

December 1, 2016

Commissioner Joseph Palacios  
**Attn: Maria Lucio, Executive Assistant**  
Hidalgo County Precinct No. 4  
2812 South Business Highway 281  
Edinburg, Texas 78539

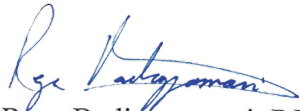
**RE: On-Call Services for “Road and Bridge, C.I.P. and Other Projects in General”  
(C-16-329-09-06)  
Work Authorization No. 3 ~ Brushline Rd.**

Dear Ms. Lucio,

Attached for your review and approval is Work Authorization No. 3 to provide Brushline Rd. PS&E under our On-Call Services for “Road and Bridge, C.I.P and Other Projects in General” Contract. This submittal is made to you in duplicate form for your further coordination with Commissioner Palacios.

We appreciate the opportunity to provide our professional services and look forward to working with you. Should you have any questions, please feel free to give me a call at (956) 585-3773.

Sincerely,



Reza Badiózzamani, P.E., C.F.M.  
President/Project Manager

Attachments: Work Authorization No. 3

**HIDALGO COUNTY**  
**Professional Engineering Services**  
**Agreement #C-16-329-09-06**

**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, **BZZ ENGINEERING LLC**, professional engineers of Mission, Texas, hereinafter called "**Engineer**".

**PART 1. SCOPE OF WORK**

The purpose of this Work Authorization is for the "engineering services" to assist with Brushline Rd. PS&E.

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 **\$57,498.48**. 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 Articles 5 and 6 of the Agreement.

**PART 4. FUNDING**

This Work Authorization No. 3 shall be funded through funding source:

Account No. 6-1287 - 431-30-124 - 151-4-721

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 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.4, Commissioner, Joseph Palacios, as to content and detail of this **Work Authorization No. 3**.

**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 \_\_\_\_\_ (cc approval date) \_\_\_\_\_ as indicated below and effective as of \_\_\_\_\_ day of \_\_\_\_\_, 201\_\_.

**THE ENGINEER:  
B2Z ENGINEERING**

**THE OWNER:  
HIDALGO COUNTY**

  
\_\_\_\_\_  
By: Reza Badiozzamani, P.E.

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

**ATTEST:**

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

# **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 the Project.

The **OWNER** will provide to the **ENGINEER** the following:

- (1) Authorization to the **ENGINEER** to begin work in accordance with Section 3 of this Agreement.
- (2) Payment for work performed by the **ENGINEER** and accepted by the **OWNER** in accordance with Section 6 of the Agreement.
- (3) Assistance to the **ENGINEER**, as necessary, to obtain the required data and information from other local, regional, State and Federal agencies that the **ENGINEER** cannot easily obtain.
- (4) Provide any available relevant data the **OWNER** may have on file concerning the project.
- (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 Attachment "C" of this Agreement.
- (6) Attend and participate in progress meetings as required and as coordinated and conducted by the **ENGINEER**.
- (7) Assist the **ENGINEER** in the preparation of the project mailing list; provide representation, a site and stenographer for all public meetings; additionally:  
  
*Public Meetings*
  - (a) Approve agenda and all exhibits prior to public meeting.
  - (b) Approve date and location of the meeting.
  - (c) Review/approve Public Meeting Report.
- (8) Attend the Preliminary Concept Conference coordinated and conducted by the **ENGINEER** and more particularly identified in Attachment "B" of the Agreement.
- (9) Assist the **ENGINEER** as required in the coordination with the USACE and the Federal Emergency Management Agency (FEMA) and any other coordinating agency or entity *(when and if applicable)*.
- (10) Review and approve the Project design criteria.
- (11) Review and approve change orders as required and prepared by the **ENGINEER**.

# EXHIBIT B

## Scope of Services to be provided by the Engineer

### SECTION I - 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

PROJECT/DESCRIPTION: On-Call Services for "Road and Bridge, C.I.P. and Other Projects in General"  
Work Authorization No. 3 ~ Brushline Rd

ENGINEER shall mean B2Z Engineering.

STATE shall mean Texas Department of Transportation.

COUNTY shall mean Hidalgo County.

