimerdla

402-488-2500, mshimerdla@schemmer.com

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[illegible]

A. Existing soil borings can be analyzed for the Geotechnical calculations necessary for the retaining wall design.

B. Soils are considered to be more of a sand subgrade than a clay soil that will be flooded.

C. Calculations for retaining wall design shall use AASHTO LRFD Bridge Design specifications.