

WORK AUTHORIZATION NO. 1

PROJECT: 2579 On Call Materials Testing & Geotechnical Engineering Services

This Work Authorization is made pursuant to the terms and conditions of the Williamson County Contract for Engineering Services, being dated May 5, 2020 and entered into by and between Williamson County, Texas, a political subdivision of the State of Texas, (the "County") and ETTL Engineers & Consultants 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 \$10,000.00.

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 July 31, 2022. 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 _____, 2020.

ENGINEER:

ETTL Engineers & Consultants Inc.

By: _____

Signature

Chris Taylor
Printed Name

Vice President - Operations
Title

COUNTY:

Williamson County, Texas

By: _____

Signature

Bill Gravel, Jr.

Printed Name

Williamson County Judge
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

Attachment A - Services to be Provided by County

Williamson County personnel will provide project direction, review and oversight.

Attachment C - Work Schedule

Work shall begin immediately upon receipt of agreement between County and ETTL Engineers & Consultants Inc. on the work schedule and authorization to proceed on assigned services.

Attachment D - Fee Schedule

Direct Labor		Consultant Propos	
Job Classification	Yrs Exp		Loaded Rate
Engineer - Senior	15+		180.00
Project Manager	10 to 20		175.00
Engineer (Project)	10 to 15		160.00
Engineer (Design)	5 to 10		140.00
Engineer-In-Training	1 to 5		110.00
Engineer Technician - Senior	15+		125.00
Engineer Technician	5 to 15		95.00
Engineer Technician - Junior	1 to 5		80.00
Senior Geologist	15+		135.00
Geologist	5 to 15		110.00
Geologist-In-Training	1 to 5		90.00
CADD Operator - Senior	15+		85.00
CADD Operator	5 to 15		80.00
CADD Operator - Junior	1 to 5		70.00
Admin/Clerical			80.00
		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

Office Overhead Rate:

187.85%

Profit Rate:

10.00%

Services To Be Provided	Test Code	Unit	Unit Cost
Admixing Lime to Reduce PI of Soils	TEX-112-E	per series	300.00
Air Compressor	N/A	day	200.00
ATV Drilling Rig Surcharge	N/A	Day	617.00
ATV Drilling Rig Surcharge	N/A	LF	10.00
Borehole Grouting - Bentonite Chlps	N/A	LF	9.00
Calcium Carbonate Content of Soils	ASTM D4373	each	55.00
California Bearing Ratio (Single Sample without MD Curve)	ASTM D1883	each	350.00
Casagrande Type Piezometers	N/A	foot	405.00
Casagrande Type Piezometers Installation	N/A	foot	500.00
Concrete/AC Patch	N/A	per patch	45.00
Consolidated-undrained Triaxial Compression Test of Cohesive Soils	ASTM D4767	test	600.00
Consolidated-undrained Triaxial Compression Test of Cohesive Soils	ASTM D4767	set of 3	1,800.00
Core Drill Asphalt	N/A	each	100.00
Core Repair/Patch Asphalt Cold Mix	N/A	each	65.00
Core Repair/Patch Concrete	N/A	each	50.00
Core Rig Daily Rate	N/A	day	750.00
Core/drill operator/technician and coring equipment used to drill flexible and rigid pavement (2-man crew)	N/A	trip	400.00
Core/drill operator/technician and coring equipment used to drill flexible and rigid pavement (2-man crew): Includes preparation of report, coordination, utility clearance if needed	N/A	hour	175.00
(a) 4-in. diameter cores	N/A	Inch	14.00
(b) 6-in. diameter cores	N/A	Inch	18.00
Core/drill operator/technician and coring equipment used to drill flexible and rigid pavement (2-man crew): (a) 4-in. diameter cores	N/A	Inch	14.00
Core/drill operator/technician and coring equipment used to drill flexible and rigid pavement (2-man crew): (b) 6-in. diameter cores	N/A	Inch	18.00
Coring through concrete	N/A	each	150.00
Daily Crew Travel	N/A	hour	250.00
Direct Shear Test of Soils under consolidated drained conditions	ASTM D3080	set of 3	1,800.00
Drilling & Sampling - Hard Rock-Diamond Bit	N/A	LF	46.00
Drilling & Sampling - Rock	N/A	LF	44.00
Drilling & Sampling -Soft Rock Carbide Bit	N/A	LF	37.00
Drilling and Sampling - Soils	N/A	LF	29.00
Drilling Standby and Clean Up (including equipment, driller and helper)	N/A	hour	300.00
Drilling Working Rate (equipment, driller and helper)	N/A	hour	250.00
Dynamic Cone Penetration Test	N/A	each	120.00
Dynamic Cone Penetrometer	ASTM D6951	each	40.00
Electronic Water Level Device	N/A	day	30.00
Falling Weight Deflectometer	N/A	day	2,850.00
Falling Weight Deflectometer Equipment Mobilization (Trips over 100 miles to site)	N/A	mile	6.00
Hydraulic Conductivity Permeability	ASTM D2434	each	400.00
Hydraulic Conductivity Permeability	ASTM D4511	each	400.00
Hydraulic Conductivity Permeability (Silt and Clay)	ASTM D5084	each	400.00
Inclinometer Casing Installation	N/A	LF	35.00
Light Tower for Night Drilling	N/A	Day	300.00
Manhole Cover for Piezometer	N/A	Each	175.00
Method of Test for the Resistivity of Soils Material	TEX-129-E	each	150.00
Minimum Drilling Rate	N/A	day	2,200.00
Mobilization and Demobilization of Drilling Rig (Trips over 100 miles to site)	N/A	mile	6.00
Mobilization and Demobilization of Drilling Rig (Trips under 100 miles to site)	N/A	each	550.00
Modified Proctor Test	ASTM D1557	each	300.00
Monitoring well cover installation for piezometer and inclinometer	N/A	each	500.00
Night Drilling Surcharge	N/A	Day	650.00
One Dimensional Consolidation Properties of Soil Test	ASTM D2435	each	450.00

