

WORK AUTHORIZATION NO. 2

**PROJECT: Engineering Design Services for the Reconstruction
of Limestone Terrace and Quarry Rim Dr, Construction of a Right Turn Lane at
SH 29 and N CR 366, and N CR 366 Overlay**

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 **\$150,000.00.**

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 ____ day of _____, 20__.

ENGINEER:

Pape-Dawson Engineers, Inc.

COUNTY:

Williamson County, Texas

By: 

Signature

By: _____

Signature

Gilmer D. Gaston, P.E., PTOE

Printed Name

Printed Name

Sr. Vice President

Title

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 02

Attachment A

Services to be Provided by County

Williamson County Road & Bridge Division personnel will provide:

- Project direction, review and oversight.
- Topographic and R.O.W Surveys.
- Geotechnical investigations, data and reports.

Attachment B

Services to be Provided by the Engineer

Project Locations:

- 1. Limestone Terrace & Quarry Rim Dr in Jerrell (behind Flying J truckstop)**
- 2. CR 366 N from SH 29 to Chandler Rd (including a decal/right-turn lane for EB SH 29 onto CR 366)**

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 To be provided by the County

Task 3: Preliminary Engineering

Conduct Site Visit and Field Reconnaissance to document existing conditions. Data collection including available as-builts. Develop a conceptual geometric layout on scroll plot (1"=20' H, 1"=2' V) showing roadway horizontal and vertical geometry and proposed typical section. Prepare preliminary cross sections (50' interval) for SH 29. Match existing pavement structure and extend existing culverts (24" and Des 5 CMPs) for the right-turn lane widening on SH 29.

Task 4: Geotechnical Investigations To be provided by the County

Task 5: Environmental Studies

Coordinate with TxDOT for the widening on SH 29.

Task 6: Utility Coordination N/A

Task 7: FEMA Coordination N/A

Task 8: Final Engineering

Prepare final detailed design and PS&E for proposed improvements. Calculate ditch capacity for SH 29 at CR 366 N only. Existing drainage patterns and flows for Limestone Terrace & Quarry Rim Drive are not anticipated to be affected.

Plan Sheets:

- Title Sheet
- Estimate & Quantity Sheet

- Typical Sections
- Horizontal Alignment Data Sheet
- Erosion Control Plan
- Traffic Control Plan
- Roadway Plan & Profile Sheets
- Miscellaneous Roadway Details
- Cross Sections (50' interval)
- Standards

Specifications Cost

Estimate General Notes

Task 9: Bidding Phase Services

Prepare Bid-Tabs for processing by Purchasing Department.

Task 10: Construction Phase Services

Review shop drawings and respond to contractor RFIs. Prepare electronic as-built final drawings for the County based on construction red- lines provided by the County.

Deliverables:

50% Submittal:

- 2 paper copies of 11" x 17" Plan Sheets
- Specifications
- Estimate of Construction Cost
- General Notes
- Engineer's internal QA/QC marked up set

100% Submittal:

- 2 paper copies of 11" x 17" Plan Sheets
- Specifications
- Estimate of Construction Cost
- General Notes
- Engineer's internal QA/QC marked up set

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

Williamson County Road and Bridge
1711-206
Work Authorization 02

Final Submittal:

- 2 paper copies of 11" x 17" Plan Sheets PE sealed and signed
- Specifications
- Estimate of Construction Cost
- General Notes
- Engineer's internal QA/QC marked up set
- Electronic copy of submittal documents in PDF format on CD

Williamson County- Roadway Design 1711-206
 Work Authorization #2

FEE SUMMARY AND TIMELINE FOR PROFESSIONAL SERVICES

Project(s):

In Jerrell at Limestone Terrace & Quarry Rim
 CR 366 from SH 29 to Chandler Rd
 Pape-Dawson Engineers, Inc, Austin, Texas

Prime Consultant:

Proposal Date:

4/23/2018

Prepared By:

Howard Lyons (PM)

Scope of Work:

Rehab Limestone Terrace & Quarry Rim
 Overlay (2") CR 366 from SH 29 to Chandler Rd including decel/right-turn lane on SH 29

