

HIDALGO COUNTY
Professional Engineering Services
Contract # C-12-225-11-06
Work Authorization Form

WORK AUTHORIZATION NO. 1

THIS WORK AUTHORIZATION is made pursuant to the terms and conditions of Section I.A. of the Agreement made by and between **HIDALGO COUNTY**, action herein by and through the **Commissioner's Court**, hereinafter called the "**Owner**," and, **L&G ENGINEERING LABORATORY, LLC** professional engineers of Texas, hereinafter called "**Engineer**".

PART 1. SCOPE OF WORK

The purpose of this Work Authorization is for the **Engineer** to provide **Geotechnical Engineering Services for the Sunflower Park Recreational Facility Improvement Project located in Hidalgo County Precinct No. Four (4)**

The scope of services to be provided by the **Owner** is identified in *EXHIBIT "A" – Scope of Services to be Provided by the Owner* attached hereto.

The scope of services to be provided by the **Engineer** is identified in *EXHIBIT "B" – Scope of Services to be Provided by the Engineer* attached hereto.

PART 2. ESTIMATED COST

The estimated cost for services under this Work Authorization is **\$14,862.56**. This amount is based upon the costs outlined in the Estimated **Cost Proposal** attached hereto as **EXHIBIT "D"**.

PART 3. PAYMENT

Compensation and payment to the **Engineer** for the services established under this Work Authorization shall be made in accordance with Article/Part/Section 5.1 of the Agreement.

PART 4. FUNDING

This Work Authorization No. 1 shall be funded through funding source:

Account No. _____

Requisition Number _____ (MUST BE INCLUDED AFTER CC APPROVAL)

PART 5. PERIOD OF SERVICE

This Work Authorization shall become effective on the date of final acceptance of the parties hereto, and terminate upon completion of scopes of the work authorization or (DATE).

ATTACHMENT "A"
Scope of Services (Owner)

PROJECT: Sunflower Park Recreational Facility Improvement Project in Hidalgo County Precinct No. Four (4)

SERVICES TO BE PROVIDED BY OWNER

The County of Hidalgo will provide **L&G Engineering Laboratory, LLC** with **Documents, Plans and Specifications** for the **Sunflower Park Recreational Facility Improvement Project in Precinct No. 4 Project.**

ATTACHMENT "B"
Scope of Services

PROJECT: Geotechnical Engineering Services for the Sunflower Park Recreational Facility Improvement Project in Hidalgo County Pct. No. 4.

GENERAL SCOPE OF WORK

The Scope of Work will entail providing **The County of Hidalgo** with **Geotechnical Engineering Services**.

The Scope of Work is identified as follows:

- **Geotechnical Engineering Services**

L&G Engineering will furnish all equipment, materials, supplies, and incidentals as needed to perform the services required by this Contract: The work is as follows:

Geotechnical Engineering Services

Geotechnical Drilling Services

L&G Engineering will provide drilling services for **Hidalgo County Pct. No. 4**. Soil samples will be removed from the sample apparatus during drilling operations. One of our geologists or engineering technicians 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 their natural moisture content and to reduce the possibility of damage during transportation to our soils laboratory for testing. The tests performed on these samples will include Moisture Content, Liquid Limit, Plastic Limit, Plasticity Index and Materials Finer than No. 200. Unconfined Compressive Strength and Dry Unit Weight tests will be performed as necessary to provide detailed description of undisturbed samples.

Drilling services will also include a 24-hour water level reading at each boring location. Piezometers, when required, will be installed to maintain the integrity of the borehole overnight or over a weekend. Following completion of drilling, sampling, and subsurface water monitoring operations, all boreholes will be backfilled with soil cuttings from the completed borings. If enough soil cuttings are unavailable, clean sand will be used to backfill the completed boreholes. If a piezometer is installed, the pipe will be removed following the water level readings and the borehole backfilled as described above.

Once all of the Engineering Properties of the soils have been determined, the final Log of Boring is created using the field and laboratory data. Included in the Log of Boring are THD Penetrometer Blow Counts, actual Moisture Contents, Plasticity Indices, and other laboratory test data obtained during the laboratory testing phase of the project. Proper description and location of strata, ground water elevations and test hole elevations will also be included in the Log of Boring.

Engineering Services

Engineering analyses will be conducted after reviewing the results of both the field and laboratory phases of the study. The findings and conclusions derived from the analyses will be presented in a written engineering report which will be prepared by the engineer. The report will include a boring location plan, boring logs with laboratory classification of recovered soil samples and subsurface water conditions encountered. The report will provide engineering recommendations for:

- Pier capacity curves; and
- Soil parameters that may be used in designing the foundations for the planned structures.

