

**EXHIBIT “F”**  
**HIDALGO COUNTY**  
**Professional Engineering Services**  
**Agreement # C-25-0514-09-30**

**WORK AUTHORIZATION NO. 1**

**THIS WORK AUTHORIZATION** is made pursuant to the terms and conditions of the Professional Engineering Services Agreement No. C-25-0514-09-30, incorporated herein by reference, for the **“Precinct 2 Cross Country Trail Park Project”** made by and between HIDALGO COUNTY, action herein by and through the Commissioner’s Court, hereinafter called the **“Owner,”** and **B2Z Engineering, LLC,** hereinafter called **“Engineer”**.

**PART 1. SCOPE OF WORK**

The purpose of this Work Authorization is for the **Engineer** to provide data collection and design services.

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 **\$90,458.79**. 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-25-0514-09-30** 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-25-0514-09-30, 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-25-0514-09-30.

**PART 7. ACCEPTANCE AND APPROVAL**

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

EXECUTED as of the day and year first written above.

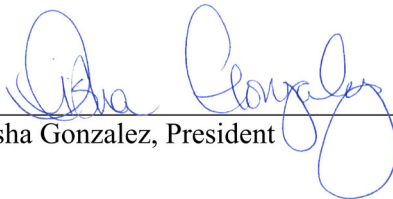
APPROVED BY COMMISSIONERS' COURT ON December 16, 2025.

Agenda Item No. 101847

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

**ENGINEER:**  
B2Z ENGINEERING, LLC

**COUNTY:**  
COUNTY OF HIDALGO

  
\_\_\_\_\_  
Aisha Gonzalez, 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”**

### **Services to be provided by the Engineer**

#### **PROJECT INFO:**

- **Project Name:** Hidalgo County Pct 2 – Cross Country Trail Park Project
- **Project Limits:** 1,070-Ft South of W Ridge Rd and S Veterans Blvd

#### **GENERAL SCOPE OF WORK:**

The work to be performed by the **Engineer** under this Work Authorization shall consist of providing Professional Engineering Services for the design of the **PSJA Cross Country Trail** for Hidalgo County Precinct 2, hereinafter denoted as the **Project**.

The **Engineer** will furnish all personnel, equipment, materials, supplies, and incidentals as needed to perform the services required by this Work Authorization, except as otherwise specified in Exhibit A, “Services to be provided by the Owner.”

Specific activities to be performed by the **Engineer**, as generally outlined in the Contract, include the following:

### **SECTION 1 – TOPOGRAPHIC DATA COLLECTION, PROCESSING, & PLANAMETRICS**

Services

Provided By:

SURVEYOR COUNTY

#### **1. Field Surveying**

- NO      NO      a. Primary Project Control - 3 to 5 miles of spacing  
Precision shall be 1 part in 20,000 or better unless otherwise directed by the district engineer.  
(1) Establish horizontal control points  
(2) Establish vertical control points

NOTE: ALL BEARING AND DISTANCE SHALL BE BASED ON THE STATE PLANE COORDINATE SYSTEM NAD 1983, SOUTH ZONE.

ALL DISTANCES AND COORDINATES SHALL BE SURFACE AND MAY BE CONVERTED TO GRID BY MULTIPLYING BY A COMBINED SCALE FACTOR OF 0.999960

- NO      NO      b. Secondary Project Control (Surveyor shall recover and/or reset H&V Control Points as provided by the Engineer and create Survey Data Sheets for inclusion in the Project Plans.

- No traverse should exceed 25 angle points. Planimetric shall be Lt & Rt from the proposed R.O.W. as per the schematic provided by the Engineer.
- The unadjusted angular error should not exceed 2 seconds per angle, plus 14 seconds.

