

WORK AUTHORIZATION NO. 5

**WILLIAMSON COUNTY ROAD BOND PROJECT:
CR 129**

This Work Authorization is made pursuant to the terms and conditions of the Williamson County Contract for Engineering Services, being dated December 20, 2022 and entered into by and between Williamson County, Texas, a political subdivision of the State of Texas, (the "County") and B2Z Engineering, LLC (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 \$42,695.00.

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 November 1, 2026. 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.

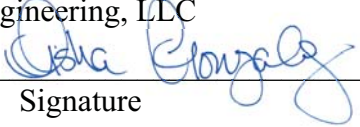
Part 7. This Work Authorization is hereby accepted and acknowledged below.

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EXECUTED this _____.

ENGINEER:

B2Z Engineering, LLC

By: 
Signature

Aisha Gonzalez
Printed Name

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 (*omit*)

Attachment D - Fee Schedule

APPROVED

By Christen Eschberger at 9:10 pm, Mar 13, 2024

ATTACHMENT A
SERVICES TO BE PROVIDED BY THE COUNTY
FOR 24IFB23 - CR 129

In general, Williamson County and its representatives to their best efforts will render services as follows:

1. Name, business address and phone number of County's project manager and any other points of contract, to be identified upon Notice to Proceed.
2. Assistance to the Engineer, as necessary, with obtaining data and information from other local, regional, State and Federal agencies required for this project.
3. Provide available appropriate County data on file, plans and specifications that are deemed pertinent to the completion of the work required by the scope of services (Set of plans and Construction Manual).
4. Provide timely reviews and decisions necessary for the Engineer to maintain the project work schedule. Review recommendations offered by the Engineer, progress of work, and final acceptance of all documents.
5. Post and maintain project information for public consumption on the County website.
6. Assist with Coordination between the Engineer and the County's other subconsultants.

ATTACHMENT B
SERVICES TO BE PROVIDED BY THE ENGINEER
CONSTRUCTION PHASE SERVICES FOR CR 129

PROJECT DESCRIPTION

Existing Facility

Construction, safety widening, grading, excavation, and drainage improvements associated with the profile adjustments of CR 129 from South of Brushy Creek to North of Williamson County Line.

1. PROJECT MANAGEMENT

a. Shall designate one Licensed Professional Engineer (Texas) to be responsible for the project management, and all communications with the County and its representatives.

b. MONTHLY PROGRESS REPORTS, INVOICES, AND BILLINGS:

- Submit monthly progress status reports to the GEC. Progress reports will include: tasks completed, tasks/objectives that are planned for the upcoming periods, lists or descriptions of items or decisions needed from the County and its representatives. Subconsultant progress will be incorporated into the monthly progress report. A copy of the monthly progress report will be uploaded to ProjectWise.
- Prepare correspondence, invoices, and progress reports on a monthly basis in accordance with current County requirements.

c. QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PLAN:

- Prepare a project specific QA/QC plan and submit to the County within thirty (30) days of notice to proceed.
- For each deliverable, provide evidence of their internal review and mark-up of that deliverable as preparation for submittal and in accordance with submitted project specific QA/QC plan.
- Provide continuous QA/QC throughout the duration of the scheduled services included herein to appraise both technical and business performance and provide direction for project activities.

d. DELIVERABLES:

- Monthly Invoices and Progress Reports

- Project Specific QA/QC Plan

2. CONSTRUCTION PHASE SERVICES

a. MATERIALS TESTING:

- Testing shall be according to TxDOT Guide Schedule. QA testing is 10% testing by a certified laboratory, minimum of 1 test. Per TxDOT, owner's laboratory does hot mix testing. Laboratory should provide timely response of test results. Contractor should provide 24-hour notice to schedule testing on the project.
- Issues with materials testing (failures in testing), GEC and Williamson County to be notified immediately. Prepare/maintain a material testing log for each material tested.
- For approval of test reports for items out of spec will be submitted to the GEC for coordination with County and Engineer of Record for approval.
- Materials arriving to the project that have been damaged during delivery and do not comply with the project specifications must be rejected by the CEI staff.
- Expectation is for the CEI firm to evaluate the quality of the proposed pavement construction by the contractor and compliance with the project specifications.
- Work with the contractor to provide the submittals with sufficient lead time for the review and acceptance/approval prior to arrival on the project

b. DELIVERABLES

• DOCUMENTS:

All contract documents, including hard copies and electronic files, shall be turned over to the County at each milestone and at the completion of the project. Documents shall be posted to the County's project management database as requested.

