

**WORK AUTHORIZATION NO. 3**

**PROJECT: Engineering Design Services for Drainage Improvements  
on S CR 363, S CR 482, S CR 322 and S CR 323**

This Work Authorization is made pursuant to the terms and conditions of the Williamson County Contract for Engineering Services, being dated March 6, 2018 and entered into by and between Williamson County, Texas, a political subdivision of the State of Texas, (the "County") and Pape-Dawson Engineers, Inc. (the "Engineer").

Part 1. The Engineer will provide the following Engineering Services set forth in Attachment "B" of this Work Authorization.

Part 2. The maximum amount payable for services under this Work Authorization without modification is \$115,000.00.

Part 3. Payment to the Engineer for the services established under this Work Authorization shall be made in accordance with the Contract.

Part 4. This Work Authorization shall become effective on the date of final acceptance and full execution of the parties hereto and shall terminate on March 31, 2019. The Engineering Services set forth in Attachment "B" of this Work Authorization shall be fully completed on or before said date unless extended by a Supplemental Work Authorization.

Part 5. This Work Authorization does not waive the parties' responsibilities and obligations provided under the Contract.

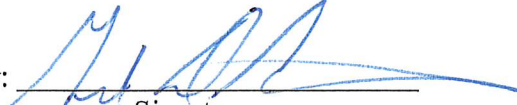
Part 6. County believes it has sufficient funds currently available and authorized for expenditure to finance the costs of this Work Authorization. Engineer understands and agrees that County's payment of amounts under this Work Authorization is contingent on the County receiving appropriations or other expenditure authority sufficient to allow the County, in the exercise of reasonable administrative discretion, to continue to make payments under this Contract. It is further understood and agreed by Engineer that County shall have the right to terminate this Contract at the end of any County fiscal year if the governing body of County does not appropriate sufficient funds as determined by County's budget for the fiscal year in question. County may effect such termination by giving written notice of termination to Engineer.

Part 7. This Work Authorization is hereby accepted and acknowledged below.

EXECUTED this 22 day of May, 2018.

ENGINEER:

Pape-Dawson Engineers, Inc.

By:   
Signature

Gilmer D. Gaston, P.E., PTOE  
Printed Name

Sr. Vice President  
Title

COUNTY:

Williamson County, Texas

By:   
Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Title

## LIST OF ATTACHMENTS

Attachment A - Services to be Provided by County

Attachment B - Services to be Provided by Engineer

Attachment C - Work Schedule

Attachment D - Fee Schedule

Pape-Dawson Consulting Engineers, Inc.  
Small Drainage and Roadway Design

Williamson County Road and Bridge  
1711-206  
Work Authorization 03

## **Attachment A**

### **Services to be Provided by County**

Williamson County Road & Bridge Division personnel will provide 2' LIDAR contours and aerial background, project direction, review and oversight.

## Attachment B

### Services to be Provided by the Engineer

#### Project Locations

1. CR 363 S - From CR 360 to the County Line to FM 971
2. CR 482 S - From CR 481 to the County Line
3. CR 322 S - From CR 302 to FM 1105
4. CR 323 S - From CR 322 to CR 384

#### Task 1: Project Management

Attend Progress Review Meetings with County Road & Bridge department at 50%, 100% and final, prepare monthly progress reports and invoices, maintain project schedule and perform QA/QC.

#### Task 2: Topographic and R.O.W. Surveys

QA and process to use 2' LIDAR contours and aerial background provided by the County (see Attachment A) for preliminary and final engineering.

#### Task 3: Preliminary Engineering

Delineate drainage areas and perform runoff calculations for 5-yr, 10-yr, 25-yr storm events for parallel driveway pipes and non-bridge class cross culverts within the project limits, including Data Collection and Field Reconnaissance. Provide a scroll plot (1"=100') showing drainage area boundaries, time of concentration path, drainage area I.D., drainage areas (acres), with 2' LIDAR contours and aerial background provided by County. Provide table showing runoff calculation results.

#### Task 4: Geotechnical Investigation N/A

#### Task 5: Environmental Studies N/A

#### Task 6: Utility Coordination N/A

#### Task 7: FEMA Coordination N/A

#### Task 8: Final Engineering

Calculate capacity of existing parallel driveway pipes and non-bridge class cross culverts. Determine parallel driveway pipes and non-bridge class culverts in need of replacement due to condition, inadequate capacity, or safety treatment. Provide 11x17 Plan & Plan Layout sheets (1"=50') for proposed improvements to parallel driveway pipes and non-bridge class cross culverts showing roadway centerline, stationing, approximate ROW, 2' LIDAR contours provided by County and aerial background. Provide temporary construction and/or drainage easement sketches or exhibits (all easement acquisitions to be handled by the County).

