

ENGINEERING SERVICES AGREEMENT

THIS AGREEMENT is made and entered into by and between the Fort Bend Grand Parkway Toll Road Authority, a Local Government Corporation (the “Authority”) organized and operating under the laws of the State of Texas, hereinafter called the “FBGPTRA” and Entech Civil Engineers, Inc., hereinafter called “Engineer.”

WITNESSETH

WHEREAS, the FBGPTRA proposes to develop the schematic for the SH 99 southbound to US 90A eastbound direct connector (Project Number 126-1062), in Fort Bend County, Texas, (the “Project”);

WHEREAS, the FBGPTRA desires to enter into an agreement with Engineer for the performance of services during the Projects, that are within the scope of services in Attachment A (“Scope of Services”);

NOW, THEREFORE, in consideration of the mutual covenants and conditions set forth below, the parties agree as follows:

AGREEMENT

1. General

The Engineer shall render professional services to FBGPTRA related to the Project as defined in the Scope of Services in Attachment A.

The standard of care for all professional engineering and related services performed or furnished by Engineer under this Agreement will be the care and skill ordinarily used by members of Engineer’s profession practicing under similar conditions at the same time and in the same locality.

2. Compensation and Payment

- a. The Maximum Compensation under this Agreement is \$492,772.00. The amount paid under this Agreement may not exceed the Maximum Compensation without an approved supplemental agreement.

Compensation for the performance of services within the Scope of Services described in Attachment A will be paid per the rates shown in Attachment B, in an amount not to exceed \$492,772.00, only for work authorized prior to being performed and only for such work as was actually performed. The Engineer shall furnish satisfactory documentation of such work (e.g., timesheets, billing rates, classifications, invoices, etc.) as may be required by FBGPTRA.

- b. The Engineer shall furnish satisfactory documentation of such work (e.g., timesheets, billing rates, classifications, invoices, etc.) as may be required by FBGPTRA. All performance of the Scope of Services and any services outside the Scope of Services (“Additional Services”), including changes in the contractual scope of work and revision of work satisfactorily performed, will be performed only when approved in advance and authorized by the FBGPTRA, and Additional Services will be reimbursed based on the billing rates in effect at that time, to the extent that such labor costs and subcontracts are reasonable and necessary for the performance of such services. Out-of-pocket expense costs may be reimbursed only when approved in advance and authorized by the FBGPTRA. Payment will be made (i) on the basis of project progress to be billed monthly, and, for Additional Services, (ii) on the basis of time and expense records, and, in accordance with those payment procedures set forth in subsection d. below. Billing rates will be inclusive of all direct labor, fringe benefits, general overhead, and profit.
- c. Where subcontractors are employed by the Engineer to perform pre-approved and pre-authorized Additional Services, the Engineer will be reimbursed for subcontractors’ actual salaries and hourly rates. Reimbursement to the subcontractor for non-salary costs incurred by subcontractor will be on the same basis as if the cost was incurred by the Engineer. For subcontractors employed for the convenience of the FBGPTRA, the Engineer will be paid a subcontract administrative fee equal to ten percent (10%) of all subcontractor invoiced amounts.
- d. It is understood and agreed that monthly payments will be made to the Engineer by the FBGPTRA based on the following procedures: On or about the fifteenth day of each month during the performance of services hereunder and on or about the fifteenth day of the month following completion of all services hereunder, the Engineer shall submit to the FBGPTRA one invoice showing the amounts due for services performed during the previous month, set forth separately for work under this Agreement and for additional services (accompanied by supporting certified time and expense records of such charges in a form acceptable to the FBGPTRA.) It is specifically understood that any requests for travel reimbursements shall comply with those procedures for travel reimbursement to Fort Bend County employees established by the Fort Bend County Auditor. The FBGPTRA shall review such invoices and approve them with such modifications as are consistent with this Agreement and forward same to the Auditor. The County shall pay each such invoice as approved by the FBGPTRA within thirty (30) calendar days after receipt by the FBGPTRA.

3. Time of Performance

It is understood and agreed that the time for performance of the Engineer’s services under this Agreement shall begin with receipt of the Notice to Proceed. The Engineer will maintain the delivery schedule to be provided by the FBGPTRA.

This Agreement will terminate upon the Engineer’s completion of the Scope of Services to

the satisfaction of the FBGPTRA.

4. The FBGPTRA's Option to Terminate

- a. The FBGPTRA has the right to terminate this Agreement at its sole option at any time, with or without cause, by providing 30 days written notice of such intentions to terminate and by stating in said notice the "Termination Date" which shall be less than 30 days later than the actual receipt of such written notice by the Engineer. Upon such termination, the FBGPTRA shall compensate the Engineer in accordance with Section 2, above, for those services which were provided under this Agreement prior to its termination, and which have not been previously invoiced to the FBGPTRA. The Engineer's final invoice for said services will be presented to and paid by the FBGPTRA in the same manner set forth in Section 2(d), above.
- b. Termination of this Agreement and payment as described in subsection (a) of this section shall extinguish all rights, duties, obligations, and liabilities of the FBGPTRA and the Engineer under this Agreement, and this Agreement shall be of no further force and effect, provided, however, such termination shall not act to release the Engineer from liability for any previous default either under this Agreement or under any standard of conduct set by common law or statute. The obligations in Sections 5, 6, and 14 of this Agreement shall survive the termination of this Agreement.
- c. If the FBGPTRA terminates this Agreement as provided in this section, no fees of any type, other than fees due and payable at the Termination Date, shall thereafter be paid to the Engineer.
- d. The FBGPTRA's rights and options to terminate this Agreement, as provided in any provision of this Agreement shall be in addition to, and not in lieu of, any and all rights, actions, and privileges otherwise available under law or equity to the FBGPTRA by virtue of this Agreement or otherwise. Failure of the FBGPTRA to exercise any of its said rights, actions, options, or privileges to terminate this Agreement as provided in any provision of this Agreement shall not be deemed a waiver of any rights, actions, or privileges otherwise available under the law or equity with respect to any continuing or subsequent breaches of this Agreement or of any other standard of conduct set by common law or statute.
- e. Copies of all completed and partially completed documents prepared under this Agreement shall be delivered to the FBGPTRA within 30 days of the Termination Date or upon Engineer's receipt of fees due and payable at the Termination Date, whichever is sooner, when and if this Agreement is terminated.

5. Inspection of the Engineer's Books and Records

Upon written notice (including email), the Engineer will permit the FBGPTRA, or any duly authorized agent of the FBGPTRA, to inspect and examine the books and records of the

Engineer for the purpose of verifying the amount of work performed on the Project. FBGPTRA's right to inspect survives the termination of this Agreement for a period of four years.

6. Ownership and Reuse of Documents

Upon payment in full for undisputed amounts of Engineer's services, all documents, including original drawings, estimates, specifications, field notes, and data created, produced, developed or prepared by Engineer or its approved outside advisory or support consultants (collectively, the "Documents") shall be the property of the FBGPTRA, subject to all of the following terms and conditions; provided, however, FBGPTRA shall not own and shall have no right to receive any documents not deemed "final" by the Engineer until completion or termination of this Agreement, as applicable. Engineer will deliver the Documents to FBGPTRA within 30 days of the completion or termination of this Agreement and may retain a set of reproducible record copies of the Documents, provided that the Engineer has received full compensation due pursuant to the terms of this Agreement. It is mutually agreed that FBGPTRA will use the Documents solely in connection with the Project and for no other purposes, except with the express written consent of the Engineer, which consent will not be unreasonably withheld. Any use of the Documents without the express written consent of the Engineer will be at FBGPTRA's sole risk and without liability or legal exposure to Engineer.

FBGPTRA shall also be the owner of all intellectual property rights of the services rendered hereunder, including all rights of copyright therein. It is the intention of Engineer and FBGPTRA that the services provided are a "work for hire" as the term is used in the federal Copyright Act. Moreover, Engineer hereby agrees to assign, and by these presents, does assign to FBGPTRA, all of Engineer's worldwide right, title, and interest in and to such work product and all rights of copyright therein.

Engineer agrees that all trademarks, trade names, service marks, logos, or copyrighted materials of FBGPTRA that Engineer is permitted to use in connection with the services will not be used without FBGPTRA's consent and shall remain the sole and exclusive properties of FBGPTRA, and this Agreement does not confer upon Engineer any right or interest therein or in the use thereof.

7. Personnel, Equipment, and Material

- a. The Engineer represents that it presently has, or is able to obtain, adequate qualified personnel in its employment for the timely performance of the Scope of Services required under this Agreement and that the Engineer shall furnish and maintain, at its own expense, adequate and sufficient personnel and equipment, in the opinion of the FBGPTRA, to perform the Scope of Services when and as required and without delays. It is understood that the FBGPTRA will approve assignment and release of all key Engineer personnel and that the Engineer shall submit written notification of all key Engineer personnel changes for the FBGPTRA's approval prior to the implementation of such changes. For the purpose of this Agreement, key Engineer personnel are defined as: Project Manager. Services described in this

Agreement shall be performed under the direction of an engineer licensed to practice professional engineering in the State of Texas.

- b. All employees of the Engineer shall have such knowledge and experience as will enable them to perform the duties assigned to them. Any employee of the Engineer who, in the opinion of the FBGPTRA, is incompetent, or, by his conduct, becomes detrimental to the Project, shall, upon request of the FBGPTRA, immediately be removed from association with the Project.
- c. Except as otherwise specified, the Engineer shall furnish all equipment, transportation, supplies, and materials required for its operation under this Agreement.