- Test documentation (Field Tech Daily Report, Sample Report, Test Results)
- Monthly update of Material Log
- Certification Verifications
- Letters of Certification
- Test Exception Letters

EXHIBIT D
ESTIMATED MAN-HOURS AND TEST BREAKDOWN

Williamson County Pct. No. 4 (CR 129) Construction Materials Testing								
Lime (ITEM 260)								
● Sampling and laboratory testing of soils and base materials proposed for use in the construction of Project (Roads/Bridges/Misc.) to determine compliance of these materials with project plans and specifications.								
		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Compliance of Lime (DMS 6350)		Tex-600-J	1 per 200 Tons		Each	2	\$450.00	\$900.00
Item Subtotal								\$900.00
Subgrade (Lime Treated) (ITEM 260)								
● Sampling and laboratory testing of soils and base materials proposed for use in the construction of Project (Roads/Bridges/Misc.) to determine compliance of these materials with project plans and specifications.								
● Field density testing of soils and base materials to ensure proposer compaction as required by project plans and specifications.								
		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Engineer Technician					Hour	21	\$76.00	\$1,596.00
Pulverization Gradation		Tex-101-E (Part III)	Each 4,500 CY	Inc. to 5 - 8 per Leg (Job)	Each	2	\$100.00	\$200.00
Atterberg Limits of Soils		Tex-106E	Each 5,000 CY		Each	2	\$135.00	\$270.00
Gradation		Tex-110-E	Each 5,000 CY	Inc. to 5 - 8 per Leg (Job)	Each	2	\$90.00	\$180.00
Moisture/Density		Tex-121-E (Part II)	Every 20,000 CY		Each	1	\$225.00	\$225.00
Test Reports				Pulv, PI, Grad, MD & FD	Each	5	\$25.00	\$125.00
Construction Truck				7 Trips	Day	7	\$75.00	\$525.00
**Admin/Clerical					Hour	10	\$80.00	\$800.00
Item Subtotal								\$3,921.00
Flexible Base (Untreated - Stockpile Testing) (ITEM 247)								
● Sampling and laboratory testing of soils and base materials proposed for use in the construction of Project (Roads/Bridges/Misc.) to determine compliance of these materials with project plans and specifications.								
		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Engineer Technician					Hour	24	\$76.00	\$1,824.00
Atterberg Limits of Soils		Tex-106E	Each 5,000 CY		Each	2	\$135.00	\$270.00
Gradation		Tex-110-E	Each 5,000 CY		Each	2	\$90.00	\$180.00
Moisture/Density		Tex-113-E	Every 20,000 CY		Each	1	\$225.00	\$225.00
Wet Ball Mill		Tex-116-E	Every 20,000 CY		Each	1	\$250.00	\$250.00
Triaxial		Tex-117-E	Every 20,000 CY		Each	1	\$2,300.00	\$2,300.00
Test Reports				PI, Grad, MD, WB & Triax.	Each	5	\$25.00	\$125.00
Construction Truck				8 Trip	Day	8	\$75.000	\$600.00
**Admin/Clerical					Hour	10	\$80.00	\$800.00
Item Subtotal								\$6,574.00

