

**HIDALGO COUNTY**  
Professional Engineering Services  
Contract # C-18-221-08-28  
Work Authorization Form

**WORK AUTHORIZATION NO. 3**

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, Terracon Consultants, Inc., professional engineers of Pharr, Texas, hereinafter called "Engineer".

**PART 1. SCOPE OF WORK**

The purpose of this Work Authorization is for the Engineer to provide construction material testing services for Hidalgo County Precinct # 2 Administration Building's Parking Lot.

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 \$ 5,000.00. 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 \_\_\_\_\_ 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 project completion as indicated in the "Exhibit C- Preliminary Work Schedule".

PART 6. RESPONSIBILITIES AND OBLIGATIONS

This Authorization does not waive the parties' responsibilities and obligations provided under the Agreement.

PART 7. ACKNOWLEDGEMENT AND CONFIRMATION

Acknowledgement and confirmation by Hidalgo County Precinct #2, as to content and detail of this Work Authorization No. 1.

HIDALGO COUNTY PRECINCT #2 \_\_\_\_\_

BY: \_\_\_\_\_

PART 8. ACCEPTANCE AND APPROVAL

This Work Authorization is hereby accepted, approved by Hidalgo County Commissioners' Court on \_\_\_\_\_ as indicated below and effective as of \_\_\_ day of \_\_\_\_\_, 2019.

THE ENGINEER:  
Terracon Consultants, Inc.

THE OWNER:  
HIDALGO COUNTY

\_\_\_\_\_  
By: Jorge A. Flores, P.G.

\_\_\_\_\_  
By: Ramon Garcia, County Judge

ATTEST:

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

LIST OF ATTACHMENTS

- EXHIBIT "A" - Service to be Provided by the Owner
- EXHIBIT "B" - Services to be Provided by the Engineer
- EXHIBIT "C" - Work Schedule
- EXHIBIT "D" - Cost Proposal

## **EXHIBIT "A"**

### Services to be Provided by County

The following provides an outline of the services to be provided by the Owner in the development of Projects (as defined and more particularly identified in Exhibit "A" attached to this Agreement).

#### **General:**

The Owner will provide to the Laboratory the following:

- 1) Provide the authorization to proceed with services through coordination with the project consulting and design Laboratory.
- 2) Payment for work performed by the Laboratory and accepted by the Owner in accordance with Article 3 of this Agreement.
- 3) Assistance to the Laboratory, as necessary, to obtain the required data and information from other local, regional, State and Federal agencies the Laboratory cannot easily obtain.
- 4) Provide any available relevant data the Owner may have on file concerning the projects.
- 5) Provide timely review and decisions in response to the Laboratory's request for information and/or required submittals and deliverables, in order for the Laboratory to maintain the agreed upon work schedule prepared in accordance with Exhibit "A" attached to this Agreement.
- 6) Attend and participate in progress meetings as required and as coordinated and conducted by Laboratory.
- 7) Provide the authorization to proceed with services on project by project basis through consulting design and construction Laboratory.

## EXHIBIT “B”

### Scope of Services to be provided by the Engineer

Terracon will perform materials testing in general accordance with the project specifications. The time required for quality control testing during the construction phase on the project is directly related to the contractor's scheduling and performance. Therefore, our fee for materials testing and observation services will be based upon applicable unit prices and hourly rates. Our anticipated scope of services is as follows:

- Field testing and laboratory evaluation of existing pavement conditions;
- Field density/moisture testing and laboratory evaluation of soils; and
- Field testing and laboratory evaluation of hot mix asphaltic concrete (HMAC) materials used during pavement construction.

Experienced field/laboratory personnel will be provided for testing services. All field/laboratory materials testing/inspection will be performed under the direction of a Texas Registered Professional Engineer. A detailed scope of services envisioned to complete the testing is as follows:

#### PAVEMENT EVALUATION

##### Dynamic Cone Penetration (DCP)

The field-testing program consists of performing up to 6 DCP tests and 6 cores on the existing Hidalgo County Precinct No. 2 Administration Building's parking lot.

**DCP Layout and Elevations:** We use handheld GPS equipment to locate DCP with an estimated horizontal accuracy of +/-20 feet. Field measurements from existing site features may be utilized. If the locations and elevation of each DCP requires more precise referencing, a survey firm should be engaged in order to develop the necessary information.

On-site DCP (Dynamic Cone Penetrometer) tests (ASTM D6951) will be performed on the existing parking lot at selected locations to assess and evaluate the in-place strength of undisturbed soil. The DCP tests will extend to about 24 inches below the existing ground surface. The DCP measures the penetration resistance of a 17.6-pound hammer through undisturbed soil and/or compacted materials. The penetration resistance may be related to in-situ strength such as estimated in-situ CBR (California Bearing Ratio), shear strength of strata, thickness of strata and bearing capacity.

##### Letter Report and Project Delivery

Results of our field programs will be evaluated by a professional engineer. *No other engineering analysis will be performed and no other recommendations will be provided.*

## **SOILS**

Observations/testing will be performed under the direction of a Texas Registered Professional Engineer. The field services will be supported by appropriate laboratory evaluation of soils used as fill or backfill on the site. The laboratory testing will include laboratory moisture-density relationship (Proctor), with sieve analysis and Atterberg limits determinations for classification and/or determination of import fill suitability. Laboratory material evaluations will be conducted as specified for each type of soil encountered during fill placement. The testing will be performed to check compliance with project specifications. The project contractor and construction manager personnel on the site will be informed of our field observations and test results. Written reports of test results will be prepared on a regular basis throughout the project duration and distributed per your directive.