8. Items to be furnished to Engineer by the FBGPTRA

As applicable, the following items will be supplied to the Engineer:

- a. Existing plans by others.
- b. Assistance in coordination with all utility companies.
- c. Assistance in coordination with all public and governmental entities.

9. Subletting

The Engineer shall not sublet, assign, or transfer any part of its rights or obligations in this Agreement without the prior written approval of the FBGPTRA. Responsibility to the FBGPTRA for sublet work shall remain with the Engineer.

10. Conference

At the request of the FBGPTRA, the Engineer shall provide appropriate personnel for conferences at its offices or attend conferences at the various offices of the FBGPTRA, or at the site of the Project, and shall permit inspections of its offices by the FBGPTRA, or others when requested by the FBGPTRA.

11. Appearance as Witness

If requested by the FBGPTRA, or on its behalf, the Engineer shall, as an Additional Service, prepare such engineering exhibits and plans as may be requested for all hearings and trials related to the Project and, further, it shall prepare for and appear at conferences at the office of the FBGPTRA and shall furnish competent expert engineering witnesses to provide such oral testimony and to introduce such demonstrative evidence as may be needed throughout all trials and hearings with reference to any litigation relating to the Project. Trial preparation and appearance by the Engineer in courts regarding litigation matters are Additional Services and compensation will be paid in accordance with Section 2(b).

12. Compliance with Laws

The Engineer shall comply with all federal, state, and local laws, statutes, ordinances, rules and regulations, and the orders and decrees of any courts or administrative bodies or tribunals in any matter affecting the performance of this Agreement., including, without limitation, Worker's Compensation laws, minimum and maximum salary and wage statutes and regulations, licensing laws and regulations. When required, the Engineer shall furnish the FBGPTRA with certification of compliance with said laws, statutes, ordinances, rules, regulations, orders, and decrees above specified.

13. Insurance

The Engineer shall obtain and maintain, throughout the term of the Agreement, insurance of the types and in the minimum amounts set forth in Attachment C.

14. Indemnification

With respect to claims brought by third parties against either Engineer or the FBGPTRA relating to the property or facilities with respect to which this Agreement pertains, Engineer and the FBGPTRA agree as follows:

- a. **ENGINEER WILL INDEMNIFY AND HOLD HARMLESS THE FBGPTRA, ITS DIRECTORS, OFFICERS, AND EMPLOYEES AGAINST ANY CLAIMS, DEMANDS OR CAUSES OF ACTION; AND COSTS, LOSSES, LIABILITIES, EXPENSES AND JUDGMENTS INCURRED IN CONNECTION THEREWITH, INCLUDING REIMBURSEMENT OF REASONABLE ATTORNEY'S FEES AND COURT COSTS, BROUGHT BY ANY OF ENGINEER'S EMPLOYEES OR REPRESENTATIVES, OR BY ANY OTHER THIRD PARTY, TO THE EXTENT BASED UPON, IN CONNECTION WITH, RESULTING FROM OR ARISING OUT OF THE NEGLIGENT ACTS, ERRORS OR OMISSIONS OF ENGINEER; HOWEVER, ENGINEER'S CONTRACTUAL OBLIGATION OF INDEMNIFICATION SHALL NOT EXTEND TO THE NEGLIGENCE OR OTHER FAULT OF THE FBGPTRA OR STRICT LIABILITY IMPOSED UPON THE FBGPTRA AS A MATTER OF LAW (INCLUDING STRICT LIABILITY IMPOSED UPON THE FBGPTRA AS A RESULT OF THE CONDITION OF THE PROPERTY OR FACILITIES WITH RESPECT TO WHICH THIS AGREEMENT PERTAINS).**
- b. In the event that both the FBGPTRA and Engineer are adjudicated negligent or otherwise at fault or strictly liable without fault with respect to damage or injuries sustained by the claimant, each shall be responsible for its own costs of litigation and pro rata share of damages as determined by the proceedings.

It is a condition precedent to the indemnitor's contractual obligation of indemnification under this Agreement that the party seeking indemnity shall provide written notice of a third party claim, demand, or cause of action within 30 days after such third party claim,

demand, or cause of action is received by the party seeking indemnity. It is a further condition precedent to the indemnitor's contractual obligation of indemnification under this Agreement that the indemnitor shall thereafter have the right to participate in the investigation, defense, and resolution of such third party claim.

15. Dispute Resolution

Except as expressly provided in Section 4. Option to Terminate, if a dispute arises out of, or relates to, the breach thereof, and if the dispute cannot be settled through negotiation, then the FBGPTRA and the Engineer agree to submit the dispute to mediation. In the event the FBGPTRA or the Engineer desires to mediate any dispute, that party shall notify the other party in writing of the dispute desired to be mediated. If the parties are unable to resolve their differences within 10 days of the receipt of such notice, such dispute shall be submitted for mediation in accordance with the Construction Industry procedures and rules of the American Arbitration Association (or any successor organization) then in effect. The deadline for submitting the dispute to mediation can be changed if the parties mutually agree in writing to extend the time between receipt of notice and submission to mediation. The expenses of the mediator shall be shared 50 percent by the FBGPTRA and 50 percent by the Engineer. This requirement to seek mediation shall be a condition required before filing an action at law or in equity.

16. Delivery of Notices, Etc.

- a. All written notices, demands, and other papers or documents to be delivered to the FBGPTRA under this Agreement, shall be delivered to the Fort Bend Grand Parkway Toll Road Authority, 245 Commerce Green Blvd., Suite 165, Sugar Land, Texas, 77478, Attention: Executive Director, or at such other place or places as it may from time to time designate by written notice delivered to the Engineer. For purposes of notice under this Agreement, a copy of any notice or communication hereunder shall also be forwarded to the following address: Fort Bend County Clerk, 301 Jackson Street, Richmond, Texas 77469, Attention: County Judge.
- b. All written notices, demands, and other papers or documents to be delivered to the Engineer under this Agreement shall be delivered to Entech Civil Engineers, Inc., 15021 Katy Freeway, Suite 500, Houston, Tx, 77094, Attention: Jim Spackman, P.E. or such other place or places as the Engineer may designate by written notice delivered to the FBGPTRA.

17. Reports of Accidents, Etc.

Within 24 hours after the occurrence of any accident or other event which results in, or might result in, injury to the person or property of any third person (other than an employee of the Engineer), whether or not it results from or involves any action or failure to act by the Engineer or any employee or agent of the Engineer and which arises in any manner from the performance of this Agreement, the Engineer shall send a written report of such accident or other event to the FBGPTRA, setting forth a full and concise statement of the facts pertaining thereto. The Engineer shall also immediately send the FBGPTRA a copy

of any summons, subpoena, notice, other documents served upon the Engineer, its agents, employees, or representatives, or received by it or them, in connection with any matter before any court arising in any manner from the Engineer's performance of work under this Agreement.

18. The FBGPTRA's Acts

Anything to be done under this Agreement by the FBGPTRA may be done by such persons, corporations, or firms as the FBGPTRA may designate.

19. Limitations

Notwithstanding anything herein to the contrary, all covenants and obligations of the FBGPTRA under this Agreement shall be deemed to be valid covenants and obligations only to extent authorized by the Act creating the FBGPTRA and permitted by the laws and the Constitution of the State of Texas. This Agreement shall be governed by the laws of the State of Texas, and no officer, director, or employee of the FBGPTRA shall have any personal obligation hereunder.

20. Captions Not a Part Hereof

The captions of subtitle of the several sections and divisions of this Agreement constitute no part of the content hereof but are only labels to assist in locating and reading the provisions hereof.

21. Controlling Law, Venue

This Agreement shall be governed and construed in accordance with the laws of the State of Texas. The parties hereto acknowledge that venue is proper in Fort Bend County, Texas, for all disputes arising hereunder and waive the right to sue or be sued elsewhere.

22. Successors and Assigns

The FBGPTRA and the Engineer bind themselves and their successors, executors, administrators, and assigns to the other party of this Agreement and to the successors, executors, administrators, and assigns of the other party, in respect to all covenants of this Agreement.

23. Statutory Terms Applicable to State Political Subdivisions

- a. Engineer certifies and agrees that it (i) does not, nor will not, so long as the Agreement remains in effect, boycott Israel, as such term is defined in Chapter 808, Texas Government Code, (ii) does not engage in business with Iran, Sudan, or any foreign terrorist organization pursuant to Subchapter F of Chapter 2252 of the Texas Government Code; (iii) is not identified on a list prepared and maintained under Sections 806.051, 807.051, or 2252.153, Texas Government Code; (iv) does not, nor will not, so long as the Agreement remains in effect, boycott energy

companies, as such term is defined in Chapter 809, Texas Government Code; (v) does not, nor will not, so long as the Agreement remains in effect, have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association, as such term is defined in 2274.001(3), Texas Government Code; and (vi) is not (a) owned or controlled by (1) individuals who are citizens of China, Iran, North Korea, Russia or any designated country (as such term is defined in 117.003, Texas Business & Commerce Code); or (2) a company or other entity, including a governmental entity, that is owned or controlled by citizens of or is directly controlled by the government of China, Iran, North Korea, Russia, of any designated country; or (b) headquartered in China, Iran, North Korea, Russia or a designated country.

- b. Prior to execution of this Agreement by FBGPTRA, the Engineer will be required to submit a Texas Ethics Commission Form 1295. Please see this website for details related to this disclosure:
https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm
- c. In accordance with Section 176.0065, Texas Local Government Code, a list of local government officers of FBGPTRA may be obtained by contacting the FBGPTRA's records administrator at (713) 374-3540.

