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SUPPLEMENTAL WORK AUTHORIZATION NO. 1
TO
WORK AUTHORIZATION NO. 2

WILLIAMSON COUNTY LONG RANGE TRANSPORTATION CORRIDOR PROJECT:
CORRIDOR H – SAM BASS ROAD

This Supplemental Work Authorization No. 1 to Work Authorization No. 2 is made pursuant to the terms and conditions of the Williamson County Contract for Engineering Services, being dated March 13, 2017 ("Contract") and entered into by and between Williamson County, Texas, a political subdivision of the State of Texas, (the "County") and K FRIESE + ASSOCIATES, INC. (the "Engineer").

WHEREAS, the County and the Engineer executed Work Authorization No. 2 dated effective February 19, 2019 (the "Work Authorization");

WHEREAS, pursuant to Article 14 of the Contract, amendments, changes and modifications to a fully executed Work Authorization shall be made in the form of a Supplemental Work Authorization; and

WHEREAS, it has become necessary to amend, change and modify the Work Authorization.

AGREEMENT

NOW, THEREFORE, premises considered, the County and the Engineer agree that the Work Authorization shall be amended, changed and modified as follows:

I. The Services to be Provided by the Engineer that were set out in the original Attachment "B" of the Work Authorization are hereby amended, changed and modified as shown in the attached revised Attachment "B" (must be attached).

II. The maximum amount payable for services under the Work Authorization is hereby increased from $ 578,180.59 to $ 707,469.62 . The revised Work Schedule is attached hereto as Attachment "D" (must be attached).

Except as otherwise amended by prior or future Supplemental Work Authorizations, all other terms of the Work Authorization are unchanged and will remain in full force and effect.

This Supplemental Work Authorization does not waive the parties' responsibilities and obligations provided under the Contract.

IN WITNESS WHEREOF, the County and the Engineer have executed this Supplemental Work Authorization, in duplicate, to be effective as of the date of the last party's execution below.

ENGINEER:

By: TMO
Signature

THOMAS M. OWENS, P.E.
Printed Name

EXECUTIVE VICE PRESIDENT
Title

24 OCT 19
Date

COUNTY:

By: _____
Signature

Bill Gravell, Jr.
Printed Name

County Judge
Title

_____
Date

OK
m 11/25/19

LIST OF ATTACHMENTS

Attachment B - Services to be Provided by Engineer

Attachment C - Work Schedule

Attachment D - Fee Schedule

ATTACHMENT B
SERVICES TO BE PROVIDED BY THE ENGINEER
DESIGN SERVICES FOR TRANSPORTATION CORRIDOR H – SAM BASS ROAD

PROJECT DESCRIPTION

This Supplemental Work Authorization adds the following items to the previously contracted scope of work.

Design Criteria
This project will utilize Williamson County Design Criteria and will incorporate Texas Department of Transportation Standard Details and Specifications except where superceded by County details or specifications.

1. PS&E PLAN PREPARATION

   a. Plans shall be prepared per Williamson County criteria including applicable submittal requirements including: cost estimate, checklists, hardcopies, CAD files, comment responses, design waivers/exceptions, general notes, quantities, updated design schedule, and construction time determination.

   b. ROADWAY:

      - Revise roadway plans to reflect updated alignment and baseline stationing including Typical Sections, Project Layout, Roadway Plan and Profiles, Intersection Details, Driveways, and Cross Sections.

   c. BRIDGE:

      - Geotechnical investigation and testing Drill two 40 foot deep bridge borings in the vicinity of Culvert C (~Station 298+50) along Sam Bass Road, approximately 0.1 miles east of Mayfield Drive. Samples will be collected and Texas Cone Penetrometer (TCP) tests will be conducted on 5 foot intervals in accordance with the TxDOT Geotechnical Manual. A testing program will be designed to define the strength and classification characteristics of soils and will include a scour analysis on upstream and downstream side of the bridge structure. The results will be incorporated in the final geotechnical report deliverable for the project. TxDOT bridge boring logs, scour analysis results, and pier capacity curves (axial and uplift) for design of drilled shaft piers to support the bridge structure.

      - The bridge is assumed as a simple span bridge with 52' overall width with raised sidewalk. TxDOT standard beam type and TxDOT standard bridge abutments with sloped embankment and wingwalls will be used. a TxDOT standard bridge rail will be used. The design of a customized bridge rail is excluded from the scope.

      - Bridge Layout Develop and submit the Preliminary Bridge Layout sheet and Typical Section sheet with the 60% resubmittal for the County's approval.

Once the Preliminary Bridge Layout sheet and Typical Section sheet are approved, finalize the Bridge Layout sheet and Typical Section sheet for the 90%, 100% and Final PS&E submittals.