Services  
Provided By:  
SURVEYOR COUNTY

## 2. Topographic Data Collection

- |            |           |  |
|------------|-----------|--|
| <u>YES</u> | <u>NO</u> | a. Surface Data Acquisition  |
|            |           | (1) Collect ground shots sufficient to define natural terrain, pavement, ditches, swales, and other features.  |
|            |           | (2) Locate all visible improvements within the survey limits (fences, utilities, drainage Structures, bridges, sidewalks, culverts, trees > 6” caliper, etc.). |
|            |           | (3) Capture sufficient break lines to ensure accurate surface modeling.  |
| <u>YES</u> | <u>NO</u> | b. Utility Features  |
|            |           | (1) Locate visible manholes, inlets, valves, meters, hydrants, and utility poles.  |
|            |           | (2) Collect rim elevations and invert elevations where accessible.   |
|            |           | (3) Coordinate with Owner/utility companies for subsurface utility records.  |
| <u>YES</u> | <u>NO</u> | c. Drone Data Collection   |
|            |           | (1) Deploy FAA-certified sUAV pilots to perform aerial data collection within the project limits.  |
|            |           | (2) Establish and utilize ground control points (GCPs) tied to project control to ensure survey-grade accuracy.  |
|            |           | (3) Acquire high-resolution aerial imagery and LiDAR (if applicable) to supplement ground survey efforts.  |
|            |           | (4) Process aerial imagery to produce Ortho mosaic maps, digital terrain models (DTM), and point clouds.   |
|            |           | (5) Extract planimetric features and break lines from the processed aerial data for integration into CAD base mapping.   |
|            |           | (6) Verify drone-derived data against field survey control for quality assurance and accuracy compliance.  |
|            |           | (7) Provide deliverables in MicroStation/AutoCAD-compatible formats, including orthophotos, point cloud (.LAS), and surface models.                            |

## 3. Data Processing & Deliveries

- |            |           |   |
|------------|-----------|---|
| <u>YES</u> | <u>NO</u> | a. Processing   |
|            |           | (1) Reduce survey observations and adjust control network.                                      |
|            |           | (2) Generate a digital terrain model (DTM/TIN) in compliance with County and TxDOT Standards.   |
|            |           | (3) Extract contours at 1-foot intervals, unless otherwise directed.                            |
|            |           | (4) Ensure closure and precision meets or exceeds industry standard tolerances.                 |
|            |           | b. Planimetric  |
|            |           | (1) Digitize and draft all collected features in MicroStation compatible format.                |
|            |           | (2) Label roadway edges, pavement markings, ROW lines, utilities, and other permanent features. |

- c. Deliverables
  - (1) Electronic CAD files (DGN/DWG) with planimetric linework and surface model.
  - (2) Control survey data sheets and point files (ASCII format).
  - (3) PDF exhibits of planimetric mapping and contours.

## **SECTION 2 – PRELIMINARY DESIGN AND ENGINEERING SERVICES**

Services  
Provided By:  
ENGINEER COUNTY

### **1. SITE MASTER PLAN DEVELOPMENT**

- |            |           |  |
|------------|-----------|--|
| <u>YES</u> | <u>NO</u> | a. Coordination and Concept Development <ul style="list-style-type: none"><li>(1) Meet with Owner, Stakeholders, and regulatory agencies to establish project goals and requirements.</li><li>(2) Review available survey, topographic, and utility data proved from Section 1.</li><li>(3) Identify potential constraints such as right-of-way, drainage, utilities, environmental features, and ADA accessibility.</li><li>(4) Develop conceptual layout alternatives for trail alignment, access points, amenities, and related improvements.</li><li>(5) Conduct review meetings with the Owner and stakeholders to refine and select the preferred Master Plan.</li></ul> |
|------------|-----------|--|