24. Appendices

The Appendices attached to this Agreement, which consists of:

- Attachment A Scope of Services
- Attachment B Compensation for Scope of Services
- Attachment C Insurance Requirements

[Signatures Follow]

IN WITNESS WHEREOF, the parties hereto have signed or have caused their respective names to be signed to multiple counterparts.

FORT BEND GRAND PARKWAY TOLL ROAD
AUTHORITY, a local government
corporation

By: James D. Rice
Name: James D. Rice
Title: Chairman

ENTECH CIVIL ENGINEERS, INC.
ENGINEER

By: Jim Spackman
Name: Jim Spackman, P.E.
Title: Vice President

EFFECTIVE DATE

THIS AGREEMENT IS EFFECTIVE ON THE DATE IT IS APPROVED BY THE FORT BEND COUNTY COMMISSIONERS COURT, AND IF NOT SO APPROVED SHALL BE NULL AND VOID.

DATE OF COMMISSIONERS COURT APPROVAL: _____

AGENDA ITEM NO.: _____

ATTACHMENT A

SERVICES TO BE PROVIDED BY THE ENGINEER

The Engineer shall provide preliminary engineering services for the development of a schematic design and supporting studies for the proposed Fort Bend Grand Parkway Toll Road Authority (FBGPTRA) southbound to eastbound Direct Connector at the SH 99 (Grand Parkway) at US 90A interchange located within the Fort Bend County Precinct 4. These services shall include high level feasibility analysis, preliminary roadway and bridge design, design surveys, and utility engineering investigation.

1. GENERAL REQUIREMENTS.

1.1. Design Criteria.

The Engineer shall prepare all work in accordance with the latest version (at time of work authorization execution) of applicable FBGPTRA and TxDOT procedures, specifications, manuals, guidelines, standard drawings, and standard specifications or previously approved special provisions and special specifications.

When design criteria are not identified in the manuals, the Engineer shall notify the FBGPTRA and refer to the American Association of State Highway and Transportation Officials (AASHTO), A Policy on Geometric Design of Highways and Streets, (latest Edition).

The Engineer shall follow TxDOT guidelines in preparing the schematic .

The Engineer shall design the project according to the latest TxDOT design criteria. The Engineer shall supply project-specific design criteria (e.g., typical sections, estimate, design exceptions) for the concurrence and approval of FBGPTRA..

1.2. Coordination.

The Engineer shall coordinate issues and communications with FBGPTRA's internal resource areas through the FBGPTRA's project manager. The FBGPTRA will communicate the resolution of issues and provide the Engineer direction through the FBGPTRA project manager. The Engineer shall coordinate with affected counties, cities, and all other governmental agencies only at the FBGPTRA's project manager's direction.

The Engineer shall notify the FBGPTRA and coordinate with adjacent engineers on all controls at project interfaces. The Engineer shall document the coordination effort, and each engineer must provide written concurrence regarding the agreed project controls and interfaces. In the event the Engineer and the other adjacent engineers are unable to agree, the Engineer shall meet with the FBGPTRA and each adjacent engineer for resolution. The FBGPTRA will have authority over these disagreements and the FBGPTRA's decision will be final.

1.3. Progress Reporting and Invoicing.

The Engineer shall invoice according to Function Code breakdowns shown in Attachment A – Services to be Provided by the Engineer, of this contract, and Attachment B – Fee Schedule. The Engineer shall submit each invoice electronically directly to the FBGPTRA project manager using the appropriate method of payment template provided by the FBGPTRA.

The Engineer shall submit a monthly written progress report to the FBGPTRA's project manager regardless of whether the Engineer is invoicing for that month. The Engineer's written progress report must describe activities during the reporting period; activities planned for the following period, problems encountered, and actions taken to remedy them; list of meetings attended; and overall status, including a percent complete by task.

The Engineer shall prepare a design time schedule using the latest version of FBGPTRA's project manager approved schedule software. The FBGPTRA's project manager may approve the use of an alternate program. The Engineer must obtain such approval in writing prior to using an alternate program. The schedule must indicate tasks, subtasks, critical dates, milestones, deliverables, and review requirements in a format that depicts their interdependence. The schedule must incorporate an allocation of time for stage reviews of the schematic design and the environmental documents by FBGPTRA personnel. The Engineer shall assist FBGPTRA personnel in interpreting the schedule. The Engineer shall schedule milestone submittals at 50% and final project completion phases. The Engineer shall provide advanced written notice to the FBGPTRA if the Engineer is not able to meet the scheduled milestone review date.

Once the project has been completed and accepted by the FBGPTRA, the Engineer shall deliver all electronic files to the FBGPTRA within 30 days of written request.

Final payment is contingent upon the FBGPTRA's receipt and confirmation by the FBGPTRA's Project Manager that (1) the electronic files are useable utilizing the current version of software in use by the FBGPTRA and (2) all review comments have been addressed.

1.4. Traffic Control.

The Engineer shall provide all planning, labor, and equipment to develop and to execute each traffic control plan (TCP) needed by the Engineer to perform services under each work authorization. The Engineer shall comply with the requirements of the most recent edition of the *Texas Manual on Uniform Traffic Control Devices (TMUTCD)*. The Engineer shall submit a copy of each TCP to the FBGPTRA for approval prior commencing any work on any FBGPTRA roadway. The Engineer shall provide all signs, flags, and safety equipment needed to execute the approved TCP. The Engineer shall notify the FBGPTRA in writing 24 hours in advance of executing each TCP requiring a lane closure and shall have received written concurrence from the FBGPTRA prior to beginning the lane closure. The Engineer's field crew must possess a copy of the approved TCP on the job site at all times and shall make the TCP available to the FBGPTRA for inspection upon request. The Engineer shall assign charges for any required traffic control to the applicable function code.

1.5. Right of Entry.

The Engineer shall notify the FBGPTRA and secure permission utilizing the FBGPTRA's current Right of Entry form to enter public and private property to perform any surveying, environmental, engineering, or geotechnical activities needed off FBGPTRA right of way. The Engineer shall not commit acts that would result in damages to public and private property. The Engineer shall make every effort to comply with the wishes and address the concerns of affected public and private property owners. Prior to entering private property, the Engineer shall contact each property owner and obtain written approval from the FBGPTRA.

Right of entry permission must be written and signed by the property owner. The Engineer shall not distribute letters or other materials seeking right of entry without prior approval of the FBGPTRA. Letters or other materials seeking right of entry must FBGPTRA the kinds of activities for which right of entry is requested and indicate the impacts (if any) that might result from performance of the activities.

1.6. Level of Effort.

For each work authorization, the Engineer shall base the level of effort at each phase on the prior work developed in earlier phases without unnecessary repetition or re-study. As directed by the FBGPTRA, the Engineer shall provide written justification regarding whether additional or repeated level of effort of earlier completed work is warranted, or if additional detail will be better addressed at a later stage in the project development.

1.7. Quality Assurance (QA) and Quality Control (QC).

The Engineer shall provide peer review at all levels. For each deliverable, the Engineer shall have some evidence of their internal review and mark-up of that deliverable as preparation for submittal. A milestone submittal is not considered complete unless the required milestone documents and associated internal red line mark-ups are submitted. The FBGPTRA's project manager may require the Engineer to submit the Engineer's internal mark-up (red line), or comments developed as part the Engineer's quality control step. When internal mark-ups are requested by the FBGPTRA in advance, the FBGPTRA may reject the actual deliverable should the Engineer fail to provide the evidence of quality control. The Engineer shall clearly label each document submitted for quality assurance as an internal mark-up document.

If, at any time, during the review of a submittal it becomes apparent to the FBGPTRA that the submittal contains errors, omissions, or inconsistencies, the FBGPTRA may cease its review and immediately return the submittal to the Engineer for appropriate action by the Engineer. A submittal returned to the Engineer for this reason is not a submittal for purposes of the submission schedule.

2. GENERAL REQUIREMENTS FOR FUNCTION CODE 102(110) – ROUTE AND DESIGN STUDIES.

2.1. Route and Design Studies.

The Engineer shall prepare an alignment and proposed roadway schematic layout that includes projected traffic volumes and existing and proposed typical sections. The Engineer shall furnish Microsoft Office and MicroStation and OpenRoads (ORD) computer generated media containing the roadway schematic layout to the FBGPTRA. All supporting attachments and exhibits must accompany the schematic layout. All MicroStation and OpenRoads (ORD) computer generated files containing the roadway design schematic must be fully compatible with the software used by the FBGPTRA without further modification or conversion.

The Engineer shall produce, obtain, review, and evaluate existing and twenty-year projected traffic data for use in the preparation of the schematic design layout. The data must be utilized in accordance with the requirements for schematic development and consistent with the policies of the FBGPTRA.

The Engineer shall prepare preliminary drawings to identify any potential impacts and constraints within the project corridor, including impacts to the natural, cultural, and human environment. The potential impacts and constraints identified must include all existing and proposed utilities (both public and private), structures, cemeteries, neighborhood communities, historical properties, and undeveloped areas. Any potential utility conflicts and structural impediments must be identified as such. The Engineer shall propose alternative alignments that avoid or minimize displacements and damages and prepare any additional attachments or exhibits required to illustrate a preferred alternative alignment.