Asphalt Concrete Pavement (Item 341 - HMA-QC/QA)								
• Field compaction testing of asphalt to ensure proper compaction during lay down operations. • Field sampling and laboratory testing of asphalt materials to determine their material properties and their compliance with project plans and specifications.								
		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Coarse Aggr.				Stockpile				
L.A. Abrasion		Tex-410-A	1 Per Project Per Source Per Design	if BRSQC meets Project Spec ~ Remove	Each	0	\$500.00	\$0.00
Soundness		Tex-411-A	1 Per Project Per Source Per Design	if BRSQC meets Project Spec ~ Remove	Each	0	\$500.00	\$0.00
Gradation		Tex-200-F	1 Per Project Per Source Per Design		Each	2	\$75.00	\$150.00
MicroDeval		Tex-461-A	1 Per every 12 Sublots	May be Eliminated based on Test History	Each	0		
Flat & Elongated Particles		Tex-280-F	1 Per Project Per Source Per Design		Each	2	\$60.00	\$120.00
Coarse Aggr. Angularity		Tex-460-A (Part I)	1 Per Project Per Source Per Design		Each	2	\$60.00	\$120.00
Del. Matl. and Decant		Tex-217-F	1 Per Project Per Source Per Design		Each	2	\$50.00	\$100.00
Fine Aggr.				Stockpile				
Bar Linear Shrinkage		Tex-107-E	1 Per Project Per Source Per Design		Each	2	\$45.00	\$90.00
Organic Impurities		Tex-408-A	1 Per Project Per Source Per Design		Each	2	\$50.00	\$100.00
Gradation		Tex-200-F	1 Per Project Per Source Per Design		Each	2	\$75.00	\$150.00
Mineral Filler				Bin or Silo				
Bar Linear Shrinkage		Tex-107-E	1 Per Project Per Source Per Design	Assume No Filler	Each	0	\$45.00	\$0.00
Gradation		Tex-200-F	1 Per Project Per Source Per Design	Assume No Filler	Each	0	\$75.00	\$0.00
Combined Aggr.				Stockpile or Feeder Belt				
Sand Equivalent		Tex-203-F	1 Per Project Per Source Per Design		Each	2	\$80.00	\$160.00
Complete Mix				Truck Sample				
Engineer Technician				12 hours per 4 days	Hour	48	\$76.00	\$3,648.00
Boil Test		Tex-530-C	1 Per Project Per Source Per Design	Waived by Engineer	Each	0	\$90.00	\$0.00
Indirect Tensile - Dry		Tex-226-F	1 Per Project Per Source Per Design	Waived by Engineer	Each	0	\$62.50	\$0.00
Moisture Content		Tex-212-F (Part II)	1 Per Project Per Source Per Design		Each	2	\$18.00	\$36.00
Hamburg Wheel Tracker		Tex-242-F	1 Per Project Per Source Per Design	Make Contractor Perform Test	Each	2	\$1,000.00	\$2,000.00
Construction Truck				7 Trips	Day	4	\$75.000	\$300.00
Roadway				At Site				
Engineer Technician				12 hours per 7 days	Hour	84	\$76.00	\$6,384.00
Tack Coat Adhesion		Tex-243-F	1 Per Project Per Source Per Design	Waived by Engineer	Each	0	\$100.00	\$0.00
Ride Quality		Tex-1001-S	Engineer may verify Contractor's results	Make Contractor Perform Test	Each	0		\$0.00
Asphalt Binder Compliance		DMS-6310	1 Per Lot Per Source Per Design		Each	2	\$500.00	\$1,000.00
Test Reports					Each	12	\$25.00	\$300.00
Construction Truck				7 Trips	Day	7	\$75.000	\$525.00
**Admin/Clerical					Hour	26	\$80.00	\$2,080.00
Item Subtotal								\$17,263.00