# EXHIBIT B

## Scope of Services to be provided by the Engineer

### SECTION 2 – FEASIBILITY STUDIES

(Function Code 102)

#### Preliminary Design Values

*The ENGINEER will work with the Owner to establish basic design concepts, project controls and general scope of Projects.*

#### Preliminary ROW Requirements

*The ENGINEER will research and identify affected property owners on the Projects utilizing the latest appraisal district file information from Hidalgo County Appraisal District and information from Carson Maps.*

#### Preliminary Cost Estimates

*The ENGINEER will calculate preliminary construction cost estimates for the location and geometry of the Projects.*

#### Project Fact Sheet with Est. Local Cost vs. Total Project Cost

*The ENGINEER will produce a Project Fact Sheet providing summaries of all pertinent items in this scope of services (as required) and providing estimated local costs vs. total project costs for the Projects.*

#### Meetings, Coordination & Support for Project Development

*The ENGINEER shall provide coordination services and shall assist in meetings and workshops with Hidalgo County, Hidalgo County Drainage District No. 1 and Hidalgo County Irrigation Districts, and all other affected parties. The ENGINEER shall serve as representative for the Owner in coordination items. The ENGINEER shall coordinate with the Owner's staff on all Project related items.*

# EXHIBIT B

## Scope of Services to be provided by the Engineer

### SECTION 7 - ROADWAY DESIGN CONTROLS

(Function Code 160)

#### 1. Geometric Design

- a. Horizontal and Vertical Alignment
- b. Schematic Layout
  - (1) The location of interchanges, main lanes, grade separations, frontage roads and ramps.
  - (2) Develop vertical and horizontal alignment of main lanes, ramps and cross roads at proposed interchanges or grade separations. Frontage road alignment data need not be shown on the schematic; however, it should be developed in sufficient detail to determine ROW needs. The degree of horizontal curves and vertical curve data, including "K" values, shall also be shown for ease of checking.
  - (3) For freeways, show the location and text of the proposed main lane guide signs. Lane lines and/or arrows indicating the number of lanes shall also be shown.
  - (4) A complete explanation of the sequence and methods of stage construction, if proposed, including the initial and ultimate proposed treatment of crossovers and ramps.
  - (5) The tentative ROW limits.
    - a. Provide a roadway Design System (RDS) or (GEOPAK) computer tape of the preliminary earthwork to verify ROW requirements.
    - b. Provide a graphics file containing the approved schematic.
  - (6) The geometric (pavement cross slopes, lane and shoulder widths, slope rates for fills and cuts) of the typical sections of proposed highway main lanes, ramps, frontage roads, and cross roads.
  - (7) The current and projected traffic volumes as provided by the TxDOT (20 year traffic projection, unless otherwise determined by the District Engineer).
  - (8) The control of access lines if Interstate or designated under House Bill 179.
  - (9) Direction of traffic flow on all roadways.
  - (10) Location and width of median openings for highway without access control.
  - (11) The geometric of speed change (acceleration, deceleration, climbing) lanes.

#### 2. General Guidelines for Project Development

- a. Prior to preparing detailed plans for a proposed project, a preliminary schematic layout shall be prepared which indicates the general geometric features and location requirements peculiar to the project. An uncontrolled aerial mosaic will be provided for this use. Four copies of the schematic layout shall be submitted through the district to the Design Division for approval and subsequent coordination with the Federal Highway Administration (FHWA) where applicable. The layout shall be submitted for two-lane arterial highway projects on new locations and for all multi-lane highway projects. **No geometric design is to be performed until the COUNTY has given the ENGINEER written approval of the preliminary schematic layout.**
- b. All geometric design shall be in conformance with the State's Design Division, Operations and Procedures Manual, except where variances are permitted in writing by the STATE.
- c. The schematic layout shall include basic information which is necessary for the proper review and evaluation including the items listed above in the checklist for schematic layout.
- d. Handling of traffic during construction shall be a consideration in the development of preliminary designs.
- e. Upon approval of the schematic layout by Design Division (FHWA on Federal-aid projects), it shall be the basis for an exhibit at any required public hearing prior to final development of the project. If there are any changes to the schematic after the Design Division and FHWA approval and before the public hearing, four copies of the revised schematic, as displayed at the hearing, shall be submitted either prior to or accompanying the public hearing data. If there are no changes in the schematic as displayed at the hearing, only photographs of the schematic and other displays shall be submitted with the public hearing data.
- f. For all freeway construction projects, these schematics shall show the location and text of the proposed main lane guide signs. A schematic layout shall be submitted through the district to the Traffic Operations Division, Traffic Safety Section for approval and subsequent coordination with the FHWA. All signing shall be in conformance with the Texas MUTCD.
- g. On complex projects, informal contact through the district with the Design Division and FHWA personnel is encouraged with regard to development of preliminary design prior to official schematic submission.
- h. The ENGINEER shall furnish a project tape that is compatible with the STATE's computer system, a project listing, and a cross section plot showing the original design sections containing the earthwork input

