

**HIDALGO COUNTY
WORK AUTHORIZATION NO. 1
Agreement # C-22-0695-01-01**

THIS WORK AUTHORIZATION is made pursuant to the terms and conditions of the Professional Engineering Services Agreement No. C-22-0695-01-01, incorporated herein by reference, for the " Canopy Improvements at the Linn San Manuel Fire Station" project made by and between HIDALGO COUNTY, action herein by and through the Commissioner's Court, hereinafter called the "**Owner**," and TERRACON CONSULTANTS, INC., hereinafter called "**Engineer**".

PART 1. SCOPE OF WORK

The purpose of this Work Authorization is for the **Engineer** to provide field exploration, laboratory testing, and engineering/project delivery.

The **Engineer** is to provide the scope of Services as required by the Agreement with Owner.

The scope of services to be provided by the **Engineer** is identified in **Attachment "A"** – "*Scope of Services to be provided by Engineer*" attached hereto and incorporated by reference.

PART 2. ESTIMATED COST

The estimated cost for services under this Work Authorization is **\$ 5,647.40**. This amount is based upon the costs outlined in the **Attachment "B"** – "*Fee Proposal*" attached hereto and incorporated by reference.

PART 3. PAYMENT

Compensation and payment to the Engineer for the services established under this Work Authorization shall be made in accordance with the **Professional Engineering Services for Geotechnical and Construction Material Testing** Agreement No. C-22-0695-01-01 between the **Owner** and the **Engineer**.

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 the scopes of the Work Authorization, within the limits of Agreement No. C-22-0695-01-01 , provided in this Work Authorization; or on (_____ DATE _____)**. *If applicable*: Engineer shall conform to the approved "Work/Project Schedule", attached hereto and incorporated by reference herein as **Attachment "C"**.

PART 6. RESPONSIBILITIES AND OBLIGATIONS

This Authorization does not waive the parties’ responsibilities and obligations provided under the **Agreement No. C-22-0695-01-01.**

PART 7. ACKNOWLEDGEMENT AND CONFIRMATION

Acknowledgement and confirmation by **Hidalgo County Precinct 4, Commissioner Ellie Torres**, as to content and detail of this **Work Authorization No. 1.**

HIDALGO COUNTY PRECINCT No. 4

By: _____
Ellie Torres, Commissioner

PART 8. ACCEPTANCE AND APPROVAL

This Work Authorization is hereby accepted, approved by Hidalgo County Commissioners’ Court on October 17th, 2023 as indicated below and effective as of **17th day of October 2023.**

EXECUTED as of the day and year first written above.

APPROVED BY COMMISSIONERS’ COURT ON OCTOBER 17th, 2023.

Agenda Item No. 92817

Executive Office: _____

ENGINEER:
TERRACON CONSULTANTS, INC.

COUNTY:
COUNTY OF HIDALGO

Alfonso A. Soto, P.E., D.GE., F. ASCE

Hon. Richard F. Cortez, County Judge

ATTEST:

Arturo Guajardo, Jr., County Clerk

LIST OF ATTACHMENTS:

- Attachment “A”** – Project Understanding
- Attachment “B”** - *Scope of Services*
- Attachment “C”** - *Compensation and Project Schedule*
- Attachment "D"** - Estimated Geotechnical Engineering Cost
- Attachment "E"** - Anticipated Exploration Plan



1506 Mid Cities Drive
Pharr, Texas 78577
P (956) 283 8254
Terracon.com

October 5, 2023

Hidalgo County Drainage District No. 1 - Precinct 4
902 N. Doolittle
Edinburg, Texas 78542

Attn: Mr. Omar Anzaldua Jr., P.E., CFM, PMP, CCM
P: (956) 292 7080 Ext. 5816
E: omar.anzaldua@hcdd1.org

RE: Proposal for Geotechnical Engineering Services
Linn - San Manuel Fire Station Canopy
21661 TX-186
Edinburg, Texas
Terracon Proposal No. P88235149

Dear Mr. Anzaldua:

We appreciate the opportunity to submit this proposal to Hidalgo County Drainage District No. 1 - Precinct 4 (HC-P4) to provide Geotechnical Engineering services for the above referenced project. We understand that we have been chosen to provide these services for this publicly funded project. Therefore, by providing cost information we are not in violation of the Texas Professional Services Procurement Act. The following are exhibits to the attached Agreement for Services.

