

EXHIBIT “F”
HIDALGO COUNTY
Professional Engineering Services
Agreement # C-22-0376-10-04
(ARPA-22-124-095)
WORK AUTHORIZATION NO. 1

THIS WORK AUTHORIZATION is made pursuant to the terms and conditions of the Professional Engineering Services Agreement No. C-22-0376-10-04, incorporated herein by reference, for the “**North Main Drain III Phase I Stormwater Project**” made by and between HIDALGO COUNTY, action herein by and through the Commissioner’s Court, hereinafter called the “**Owner**,” and TEDSI Infrastructure Group, Inc. , and hereinafter called “**Engineer**”.

PART 1. SCOPE OF WORK

The purpose of this Work Authorization is for the **Engineer** to provide the preparation of Plans, Specifications, Estimates, and Construction Management 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 **\$351,918.96**. 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-22-0376-10-04 between the **Owner** and the **Engineer**.

PART 4. FUNDING

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

Account No. 2-1290-431-50-115-282-1-723

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-22-0376-10-04, 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-22-0376-10-04

PART 7. ACKNOWLEDGEMENT AND CONFIRMATION

Acknowledgement and confirmation by **Hidalgo County Precinct 4, Commissioner Ellie Torres** as to content and detail of this **Work Authorization No. 1.**

HIDALGO COUNTY PRECINCT No. 4

By: _____

Ellie Torres, Commissioner

PART 8. ACCEPTANCE AND APPROVAL

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

APPROVED BY COMMISSIONERS’ COURT ON OCTOBER 4th, 2022.

Agenda Item No. 87698

Executive Office: _____

ENGINEER:

TEDSI Infrastructure Group Inc.

COUNTY:

COUNTY OF HIDALGO

Ponciano N. Longoria, P, E., CFM

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

PROJECT SPECIFIC SCOPE OF SERVICES TO BE PROVIDED BY ENGINEER

SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

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 Precinct 4

CONTROL: N/A

PROJECT/DESCRIPTION: Preparation of Plans, Specifications & Estimates and Construction Management

LENGTH: 7,200 LF

HIGHWAY: North Main Drain III Phase 1

LIMITS: From Mile 17 ½ to 2,000 feet north of FM 1925 (Monte Cristo 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
- Miscellaneous Studies (Use Function Code 110 for All Tasks)
- Drainage Improvements

ENGINEER shall mean TEDSI.

COUNTY shall mean Hidalgo County Pct. 4.

LPA shall mean Hidalgo County Pct. 4.

EXHIBIT
SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

ENGINEERING DESIGN SURVEY SERVICES (PS&E) :

PURPOSE:

The purpose of a “design survey” is to provide field information in support of drainage systems design.

DEFINITIONS:

A “design survey” is defined as the combined performance of research, field work, analysis, computation, and documentation necessary to provide detailed topographic (3-dimensional) mapping of a project site. A design survey may include, but need not be limited to, cross-sections or data to create cross-sections and Digital Terrain Models (DTM), horizontal and vertical location of utilities and improvements, detailing of bridges and other structures, review of right-of-way maps, establishing control points, etc.

Design Surveying

Control

- Primary Project Control - Precision shall be 1 part in 20,000 or better, unless otherwise directed by the Project 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

- Secondary Project Control – Surveyor shall recover and/or reset H&V Control Points as provided by the Engineer and create Survey Control Data Sheets for inclusion in the Construction Project Plans signed and sealed by an R.P.L.S.
 - No traverse should exceed 25 angle points. Planimetric shall be 0 ft Lt & Rt from the proposed ROW as per the schematic provided by the Engineer.
 - The unadjusted angular error should not exceed 2 seconds per angle, plus 14 seconds.
 - 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.)
 - The unadjusted vertical error should not exceed 0.03 foot per mile of traverse.
- Set H&V Control at 1000-ft intervals along the project proposed right-of-way. Provide x, y, z for each H&V Control The H&V Control shall be #5 I.R. 1.5-ft in depth set in concrete. **The surveyor shall provide an H&V Control 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.

Right-of-Way

- Right of Entry, Right of Way Research, and Appraisal District Records is the responsibility of the Surveyor.
- Deed and plat research for delineation of existing ROW/property lines
- Field search and survey available ROW monuments along the project route and adjoining areas to determine and delineate existing ROW.

