

**EXHIBIT “E”**  
**HIDALGO COUNTY**  
**Agreement #C-21-0441-04-20**  
**Work Authorization Form**

**WORK AUTHORIZATION NO. 1**

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

**PART 1. SCOPE OF WORK**

The purpose of this Work Authorization is for the Engineer to provide design services for the Design of Beacon Lights for 10<sup>th</sup> Street (Chapin & Rogers).

The **Engineer** is to provide the Services as required by the Agreement with Owner for Engineering Services. This includes but is not limited to the services identified in **ATTACHMENT “B” – *Scope of Services to be provided by the Engineer*** which is attached hereto and incorporated by reference.

**PART 2. ESTIMATED COST**

The estimated cost for services under this Work Authorization is \$24,362.00. This amount is based upon the costs outlined in the Estimated **Cost Proposal** attached hereto as **ATTACHMENT “D”**.

**PART 3. PAYMENT**

Compensation and payment to the Engineer for the services established under this Work Authorization shall be made in accordance with the Project Specific Service Agreement between Owner and Engineer.

**PART 4. FUNDING**

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

Account No. -1200-431-00-124-226-0-334

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 work provided in this 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**

Acknowledgment and confirmation by Hidalgo County Precinct No. 4 Commissioner Ellie Torres, as to content and detail of this Work Authorization No. 1 (If applicable – Work Schedule attached as Attachment “D-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 04/20/2021 as indicated below and effective as of 20<sup>th</sup> day of April 2021.

**THE ENGINEER:**  
GDJ Engineering, LLC

**THE OWNER:**  
HIDALGO COUNTY

\_\_\_\_\_  
By: \_\_\_\_\_  
Print Name

\_\_\_\_\_  
By: Richard F. Cortez, County Judge

**ATTEST:**

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

ATTACHMENT “A”  
SCOPE OF SERVICES TO BE PROVIDED BY THE OWNER

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The following provides an outline of the services to be provided by the **Owner** in the development of the PS&E for the design of flashing beacons at the following intersections: 10<sup>th</sup> Street/Chapin Road & 10<sup>th</sup> Street/Rogers Road, located within Hidalgo County, hereinafter denoted as the **Project**.

**GENERAL:**

The **Owner** will provide to the **Engineer** the following:

- 1) Provide the authorization to proceed with services through coordination with the **Engineer**.
- 2) Payment for work performed by the **Engineer** and accepted by the **Owner** in accordance with the 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 **Project** including existing engineering documents or survey data.
- 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 “C” attached to this Work Authorization.
- 6) Attend and participate in progress meetings as required and as coordinated and conducted by **Engineer**.

**ATTACHMENT "B"**  
**SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER**

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**PROJECT DESCRIPTION**

The services designated herein as "Services provided by the ENGINEER" shall include the performance of all engineering services for the following described facility:

COUNTY/CITY: Hidalgo County

CONTROL: \_\_\_\_\_

PROJECT/DESCRIPTION: Surveying and PS&E

LENGTH: 2 Intersections

HIGHWAY: 10<sup>th</sup> Street

LIMITS: At Chapin Road & Rogers Road

**PROJECT CLASSIFICATION**

(Place an "X" in only one Project Classification)

- Surface Treatment
- Overlay
- Rehabilitation Existing Road (Scarify & Reshape)
- Convert Non-Freeway to Freeway
- Widen Freeway
- Widen Non-Freeway
- New Location Toll Freeway
- New Location Non-Freeway
- Interchange (New or Reconstruct)
- Bridge Widening or Rehabilitation
- Bridge Replacement
- Upgrade to Standards - Freeway
- Upgrade to Standards - Non-Freeway
- Signal/Beacon Design

ENGINEER shall mean GDJ Engineering.

COUNTY shall mean Hidalgo County.

LPA shall mean Hidalgo County.