The design schematic horizontal layout must adhere to a design scale of 1 inch = 100 foot (or 1 inch = 200 foot, when directed by the FBGPTRA.) The Engineer shall develop the schematic layout, exhibits, and attachments in English units. All Microsoft Office, MicroStation, Keyhole Markup Language (KML), Keyhole Markup Language Zipped (KMZ), and OpenRoads (ORD) computer graphic files furnished to the FBGPTRA must be submitted on USB flash drive to the FBGPTRA in their native format, which must be fully compatible with the programs currently used by the FBGPTRA. Schematics must follow TxDOT and Federal Highway Administration (FHWA) standards. The schematic must follow TxDOT's computer-aided design and drafting (CADD) standards. The Engineer shall submit the schematic as an original document, accompanied with

an original MicroStation formatted graphics file. Final copies of the schematic design must be signed and sealed by a professional engineer licensed in the State of Texas.

2.2. Analyze Existing Conditions.

The Engineer shall utilize collected data and base files when analyzing existing conditions to develop the schematic design. The analysis must include right of way and easement determination, horizontal alignment, vertical alignment, pavement cross slopes and pavement type, soil exploration, geotechnical testing, highway-rail grade crossing studies (if applicable), intersection design and analysis, sight distance, large guide signs and roadside signing, level of service, safety (i.e., crash data), traffic observation for morning (AM) and evening (PM) conditions, locations of critical constraints, drainage, and traffic control and construction phasing sequence.

The Engineer shall evaluate and document the following in the analysis to optimize the final schematic design: efficient use of the allocated right of way, control of access (COA) and driveway locations, roadway and intersection geometry, cross-sections, bicycle and pedestrian design, drainage and hydraulic design, stopping sight distance, level of service, safety, traffic and signal operations, construction, right of way, easement, and utility costs, construction sequencing, traffic control during construction, roadside safety appurtenances, large guide signage, environmental mitigation (e.g., noise walls, storm water best management practices (BMPs)), bridge layouts and clearance, railroads (if applicable), interface with existing high occupancy vehicle (HOV) lane, managed lanes, and park-and-ride facilities, accommodation of ultimate corridor configuration, accommodation of future cross street expansion as described in local thoroughfare plan (if applicable), avoidance of utility lines (if feasible), and impact of construction delays from utility relocations.

2.3. Preliminary Drainage Design and Documentation Requirements. - OMIT

2.4. Bicycle and Pedestrian Accommodations Requirements - OMIT.

2.5. Bridge Layout Requirements.

1. The Engineer shall consider bridge vertical and horizontal clearances.
2. The Engineer shall develop preliminary bridge layouts sufficient to identify:
 - a. Bent locations
 - b. Span lengths
 - c. Bridge framing feasibility analysis at critical locations

2.6. Geometric Design Schematic Requirements.

The Engineer shall submit the geometric schematic to the FBGPTRA for review through multiple milestone submittals (e.g., 50% and, Final) and is submitted for final review and approval by TxDOT and possibly FHWA (if warranted). The completed geometric schematic will serve as the initial (30%) milestone submittal for project development (refer to TxDOT's PS&E Preparation Manual) and should accomplish the following, formulate final design concepts for the project; show interrelating design elements such as typical sections, intersection control, bridge and drainage structures, traffic and turning data; serve as the basis of approval for scope and design; define ROW and control of access limits; act as a public information communication tool; and serve as the guide for the detailed design and plan preparation.

A. The geometric schematic plan view must contain the following design elements:

1. Bentley OpenRoads (ORD) calculated roadway alignments for mainlanes, general purpose lanes, ramps, direct connectors, bridges, HOV lanes, managed lanes, express lanes, collector distributor roads, frontage roads and cross streets at major intersections and grade separations

2. Horizontal curve data shown in tabular format
3. Pavement edges, curb lines, and sidewalks for all roadway improvements
4. Typical sections of existing and proposed roadways
5. Proposed bridge structures, including bridge deck, abutment, bent, and rail locations
6. Proposed retaining walls
7. Existing utilities and proposed utilities, as well as utility easements
8. Existing property lines and respective property ownership information
9. Existing ROW and easements
10. Proposed ROW and easements adequate for preparation of ROW maps
11. Waters of the US (WOTUS)
12. Control-of-access (COA) limits
13. Existing and projected traffic volumes
14. Location and text of the existing and proposed guide signs and the preliminary locations for changeable message signs
15. Lane lines, shoulder lines, and direction of traffic flow arrows indicating the number of lanes on all roadways
16. Existing driveway locations and reconstruction limit

B. The geometric schematic profile view must contain the following design elements:

1. Calculated profile grade and vertical curve data including "K" values for all curves and sight distance values for crest vertical curves on the mainlanes
2. Existing ground line profiles along the mainlanes
3. Grade separations including preliminary abutment and bent locations, vertical clearances, assumed beam type, depth girder type, and span lengths
4. Calculated vertical clearances at grade separations
5. Anticipated cross-drainage structures with approximate inlet and outfall elevations
6. Proposed ditch grading (special grading), if it does not follow the typical section.
7. Approximate locations of existing and proposed major utility crossings
8. The calculated profile grade for frontage roads, connectors, ramps, and cross streets will be shown on separate Supplemental Profile rolls

3. GENERAL REQUIREMENTS FOR FUNCTION CODE 120(120) – SOCIAL/ECON/EVN STUDIES – SOCIAL, ECONOMIC, AND ENVIRONMENTAL STUDIES AND PUBLIC INVOLVEMENT.

3.1. Public Involvement and Documentation Requirements. - OMIT

4. GENERAL REQUIREMENTS FOR FUNCTION CODE 135(135) – RIGHT OF WAY – UTILITY ACTIVITIES.

4.1. Definitions.

In this attachment, the following definitions apply.

- A. "Utility Coordinator" means the individual or entity performing utility-related services that are not required to be performed by a licensed professional engineer under Texas law. The Engineer remains ultimately responsible and shall ensure that the work is performed as required.
- B. "Utility Engineer" means the individual or entity performing utility-related services that are required to be performed by a licensed professional engineer under Texas law. The Engineer remains ultimately responsible and shall ensure that the work is performed as required.
- C. "Ensure" means to make certain that something has happened or will happen and includes an obligation to deploy the appropriate level of engineering or other technical expertise, consistent with the complexity, cost, and level of risk associated with a task. The term ensure does not require the completion of any task assigned to another entity by the FBGPTRA under a separate agreement.

4.2. Utility Engineering Investigation Requirements.

Utility engineering investigation includes utility investigations subsurface and above ground prepared in accordance with the latest American Society of Civil Engineers (ASCE) Construction Institute (CI) Standard and Utility Quality Levels.

A. Utility Quality Levels (QL)

Utility Quality Levels are defined in cumulative order (least to greatest) as follows:

1. Quality Level D - Quality level value assigned to a utility segment or utility feature after a review and compilation of data sources such as existing records, oral recollections, One-Call markings, and data repositories.
2. Quality Level C - Quality level value assigned to a utility segment or utility feature after surveying aboveground (i.e., visible) utility features and using professional judgement to correlate the surveyed locations of these features with those from existing utility records.
3. Quality Level B - Quality level value assigned to a utility segment or subsurface utility feature whose existence and position is based upon appropriate surface geophysical methods combined with professional judgment and whose location is tied to the project survey datum. Horizontal accuracy of utilities is 18" (including survey tolerances) unless otherwise indicated for a specific segment of the deliverable. Quality Level B incorporates quality levels C and D information. A composite plot is created.
4. Quality Level A – Quality level value assigned to a portion (x, y, and z geometry) of a point of a subsurface utility feature that is directly exposed, measured, and whose location and dimensions are tied to the project survey datum. Other measurable, observable, and judged utility attributes are also recorded (per District Best Practices). The utility location must be tied to the project survey datum with an accuracy of 0.1 feet (30-mm) vertical and to 0.2 feet (60-mm) horizontal. As test holes may be requested up front or during the project, test holes done prior to completion of QL D, C, or B deliverables must be symbolized on the QL B deliverable with a call out indicating test hole's number. This is in addition to and not in lieu of the test hole.

B. Utility Engineering Investigation Methodology Requirements

The Engineer shall:

1. Provide utility designating services. Designate means to indicate the horizontal location of underground utilities by the application and interpretation of appropriate non-destructive surface geophysical techniques and reference to established survey control. Designating (Quality Level B) services are inclusive of Quality Levels C and D.

The Engineer and FBGPTRA acknowledge that the line sizes of designated utility facilities detailed on the deliverable will be from the best available records and that an actual line size is normally determined from a test hole vacuum excavation. A note must be placed on the designate deliverable only that FBGPTRAs "lines sizes are from best available records". All above-ground utility feature locations must be included in the deliverable to the FBGPTRA. This information must be provided in the latest version of OpenRoads (ORD) civil design system used by the FBGPTRA. The electronic file will be delivered on USB flash drive or as required by the FBGPTRA. A hard copy is required and must be signed, sealed, and dated by the engineer overseeing the utility engineering (Utility Engineer). When requested by the FBGPTRA, the designated utility information must be overlaid on TxDOT's design plans.

2. Provide utility locate (test hole) services. Locate means the process used to obtain precise horizontal and vertical position, material type, condition, size, and other data that may be obtainable about the utility facility and its surrounding environment through exposure by non-destructive excavation techniques that ensures the integrity of the utility facility. Subsurface utility locate (test hole) services (Quality Level A) are inclusive of Quality Levels B, C, and D. Quality Level A test holes that do not encounter an expected utility will not be considered complete until discussed with the TxDOT Project Manager.

