

**EXHIBIT “F”  
HIDALGO COUNTY**

**Professional Engineering Services for Geotechnical  
& Construction Material Testing  
Agreement # C-24-0091-04-02  
(ARPA-22-110-078)**

**WORK AUTHORIZATION NO. 1**

**THIS WORK AUTHORIZATION** is made pursuant to the terms and conditions of the Professional Engineering Services Agreement No. C-24-0091-04-02, incorporated herein by reference, for the “[ARPA-22-110-078] - Geotechnical & Construction Material Testing Services - Emergency Management Facility” made by and between HIDALGO COUNTY, action herein by and through the Commissioner’s Court, hereinafter called the “**Owner**,” and RABA KISTNER, INC., 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 Hidalgo County Emergency Management Facility.

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 **\$13,042.00**. 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 Agreement No. C-24-0091-04-02** between the **Owner** and the **Engineer**.

**PART 4. FUNDING**

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

Account No. **4-1290-441-62-115-267-1-730**

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-24-0091-04-02 , 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-24-0091-04-02**

**PART 7. ACKNOWLEDGEMENT AND CONFIRMATION**

Acknowledgement and confirmation by **Hidalgo County**.

**PART 8. ACCEPTANCE AND APPROVAL**

This Work Authorization is hereby accepted and approved by the Hidalgo County Commissioners Court and hereby executed and effective as of the date indicated below.

**APPROVED BY COMMISSIONERS’ COURT ON APRIL 2, 2024.**

**Agenda Item No. 94743**

**Executive Office:** \_\_\_\_\_

**ENGINEER:**  
RABA KISTNER, INC.

**COUNTY:**  
COUNTY OF HIDALGO

\_\_\_\_\_  
Katrin M. Leonard, P.E. Vice President

\_\_\_\_\_  
Hon. Richard F. Cortez, County Judge

**ATTEST:**

\_\_\_\_\_  
Arturo Guajardo, Jr., County Clerk

**LIST OF ATTACHMENTS:**

**Attachment “A”** – *Scope of Services to be provided by Engineer*

**Attachment “B”** – *Fee Proposal*

**Attachment “C”** – *Approved Work/Project Schedule (If applicable)*



# ATTACHMENT A

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## PROJECT SPECIFIC SCOPE OF SERVICES TO BE PROVIDED BY ENGINEER



# **ATTACHMENT B**

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## **FEE PROPOSAL**

**Attachment I**

**PROJECT TYPE:** Geotechnical Engineering Services  
**PROJECT NAME:** Proposed Emergency Management Facility - Hidalgo County  
**DATE:** Thursday, March 28, 2024

**ATTN:** Mr. Victor Borrego, CTCD  
Contract Specialist III  
Hidalgo County Purchasing Department  
2802 S. Business Highway 281  
Edinburg, Texas 78539

Structures	Number	Depth	Soil	Total
Management Building	2	20	40	40
Carport Addition	1	40	40	40
Washbay Addition	1	40	40	40
Construction Area Addition	1	20	20	20
Pavement Areas	5	10	50	50
<b>Totals</b>	<b>10</b>	<b>130</b>	<b>535</b>	<b>190</b>

**FIELD OPERATIONS**

	<u>QUANTITY</u>	<u>UNIT PRICE</u>	<u>TOTAL</u>
Mobilization Truck-Mounted Rig, Drill Crew and Support	2 l.s.	\$327.50	\$655.00
Soil (Existing Ground Surface to 50 ft.)	190 l.f.	\$15.50	\$2,945.00
Field Logger Trip Charge	100 mile	\$1.25	\$125.00
Field Coordination - Field Engineer (E.I.T.)	2 hrs.	\$156.00	\$312.00
Field Coordination - Engineering Technician (Flagman)	4 hrs.	\$67.00	\$268.00
Field Logging Services - Engineering Technician	20 hrs.	\$67.00	\$1,340.00
<b>Field Operations Subtotal:</b>			<b>\$5,645.00</b>

**LABORATORY TESTS**

	<u>QUANTITY</u>	<u>UNIT PRICE</u>	<u>TOTAL</u>
Plasticity Index (Atterberg Limits)	15 ea.	\$114.50	\$1,717.50
Amount Finer Than No. 200 Sieve	12 ea.	\$77.50	\$930.00
Unconfined Compression (Includes Unit Dry Weight) a) Soil Shelby Tube Specimens	4 ea.	\$67.00	\$268.00
Moisture Content	91 ea.	\$14.00	\$1,274.00
Sulfate Content	2 ea.	\$122.00	\$244.00
<b>Laboratory Testing Subtotal:</b>			<b>\$4,433.50</b>

**ENGINEERING AND REPORT**

	<u>QUANTITY</u>	<u>UNIT PRICE</u>	<u>TOTAL</u>
Licensed Professional Engineer (P.E.)	2 hrs.	\$172.00	\$344.00
Staff Engineer, E.I.T.	15 hrs.	\$136.50	\$2,047.50
Draftsman	2 hrs.	\$111.00	\$222.00
Secretarial	5 hrs.	\$70.00	\$350.00
<b>Engineering and Report Writing Subtotal:</b>			<b>\$2,963.50</b>

**TOTAL: \$13,042.00**





# ATTACHMENT C

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## APPROVED WORK/PROJECT SCHEDULE

## **FIELD STUDY**

Perform the following drilling schedule.

