

**SUPPLEMENTAL AGREEMENT NO. 2
TO
ENGINEERING SERVICES AGREEMENT OF
MAY 12, 2021
FOR
FORT BEND GRAND PARKWAY 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 February 25, 2020 (the "Agreement") between the Fort Bend Grand Parkway Toll Road Authority, a Texas Local Government Corporation (the "Authority"), and Aguirre & Fields, LP, (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 FBGPTRA related to the Project as defined in the Scope of Services in Attachment A, Attachment A-1 & Attachment A-2."

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

"The Maximum Compensation under this Agreement is \$617,672.09. 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 \$115,047.98, as shown in Attachment B.

Compensation for the performance of services within the Scope of Services described in Attachment A-1 will be paid as a lump sum amount not to exceed \$13,758.74, as shown in Attachment B-1.

Compensation for the performance of services within the Scope of Services described in Attachment A-2 will be paid as a lump sum amount not to exceed \$488,865.37, as shown in Attachment B-2.

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

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. 2
To Agreement of February 25, 2020

IN WITNESS WHEREOF, this Supplemental Agreement is hereby executed as of May 19, 2021.

FORT BEND GRAND PARKWAY TOLL ROAD
AUTHORITY, a Texas local government corporation

By: _____

Name: Showkat Dhanani

Title: Chairman

Aguirre & Fields, LP, Aguirre, LLC - General Partner
ENGINEER

By: _____
DocuSigned by:
Oscar R. Aguirre
107724270CF040B...

Name: Oscar R. Aguirre, P.E.

Title: President

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-2
SUPPLEMENTAL AGREEMENT #2 SCOPE OF SERVICES**

**FORT BEND GRAND PARKWAY TOLL ROAD (SH 99) / WESTPARK TOLLWAY (FM 1093)
EASTBOUND/NORTHBOUND & WESTBOUND/NORTHBOUND DIRECT CONNECTORS**

DESIGN SERVICES

GENERAL DESCRIPTION

The work to be performed by the Engineer under this Supplemental Agreement consists of PS&E for a new northbound entrance ramp to SH 99 (Grand Parkway) just south of Fry Road and performing an Atlas 14 Impact Analysis with mitigation alternatives. The entrance ramp improvements will include widening of the existing northbound SH 99 bridge. The proposed Fry Road entrance ramp is expected to be added to the project as a change order during construction.

The following is a detailed list of tasks which will be performed by the Engineer in addition to and in accordance with the scope of services in the Prime Agreement.

1) SURVEY

- a) Utilize horizontal and vertical project controls established for the project
- b) Update the utility master cad file. This will include field work as necessary to locate existing utilities based on utility research.
- c) Acquire existing northbound bridge detail adequate for bridge widening including:
 - 1) Top of cap elevations at inside and outside points along each bent to establish top of cap and slope.
 - 2) Cap dimensions
 - 3) Top of column elevations (outside columns only)
 - 4) Bearing seat elevations (outside girder line only)
 - 5) Top of bridge deck along each bent at inside and outside edges of bridge
 - 6) Outside wingwall detail at both abutments

2) UTILITY COORDINATION

- a) Coordinate with utility companies as necessary to identify & locate the utilities with the project limits. Update the utility contact list and conflict matrix.

3) GEOTECHNICAL STUDY

- a) Provide field exploration, laboratory testing, engineering analysis and reporting for the bridge widening and retaining walls. Two (2) bridge borings at 120-foot depth will be completed for the bridge foundation analysis and two (2) boring at 50-foot depth will be completed for the retaining wall analysis in accordance with the TxDOT Geotechnical Manual. Engineering analysis will be provided for pavement subgrade, storm sewer construction, bridge foundations and MSE wall recommendations.

4) ROADWAY

- a) Verify the schematic geometry for the proposed entrance ramp
- b) Typical section sheets shall be developed. Sections will be prepared for the ramp as necessary to provide a thorough understanding to the contractor of the work intended.
- c) Separate plan and profile sheets will be prepared for the ramp to a scale of 1"=100' horizontal and 1"=10' vertical on 11"x17" format sheets.
- d) Roadway detail plan sheets will be prepared that are associated with the roadway construction. Roadway detail sheets will be developed for special details that may be needed to define, detail, or clarify construction items for the contractors' understanding. These plan sheets include:

- 1) Removal Layouts
- 2) Alignment Data Sheets
- e) Design cross sections should be prepared at a maximum interval of 50 feet for determining final earthwork and other bid item quantities. The cross sections shall be prepared at the beginning and end stations and at even 50-foot stations. Cross Sections will not include bridge.

5) TRAFFIC

- a) The Engineer shall prepare drawings, specifications, details and summaries for all small signs. The Engineer shall also designate the shields to be attached to guide signs. The proposed signs shall be illustrated and numbered on plan sheets.
- b) The Engineer shall detail permanent and temporary pavement markings and channelization devices on plan sheets.
- c) The Engineer shall provide illumination layout plans, electrical circuit plans and details for safety lighting along the ramp.