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ATTACHMENT "B"  
SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

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**FIELD SURVEYING AND PHOTOGRAMMETRY**

(Function Code 150)

**TOPOGRAPHY AND CONSTRUCTION SURVEYS:**

The SURVEYOR will perform Topography and Construction Surveying for the project which will include:

1. Primary Project Control: 3 to 5 mile spacing (Precision shall be 1 part in 20,000 or better, unless otherwise directed by the ENGINEER).
  - a. Establish Horizontal Control Points
  - b. 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

2. 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).
    - a. No traverse should exceed 25 angle points. Planimetrics shall be 20 ft Lt & Rt from the proposed ROW as per the schematic provided by the Engineer.
    - b. The unadjusted angular error should not exceed 2 seconds per angle, plus 14 seconds.
    - c. The unadjusted ratio of precision should be one part in 10,000 or better (The ratio of precision is the total length of the traverse divided by the total error.).
    - d. The unadjusted vertical error should not exceed 0.03 foot per mile of traverse.
  3. Other Field Surveying
    - a. **The limit of the Design surveys shall be 1,500-ft before and after the limits of the project as identified by the Project Engineer on the schematic. Establish horizontal and vertical control.** Set benchmarks at 1000-ft intervals along the project proposed right-of-way. Provide x, y, z for each Benchmark. Provide a BM along each outfall identified on the Hydrologic Map. The BM's shall be #5 I.R. 2-ft in depth set in concrete. **The surveyor shall provide an H&V Book (a Sample shall be provided by the Engineer to the Surveyor).** The Surveyor will provide a 3-pt reference sketch with ties to the BMs for inclusion the existing H&V Control Book. Establish benchmark circuit throughout the project with a tolerance of 0.03'/ft per mile error vertically.
    - b. The Surveyor shall provide complete topographic and cross section survey, data processing, and CADD mapping (2D & 3D) for the limits of the project.
    - c. The Surveyor shall locate all visible utilities, data processing and CADD mapping (2D & 3D) including irrigation lines. Follow sample provided by the Engineer.
    - d. The Surveyor shall field locate cross culverts, driveway culverts, inverts, irrigation lines, within the project limits, data processing and CADD mapping (2D & 3D).
    - e. Right of Entry, Right of Way Research, and Appraisal District Records is the responsibility of the Surveyor.
    - f. The Surveyor shall also paint the proposed centerline on the existing pavement as approved by the ENGINEER (at 500-ft stations and a tick mark at 100-ft stations, 12 inches long with approved paint by ENGINEER) before construction for the purpose of utility adjustments and project location.
    - g. Profile and cross section intersecting streets for ties into project (500-ft. beyond the proposed ROW per schematic and 20-ft wider than the existing ROW of intersecting street). Reference missing voids as per CD provided by the Engineer.
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ATTACHMENT "B"  
SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

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- h. Cross section irrigation crossings for a distance of 20-ft beyond the proposed ROW at 100-ft intervals in a DTM file. Provide a complete description of irrigation appurtenances as identified by the engineer sample layout.
  - i. Tie Horizontally and Vertically the existing storm drain system that lies within the existing proposed ROW including the elevation of the outfall of said recovered existing storm drain systems.
  - j. Tie to existing underground and overhead utilities (location, elevation and direction)
    - i. Horizontally - The surveyor shall call the 1-800 number for the utilities to be marked on the ground as well as any city water and sewer lines. He shall tie all visible utility crossings with name, address and Phone #'s of utility companies. The engineer will coordinate with the utility companies and jointly the Surveyor and the Engineer will identify which utilities were missed and need to be tied down.
    - ii. Vertically - The engineer shall identify all utilities that are potential conflicts and that need to be tied vertically. The engineer will advise the surveyor in writing of the needed vertical ties and the surveyor will tie the lines vertically once the surveyor has coordinated the exposure and provide the information to the engineer.
  - k. Additional Field Surveying as shown below:
    - i. Irrigation Lines - The surveyor will meet with the engineer before he ties down any irrigation lines. The Engineer will provide him the existing Irrigation District Maps and the A&M Data of existing irrigation lines that are identified of record. He will follow the sample given to him by the engineer and tie the structures horizontally and vertically and provide Field Books to the engineer.
    - ii. Outfalls - The surveyor will provide a complete 2D & 3D File including utilities of the outfall identified on the Hydrologic Map.
  - l. Driveways and Turnouts
    - i. Inventory commercial entrances, public roads and side streets separately.
    - ii. Obtain centerline station (Width at ROW, Pavement and existing radius).
    - iii. Inventory by type (dirt, caliche, gravel or paved). If paved, indicate condition in terms of no patches, has patches or has potholes.
    - iv. Obtain width at ROW line
    - v. Obtain elevations at both edges of the driveway or turnout in line with any side drain.
  - m. ROW Staking (Existing and proposed @ 1,000 ft stations, PC's, PT's and Angle points as per ROW Map)
  - n. Soil core hole staking
  - o. Determine changes in topography from voids and outdated maps due to development, erosion, etc.
  - p. Profile existing drainage facilities, if applicable
  - q. Measure hydraulic openings under existing bridges, if applicable
  - r. Obtain elevations of manholes and valves of utilities, if applicable
  - s. Provide temporary signs, traffic control, flags, safety equipment, etc.
  - t. Provide ties to existing bridges or culverts that may conflict with new construction
  - u. If there is a Bridge widening, provide top of deck and/or top of cap elevations at the Profile Grade Line (PGL) and the edges of slab at bent locations.
  - v. Inventory signs, mailboxes and driveways
  - w. Survey controlled data sheets as per STATE guidelines
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ATTACHMENT "B"  
SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

