

**SUPPLEMENTAL AGREEMENT NO. 1
TO
ENGINEERING SERVICES AGREEMENT OF
AUGUST 6, 2019
FOR
FORT BEND COUNTY TOLL ROAD AUTHORITY**

This Supplemental Agreement is signed in multiple counterparts to be effective on the date approved by the Fort Bend County Commissioners Court, and modifies the ENGINEERING SERVICES AGREEMENT dated August 6, 2019 (the "Agreement") between the Fort Bend County Toll Road Authority, a Texas Local Government Corporation (the "Authority"), and Earth Engineering, Inc. (the "Engineer").

The Agreement is hereby modified as follows:

1. The first sentence in Section 1 is replaced with the following sentence:

"The Engineer shall render professional services to FBCTRA related to the Project as defined in the Scope of Services in Attachment A & Attachment A-1."

2. Section 2.a is replaced with the following paragraphs:

"The Maximum Compensation under this Agreement is \$373,023.00. The amount paid under this Agreement may not exceed the Maximum Compensation without an approved supplemental agreement.

Compensation for the performance of services within the Scope of Services described in Attachment A will be paid as a lump sum amount not to exceed \$123,023.00, as shown in Attachment B.

Compensation for the performance of services within the Scope of Services described in Attachment A-1 shall be in accordance with the billing rates shown in Attachment B-1, with total compensation not to exceed \$250,000.00. Payments for work detailed in Attachment A-1 will be made as such work is performed.

The Engineer shall furnish satisfactory documentation of such work (e.g. timesheets, billing rates, classifications, invoices, etc.) as may be required by FBCTRA."

This Supplemental Agreement does not alter, modify, or otherwise change any part of the Agreement, except as specifically stated in this Supplemental Agreement.

Supplemental Agreement No. 1
To Agreement of August 6, 2019

IN WITNESS WHEREOF, this Supplemental Agreement is hereby executed as of August 18, 2021

FORT BEND COUNTY TOLL ROAD AUTHORITY, a
Texas local government corporation

By: Bobbie Tallas

Name: Bobbie Tallas

Title: Vice Chairman

Earth Engineering, Inc.
ENGINEER

By: M.A. Shihadeh

Name: Moe A. Shihadeh, P.E., D.GE.

Title: Principal

EFFECTIVE DATE

THIS AGREEMENT IS EFFECTIVE ON THE DATE IT IS APPROVED BY THE FORT BEND COUNTY COMMISSIONERS COURT, AND IF NOT SO APPROVED SHALL BE NULL AND VOID.

DATE OF COMMISSIONERS COURT APPROVAL: _____

AGENDA ITEM NO.: _____

**ATTACHMENT A-1
SCOPE OF SERVICES
Supplemental Agreement No. 1**

**FORT BEND PARKWAY TOLL ROAD, SEGMENT B-2
CONSTRUCTION MATERIALS TESTING AND INSPECTION SERVICES**

GENERAL DESCRIPTION

The proposed project consists of the construction of the extension of the Fort Bend Parkway Toll Road from Sienna Parkway to Sienna Ranch Rd, Segment B-2. The construction work includes embankment, stabilized subgrade, base, asphalt, concrete pavement, concrete structures, foundations, etc. All work is to Texas Department of Transportation (TxDOT) specifications.

SCOPE OF SERVICES

Scope of services covered will consist of all required materials testing and inspection to ensure the work meets TxDOT specifications. The following services are expected to be performed:

- Moisture / density relationship of soils / stabilized soils
- Compaction testing of subgrade soils, compaction testing of fill / backfill
- Compressive strength testing of concrete test cylinders
- Compressive strength of cement stabilized sand
- Asphalt testing
- Material mix design review
- Other testing or inspection services as required

Working hours for testing and inspection staff will not be limited to 7 a.m. to 5 p.m. on weekdays and may include night and weekend work.

