EXHIBIT "F"
Supplemental Agreement Form

THE STATE OF TEXAS §
§
COUNTY OF HIDALGO §

SUPPLEMENTAL AGREEMENT NO. 1
TO WORK AUTHORIZATION NO. 3
TO AGREEMENT FOR PROFESSIONAL SERVICES
C-18-228-10-09

THIS **SUPPLEMENTAL AGREEMENT** is made pursuant to the terms and conditions of Article 6 of the Agreement made by and between **HIDALGO COUNTY**, acting herein by and through the **Commissioner's Court**, hereinafter called the "**Owner**", and L&G ENGINEERING, Professional Engineers of Mercedes, Texas, hereinafter called the "**Engineer**".

WITNESSETH

WHEREAS, the **Owner** and the **Engineer** executed the **Agreement** on the 9th day of October, 2018 concerning Geotechnical and Construction Material Testing Engineering Services for the Hidalgo County Sheriff's Bus Barn located in Hidalgo County Precinct No. 4 hereinafter referred to as the ("**Project**"); and,

WHEREAS, Article 6 of the **Agreement**, Supplemental Agreements, establishes; and,

WHEREAS, it has become necessary to amend the contract to amend Exhibit B-Services to be provide by Engineer of Work Authorization No. 3 to include the scope of services of the Construction Materials Testing (CMT) for the Project; and

WHEREAS, it has become necessary to amend the contract to amend Exhibit D-Cost Proposal to be provided by Engineer of Work Authorization No. 3 to add the cost of the Construction Materials Testing (CMT) for the Project; and

WHEREAS, the Estimated Cost will increase from the Work Authorization No. 3 amount of $10,886.64 to $16,395.82 (increase of $5,509.18); therefore, the amount of Supplemental No. 1 is $16,395.82.

NOW THEREFORE, premises considered, the **Owner** and the **Engineer** agree that said **Agreement** is amended as follows:

I. Sections of the Work Authorization, Exhibit B-Scope of Services to be provided by the Engineer and Exhibit-D-Cost Proposal, are revised to reflect the above listed modifications of this Supplemental.

All other provisions are unchanged and remain in full force and effect.

IN WITNESS WHEREOF, the Engineer and the Owner have caused this Supplemental Agreement to the Agreement for Professional Services to be executed as of the 23rd day of June, 2020.

THE ENGINEER:
L&G ENGINEERING

BY:_____
Jacinto Garza, P.E., President

THE OWNER:
HIDALGO COUNTY

BY:_____
Richard F. Cortez, County Judge

LIST OF ATTACHMENTS:

REVISED EXHIBIT B - Scope of Services to be provided by the Engineer
REVISED EXHIBIT D - Cost Proposal

EXHIBIT B

Scope of Services to be provided by the Engineer

GENERAL SCOPE OF WORK

The work to be performed by the **Engineer** under this Work Authorization shall consist of; Geotechnical Drilling and Miscellaneous Field Services, Geotechnical Laboratory Testing Services and Geotechnical Engineering Services for the HC Sheriff's Office Bus Barn project hereinafter denoted as the **Project**.

The **Engineer** shall provide all services required (as noted under this Work Authorization) for usage by the **Owner** in the preparation of plans, specification and estimate, and related documents for the **Project**. The **Engineer** shall maintain a direct line of communication and coordinate with the **Owner** throughout the project.

The **Engineer** shall furnish all equipment, materials, supplies, and incidentals as needed to perform the services required, except as otherwise specified to be provided by the **Owner**.

Specific activities to be performed by the **Engineer** include the following:

I. Geotechnical Drilling Services and Miscellaneous Field Services

The **Engineer** will coordinate with the **Owner** for verification of project vicinity map indicating general boring site locations.

The **Engineer** will provide drilling/excavation and sampling of subsurface materials as follows in accordance with this Work Authorization and in conformance with ASTM guidelines:

- Structural Boring – Two (2) Borings will be drilled at approximate locations of the building structures on the project (Borings will be advanced to a depth of approximately 35 feet below the existing top of natural ground) (Boring Designation B-01 through B-02)

The **Engineer** will stake the boring locations and provide utility clearances prior to performing the field exploration portion of the project. The **Owner** will be responsible to provide any necessary permits or authorization to access areas (right of entry) where borings are to be drilled. All borings will be located in the field by a representative of the **Engineer**. All boring locations will be documented with GPS coordinates. Field survey and tie-down locations of all borings will be the responsibility of the **Owner**.