6) DRAINAGE

The purpose of this task is to prepare drainage impact report, drainage plans and details. The FBGPTRA has requested use of Atlas 14 rainfall data for the impact study, but keep previous criteria for PS&E drainage design. The limit of study is only for the proposed improvements of this project and not the future fully developed interchange. The following is included:

- a) The drainage calculations will be prepared using Atlas 14 precipitation values.. At a minimum the drainage items to be provided shall include the drainage area maps showing the final drainage areas and inlet and storm sewer calculation. The proposed tasks are listed below:
 - 1) Develop existing drainage area and hydrologic calculations for Fry Road ramp.
 - 2) Develop existing hydraulic analysis SWMM Models
 - 3) Develop proposed hydraulic analysis SWMM models
 - 4) Develop hydraulic analysis mitigation alternatives
 - 5) Develop proposed drainage areas and hydrologic calculations for Fry Road ramp
 - 6) Prepare drainage area maps for proposed improvements for the Fry Road ramp.
 - 7) Design all drainage structures including open ditch drainage, storm sewer, inlets, manholes, subsurface drainage at retaining walls, bridge deck drainage systems, and inlets/internal drainage piping where required on structures.
 - 8) Design and analyze the storm sewer system utilizing the GEOPAK DRAINAGE program and incorporate output to plan set.
 - 9) Design and analyze the roadside ditches using Flowmaster or similar spreadsheet analysis program and incorporate results into the plans set on the roadway plan and profile sheets.
 - 10) Prepare storm sewer plan/profile drawings and special plan details, where required, for storm sewer system, laterals, junction boxes, outfall structures, etc. Identify and resolve potential utility conflicts during project design. Drawings will be prepared on 11"X 17" sheet at horizontal scale of 1"=100' and vertical scale of 1"=10'.
 - 11) Prepare drainage impact report. The impact report will determine the difference in runoff volume and flow between existing and proposed conditions for the scope of work of this PS&E including DCEN, DCWN and associated ramps. Any impacts from the proposed project will be mitigated to match existing flows assuming the mitigation can be handled in ROW within available ditches. Offsite mitigation is not included in the scope. No additional mitigation will be provided for the existing conditions due to the change in the rainfall utilized for the analysis.
- b) Temporary Drainage Facilities

- 1) Develop plans for temporary drainage facilities necessary during staged construction of the project. Ponding on or diverting of water onto roadways is not permissible. All temporary drainage facilities shall be shown on the Traffic Control Plan Sheets

c) Storm Water Pollution Prevention Plans (SW3P)

- 1) Develop SW3P, based on latest NPDES and any Fort Bend County requirements, on separate sheets (may be double banked) but in conformance with the TCP, to minimize potential impact to receiving waterways. The SW3P shall include text describing the plan, quantities, type, phase and locations of erosion control devices and any required permanent erosion control measures.
- 2) EPIC Sheets will not be developed by the Engineer. If required, they will be provided by the FBGPTRA.

7) CONSTRUCTION SEQUENCING AND TRAFFIC CONTROL

The purpose of this task is to prepare traffic control plans and details in accordance with the latest version of the Texas Manual On Uniform Traffic Control Devices, latest version (TMUTCD), including:

The traffic control work consists of preparation of Traffic Control Plans (TCP), specifications and general notes, and cost estimate for the various traffic control measures.

a) General

- 1) Traffic control will be based on the existing conditions known at time of agreement execution.
- 2) Revise the current TCP to swap Phase 1 & 2 and keep the entrance ramp open at all times. A temp ramp will be installed once the existing ramp is closed in Phase 2. A Phase 3 will be created to construct the new entrance ramp.
- 3) One phase (single step) is anticipated for construction.
 - (a) Phase 3 – Construct ramp and all associated work prior to closing the existing entrance ramp to be removed. Detours will be setup for when work is planned on spans over Fry Road. Frontage road and mainlane closures will only be permitted during off-peak hours as defined by FBGPTRA. Closures will be limited to one facility at a time.
- 4) A TCP shall show the various construction sequences (phases) and phases with barricades, signing, striping, delineation, detours, temporary retaining walls, temporary drainage, and any other devices used for control of traffic during construction.

b) Traffic Control Plans:

- 1) Traffic control plan layouts will be prepared according to the TMUTCD and the General Guidelines for Traffic Handling. Each phase of the TCP shall show the location of the traffic flow indicated by directional arrows. The construction areas will be clearly defined. All barricades, traffic barriers, concrete traffic barrier end treatments, pavement markings, signing (regulatory, warning, and guide), flaggers, temporary roadways and walls, and drainage shall be shown on the plans. Features that are existing or under construction, such as, roadways, retaining walls, bridges, drainage structures, etc. shall also be shown.
- 2) Traffic control plan typical sections will be prepared for each stage of the construction sequence to delineate the position of the existing traffic with respect to the proposed construction and will be shown on each TCP layout sheet.

3) At a minimum, the following sheets are to be included or modified in the TCP package:

- (a) TCP Layouts (1"=100' Scale)
- (b) TCP Overview with Narrative (if more than one phase)
- (c) Typical Sections
- (d) Detour Layouts for temporary Road Closures
- (e) Advanced Warning Sign Layout
- (f) Quantities

8) **RETAINING WALLS**

- a) The existing MSE retaining wall along the south side will be removed and replaced to accommodate the proposed entrance ramp. A new wall will be introduced along the frontage road on the north side of Fry Road. The retaining wall plans and details will include a plan & profile(s) illustrating the wall geometry and design and applicable TxDOT MSE wall standards. External stability for MSE walls including foundation improvements, if necessary, will be evaluated by the Geotechnical Engineer.
- b) Temporary Special Shoring layouts for excavation height > 5'-0" are to be included, if necessary, to construct MSE retaining walls. Layouts will establish limits and height of shoring for quantification. Per Item 403, design of Temporary Special Shoring is the responsibility of the Contractor.

9) **BRIDGES**

The design of the Fry Road bridge widening will match the existing bridge aesthetics and member sizes as verified by design.

a) Bridge Layouts

- 1) Prepare bridge layout plans and elevations for all bridge locations in accordance with the latest edition of the TxDOT's *Bridge Design Manual*, *Bridge Division Operation and Planning Manual*, and *Bridge Detailing Guide*. All bridge layouts shall be at 1"= 40' scale (11"x17" plan sheets).
- 2) The Engineer shall evaluate and prepare bridge typical sections for construction sequencing.

b) Final Design Calculations and Details

- 1) Widened portions of existing highway bridge structures shall be designed for HL 93 loading. All bridge design shall be in conformance with the latest edition of the TxDOT's *Bridge Design Manual - LRFD*, *Bridge Division Operation and Planning Manual*, *Bridge Detailing Guide*, and *AASHTO LRFD Bridge Design Specifications, 9th Edition*. Final design calculations and final detail drawings for the bridge widening will be provided in pdf format upon submission of structural review to the FBGPTRA.

c) Bridge Quantities Summary

- 1) Quantities for each bridge will be provided. These quantities will be incorporated onto summary sheets to be included in the plan set as part of the individual bridge plans.

