

# EXHIBIT D

## -Work Authorization Form

HIDALGO COUNTY  
Professional Engineering Services  
***“Construction Material Testing / GEO Technical Services”***  
Agreement # **C-CAP-18-053-04-04**

### 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, **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 “engineering services” to provide ***“Construction Material Testing Services” for the (TxDOT-BCAP Round III) Project - Ware Country Subdivision in Precinct No. 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 **\$ 2,166.50**. 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 **4** 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 the scope of the work***.

#### **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 No. 4, Commissioner, Joseph Palacios*, as to content and detail of this *Work Authorization No. 1*.

**HIDALGO COUNTY  
COMMISSIONER PRECINCT No. 4**

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 \_\_\_\_\_, 2018.

**THE ENGINEER:  
TERRACON CONSULTANTS, INC.**

**THE OWNER:  
HIDALGO COUNTY**

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

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

**ATTEST:**

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

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

# EXHIBIT A

## -Scope of Services to be provided by the 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 Engineer the following:

- 1) Provide the authorization to proceed with services through coordination with the project consulting and design Engineer.
- 2) Payment for work performed by the Engineer and accepted by the Owner in accordance with Article 3 of this Agreement.
- 3) Assistance to the Engineer, as necessary, to obtain the required data and information from other local, regional, State and Federal agencies the Engineer 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 Engineer's request for information and/or required submittals and deliverables, in order for the Engineer 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 Engineer.
- 7) Provide the authorization to proceed with services on project by project basis through consulting design and construction Engineer.

# 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 density/moisture testing and laboratory evaluation of soils;
- Field testing and laboratory evaluation of concrete, observation of reinforced concrete; 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:

### 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.

### Concrete

An American Concrete Institute (ACI) or equivalent Certified Engineering Technician will be provided on an as-requested basis to sample the plastic concrete used during construction. The concrete will be tested for slump, air content and temperature at the time of placement. Sets of concrete cylinders will be molded at each sampling.

Concrete specimens will have initial field curing as recommended by the ACI standards at the site and returned to our laboratory for completing final curing prior to testing. Compressive strength testing will be conducted at 7-days (1 or 2 specimens), 28-days (2 or 3 specimens) intervals to determine compliance with project specifications. All test results will be conveyed after testing is completed.

### 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 concrete 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;
- g) Performing site visits to the project site; and
- h) Provide technical assistance.

## 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

## -Cost Proposal

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

### SOILS

Estimate 10 hours in-place nuclear moisture-density testing @ \$45/hour.....	\$ 450.00
Estimate 1 standard proctor (soil (4" and 6" mold, each)) @ \$225/test.....	\$ 225.00
Estimate 1 modified proctor (soil with gravel, base materials, each)) @ \$275/test.....	\$ 275.00
Estimate 2 Atterberg Limits (Liquid and Plastic Limits – Single Point Test) @ \$75/test.....	\$ 150.00
Estimate 1 sieve analysis through 200 sieve (washed)@ \$110/test.....	\$ 110.00
Estimate 3 nuclear gauge days @ \$35/day.....	\$ 105.00
Estimate 3 vehicle trip charge @ \$30/trip.....	\$ 90.00
<i>Sub-Total (Soils).....</i>	<i>\$ 1,405.00</i>

### CONCRETE

Estimate 6 hours of sampling materials, per hour @ \$45/hour.....	\$ 270.00
Estimate 7 compression testing of concrete cylinders made during field @ \$14.50/test.....	\$ 101.50
Estimate 2 vehicle trip charge @ \$30/trip.....	\$ 60.00
<i>Sub-Total (Concrete).....</i>	<i>\$ 431.50</i>

### ASPHALT

Estimate 6 hours asphalt observations/testing @ \$45/hour.....	\$ 270.00
Estimate 2 vehicle trips @ \$30/trip.....	\$ 60.00
<i>Sub-Total (Asphalt).....</i>	<i>\$ 330.00</i>

<b>Total Cost .....</b>	<b>\$ 2,166.50</b>
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<i>Budget.....</i>	<i>\$ 2,174.49</i>
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