The borings will be advanced to the specified depth(s) and in-situ soil testing will be performed in general accordance with ASTM and/or TxDOT Standard Test Procedures and Geotechnical Manual (ASTM D1586 – Standard Penetration Testing (SPT) and/or Tex-132-E – Texas Cone Penetration (TCP)). In addition, where applicable, thin-walled Shelby tube samples may be collected (ASTM D1587 – Thin Walled Tube Sampling). The soils will be sampled as needed to verify subsurface materials and strata changes. Final drilling depths and elevations will be based on topographic conditions at the time of drilling operations.

All samples will be removed from the sample apparatus during drilling operations. The **Engineer** will conduct various field tests on the recovered samples, visually classify the samples, and record the appropriate data on a field boring log. The samples will be appropriately packaged to minimize loss of natural moisture content and to reduce the possibility of damage during transportation to the soil testing laboratory facility.

Drilling services will include an initial water strike depth and a 24-hour water level reading at each boring location. Following completion of drilling and sampling, all boreholes will be backfilled with soil cuttings from the completed borings. If there is insufficient soil cuttings available, alternate fill will be used to backfill the completed boreholes.

This proposal does not include activities and corresponding costs that may be associated with the following:

- Providing an ATV mounted drill rig, dozer or special equipment to clear areas of vegetation and debris or re-grading the site to gain access to the boring locations;
- Re-grading the site or portions of the site after drilling activities are completed;
- Site safety meetings that may be required;
- Encountering hazardous or contaminated soils or substances during our field activities.

The **Engineer** will notify the **Owner** should these services become necessary to complete field exploration activities, and if approved by the **Owner**, additional negotiated fee and scope will be incorporated through Supplemental Work Authorization.

II. Geotechnical Laboratory Testing Services

Geotechnical Laboratory Testing will be performed by the **Engineer** on the samples recovered during the field study to evaluate their physical and engineering properties. Laboratory testing will be performed in general accordance with ASTM and/or TxDOT Standard Test Procedures. Testing shall include the following test procedures:

(1) Atterberg Limits (ASTM D4318 or Tex-104-E, 105-E, 106-E)
(2) Gradation (-200) (ASTM D1140 or Tex-111-E)
(3) Lab. Determination of Moisture in Soils (ASTM D2216 or Tex-103-E)
(4) Sulfate Content of Soil (ASTM C1580 or Tex-145-E)

III. Geotechnical Engineering Services

The **Engineer** will utilize information gathered from the field and laboratory testing to provide the **Owner** with Geotechnical Engineering results and analyses for the **Project**. The findings and conclusions derived from the results and analyses will be presented in an engineering report and provided to the **Owner** (electronic .pdf medium only). The report will include a boring location plan, boring logs with laboratory classification of recovered soil samples at the boring locations and subsurface water conditions encountered. The report will provide analyses and/or engineering recommendations as follows:

1	Structural Evaluation of Borings / Calc. Shear Strength Models / Soil Profiles
2	Deep Foundation Analysis & Recs (All Found Capacity Curves and Skin Friction Charts)
3	Construction Recommendations based on Geotechnical Investigation/Analyses

The report will provide general comments and applicable recommendations regarding construction methods, sequences, and potential difficulties that may arise during overall construction as it relates to the soil aspects of this project. This information may serve to guide both geometric modeling and foundation selection and design as well as provide assistance in the preparation of specifications for the project.

IV. Construction Material Testing Services

The **Engineer** will complete the Construction Materials Testing (CMT) for this project based on the requirements and testing denoted in the Exhibit D.

EXHIBIT "D"
Cost Proposal

L&G Consulting Engineers, Inc.