10) **GENERAL NOTES AND SPECIFICATIONS**

- a) Review and update general notes and specifications as needed to accommodate the proposed ramp.

11) **STANDARD DRAWINGS**

- a) Review and update standard drawings as needed to accommodate the proposed ramp.

12) **QUANTITY TAKE-OFFS AND QUANTITY SUMMARIES**

- a) Quantities will be determined and included on summary sheets. The quantities will be included in tables and organized according to the bid item codes that will be used for construction. Quantities should be organized by item per sheet and totaled for the item and the project.
- b) Coordinate and combine quantity take-offs (stand alone sheets) from other team members into overall project summary sheets for plans.

13) CONSTRUCTION COST ESTIMATE

- a) Review and update the cost estimate to include the proposed ramp.

14) MISCELLANEOUS DRAWINGS

- a) Title Sheet – Review and update to accommodate the proposed ramp
- b) Index Sheet(s) – Review and update to accommodate the proposed ramp
- c) Project Layout Sheets – Review and update to accommodate the proposed ramp

15) PREPARATION AND SUBMITTAL OF PS&E

The following submittals are anticipated:

- a) Revised TCP to include Temp Entrance Ramp
- b) 30% Geometric Layout
- c) Draft Drainage Report & Draft Geotechnical Supplement Report
- d) Final Drainage Report & Final Geotechnical Supplement Report
- e) 60% PS&E
- f) 90% PS&E
- g) Final PS&E.

Each deliverable will be in PDF 11x17" format submitted electronically.

16) PROJECT MANAGEMENT

The purpose of this task is to provide the overall management of this design contract. Project files will be set up and overall coordination of the team and contact with FBGPTRA will be maintained.

- a) Provide general coordination with the team members concerning administrative and technical issues. Report and coordinate with FBGPTRA on any design issues and requests for information from subconsultants.
- b) Prepare and submit monthly progress reports and invoices to FBGPTRA for review and approval. The invoices will include the progress report and invoice. The progress report will list outstanding issues that need resolution, as well as, progress of the tasks and estimated completion dates for the work.
- c) Prepare an overall project design schedule detailing the progression of the work. This schedule will include review dates by the FBGPTRA, submittal dates for deliverables, and estimated time frame to complete the work. The schedule will be updated monthly and included in the progress report. Changes or adjustments in the schedule caused by delays due to unforeseen task difficulties or lengthy review times will be shown and reported to the FBGPTRA.
- d) Attend coordination and interim progress review meetings every month or as necessary, to be scheduled on an as-needed basis. Prepare and distribute meeting minutes within five working days after the meeting.

17) SCHEDULE

The following schedule is anticipated:

- a) NTP - June 1, 2021
- b) Final revised TCP to add temp entrance ramp – June 25, 2021
- c) 30% Geometric Layout – June 25, 2021
- d) 60% PS&E, Draft Drainage Report & Draft Geotech Supplement Report – August 27, 2021
- e) 90% PS&E, Final Drainage Report & Geotech Supplemental Report – November 19, 2021
- f) Final PS&E – January 28, 2022

**ATTACHMENT B2
SUPPLEMENTAL AGREEMENT #2 FEE ESTIMATE**

**FORT BEND GRAND PARKWAY TOLL ROAD (SH 99) / WESTPARK TOLLWAY (FM 1093)
EASTBOUND/NORTHBOUND & WESTBOUND/NORTHBOUND DIRECT CONNECTORS**

CONTRACT SUMMARY

PRIME: Aguirre & Fields
SUB: TNP
SUB: Progressive Traffic & Transportation
SUB: Geotech Engineering and Testing
SUB: Weisser Engineering & Surveying

WORK TASK	DESCRIPTION	Original Contract	SA#1	SA#2	TOTAL
1	SURVEY	\$ 17,430.00	\$ 2,230.00	\$ 16,450.00	\$ 36,110.00
2	UTILITY COORDINATION	\$ 2,485.35		\$ 2,714.25	\$ 5,199.60
3	GEOTECHNICAL STUDY	\$ -		\$ 65,992.00	\$ 65,992.00
4	ROADWAY	\$ 6,560.40	\$ 2,276.14	\$ 32,607.75	\$ 41,444.29
5	TRAFFIC	\$ 5,884.00	\$ -	\$ 30,632.00	\$ 36,516.00
6	DRAINAGE	\$ 16,305.00	\$ -	\$ 115,070.00	\$ 131,375.00
7	CONSTRUCTION SEQUENCING AND TRAFFIC CONTROL	\$ 5,814.90	\$ 858.11	\$ 18,354.26	\$ 25,027.27
8	RETAINING WALLS	\$ 4,090.80	\$ -	\$ 34,092.45	\$ 38,183.25
9	BRIDGES	\$ 19,500.60	\$ 7,723.01	\$ 78,653.40	\$ 105,877.01
10	GENERAL NOTES AND SPECIFICATIONS	\$ 2,312.10	\$ -	\$ 1,127.04	\$ 3,439.14
11	STANDARD DRAWINGS	\$ 12,942.96	\$ -	\$ 1,092.40	\$ 14,035.36
12	QUANTITY TAKE-OFFS AND QUANTITY SUMMARIES	\$ 5,196.89	\$ 671.48	\$ 17,776.60	\$ 23,644.97
13	CONSTRUCTION COST ESTIMATE	\$ 2,768.58		\$ 2,018.36	\$ 4,786.94
14	MISCELLANEOUS DRAWINGS	\$ 2,297.40		\$ 7,123.73	\$ 9,421.13
15	PREPARATION AND SUBMITTAL OF PS&E	\$ 2,751.50		\$ 14,545.13	\$ 17,296.63
16	PROJECT MANAGEMENT	\$ 7,707.50		\$ 50,616.00	\$ 58,323.50
17	DIRECT EXPENSES	\$ 1,000.00		\$ -	\$ 1,000.00
TOTAL		\$ 115,047.98	\$ 13,758.74	\$ 488,865.37	\$ 617,672.09