**ATTACHMENT B-1
COMPENSATION FOR SCOPE OF SERVICES**

**FORT BEND PARKWAY TOLL ROAD, SEGMENT B-2
CONSTRUCTION MATERIALS TESTING AND INSPECTION SERVICES**

Code	Labor Rates	Unit	Fee
10100	Principal, P.E.	Hr.	\$250.00
10200	Senior Engineer, P.E. (10 yrs. Experience)	Hr.	\$205.00
10300	Project Engineer, P.E. or Project Geologist, P.G.	Hr.	\$165.00
10400	Graduae Engineer, Graduate Geologist or Project Manager	Hr.	\$115.00
10500	Technician, NICET IV	Hr.	\$105.00
10600	Technician, NICET III, HMA-II	Hr.	\$100.00
10700	Technician, NICET II, ACI Construction Inspector, HMA-1A, Logger or both TxDot Soil SB-101 and SB-02	Hr.	\$90.00
10750	Technician, ACI Field Grade I and TxDot Soil SB-102	Hr.	\$78.00
10800	Technician, ACI Field Grade I and TxDot Soil SB-101, or SB-102 or HMA-1B	Hr.	\$65.00
10900	Technician (Non Certified)	Hr.	\$55.00
11000	Senior Certified Welding Inspector, SCWI or Non Destructive Tester, ACCP Level III	Hr.	\$130.00
11100	Welding Inspector, CWI or Non Destructive Tester, ACCP II	Hr.	\$115.00
11200	Associate Welding Inspector CAWI	Hr.	\$75.00
11400	Non Destructive Tester, ACCP II with Assistant (2 man crew)	Hr.	\$170.00
11500	Administrative Assistant and Clerical Support	Hr.	\$70.00
15000	Vehicle Charge	Monthly	\$2,000.00
15000	Vehicle Charge	Hr.	\$12.00
15100	Reimursable Expenses	Cost	+10%
15200	Services provided by quatacion	Cost	+10%

Code	Aggregates	Unit	Fee
20100	Sieve Analysis-Coarse Aggregates	Ea.	\$62.00
20200	Sieve Analysis-Fine Aggregates	Ea.	\$62.00
20300	Rel. Density & Absorption-Coarse Aggregates	Ea.	\$92.00
20400	Rel. Density & Absorption-Fine Aggregates	Ea.	\$112.00
20500	Bulk Density & Voids in Aggregates	Ea.	\$43.00
20600	Absorption-Coarse Aggregates	Ea.	\$51.00
20700	Absorption-Fine Aggregates	Ea.	\$51.00
20800	Finer than 75-um (No. 200) Sieve	Ea.	\$56.00
20900	Organic Impurities in Fine Aggregates	Ea.	\$55.00
21000	L.A. Abrasion (Fine and Coarse Aggregates)	Ea.	\$236.00
21100	Clay Lumps and Friable Particles	Ea.	\$63.00
21200	Lightweight Particles	Ea.	\$300.00
21300	Sand Equivalent	Ea.	\$74.00
21400	Na/Mg Sulfate Soundness of Aggregates (5 cylcles)	Ea.	\$400.00
21500	Na/Mg Sulfate Soundness of Aggregates (add'l cylcles)	Ea.	\$231.00