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- Delineate existing ROW based on found monuments and available record information on the ROW.
- Prepare a plat map drawing for existing ROW including bearing & distances, abstracting information of existing right-of-way & adjoining properties.
- Show all encroachments within ROW and prepare a table for all encroachments
- Include Floodplain information on the map
- Prepare cover sheet with sheet index for above ROW maps

Topographic Survey

- Complete topographic and cross section survey, data processing, and CADD mapping (2D & 3D).
- Locate all visible utilities, data processing and CADD mapping (2D & 3D) including irrigation lines. Follow sample provided by the Engineer.
- Field locates cross culverts, driveway culverts, inverts, irrigation lines, within the project limits, data processing and CADD mapping (2D & 3D).
- The Surveyor shall stake the proposed centerline on the existing fields as approved by Engineer before construction for the purpose of utility adjustments and project location.
- Profile and cross section intersecting streets for ties into project (200-ft. beyond the proposed ROW per schematic and 20-ft wider than the existing ROW of intersecting street).
- Cross section irrigation crossings for a distance of 20-ft beyond the proposed ROW at 200-ft intervals in a DTM file. Provide a complete description of irrigation appurtenances as identified by the engineer sample layout. The SURVEYOR will meet with the ENGINEER before he ties down any irrigation lines. Jointly the SURVEYOR and the ENGINEER will identify from records such as the Irrigation District Maps and the A&M Data of existing irrigation lines that will need to be tied down. The SURVEYOR will follow the sample given to him by the ENGINEER and tie the structures horizontally and vertically and include in the field books to be submitted.
- 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.
- Tie to existing underground and overhead utilities (location, elevation, and direction)
- 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.
- 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.
- Cross section and profile for a distance of 10-ft beyond the proposed ROW upstream and downstream at 250-ft intervals. The SURVEYOR will provide a complete 2D/3D File including utilities of the outfalls identified.
- Driveways and Turnouts
 - Inventory commercial entrances, public roads, and side streets separately.
 - Obtain centerline station. (Width at ROW, PAV'T and existing radius.
 - Inventory by type (dirt, caliche, gravel or paved). If paved, indicate condition in terms of no patches, has patches or has potholes.
 - Obtain width at R.O.W. line.
 - Obtain elevations at both edges of the driveway or turnout in line with the side drain.
- Determine changes in topography from voids and outdated maps due to development, erosion, etc.
- Profiles of existing drainage facilities.
- Obtain elevations of manholes and valves of utilities

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SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

- Provide temporary signs, traffic control, flags, safety equipment, etc.
- Inventory signs, mailboxes, and driveways

Locate existing or apparent fence lines along rights-of-way unless directed otherwise by Engineer or HCDD1.

Optional Services

Level A Subsurface Utility Engineering

Perform a Level A Subsurface Utility Engineering surveying at specific locations of the pipelines and underground utility lines identified during the topographic survey specified by the Project Engineer and HCDD as being necessary to determine the accurate location and depth required for final design.

Plan and Profile of High-Tension Power Lines

Perform detailed profile drawings of high-tension power lines crossing project located +/- 800' north of Monte Cristo Road. Drawings would be used by engineer for inspection of possible construction conflict.

ENGINEERING SERVICES (PS&E) :

The ENGINEER will perform engineering design services for the needed for the construction of drainage ditch widening along the project limits. The services will include:

- Prepare PS&E (Plans, Specifications and Estimates) package which includes the following:
 1. Title sheet
 2. Index of sheets
 3. Project Layout
 4. Existing typical section
 5. Proposed typical section
 6. Summary Tables of Estimated Quantities
 7. General Notes & Specifications
 8. Traffic Control General Notes
 9. Traffic Control Plan Sheets
 10. Traffic Control Standards
 11. Removal Sheets
 12. Plan & Profile Sheets
 13. Drainage Standards
 14. SW3P
 15. SW3P Layout
 16. SW3P Standards
 17. 30% Submittal to the County
 18. 60% Submittal to the County
 19. 90% Submittal to the County
 20. 100% Final Submittal to the County
 21. Utility Coordination

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SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

CONSTRUCTION PHASE SERVICES

The ENGINEER will provide engineering, geotechnical testing, and support services for and during the construction of the Project or portions of the Project approved by the LPA. Specific (basic and special) services for CONSTRUCTION MANAGEMENT AND SUPPORT by the ENGINEER will include the following:

CONSTRUCTION BIDDING:

1. The ENGINEER will furnish the LPA the necessary copies of approved plans, specifications, notices to bidders, and proposals as prepared under PS&E.
2. The ENGINEER will assist the LPA on the tabulation of bids, recommendations to the Owner as to the proper action on all bid proposals received, and the preparation of formal contract documents for the award of each construction contract.