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**ADDITIONAL RESPONSIBILITIES**

**A. TRAFFIC CONTROL:**

The SURVEYOR shall control traffic in and near surveying operations adequately to comply with provisions of the latest edition of the TxDOT Manual on Uniform Traffic Control Devices – Part VI and the latest edition of the Occupational Safety Manual both of which can be found on the TxDOT internet site.

In the event field crew personnel must divert traffic or close traveled lanes, a Traffic Control Plan based upon principles outlined in the latest edition of the TxDOT Manual on Uniform Traffic Control Devices – Part VI shall be prepared by the SURVEYOR and approved by the ENGINEER prior to commencement of field work. A copy of the approved plan shall be in the possession of field crew personnel on the job site at all times and shall be made available to the ENGINEER for inspection upon request.

**B. INVOICING:**

Payment requests shall include a SURVEYOR's invoice. With each payment request, the SURVEYOR shall submit a project status report which will, as a minimum, include the percentage of total work complete as of the date of the payment request and a description of current work activity. The percentage of total work complete shall not be based simply on the percentage of funds expended, but shall be based on the best judgment of the SURVEYOR as to the percentage of actual work complete.

**C. EASEMENTS, LETTERS OF PERMISSION, ETC.**

The SURVEYOR shall be responsible for delineating easements. The SURVEYOR will be responsible for securing the necessary legal instruments and obtaining all Right-of-Entries (ROEs).

**D. MEETINGS:**

The ENGINEER shall setup the necessary meetings with the SURVEYOR in order to assure all field information is provided on-time and products are delivered in accordance with TxDOT's/LPA's specifications. SURVEYOR must attend all meetings involving data provided if requested by ENGINEER.

**E. PROJECT MANAGER/SURVEYOR COMMUNICATION:**

The SURVEYOR shall designate one Texas Registered Professional Land Surveyor (RPLS) to be responsible throughout the project for project surveying coordination and all communications, including billing, with the ENGINEER.

**F. OFFICE LOCATION:**

The SURVEYOR will perform the services to be provided under this agreement out of a local office and have a crew available to perform requested tasks within 24 hours of request. The coordinating SURVEYOR's Project Manager (RPLS) shall be accessible at all times and working from the local office.

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**ATTACHMENT “B”**  
**SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER**

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**SIGNING, MARKINGS AND SIGNALIZATION**  
(Function Code 162)

**PAVEMENT MARKINGS:**

The ENGINEER will provide flashing beacon layouts for the needed construction repairs along the project limits. The services will include:

1. Traffic Signals (if applicable)
  - a. Development of Justification (Warrant) Data
    - i. Location Map
    - ii. Photographs as appropriate
    - iii. Accident data as appropriate
    - iv. Vehicle volumes (existing, estimated, projected, and pedestrian)
    - v. Traffic Survey – Count Analysis
    - vi. Recommendation based on the collected data
  - b. Layout
    - i. Title Sheet (when applicable)
      1. Describe the location
      2. Type of installation
      3. Area map with project limits for each location
      4. Index of sheets
      5. Space for official signatures
    - ii. Estimate and quantity sheet (when applicable)
      1. List of all bid items
      2. Bid item quantities
      3. Specification item number
      4. Paid item description and unit of measure
    - iii. Basis of estimate sheet
    - iv. General notes and specification data sheet
    - v. Condition Diagram
      1. Highway and intersection design features
      2. Roadside development
      3. Traffic control including illumination
    - vi. Plan Sheets(s)
      1. Existing traffic control that will remain (signs and markings)
      2. Existing utilities
      3. Proposed highway improvements
      4. Proposed installation
      5. Proposed additional traffic controls
      6. When applicable, proposed conduit for Railroad interconnect with standard details for runs under tracks
      7. Proposed illumination attached to signal poles
    - vii. Notes for plan layout
    - viii. Elevation sheet(s) (span wire design)
    - ix. Phase sequence diagram(s)
      1. Signal locations
      2. Signal indications
      3. Phase Diagram
      4. Signal sequence table
      5. Flashing operation

**ATTACHMENT “B”**  
**SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER**

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- 6. Preemption operation
  - 7. Interval timing, cycle length and offset
  - x. Construction Detail Sheets
    - 1. Poles, Detectors, Pull box and conduit layout & Controller Foundation
  - xi. Marking Details (when applicable)
  - xii. Barricade and warning sign standard sheet and any special details for work zone traffic control for special conditions
  - xiii. Aerial or underground interconnect details (when applicable)
- c. General Requirements
- i. Contact the local utility company
    - 1. Confirm Power Source
    - 2. Discuss route of aerial or underground interconnect cable
    - 3. Adjustment of overhead utility lines
  - ii. Prepare governing specifications, special provisions list and estimate
- d. Summary of Quantities

**PROJECT MANAGEMENT**

(Function Code 164)

**MEETINGS, COORDINATION & SUPPORT FOR PROJECT MANAGEMENT:**

The ENGINEER shall meet and coordinate with all relevant entities (i.e. County, Regional Mobility Authority, Texas Department of Transportation, Rio Grande Valley Metropolitan Planning Organization, etc...) and all other affected parties. The Engineer shall serve as representative for the LPA in coordination items. The Engineer shall coordinate with the LPA’s staff on all Project related items.

**ADDITIONAL RESONSIBILITIES**

**EASEMENTS, LETTERS OF PERMISSION, ETC.:**

The ENGINEER shall be responsible for delineating easements. The ENGINEER will be responsible for securing the necessary legal instruments.

**MEETINGS:**

Meetings will be held with the FHWA, State Officials, local governments, property owners, utility owners, railroad companies, other consulting firms, etc., as needed or required by the LPA. The ENGINEER shall coordinate through the LPA for the development of this project with any local entity having jurisdiction or interest in the project (i.e., city, county, etc).

**SPECIFICATIONS, SPECIAL PROVISIONS, SPECIAL SPECIFICATIONS:**

Use the State's standard specifications or previously approved special provisions and/or special specifications. If a special provision and/or special specification is developed for this project, it shall be in the State's format and incorporate references to approved State test procedures.

**PROJECT MANAGER/ENGINEER COMMUNICATION:**

The ENGINEER shall designate one Texas Registered Professional Engineer to be responsible throughout the project for project management and all communications, including billing, with the LPA’s Director. Any replacements to the ENGINEER’s designated Project Manager/Engineer must be approved by the LPA.

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**ATTACHMENT "B"**  
**SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER**

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Engineering documents produced for the department's engineering projects shall be signed, sealed and dated or CADD sealed in accordance with Administrative Order No. 5-89 and Administrative Circular No. 26-91.

**DESIGN RESPONSIBILITIES:**

The ENGINEER is responsible for design errors and/or omissions that become evident before, during or after construction of the project. The ENGINEER's responsibility for all questions arising from design errors and/or omissions will be determined by the LPA and all decisions shall be final and binding. This would include, but not necessarily be limited to:

1. All design errors and/or omissions resulting in additional design work to correct the errors and/or omissions.
2. Preparation of design documents and detail drawings necessary for a field change due to design errors and/or omissions.
3. Revision of original tracings to the extent required for a field change due to design errors and/or omissions.