Attachment A	Project Understanding
Attachment B	Scope of Services
Attachment C	Compensation and Project Schedule
Attachment D	Estimated Geotechnical Engineering Cost
Attachment E	Anticipated Exploration Plan

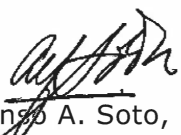
Our fee to perform the Scope of Services described in this proposal is outlined in Exhibit C as well as a general breakdown of our anticipated schedule. Your authorization for Terracon to proceed in accordance with this proposal can be issued by signing and returning a copy of the attached Agreement for Services to our office.

Sincerely,

Terracon

(Texas Firm Registration No. F-3272)


Martin Reyes
Group Manager


Alfonso A. Soto, P.E., D.GE
Senior Principal



ATTACHMENT A

PROJECT UNDERSTANDING

Attachment A – Project Understanding

Our Scope of Services is based on our understanding of the project as described by HC-P4 and the expected subsurface conditions as described below. We have not visited the project site to confirm the information provided. Aspects of the project, undefined or assumed, are highlighted as shown below. We request HC-P4 and/or the design team verify all information prior to our initiation of field exploration activities.

Planned Construction

Item	Description
Information Provided	By Mr. Omar Anzaldua Jr., P.E. with Hidalgo County Precinct 4 on October 2, 2023.
Project Description	Linn - San Manuel Fire Station Canopy extension
Proposed Structure	The project will consist of the following structure: <ul style="list-style-type: none"> ■ Canopy extension (approx. 1,300 square feet)
Construction Type	We anticipate that the canopy extension would likely consist of pre-engineered metal structure supported by a shallow or deep foundation system.
Finished Floor Elevation (FFE)	Information was not provided at this time.
Maximum loads (assumed)	<ul style="list-style-type: none"> ■ Columns: 20 - 50 kips maximum ■ Slabs: 250 pounds per square foot maximum
Grading/Slopes	Up to 1 foot of cut and 2 feet of fill may be required to develop final grade.

Site Location and Anticipated Conditions

Item	Description
Parcel Information	The proposed site is located at 21661 TX-186 in Edinburg, Texas. Approx. Latitude: 26.554928° N Longitude: 98.119615° W. (See Exhibit D)
Existing Improvements	Developed land
Current Ground Cover	Bare soils and native grass (assumed)

Existing Topography	Relatively flat and level.
Site Access	We expect the site, and all exploration locations, are accessible with our truck-mounted drilling equipment and support vehicles.
Expected Subsurface Conditions	Based on the Geologic Atlas of Texas, McAllen - Brownsville prepared by The University of Texas, the site is located within the Goliad Formation (Mg) Phanerozoic Cenozoic Tertiary Miocene Age at this site. The Goliad Formation (Mg) soils are composed of clay or mud and sandstone. The clay, sandstone, marl, caliche, limestone, and conglomerate have a thickness of 100 to 500 feet.



ATTACHMENT B

SCOPE OF SERVICES

Attachment B - Scope of Services

Our proposed Scope of Services consists of field exploration, laboratory testing, and engineering/project delivery. These services are described in the following sections.

Field Exploration

The field exploration program consists of the following:

Number of Borings	Planned Boring Depth (feet) ¹	Planned Location ²
2	25	Canopy extension

1. Below existing grade.
2. The planned boring locations are shown on the attached **Anticipated Exploration Plan**.

Boring Layout and Elevations: We will use handheld GPS equipment to locate borings with an estimated horizontal accuracy of +/-20 feet. Field measurements from existing site features may be utilized. If available, approximate elevations will be obtained by interpolation from a site specific, surveyed topographic map.

