STATE OF TEXAS §
§
COUNTY OF FORT BEND §

AGREEMENT FOR PROFESSIONAL ENGINEERING SERVICES

(Entech Civil Engineers, Inc. – Project No. 23222x)

This Agreement for Professional Engineering Services ("Agreement") is made and entered into by and between Fort Bend County, Texas ("County"), a political subdivision of the state of Texas, and Entech Civil Engineers, Inc. ("Engineer"), a Texas corporation. County and Engineer may be referred to individually as a "Party" or collectively as the "Parties."

WHEREAS, Engineer is a professional engineering firm which provides professional engineering, design, and construction management services in the Greater Houston Area; and

WHEREAS, County desires for Engineer to provide professional engineering services for reconstruction of -Ricefield Road, Segment 1, from FM2977 to Benton Road under Mobility Bond Project No. 23222x; and

WHEREAS, Engineer represents that it is qualified and desires to perform such services for County; and

WHEREAS, pursuant to the requirements of Chapter 2254 of the Texas Government Code, County has determined that Engineer is the most highly qualified provider of such professional services and the Parties have negotiated a fair and reasonable price for the same; and

WHEREAS, this Agreement is not subject to competitive bidding requirements under Section 262.023 of the Texas Local Government Code because this Agreement is for professional engineering services and may not be competitively bid pursuant to Chapter 2254 of the Texas Government Code.

NOW, THEREFORE, in consideration of the mutual covenants and agreements contained herein, the Parties do mutually agree as follows:

1. **Recitals.** The recitals set forth above are incorporated herein by reference and made a part of this Agreement.

2. **Scope of Services.** Engineer shall render services to County as provided in Engineer's Proposal dated October 16, 2024 attached hereto as "Exhibit A" and incorporated herein by reference (the "Services").

3. **Time for Performance.** Time for performance for the Services provided under this Agreement shall begin with Engineer's receipt of Notice to Proceed and shall end no later than December 31, 2028. Engineer shall complete such tasks described in the Scope of Services, within this time or within such additional time as may be extended by County.

4. **Compensation and Payment Terms.**

Engineer's fees for the Services shall be calculated at the rate(s) set forth in Exhibit "A" attached hereto. The Maximum Compensation to Engineer for the Services performed under this Agreement is One Million Two Hundred Eighteen Thousand and Two and 00/100 Dollars ($1,218,002.00). In no event shall the amount paid by County to Engineer under this Agreement exceed said Maximum Compensation without an approved change order.

(a) Engineer understands and agrees that the Maximum Compensation stated is an all-inclusive amount and no additional fee, cost or reimbursed expense shall be added whatsoever to the fees stated in the attached Exhibit "A."

(b) County will pay Engineer based on the following procedures: Upon completion of the tasks identified in the Scope of Services, Engineer shall submit to County staff person designated by the County Engineer, one (1) electronic (pdf) copy of the invoice showing the amounts due for services performed in a form acceptable to County. Engineer shall submit invoices no more frequently than on a monthly basis. County shall review such invoices and approve them within 30 calendar days with such modifications as are consistent with this Agreement and forward same to the Auditor for processing. County shall pay each such approved invoice within thirty (30) calendar days.

(c) Accrual and payment of interest on any overdue payments assessed by Engineer, if any, shall be governed by Chapter 2251 of the Texas Government Code.

(d) Engineer understands and agrees that County's obligation to make any payment(s) hereunder is dependent upon Engineer's completion of the Services in a timely, good, and professional manner and in accordance with the performance representations made in Section 25 of this Agreement. Therefore, County reserves the right to withhold payment pending verification of satisfactory work performed.

5. **Limit of Appropriation.** Engineer understands and agrees that the Maximum Compensation for the performance of the Services within the Scope of Services described in Section 2 above is One Million Two Hundred Eighteen Thousand and Two and 00/100 Dollars ($1,218,002.00). In no event shall the amount paid by County under this Agreement exceed the Maximum Compensation without a County approved change

order. Engineer clearly understands and agrees, such understanding and agreement being of the absolute essence of this Agreement, that County shall have available the total maximum sum of One Million Two Hundred Eighteen Thousand and Two and 00/100 Dollars ($1,218,002.00) specifically allocated to fully discharge any and all liabilities County may incur under this Agreement. Engineer does further understand and agree, said understanding and agreement also being of the absolute essence of this Agreement, that the total Maximum Compensation that Engineer may become entitled to and the total maximum sum that County may become liable to pay Engineer under this Agreement shall not under any conditions, circumstances, or interpretations thereof exceed One Million Two Hundred Eighteen Thousand and Two and 00/100 Dollars ($1,218,002.00).