# EXHIBIT B

## Scope of Services to be provided by the Engineer

and original cross sections for the project. **Accuracy of the earthwork design is of utmost importance since it is the basis for contractor payments and construction staking.**

### 3. Grading Design

- a. Refine the horizontal and vertical alignment of main lanes, frontage roads, ramps, cross roads and direct connectors based upon the approved schematic layout. Determine vertical clearances at grade separations and overpasses, taking into account the appropriate super elevation rate.
- b. Typical Sections
- c. Design Cross Sections
- d. Determine Cut and Fill Quantities
- e. Slope Stability Analysis
- f. Embankment Foundation Stability Analysis
- g. Embankment Settlement Analysis

### 4. Pavement Design

- a. The typical section shall also reflect proposed geometric including pavement cross slopes, lane and shoulder widths, and slope rates whenever this data have not been previously shown on a schematic submission.
- b. Basic Design Criteria
- c. Cost Data
- d. Pavement Material Properties
- e. Rehabilitation Investigations
  - (1) Core Hole Survey (Show cost estimate with Function Code 110)
    - (a) Determine type and depth of existing material, pavement, etc. The ENGINEER will determine whether to salvage ACP and FLEXBASE as well as their properties and provide this information to TxDOT.

# EXHIBIT B

## Scope of Services to be provided by the Engineer

### SECTION 8 - DRAINAGE

(Function Code 161)

All hydraulic design shall be in accordance with the TxDOT's Hydraulic Manual, except where variances are permitted in writing by the COUNTY.

1. Hydrologic Map
  - a. Hydrologic data/discharge determination for outfalls
2. Hydraulic Drainage Study and Documentation
  - a. Hydraulic computations and Drainage area maps showing existing conditions and proposed improvements.
    - (1) Storm water detention available within the ROW (linear ft. alongside drain ditch).
    - (2) Storm water detention required outside the ROW (as per HCDD#1)
    - (3) Culverts
    - (4) Bridge waterways
    - (5) Channels
    - (6) Storm sewers/inlets
    - (7) Pump stations
    - (8) Storm Water Management facilities
    - (9) Other
      - (a) Irrigation Canals/Siphons
  - b. Hydraulic report(s)
  - c. Federal Emergency Management Agency (FEMA) floodway requirements
  - d. Determine impact of proposed drainage plan on the following receiving stream(s)
    - (1) Hidalgo County Drainage District Outfalls
    - (2) All Irrigation District Outfalls impacted
3. Layout, Structural Design and Detailing of Drainage Features
  - a. Culverts
    - (1) New culverts
    - (2) Culvert widening and/or lengthening
    - (3) Culvert replacements
  - b. Summary of Quantities
4. Storm Water Pollution Prevention Plan (SW3P)

# EXHIBIT B

## Scope of Services to be provided by the Engineer

### SECTION 9 - SIGNING, MARKINGS AND SIGNALIZATION

(Function Code 162)