**ATTACHMENT B2
SUPPLEMENTAL AGREEMENT #2 FEE ESTIMATE**

**FORT BEND GRAND PARKWAY TOLL ROAD (SH 99) / WESTPARK TOLLWAY (FM 1093)
EASTBOUND/NORTHBOUND & WESTBOUND/NORTHBOUND DIRECT CONNECTORS**

SUMMARY

PRIME: Aguirre & Fields
SUB: TNP
SUB: Progressive Traffic & Transportation
SUB: Geotech Engineering and Testing
SUB: Weisser Engineering & Surveying

WORK TASK	DESCRIPTION	Aguirre & Fields	TNP	Progressive Traffic & Transportation	Geotech Engineering and Testing	Weisser Engineering & Surveying	TOTAL
1	SURVEY					\$16,450.00	\$16,450.00
2	UTILITY COORDINATION	\$2,714.25					\$2,714.25
3	GEOTECHNICAL				\$65,992.00		\$65,992.00
4	ROADWAY	\$32,607.75					\$32,607.75
5	TRAFFIC			\$30,632.00			\$30,632.00
6	DRAINAGE		\$115,070.00				\$115,070.00
7	CONSTRUCTION SEQUENCING AND TRAFFIC CONTROL	\$18,354.26					\$18,354.26
8	RETAINING WALLS	\$34,092.45					\$34,092.45
9	BRIDGES	\$78,653.40					\$78,653.40
10	GENERAL NOTES AND SPECIFICATIONS	\$531.04		\$596.00			\$1,127.04
11	STANDARD DRAWINGS	\$596.40	\$160.00	\$336.00			\$1,092.40
12	QUANTITY TAKE-OFFS AND QUANTITY SUMMARIES	\$11,142.60	\$2,830.00	\$3,804.00			\$17,776.60
13	CONSTRUCTION COST ESTIMATE	\$2,018.36					\$2,018.36
14	MISCELLANEOUS DRAWINGS	\$7,123.73					\$7,123.73
15	PREPARATION AND SUBMITTAL OF PS&E	\$14,545.13					\$14,545.13
16	PROJECT MANAGEMENT	\$40,236.00	\$5,880.00	\$4,500.00			\$50,616.00
17	DIRECT EXPENSES						\$0.00
TOTAL		\$ 242,615.37	\$ 123,940.00	\$ 39,868.00	\$ 65,992.00	\$ 16,450.00	\$ 488,865.37

**ATTACHMENT B2
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**FORT BEND GRAND PARKWAY TOLL ROAD (SH 99) / WESTPARK TOLLWAY (FM 1093)
EASTBOUND/NORTHBOUND & WESTBOUND/NORTHBOUND DIRECT CONNECTORS**