<b>Proposed Structure</b>	<b>Number of Borings</b>	<b>Depth, ft. *</b>
Management Building Addition	2	20
Carport Addition	1	40
Washbay Addition	1	40
Additional/Optional Construction Area Addition	1	20
Pavement Areas	5	10

\* below the existing ground surface elevation, or auger refusal, whichever occurs first.

Borings will be located in the field utilizing tape and right angle measurements from existing benchmarks. Our scope of services does not include surveying of the boring locations. However, **RKI** recommends that the final boring locations be surveyed in the field by the CLIENT or their representative.

Samples will be taken using conventional split-spoon and/or Shelby tube sampling techniques in general accordance with applicable American Society for Testing and Materials (ASTM) standards. Representative portions of the samples will be sealed, identified, packaged, and transported to our laboratory for subsequent testing and classification.

Upon completion of drilling activities, water level readings, if applicable, will be recorded in the open boreholes and the boreholes will be backfilled using the auger cuttings generated during the drilling operations.

## **LABORATORY STUDY**

Upon completion of the subsurface exploration, a general testing program will be designed to define the classification and engineering characteristics of the subsurface strata. The laboratory testing is anticipated to include moisture content tests, Atterberg Limits (plasticity) tests, unconfined compressive strength tests, dry unit weight determinations, sulfate content determinations, and grain size analyses. The laboratory testing will be performed in general accordance with applicable ASTM standards. For pavement design analysis, a California Bearing Ratio (CBR) test value will be assumed based on the laboratory test results performed to determine the classification and to estimate the strength characteristics of the subgrade soils.

## **ENGINEERING REPORT**

The results of the field and laboratory phases of the study will be reviewed by our staff of engineers. The results of our review, together with the supporting field and laboratory data, will be presented in a written engineering report. Included therein will be recommendations concerning the design and construction of the foundation and pavement systems for the proposed structure additions. The Geotechnical Engineering Report may also include the following information and recommendations:

- A summary of the field and laboratory sampling and testing program;
- Boring logs and laboratory testing results;
- A review of the general site conditions including a description of the site, the subsurface stratigraphy, groundwater conditions, and the presence and condition of fill materials, if encountered.
- Foundation design considerations and recommendations, including:
  - expansive, soil-related movements using an empirical method for predicting the Potential Vertical Rise (PVR) developed by the Texas Department of Transportation (TxDOT);
  - methods for reducing expansive, soil-related movements to about 1 inch, which is the typical tolerance for ground-supported floor slabs in this region;
  - shallow and/or deep foundation recommendations;
  - available soil-bearing pressures;
  - settlement estimations, where applicable; and
  - groundwater considerations.
- Foundation construction considerations, including:
  - site drainage;
  - site preparation;
  - select fill materials;
  - shallow and/or deep foundation excavations;
  - potential reuse of on-site materials as select fill materials;
  - excavation considerations; and
  - fill placement compaction requirements.
- Seismic region condition evaluations.

Also included in the report will be general guidelines for the construction of pavements for the proposed pavement areas. These guidelines will be based on the results of classification testing completed on specimens from the pavement areas and on our experience with similar soils.

Since site grading plans can result in changes in the foundation and pavement subgrade conditions, final site grading plans will be helpful information in the preparation of engineering recommendations. In the absence of final site grading information, we will prepare recommendations based on the existing ground surface elevations. Also, specific information concerning anticipated traffic loadings and frequencies for the pavement areas will be critical in the preparation of pavement recommendations.

The final report will be submitted only in a PDF format via electronic-mail attachment. Upon the CLIENT's request, we will reproduce the report in a spirally-bound copy.

### **TENTATIVE PROJECT SCHEDULE**

Based on our present workload and weather permitting, it is anticipated that the field exploration phase of this study can begin within five working days of receiving written authorization to proceed, provided that

the site is accessible to our truck-mounted drill rig and the CLIENT has supplied us with all available information regarding existing utilities and below-grade structures on site. The field exploration and laboratory testing phases of the study are expected to take approximately twelve working days to complete. The engineering report will be submitted within an additional twelve working days following completion of the laboratory testing. The above schedule does not account for delays due to inclement weather. We will be pleased to provide the design team with verbal design information as the data becomes available.