#### 1. Signing and Markings Layout

##### a. Requirements (Separate Layout)

- (1) Roadway layout
- (2) Center line with station numbering
- (3) ROW lines
- (4) Culverts and other structures that present a hazard to traffic
- (5) Location of utilities, if not shown on plan and profile
- (6) Existing signs to remain, to be removed, to be relocated
- (7) Proposed signs (illustrated and numbered)
- (8) Existing overhead sign bridges to remain, to be revised, removed or relocated
- (9) Proposed overhead sign bridges indicating location by plan layout (electrical details need not be shown on this layout)
- (10) Proposed markings (illustrated and quantified) which include pavement markings, object markings and delineation
- (11) Quantities of existing pavement markings to be removed
- (12) Proposed delineators and object markers

#### 2. Summary of Small Signs Tabulation

#### 3. Sign Detail Sheets

- a. All signs except route markers
- b. Design details for large guide signs
- c. Dimensions of letters, shields, borders, corner radii etc.
- d. Designation of shields attached to guide signs
- e. Designation of arrow used on exit direction signs

# EXHIBIT B

## Scope of Services to be provided by the Engineer

### SECTION 10 - MISCELLANEOUS (ROADWAY)

(Function Code 163)

#### 1. Traffic Control Plan, Detours and Sequence of Construction

Traffic Control Plans (TCP) are required for all projects. A detailed TCP shall be developed when traffic handling during construction involves complications for which a feasible solution is not covered by the Texas MUTCD or the current Barricade and Construction (BC) Standards. The following items are required on all Traffic Control Plan Layouts:

- a. The sequence of construction and method of handling traffic during each phase.
- b. The existing and proposed traffic control devices that will be used to handle traffic during each construction sequence. Include signals, regulatory signs, warning signs, construction warning signs, guide signs, route markers, construction pavement markings, channelizing devices, portable changeable message signs, flashing arrow boards, barricades, barriers, etc.
- c. The proposed traffic control devices (stop signs, signals, flag person, etc.) at grade intersections during each construction sequence.
- d. Where detours are provided, typical cross sections shall be shown.
- e. Road construction work hours shall be developed after an investigation of the traffic volumes has been performed.

#### 2. Compute and Tabulate Quantities

#### 3. Estimate

#### 4. Specifications and General Notes

# EXHIBIT B

## Scope of Services to be provided by the Engineer

### SECTION 14 - ADDITIONAL RESONSIBILITIES

#### **Coordination of Utilities**

The ENGINEER shall furnish the COUNTY prints of a project layout which will be distributed by the ENGINEER to various utility companies to determine which utilities are in the limits of the project. These shall be preliminary layouts. Upon completion of the preliminary drainage plans and U&D sheets, the ENGINEER shall distribute to the various utility companies and request return. Upon return of these prints, the ENGINEER will schedule a meeting with the various utility companies to discuss potential conflicts and conformance with the State's Utility Accommodation Policy. The ENGINEER is responsible for coordination with the various utility companies for exposing potential conflicts and field ties to uncover utilities in potential conflict areas.

#### **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 COUNTY. The ENGINEER shall coordinate through the COUNTY 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 COUNTY's Director. Any replacements to the ENGINEER's designated Project Manager/Engineer must be approved by the COUNTY.

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 COUNTY 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 COUNTY 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 COUNTY 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.

# EXHIBIT B

## Scope of Services to be provided by the Engineer

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

If required, the ENGINEER shall provide to the COUNTY, a CD that contains all the plan sheets for the project. The graphics tape shall be compatible with the COUNTY'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 the services to be provided under this agreement out of their office or offices listed below:

Service  
All Services

Office Location  
Mission Office

The work effort will be managed out of the \_\_\_\_\_ Mission \_\_\_\_\_  
(City)


office located at 900 S Stewart Road, Ste 4 \_\_\_\_\_,  
(Address)

Mission \_\_\_\_\_, Texas \_\_\_\_\_.  
(City) (State)

**EXHIBIT "C"**  
**PROJECT SCHEDULE**  
**On-Call Services for "Road and Bridge, C.I.P. and Other Projects in General"**

**WA #3 - BRUSHLINE ROAD PS&E**

TASK AND DESCRIPTION	2016		2017									
	NOV	DEC	JAN	FEB	MAR	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
<b>Brushline Road PS&amp;E</b>												
Work Authorization Approval												
PS&E Development												
Ability for Construction Commencement												

 B2Z Engineering