6. **Non-appropriation.** Engineer understands and agrees that in the event no funds or insufficient funds are appropriated by the County under this Agreement, County shall immediately notify Engineer in writing of such occurrence and the Agreement shall thereafter terminate and be null and void on the last day of the fiscal period for which appropriations were received or made without penalty, liability or expense to the County. In no event shall said termination of this Agreement or County's failure to appropriate said funds be deemed a breach or default of this Agreement or create a debt by County in any amount(s) in excess of those previously funded.

7. **Taxes.** Engineer understands and agrees that County is a governmental entity and political subdivision of the state of Texas, and as such, is exempt from payment of any sales and use taxes. County shall furnish evidence of its tax-exempt status upon written request by Engineer.

8. **Insurance.** Prior to commencement of the Services, Engineer shall furnish County with properly executed certificates of insurance which shall evidence all insurance required and provide that such insurance shall not be canceled, except on 30 days' prior written notice to County. Engineer shall provide certified copies of insurance endorsements and/or policies if requested by County. Engineer shall maintain such insurance coverage from the time Services commence until Services are completed and provide replacement certificates, policies and/or endorsements for any such insurance expiring prior to completion of Services. Engineer shall obtain such insurance written on an Occurrence form from such companies having Best's rating of A/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 in accordance with the laws of the State of Texas. Substitutes to genuine Workers' Compensation Insurance will not be allowed.

   (b) Employers' Liability insurance with limits of not less than $1,000,000 per injury by accident, $1,000,000 per injury by disease, and $1,000,000 per bodily injury by disease.

(c) Commercial general liability insurance with a limit of not less than $1,000,000 each occurrence and $2,000,000 in the annual aggregate. Policy shall cover liability for bodily injury, personal injury, and property damage and products/completed operations arising out of the business operations of the policyholder.

(d) 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.

(e) Professional Liability insurance with limits not less than $1,000,000.

County and members of the Fort Bend County Commissioners Court shall be named as additional insured to all required coverage except for Workers' Compensation and Professional Liability (if required). All Liability policies written on behalf of Engineer shall contain a waiver of subrogation in favor of County.

If required coverage is written on a claims-made basis, Engineer warrants that any retroactive date applicable to coverage under the policy precedes the Effective Date of this Agreement and that continuous coverage will be maintained or an extended discovery period will be exercised for a period of 2 years beginning from the time the work under this Agreement is completed.

Engineer shall not commence any portion of the work under this Agreement until it has obtained the insurance required herein and certificates of such insurance have been filed with and approved by County.

No cancellation of or changes to the certificates, or the policies, may be made without thirty (30) days prior, written notification to County.

Approval of the insurance by County shall not relieve or decrease the liability of the Engineer.

9. **Indemnity. PURSUANT TO SECTION 271.904 OF THE TEXAS LOCAL GOVERNMENT CODE, ENGINEER SHALL INDEMNIFY AND HOLD HARMLESS COUNTY, ITS OFFICIALS, OFFICERS, AND EMPLOYEES FROM AND AGAINST ALL CLAIMS, LOSSES, DAMAGES, CAUSES OF ACTION, SUITS, LIABILITY, AND COSTS, INCLUDING THE REIMBURSEMENT OF REASONABLE ATTORNEY FEES, ARISING OUT OF OR RESULTING FROM AN ACT OF NEGLIGENCE, INTENTIONAL TORT, INTELLECTUAL PROPERTY INFRINGEMENT, OR FAILURE TO PAY A SUBCONTRACTOR OR SUPPLIER COMMITTED BY ENGINEER OR ENGINEER'S AGENTS, EMPLOYEES, OR ANOTHER ENTITY OVER WHICH ENGINEER EXCERCISES CONTROL. IN ADDITION, HALL FURTHER PROCURE AND MAINTAIN**

LIABILITY INSURANCE WITH COVERAGE AS PROVIDED IN SECTION 8 OF THIS AGREEMENT.