- Bridge Detail Summary Prepare total bridge quantities, estimates and summary sheets.
- Bridge Structural Details Prepare the structural design and develop detailed structural drawings of all required details in compliance with TxDOT manuals and guidelines. Assemble and complete all applicable TxDOT Standard Details sheets.

d. DRAINAGE:

- Revise drainage plans to reflect updated alignment and baseline stationing including Drainage Area Maps, Drainage Plan and Profiles, and Hydraulic Calculations.

e. SIGNING, MARKINGS, & SIGNALIZATION

- Revise signing and pavement marking plans to reflect updated alignment and baseline stationing including pavement marking plans and summary of signs.

f. TRAFFIC CONTROL

- Revise traffic control plans to reflect updated alignment and baseline stationing.

2. DRAINAGE STUDY

a. HYDROLOGIC/HYDRAULIC MODELING – Perform hydrologic and hydraulic modeling for a bridge crossing the outfall at Upper Brushy Creek WCID Dam #13A:

- Update hydrologic and hydraulic models or modify existing models (FEMA, drainage districts, river authorities, cities, etc.) to include the construction of a dam across the UBCWCID Dam #13A outfall.

3. BIDDING PHASE SERVICES

a. BIDDING PHASE SERVICES:

- Respond to bidder's questions related to the bridge structure during the bid period.

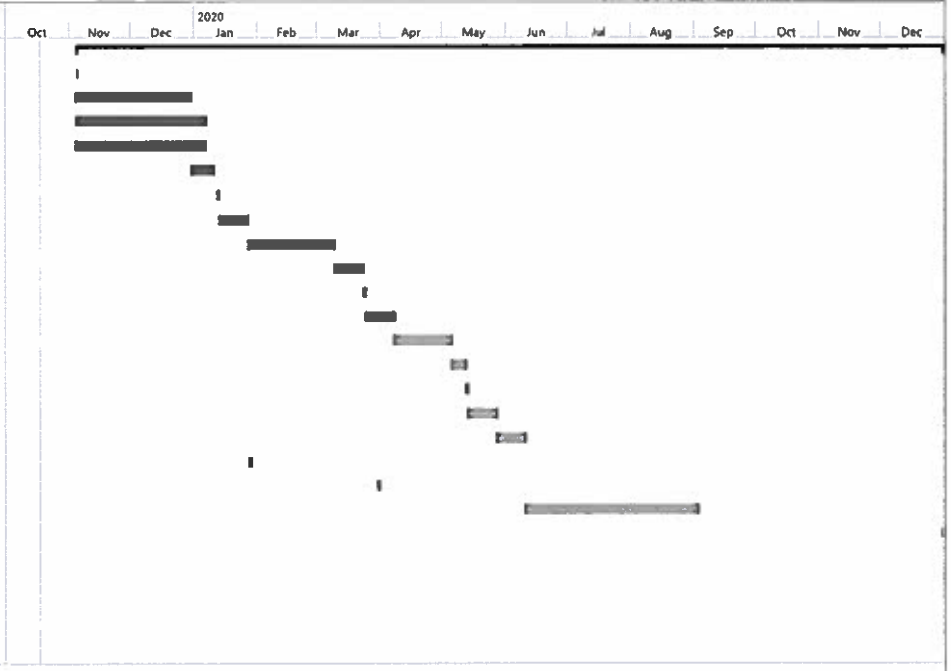
DELIVERABLES

- 60% PS&E Resubmittal – including 60% bridge plans
- 90% PS&E Submittal

- 100% PS&E Submittal
- Final PS&E Submittal
- Geotechnical Report
- Drainage Study