Pape-Dawson Consulting Engineers, Inc.  
Small Drainage and Roadway Design

Williamson County Road and Bridge  
1711-206  
Work Authorization 03

Task 9: Bidding Phase Services N/A

Task 10: Construction Phase Services N/A

**Deliverables:**

50% Submittal:

- 2 copies of Scroll Plots of Drainage Areas and runoff calculations
- Quantity Summary and Estimate of Construction Cost
- Engineer's internal QA/QC marked up set

100% Submittal:

- 2 paper copies of 11" x 17" Plan Sheets
- Quantity Summary and Estimate of Construction Cost
- Temporary construction and/or drainage easement sketches and exhibits
- Engineer's internal QA/QC marked up set

Final Submittal:

- 2 paper copies of 11" x 17" Plan Sheets
- Quantity Summary and Estimate of Construction Cost
- Temporary construction and/or drainage easement sketches and exhibits
- Engineer's internal QA/QC marked up set

Electronic copy of submittal documents in PDF format on CD

ID	Task Name	Duration	Start	Finish
1	Williamson County Road and Bridge- Small Drainage and Roadway Design	49 days	Mon 5/14/18	Mon 7/23/18
2	Site Visits	2 days	Mon 5/14/18	Tue 5/15/18
3	Rec NTP, survey data & other information from Client	0 days	Mon 5/14/18	Mon 5/14/18
4	QA Data	1 day	Mon 5/14/18	Mon 5/14/18
5	H/V alignment (existing & new)	5 days	Tue 5/15/18	Mon 5/21/18
6	X sections	5 days	Tue 5/22/18	Tue 5/29/18
7	Prelim QA & prelim estimates	2 days	Wed 5/30/18	Thu 5/31/18
8	Typical sections	2 days	Fri 6/1/18	Mon 6/4/18
9	H&H	20 days	Tue 6/5/18	Mon 7/2/18
10	Culvert Designs	5 days	Tue 6/12/18	Mon 6/18/18
11	Plan sheets	5 days	Tue 6/19/18	Mon 6/25/18
12	Culvert layout & details	3 days	Tue 6/19/18	Thu 6/21/18
13	County Review	5 days	Fri 6/22/18	Thu 6/28/18
14	Incorporate County Comments	1 day	Fri 6/29/18	Fri 6/29/18
15	Complete Plans	10 days	Mon 7/2/18	Mon 7/16/18
16	County Review & Coordination	5 days	Tue 7/17/18	Mon 7/23/18
17	Provide Deliverables	2 days	Mon 7/9/18	Tue 7/10/18

Project Schedule  
Date: Mon 4/23/18

Task  
Split  
Milestone  
Summary

Project Summary  
Inactive Task  
Inactive Milestone  
Inactive Summary

Manual Task  
Duration-only  
Manual Summary Rollup  
Manual Summary

Start-only  
Finish-only  
External Tasks  
External Milestone

Deadline  
Progress  
Manual Progress

Williamson County- Roadway Design 1711-206  
 Work Authorization #3

FEE SUMMARY FOR PROFESSIONAL SERVICES

Project(s): Throughout WilCo (see listing below)  
 Prime Consultant: Pape-Dawson Engineers, Inc, Austin, Texas  
 Proposal Date: 4/23/2018  
 Prepared By: Howard Lyons (PM)

Scope of Work: Asphalt stabilize pavement (design by County) holding PGL, ditch & drainage

Location(s) of Work:  
 Project 3: CR 363S - West from CR 360 to County Line & east from County Line to CR 361/RM 971  
 Project 4: CR 482 N from CR 481 to County Line  
 Project 5: CR 322 S- from CR 302 to FM 1105  
 Project 6: CR 323 S- from CR 322 to CR 384

DESCRIPTION	TOTAL COST
TASK 1 - MANAGEMENT & COORDINATION	\$14,571.09
TASK 2 - COORDINATION OF SERVICES BY OTHERS	\$1,885.70
TASK 3 - PRELIMINARY ENGINEERING	\$65,312.51
TASK 8 - FINAL ENGINEERING	\$27,904.82
OTHER DIRECT EXPENSES	\$4,975.00
SUBTOTAL LABOR + EXPENSES	\$114,649.12