Aguirre & Fields

TASK DESCRIPTION	NUMBER OF SHEETS	Senior Structural Engineer	Project Manager	Project Engineer	Design Engineer	EIT	Engineering Technician	Admin Clerical	TOTAL LABOR HRS & COSTS	Hrs/Sht
LABOR RATE PER HOUR		\$220.50	\$204.75	\$149.10	\$121.80	\$98.44	\$88.20	\$78.75		
UTILITY COORDINATION										
UPDATE UTILITY CONFLICT MATRIX				5		20			25	NA
SHEETS & HOURS SUBTOTAL	0	0	0	5	0	20	0	0	25	
SUBTOTAL LABOR COSTS		\$0.00	\$0.00	\$745.50	\$0.00	\$1,968.75	\$0.00	\$0.00	\$2,714.25	
ROADWAY										
TYPICAL SECTIONS	1			5	10	5	10		30	30
HORIZONTAL ALIGNMENT DATA	1			5			20		25	25
REMOVAL LAYOUTS	2			5	10	10	20		45	23
ROADWAY PLAN & PROFILE	2			20	10	10	20		60	30
MISCELLANEOUS DETAILS	1			10	10	10	10		40	40
CROSS SECTIONS & EARTHWORK				10	25	25	40		100	NA
SHEETS & HOURS SUBTOTAL	7	0	0	55	65	60	120	0	300	
SUBTOTAL LABOR COSTS		\$0.00	\$0.00	\$8,200.50	\$7,917.00	\$5,906.25	\$10,584.00	\$0.00	\$32,607.75	
TRAFFIC CONTROL PLAN										
UPDATE TRAFFIC CONTROL PLAN LAYOUT & NARRATIVE	1			1	2	2	5		10	10
UPDATE TRAFFIC CONTROL PLAN ADVANCE WARNING SIGNS LAYOUT	1			1	2	2	5		10	10
TRAFFIC CONTROL DETOUR LAYOUT (FRY ROAD CLOSURE)	1			5	10	5	10		30	30
TRAFFIC CONTROL PLAN PHASE LAYOUTS & TYP SEC (PHASE 0)	2			9	20	10	20		59	30
UPDATE TRAFFIC CONTROL PLAN PHASE LAYOUTS (PHASE 1)	2			2	5	10	15		32	16
UPDATE TRAFFIC CONTROL PLAN PHASE LAYOUTS (PHASE 2)	2			2	5	10	15		32	16
SHEETS & HOURS SUBTOTAL	9	0	0	20	44	39	70	0	173	
SUBTOTAL LABOR COSTS		\$0.00	\$0.00	\$2,982.00	\$5,359.20	\$3,839.06	\$6,174.00	\$0.00	\$18,354.26	
RETAINING WALLS										
UPDATE RETAINING WALL SUMMARY	1	2		2			4		8	8
RETAINING WALL HORIZONTAL ALIGNMENT DATA	1	2		2			4		8	8
RETAINING WALL #1 PLAN AND PROFILE (SOUTH OF FRY RD)	2	4		8	16	20	24		72	36
RETAINING WALL #2 PLAN AND PROFILE (NORTH OF FRY RD)	2	4		8	16	20	24		72	36
TEMPORARY SPECIAL SHORING LAYOUT AT WALL #1	2	2		6	12	16	24		60	30
TEMPORARY SPECIAL SHORING LAYOUT AT WALL #2	2	2		6	12	16	24		60	30
RW(MSE)(DD) WALL DESIGN DATA SHEET (INCL. GEOTECH COORD)	1	4		4	4	4	4		20	20
SHEETS & HOURS SUBTOTAL	11	20	0	36	60	76	108	0	300	
SUBTOTAL LABOR COSTS		\$4,410.00	\$0.00	\$5,367.60	\$7,308.00	\$7,481.25	\$9,525.60	\$0.00	\$34,092.45	
BRIDGES										
BRIDGE LAYOUT	1	6		6	8	12	16		48	48
BRIDGE TYPICAL SECTIONS	1	3		3	4	10	16		36	36
ESTIMATED BRIDGE QUANTITIES & BEARING SEAT ELEVATIONS	1	4		4	8	12	8		36	36
FOUNDATION LAYOUT	1	3		3	4	8	12		30	30
ABUTMENT REMOVAL & WINGWALL SHORING LIMITS	1	3		3	4	10	16		36	36
ABUTMENT 1 WIDENING DETAILS	2	8		8	12	16	36		80	40
ABUTMENT 4 WIDENING DETAILS	2	8		8	12	16	36		80	40
BENT 2 WIDENING DETAILS	2	8		8	12	16	36		80	40
BENT 3 WIDENING DETAILS	2	8		8	12	16	36		80	40
FRAMING PLAN	1	3		3	4	8	12		30	30
312.00' PRESTRESSED CONCRETE GIRDER UNIT	2	6		6	8	16	36		72	36
PRESTRESSED CONCRETE I-GIRDER DESIGNS - IGND	1	5		5	2	12	8		32	32
PREPARE STRUCTURAL CALCULATION BOOK INCL. LOAD RATING	1	6		6	4	24			40	40
SHEETS & HOURS SUBTOTAL	18	71	0	71	94	176	268	0	680	
SUBTOTAL LABOR COSTS		\$15,655.50	\$0.00	\$10,586.10	\$11,449.20	\$17,325.00	\$23,637.60	\$0.00	\$78,653.40	

**ATTACHMENT B2
SUPPLEMENTAL AGREEMENT #2 FEE ESTIMATE**

**FORT BEND GRAND PARKWAY TOLL ROAD (SH 99) / WESTPARK TOLLWAY (FM 1093)
EASTBOUND/NORTHBOUND & WESTBOUND/NORTHBOUND DIRECT CONNECTORS**