Hydraulic Cement Concrete ~ Drill Shafts, Bridge Slabs & Traffic Rail Foundation (Class C) (Class S) Structural								
- Field sampling and testing of fresh concrete and laboratory testing of hardened concrete to determine compliance with project plans and specifications. - Concrete batching as well a the asphalt testing at the plants to insure delivery of acceptable material to the job site (as required).								
		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Coarse Aggr.				QA Test. (QC by Source)				
Decantation		Tex-406-A	Each 20,000 CY(or source)		Each	1	\$50.00	\$50.00
Sieve Analysis		Tex-401-A	Each 1,000 CY(ea source)	5 Sieve	Each	1	\$90.00	\$90.00
Deleterious Matl.		Tex-413-A	Each 20,000 CY(or source)		Each	1	\$50.00	\$50.00
L.A. Abrasion		Tex-410-A	Two Each Source	if CRSQC meets Project Spec ~ Remove	Each	0	\$500.00	\$0.00
Soundness		Tex-411-A	Two Each Source	if CRSQC meets Project Spec ~ Remove	Each	0	\$500.00	\$0.00
Fine Aggr.				QA Test. (QC by Source)				
Sand Equivalent		Tex-203-F	Each 1,000 CY(ea source)		Each	1	\$80.00	\$80.00
Organic Imp.		Tex-408-A	One Per Project Per Source		Each	1	\$50.00	\$50.00
Sieve Analysis		Tex-401-A	Each 1,000 CY(ea source)		Each	1	\$90.00	\$90.00
Fineness Mod.		Tex-402-A	Each 1,000 CY(ea source)		Each	1	\$15.00	\$15.00
Deleterious Matl.		Tex-413-A	Each 20,000 CY(or source)		Each	1	\$50.00	\$50.00
Acid Insoluble		Tex-612-J	Two Each Source	if CRSQC meets Project Spec ~ Remove	Each	0	\$90.00	\$0.00
Mineral Filler				QA Test. (QC by Source)				
Sieve Analysis		Tex-401-A	Two Each Source	if No Mineral Filler utilized in Mix ~ Remove	Each	0	\$90.00	\$0.00
Concrete								
Engineer Technician		ACI field			Hour	10	\$76.00	\$760.00
*Strength		Tex-447-A & Tex-418-A	Each 60 CY(1 Sets = 5 Cyl.)	use 2 Sets per Pour (12 Pours)	Each	0	\$25.00	\$0.00
Slump		Tex-415-A	One per 2 Sets		Each	0	\$20.00	\$0.00
Entrained Air		Tex-416-A	One per 2 Sets		Each	0	\$25.00	\$0.00
Temperature		Tex-422-A	One per 2 Sets		Each	0	\$5.00	\$0.00
Test Reports				CA,FA,MF,Conc.	Each	8	\$25.00	\$200.00
Construction Truck				2 Trips	Day	2	\$75.00	\$150.00
**Admin/Clerical					Hour	12	\$80.00	\$960.00
							Item Subtotal	\$2,545.00
Hydraulic Cement Concrete Misc. - Riprap/Riprap(Mowstrip)/Curb/Sidewalk(Class A)								
- Field sampling and testing of fresh concrete and laboratory testing of hardened concrete to determine compliance with project plans and specifications. - Concrete batching as well a the asphalt testing at the plants to insure delivery of acceptable material to the job site (as required).								
		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Concrete								
Engineer Technician		ACI field			Hour	12	\$76.00	\$912.00
*Strength		Tex-447-A & Tex-418-A	Each 180 CY(1 Set = 4 Cyl.)	Adjust Per Str & Placement	Each	8	\$25.00	\$200.00
Test Reports				Conc.	Each	6	\$25.00	\$150.00
Construction Truck				5 Trips	Day	5	\$75.000	\$375.00
**Admin/Clerical					Hour	6	\$80.00	\$480.00
							Item Subtotal	\$2,117.00

* Concrete Strength testing includes strength testing of cylinder specimens (breaks) as well as preperation, holding and curing of strength specimen costs
~ 1 Set is defined as 2 Cylinders (7-day or 28-day)
~ All Structural Concrete requires a minimum 1 Sets per Test Location (5 Cyl.)

Summary			
Sub-Total (CMT Items) =			\$33,320.00
	Qty	Contract Rate	
Sr. Eng. Tech.	35	\$125.00	\$4,375.00
Project Manager	20	\$250.00	\$5,000.00

Constuction Materials Testing Total :	\$42,695.00
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