Code	Portland Cement Concrete	Unit	Fee
30050	Mix Design Review	Ea.	\$500.00
30100	Compressive Strength Cylinder	Ea.	\$20.00
30200	Flexural Strength Beam	Ea.	\$31.00
30300	Split Tensile Strength (Incl. Prep)	Ea.	\$124.00
30400	Tme of Set by Penetration	Ea.	\$362.00
30500	Linear Shrinkage & Thermal Coef (Bar)	Set 3	\$371.00
30600	Length Change of Hydraulic-Cement Mortar and Concrete	Set 3	\$132.00
30700	Density of Structural Lightweight Concrete	Ea.	\$92.00
30800	Concrete Coring, Minimum Charge	Min.	\$600.00
30900	Concrete Coring, (4" Diameter to 6" Thickness)	Ea.	\$119.00
31000	Concrete Coring, Additional Thickness (Over 6" to 12")	In.	\$11.00
31100	Concrete Coring, Additional Thicjness (Over 12")	In.	\$14.00
31110	Concrete Coring (6" Diameter to 6" Thickness)	Ea.	\$170.00
31112	Concrete Coring 6" Additional Thickness (Over 6" to 12")	In.	\$16.00
31113	Concrete Coring 6" Additional Thickness (Over 12")	In.	\$21.00
31200	Preparation of Core, Cap & Test	Ea.	\$89.00
31300	Measuring Length of Core	Ea.	\$30.00
310400	Pachometer Survey (Magnetic Induction)	Day	\$103.00
31500	Probe Penetration Test Equipment (Plus Probes)	Day	\$104.00
Code	HMAC	Unit	Fee
40100	Mix Design Review	Ea.	\$500.00
40200	HMAC Design (In-Place)	Ea.	\$2,460.00
40300	Trial Batch (Up to 5 Points) Excludes Testing	Ea.	\$1,846.00
40400	Additional Points	Ea.	\$266.00
40500	Extraction / Gradation	Ea.	\$230.00
40600	Specific Gravity	Ea.	\$82.00
40700	HVEEM Stability	Set	\$108.00
40800	Bulk Density - Lab Molded or Cores	Set	\$61.00
40900	Bulk Density Core	Ea.	\$55.00
41000	Molding Specimens	Set	\$72.00
41100	Maximum Theoretical Specific Gravity	Ea.	\$103.00
41200	Apparent Specific Gravity	Ea.	\$77.00
41300	Abson Recovery	Ea.	\$370.00
41400	Moisture Susceptibility	Ea.	\$538.00
41500	Penetration	Ea.	\$98.00
41600	Ductility	Ea.	\$130.00
41700	Viscosity	Ea.	\$108.00
41800	Asphalt Coring, Minimum Charge	Min.	\$600.00
41900	Asphalt Coring (4" Dia. to 6" Thickness)	Ea.	\$106.00
42000	Asphalt Coring (4" Dia. over 6" Thickness)	In.	\$10.00
42150	Aphalt Coring (6" Dia. to 6" Thickness)	Ea.	\$159.00
42160	Aphalt Coring (6" Dia. over 6" Thickness)	In.	\$14.00
42200	Measuring Thickness of Asphalt	Ea.	\$25.00
42300	PMA Extraction / Gradation	Ea.	\$308.00
42400	PMA Extraction / Gradation	Ea.	\$191.00
42500	Asphalt Content	Ea.	\$92.00
42600	Molding Superpave Specimens	Set	\$500.00
42700	Hamburg Wheel	Ea.	\$1,000.00

Code	Structural Steel	Unit	Fee
50100	Radiographic Source, Iridium	Day	\$139.00
50200	Radiographic Source, Cobalt 60	Day	\$161.00
50300	Ultrasonic Equipment	Day	\$103.00
50400	Magnetic Particle Inspection	Day	\$39.00
50500	Skidmore-Wilhelm Tension Indicator	Day	\$154.00
50600	Torque Wrench	Day	\$57.00
50700	Discontinuity (Holiday) Equipment	Day	\$108.00
50800	Dry Film Thickness Equipment (Tooke Gauge)	Day	\$39.00
50900	Dry Film Thickness Equipment (Magnetic)	Day	\$39.00
Code	Masonry	Unit	Fee
60100	Compressive Strength, Mortar Cubes	Set 6	\$159.00
60200	Compressive Strength, Mortar Cubes	Ea.	\$26.00
60300	Compressive Strength, Mortar or Grout Cylinder	Ea.	\$26.00
60400	Compressive Strength, Grout Prism	Set 3	\$159.00
60500	Measurment, Brick	Ea.	\$63.00
60600	Compressive Strength Test, Brick	Ea.	\$38.00
60700	Flexural Strength Test, Brick	Ea.	\$49.00
60800	Absorption of Brick, 24 hr.	Ea.	\$82.00
60900	Absorption of Brick, 5 hr.	Ea.	\$81.00
61000	Measurment, CMU	Ea.	\$33.00
61100	Weight, CMU	Ea.	\$92.00
61200	Moisture Content, CMU	Ea.	\$92.00
61300	Compressive Strength, CMU	Ea.	\$150.00
61400	Compressive Strength, CMU Hollow Prism	Ea.	\$200.00
61500	Compressive Strength, CMU Grouted Prism	Ea.	\$300.00
Code	Fireproofing	Unit	Fee
70100	Density of SFRM	Ea.	\$43.00
70200	Cohesion / Adhesion of SFRM (Equipment Only)	Ea.	\$33.00