TASK DESCRIPTION	Vice President	Sr. Mgr.	Principal Engr.	PM	Project Engr.	Project Supervisor	Asst. Mgr.	Designer	Est.	CIS Analyst	Envsat/GA/SA/Env	Envsat/GA/SA/Env	Proj. Coord.	Technician	Clerical	TOTAL LABOR HRS. & COSTS
<b>TASK 1 - MANAGEMENT &amp; COORDINATION</b>																
<b>PROJECT MANAGEMENT AND ADMINISTRATION</b>																
Monthly Progress Report	6		1	6	12			2	2							29
Maintain Project Schedule	2		1	4	2			1	1							11
Meetings with State (Print design, PSD/E, AFA, etc)																0
Written & Electronic Correspondence	2		1	2	2			1	1						1	10
Meeting Minutes				8	8											16
Phone Calls/Conference Calls with Team Members	1		1	16	8			1	1							28
<b>HOURS SUB-TOTALS</b>	11	0	4	36	32	0	0	5	5	0	0	0	0	0	1	94
<b>CONTRACT RATE PER HOUR</b>	\$265.64	\$196.46	\$247.28	\$160.37	\$122.08	\$140.76	\$133.61	\$104.65	\$104.09	\$87.55	\$154.43	\$109.89	\$73.54	\$75.56	\$77.45	
<b>TOTAL LABOR COSTS</b>	\$3,144.24	\$0.00	\$985.12	\$5,413.37	\$3,996.56	\$0.00	\$0.00	\$520.25	\$520.25	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$77.35	\$14,571.09
<b>SUBTOTAL</b>																

<b>SUMMARY</b>	
TOTAL COSTS FOR PRIME ONLY	\$14,571.09
<b>GRAND TOTAL</b>	<b>\$14,571.09</b>

TASK DESCRIPTION	Vice President	Sr. Mgr	Principal Engr	PM	Project Engr	Project Surveyor	Asst Mgr	Designer	BIT	GIS Analyst	EnvSci/Cost/EnvSci/Cost	EnvSci/Cost/EnvSci/Cost	EnvSci/Cost/EnvSci/Cost	Proj Coord	Technician	Clerical	TOTAL LABOR RES. & COSTS
TASK 2 - COORDINATION OF SERVICES BY OTHERS																	
SERVICES TO BE PROVIDED BY OTHERS																	
Coord with County				1													1
Coord with Surveyor				1													1
Verification and OA			1	1	1												3
ROW verification OA			1	1	1												3
Design Survey				1	1												2
Locate utilities				1	1												2
HOURS SUB-TOTALS	0	0	2	6	4	6	0	0	0	0	0	0	0	0	0	0	12
CONTRACT RATE PER HOUR	\$285.84	\$285.84	\$247.28	\$193.37	\$172.08	\$146.76	\$133.61	\$104.05	\$104.05	\$87.55	\$154.43	\$109.80	\$72.44	\$115.75	\$75.56	\$72.55	\$1,885.10
TOTAL LABOR COSTS	\$0.00	\$0.00	\$494.56	\$622.22	\$668.32	\$880.56	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,885.10
SUBTOTAL																	\$1,885.10
SUMMARY																	\$1,885.10
TOTAL COSTS FOR FIRM ONLY																	\$1,885.10
GRAND TOTAL																	\$1,885.10