DESCRIPTION	TOTAL COST
TASK 1 - MANAGEMENT & COORDINATION	\$27,875.86
TASK 2 - COORDINATION OF SERVICES BY OTHERS	\$1,806.74
TASK 3 - PRELIMINARY ENGINEERING	\$59,684.29
TASK 4 - GEOTECHNICAL SERVICES	\$1,240.17
TASK 5 - ENVIRONMENTAL	\$10,920.44
TASK 8 - FINAL ENGINEERING	\$23,549.22
TASK 9 - BID PHASE SERVICES	\$5,104.16
TASK 10 - CONSTRUCTION PHASE SERVICES	\$12,506.22
OTHER DIRECT EXPENSES	\$2,895.00
SUBTOTAL LABOR + EXPENSES	\$145,582.10

TASK DESCRIPTION	Vice President	Sr. Mgr.	Principal Engr.	PM	Project Engr.	Project Surveyor	Asst. Mgr.	Designer	EIT	GIS Analyst	Env/Sci/Go/At/	Env/Sci/Go/	Env/Sci/Go/	Prof Coord.	Technician	Clerical	TOTAL LABOR HRS. & COSTS
TASK 1 - MANAGEMENT & COORDINATION																	
PROJECT MANAGEMENT AND ADMINISTRATION																	
50% plan review meeting			4	4	4												16
100% plan review meeting			4	4	4												
Monthly Progress Report	2		6	6	6												
Maintain Project Schedule			2	16	2												22
Meetings with State (Pymt design, PS&E, AFA, etc)			3	20	20												59
Written & Electronic Correspondence			3	8	3											6	20
Meeting Minutes				8	2											6	16
Phone Calls/Conference Calls with Team Members	1		3	16	8												28
HOURS SUB-TOTALS	3	0	25	82	49	0	0	0	0	0	0	0	0	0	0	12	ERROR
CONTRACT RATE PER HOUR	\$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	\$116.75	\$75.56	\$77.35	
TOTAL LABOR COSTS	\$857.52	\$0.00	\$5,182.00	\$12,330.34	\$5,981.92	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,595.88	\$0.00	\$0.00	\$0.00	\$928.20	\$27,875.86
SUBTOTAL																	\$27,875.86

SUMMARY	TOTAL COSTS FOR PRIME ONLY
	\$27,875.86
GRAND TOTAL	\$27,875.86

TASK DESCRIPTION	Vice President	Sr Mgr	Principal Engr	PM	Project Engr	Project Surveyor	Asst Mgr	Designer	EIT	GIS Analyst	Env/Sci/Go/Art	Env/Sci/Go/H	Env/Sci/Go/L	Prof Coord	Technician	Clerical	TOTAL LABOR HRS. & 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 QA				1	1			1									3
ROW verification QA				1	1			1									3
Design Survey				1	1			1									3
Locate utilities				1	1			1									3
HOURS SUB-TOTALS	0	0	0	6	4	0	0	4	0	0	0	0	0	0	0	0	14
CONTRACT RATE PER HOUR	\$285.84	\$186.46	\$247.28	\$150.37	\$122.08	\$140.76	\$133.81	\$104.05	\$104.05	\$87.65	\$154.43	\$109.80	\$72.54	\$116.75	\$75.66	\$77.35	
TOTAL LABOR COSTS	\$0.00	\$0.00	\$0.00	\$902.22	\$488.32	\$0.00	\$0.00	\$416.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,806.74
SUBTOTAL																	\$1,806.74