WILLIAMSON COUNTY
TRANSPORTATION CORRIDOR H
SWA#1 to WA#2 ATTACHMENT C - WORK SCHEDULE

ID	Task Name	Duration	Start	Finish	Predecessors
1	**Corridor H (Sam Bass Road)**	**303 days?**	**Tue 11/5/19**	**Thu 12/31/20**	
2	Notice to Proceed (NTP)	1 day	Tue 11/5/19	Tue 11/5/19	
3	Bridge Geotech Bores and Testing	40 days	Tue 11/5/19	Mon 12/30/19	2
4	Bridge Design	45 days	Tue 11/5/19	Mon 1/6/20	2
5	60% Design	45 days	Tue 11/5/19	Mon 1/6/20	2
6	60% QA/QC	9 days	Tue 12/31/19	Fri 1/10/20	5
7	60% Submittal	1 day	Mon 1/13/20	Mon 1/13/20	6
8	60% County/GEC Review	10 days	Tue 1/14/20	Mon 1/27/20	7
9	90% Design	30 days	Tue 1/28/20	Mon 3/9/20	8
10	90% QA/QC	10 days	Tue 3/10/20	Mon 3/23/20	9
11	90% Submittal	1 day	Tue 3/24/20	Tue 3/24/20	10
12	90% County/GEC Review	10 days	Wed 3/25/20	Tue 4/7/20	11
13	100% Design	20 days	Wed 4/8/20	Tue 5/5/20	12
14	100% QA/QC	5 days	Wed 5/6/20	Tue 5/12/20	13
15	100% Submittal	1 day	Wed 5/13/20	Wed 5/13/20	14
16	100% County/GEC Review	10 days	Thu 5/14/20	Wed 5/27/20	15
17	Final Submittal	10 days	Thu 5/28/20	Wed 6/10/20	16
18	Submit All Metes and Bounds	1 day	Tue 1/28/20	Tue 1/28/20	7FS+10 days
19	WPAP Submittal to TCEQ	1 day	Tue 3/31/20	Tue 3/31/20	
20	Bid Phase	60 days	Thu 6/11/20	Wed 9/2/20	17
21	**Work Authorization Termination Date**	**1 day**	**Thu 12/31/20**	**Thu 12/31/20**	
22					
23					
24					
25					



Attachment D - Fee Schedule
Transportation Corridor H
K Friese Associates, Inc.

TASK	KFA	RKCI	WSP	Total Labor Cost
1. PS&E PLAN PREPARATION				
b. REVISE ROADWAY PLAN SHEETS	$ 5,160.00	$ -	$ -	$ 5,160.00
c. PREPARE BRIDGE PLAN SHEETS	$ 4,020.00	$ 4,350.72	$ 90,827.61	$ 99,198.33
d. REVISE DRAINAGE SHEETS	$ 1,760.00	$ -	$ -	$ 1,760.00
e. REVISE SIGNING AND PAVEMENT MARKING SHEETS	$ 2,460.00	$ -	$ -	$ 2,460.00
f. REVISE TRAFFIC CONTROL SHEETS	$ 6,080.00	$ -	$ -	$ 6,080.00
2. DRAINAGE STUDY				
a. HYDROLOGIC/HYDRAULIC MODELING	$ 9,140.00	$ -	$ -	$ 9,140.00
3. BIDDING PHASE SERVICES				
a. BIDDING PHASE SERVICES (BRIDGE)	$ -	$ -	$ 721.88	$ 721.88
LABOR COST:	**$ 28,620.00**	**$ 4,350.72**	**$ 91,549.49**	**$ 124,520.21**
TOTAL DIRECT EXPENSES COST:	**$ -**	**$ 4,151.32**	**$ 617.50**	**$ 4,768.82**
TOTAL PROJECT COST:	**$ 28,620.00**	**$ 8,502.04**	**$ 92,166.99**	**$ 129,289.03**

Attachment D - Fee Schedule
Transportation Corridor H
K Friese Associates, Inc.

TASK Hourly Rate K Friese & Associates, Inc.	SHEETS/ UNITS	Principal $ 250.00	Sr. Roadway Engineer $230.00	QA/QC Engineer $190.00	Sr. Drainage Engineer $187.50	Sr. Project Manager $165.00 Hours	Project Engineer $125.00	Engineer in Training $100.00	CADD Technician $90.00	Admin. $75.00	Sub Total Hours	Hr/Unit	KFA Labor Cost
1. PS&E PLAN PREPARATION													
b. REVISE ROADWAY PLAN SHEETS						4	20	20			44		$ 5,160.00
c. PREPARE BRIDGE PLAN SHEETS						8	12	12			32		$ 4,020.00
d. REVISE DRAINAGE SHEETS						4	4	6			14		$ 1,760.00
e. REVISE SIGNING AND PAVEMENT MARKING SHEETS						4	8	8			20		$ 2,460.00
f. REVISE TRAFFIC CONTROL SHEETS						12	20	16			48		$ 6,080.00
2. DRAINAGE STUDY													
a. HYDROLOGIC HYDRAULIC MODELING						16	20	40			76		$ 9,140.00
3. BIDDING PHASE SERVICES													
a. BIDDING PHASE SERVICES (BRIDGE)													$ -
TOTAL NUMBER OF SHEETS:													
HOURS:						48	84	102					
LABOR COST:		$ -	$ -	$ -	$ -	$ 7,920	$ 10,500	$ 10,200	$ -	$ -			$ 28,620.00
						20.5%	35.9%	43.6%					$ 28,620.00

DIRECT EXPENSES:							
	Travel:						
	Mileage		miles			$ 0.56	
	Copies:						
	Reproduction		copies			$ 0.20	
	Media (mylar)		sheets				
	Misc Expenses:						
	Express delivery		each			$ 25.00	
TOTAL DIRECT COST:							$ -
TOTAL PROJECT COST:							$ 28,620.00

Attachment D - Fee Schedule
Transportation Corridor H
Raba-Kistner Consultants, Inc.