### **2. PLANS, SPECIFICATIONS, AND ESTIMATE (PS&E)**

- |            |           |  |
|------------|-----------|--|
| <u>YES</u> | <u>NO</u> | a. Design Development <ul style="list-style-type: none"><li>(1) Prepare preliminary design documents, including alignment, grading, drainage, and typical sections.</li><li>(2) Incorporate design standards in accordance with Hidalgo County, AASHTO, and ADA guidelines.</li><li>(3) Coordinate with utility providers and governing agencies to resolve potential conflicts.</li><li>(4) Conduct intermediate design submittals (30%, 60%, 90%) and incorporate Owner review comments.</li></ul>   |
|            |           | b. Final PS&E <ul style="list-style-type: none"><li>(1) Prepare final signed and sealed construction plans, specifications, and Estimate (PS&amp;E)</li><li>(2) Provide plan sets including title sheets, general notes, typical sections, plan &amp; profile sheets, cross-sections, drainage details, signing/stripping, and construction details.</li><li>(3) Deliver final electronic CAD files (DGN/DWG), PDF plans set, and editable specification documents in County-approved format.</li><li>(4) Provide a final sealed Estimate of Quantities and Opinion of Probable Construction Cost.</li></ul> |

### **3. DELIVERABLES**

- |            |           |  |
|------------|-----------|--|
| <u>YES</u> | <u>NO</u> | <ul style="list-style-type: none"><li>▪ Draft and Final Site Master Plan (CAD and PDF formats).</li><li>▪ Preliminary and Final PS&amp;E Submittals (30%,60%, 90%, Final).</li></ul> |
|------------|-----------|--|

- Signed and Sealed Construction Plans.
- Technical Specifications.
- Engineer’s Opinion of Probable Construction Cost.

### **SECTION 3 – HYDROLOGIC & HYDRAULIC (H&H) MODELING AND DRAINAGE DESIGN**

Services  
Provided By:  
ENGINEER COUNTY

#### **1. HYDROLOGIC & HYDRAULIC (H&H) MODELING**

- |            |           |   |
|------------|-----------|---|
| <u>YES</u> | <u>NO</u> | a. Hydrologic Modeling  |
|            |           | (1) Review available rainfall data, watershed characteristics, and historical flooding reports with the project limits. |
|            |           | (2) Delineate drainage basins contributing runoff to the proposed trail and adjacent PSJA High School parking lot.      |
|            |           | (3) Develop design storm events using NOAA Atlas 14 rainfall data and applicable County/TxDOT criteria.                 |
|            |           | (4) Compute peak discharges, time of concentration, and runoff volumes for all relevant design events.                  |
| <br>       |           |   |
| <u>YES</u> | <u>NO</u> | b. Hydraulic Modeling   |
|            |           | (1) Construct a hydraulic model (HEC-RAS, HY-8, or approved software) of the existing and proposed drainage systems.    |
|            |           | (2) Evaluate existing conditions for capacity, flood-prone areas, and ponding within the PSJA High School parking lot.  |
|            |           | (3) Model proposed drainage improvements to verify system capacity, roadway/trail overtopping, and flow conveyance.     |
|            |           | (4) Identify downstream impacts and confirm no adverse effect on adjacent properties.                                   |

#### **2. DRAINAGE DESIGN**

- |            |           |   |
|------------|-----------|---|
| <u>YES</u> | <u>NO</u> | a. System Layout & Sizing   |
|            |           | (1) Design storm sewers, culverts, inlets, swales, ditches, or detention facilities as required to manage runoff.           |
|            |           | (2) Incorporate measures to reduce or eliminate flooding at the PSJA High School parking lot by providing positive outfall. |
|            |           | (3) Size structures to meet County, TxDOT, and FEMA design criteria, as applicable.   |
|            |           | (4) Incorporate water quality and erosion control features where required by TCEQ/MS4 regulations.                          |
| <br>       |           |   |
| <u>YES</u> | <u>NO</u> | b. Plan Integration   |
|            |           | (1) Incorporate drainage improvements into PS&E construction drawings (Plan & profile sheets, cross-sections details).      |
|            |           | (2) Provide drainage summary tables, design notes, and supporting calculations within the plan set.                         |
|            |           | (3) Coordinate utility crossings and conflicts with the drainage system, if necessary.                                      |

### 3. DELIVERABLES

YES      NO

- H&H modeling reports (including hydrologic and hydraulic calculations).
- Exhibits showing watershed delineations and drainage system layouts.
- Draft and Final drainage design sheets incorporated into PS&E.
- Electronic modeling files (HEC-RAS, HY-8, etc.).
- Engineer’s Opinion of Probable Construction Cost.