TASK DESCRIPTION	Vice President	Sr. Mgr.	Principal Engr.	PM	Project Engr.	Project Supervisor	Asst. Mgr.	Designer	BT	GIS Analyst	EnvsSci/Coil/EnvSci/Coil	EnvsSci/Coil/EnvSci/Coil	Prof. Coord.	Technician	Clerical	TOTAL LABOR HRS. & COSTS
<b>TASK 3 - PRELIMINARY ENGINEERING ROADWAY</b>																
Front End Documents (Title, Index, EAO, General Notes, etc.)																0
Typical Sections - Existing and Proposed				1	2			2	2							0
Horizontal Roadway Alignments																7
Roadway Profiles																0
Street Cross Sections																0
Plan Sheets				4	20			20	20							64
Driveway Summary Sheet																0
Metal Beam Guard Fence Evaluation																0
Preliminary cost estimates																0
Construction Phasing Typical Sections																0
Construction Phasing and Sequence of Work																0
Conceptual Construction Phasing Layouts																0
Intersection Layouts (Grading and Turning Movements)																0
Pavement Marking and Signing Plan																0
Selection of standards																0
<b>HOURS SUB-TOTALS</b>	0	0	0	5	22	0	0	22	22	0	0	0	0	0	0	71
<b>CONTRACT RATE PER HOUR</b>	\$285.84	\$186.46	\$247.28	\$150.37	\$122.08	\$140.76	\$133.81	\$104.05	\$104.05	\$87.55	\$154.43	\$109.80	\$72.54	\$75.56	\$77.35	\$51,615.81
<b>TOTAL LABOR COSTS</b>	\$0.00	\$0.00	\$0.00	\$751.85	\$2,695.76	\$0.00	\$0.00	\$2,288.10	\$2,288.10	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$81,015.81
<b>SUBTOTAL</b>																
<b>COORDINATING WORK BY OTHERS</b>																
Coordinate with geotech, SUE, survey																0
Pavement Design																0
Utility coordination & layouts																0
QA/QC																0
<b>HOURS SUB-TOTALS</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>CONTRACT RATE PER HOUR</b>	\$285.84	\$186.46	\$247.28	\$150.37	\$122.08	\$140.76	\$133.81	\$104.05	\$104.05	\$87.55	\$154.43	\$109.80	\$72.54	\$75.56	\$77.35	\$51,615.81
<b>TOTAL LABOR COSTS</b>	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>SUBTOTAL</b>																
<b>CULVERTS &amp; BRIDGES</b>																
Field																0
Site visits		24	34	24	24											96
Understand area		40	6					80	80							228
culvert analysis																0
Culvert Design		1		1	8			1	1							12
<b>HOURS SUB-TOTALS</b>	0	65	32	25	32	0	0	91	91	0	0	0	0	0	0	336
<b>CONTRACT RATE PER HOUR</b>	\$285.84	\$186.46	\$247.28	\$150.37	\$122.08	\$140.76	\$133.81	\$104.05	\$104.05	\$87.55	\$154.43	\$109.80	\$72.54	\$75.56	\$77.35	\$46,635.77
<b>TOTAL LABOR COSTS</b>	\$0.00	\$12,119.90	\$7,912.85	\$3,759.25	\$3,906.56	\$0.00	\$0.00	\$9,468.55	\$9,468.55	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$46,635.77
<b>SUBTOTAL</b>																

TASK DESCRIPTION	Vis. President	Sr. Mgr.	Principal Engr.	PM	Project Engr.	Project Supervisors	Asst. Mgr.	Designer	ET	GIS Analyst	Envs/Sc/Qual	Envs/Sc/Qual/Envs/Sc/Qual	Proj. Coord.	Technician	Checked	TOTAL LABOR HRS. & COSTS
<b>TASK 3 - PRELIMINARY ENGINEERING</b>																
<b>MISCELLANEOUS (ROADWAY)</b>																
Traffic Control Plan, Details, Sequence of Construction Narrative																0
TCP																0
Stormwater Pollution Prevention Plans (SW3P)																5
EPIC Sheet																0
SW3P Narrative																0
SW3P Layout Sheet																0
Comps and Tabulate Quantities																25
Estimate																0
Contract time determination																0
Specifications and General Notes																17
Constructability Review																12
Internal QA/QC																10
<b>HOURS SUB-TOTALS</b>	0	8	10	23	18	0	0	5	5	0	0	0	0	0	0	59
<b>CONTRACT RATE PER HOUR</b>	\$385.84	\$186.46	\$247.28	\$150.37	\$122.08	\$140.76	\$133.81	\$104.05	\$104.05	\$87.65	\$154.43	\$109.80	\$146.75	\$75.56	\$77.35	
<b>TOTAL LABOR COSTS</b>	\$0.00	\$1,491.66	\$2,472.60	\$3,459.51	\$2,197.44	\$0.00	\$0.00	\$520.26	\$520.26	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$10,690.93
<b>SUBTOTAL</b>																
<b>SUMMARY</b>																
<b>TOTAL COSTS FOR PRIME ONLY</b>																\$85,312.51
<b>GRAND TOTAL</b>																\$95,999.44