The ENGINEER shall promptly make necessary revisions or corrections resulting from the ENGINEER's errors, omissions or negligent acts without additional compensation. Acceptance of the work by the LPA will not relieve the ENGINEER of the responsibility for subsequent correction of any such errors or omissions or for clarification of any ambiguities.

**DOCUMENT AND INFORMATION EXCHANGE:**

Data, Plan Sheets, General Notes and/or Specifications provided to the LPA shall be furnished on 8GB USB flash drives. Each 8 GB flash drive shall have a file titled Table of Contents. The Table of Contents shall indicate the locations of files within the directory structure of the documentation.

General Notes and specifications shall be provided in MS Office 2007 format. Plan sheets shall be provided in Microstation DGN or GEOPAK GPK format. PDF copies of plan sheets shall also be provided.

Two copies of the documentation shall be provided to the LPA.

If required, the ENGINEER shall provide to the LPA, a CD that contains all the plan sheets for the project. The graphics tape shall be compatible with the LPA's computer system.

CD Tape Required (YES or NO): YES

**PROPOSAL TIME:**

The time indicated in the proposal and the contract shall include time necessary for reviews, approval, etc.

**OFFICE LOCATION:**

The ENGINEER will perform all services to be provided under this agreement out of their office located at: 2805 Fountain Plaza Blvd., Suite A, Edinburg, Texas 78539

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**ATTACHMENT "D-1" - WORK SCHEDULE  
10th Street Flashing Beacon Design**

TASK AND DESCRIPTION	2021																	
	MAY		JUNE				JULY				AUGUST				SEPTEMBER			
	WK3	WK4	WK1	WK2	WK3	WK4	WK1	WK2	WK3	WK4	WK1	WK2	WK3	WK4	WK1	WK2	WK3	WK4
<b>Hid Cty Pct #4 - Flashing Beacon Design</b>																		
Notice To Proceed																		
<b>Design Tasks</b>																		
Data Collection																		
PS&E for 2-Flashing Beacons (Chapin & Rogers)																		
<b>Construction Tasks</b>																		
Advertise for Construction Bids																		
Receive Bids & Award																		
Begin Construction Operations																		

GDJ ENGINEERING TEAM TASK  
 HIDALGO COUNTY TASK



## "Attachment D" Fee Estimate

**Hidalgo County Precinct #4: 10th Street Flashing Beacon Design - Fee Proposal (WA #1)  
At Chapin Road & Rogers Road**

<i>Flashing Beacon Design Fee Proposal - Hidalgo County Pct. #4: 10th Street @ Chapin Rd &amp; Rogers Rd</i>			MANHOURS							Total Hours	Total Line Item Cost
			Principal/Senior Project Manager	Project Manager	Agency Coordination/ Utility Manager	Project/Design Engineer	EIT	Engineering Tech	Admin/Clerical		
TASK											
<b>WA #1 - DESIGN</b>											
1	Data Collection		2	4	16	16		8	4	50	\$ 5,806.00
2	Design of 2-Flashing Beacons (Chapin & Rogers Rds)		6	24	14	26	34	48	6	158	\$ 17,376.00
3	Project Management		2	2	2	2				8	\$ 1,180.00
<b>Total (WA #1)</b>			<b>10</b>	<b>30</b>	<b>32</b>	<b>44</b>	<b>34</b>	<b>56</b>	<b>10</b>	<b>216</b>	<b>\$ 24,362.00</b>
<b>Total Labor Hours</b>			<b>10</b>	<b>30</b>	<b>32</b>	<b>44</b>	<b>34</b>	<b>56</b>	<b>10</b>	<b>216</b>	
Contract Rate			\$ 185.00	\$ 160.00	\$ 120.00	\$ 125.00	\$ 95.00	\$ 82.00	\$ 55.00		
<b>Total Labor Costs</b>			<b>\$ 1,850.00</b>	<b>\$ 4,800.00</b>	<b>\$ 3,840.00</b>	<b>\$ 5,500.00</b>	<b>\$ 3,230.00</b>	<b>\$ 4,592.00</b>	<b>\$ 550.00</b>		<b>\$ 24,362.00</b>

LINE ITEM EXPENSES

N/A

\$ -

**Total Expenses**

\$ -

**GDJ Engineering Total Cost**

**\$ 24,362.00**