SUMMARY	
TOTAL COSTS FOR PRIME ONLY	\$1,806.74
GRAND TOTAL	\$1,806.74

TASK DESCRIPTION	Vice President	Sr. Mgr	Principal Engr	PM	Project Engr	Project Supt	Asst Mgr	Designer	EIT	GIS Analyst	EnvSci/Geol	EnvSci/Geol	EnvSci/Geol	Proj Coord	Technician	Clerical	TOTAL LABOR HRS. & COSTS
TASK 3 - PRELIMINARY ENGINEERING																	
ROADWAY																	
Front End Documents (Title, Index, E&C, General Notes, etc.)				1	4			4	4								13
Field Visit, Verification, data collection				16	16			16	16								64
Typical Sections - Existing and Proposed				1	10			8	8								18
Horizontal Roadway Alignments				1	2			2	2								7
Roadway Profiles				1	10			10	10								21
Cross Sections				1	8			16	8								33
Driveway Summary Sheet				1	1			2	2								6
Manit Barram Guard Fence Evaluation				1	2			2	2								7
Primary cost estimates				4	4			4	4								18
Construction Phasing Typical Sections				1	10			2	10								22
Construction Phasing and Sequence of Work				1	4			2	2								9
Conceptual Construction Phasing Layouts				1	4			2	2								9
Intersection Layouts (Grading and Turning Movements)				1	4			2	1								8
Pavement Marking and Signing Plan				1	1			1	1								4
Selection of Standards				1	1			2	2								6
HOURS SUB-TOTALS	0	0	5	32	91	0	0	81	56	0	0	0	0	0	0	0	265
CONTRACT RATE PER HOUR	\$286.84	\$186.46	\$247.28	\$160.37	\$122.08	\$140.76	\$133.81	\$104.05	\$104.05	\$97.55	\$154.43	\$109.80	\$72.54	\$116.75	\$75.56	\$77.35	\$77.35
TOTAL LABOR COSTS	\$0.00	\$0.00	\$1,236.40	\$4,811.84	\$11,109.76	\$0.00	\$5,439.05	\$6,826.80	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$31,412.37
SUBTOTAL																	\$31,412.37
COORDINATING WORK BY OTHERS																	
Coordinate geotech, SUE, survey																	0
Pavement Design																	0
Utility coordination & bypass																	0
QA/QC																	0
HOURS SUB-TOTALS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CONTRACT RATE PER HOUR	\$286.84	\$186.46	\$247.28	\$160.37	\$122.08	\$140.76	\$133.81	\$104.05	\$104.05	\$97.55	\$154.43	\$109.80	\$72.54	\$116.75	\$75.56	\$77.35	\$77.35
TOTAL LABOR COSTS	\$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	\$0.00
SUBTOTAL																	\$0.00
CULVERTS & BRIDGES																	
Rise		20		4	12			20	20								64
Culvert Design				4	12			16	16								32
HOURS SUB-TOTALS	0	20	0	8	12	0	0	20	36	0	0	0	0	0	0	0	86
CONTRACT RATE PER HOUR	\$206.84	\$186.46	\$247.28	\$160.37	\$122.08	\$140.76	\$133.81	\$104.05	\$104.05	\$97.55	\$154.43	\$109.80	\$72.54	\$116.75	\$75.56	\$77.35	\$77.35
TOTAL LABOR COSTS	\$0.00	\$3,729.20	\$0.00	\$1,282.96	\$1,464.96	\$0.00	\$0.00	\$2,081.00	\$3,745.80	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$12,223.92
SUBTOTAL																	\$12,223.92
MISCELLANEOUS (ROADWAY)																	
Traffic Control Plan, Orders, Sequence of Construction				1	4			1	1								6
Narrative				1	2			2	2								3
TCP				1	2			2	2								7
Stormwater Pollution Prevention Plans (SWPPP)				1	2			1	1								5
ERIC Sheet				1	1			1	1				2				6
SWPPP Narrative				1	1			1	1								4
SWPPP Layout Sheet				1	1			1	1								4
Compute and Tabulate Quantities		1		1	2			4	4								12
Estimate		4		1	1			1	1								8
Contract time determination		1		4	1			1	1								8
Specifications and General Notes		1		2	1			2	2								8
Constructability Review		6		4	1			4	1								11
Internal CAGC		8		4	1			1	1								15
HOURS SUB-TOTALS	0	21	22	21	0	0	0	16	15	0	2	0	0	0	0	0	97
CONTRACT RATE PER HOUR	\$286.84	\$186.46	\$247.28	\$160.37	\$122.08	\$140.76	\$133.81	\$104.05	\$104.05	\$97.55	\$154.43	\$109.80	\$72.54	\$116.75	\$75.56	\$77.35	\$77.35
TOTAL LABOR COSTS	\$0.00	\$3,915.66	\$5,440.16	\$3,157.77	\$0.00	\$0.00	\$0.00	\$1,684.80	\$1,560.75	\$0.00	\$309.86	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$16,046.00
SUBTOTAL																	\$16,046.00
SUMMARY																	
TOTAL COSTS FOR PRIME ONLY																	\$59,644.29
GRAND TOTAL																	\$88,866.83