Code	Soils	Unit	Fee
90100	Liquid and Plastic Limits	Ea.	\$71.00
90200	Moisture Content of Soils by Mass	Ea.	\$11.00
90300	Moisture Content by Microwave	Ea.	\$34.00
90400	Sieve Analysis	Ea.	\$65.00
90500	Sieve Analysis w / Hydrometer	Ea.	\$145.00
90600	Percent Passing #200 Sieve	Ea.	\$55.00
90700	Specific Gravity	Ea.	\$67.00
90800	pH of Soils	Ea.	\$20.00
90900	Unconfined Compressive Strength	Ea.	\$51.00
91100	Unconsolidated-undrained Triaxial Compression	Ea.	\$72.00
91200	One-Dimension Consolidation	Ea.	\$450.00
91300	Consolidation, Additional Increments	Ea.	\$58.00
91400	Dispersive Characteristics by Pinhole Test	Ea.	\$324.00
91500	Dispersive Characteristics by Crumb Test	Ea.	\$43.00
91600	Double Hydrometer	Ea.	\$250.00
91700	Soil Suction-Filter Paper	Ea.	\$65.00
91900	California Bearing Ratio	Ea.	\$243.00
92000	Soil Shrinkage Factors by Mercury Method	Ea.	\$72.00
92100	Soil Shrinkage Factors by Wax Method	Ea.	\$86.00
92200	One-Dimensional Swell, Cohesive Soil	Ea.	\$350.00
92300	OMD Standard Compaction	Ea.	\$231.00
92400	OMD Modified Compaction	Ea.	\$247.00
92500	Max. & Min. Density-Sand	Ea.	\$300.00
92600	Percent Solids in Lime Slurry	Ea.	\$49.00
92700	Optimum Lime - pH Method	Ea.	\$266.00
92800	Optimum Lime - PI Method	Ea.	\$274.00
94100	Cement Sand Compressive Strength	Ea.	\$81.00
94200	Cement Content of Soil-Cement	Ea.	\$354.00
94300	Sieve Analysis-Base Material	Ea.	\$108.00
94400	Compressive Strength Treated Base	Ea.	\$292.00
94500	OMD Standard Compaction, Treated	Ea.	\$256.00
94600	OMD Modified Compaction, Treated	Ea.	\$271.00
95100	Nuclear Density Gauge	Hr.	\$12.00