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One Dimensional Swell, Method C	ASTM D4546	each	160.00
One Dimensional Swell, Methods A & B	ASTM D4546	each	120.00
Permeability of Silt and Clays	ASTM D5084	each	375.00
Piezometer - 2"	N/A	LF	31.00
Piezometer - 2" (including well completion and installation)	N/A	LF	35.00
Piezometer Abandonment	N/A	each	300.00
Piezometer Abandonment	N/A	day	50.00
Piezometer Abandonment	N/A	LF	25.00
Piezometer Finish: (a) Flush Mount w 2'x 2' pad	N/A	each	300.00
Piezometer Finish: (b) Stick up w/4 Bollards on a 4'x 4' pad	N/A	each	1,200.00
Site clean up	N/A	hour	200.00
Soil Boring without TCP (< 60 ft.): (a) Utilizing Continuous Sampler	ASTM D1587	LF	40.00
Soil Boring without TCP (< 60 ft.): (b) Shelby Push Tubes Extruded in Field	ASTM D1587	LF	40.00
Soil Boring without TCP (< 60 ft.): (c) Augering	N/A	LF	25.00
Soil Boring without TCP (< 60 ft.): (a) Utilizing Continuous Sampler	ASTM D1587	LF	40.00
Soil Boring without TCP (> 60 ft.): (b) Shelby Push Tubes Extruded in Field	ASTM D1587	LF	32.00
Soil Boring without TCP (> 60 ft.): (c) Augering	N/A	LF	28.00
Soil Boring /Rock Coring without TCP (> 60 ft.)	N/A	LF	45.00
Soil Boring with SPT	ASTM D1586	LF	25.00
Soil Boring without TCP (< 60 ft.):	N/A	LF	30.00
Soil Boring/Rock Coring without TCP (< 60 ft.)	N/A	LF	42.00
Soil Boring/Rock Coring with TCP (< 60 ft.)	Tex-132-E	LF	43.00
Soil Boring/Rock Coring with TCP (> 60 ft.)	Tex-132-E	LF	45.00
Splitting Tensile of Intact Rock Core	ASTM D3967	each	135.00
Standard Penetration Test (SPT) and Split Barrel Sampline of Soils	ASTM D1586	test	25.00
Standard Proctor Test	ASTM D698	each	250.00
Standard Test Method for Dispersive Characteristics of Clay Soil by Double Hydrometer	ASTM D4221	each	250.00
Standard Test Methods for Determining Dispersive Characteristics of Clayey Soils by the Crumb Test	ASTM D6572	each	50.00
Standard Test Methods for Identification and Classification of Dispersive Clay Soils by the Pinhole Test	ASTM D4647	each	280.00
Standby of Crew		hour	300.00
Suction Test (Filter Method)	ASTM D5298	each	80.00
Test of unconsolidated-undrained triaxial compression test of cohesive soils	ASTM D2850	test	125.00
Unconfined Compressive Strength (Rock)	ASTM D2938	each	90.00
Unconfined Compressive Strength (Soil)	ASTM D2166	each	75.00
Uniaxial Compression Strength (Rock)	ASTM D7012	each	65.00
Unit Weight Of Soil	ASTM D2167	each	65.00
Vertical Inclinator	N/A	each	500.00
Vertical Inclinator Installation	N/A	each	800.00
Vertical Inclinator Installation	N/A	LF	65.00
Vibrating Wire Piezometer	N/A	each	850.00
Vibrating Wire Piezometer Installation	N/A	each	1,000.00
Vibrating Wire Piezometer Installation	N/A	LF	55.00
Volumetric Shrinkage	ASTM D427	each	90.00
Water Stand Pipes	ASTM D4043	LF	40.00