Aguirre & Fields

TASK DESCRIPTION	NUMBER OF SHEETS	Senior Structural Engineer	Project Manager	Project Engineer	Design Engineer	EIT	Engineering Technician	Admin Clerical	TOTAL LABOR HRS & COSTS	Hrs/Sht
LABOR RATE PER HOUR		\$220.50	\$204.75	\$149.10	\$121.80	\$98.44	\$88.20	\$78.75		
GENERAL NOTES AND SPECIFICATIONS										
UPDATE GENERAL NOTES AND SPECIFICATIONS			1	1		1		1	4	NA
SHEETS & HOURS SUBTOTAL	0	0	1	1	0	1	0	1	4	
SUBTOTAL LABOR COSTS		\$0.00	\$204.75	\$149.10	\$0.00	\$98.44	\$0.00	\$78.75	\$531.04	
STANDARD DRAWINGS										
UPDATE ROADWAY STANDARDS	2			1					1	1
UPDATE RETAINING WALL STANDARDS	2			1					1	1
UPDATE BRIDGE STANDARDS	2			1					1	1
UPDATE SWPPP STANDARDS	2			1					1	1
SHEETS & HOURS SUBTOTAL	8	0	0	4	0	0	0	0	4	
SUBTOTAL LABOR COSTS		\$0.00	\$0.00	\$596.40	\$0.00	\$0.00	\$0.00	\$0.00	\$596.40	
QUANTITY TAKE-OFFS AND QUANTITY SUMMARIES										
UPDATE SUMMARY OF TRAFFIC CONTROL QUANTITIES	1		2	8		8	6		24	24
UPDATE SUMMARY OF REMOVAL QUANTITIES	1			8					8	8
UPDATE SUMMARY OF ROADWAY QUANTITIES	1		2	8		8	6		24	24
UPDATE SUMMARY OF RETAINING WALL QUANTITIES	1		2	8		8	6		24	24
UPDATE SUMMARY OF SW3P QUANTITIES	1			8					8	8
SHEETS & HOURS SUBTOTAL	5	0	6	40	0	24	18	0	88	
SUBTOTAL LABOR COSTS		\$0.00	\$1,228.50	\$5,964.00	\$0.00	\$2,362.50	\$1,587.60	\$0.00	\$11,142.60	
CONSTRUCTION COST ESTIMATE										
90% AND FINAL		3	3	3		3			12	NA
SHEETS & HOURS SUBTOTAL	0	3	3	3	0	3	0	0	12	
SUBTOTAL LABOR COSTS		\$661.50	\$614.25	\$447.30	\$0.00	\$295.31	\$0.00	\$0.00	\$2,018.36	
MISCELLANEOUS DRAWINGS										
UPDATE TITLE SHEET	2		2	2		2	2		8	4
UPDATE PROJECT LAYOUT (ADD 1 SHEET)	4		2	2		2	34		40	10
UPDATE INDEX OF SHEETS (ADD 1 SHEET)	3		2	2		2	14		20	7
SHEETS & HOURS SUBTOTAL	9	0	6	6	0	6	50	0	68	
SUBTOTAL LABOR COSTS		\$0.00	\$1,228.50	\$894.60	\$0.00	\$590.63	\$4,410.00	\$0.00	\$7,123.73	
PREPARATION AND SUBMITTAL OF PS&E										
60% SUBMITTAL (2 VOLUMES)		2	4	8		10	16		40	NA
90% SUBMITTAL (2 VOLUMES)		2	4	8		10	16		40	NA
FINAL SUBMITTAL (2 VOLUMES)		2	4	8		10	16		40	NA
SHEETS & HOURS SUBTOTAL	0	6	12	24	0	30	48	0	120	
SUBTOTAL LABOR COSTS		\$1,323.00	\$2,457.00	\$3,578.40	\$0.00	\$2,953.13	\$4,233.60	\$0.00	\$14,545.13	
PROJECT MANAGEMENT										
PROJECT MANAGEMENT (4 hr/wk for PM for 6 months)(1/2 time for PE)			104	52					156	NA
INVOICES, PROGRESS REPORTS & SCHEDULES (2 hr/month/person)			12	6				12	30	NA
PROGRESS MEETINGS (2 hr/month/person)		12	12	12					36	NA
SHEETS & HOURS SUBTOTAL	0	12	128	70	0	0	0	12	222	
SUBTOTAL LABOR COSTS		\$2,646.00	\$26,208.00	\$10,437.00	\$0.00	\$0.00	\$0.00	\$945.00	\$40,236.00	
TOTAL LABOR HOURS		112	156	335	263	435	682	13	1996	
TOTAL LABOR COSTS	67	\$24,696.00	\$31,941.00	\$49,948.50	\$32,033.40	\$42,820.32	\$60,152.40	\$1,023.75	\$242,615.37	
DIRECT EXPENSES									\$0.00	
TOTAL COSTS									\$242,615.37	

ATTACHMENT B2
SUPPLEMENTAL AGREEMENT #2 FEE ESTIMATE

FORT BEND GRAND PARKWAY TOLL ROAD (SH 99) / WESTPARK TOLLWAY (FM 1093)
EASTBOUND/NORTHBOUND & WESTBOUND/NORTHBOUND DIRECT CONNECTORS

TNP

TASK DESCRIPTION	NUMBER OF SHEETS	Senior Project Manager	Project Manager	Senior Project Engineer	Project Engineer	EIT	Senior Design Tech	Engineer Tech	Admin/Clerical	TOTAL LABOR HRS & COSTS	Hrs/Sht
LABOR RATE PER HOUR		\$220.00	\$195.00	\$185.00	\$160.00	\$110.00	\$130.00	\$100.00	\$75.00		
DRAINAGE											
DRAINAGE STUDY											
CONDUCT FIELD VISITS			2			2				0	
REVIEW PREVIOUS PLANS AND DRAINAGE REPORTS			4	4	6	8				4	
DETERMINE EXISTING DRAINAGE AREA BOUNDARIES & HYDROLOGIC CALCULATIONS			2	4	8	18				22	
DETERMINE PROPOSED DRAINAGE AREA BOUNDARIES & HYDROLOGIC CALCULATIONS			2	4	8	18				32	
DEVELOP EXISTING SWMM MODELS			4	8	24	44				32	
DEVELOP PROPOSED SWMM MODEL			4	8	24	32				80	
ANALYZE MITIGATION ALTERNATIVES			4	12	24	40				68	
DEVELOP DRAINAGE IMPACT REPORT		4	6	24	32		60		4	80	
DRAINAGE PS&E										130	
DEVELOP DRAINAGE AREA MAPS (1"=100') FOR NEW LIMITS	2		2	4	8	12	16			0	
DESIGN STORM SEWER SYSTEM			8		32	40				42	21
DEVELOP DRAINAGE PLAN & PROFILE (1"=100'H)(1"-10'V) FOR NEW LIMITS	4		12		18	30	60			80	
DEVELOP STORM SEWER LATERAL PROFILES	2		4		8	16	24			120	30
DEVELOP GEOPAK DRAINAGE HYDRAULIC DATA SHEETS FOR NEW LIMITS	6		4		8	8	16			52	26
DESIGN ROADSIDE DITCHES			4		18	18				36	6
SHEETS & HOURS SUBTOTAL	14	4	62	68	218	286	176	0	4	818	
SUBTOTAL LABOR COSTS		\$880.00	\$12,090.00	\$12,580.00	\$34,880.00	\$31,460.00	\$22,880.00	\$0.00	\$300.00	\$115,070.00	
STANDARD DRAWINGS											
STANDARDS	8				1					1	0
SHEETS & HOURS SUBTOTAL	8	0	0	0	1	0	0	0	0	1	
SUBTOTAL LABOR COSTS		\$0.00	\$0.00	\$0.00	\$160.00	\$0.00	\$0.00	\$0.00	\$0.00	\$160.00	
QUANTITY TAKE-OFFS AND QUANTITY SUMMARIES											
DRAINAGE SUMMARIES	2		2		2	12		8		24	12
SHEETS & HOURS SUBTOTAL	2	0	2	0	2	12	0	8	0	24	
SUBTOTAL LABOR COSTS		\$0.00	\$390.00	\$0.00	\$320.00	\$1,320.00	\$0.00	\$800.00	\$0.00	\$2,830.00	
PROJECT MANAGEMENT											
PROJECT MANAGEMENT		12	12						12	36	
SHEETS & HOURS SUBTOTAL	0	12	12	0	0	0	0	0	12	36	
SUBTOTAL LABOR COSTS		\$2,640.00	\$2,340.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$900.00	\$5,880.00	
TOTAL LABOR COSTS		\$3,520.00	\$14,820.00	\$12,580.00	\$35,360.00	\$32,780.00	\$22,880.00	\$800.00	\$1,200.00	\$123,940.00	
DIRECT EXPENSES										\$0.00	
TOTAL COSTS										\$123,940.00	