## SECTION 4 – MEETINGS & COORDINATION IN SUPPORT OF PROJECT DEVELOPMENT ACTIVITIES

Services  
Provided By:  
ENGINEER COUNTY

### 1. PROJECT MEETINGS

YES      NO

- a. Kick-Off Meeting
  - (1) Attend and facilitate project initiation meetings with the Owner, stakeholders, and partnering agencies.
  - (2) Review project goals, schedule, communication protocols, and roles/responsibilities.
- b. Progress Meetings
  - (1) Participate in recurring coordination meetings (virtual or in-person) to update project status.
  - (2) Present design progress, review action items, and document meeting minutes.
  - (3) Address Owner/stakeholder comments and incorporate into ongoing project development.
- c. Review Meetings
  - (1) Present 30%, 60%, 90%, and Final PS&E submittals for Owner/agency review.
  - (2) Prepare exhibits and technical materials to support design discussions.
  - (3) Revise documents as needed based on meeting outcomes.

### 2. AGENCY & STAKEHOLDER COORDINATION

YES      NO

- a. Agency Coordination
  - (1) Coordinate with regulatory agencies, utility companies, irrigation districts, and drainage districts.
  - (2) Submit required design information, respond to comments, and secure approvals.
- b. Stakeholder Engagement
  - (1) Provide project updates and design exhibits for community representatives and school district officials.
  - (2) Document stakeholder input and summarize in coordination reports for Owner review.

**3. DELIVERABLES**

YES

NO

- Meeting agendas, presentation materials, and sign-in sheets (as applicable).
- Written meeting minutes with action items and responsible parties.
- Coordination logs summarizing agency and stakeholder correspondence.
- Updated project schedule reflecting decisions made during coordination activities.

**ATTACHMENT "B"**  
**COST PROPOSAL**  
**C-25-0514-09-30 - WA#1 - Hidalgo County Precinct 2 - Cross Country Trail Park Project**  
**Data Collection and Design Services (Drone Aerials, Planometrics, H&H study, Site Masterplan Development, & PS&E)**

TASKS	MANHOURS										Total	Subtotal		
	Project Manager	Project Engineer	Sr. Engineering Tech	CADD Operator	sUAS Pilot	Admin/ Clerical								
<b>Project Location: South of PSJA Highschool east of Veterans Blvd &amp; Moore Rd</b>														
1	2				26	44						72	\$7,199.06	
2	8	22	36	58								124	\$15,142.50	
3	38	84	101	170						16		409	\$51,680.07	
4	10	44										54	\$9,197.00	
5	10	6	8							6		30	\$4,925.16	
											<b>SUB-TOTAL</b>		<b>689</b>	<b>\$88,143.79</b>
<b>Labor Hours</b>	<b>68</b>	<b>156</b>	<b>145</b>	<b>254</b>	<b>44</b>	<b>22</b>								
Hourly Base Rates	\$ 75.00	\$ 45.00	\$ 38.00	\$ 26.50	\$ 29.50	\$ 23.00								
Contract Rate FY2025	\$ 252.66	\$ 151.60	\$ 128.01	\$ 89.27	\$ 99.38	\$ 77.48								
<b>Total Labor Costs</b>	<b>\$ 17,180.88</b>	<b>\$ 23,649.60</b>	<b>\$ 18,561.45</b>	<b>\$ 22,674.58</b>	<b>\$ 4,372.72</b>	<b>\$ 1,704.56</b>						<b>\$ 88,143.79</b>		

**Direct Expenses**  
Aerial Drone Flight (\$250.00/hr.) \$ 2,000.00  
Mileage (\$0.70/mile) \$ 315.00  
**Total Direct Expenses \$ 2,315.00**

**WA#1 - Total Cost**

**\$ 90,458.79**