Attachment D

TASK DESCRIPTION	Vice President	Sr. Mgr	Principal Engr.	PM	Project Engr.	Project Surveyor	Asst. Mgr	Designer	BIT	GIS Analyst	Prof. Coord	Technician	Clerical	TOTAL LABOR HRS. & COSTS
TASK 4 - GEOTECHNICAL SERVICES														
COORDINATION OF SERVICES PROVIDED BY THE COUNTY														
Coord with County				1	1									2
Coord with firm				1										1
Verification and QA					1									1
Pavement Design QA					1									2
Life cycle cost analysis of pavement design & alternatives				2	1									3
HOURS SUB-TOTALS	0	0	0	5	4	0	0	0	0	0	0	0	0	9
CONTRACT RATE PER HOUR	\$285.84	\$186.46	\$247.28	\$150.37	\$122.08	\$140.76	\$133.81	\$104.05	\$104.05	\$87.55	\$116.75	\$75.56	\$77.35	
TOTAL LABOR COSTS	\$0.00	\$0.00	\$0.00	\$751.85	\$488.32	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,240.17
SUBTOTAL														\$1,240.17
SUMMARY														
TOTAL COSTS FOR PRIME ONLY														\$1,240.17
GRAND TOTAL														\$1,240.17

TASK DESCRIPTION	Vice President	Sr. Mgr.	Principal Engr.	PM	Project Engr.	Project Surveyor	Asst. Mgr.	Designer	ERT	GIS Analyst	Env/S&G/Abt	Env/S&G/Abt/Env/S&G/	Env/S&G/	Proj Coord.	Technician	Chemical	TOTAL LABOR HRS. & COSTS
TASK 8 - FINAL ENGINEERING																	
ROADWAY																	
Final End Documents (Title, Index, E&O, General Notes, etc.)																	0
Typical Sections - Existing and Proposed																	0
Horizontal Roadway Alignments																	0
Roadway Profiles																	0
Cross Sections																	7
Plan and Profile Sheets																	11
Driveway Summary Sheet																	5
Metal Beam Guard Fence Evaluation																	0
Final cost estimates																	16
Construction Phasing Typical Sections																	4
Construction Phasing and Sequence of Work																	0
Intersection Layouts (Grading and Turning Movements)																	0
Pavement Marking and Signing Plan																	2
Selection of Standards																	2
HOURS SUB-TOTALS	0	2	13	7	13	0	0	13	13	0	0	0	0	0	0	0	47
COSTS SUB-TOTALS	\$185.84	\$185.46	\$247.28	\$1493.37	\$122.08	\$140.76	\$133.81	\$104.05	\$104.05	\$87.55	\$154.43	\$109.80	\$72.54	\$116.75	\$75.56	\$72.55	\$5,717.41
TOTAL LABOR COSTS	\$0.00	\$494.96	\$494.96	\$1,022.59	\$1,464.96	\$0.00	\$0.00	\$1,292.65	\$1,352.65	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,717.41
SUBTOTAL																	\$5,717.41
COORDINATING WORK BY OTHERS																	
Coordinate geotech, SUE, survey																	0
Pavement Design																	0
Utility coordination & layouts																	0
QA/QC																	0
HOURS SUB-TOTALS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COSTS SUB-TOTALS	\$185.84	\$185.46	\$247.28	\$1493.37	\$122.08	\$140.76	\$133.81	\$104.05	\$104.05	\$87.55	\$154.43	\$109.80	\$72.54	\$116.75	\$75.56	\$72.55	\$0.00
TOTAL LABOR COSTS	\$0.00	\$745.84	\$745.84	\$493.11	\$2,197.44	\$0.00	\$0.00	\$1,456.70	\$1,456.70	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$6,307.79
SUBTOTAL																	\$6,307.79
CULVERTS & BRIDGES																	
H&H																	15
Culvert Design																	13
Drain designs																	25
HOURS SUB-TOTALS	0	4	18	3	18	0	0	14	14	0	0	0	0	0	0	0	53
COSTS SUB-TOTALS	\$285.84	\$185.46	\$247.28	\$1493.37	\$122.08	\$140.76	\$133.81	\$104.05	\$104.05	\$87.55	\$154.43	\$109.80	\$72.54	\$116.75	\$75.56	\$72.55	\$0.00
TOTAL LABOR COSTS	\$0.00	\$745.84	\$745.84	\$493.11	\$2,197.44	\$0.00	\$0.00	\$1,456.70	\$1,456.70	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$6,307.79
SUBTOTAL																	\$6,307.79
MISCELLANEOUS (ROADWAY)																	
Traffic Control Plan, Details, Sequence of Construction																	3
Narrative																	1
TCP																	4
StormWater Pollution Prevention Plans (SW3P)																	4
EPIC Sheet																	5
SW3P Narrative																	1
SW3P Layout Sheet																	1
Compute and Tabulate Quantities																	11
Estimate																	10
Contract time determination																	4
Specifications and General Notes																	3
Constructability Review																	5
Internal QA/QC																	16
HOURS SUB-TOTALS	0	11	15	29	0	0	0	6	6	0	1	0	0	0	0	0	68
COSTS SUB-TOTALS	\$285.84	\$185.46	\$247.28	\$1493.37	\$122.08	\$140.76	\$133.81	\$104.05	\$104.05	\$87.55	\$154.43	\$109.80	\$72.54	\$116.75	\$75.56	\$72.55	\$0.00
TOTAL LABOR COSTS	\$0.00	\$2,051.06	\$3,709.20	\$4,366.73	\$0.00	\$0.00	\$624.30	\$624.30	\$624.30	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$11,624.02
SUBTOTAL																	\$11,624.02
SUMMARY																	
TOTAL COSTS FOR PRIME ONLY	\$23,546.22																
GRAND TOTAL	\$31,516.29																