CONSTRUCTION CONTRACT ADMINISTRATION AND INSPECTION:

3. In general, the ENGINEER will provide the management and engineering support/data required for consultation and advisement to the LPA and act as the LPA's representative as provided in the General Condition of the Construction Contract.
4. The ENGINEER will coordinate and conduct a pre-construction conference (if required).
5. Defects and Deficiencies. The ENGINEER will use his best efforts to protect the LPA against defects and deficiencies in the work of the Contractor. The ENGINEER will promptly notify the LPA of any such defect or deficiency and take all steps possible to require the Contractor to correct the defect or deficiency.
6. Contractor Payment. The ENGINEER will review quantities as submitted by the Contractor and will coordinate with the LPA for the preparation of the monthly and final estimates for payment to the Contractor.
7. 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 for the purpose of monitoring the Contractor's progress and conformance to the construction contract plans and specifications.
 - b. Resident Engineer and/or Construction Inspector(s). The ENGINEER will furnish the services of a Resident Engineer and/or Construction Inspector(s) for on the site inspection construction to monitor/inspect the Contractor's daily progress and conformance to TxDOT's PS&E specifications.

MISCELLANEOUS TECHNICAL ACTIVITIES:

8. Shop Drawings. The ENGINEER will review and check all shop or working drawings furnished by the Contractor.
9. Control of Materials & Equipment. The ENGINEER will provide inspection of all materials and equipment furnished/used by the Contractor as follows:

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- 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.
10. 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 LPA.
11. As Built Drawings. The ENGINEER will develop as built drawings to depict the work as actually constructed. The LPA will be furnished five (5) set of prints.

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 COUNTY, 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.

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.

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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: 1201 E. interstate Highway 2, Mission, Texas, 78572.

SERVICES INCLUDED IN THIS SCOPE:

1. The ENGINEER shall develop PS&E in conformance with Hidalgo County requirements and standards.
2. The ENGINEER shall include in the PS&E Standard Detail Drawings.
3. The ENGINEER shall prepare Construction Cost Estimate.
4. The ENGINEER shall prepare General Notes for construction.
5. The ENGINEER shall assist the Hidalgo County with coordination and permitting with various agencies (i.e., Drainage District, Irrigation Districts, etc.)
6. The ENGINEER shall prepare PS&E in English units on 11" X 17" sheets.
7. The ENGINEER shall prepare Bid Services (Bid documents preparation, pre-bid conference, bid tabulation and award recommendation)

SERVICES NOT INCLUDED IN THIS SCOPE:

8. Traffic Signal Warrant Study.
9. Traffic Impact Analysis Study Preparation.
10. Traffic Data Collection including Volume, Classification and Turning Movement Counts.
11. Right of way acquisition services.
12. Perform evaluations and other tasks related to permitting issues for locations or elements of the project.
13. Design or detailing of interconnect system or signal progression.
14. Construction staking.
15. Geotechnical and Material Testing Services.

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16. Environmental Services
17. Advertisement and award of construction contract.
18. Traffic Control for geotechnical services.
19. Surveying services does not include sub surface investigations.
20. Illumination Design.



ATTACHMENT B

FEE PROPOSAL



**Fee Estimate
North Main Drain Phase III Fee Proposal**

Plans, Specifications and Estimates, Survey, Utility Coordination, Construction Management	Principal	Project Manager	Project Engineer	Design Engineer	Engineer-In-Training	Engineering Technician	Sr. CADD Operator	CADD/GIS Technician	Administrative/Clerical	Total Hours	Total Line Item Cost
TASK											
Topographic Survey											\$53,726.00
	SUBCONSULTANT SURVEYING COST										
	SUBCONSULTANT PS&E, UTILITY COORDINATION, PROCUREMENT, AND CONSTRUCTION MANAGEMENT COST										\$105,066.26
PS&E Development		6	80	120	180	200	250	300		1136	\$164,974.62
Utility Coordination		7	30		50					87	\$15,738.74
Procurement Services		8	10		15				5	38	\$7,056.86
Construction Management		4	20							24	\$5,356.48
Total Labor Hours		25	140	120	245	200	250	300	5	1285	
Contract Rate	\$300.06	\$264.52	\$214.92	\$181.86	\$148.79	\$140.76	\$138.87	\$115.73	\$111.93		
TOTAL LABOR COSTS	\$0.00	\$6,613.00	\$30,088.80	\$21,823.20	\$36,453.55	\$28,152.00	\$34,717.50	\$34,719.00	\$559.65		\$351,918.96
Total											\$351,918.96



ATTACHMENT C

APPROVED WORK/PROJECT SCHEDULE

PROJECT SCHEDULE															
NORTH MAIN DRAIN III PHASE 1															
Limits: From Mile 17 1/2 to 2000 ft North FM 1925 (Monte Cristo Road)															
	2022					2023									
<i>TASK AND DESCRIPTION</i>	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
Contract Development and Approval	█	█													
Topographic Survey			█	█											
30% PS&E Submittal and County Review				█	█										
60% PS&E Submittal and County Review					█	█									
90% PS&E Submittal and County Review						█	█								
100% PS&E Submittal and County Review							█								
Utility Coordination				█	█	█	█								
Bidding and Contract Award								█	█						
Construction									█	█	█	█	█	█	
Project Closeout														█	█