Subsurface Exploration Procedures: We will advance borings with a truck-mounted drill rig using continuous flight augers (solid stem and/or hollow stem, as necessary, depending on soil conditions) and/or rotary wash boring techniques. Five samples will be obtained in the upper 10 feet of each boring and at intervals of 5 feet thereafter. Soil sampling is typically performed using thin-wall tube and/or split-barrel sampling procedures. The split-barrel samplers are driven in accordance with the standard penetration test (SPT). The samples will be placed in appropriate containers, taken to our soil laboratory for testing, and classified by a Geotechnical Engineer. In addition, we will observe and record groundwater levels during drilling and sampling.

Our exploration team will prepare field boring logs as part of standard drilling operations including sampling depths, penetration distances, and other relevant sampling information. Field logs include visual classifications of materials observed during drilling and our interpretation of subsurface conditions between samples.

Property Disturbance: Terracon will take reasonable efforts to reduce damage to the property. However, it should be understood that in the normal course of our work some disturbance could occur including rutting of the ground surface and damage to landscaping and/or crops.

The boreholes will be backfilled with on-site soil cuttings after completion of the groundwater level observations, if any. Our services do not include repair of the site beyond backfilling our boreholes. Excess auger cuttings will be dispersed in the general vicinity of the borehole or removed from the site.

Safety

Terracon is not aware of environmental concerns at this project site that would create health or safety hazards associated with our exploration program; thus, our Scope considers standard OSHA Level D Personal Protection Equipment (PPE) appropriate. Our Scope of Services does not include environmental site assessment services, but identification of unusual or unnatural materials observed while drilling will be noted on our logs.

Exploration efforts require borings into the subsurface, therefore Terracon will comply with local regulations to request a utility location service (Texas 811). We will consult with the landowner/client regarding potential utilities or other unmarked underground hazards. Based upon the results of this consultation, we will consider the need for alternative subsurface exploration methods as the safety of our field crew is a priority.

Private utilities should be marked by the owner/client prior to commencement of field exploration. Terracon will not be responsible for damage to private utilities not disclosed to us.

If the owner/client is unable to accurately locate private utilities, Terracon can assist the owner/client by coordinating or subcontracting with a private utility locating services. Fees associated with the additional services are not included in our current Scope of Services and will be forwarded to our client for approval prior to initiating.

The detection of underground utilities is dependent upon the composition and construction of the utility line; some utilities are comprised of non-electrically conductive materials and may not be readily detected. The use of a private utility locate service would not relieve the landowner/client of their responsibilities in identifying private underground utilities.

Site Access: Terracon must be granted access to the site by the property owner. Without information to the contrary, we consider acceptance of this proposal as authorization to access the property for conducting field exploration in accordance with the Scope of Services. Our proposed fees do not include time to negotiate and coordinate access with landowners or tenants. Terracon will conduct field services during normal business hours (Monday through Friday between 7:00am and 5:00pm). If our exploration must take place over a weekend or at night, please contact us so we can adjust our schedule and fee.

Laboratory Testing

The project engineer will review field data and assign laboratory tests to understand the engineering properties of various soil strata. Exact types and number of tests cannot be defined until completion of fieldwork, but we anticipate the following laboratory testing may be performed:

- Water Content
- Atterberg Limits
- Unconfined Compressive Strength
- Grain Size Analysis
- Swell
- Unit Dry Weight

Our laboratory testing program often includes examination of soil samples by an engineer. Based on the results of our field and laboratory programs, we will describe and classify soil samples in accordance with the Unified Soil Classification System (USCS).

Engineering and Project Delivery

The results of our field and laboratory programs will be evaluated, and a geotechnical engineering report will be prepared under the supervision of a licensed professional engineer. The geotechnical engineering report will provide the following:

- Boring logs with field and laboratory data
- Stratification based on the Unified Soil Classification System (USCS)
- Groundwater levels, if observed during and after the completion of drilling
- Site Location and Exploration Plans
- Subsurface exploration procedures
- Description of subsurface conditions
- Recommended foundation options and engineering design parameters
- Estimated settlement of foundations
- Recommendations for design of floor slabs
- Seismic site classification (IBC)
- Subgrade preparation/earthwork recommendations

In addition to an emailed report, your project will also be delivered using our **Client Portal**. Upon initiation, we provide you and your design team the necessary link and password to access the website (if not previously registered). Each project includes a calendar to track the schedule, an interactive site map, a listing of team members, access to the project documents as they are uploaded to the site, and a collaboration portal. We welcome the opportunity to have project kickoff conversations with the team to discuss key elements of the project and demonstrate features of the portal. The typical delivery process includes the following:

- Project Planning – Proposal information, schedule and anticipated exploration plan
- Site Characterization – Findings of the site exploration and laboratory results
- Geotechnical Engineering Report

When services are complete, we upload a printable version of our completed Geotechnical Engineering report, including the professional engineer's seal and signature, which documents our services. Previous submittals, collaboration, and the report are maintained in our system. This allows future reference and integration into subsequent aspects of our services as the project goes through final design and construction.

Additional Services

In addition to the services noted above, the following are often associated with geotechnical engineering services. Fees for services noted above do not include the following:

Review of Plans and Specifications: Our geotechnical report and associated verbal and written communications will be used by others in the design team to develop plans and specifications for construction. Review of project plans and specifications is a vital part of our geotechnical engineering services. This consists of review of project plans and specifications related to site preparation, foundation, and pavement construction. Our review will include a written statement conveying our opinions relating to the plans and specifications' consistency with our geotechnical engineering recommendations.

Observation and Testing of Pertinent Construction Materials: Development of our geotechnical engineering recommendations and report relies on an interpretation of soil conditions. Our assessment is based on widely spaced exploration locations and the assumption that construction methods will be performed in a manner sufficient to meet our expectations and consistent with recommendations made at the time the geotechnical engineering report is issued. We should be retained to conduct construction observations, and perform/document associated materials testing, for site preparation, foundation, and pavement construction. These services allow a more comprehensive understanding of subsurface conditions and necessary documentation of construction to confirm and/or modify (when necessary) the assumptions and recommendations made by our engineers.

Perform Environmental Assessments: Our Scope for this project does not include, either specifically or by implication, an environmental assessment of the site intended to identify or quantify potential site contaminants. If the client/owner is concerned about the potential for such conditions, an environmental site assessment should be conducted. We can provide a proposal for an environmental assessment, if desired.



ATTACHMENT C

COMPENSATION AND PROJECT SCHEDULE

Attachment C - Compensation and Project Schedule

Compensation

Based upon our understanding of the site, the project as summarized in Exhibit A, and our planned Scope of Services outlined in Exhibit B, our fee is shown in the following table:

Task	Lump Sum Fee
Subsurface Exploration, Laboratory Testing, Geotechnical Report ¹	\$5,647.40

1. The lump sum fee considers one drill rig mobilization and no unexpected onsite delays. If additional drill rig mobilizations are required, an additional fee of \$300 would be invoiced. A drill crew standby rate of \$225 per hour would be invoiced for unexpected delays.

Our Scope of Services does not include services associated with site clearing, wet ground conditions, tree or shrub clearing, or repair of/damage to existing landscape or crops. If such services are desired by the owner/client, we should be notified so we can adjust our Scope of Services. If borings are performed when crops are planted, a crop damage agreement should be established between the Client and crop owner prior to subsurface exploration.

Unless instructed otherwise, we will submit our invoice(s) to the address shown at the beginning of this proposal. If conditions are encountered that require Scope of Services revisions and/or result in higher fees, we will contact you for approval, prior to initiating services. A supplemental proposal stating the modified Scope of Services as well as its effect on our fee will be prepared. We will not proceed without your authorization.

Project Schedule

We developed a schedule to complete the Scope of Services based upon our existing availability and understanding of your project schedule. However, our schedule does not account for delays in field exploration beyond our control, such as weather conditions, delays resulting from utility clearance, permit delays, or lack of permission to access the boring locations. In the event the schedule provided is inconsistent with your needs, please contact us so we may consider alternatives.

Delivery on Client Portal	Schedule ^{1, 2}
Project Planning	5 days after notice to proceed
Site Characterization	15 days after completion of field program
Geotechnical Engineering Report	21 days after completion of field program

1. Upon receipt of your notice to proceed we will activate the schedule component on **Client Portal** with specific, anticipated dates for the delivery points noted above as well as other pertinent events.
2. Standard workdays. We will maintain an activities calendar within on **Client Portal**. The schedule will be updated to maintain a current awareness of our plans for delivery.