**ATTACHMENT B2
SUPPLEMENTAL AGREEMENT #2 FEE ESTIMATE**

**FORT BEND GRAND PARKWAY TOLL ROAD (SH 99) / WESTPARK TOLLWAY (FM 1093)
EASTBOUND/NORTHBOUND & WESTBOUND/NORTHBOUND DIRECT CONNECTORS**

Progressive Traffic & Transportation

TASK DESCRIPTION	NUMBER OF SHEETS	Principal	Project Manager	Project Engineer	Engineering Technician	TOTAL LABOR HRS & COSTS	Hrs/Sht
LABOR RATE PER HOUR		\$265.00	\$225.00	\$168.00	\$130.00		
TRAFFIC							
SIGNING & PAVEMENT MARKINGS LAYOUT	2			16	32	48	24
ILLUMINATION LAYOUTS	2			30	60	90	45
ILLUMINATION CIRCUIT DIAGRAM	1			20	36	56	56
ILLUMINATION DETAILS	1			8	12	20	20
SHEETS & HOURS SUBTOTAL	6	0	0	74	140	214	
SUBTOTAL LABOR COSTS		\$0.00	\$0.00	\$12,432.00	\$18,200.00	\$30,632.00	
GENERAL NOTES AND SPECIFICATIONS							
GENERAL NOTES AND SPECIFICATIONS				2	2	4	NA
SHEETS & HOURS SUBTOTAL	0	0	0	2	2	4	
SUBTOTAL LABOR COSTS		\$0.00	\$0.00	\$336.00	\$260.00	\$596.00	
STANDARD DRAWINGS							
STANDARDS				2		2	NA
SHEETS & HOURS SUBTOTAL	0	0	0	2	0	2	
SUBTOTAL LABOR COSTS		\$0.00	\$0.00	\$336.00	\$0.00	\$336.00	
QUANTITY TAKE-OFFS AND QUANTITY SUMMARIES							
SUMMARY OF ILLUMINATION QUANTITIES	1			6	2	8	8
SUMMARY OF PAVEMENT MARKING QUANTITIES	1			6	2	8	8
SMALL SIGN SUMMARY	1			6	2	8	8
SHEETS & HOURS SUBTOTAL	3	0	0	18	6	24	
SUBTOTAL LABOR COSTS		\$0.00	\$0.00	\$3,024.00	\$780.00	\$3,804.00	
PROJECT MANAGEMENT							
PROJECT MANAGEMENT			20			20	NA
SHEETS & HOURS SUBTOTAL	0	0	20	0	0	20	40
SUBTOTAL LABOR COSTS		\$0.00	\$4,500.00	\$0.00	\$0.00	\$4,500.00	
TOTAL LABOR COSTS	9	\$0.00	\$4,500.00	\$16,128.00	\$19,240.00	\$39,868.00	
DIRECT EXPENSES						\$0.00	
TOTAL COSTS						\$39,868.00	

**ATTACHMENT B2
SUPPLEMENTAL AGREEMENT #2 FEE ESTIMATE**

**FORT BEND GRAND PARKWAY TOLL ROAD (SH 99) / WESTPARK TOLLWAY (FM 1093)
EASTBOUND/NORTHBOUND & WESTBOUND/NORTHBOUND DIRECT CONNECTORS**