ETTL Engineers and Consultants Inc.		Unit Cost	Consultant Proposal Cost
Services To Be Provided	Test Code	Unit	
Senior Engineer Tech	Personel	hour	60.00
Engineer Tech	Personel	hour	50.00
Admin/Clerical	Personel	hour	65.00
Determining Slaking Time	Tex-102-E	each	50.00
Determining Moisture Content In Soil Materials	Tex-103-E	each	15.00
Determining Liquid Limits of Soils	Tex-104-E	each	25.00
Determining Plastic Limit of Soils	Tex-105-E	each	25.00
Calculating the Plasticity Index of Soils	Tex-106-E	each	25.00
Determining the Bar Linear Shrinkage of Soils	Tex-107-E	each	40.00
Determining the Specific Gravity of Soils	Tex-108-E	each	55.00
Particle Size Analysis of Soils	Tex-110-E	each	80.00
Determining the Amount of Material in Soils Finer than the 75 micrometer (No. 200) Sieve	Tex-111-E	each	40.00
Admixing Lime to Reduce Plasticity Index of Soils	Tex-112-E	each	100.00
Laboratory Compaction Characteristics and Moisture-Density Relationship of Base Materials	Tex-113-E	each	300.00
Laboratory Compaction Characteristics and Moisture-Density Relationship of Subgrade, Embankment Soils, and Backfill Material	Tex-114-E	each	275.00
Field Method for Determining In-Place Density of Soils and Base Materials	Tex-115-E	each	20.00
Ball Mill Method for Determining the Disintegration of Flexible Base Material	Tex-116-E	each	200.00
Triaxial Compression Test for Disturbed Soils and Base Materials	Tex-117-E	each	1,600.00
Triaxial Compression Test for Undisturbed Soils	Tex-118-E	each	200.00
Soil-Cement Testing- Part 1	Tex-120-E	each	275.00
Soil-Cement Testing- Part 2	Tex-120-E	each	275.00
Soil-Lime Testing- Part 1	Tex-121-E	each	275.00
Soil-Lime Testing- Part 2	Tex-121-E	each	275.00
Determining Potential Vertical Rise	Tex-124-E	each	85.00
Molding, Testing, and Evaluating Bituminous Black Base Materials	Tex-126-E	each	1,800.00
Lime Fly-Ash Compressive Strength Test Methods- Part 1	Tex-127-E	each	120.00
Lime Fly-Ash Compressive Strength Test Methods- Part 2	Tex-127-E	each	120.00
Determining Soil pH	Tex-128-E	each	35.00
Measuring the Resistivity of Soil Materials	Tex-129-E	each	130.00
Freezing and Thawing Tests of Compacted Soil-Cement Mixture	Tex-135-E	each	275.00
Manual Procedure for Description and Identification of Soils	Tex-141-E	each	50.00
Laboratory Classification of Soils for Engineering Purposes	Tex-142-E	each	45.00
Determining Sulfate Content in Soils - Colorimetric Method	Tex-145-E	each	100.00
Conductivity Test for Field Detection of Sulfates in Soil	Tex-146-E	each	50.00
Compressive Strength of Cement Mortars	ASTM C109	set of 3	40.00
Sieve Analysis of Fine and Coarse Aggregate	Tex-401-A	each	75.00
Fineness Modulus of Fine Aggregate	Tex-402-A	each	80.00
Saturated Surface-Dry Specific Gravity and Absorption of Aggregates	Tex-403-A	each	75.00
Determining Unit Mass (Weight) of Aggregates	Tex-404-A	each	65.00
Determining Percent Voids and Solids in Concrete	Tex-405-A	each	50.00
Material Finer than 75 micrometer (No. 200) Sieve in Mineral Aggregates (Decantation Test for Concrete Aggregates)	Tex-406-A	each	70.00
Organic Impurities in Fine Aggregate for Concrete	Tex-408-A	each	90.00
Free Moisture and Water Absorption in Aggregate for Concrete	Tex-409-A	each	75.00
Abrasion of Coarse Aggregate Using the Los Angeles Machine	Tex-410-A	each	210.00
Soundness of Aggregate Using Sodium Sulfate or Magnesium Sulfate	Tex-411-A	each	300.00
Determining Deleterious Material in Mineral Aggregate	Tex-413-A	each	85.00
Compressive Strength of Cylindrical Concrete Specimens	Tex-418-A	each	20.00
Compressive Strength of Concrete Using Portions of Beams Broken in Flexure	Tex-419-A	each	30.00
Determining Pavement Thickness by Direct Measurement	Tex-423-A	each	30.00
Obtaining and Testing Drilled Cores of Concrete	Tex-424-A	each	100.00
Absorption and Dry Bulk Specific Gravity of Lightweight Coarse Aggregate	Tex-433-A	each	65.00
Test Flow of Grout Mixtures (Flow Cone Method)	Tex-437-A	each	40.00
Accelerated Polish Test for Coarse Aggregate	Tex-438-A	each	300.00
Making and Curing Concrete Test Specimens	Tex-447-A	each	400.00
Flexural Strength of Concrete Using Simple Beam Third-Point Loading	Tex-448-A	each	30.00
Capping Cylindrical Concrete Specimens	Tex-450-A	each	10.00
Determining Crushed Face Particle Count	Tex-460-A	each	75.00