The geotechnical 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 and foundation aspects of this project. This information may serve to guide foundation selection and design and assist in the preparation of specifications for the project.

This contract **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 to re-grade 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; or
- Encountering hazardous or contaminated soils or substances during our field activities.

Hidalgo County Pct. No. 4 will be notified should these services become necessary for the completion of field exploration activities.

This proposal **does** include activities and corresponding costs that may be associated with locating buried utilities or pipelines as follows:

- Providing PVC pipe for water level readings; and
- Clearing the boring locations for underground utilities.

Hidalgo County Pct. No. 4 will be responsible for obtaining any necessary permits or authorization to egress areas where the borings are to be drilled.

Schedule

Based on the requested services, it is estimated that the drilling operations can take approximately two (2) to three (3) days to complete. We anticipate that drilling operations can usually begin within two (2) to three (3) days following notice to proceed, staking of the borings, clearing the boring locations of utilities and site and weather conditions permitting. The report and engineering analyses should generally be completed within two (2) weeks after completion of the drilling operations.

ATTACHMENT "C"
Work Schedule

PROJECT: Geotechnical Engineering Services for the Sunflower Park Recreational Facility Improvement Project in Hidalgo County Pct. No. 4.

Work Schedule

L&G Engineering Laboratory will provide **Hidalgo County Pct. # 4** with **Geotechnical Engineering Services** as outlined in **Contract Agreement C-12-225-11-06**.

ATTACHMENT "D"
Cost Proposal

PROJECT: Geotechnical Engineering Services for the Sunflower Park Recreational Facility Improvement Project in Hidalgo County Pct. No. 4.

See Attached

Attachment D
 Geotechnical Field and Laboratory Services
 Sunflower Park Recreational Facility Improvement Project
 Prepared for Hidalgo County Pct. No. 4

	SERVICES	UNITS	UNITS	UNIT COST	TOTAL COST
I.	Project Management / Review/Report				
	A. Engineer (Principal) (Senior Project Manager)	Hours	4	\$ 154.76	\$ 619.04
	B. Engineer (Principal)(Geotechnical)	Hours	8	\$ 154.76	\$ 1,238.08
	C. EIT/Engineer in Training-(Bear. Cap/PVR/Found. Capacity)	Hours	24	\$ 116.01	\$ 2,784.24
II.	Utility Clearances / Boring Locates				
	A. Technician/Soils (Logger) (Locate Borings)(Util Clr)	Hours	3	\$ 46.44	\$ 139.32
		LS			
		Cost			
		Mile			
	B. Mileage (Logger)(Soil Tech)	Mile	60	\$ 0.51	\$ 30.60
III.	Field Exploration				
A	Mobilization/Demobilization				
	1. Mobilization (Drill Rig and Crew)	Daily	2	\$ 430.82	\$ 861.64
B	Field Exploration				
	1. Soil Boring/Solid Stem (w SPT)	Feet	60	\$ 30.17	\$ 1,810.20
	Soil Boring/Mud Rotary (w SPT)	Feet	60	\$ 30.17	\$ 1,810.20
	2. Texas Cone Penetration Tests	Ea.			\$ -
	3. Technician (Soils)(Logger)	Hour	16	\$ 46.44	\$ 743.04
	4. Technician (Soils)(Logger)24 Hr. Water Level Observations	Hour	3	\$ 46.44	\$ 139.32
	5. Piezometers	Each			
	6. Vehicle Charge (Support Truck)	Mile	60	\$ 1.61	\$ 96.60
	7. Mileage (Logger)(Soil Tech)	Mile	120	\$ 0.51	\$ 61.20
C					
IV	Engineering Data Analysis / Report				
	1. Engineering Specialist (Soil Classification)	Hours	6	\$ 116.01	\$ 696.06
	2. Engineering Specialist (Boring Logs)	Hours	6	\$ 116.01	\$ 696.06
	3. Moisture Content	Ea.	42	\$ 10.30	\$ 432.60
	4. Atterberg Limits of Soils	Ea.	20	\$ 77.33	\$ 1,546.60
	5. Finer #200 Sieve	Ea.	18	\$ 53.85	\$ 969.30
	6. Unconfined Compression Testing	Ea.	2	\$ 48.48	\$ 96.96
	7. Admin/Clerical/Report Reproduction	Hr.	2	\$ 45.75	\$ 91.50
Project Total					\$ 14,862.56