Geotech Engineering and Testing

TASK DESCRIPTION	Principal Engineer	Senior Engineer	Graduate Engineer	Field Technician	Typing/Drafting	Unit of Measure	Estimated Qty	Rate	TOTAL LABOR HRS & COSTS
LABOR RATE PER HOUR	\$250.00	\$165.00	\$115.00	\$55.00	\$70.00				
GEOTECHNICAL STUDY									
Project Initiation Upon Receiving NTP									
Review of scope of work (including site visit)	3	1	1						5
Coordinate with Client, in obtaining the updated information of the project			2						2
Field Investigation									
TxDOT Permitting for Drilling		2	4						6
Develop a Drilling Plan			1						1
Staking the Four (4) Borings in the Field			5						5
Coordinate with Surveyors to Locate & Tie in Borings at the Site			1						1
Field Coordination during Drilling Including Utility Clearance, Texas One Call, and/or obtain drilling permission, site visits during drilling		4	10						14
Borehole Logging				35					35
Laboratory Testing									
Assign Laboratory Tests, Looking at Soil Samples		1	6						7
Data Reduction and Evaluation			4						4
Engineering Analysis									
Prepare Plan of Borings			1						1
Analyze Field and Laboratory Test Results			1						1
Prepare Summary of Laboratory Test Data			1						1
Edit and Prepare Final Boring Log			6						6
Prepare and Develop Boring Log Profiles			1						1
MSE Retaining Wall									
Lateral Pressures		2	6						8
Stability Analysis		2	6						8
Bearing Capacity		2	4						6
Global Stability, Short Term and Long Term		5	10						15
Sliding, Overturning Analysis		2	4						6
Settlement Analysis		2	10						12
Recommendations for Foundation Improvement		4	12						16
Bridges									
Bridge Foundations Recommendations including skin friction curves and end bearing curves, for driven piles and drilled footings		8	10						18
Recommendations for Lateral/Uplift Capacity of Drilled Footing for L-Pile		4	6						10
Group Effect		1	2						3
Settlement Analysis of the Pile-Supported Foundation		2	12						14
Recommendations for Pile/Drilled Footing Installations		1	2						3
Final Report									
Document the results of soil exploration, laboratory testing and geotechnical recommendations in a geotechnical draft report	9	14	30						53
Incorporate Review Comments and Prepare a Final Geotechnical Report	2	4	8						14
Review Plans and Specifications (if requested)	2	4	6						12
Technical Typing/Drafting					10				10
Unit Costs									
One Dimensional Consolidation Properties of Soil						each	4	\$450.00	\$ 1,800.00
Consolidation, Additional Increments						each	20	\$58.00	\$ 1,160.00
Soil Boring/Rock Coring (0' to 20')						lf	80	\$25.00	\$ 2,000.00
Soil Boring/Rock Coring (20' to 50')						lf	120	\$30.00	\$ 3,600.00
Soil Boring/Rock Coring (50' to 100')						lf	100	\$40.00	\$ 4,000.00
Soil Boring/Rock Coring (100' to 120')						lf	40	\$50.00	\$ 2,000.00
TCP Testing						each	68	\$31.00	\$ 2,108.00
Unconfined Compressive Strength (Soil)						each	20	\$51.00	\$ 1,020.00
Borehole Clearing						each	170	\$11.00	\$ 1,870.00
Water Content						each	34	\$71.00	\$ 2,414.00
Liquid and Plastic Limits						each	34	\$55.00	\$ 1,870.00
Percent passing #200 Sieve						each	10	\$72.00	\$ 720.00
UU Triaxial Tests						each	2	\$1,800.00	\$ 3,600.00
CU Triaxial Tests						ls	1	\$700.00	\$ 700.00
Mobilization/Demobilization for Drilling Rig									\$ -
Total for Unit Costs									
SHEETS & HOURS SUBTOTAL	16	65	172	35	10				298
SUBTOTAL LABOR COSTS	\$4,000.00	\$10,725.00	\$19,780.00	\$1,925.00	\$700.00				\$65,992.00
DIRECT EXPENSES									\$0.00
TOTAL COSTS									\$65,992.00

**ATTACHMENT B2
SUPPLEMENTAL AGREEMENT #2 FEE ESTIMATE**

**FORT BEND GRAND PARKWAY TOLL ROAD (SH 99) / WESTPARK TOLLWAY (FM 1093)
EASTBOUND/NORTHBOUND & WESTBOUND/NORTHBOUND DIRECT CONNECTORS**

Weisser Engineering & Surveying

TASK DESCRIPTION	PROJECT MANAGER (RPLS)	FIELD SUPERVISOR	SURVEY TECHNICIAN	3 PERSON CREW	CADD SUPPORT	ADMIN	RECORDS RESEARCH	TOTAL LABOR HRS & COSTS
LABOR RATE PER HOUR	\$140.00	\$100.00	\$105.00	\$165.00	\$90.00	\$60.00	\$80.00	
SURVEY								
Update Topo and Utilities	8	4	16	50	40	2	16	136
SHEETS & HOURS SUBTOTAL	8	4	16	50	40	2	16	136
SUBTOTAL LABOR COSTS	\$1,120.00	\$400.00	\$1,680.00	\$8,250.00	\$3,600.00	\$120.00	\$1,280.00	\$16,450.00
EXPENSES								
EXPENSES								\$0.00
TOTAL COSTS								\$16,450.00

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

1 of 2

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.
Aguirre & Fields, LP
Sugar Land, TX United States

Certificate Number:
2021-752996

Date Filed:
05/17/2021

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.
Fort Bend Grand Parkway Toll Road Authority

Date Acknowledged:
05/20/2021

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.
May 12, 2021 Supplemental #2
SH 99 Toll Road / Westpark Tollway (FM 1093) Project

4	Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
			Controlling	Intermediary
	Aguirre, LLC - General Partner	Sugar Land, TX United States	X	
	Aguirre, Oscar R.	Sugar Land, TX United States	X	
	Ahmed, Nazeer M.	Sugar Land, TX United States	X	
	Carle, Rick A.	Sugar Land, TX United States	X	
	Crosby, Christine R.	Sugar Land, TX United States	X	
	Gribble, Mark D.	Sugar Land, TX United States	X	
	Lee, Roger O.	Fort Worth, TX United States	X	
	Hazzard, Elizabeth A.	Oklahoma City, TX United States	X	
	Lee, Eugene J.	Fort Worth, TX United States	X	
	Hahn, Paul R.	Austin, TX United States	X	
	Lubitz, David J.	Austin, TX United States	X	
	Williams, Ryan J.	Austin, TX United States	X	

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

2 of 2

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**

Certificate Number:
 2021-752996

Date Filed:
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 Aguirre & Fields, LP
 Sugar Land, TX United States

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 Fort Bend Grand Parkway Toll Road Authority

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 May 12, 2021 Supplemental #2
 SH 99 Toll Road / Westpark Tollway (FM 1093) Project

4	Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
			Controlling	Intermediary

5 Check only if there is NO Interested Party.

6 UNSWORN DECLARATION

My name is _____, and my date of birth is _____.

My address is _____, _____, _____, _____, _____.
(street) (city) (state) (zip code) (country)

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

Executed in _____ County, State of _____, on the _____ day of _____, 20____.
(month) (year)

 Signature of authorized agent of contracting business entity
 (Declarant)