

**EXHIBIT “E”**  
**Work Authorization**

**HIDALGO COUNTY**  
**Professional Engineering Services**  
**Agreement # C-19-070-04-23**

**WORK AUTHORIZATION NO. 1**

**THIS WORK AUTHORIZATION** is made pursuant to the terms and conditions of Article 7 of the Agreement made by and between **HIDALGO COUNTY**, action herein by and through the **Commissioner’s Court**, hereinafter called the “**Owner**,” and, **Strada Engineering and Consulting, LLC**, professional engineers of **McAllen, Texas**, hereinafter called “**Engineer**”.

**PART 1. SCOPE OF WORK**

The purpose of this Work Authorization is for the **Engineer** to provide Advance Project Development-Final Planning Documents, and Preliminary Engineering, Final Design and PS&E, Construction Management and Inspection for “Monte Alto Solar Community Light Project” located within Precinct No. 1.

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 **\$28,105.90**. This amount is based upon the costs outlined in the **Estimated Project Fee Schedule** attached hereto as **EXHIBIT “D-1”**.

**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 6** of the Agreement.

**PART 4. FUNDING**

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

Account No. **9-1200-431-00-121-005-0-334**

Requisition Number **392327** (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 scopes of the work authorization.**

**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. 1, Commissioner David Fuentes** as to content and detail of this **Work Authorization No. 1.**

**HIDALGO COUNTY  
COMMISSIONER PRECINCT No. 1**

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

**Hon. David Fuentes, Commissioner**

**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 \_\_\_\_\_, 20\_\_\_\_.

**THE ENGINEER:  
Strada Engineering and Consulting, LLC**

**THE OWNER:  
HIDALGO COUNTY**

\_\_\_\_\_  
By: Oscar Cancino, PE-President

\_\_\_\_\_  
By: Richard F. Cortez, 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-1” -Estimated Cost Proposal

**EXHIBIT A**  
**SCOPE OF SERVICES TO BE PROVIDED BY THE OWNER**

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) Advertise and award, as assisted and recommendation by the Engineer, construction Agreements for the PS&E developed by the Engineer.
- 8) Attend pre-bid and pre-construction conferences coordinated and conducted by the Engineer.
- 9) Review and approve monthly and final estimates, developed by the Engineer, for payment to the Contractor. Compensation and pay the Agreements for work performed as identified in the approved monthly and final estimates.
- 10) Provide assistance to the Engineer where necessary and possible with the Owner information/resources to ensure project is completed within timely/efficient basis.
- 11) Provide the authorization to proceed with services on project by project basis through consulting design and construction Engineer.

## **EXHIBIT “B”**

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

The following, though not limited to, provides an outline of the services to be provided by the **Engineer** that may be incorporated into individual Work Authorizations in the development of the **Project**.

### **ADVANCE PROJECT DEVELOPMENT – FINAL PLANNING DOCUMENTS AND PRELIMINARY ENGINEERING**

Specific **APD** activities to be performed by the **Engineer** include final planning and preliminary engineering, including preliminary field survey and preliminary geotechnical investigation and reports.

- (1) The **Engineer** shall perform site visits for field reconnaissance; site visits to be performed by designers and environmental staff to identify constructibility issues, including constraints and potentially significant structures.
- (2) The **Engineer** shall gather data to include, but not be limited to previous studies, land records, property and facility management records, land use, engineering data, permits, public safety requirements, and/or environmental requirements from previous studies.
- (3) The **Engineer** shall coordinate and conduct a preliminary concept conference.
- (4) The **Engineer** shall develop the project design criteria (utility, etc.) in accordance with industry guidelines; preliminary typical sections shall be developed and conform to the approved project design criteria.
- (5) The **Engineer** shall prepare preliminary cost estimate.

#### ***Field Surveying***

- (1) The **Engineer** will, at all times, if required contact the property owner prior to any entry onto the property owner’s property. The property owner will be informed, by the **Engineer**, the name of the survey party chief or other primary person of contact during each entry.
- (2) The **Engineer** may establish primary **Project** control for field surveying by establishing horizontal and vertical control points, and establish secondary **Project** control for aerial photogrammetry to tie ground control to the State Plane Coordinate System.
- (3) The **Engineer** may obtain the following photogrammetric products:
  - (a) Contact Prints and mosaics
  - (b) Planimetric maps
  - (c) Contour maps
  - (d) Cross Sections

- (4) The **Engineer** shall establish benchmark (or TBM) identifications.
- (5) The **Engineer** shall obtain data for existing utility facilities and/or structures, including size, type, and location, elevations of structures.
- (6) The **Engineer** shall compile project layout.
- (7) The **Engineer** shall obtain solar light specifications for modeling.

#### ***Geotechnical***

The **Engineer** may provide geotechnical services to include, but not be limited to: soil exploration, sample testing and identification of soil properties, and recommendations through a geotechnical report.

#### ***Data Collection***

- (1) The **Engineer** shall perform site visits for field reconnaissance.
- (2) The **Engineer** shall identify and obtain data to include, but not be limited to:
  - Previous Studies:***
    - (a) Existing lighting plans and/or projects.
  - Land Records:***
    - (b) Parcel mapping
  - Engineering***
    - (c) Utility Location
    - (d) Subdivision review/lot mapping
    - (e) Street mapping

## **FINAL DESIGN AND PS&E**

For each portion of the Project, the Engineer shall provide the Owner with final design and a complete and approved set of plans for the construction of the **Project**. Specific activities include:

#### ***Design Field Surveying***

The **Engineer** shall perform field surveys and provide field layouts and/or information necessary to collect information required in the final design of the **Project**. This may include, but not be limited to, additional channel sections for the determination of final earthwork, roadway cross sections and profiles for intersecting roadways, soil bore staking, and right of way staking.