ENGINEER SHALL TIMELY REPORT TO COUNTY ALL SUCH MATTERS ARISING UNDER THE INDEMNITY PROVISIONS ABOVE. UPON THE RECEIPT OF ANY CLAIM, DEMAND, SUIT, ACTION, PROCEEDING, LIEN, OR JUDGMENT, AND NO LATER THAN THE FIFTEENTH DAY OF EACH MONTH, ENGINEER SHALL PROVIDE COUNTY WITH A WRITTEN REPORT ON EACH MATTER, SETTING FORTH THE STATUS OF EACH MATTER, THE SCHEDULE OR PLANNED PROCEEDINGS WITH RESPECT TO EACH MATTER, AND THE COOPERATION OR ASSISTANCE, IF ANY, OF COUNTY REQUIRED BY ENGINEER IN THE DEFENSE OF EACH MATTER. IN THE EVENT OF ANY DISPUTE BETWEEN THE PARTIES AS TO WHETHER A CLAIM, DEMAND, SUIT, ACTION, PROCEEDING, LIEN, OR JUDGMENT APPEARS TO HAVE BEEN CAUSED BY OR APPEARS TO HAVE ARISEN OUT OF OR RESULTS FROM AN ACT OF NEGLIGENCE, INTENTIONAL TORT, INTELLECTUAL PROPERTY INFRINGEMENT, OR FAILURE TO PAY A SUBCONTRACTOR OR SUPPLIER COMMITTED BY ENGINEER, OR ITS AGENTS, EMPLOYEES, OR ANOTHER ENTITY OVER WHICH ENGINEER EXERCISES CONTROL, ENGINEER SHALL, NEVERTHELESS, FULLY DEFEND SUCH CLAIM, DEMAND, SUIT, ACTION, PROCEEDING, LIEN, OR JUDGMENT UNTIL AND UNLESS THERE IS A DETERMINATION BY A COURT OF COMPETENT JURISDICTION THAT SAID ACTS AND/OR OMISSIONS OF ENGINEER ARE NOT AT ISSUE IN THE MATTER.

THE INDEMNITY PROVISIONS OF THIS SECTION SHALL SURVIVE THE TERMINATION OF THIS AGREEMENT HOWEVER CAUSED, AND NO PAYMENT, PARTIAL PAYMENT, OR ISSUANCE OF CERTIFICATION OF COMPLETION OF THE SERVICES UNDER THIS AGREEMENT BY COUNTY, WHETHER IN WHOLE OR IN WHOLE OR IN PART, SHALL WAIVE OR RELEASE ANY OF THE PROVISIONS OF THIS SECTION.

10. **Public Information Act.** Engineer expressly acknowledges and agrees that County is a public entity and as such, is subject to the provisions of the Texas Public Information Act under Chapter 552 of the Texas Government Code. In no event shall County be liable to Engineer for release of information pursuant to Chapter 552 of the Texas Government Code or any other provision of law. Except to the extent required by law or as directed by the Texas Attorney General, County agrees to maintain the confidentiality of information provided by Engineer expressly marked as proprietary or confidential. County shall not be liable to Engineer for any disclosure of any proprietary or confidential information if such information is disclosed under Texas law or at the direction of the Texas Attorney General. Engineer further acknowledges and agrees that the terms and conditions of this Agreement are not proprietary or confidential information.

11. **Compliance with Laws.** Engineer shall comply with all federal, state, and local laws, statutes, ordinances, rules, regulations, and the 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. Engineer, in providing all

services hereunder, further agrees to abide by the provisions of any applicable Federal or State Data Privacy Act.

12. **Independent Contractor.** In the performance of work or services hereunder, Engineer shall be deemed an independent Contractor, and any of its agents, employees, officers, or volunteers performing work required hereunder shall be deemed solely as employees of Engineer. Engineer and its agents, employees, officers, or volunteers shall not, by performing work pursuant to this Agreement, be deemed to be employees, agents, or servants of County and shall not be entitled to any of the privileges or benefits of County employment.

13. **Use of Customer Name.** Engineer may use County's name without County's prior written consent only in Engineer's customer lists. Any other use of County's name by Engineer must have the prior written consent of County.

14. **County/County Data**. Nothing in this Agreement shall be construed to waive the requirements of Section 205.009 of the Texas Local Government Code.

15. **Personnel.** Engineer represents that it presently has, or is able to obtain adequate qualified personnel in its employment for the timely performance of the Services required under this Agreement and that Engineer shall furnish and maintain, at its own expense, adequate and sufficient personnel, in the opinion of County, to perform the Services when and as required and without delays.

    All employees of Engineer shall have such knowledge and experience as will enable them to perform the duties assigned to them. Any employee or agent of Engineer who, in County's opinion, is incompetent or by his conduct becomes detrimental to providing Services pursuant to this Agreement, shall, upon request of County, immediately be removed from association with the Services required under this Agreement.