Include the following data on an appropriately formatted test hole data sheet that has been sealed and dated by the Engineer:

- a. Elevation of top of utility tied to the datum of the furnished plan
- b. Minimum of two benchmarks utilized. Elevations must be within an accuracy of 15mm (.591 inches) of utilized benchmarks
- c. Elevation of existing grade over utility at test hole location
- d. Horizontal location referenced to project coordinate datum
- e. Outside diameter of pipe or width of duct banks and configuration of non-encased multi-conduit systems
- f. Utility facility material
- g. Utility facility condition
- h. Pavement thickness and type
- i. Coating/wrapping information and condition
- j. Unusual circumstances or field conditions

Excavate test holes in such a manner as to prevent any damage to wrappings, coatings, cathodic protection, other protective coverings, and features. Water excavation can only be utilized with written approval from the appropriate TxDOT district office.

Be responsible for any damage to the utility during the locating process. In the event of damage, the Utility Engineer must stop work, notify the appropriate utility facility owner, the FBGPTRA, and appropriate regulatory agencies. The regulatory agencies include: the Railroad Commission of Texas and the Texas Commission on Environmental

Quality. The Utility Engineer must not resume work until the utility facility owner has determined the corrective action to be taken. The Engineer shall be liable for all costs involved in the repair or replacement of the utility facility.

Back fill all excavations with appropriate material and methods approved in writing by the FBGPTRA's project manager. The Engineer is responsible for the integrity of the backfill and surface restoration.

Provide complete restoration of work site and landscape to equal or better condition than before excavation. If a work site and landscape is not appropriately restored, the Engineer shall return to correct the condition at no extra charge to the FBGPTRA.

Plot utility location position information to scale and provide a comprehensive utility plan signed and sealed by the responsible engineer. This information must be provided in the latest version of MicroStation and be fully compatible with the OpenRoads (ORD) civil design system used by the FBGPTRA. The electronic file must be delivered on USB flash drive or as required by the FBGPTRA. When requested by the FBGPTRA, the locate information must be over laid on TxDOT's design plans.

3. Maintain a utility layout in the current approved version of OpenRoads (ORD) Civil Design system used by TxDOT. This layout must include all existing utilities that are to remain in place or be abandoned, and all adjusted utilities. This layout must be utilized to monitor the necessity of relocation and evaluate alternatives.
4. Provide utility engineering investigation information in the latest version of MicroStation OpenRoads (ORD) Designer and MicroStation Connect Edition that are implemented at TxDOT at the time the work authorization is executed.
5. Ensure that there is no conflict between the utility management plan, utility certifications, and special provisions.
6. The Utility Engineer's activities must conform with those specified under Texas Administrative Code, Title 43, Part 1, Chapter 21, Subchapter C, Section 21.37, relating to the specified utility types, eligibility requirements, agreements, and approvals.

4.3. Utility Adjustment Coordination Requirements - OMIT

4.4. Utility Adjustment Monitoring and Verification Requirements - OMIT

5. GENERAL REQUIREMENTS FOR FUNCTION CODE 160(150) – ROADWAY DESIGN – DESIGN SURVEYS AND CONSTRUCTION SURVEYS.

5.1. General Survey Requirements.

- A. In this attachment, the term "Surveyor" means the firm (prime provider or subprovider) that is providing the surveying services shown in the scope. The Engineer remains ultimately responsible and shall ensure that the work is performed as required.
- B. Survey Standards and requirements for deliverables are detailed in the *TxDOT Survey Manual* and the TxDOT Surveyor's Toolkit. The versions in existence at the time the work authorization or supplemental work authorization is executed are applicable to that work authorization and the Surveyor shall comply with those versions unless a written exception is provided by the TxDOT District Survey Coordinator or the TxDOT ROW Division Survey Section Director. The Engineer shall provide the services of a certified Photogrammetrist or Mapping Scientist to perform or oversee the tasks done by aerial instrument platforms. The Engineer remains ultimately responsible and shall ensure that the work is performed as required.

5.2. Design Survey.

A. Definitions

1. Design Survey

A design survey gathers data in support of transportation systems design. A design survey includes the research, field work, analysis, computation, and documentation necessary to provide detailed topographic (3-dimensional) mapping of a project site (e.g., locating existing ROW, surveying cross-sections or developing data to create cross-sections and digital terrain models, horizontal and vertical location of utilities and improvements, collecting details of bridges and other structures, review of ROW maps, and establishing control points).

B. Requirements

Design Surveys must be performed under the supervision of a Professional Engineer or Registered Professional Land Surveyor (RPLS) currently registered with the Texas Board of Professional Engineers and Land Surveyors (TBPELS).

6. GENERAL REQUIREMENTS FOR FUNCTION CODE 160(163) – ROADWAY DESIGN – MISCELLANEOUS ROADWAY.

6.1. Utility Engineering Requirements.

- A. The Engineer must maintain a utility layout in the current approved version of OpenRoads (ORD) Civil Design system used by the FBGPTRA. This layout must include all existing utilities which are to remain in place or be abandoned, and all adjusted utilities. This layout must be utilized to monitor the necessity of relocation and evaluate alternatives.
- B. The Engineer shall not provide services under this contract that are for the sole benefit of a party or parties other than the FBGPTRA. The Engineer shall not invoice the FBGPTRA for any such services.

6.2. Utility Design Requirements.

The Engineer’s utility design activities must conform with 43 Tex. Admin. Code § 21.37.

6.3. Geotechnical Borings and Investigation Requirements - OMIT.

TASK DESCRIPTIONS AND FUNCTION CODES

The Engineer shall categorize each task performed to correspond with the Function Codes (FC) and Task Descriptions.

FUNCTION CODE 102 (102) – FEASIBILITY STUDIES - OMIT

FUNCTION CODE 102 (110) – FEASIBILITY STUDIES

ROUTE AND DESIGN STUDIES

110.1. General Route and Design Studies Tasks.

- A. Design Criteria.

The Engineer shall develop the roadway design criteria based on the controlling factors specified by the FBGPTRA.

- B. Preliminary Design Conference. - OMIT
- C. Right of Entry - OMIT
- D. Data Collection and Field Reconnaissance

The Engineer shall collect, review, and evaluate data described below. Data shall be obtained from the FBGPTRA and other agencies, if available. The Engineer shall notify the FBGPTRA in writing whenever the Engineer finds disagreement with the information or documents. Data must include the following information:

1. As-built plans, existing schematics, design data from record drawings of existing and proposed facilities, right of way and easement maps, utility engineering investigation mapping, existing cross-sections, existing aerial photogrammetry and planimetric mapping, digital terrain models (DTM), environmental documents, GIS data and maps, soil survey data, existing drainage data and studies, existing and available future design year traffic counts and data, historical crash data, bridge inspection records, scour summary forms, Pavement Management Information System (PMIS) data, identified environmental constraints and data, and current unit bid price information.
2. Research from local municipalities for documents and plats related to existing and proposed development along the proposed route, and local ordinances related to development of the project Public and private utility plans and documents from appropriate municipalities and agencies.
3. Public and private utility plans and documents from appropriate municipalities and agencies, including TxDOT Right of Way Utility and Leasing Information System (RULIS) permits
4. Pond, reservoir, and flood plain information including studies, maps, and models from the Federal Emergency Management Agency (FEMA), the United States Army Corps of Engineers (USACE), Natural Resource Conservation Service (NRCS), local municipalities, and other governmental agencies.
5. Readily available rainfall history, stream gauge data, historical flood records, frequency of road closures, and any additional high-water information.
6. Available corridor studies and local major thoroughfare plans.
7. Adopted land use maps and plans (if available).
8. Roadway inventory information, including number of lanes, speed limits, pavement widths and ratings, bridge widths and ratings, and ROW widths.
9. Conduct field reconnaissance, as necessary, and collect data including a photographic record of notable existing features.
10. When requested by the FBGPTRA, collect video imagery for each intersection to document existing AM and PM peak hour operations.

- E. Develop Base Files

The Engineer shall develop base files to be used for conditions analysis, alternatives analysis, and proposed schematic design from all data collection and field reconnaissance. The Engineer shall re-establish the existing centerline horizontal alignments for all roadways, identify existing ROW and easements, property owners, and the approximate location of major utilities based on a utility engineering investigation in the preparation of base files. The

engineer shall merge and verify that all files and data collected line up and match the appropriate survey grid or surface adjustment factors as directed by the FBGPTRA.

F. Environmental Constraints - OMIT

G. Typical Sections

The Engineer shall develop both existing and proposed typical sections that depict the cross-sectional geometry of all improvements including the proposed direct connector, connections to existing mainlanes, and realignment of frontage roads as applicable.

H. Drainage - OMIT

I. Design Exceptions/Design Waivers/Design Deviations/ Design Variance - OMIT

J. Traffic Forecasting - OMIT

K. Traffic and Operational Analysis - OMIT

L. Safety Analysis - OMIT

M. Intersection Control Evaluation (ICE). - OMIT

N. Interstate Access Justification (IAJ) - OMIT

O. Express, High Occupancy Vehicle, Managed Lanes, Other Special-Use Lanes, and Transit Elements - OMIT

P. Corridor Modeling/Cross-Sections - OMIT

Q. Bridge (3 Alternatives)

1. Bridge Cost Comparative Study

Engineer shall prepare a comparative cost analysis of bridge structures to determine:

- a. The optimum bridge beams for vertical clearance over railroads, roadways or waterways.
- b. The optimum bridge structure versus roadway embankment, pavement, soil stabilization, and retaining walls.
- c. The optimum bridge beams for proposed direct connectors.