Geotechnical Engineering, Report & Summary

L&G Consulting Engineers, Inc. (Division: L&G ENGINEERING LAB)

		WA #3 - HC Sheriff's Bus Barn Project ***Client: Hidalgo County Pct. 4***	MANHOURS Senior Project Manager	Senior Engineer (Geotechnical)	Project Engineer	Engineering Tech / GIS	Admin/Clerical	Total
	TASK							
	1	Structural Evaluation of Borings / Calc. Shear Strength Models / Soil Profiles			2			2
	2	Deep Found Analysis & Recs (All Found Capacity Curves and Skin Friction Charts)			4			4
	3	Construction Recommendations based on Geotechnical Investigation/Analyses		2	2			4
	4	Geotechnical Report (Including Soil Survey/Geog./All Analyses)		2	8	2	2	14
	5	Meetings/Coordination	2	2				4
		Subtotal	**2**	**6**	**16**	**2**	**2**	**28**
Labor Hours			**2**	**6**	**16**	**2**	**2**	**28**
Contract Rate (Contract Rates)			$ 215.34	$ 180.42	$ 139.68	$ 78.57	$ 58.20	
Total Labor Costs			**$ 430.68**	**$ 1,082.52**	**$ 2,234.88**	**$ 157.14**	**$ 116.40**	**$ 4,021.62**

LINE ITEM EXPENSES

Printing Reproduction (None - Electronic Copies Only)	$	-
*L&G Consulting Engineers, Inc. (Sub-Total for Geo. Field & Lab Services)	$	6,865.02
** - (Please see page 2, for detailed estimates of testing)*		
Total Expenses	**$**	**6,865.02**

L&G Total Cost **$ 10,886.64**

L&G Consulting Engineers, Inc.

EXHIBIT "D"
Geotechnical Field and Laboratory Services
WA #3 - HC Sheriff's Office Bus Barn Project
Prepared for Hidalgo County Pct. 4

	SERVICES		UNITS	UNITS	UNIT COST	TOTAL COST
I.	**Project Management / Review**					
	A. Principal / Project Manager / Review		Hours			
	B. Senior Project Engineer (Staff)		Hours			$ -
	C. Typing and Clerical (Report)		Hours			
	D. Lodging		Day			
	E. Mileage		Mile			
	F. Air Travel		Trip			
II.	**Utility Clearances / Boring Locates**					
	A. Technician (Locate Borings)(Util Clr)		Hours	**2**	**$ 58.20**	**$ 116.40**
	B. Staff Engineer/Geologist/Scientist		Hours			
	C. Rebar (stakes with impalement covers)		Cost +12.5%			
	D. Vehicle Charge		Mile			
	E. Mileage		Mile	**68**	**$ 0.54**	**$ 36.72**
	F. Survey Locate Borings (X,Y,Z)		LS			$ -
	G. Clear Site for Access (Dozer)		LS			$ -
III.	**Field Exploration**					
A	Mobilization/Demobilization		Day	**1**	**$ 468.56**	**$ 468.56**
B	Field Exploration					
	1. ASTM Drill & SPT/Tube Sampling (SS)		Feet	**70**	**$ 32.97**	**$ 2,307.90**
	2. TxDOT TCP Field Test (BL/ft)		Ea.	**20**	**$ 5.89**	**$ 117.80**
	3. Field Logger/Eng Tech (Soil & Agg Tech)		Hour	**8**	**$ 58.20**	**$ 465.60**
	4. 24 Hr. Water Level Observations		Hour	**2**	**$ 58.20**	**$ 116.40**
	5. Piezometers		Each			$ -
	6. Supp. Vehicle-Trailer, Tools H2O Supply		Mile	**68**	**$ 1.75**	**$ 119.00**
	7. Vehicle Charge		Mile	**136**	**$ 0.54**	**$ 73.44**
C	Miscellaneous Field Services					
IV.	**Engineering Data Analysis / Report**					
	1. Staff Engineer		Hours			
	2. Sr. Eng Tech / Geo Eng (Soil Classification)		Hours	**2**	**$ 116.40**	**$ 232.80**
	3. Sr. Eng Tech / Geo Eng (Logs & Summ.)		Hours	**2**	**$ 116.40**	**$ 232.80**
	4. Moisture Content		Ea.	**20**	**$ 11.20**	**$ 224.00**
	5. Atterberg Limits		Ea.	**14**	**$ 84.51**	**$ 1,183.14**
	6. -200 Determination		Ea.	**14**	**$ 70.51**	**$ 987.14**
	7. Sieve Analysis (w/ Hydrometers)		Ea.			$ -
	8. UC Testing (w/ Unit Weight)		Ea.			$ -
	9. Consolidation Testing		Ea.			$ -
	10. Dry Unit Weight		Ea.			$ -
	11. Soils Sulfate Content		Ea.	**2**	**$ 91.66**	**$ 183.32**
	12. Determination of Soil pH		Ea.			$ -
	13. Lime Series Testing (5 Pt.)		Ea.			$ -
	Project Sub-Total (Geo Field and Lab)					**$ 6,865.02**