TASK DESCRIPTION	Vice President	Sr. Mgr.	Principal Engr.	PM	Project Engr.	Project Survey	Asst. Dir.	Designer	EST	GIS Analyst	Envs/Soils/Asst. Envs/Soils	Proj. Coord.	Technician	Clerical	TOTAL LABOR HRS. & COSTS
<b>TASK &amp; - FINAL ENGINEERING</b>															
<b>ROADWAY</b>															
Front End Documents (Title, Index, E&O, General Notes, etc.)															0
Typical Sections - Existing and Proposed															0
Horizontal Roadway Alignments					1										1
Roadway Profiles															0
Street Cross Sections															0
Plan Sheets				1	10			10	10						31
Driveway Summary Sheet															0
Metal Beam Guard Fence Evaluation															0
Final Quantities			4	2	2			2	2						12
Construction Phasing Typical Sections															0
Construction Phasing and Sequence of Work															0
Intersection Layouts (Grading and Turning Movements)															0
Pavement Marking and Signing Plan															0
Selection of standards															0
<b>HOURS SUB-TOTALS</b>	0	0	4	3	13	0	0	12	12	0	0	0	0	0	44
<b>CONTRACT RATE PER HOUR</b>	\$285.84	\$186.46	\$247.28	\$150.37	\$122.08	\$140.76	\$133.81	\$104.05	\$104.05	\$87.55	\$154.43	\$116.75	\$75.56	\$77.35	\$75.56
<b>TOTAL LABOR COSTS</b>	\$0.00	\$0.00	\$989.12	\$451.11	\$1,597.04	\$0.00	\$0.00	\$1,248.60	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,591.47
<b>SUBTOTAL</b>															
<b>COORDINATING WORK BY OTHERS</b>															
Coordinate geotech. SUE survey															0
Pavement Design															0
Utility coordination & layouts															0
QA/QC															0
<b>HOURS SUB-TOTALS</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>CONTRACT RATE PER HOUR</b>	\$285.84	\$186.46	\$247.28	\$150.37	\$122.08	\$140.76	\$133.81	\$104.05	\$104.05	\$87.55	\$154.43	\$116.75	\$75.56	\$77.35	\$75.56
<b>TOTAL LABOR COSTS</b>	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>SUBTOTAL</b>															
<b>CULVERTS &amp; BRIDGES</b>															
H&H															0
Site visits			8	8	8										24
Watershed area															0
Culvert analysis		10	2	4				20	20						56
Culvert Design															0
															0
															0
<b>HOURS SUB-TOTALS</b>	0	12	12	14	26	0	0	28	28	0	0	0	0	0	122
<b>CONTRACT RATE PER HOUR</b>	\$285.84	\$186.46	\$247.28	\$150.37	\$122.08	\$140.76	\$133.81	\$104.05	\$104.05	\$87.55	\$154.43	\$116.75	\$75.56	\$77.35	\$75.56
<b>TOTAL LABOR COSTS</b>	\$0.00	\$2,237.52	\$2,967.36	\$2,105.16	\$3,118.24	\$0.00	\$0.00	\$2,913.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$16,555.10
<b>SUBTOTAL</b>															

TASK DESCRIPTION	Vice President	Sr. Mgr.	Principal Engr.	Pm	Project Engr.	Project Survey	Asst. Mgr.	Designer	EST	GIS Analyst	Enviro/Soil	Enviro/Soil	Enviro/Soil	Proj. Coord.	Technician	Clerical	TOTAL LABOR HRS. & COSTS
<b>TASK 8 - FINAL ENGINEERING</b>																	
MISCELLANEOUS (ROADWAY)																	0
Traffic Control Plan, Obsolete, Sequence of Construction Narrative																	0
Temp Const Easements / Drainage Easements- Provide exhibits / sketches									3						6		14
EPIC Sheet																	0
SWBP Narrative																	0
SWBP Layout Sheet																	0
Compute and Tabulate Quantities			1	2				4	4								19
Estimate																	0
Contract line determination																	0
Specifications and General Notes																	0
Constructability Review																	0
Internal Co/EC		4															10
<b>HOURS SUB-TOTALS</b>	0	4	5	5	11	0	5	4	7	0	0	0	0	0	6	0	43
CONTRACT RATE PER HOUR	\$263.64	\$166.46	\$247.28	\$150.37	\$122.06	\$40.76	\$131.21	\$104.05	\$104.05	\$17.25	\$109.60	\$124.43	\$124.43	\$16.75	\$75.56	\$77.35	
TOTAL LABOR COSTS	\$0.00	\$793.84	\$1,236.40	\$902.22	\$1,342.56	\$0.00	\$652.00	\$416.20	\$728.35	\$0.00	\$652.00	\$744.43	\$744.43	\$273.75	\$553.36	\$600.00	
<b>SUBTOTAL</b>																	
<b>SUMMARY</b>	TOTAL COSTS FOR PRIME ONLY																
	GRAND TOTAL																

Prime Provider: Pape-Dawson Engineers, Inc.

Attachment D

Contract No. 1711-206

Work Authorization No. 3

OTHER DIRECT EXPENSES	UNIT	RATE	Quantity	Total
MILEAGE	MI	0.540	5000	\$ 2,700.00
CORRESPONDENCE	PAGE	\$1.00	25	\$ 25.00
COPIES	PAGE	\$0.50	4500	\$ 2,250.00
<b>TOTAL OTHER DIRECT EXPENSES</b>				<b>\$ 5,000.00</b>