2. Bridge Preliminary Design -

The Engineer shall develop preliminary bridge layouts sufficient to identify:

- a. Bent locations
- b. Span lengths
- c. Bridge framing feasibility analysis at critical locations

3. Bridge Detail Summary - OMIT

R. Retaining Walls/Sound Walls - OMIT

S. Large Guide Signs - OMIT

T. Renderings and Visualizations - OMIT

U. Preliminary Cost Estimates

The Engineer shall prepare cost estimates for the project, including the costs of construction, required ROW and associated improvements, environmental compliance and mitigation, eligible utility adjustments, and any other items as determined by the FBGPTRA. Current

TxDOT average unit bid prices must be used in preparation of the estimate. The Engineer shall update cost estimates at intervals to be determined by the FBGPTRA.

- V. ROW Requirements - OMIT
- W. Construction Sequence - OMIT
- X. Implementation Plan - OMIT
- Y. Engineering Summary Report - OMIT
- Z. Support or Attendance at Value Engineering Study - OMIT
- AA. Major Project and Other Project Documentation - OMIT

110.2. Route Study- OMIT

110.3. Geometric Alternatives Analysis.

The Engineer shall identify and evaluate different geometric elements to determine the best option to satisfy the project's goals and objectives through an alternatives analysis. Geometric alignments, typical sections and intersection types are the major engineering variables to evaluate along with any needed ROW, utility and environmental impacts. The result of the geometric alternatives analysis will be a geometric schematic or a geometric layout

- A. Multiple Route Concepts - OMIT
- B. Multiple Alternatives along the Preferred Route

The Engineer shall develop up to three alternatives for the proposed direct connector. The Engineer shall develop alternative typical sections, alignments, roadway horizontal and vertical geometrics establishing proposed bridge beam and column sizes. The Engineer shall conduct an alternatives analysis comparing the three alternatives to one another considering planning factors including construction cost, traffic operations, constructability, and overall impact. The Engineer shall coordinate with the FBGPTRA to determine a recommended preferred alternative that will be carried forward for further geometric schematic development.

110.4. Geometric Schematic Design.

The Engineer shall develop geometric design schematics based on the conceptual schematics after the basic layout, lane arrangement, and anticipated ROW and easement impacts depicted on the conceptual schematics are approved. The Engineer shall develop the Geometric Schematic Design to a 30% PS&E level of detail that includes the following.

- A. The Engineer shall develop detailed geometric design schematic plans for the following:
 - 1. SH 99 SB to US 90A EB direct connector
 - 2. Frontage Roads
 - 3. Cross Streets
- B. The Engineer shall develop detailed geometric design schematic profiles for the following:
 - 1. SH 99 SB to US 90A EB direct connector
 - 2. Frontage Roads
 - 3. Cross Streets
- C. The Engineer shall develop 3D cross-sections using OpenRoads (ORD) at critical locations for the purpose of verifying horizontal and vertical alignments and clearances.

DEL.110. Deliverables for FC 110.

- A. Deliverables for FC 110.1. General Route and Design Studies Tasks
 - 1. Roadway Typical Sections, in a format as requested by the FBGPTRA
 - 2. ORD Model - Final schematic 3D model created using OpenRoads (ORD) software
 - 3. Bridge cost comparative study, in a format as requested by the FBGPTRA
 - 4. Bridge typical sections, in a format as requested by the FBGPTRA
 - 5. OBM (OpenBridge Modeler) 3D Model of Bridges
- B. Deliverables for FC 110.3. Geometric Alternatives Analysis
 - 1. Geometric Layouts for Each Alternative (to the level of detail specified by the FBGPTRA)
 - 2. Draft and final copies of the geometric alternatives and geometric design schematic layouts on roll plots or PDF, as requested by the FBGPTRA
 - 3. KMZ or KML file of conceptual design schematic created from applicable DGN files for reviewing in Google Earth
 - 4. Alternatives Comparison Matrices
- C. Deliverables for FC 110.4. Geometric Schematic Design
 - 1. Geometric Schematic for FBGPTRA approved alternative at 50%, and Final
 - 2. Draft and final copies of the geometric alternative and geometric design schematic layout on roll plot or PDF, as requested by the FBGPTRA
 - 3. KMZ or KML file of conceptual design schematic created from applicable DGN files for reviewing in Google Earth

FUNCTION CODE 120 (120) – SOCIAL/ECON/ENV STUDIES - OMIT

FUNCTION CODE 130 (130) – RIGHT OF WAY – SURVEY - OMIT

FUNCTION CODE 135 (135) – RIGHT OF WAY – UTILITY ACTIVITIES

RIGHT OF WAY UTILITY ACTIVITIES

135.1. Utility Engineering Investigation and Subsurface Utility Engineering (SUE).

- A. Existing Records (Quality Level D)

The Engineer shall:

- 1. Perform records research from all available resources. Sources may include: Texas811, Railroad Commission of Texas (Texas RRC), verbal recollection, as-built information from plans, plats, permits and any other applicable information provided by the utility owners or other stakeholders.
- 2. Document utility owners and contact information
- 3. Create a utility drawing of information gathered

B. Surface Visible Feature Survey (Quality Level C)

The Engineer shall:

1. Correlate record information with topographic survey
2. Create CADD files depicting existing utilities reconciled with data from the topographic survey

C. Designate (Quality Level B) - OMIT

D. Subsurface Utility Locate (Test Hole) Service (Quality Level A) - OMIT

135.2. Utility Adjustment Coordination - OMIT

DEL.135. Deliverables for FC 135.

- A. A utility drawing showing the information gathered during the utility engineering investigation, including all underground utilities and all above ground appurtenance locations

FUNCTION CODE 145 (145, 164) – MANAGING CONTRACTED/DONATED PE

PROJECT MANAGEMENT AND ADMINISTRATION

145.1. Contract Management and Administration.

The Engineer shall:

- A. Coordinate, direct, and provide communication with the FBGPTRA's project team for activities associated with the project.
- B. Coordinate, manage, and oversee subconsultant activity including quality of and consistency of plans and administration of monthly progress reports.
- C. Prepare monthly written progress reports for each project.
- D. Develop and maintain on a monthly basis a detailed project schedule to track project conformance for each work authorization.
- E. Develop and maintain on a monthly basis a detailed budget projection to track project conformance to Attachment B, Fee Schedule, for each work authorization.
- F. Meet on a scheduled basis with the FBGPTRA to review project progress and prepare meeting minutes for each meeting.
- G. Meet on a scheduled basis with the Engineer's project team to review project progress and perform interdisciplinary design coordination; and document each meeting.
- H. Prepare, distribute, and file both written and electronic correspondence, including phone calls.
- I. Prepare a closeout package for each project and submit to the FBGPTRA electronically.

DEL.145. Deliverables for FC 145.

- A. Monthly progress reports
- B. Project schedule, updated monthly
- C. Budget projection, updated monthly
- D. Meeting minutes

- E. Documentation of project correspondence phone calls
- F. Project closeout package

FUNCTION CODE 160 (150) – ROADWAY DESIGN

DESIGN SURVEYS

150.1. Survey Tasks to be Completed.

A. Design Surveys

- 1. The Surveyor or Engineer shall perform design surveys for roadway segments in Table 150.1 – Design Surveys.

Table 150.1 – Design Surveys		
Roadway	Start Location	End Location
SH 99	US 90A	N. of FM 1464

- 2. The Surveyor or Engineer shall perform tasks including the following:
 - a. Obtain or collect data to create cross-sections and digital terrain models (DTMs) in areas designated by the Engineer
 - b. Locate topographical features and existing improvements
 - c. Provide details of existing bridge structures at locations designated by the Engineer
 - d. Establish additional and verify existing control points and check points. Horizontal and Vertical control ties must be made and tabulated, to other control points in the vicinity, which were established by other sources such as, the TxDOT Regional Reference Points, the National Geodetic Survey (NGS), and the Federal Emergency Management Agency (FEMA), and other entities as directed by the FBGPTRA
 - e. Locate apparent existing right of way for UPRR within the project limits

DEL.150. Deliverables for FC150.

- A. Digital Terrain Models (DTM) and the Triangular Irregular Network (TIN) files in a format acceptable by the FBGPTRA.
- B. Maps, plans, or sketches prepared by the Surveyor or Engineer showing the results of field surveys
- C. Maps, plats, plans, sketches, or other documents acquired from utility companies, private corporations, or other public agencies, the contents of which are relevant to the survey
- D. All data developed during field collection. Includes survey field notes, flight or drive plan, GPS files, data collector files, leveling files, LAS files, and any other raw files.
- E. All processed and adjusted field data. Includes metadata report, job files, and coordinate files.
- F. A digital copy of all computer printouts of horizontal and vertical conventional traverses, GPS analysis and results, and survey control data sheets

- G. All Open Roads files, including files listed in the Design Survey Checklist
- H. Survey reports in a format requested by the FBGPTRA

FUNCTION CODE 160 (163) – ROADWAY DESIGN

MISCELLANEOUS ROADWAY

163.1. Utility Engineering. OMIT

- A. Public and Individual Meetings with Utility Companies - OMIT
- B. Review Of Utility's Proposed Adjustments - OMIT
- C. Proposed Utility Layout - OMIT
- D. PS&E for all utilities - OMIT
- E. Utility Certification and Special Provisions - OMIT

163.2. Geotechnical Borings and Investigations - OMIT

DEL.163. Deliverables for FC 163.