## **ASPHALT**

Observations/testing will be performed under the direction of TxDOT Level 1A and 1B certified engineering technicians or equivalent qualified engineering technicians on as requested basis during placement of asphalt at the project. The asphalt will be sampled and submitted to our laboratory for mix properties, asphalt content and aggregate grain size distribution to verify compliance with project specifications. Asphaltic concrete cores will confirm thickness and nuclear gauge density.

## **PROJECT MANAGEMENT**

The project manager will be the point of contact for the project and his duties include as related materials testing and observation services the following:

- a) Attend construction meetings, on as scheduled basis;
- b) Review asphalt mixes submitted, on as scheduled basis;
- c) Coordinate field and laboratory testing;
- d) Communicate with Terracon field technicians, Contractor, and Owner's site representative;
- e) Review laboratory and field test reports;
- f) Control our budget and invoice; and
- g) Provide technical assistance.

## **Safety**

All private utilities should be marked by the owner/client prior to commencement of field testing. Terracon will not be responsible for damage to private utilities that are not made aware to us. If the owner/client is not able to accurately locate private utilities, Terracon can assist the owner/client by coordinating or subcontracting with a private utility locating services. Fees associated with these 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 owner of their responsibilities in identifying private underground utilities.

**Site Access:** Terracon must be granted access to the site by the property owner. By acceptance of this proposal, without information to the contrary, we consider this as authorization to access the property for conducting field testing in accordance with the scope of services.

## EXHIBIT "C"

### Work Schedule

Terracon's work schedule is directly related to the contractor's scheduling and performance. It is the responsibility of the contractor or your designated representative to notify Terracon, in advance (minimum of 24 hour notice), for testing services required on this project. Our services will be performed on an as requested basis.

## EXHIBIT "D"

### Proposal

Our fee estimate is in accordance with the time and tests performed as shown below:

Pavement Evaluation				
Service	Quantity	Unit	Unit Rate	Estimate
Engineering Technician	9	Hour	\$ 45.00	\$ 405.00
Generator	1	Day	\$ 150.00	\$ 150.00
Coring Rig and Equipment	1	Day	\$ 150.00	\$ 150.00
Bit Wear	40	in. dia.	\$ 3.00	\$ 120.00
Patching of Asphalt Holes	6	Each	\$ 44.00	\$ 264.00
Project Manager/Senior Engineer	6	Hour	\$ 135.00	\$ 810.00
Vehicle Trip Charge	1	Per Trip	\$ 30.00	\$ 30.00
<b>Subtotal, Earthwork</b>				<b>\$ 1,929.00</b>
Earthwork Observation/Testing				
Service	Quantity	Unit	Unit Rate	Estimate
Moisture/Density Curve of Soil	1	Each	\$ 225.00	\$ 225.00
Moisture/Density Curve of Base Material	1	Each	\$ 275.00	\$ 275.00
Atterberg Limits (ASTM D4318)	2	Each	\$ 75.00	\$ 150.00
Pewrcent Finer than No. 200 Sieve	1	Each	\$ 55.00	\$ 55.00
Sieve Analyses through 200 Sieve	1	Each	\$ 110.00	\$ 110.00
Nuclear Density Test	12	Each	\$ 11.50	\$ 138.00
Soil Technician	10	Hour	\$ 45.00	\$ 450.00
Vehicle Trip Charge	4	Per Trip	\$ 30.00	\$ 120.00
<b>Subtotal, Earthwork</b>				<b>\$ 1,523.00</b>
Hot-Mix Asphaltic Concrete Observation/Testing				
Service	Quantity	Unit	Unit Rate	Estimate
Senior Technician	4	Hour	\$ 55.00	\$ 220.00
Extraction/Gradation of Bituminous Mixture	1	Each	\$ 175.00	\$ 175.00
Molding Specimens (Lab Density- set of 3)	1	Each	\$ 175.00	\$ 175.00
Theoretical Maximum Specific Gravity	1	Each	\$ 110.00	\$ 110.00
Nuclear Density Test	3	Each	\$ 11.50	\$ 34.50
Generator	1	Day	\$ 150.00	\$ 150.00
Coring Rig and Equipment	1	Day	\$ 150.00	\$ 150.00
Bit Wear	24	in. dia.	\$ 3.00	\$ 72.00
Patching of Asphalt Holes	3	Each	\$ 44.00	\$ 132.00
Vehicle Trip Charge	2	Per Trip	\$ 30.00	\$ 60.00
<b>Subtotal, Hot-Mix Asphaltic Concrete Obs./Testing</b>				<b>\$ 1,278.50</b>
<b>CME Project Management</b>	<b>3</b>	Hour	<b>\$ 90.00</b>	<b>\$ 270.00</b>
<b>Subtotal, Management</b>				<b>\$ 270.00</b>
<b>ESTIMATE TOTAL</b>				<b>\$ 5,000.00</b>