#### ***Geotechnical Investigations***

The **Engineer** may perform final geotechnical investigations and testing for the purpose of foundation studies and design for any pavement, retaining walls, bridges, and/or miscellaneous structures that may be required for final design.

### ***Roadway Design***

The **Engineer** shall perform utility design for proposed project location incorporating existing utilities of the **Project**. The design of these utilities shall conform to the **Project** design criteria, and when possible the standard designs, required by the owner (city, county, or state) of the associated roadway. These designs shall in all respects combine the application of sound engineering principles with a high degree of economy, and shall be submitted to the applicable city, county, state, and/or federal agencies for approval.

### ***PS&E***

- (1) The **Engineer** shall prepare contract drawings, specifications and estimates for construction of the **Project** or portions of the **Project** as authorized by the **Owner**. These documents shall in all respects combine the application of sound engineering principles with a high degree of economy, and shall be submitted to the applicable city, county, state, and/or federal agencies for approval.
- (2) All final plan sheets shall be developed, by the **Engineer**, on 11" x 17" reproducible, 4 mil, double-matte, white, opaque film.
- (3) Graphics files shall be developed by the **Engineer** in Microstation design file format, and must plot consistent with the reproducible plots submitted.
- (4) **Plan Sheets.** Plan sheets developed by the **Engineer** shall include, but not be limited to, title sheet, typical sections, sequence of construction, traffic control (as applicable), specification data (including schedules for minimum sampling and testing), estimate and quantity, plan-profile, channel details, roadway details (as applicable), bridge and culvert details, hydraulic details, and standards. (Standards may be used from governing entities, but must be signed and dated by the **Project Engineer** of responsible supervision as being applicable to the **Project**.)
- (5) **Specifications.** Whenever possible, the **Engineer** shall use the Texas Department of Transportation's 2014 Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges. Other specifications may be developed by the **Engineer**, but must incorporate, to the extent possible, references to standard requirements of AASHTO design and AASHTO testing procedures.
- (6) **Estimates.** The **Engineer** shall prepare detailed cost estimates and proposals of authorized construction, which shall include summaries of bid items and quantities based, insofar as practicable, on the unit price system of bidding. The **Engineer** shall not be required to guarantee the accuracy of those estimates.

## **CONSTRUCTION MANAGEMENT AND INSPECTION**

The **Engineer** shall provide engineering services for each authorized construction contract of the **Project**. Specific engineering work activities, tasks, and/or special services to be provided by the **Engineer** will include:

### ***Project Site Inspection***

- (1) In general, the **Engineer** shall provide the engineering support and data required for consultation and advisement to the **Owner**.

- (2) **Daily and Weekly Reports.** The **Engineer** shall provide the engineering support and data, required to monitor the **Contractor's** progress, with daily and weekly reports and provide a monthly progress report to the **Owner**.
- (3) The **Engineer** will provide **Project** site inspection of the authorized construction contract as follows:
  - (a) **Project Engineer.** The **Engineer** will provide visits by the **Project Engineer** or a competent representative of the **Engineer** to the site of construction at least three times each week for the purpose of monitoring the **Contractor's** progress and conformance to the construction contract plans and specifications.
  - (b) **Resident Engineer.** If authorized by the **Owner**, the **Engineer** will furnish the services of a **Resident Engineer** and/or construction inspector(s) for continuous on-the-site inspection construction.

#### **Miscellaneous Technical Activities**

- (1) **Construction Field Surveying.** The **Engineer** may perform all field surveys and field layouts, including construction staking and right of way staking.
- (2) **Shop Drawings.** The **Engineer** shall review and check all shop or working drawings furnished by the **Contractor**.
- (3) **Control of Materials & Equipment.** The **Engineer** shall provide inspection of all materials and equipment furnished/used by the **Contractor** as follows:
  - (a) Review and record all laboratory, shop and mill tests of materials and equipment for compliance with the construction contract specifications.
  - (b) Observe and/or perform **Project** record testing and/or independent assurance testing as outlined in the construction contract specifications.
- (4) **Change Orders.** When applicable, the **Engineer** will prepare the engineering data, including plan sheet drawings, specifications, and estimates, for the preparation of construction contract change orders, which may be required due to actual field conditions encountered or new requirements directed by the **Owner**.

#### **Final Acceptance**

- (1) **Performance Testing.** Following the completion of construction by the **Contractor**, the **Engineer** shall provide the engineering support and data required for the initial operation of the **Project**. This will include inspection for conformance and record-keeping for the necessary performance tests required by the construction contract specifications. The **Engineer** will provide this inspection with either the **Project Engineer** or **Resident Engineer**, as directed by the **Owner**.
- (2) **As-Built Drawings.** The **Engineer** may develop as-built drawings to show the work as actually constructed.

<b>Engineering Schedule Summary</b>	Duration	<b>2019</b>				
		April	May	June	July	Aug
Survey and Topographic Work	7 days					
Utility Coordination	20 days					
Design Summary Review	7 days					
Preliminary Engineering	14 days					
Plans Final Design	28 Days					
QA/QC	2 Days					
Spec Book / Bidding	2 days					