- A. Utility layout

SALARY RATES*

MAXIMUM SALARY RATES		
ENTECH CIVIL ENGINEERS, INC		
JOB CLASSIFICATION	BASE RATE	LOADED RATE (3x BASE RATE)
Project Manager - Schem/ENV_SD	\$150.00	\$450.00
Technical Advisor - Senior	\$140.00	\$420.00
Quality Manager	\$140.00	\$420.00
Engineer (Senior)	\$110.00	\$330.00
Engineer (Project)	\$91.67	\$275.00
Engineer (Design)	\$73.33	\$220.00
Engineer (Bridge) - Senior	\$140.00	\$420.00
Engineer (Bridge)	\$80.00	\$240.00
Engineer (Utilities) - Senior	\$90.00	\$270.00
Engineer-In-Training II	\$55.17	\$165.50
Engineer-In-Training I	\$50.00	\$150.00
Engineer Technician - Senior	\$66.67	\$200.00
Engineer Technician	\$53.33	\$160.00
Engineering Specialist - Senior	\$88.33	\$265.00
Administrative/Clerical	\$36.67	\$110.00

MAXIMUM SALARY RATES		
RODS, INC		
JOB CLASSIFICATION	BASE RATE	LOADED RATE (3x BASE RATE)
Survey Project Manager	\$57.00	\$171.00
Survey Field Coordinator	\$51.67	\$155.00
RPLS	\$70.67	\$212.00
CADD Technician	\$39.67	\$119.00
Senior CAD Technician	\$51.67	\$155.00
3-Peron Survey Crew	\$76.00	\$228.00
Support Manager	\$100.00	\$300.00
SUE Senior Engineer	\$63.67	\$191.00
SUE Engineer-In-Training	\$44.00	\$132.00
SUE Engineer Technician	\$37.00	\$111.00
SUE CAD Technician	\$39.67	\$119.00
Administrative/Clerical	\$35.67	\$107.00

***Note: Base rates and Loaded rates listed above are Maximum allowable rates. Payment will be based on actual raw rates x 3.0 not exceeding listed loaded rates.**

Prime Provider: Entech Civil Engineers Highway: CSJ:		ENTECH CIVIL ENGINEERS	RODS Surveying Inc.	RODS SUE	SUBTOTALS
FC 102 (110)	Total Labor Cost	\$ 335,742.00			\$ 335,742.00
	Other Direct Expenses				\$ -
FC 135 (135)	Total Labor Cost	\$ 12,044.00		\$ 40,473.00	\$ 52,517.00
	Other Direct Expenses				\$ -
FC 145 (164)	Total Labor Cost	\$ 38,000.00			\$ 38,000.00
	Other Direct Expenses	\$ 2,500.00			\$ 2,500.00
FC 160 (150)	Total Labor Cost	\$ 11,088.00	\$ 52,925.00		\$ 64,013.00
	Other Direct Expenses				\$ -
Grand Totals		\$ 399,374.00	\$ 52,925.00	\$ 40,473.00	\$ 492,772.00
(Percentage%)		81.05%	10.74%	8.21%	

BUSINESS CODE ID	TASK DESCRIPTION	Project Manager - Schem/ENV_SD	Technical Advisor - Senior	Quality Manager	Engineer (Senior)	Engineer (Project)	Engineer (Design)	Engineer (Bridge) - Senior	Engineer (Bridge)	Engineer (Utilities) - Senior	Engineer - Training II	Engineer - Training I	Engineer Technician - Senior	Engineer Technician	Engineering Specialist - Senior	Administrative - Clerical	TOTAL LABOR HRS AND COSTS
102	MAXIMUM CONTRACT RATE PER HOUR:	\$ 450.00	\$ 420.00	\$ 400.00	\$ 330.00	\$ 275.00	\$ 220.00	\$ 420.00	\$ 240.00	\$ 270.00	\$ 165.00	\$ 150.00	\$ 200.00	\$ 160.00	\$ 265.00	\$ 110.00	
	FC 102 (110) - ROUTE AND DESIGN STUDIES																
	General Route and Design Study Tasks																
	A. Data Collection	1	4	2	4	2	4	2	4	2	8	16	2	16	2	1	20
	D. Develop Base Files	1	1	1	1	1	2	2	2	2	8	16	2	16	8	1	30
	G. Typical Sections	1	1	1	1	1	16	2	2	2	8	16	2	16	8	1	55
	Q. Bridge	4	1	1	1	1	16	40	80	80	60	324	140	40	16	75	75
	U. Preliminary Cost Estimates	8	4	1	1	2	16	8	8	8	16	324	140	40	16	45	45
	B. Multiple Route Alternatives	5	4	1	8	12	40	8	16	16	100	376	160	80	2	353	376
	A. Horizontal Geometry	4	4	1	8	12	40	8	8	8	40	160	80	40	2	353	376
	B. Cross Sections	1	4	1	8	12	40	8	8	8	16	16	60	40	16	80	80
	Sub-Total	26	12	5	44	54	120	50	122	0	264	108	444	252	82	1	1584
	CONTRACT RATE PER HOUR	\$ 450.00	\$ 420.00	\$ 400.00	\$ 330.00	\$ 275.00	\$ 220.00	\$ 420.00	\$ 240.00	\$ 270.00	\$ 165.00	\$ 150.00	\$ 200.00	\$ 160.00	\$ 265.00	\$ 110.00	\$ 335,742.00
	TOTAL LABOR COST	\$ 11,700.00	\$ 5,040.00	\$ 2,100.00	\$ 14,520.00	\$ 14,850.00	\$ 26,400.00	\$ 21,000.00	\$ 29,280.00	\$ -	\$ 43,692.00	\$ 16,200.00	\$ 88,800.00	\$ 40,320.00	\$ 21,750.00	\$ 110.00	\$ 335,742.00
	% Distribution of Staffing	1.64%	0.76%	0.32%	2.76%	3.41%	7.58%	3.16%	7.70%	0.00%	16.57%	6.82%	28.03%	15.81%	5.18%	0.08%	100.00%
	SUBTOTAL FC 102(110)																\$ 335,742.00
135	FC 135 (135) - RIGHT-OF-WAY - UTILITY ACTIVITIES																
	Utility Engineering Investigation and SUE																
	A. Existing Records S/L D	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0
	Sub-Total	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0
	CONTRACT RATE PER HOUR	\$ 450.00	\$ 420.00	\$ 400.00	\$ 330.00	\$ 275.00	\$ 220.00	\$ 420.00	\$ 240.00	\$ 270.00	\$ 165.00	\$ 150.00	\$ 200.00	\$ 160.00	\$ 265.00	\$ 110.00	\$ 12,044.00
	TOTAL LABOR COST	\$ 1,800.00	\$ 0.00	\$ 0.00	\$ 1,320.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 12,044.00
	% Distribution of Staffing	7.14%	0.00%	0.00%	7.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
	SUBTOTAL FC 135(135)																\$ 12,044.00
145	FC 145 (145, 164) - MANAGING CONTRACTED/DONATED																
	Contract Management and Administration																
	A. Contract Management and Administration	48	8	8	24	0	0	0	0	0	0	0	0	0	0	0	0
	Sub-Total	48	8	8	24	0	0	0	0	0	0	0	0	0	0	0	0
	CONTRACT RATE PER HOUR	\$ 450.00	\$ 420.00	\$ 400.00	\$ 330.00	\$ 275.00	\$ 220.00	\$ 420.00	\$ 240.00	\$ 270.00	\$ 165.00	\$ 150.00	\$ 200.00	\$ 160.00	\$ 265.00	\$ 110.00	\$ 12,044.00
	TOTAL LABOR COST	\$ 21,600.00	\$ 3,360.00	\$ 3,160.00	\$ 7,920.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 12,044.00
	% Distribution of Staffing	46.15%	7.89%	7.89%	23.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
	SUBTOTAL FC 145(145)																\$ 38,000.00
160	FC 160 (160) - ROADWAY DESIGN																
	Survey Tasks																
	A. Survey Tasks	4	0	0	8	0	0	0	0	0	16	0	20	0	0	0	0
	Sub-Total	4	0	0	8	0	0	0	0	0	16	0	20	0	0	0	48
	CONTRACT RATE PER HOUR	\$ 450.00	\$ 420.00	\$ 400.00	\$ 330.00	\$ 275.00	\$ 220.00	\$ 420.00	\$ 240.00	\$ 270.00	\$ 165.00	\$ 150.00	\$ 200.00	\$ 160.00	\$ 265.00	\$ 110.00	\$ 11,088.00
	TOTAL LABOR COST	\$ 1,800.00	\$ -	\$ -	\$ 2,640.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,640.00	\$ -	\$ 4,000.00	\$ -	\$ -	\$ -	\$ 11,088.00
	% Distribution of Staffing	8.33%	0.00%	0.00%	16.67%	0.00%	0.00%	0.00%	0.00%	0.00%	33.33%	0.00%	41.67%	0.00%	0.00%	0.00%	100.00%
	SUBTOTAL FC 160(160)																\$ 11,088.00
	Grand Total																\$ 396,874.00

SUBTOTAL BY FUNCTION CODE		TOTAL COST
FC 102 (110) - ROUTE AND DESIGN STUDIES		\$ 335,742.00
FC 135 (135) - RIGHT-OF-WAY - UTILITY ACTIVITIES		\$ 12,044.00
FC 145 (145, 164) - MANAGING CONTRACTED/DONATED PE		\$ 38,000.00
FC 160 (160) - ROADWAY DESIGN		\$ 11,088.00
SUBTOTAL		\$ 396,874.00

SUMMARY		TOTAL LABOR COSTS FOR PRIME PROVIDER ONLY	NON-SALARY (UNIT COSTS) FOR PRIME PROVIDER ONLY	ENTECH COSTS (as pre-approved by FBGPTRA)	SUBTOTAL ENTECH
		\$ 396,874.00	\$ -	\$ 2,500.00	\$ 399,374.00
	RODS Survey	\$ 52,925.00			
	RODS SUE	\$ 40,473.00			
	Grand Total	\$ 489,772.00			

RODS, Inc.