TASK DESCRIPTION	Vice President	Sr. Mgr.	Principal Engr.	PM	Project Engr.	Project Surveyor	Asst. Mgr.	Designer	ET	GIS Analyst	Env/Sci/Geo/Atm	Env/Sci/Geo/Atm	Env/Sci/Geo/Atm	Proj Coord	Technician	Clerical	TOTAL LABOR HRS. & COSTS
TASK 10 - CONSTRUCTION PHASE SERVICES																	
Reestablish Project Control Points for Contractor Prior to Construction																	0
Review Contractor Pay Estimates																	0
Review / Negotiate Change Orders																	0
Review Shop Drawings				16	16												32
Respond to RFI's				20	20												40
																	0
																	0
Final Walkthrough and Punchlist Review																	0
TDLR Inspection																	0
Final As-Built Plans				2	6			8	8								24
				38	42			8	8								96
HOURS SUB-TOTALS	0	0	0	38	42	0	0	8	8	0	0	0	0	0	0	0	96
CONTRACT RATE PER HOUR	\$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	\$116.75	\$75.56	\$77.35	\$12,506.22
TOTAL LABOR COSTS	\$0.00	\$0.00	\$0.00	\$5,714.06	\$5,127.96	\$0.00	\$0.00	\$832.40	\$832.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$12,506.22
SUBTOTAL																	\$12,506.22

SUMMARY	TOTAL COSTS FOR PRIME ONLY	\$12,506.22
	GRAND TOTAL	\$12,506.22

OTHER/DIRECT EXPENSES	UNIT	RATE	Quantity	Total
MILEAGE	MI	0.540	3000	\$ 1,620.00
CORRESPONDENCE	PAGE	\$1.00	25	\$ 25.00
COPIES	PAGE	\$0.50	2500	\$ 1,250.00
TOTAL OTHER DIRECT EXPENSES				