EXHIBIT D

FEE PROPOSAL - ESTIMATED MAN-HOURS AND TEST BREAKDOWN

Hidalgo County Pct. 4 - Hidalgo County Sheriff's Bus Barn Project
Construction Materials Testing

Embankment/Subgrade (Scarified Area 6" Below Proposed Flexible Base)

- 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.

								Subgrade
		TxDOT/ASTM Test	Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Atterberg Limits		ASTM D 4318			Each	1	$84.51	$84.51
Gradation		ASTM D 422			Each	1	$101.59	$101.59
Moisture/Density		ASTM D 698		Small Area - 1 on job	Each	1	$218.35	$218.35
In-Place Density		ASTM D 6938	95% Den at -1 to +3 OM	Small Area - 6 on site	Each	6	$25.37	$152.22
Reports				LL/PI, Grad, MD, FD	Each	5	$25.03	$125.15
Tech Time (Soils)				4 hrs - PI,Gr,MD, 2 hrs - FD	Hour	16	$58.20	$931.20
# of Trips (Tech)				3 Trips (40 Miles RT)	Mile	120	$0.54	$64.80
**Admin/Clerical					Hour	2	$58.20	$116.40
							Item Subtotal	$1,794.22

Flexible Base (8" Depth as Per Plans)

- 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.

								8" Flex Base
		TxDOT/ASTM Test	Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Atterberg Limits		ASTM D 4318			Each	1	$84.51	$84.51
Gradation		ASTM D 422			Each	1	$101.59	$101.59
Wet Ball Mill		Tex-116-E			Each	1	$246.72	$246.72
Moisture/Density		ASTM D 698		Small Area - 1 on job	Each	1	$218.35	$218.35
In-Place Density		ASTM D 6938	95% Den at -1 to +3 OM	Small Area - 6 on site	Each	6	$25.37	$152.22
Reports				LL/PI, Grad, MD, FD	Each	6	$25.03	$150.18
Tech Time (Soils)				4 hrs - PI,Gr,MD, 2 hrs - FD	Hour	20	$58.20	$1,164.00
# of Trips (Tech)				3 Trips (40 Miles RT)	Mile	120	$0.54	$64.80
**Admin/Clerical					Hour	3	$58.20	$174.60
							Item Subtotal	$2,356.97

Hydraulic Cement Concrete Misc. - Drilled Shaft Foundations (28 Day Strength = 4000 psi)

- Field sampling and testing of fresh concrete and laboratory testing of hardened concrete to determine compliance with project plans and specifications.

								Drilled Shafts
		TxDOT Test	Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Concrete								
*Strength		ASTM C 192 and C 39	Min. 3 Sets per Class Conc	1 Conc Class	Each	9	$29.62	$266.58
Slump		Tex-415-A	4-6"	Assume 2 Tests - No Charge	Each	2	$0.00	$0.00
Reports				Conc.	Each	7	$25.03	$175.21
Tech Time (Aggr)			Not Required		Hour	0	$52.95	$0.00
Tech Time (Conc)					Hour	8	$58.20	$465.60
# of Trips (Tech)				2 Trips (40 Miles RT)	Miles	80	$0.54	$43.20
**Admin/Clerical					Hour	1	$58.20	$58.20
							Item Subtotal	$1,008.79

*** 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 3 Cylinders (1 Cyl at 7-day or 2 Cyl at 28-day)
~ As per project documents
**** Project Administrative Fee is assessed on a per invoice basis and involves engineering review, evaluation, management and administration**

Summary

Sub-Total (CMT Items) =		$5,159.98
Eng. Lab Mgr. (Coor. w/Area Eng./Rpt. Rev.)	(3 hrs x 116.40 Hr.)	$349.20
Total CMT :		**$5,509.18**