TASK DESCRIPTION	Office					Field			TOTAL HRS	Total Office Amt.	Total Field Amt.	Total Cost
	SURVEY PROJECT MANAGER	SURVEY FIELD COORDINATOR	RPLS	CAD TECHNICIAN	SR CAD TECHNICIAN	3-PERSON SURVEY CREW	SURVEY CREW					
Survey Services												
CONTROL												
FIELD												
GPS Control												
Control Checking												
FIELD CONTROL SUBTOTAL												
FIELD SUBTOTAL												
OFFICE												
CONTROL DATA PROCESSING												
Control Data Processing												
CONTROL MAPS												
Control Maps												
Redlines												
CONTROL MAPS SUBTOTAL												
QA/QC												
QA/QC												
QA/QC SUBTOTAL												
OFFICE SUBTOTAL												
OFFICE TOTAL												
TOPO												
FIELD												
Site topo												
FIELD TOPO SUBTOTAL												
FIELD SUBTOTAL												
TOPO DATA PROCESSING												
Field Package												
Meeting and Line Out												
Survey Data Processing												
DATA PROCESSING SUBTOTAL												
TOPO SURVEY DRAWING												
Topo Survey Drawing/Utility/Drawing												
Elevation Clean Up												
UDP Inverts												
90 Labels												
Surface Drawing												
Sheet Setup												
Redlines												
Client Revision												
Project Setup												
Project Controls												
Project Meetings												
DRAWING SUBTOTAL												
TOPO QA/QC												
QA/QC Review												
QA/QC SUBTOTAL												
OFFICE SUBTOTAL												
TOPOGRAPHIC SURVEY TOTAL												
HOURS SUB-TOTALS												
MAXIMUM CONTRACT RATE PER HOUR												
TOTAL LABOR COSTS												
SUBTOTAL Task												
Basic Services total												

SUMMARY OF SURVEY TOTALS	
Survey Services	\$ 52,925.00
CL-D SUE Services	\$ 29,493.00
CL-C SUE Services	\$ 10,360.00
	\$ -
Total Survey Fee	\$ 93,360.00

RODS, Inc.

TASK DESCRIPTION	Office										TOTAL HRS.	Total Office Amt.	Total Field Amt.	TOTAL LABOR HRS. & COSTS
	SUPPORT MANAGER	SUE SENIOR ENGINEER	SUE ENGINEER IN TRAINING	SUE ENGINEER	SUE ENGINEERING TECHNICIAN	SUE CAD TECHNICIAN	ADMIN/ CLERICAL							
QL-D SUE Services														
Project Setup	1	1										\$ 491.00	\$ -	\$ 491.00
Kickoff Meeting	1	1										\$ 491.00	\$ -	\$ 491.00
Utility Records Research				10	40							\$ 5,760.00	\$ -	\$ 5,760.00
Utility Records Review		4	8	32								\$ 5,372.00	\$ -	\$ 5,372.00
Utility Owner Correspondence			4	16								\$ 2,304.00	\$ -	\$ 2,304.00
CADD - Schematic Drawing	2.5	5	10	20	40							\$ 10,065.00	\$ -	\$ 10,065.00
QAQC	1	4										\$ 1,064.00	\$ -	\$ 1,064.00
Engineer Review	1	8										\$ 1,828.00	\$ -	\$ 1,828.00
Progress Meetings	2	2					2					\$ 1,196.00	\$ -	\$ 1,196.00
Client Coordination	2	2										\$ 982.00	\$ -	\$ 982.00
QL-D TOTAL	10.5	27	32	108	40	40	2	2	2	2	219.5	\$ 29,493.00	\$ -	\$ 29,493.00
QL-C SUE Services														
Field Coordination			3	6								\$ 1,062.00	\$ -	\$ 1,062.00
CADD - Schematic Drawing		2	2	8	16							\$ 3,056.00	\$ -	\$ 3,056.00
Utility Records Correlation			4	8	16							\$ 3,320.00	\$ -	\$ 3,320.00
QAQC	1	2										\$ 682.00	\$ -	\$ 682.00
Engineer Review	1	2										\$ 682.00	\$ -	\$ 682.00
Progress Meetings	2	2										\$ 982.00	\$ -	\$ 982.00
Client Coordination	2	2										\$ 1,196.00	\$ -	\$ 1,196.00
QL-C TOTAL	6	8	9	22	32	32	2	2	2	2	79	\$ 10,980.00	\$ -	\$ 10,980.00
HOURS SUB-TOTALS	16.5	35	41	130	72	72	4	4	4	4				\$40,473.00
MAXIMUM CONTRACT RATE PER HOUR	\$300.00	\$191.00	\$132.00	\$111.00	\$119.00	\$119.00	\$107.00	\$107.00	\$107.00	\$107.00				
TOTAL LABOR COSTS	\$4,950.00	\$6,685.00	\$5,412.00	\$14,430.00	\$8,568.00	\$8,568.00	\$428.00	\$428.00	\$428.00	\$428.00				
SUBTOTAL Tasks	\$4,950.00	\$6,685.00	\$5,412.00	\$14,430.00	\$8,568.00	\$8,568.00	\$428.00	\$428.00	\$428.00	\$428.00	\$0.00	\$0.00	\$0.00	\$ 40,473.00
Basic Services Total														\$ 40,473.00

SUMMARY OF SUE TOTALS	
QL-D Total	\$ 29,493.00
QL-C Total	\$ 10,980.00
Total Fee	\$ 40,473.00

ATTACHMENT C

The Engineer shall furnish certificates of insurance to the FBGPTRA evidencing compliance with the insurance requirements hereof. Certificates shall indicate name of the Engineer, name of insurance company, policy number, term of coverage and limits of coverage. The Engineer shall cause its insurance companies to provide the FBGPTRA with at least 30 days prior written notice of any cancellation or non-renewal of the insurance coverage required under this Agreement. The Engineer shall obtain such insurance from such companies having a Bests rating of B+/VII or better, licensed or approved to transact business in the State of Texas, and shall obtain such insurance of the following types and minimum limits:

- a. Workers' Compensation insurance in accordance with the laws of the State of Texas, or state of hire/location of Services, and Employers' Liability coverage with a limit of not less than \$1,000,000 each employee for Occupational Disease, \$1,000,000 policy limit for Occupational Disease; and Employer's Liability of \$1,000,000 each accident.
- b. Commercial General Liability insurance including coverage for Products/Completed Operations, Blanket Contractual, Broad Form Property Damage, Personal Injury/Advertising Liability, and Bodily Injury and Property Damage with limits of not less than:
 - \$2,000,000 general aggregate limit
 - \$1,000,000 each occurrence, combined single limit
 - \$2,000,000 aggregate Products, combined single limit
 - \$1,000,000 aggregate Personal Injury/Advertising Liability
 - \$50,000 Fire Legal Liability
 - \$5,000 Premises Medical
- c. Business Automobile Liability coverage applying to owned, non-owned and hired automobiles with limits not less than \$1,000,000 each occurrence combined single limit for Bodily Injury and Property Damage combined.
- d. Umbrella Excess Liability insurance written as excess of Employer's Liability, with limits not less than \$2,000,000 each occurrence combined single limit.
- e. Professional Liability insurance with limits not less than \$2,000,000 each claim/annual aggregate.

The FBGPTRA and the FBGPTRA's Directors shall be named as additional insureds to all coverages required above, except for those requirements in paragraphs "a" and "e." All policies written on behalf of the Engineer shall contain a waiver of subrogation in favor of the FBGPTRA and the FBGPTRA's Directors, with the exception of insurance required under paragraph "e."

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

1 of 1

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY CERTIFICATION OF FILING

Certificate Number:
2026-1447102

Date Filed:
04/13/2026

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

Entech Civil Engineers, Inc.
Houston, TX United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

Fort Bend County

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

FBGPTRA 126-1062
Proj # 126-1062 - Schematic for SH 99 Southbound to US 90A East Bount Direct Connector in Ft Bend Cty

4	Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
			Controlling	Intermediary

5 Check only if there is NO Interested Party.

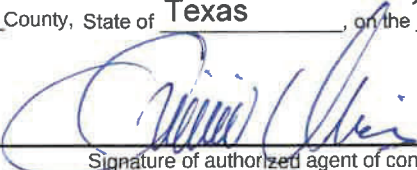
6 UNSWORN DECLARATION

My name is Ovidio N. Alanis, and my date of birth is 9/19/1961.

My address is 8519 Woods Hollow Trail, Fulshear, TX, 77406, USA.
(city) (state) (zip code) (country)

I declare under penalty of perjury that the foregoing is true and correct.

Executed in Harris County, State of Texas, on the 14th day of April, 2026.
(month) (year)



Signature of authorized agent of contracting business entity
(Declarant)