TASK Hourly Rate Raba-Kistner Consultants, Inc.	SHEETS/ UNITS	SR. CIVIL ENGR $ 187.46	CIVIL ENGR $128.75	CIVIL ENGR $107.12	LOGGER $107.12	DRAFTING $96.82	ADMIN/ CLER $66.95				Sub Total Hours	Hr/Unit	RKCI Labor Cost
						Hours							
1. PS&E PLAN PREPARATION													
b. REVISE ROADWAY PLAN SHEETS													$ -
c. PREPARE BRIDGE PLAN SHEETS		1	4	14	17	2	2				40		$ 4,350.72
d. REVISE DRAINAGE SHEETS													$ -
e. REVISE SIGNING AND PAVEMENT MARKING SHEETS													$ -
f. REVISE TRAFFIC CONTROL SHEETS													$ -
2. DRAINAGE STUDY													
a. HYDROLOGIC HYDRAULIC MODELING													$ -
3. BIDDING PHASE SERVICES													
a. BIDDING PHASE SERVICES (BRIDGE)													$ -
TOTAL NUMBER OF SHEETS:											Column Total = 40		
HOURS:		1	4	14	17	2	2				Row Total = 40		
LABOR COST:		$ 187	$ 515	$ 1,500	$ 1,821	$ 194	$ 134	$ -	$ -	$ -			$ 4,350.72
		2.5%	10.0%	35.0%	42.5%	5.0%	5.0%						$ 4,350.72

DIRECT EXPENSES:							
	Travel:						
	Drill Rig Moblization	1	each			$ 363.00	$363.00
	Drilling and Sampling	80	linear foot			$ 18.15	$1,452.00
	Traffic Control	1.5	day			$ 927.00	$1,390.50
	Logger Truck	1	day			$ 58.92	$58.92
	Lab Testing (Moisture Content)	16	each			$ 9.37	$149.92
	Lab Testing (Atterberg Limits)	4	each			$ 96.41	$385.64
	Lab Testing (Minus 200-Mest Sieve)		each			$ 53.56	
	Lab Testing (Sulfate Testing)		each			$ 96.41	
	Lab Testing (Lime Series Curve)		each			$ 390.00	
	Lab Testing (Moisture/Density Test)		each			$ 262.44	
	Lab Testing (Resilient Modulus)		each			$ 1,500.00	
Added with PSA Amendment #2 -->	Lab Testing (Sieve Analysis for Scour)	2	each			$ 94.27	$188.54
Added with PSA Amendment #2 -->	Texas Cone Penetrometer	8	each			$ 20.35	$162.80
TOTAL DIRECT COST:							$ 4,151
TOTAL PROJECT COST:							$ 8,502.04

Attachment D - Fee Schedule
Transportation Corridor H
WSP

TASK Hourly Rate: WSP	SHEETS/ UNITS	Principal in Charge $ 255.05	Project Manager $185.32	Sr. Structural Engineer $180.47	Sr Supervising Traff. Engr. $220.83	Lead Traffic Engineer $146.77 Hours	Sr. CADD Tech $118.70	Project Engineer $112.73	EIT $102.77	Project Accountant $97.80	Sub Total Hours	Hr/Unit	WSP Labor Cost
1. PS&E PLAN PREPARATION													
b REVISE ROADWAY PLAN SHEETS													$ -
c. PREPARE BRIDGE PLAN SHEETS			12	197			248	206		4	667		$ 90,827.61
d REVISE DRAINAGE SHEETS													$ -
e REVISE SIGNING AND PAVEMENT MARKING SHEETS													$ -
f REVISE TRAFFIC CONTROL SHEETS													$ -
2. DRAINAGE STUDY													
a HYDROLOGIC/HYDRAULIC MODELING													$ -
3. BIDDING PHASE SERVICES													
a BIDDING PHASE SERVICES (BRIDGE				4							4		$ 721.88
TOTAL NUMBER OF SHEETS: HOURS:			12	201			248	206		4	Column Total = 671 Row Total = 671		
LABOR COST:		$ -	$ 2,224	$ 36,274	$ -	$ -	$ 29,438	$ 23,222	$ -	$ 391			$ 91,549.49
			1.8%	30.8%			37.0%	30.7%		0.6%			$ 91,549.49

DIRECT EXPENSES:					
Travel: Mileage (2 trip from Dallas to Austin)	1000	miles		$ 0.58	$580.00
Copies: Photocopies B/W (11"x17")	250	copies		$ 0.15	$37.50
TOTAL DIRECT COST:					$ 618
TOTAL PROJECT COST:					$ 92,166.99