Code	Subsurface Exploration (Geotechnical Drilling)	Unit	Fee
110010	Soil Boring, Intermittent 3-in. dia. (0 to 50')	Ft.	\$23.00
110020	Soil Boring, Intermittent 3-in. dia. (50 to 100')	Ft.	\$25.00
110030	Soil Boring, Continuous 3-in. (0 to 20')	Ft.	\$25.00
110031	Soil Boring, Continuous 3-in. (20 to 50')	Ft.	\$30.00
110032	Soil Boring, Continuous 3-in. (50 to 100')	Ft.	\$40.00
110040	Soil Boring over 100' (Surcharge)	Ft.	\$10.00
110050	Wash Boring	Ft.	\$14.00
111060	Auger Boring	Ft.	\$13.00
110070	Undisturbed / Split - Spoon in Wash / Auger	Ea.	\$45.00
110071	Piezometer Installation	Ft.	\$24.00
110072	Piezometer Abandonment	Ft.	\$20.00
110080	Grouting of complete Boring	Ft.	\$12.00
110090	ATV Surcharge	Ft.	\$10.00
110100	Minimum Charge for the Exploration (to be used if charges are less than \$1000.00)	LS	\$1,000.00
110110	Mobilization / Demobilization	LS	\$700.00
110120	TDH Cone Penetration Test	Ea.	\$31.00
110130	ATV Mobilization Surcharge	LS	\$250.00
110140	Portable Drilling Rig Operation (Crew of two)	Hr.	\$300.00
110150	Standby (Crew of two)	Hr.	\$300.00
110160	Daily Mobilization (Crew)	Day	\$500.00

General Notes

1. General

- 1.1 All construction materials engineering services including sampling, field and laboratory testing, and inspection services ("Services") performed by Consultant for Fort Bend County Toll Road Authority must be authorized by Fort Bend County Toll Road Authority.
- 1.2 Services not specifically authorized by Fort Bend County Toll Road authority will not be paid for.
- 1.3 Failure to perform specified services in accordance with Fort Bend County Toll Road Authority requirements may result in cancellation of Consultant's purchase order.

2. Engineering Services

- 2.1 Engineering Services shall be performed by a professional engineer licensed in the State of Texas and employed full-time by the Consultant ("Engineer").
- 2.2 All construction materials engineering reports ("Reports") relating to Services performed by the Consultant shall be reviewed and signed by Consultant's Engineer. The Consultant's Engineer does not need to sign specimen pick-ups or project cancellation reports.

2.3 Fort Bend County Toll Road Authority shall also compensate Consultant when Consultant's Engineer attends Project-related on-site and progress meetings at the request of the Fort Bend County Toll Road Authority.

2.4 Overtime will not be allowed for any Engineering Service.

3. Field Services

3.1 "Sampling" is defined as the process of procuring materials for subsequent testing or examination that is performed by a certified technician with knowledge of appropriate sampling procedures.

3.2 "Specimen Pickup" is defined as the process of retrieving "specimens" usually prefabricated in the field such as cylinders, beams, or cubes, and transporting those specimens to the laboratory for subsequent testing or examination.

3.3 Field Services shall be performed by Consultant's certified engineering technicians in accordance with the Fee Schedule.

3.3.1 A non-certified technician may be allowed to assist a certified technician on a Project provided two or more technicians are required.

3.3.2 Specimen Pickup shall be performed, whenever possible, as part of a scheduled field trip or by the full-time technician assigned to the Project.

3.3.3 Specimen Pickup not performed as a part of a scheduled field trip or by the technician assigned to the Project shall be compensated at the technician rate.

3.3.4 Field sieve analysis and lime slurry percent-solids determination shall be performed in the field as part of the field inspection without an additional testing charge.

3.3.5 The rates for coring of Portland cement concrete or asphaltic concrete are inclusive of the field representative's time, all equipment, and patching of the core hole with a conventional concrete mixture for concrete or cold-patching asphaltic materials for asphaltic concrete. The rates for coring do not include a Vehicle Charge. Patching with specialty materials (such as non-shrink repair mortar) must be approved in advance by Fort Bend County Toll Road Authority and any approved specialty patching materials will be reimbursed by Fort Bend County Toll Road Authority at cost plus 10%.

3.3.6 A minimum of a 30-minute unpaid lunch shall be taken by the field technician for work over eight (8) hours unless otherwise approved in writing by Fort Bend County Toll Road Authority.

3.3.7 Certified technicians shall carry their certification wallet cards with them on the Project.

3.4 Fort Bend County Toll Road Authority shall compensate Consultant for travel time between the Consultant's facility and the Fort Bend County Toll Road Authority's

Project or other Project-related location. The maximum time compensated for this travel is 1 hour total/roundtrip (30 minutes each way).