ATTACHMENT D

ESTIMATED GEOTECHNICAL ENGINEERING COST

Proposal for Geotechnical Engineering Services

Linn - San Manuel Fire Station Canopy | Edinburg, Texas

October 5, 2023 | Terracon Proposal No. P88235149



ATTACHMENT D
Estimated Geotechnical Engineering Cost

COST WORKSHEET:		Total:		\$5,647.40		10/5/2023 10:52	
# of Borings	Depth of Borings	Footage	# of Samples				
2	25	50 ft	16				
0	0	0 ft					
0	0						
0	0						
0	0						
0	0						
2 Boring(s)	Subtotal:	50 ft	16 Samples				
Drilling/Field				Total			
Local Mobilization	1.0	day(s)		\$300.00	/day		300.00
Driller Per Diem for 2 People/day	0	day(s)		\$300.00	/day		0.00
Straight Flight Auger	50	feet		\$10.50	/ft		525.00
Borings over 50 feet	0	feet		\$12.00	/ft		0.00
Add. Charge for Rock Coring	0	feet		\$32.00	/ft		0.00
Field Tech to Stake Boring(s)	3	hour(s)		\$60.00	/hr		180.00
Logger Trip to Site	2	hour(s)		\$60.00	/hr		120.00
Mileage-Logger	130	miles		\$0.58	/mile		75.40
Logger Time in Field	6	hour(s)		\$60.00	/hr		360.00
Utility Clearance	1	hour(s)		\$60.00	/hr		60.00
Boring Backfill	1	hour(s)		\$180.00	/hr		180.00
Backhoe for Path Access	0	day(s)		\$2,200.00	/day		0.00
Water Reading(s)	0.5	hour(s)		\$60.00	/hr		30.00
Drilling Permit(s)	\$0.00	Permit Cost - Lump Sum					0.00
Staff Engineer (EIT) in Field	0	hour(s)		\$110.00	/hr		0.00
Project Manager in Field	0	hour(s)		\$135.00	/hr		0.00
Principal in Field/hr	0	hour(s)		\$160.00	/hr		0.00
Subtotal							\$1,830.40
Laboratory Testing				Total			
Moisture Content	16	test(s)		\$9.50	/test		\$152.00
Dry Density	0	test(s)		\$30.00	/test		\$0.00
- 200	4	test(s)		\$55.00	/test		\$220.00
Sieve Analysis (Gradation)	0	test(s)		\$100.00	/test		\$0.00
Atterberg Limit	8	test(s)		\$75.00	/test		\$600.00
Swell	1	test(s)		\$165.00	/test		\$165.00
Unconfined Compression	0	test(s)		\$50.00	/test		\$0.00
Unconsolidated Undrained	0	test(s)		\$90.00	/test		\$0.00
Rock Compression	0	test(s)		\$55.00	/test		\$0.00
Hydrometer	0	test(s)		\$265.00	/test		\$0.00
Triaxial	0	test(s)		\$450.00	/test		\$0.00
Consolidated Unconfined	0	test(s)		\$450.00	/test		\$0.00
Hydraulic Conductivity (Perm)	0	test(s)		\$350.00	/test		\$0.00
Subtotal							\$1,137.00
Engineering Report/Time				Total			
Senior Principal	2	hour(s)		\$175.00	/hr		\$350.00
Principal	4	hour(s)		\$160.00	/hr		\$640.00
Project Manager/Engineer	4	hour(s)		\$135.00	/hr		\$540.00
Staff Engineer (EIT)	8	hour(s)		\$110.00	/hr		\$880.00
CADD Technician	2	hour(s)		\$45.00	/hr		\$90.00
Project Secretary	4	hour(s)		\$45.00	/hr		\$180.00
Subtotal							\$2,680.00
Total:				\$5,647.40			

Project Name - Linn - San Manuel Fire Station Canopy
Project Location - 21661 TX-186
City/State - Edinburg, Texas
Proposal Number - P88235149



ATTACHMENT E

ANTICIPATED EXPLORATION PLAN

Attachment E - Anticipated Exploration Plan