Clarifications

ETTL's office is located at:

8403 Crosspark Suite 3D
Austin, Texas 78754
Phone: 512-519-9312

ETTL sampling/testing/observation services must be scheduled through dispatch including cancellations. Our dispatch is available at the number noted above, Monday through Thursday between the hours of 8:00am & 5:00pm, Fridays 8:00am & 12:00pm with the exception of Holidays. Calls received outside of this time frame will be handled by our voice mail system and will be checked the next working day morning. It is recommended that you schedule services through our dispatch during our regular working hours noted above. We require one working day (24 hours) advance notice for our services. Same day call-ins or after hour voice mail call-ins for work the following day are subject to the availability of personnel.

Service is not guaranteed for same day call-in's.

Reinforcing Steel Inspections require adequate lighting in order to perform the inspection. The inspection needs to be scheduled during daylight hours and/or jobsite illumination needs to be provided by others in order to allow us to perform the required inspection. These inspections need to be scheduled independently of the concrete inspection.

At your request, ETTL's project manager will attend the pre-construction meeting for the project. Our project manager will answer any relevant questions regarding our service's for the project at that time. As the project progresses our project manager will be available to answer any questions you may have concerning our service's.

Three (3) paper copies of test reports are included for mail distribution as directed by the client at no additional charge. Additional mail copies of test reports requested and approved by the client will be charged at \$0.45 per page to cover copying and mailing costs. There is no charge for additional distribution through our e-mail and web distribution system.

Compensation for our services will be based upon the actual sampling/testing/observations performed in accordance with the unit rates shown. The estimated budget that we have indicated is approximate and is based on our past experience with projects of similar type and scope. The estimated budget does not include cancellations/re-testing/re-inspection, and/or any changes and/or modifications to the contract documents.

Clarifications

If ETTL is selected to perform the sampling/testing/observation for the project we will require the following items in order to perform our services on your project.

Two complete sets of drawings and specifications.
Approved concrete mix designs for the project.
Report distribution list.

In addition, please be sure to add ETTL to the distribution list for all addendums and revisions on the project and notification of pre-construction meetings, where applicable, regarding soils, piers, concrete, masonry and structural steel.

All time is for a minimum of two hours or as noted. Overtime will be charged for all hours worked before 7:00am and after 5:00pm, for any time in excess of 8 hours per day or 40 hours per week, Saturdays, Sundays and Holidays. All time is Portal to Portal.

Project Engineering services on materials engineering and testing for consultation, analysis, report preparation and review, supervision and scheduling of field and laboratory personnel will typically be 0.4 to 0.7 hours per report.

This proposal is valid for sixty days from the listed proposal date.

All Invoices for our services are payable within 30 days with no retainage.