4. Laboratory Services

- 4.1 Fees for laboratory tests are inclusive of sample preparation unless specifically noted in this Attachment. Compensation shall not be paid for personnel services and / or materials related to such testing, except as specifically noted in this Attachment.

5. Reporting

Consultant shall document all field and laboratory Services in a written report prepared in accordance with Project Specifications and standard methods.

- 5.1 Reports shall contain hours of service for each visit to the Fort Bend County Toll Road Authority Project including Specimen Pickup.
- 5.2 All Reports must be received by the Fort Bend County Toll Road Authority within 14 calendar days of the original date of service or completion of required laboratory tests.
- 5.3 Final reports presenting strength test results shall be sent to Fort Bend County Toll Road Authority within three (3) business days following the test date.

6. Compensation

- 6.1 Compensation of Consultant for personnel performing sampling, testing, and inspection shall be as stated in the Fee Schedule.
- 6.2 Fees for services are inclusive of all tools, equipment and consumable supplies needed to perform the subject services, except as specifically noted in this Attachment.
- 6.3 Fees for Services performed on an hourly basis shall be recorded to the nearest $\frac{1}{4}$ (0.25) hour and will be compensated at the applicable rate.
- 6.4 Overtime for field services is applicable for any hours worked over 40 hours per week. No overtime will be paid without prior approval from the Fort Bend County Toll Road Authority.
- 6.5 A minimum charge of four (4) hours for field technician, vehicle, and equipment (where charged on an hourly rate) shall apply to each visit to the Project site or to an authorized off- site location for sampling, observation, inspection, or testing as outlined in the Fee Schedule.
- 6.6 All hourly services invoiced shall be accompanied by the Company representative's signed time sheet or daily report, including the name and classification of the individual. Hourly services shall be invoiced to the nearest $\frac{1}{4}$ hour.
- 6.7 A minimum of 30-minute lunch shall be taken for continuous work eight (8) hours or more on a single Project.

- 6.8 If a technician has departed for the Project, prior to receipt of a cancellation notice by Consultant, Consultant shall be compensated at the applicable technician rate for the time required to Consultant's facility plus applicable Vehicle Charge. A four (4) hour minimum shall apply.
- 6.9 Consultant may be reimbursed by Fort Bend County Toll Road Authority for services of a qualified subcontractor or consultant, authorized in advance by the Fort Bend County Toll Road Authority, at cost plus 10%.
- 6.10 All reimbursable expenses of Consultant shall be supported by documentation acceptable to the Fort Bend County Toll Road Authority. Reimbursables such as photographs, reproduction material, delivery, background checks, safety training / orientation, traffic control, parking, and badging, etc., shall be invoiced and reimbursed at cost + 10%. Receipts for reimbursable expenses must be submitted with the Consultant's invoice for the reimbursable expense.

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

1 of 1

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY CERTIFICATION OF FILING

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

Earth Engineering, Inc.
Houston, TX United States

Certificate Number:
2021-787455

Date Filed:
08/05/2021

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

Fort Bend County Toll Road Authority

Date Acknowledged:
8/18/2021

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

FSP6-Supplemental
Engineering Services-Geotechnical Engineering

4	Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
			Controlling	Intermediary
	Shihadeh, Juanita	Houston, TX United States	X	
	Shihadeh, P.E., D.GE, Moe	Houston, TX United States	X	

5 Check only if there is NO Interested Party.

6 UNSWORN DECLARATION

My name is Mohamed A. Shihadeh, P.E. and my date of birth is [REDACTED]

My address is [REDACTED] (street) (city) (state) (zip code) (country)

I declare under penalty of perjury that the foregoing is true and correct.

Executed in Harris County, State of Texas, on the 5th day of August, 2021.
(month) (year)

M.A. Shihadeh
Signature of authorized agent of contracting business entity (Declarant)