    When performing Services on–site at County's facilities, Engineer shall comply with, and will require that all Engineer's Personnel comply with, all applicable rules, regulations and known policies of County that are communicated to Engineer in writing, including security procedures concerning systems and data and remote access thereto, building security procedures, including the restriction of access by County to certain areas of its premises or systems for security reasons, and general health and safety practices and procedures.

16. **Confidential and Proprietary Information.** Engineer acknowledges that it and its employees or agents may, in the course of performing their responsibilities under this Agreement, be exposed to or acquire information that is confidential to County. Any and all information of any form obtained by Engineer or its employees or agents from County in the performance of this Agreement shall be deemed to be confidential information of County ("Confidential Information"). Any reports or other documents or items (including software) that result from the use of the Confidential Information by Engineer shall be

treated with respect to confidentiality in the same manner as the Confidential Information. Confidential Information shall be deemed not to include information that (a) is or becomes (other than by disclosure by Engineer) publicly known or is contained in a publicly available document; (b) is rightfully in Engineer's possession without the obligation of nondisclosure prior to the time of its disclosure under this Agreement; or (c) is independently developed by employees or agents of Engineer who can be shown to have had no access to the Confidential Information.

Engineer agrees to hold Confidential Information in strict confidence, using at least the same degree of care that Engineer uses in maintaining the confidentiality of its own confidential information, and not to copy, reproduce, sell, assign, license, market, transfer or otherwise dispose of, give, or disclose Confidential Information to third parties or use Confidential Information for any purposes whatsoever other than the provision of Services to County hereunder, and to advise each of its employees and agents of their obligations to keep Confidential Information confidential. Engineer shall use its best efforts to assist County in identifying and preventing any unauthorized use or disclosure of any Confidential Information. Without limitation of the foregoing, Engineer shall advise County immediately in the event Engineer learns or has reason to believe that any person who has had access to Confidential Information has violated or intends to violate the terms of this Agreement and Engineer will at its expense cooperate with County in seeking injunctive or other equitable relief in the name of County or Engineer against any such person. Engineer agrees that, except as directed by County, Engineer will not at any time during or after the term of this Agreement disclose, directly or indirectly, any Confidential Information to any person, and that upon termination of this Agreement or at County's request, Engineer will promptly turn over to County all documents, papers, and other matters in Engineer's possession which embody Confidential Information.

Engineer acknowledges that a breach of this Section, including disclosure of any Confidential Information, or disclosure of other information that, at law or in equity, ought to remain confidential, will give rise to irreparable injury to County that is inadequately compensable in damages. Accordingly, County may seek and obtain injunctive relief against the breach or threatened breach of the foregoing undertakings, in addition to any other legal remedies that may be available. Engineer acknowledges and agrees that the covenants contained herein are necessary for the protection of the legitimate business interest of County and are reasonable in scope and content.

Engineer in providing all services hereunder agrees to abide by the provisions of any applicable Federal or State Data Privacy Act.

17. **Ownership and Reuse of Documents.** All work product and data produced or developed under this Agreement by Engineer including any documents, data, notes, reports, research, graphic presentation materials, and any other related material (collectively, "Materials"), shall at all times be the property of County. County, at all times, shall have a right of access to the Materials. Engineer shall promptly furnish and deliver all such

Materials to County on request. Notwithstanding the foregoing, Engineer shall bear no liability or responsibility for Materials that have been modified post-delivery to County or used by County for a purpose other than that for which they were prepared under this Agreement.

18. **Inspection of Books and Records.** Engineer shall permit County, or any duly authorized agent of County, to inspect and examine the books, records, information, and documentation (collectively, "Records") of Engineer which relate to the Services provided under this Agreement for the purposes of making audits, examinations, excerpts, copies, and transcriptions. Engineer shall maintain all such Records in a readily available state and location, reasonably accessible to County or their authorized representatives. County's right to inspect such books and records shall survive the termination of this Agreement for a period of four (4) years, or until any litigation concerning any of the Services has been satisfactorily resolved, whichever occurs later. **ENGINEER SHALL NOT DESTROY OR DISCARD ANY RECORDS REASONABLY RELATED TO THIS AGREEMENT OR THE SERVICES, UNLESS THE TIME PERIOD FOR MAINTAINING THE SAME HAS EXPIRED.**

19. **Termination.**

(a) Without Cause. County, in its sole discretion, and without prejudice to any other remedy to which it may be entitled to at law or in equity, may terminate this Agreement, in whole or in part, without cause, upon thirty (30) days prior written notice to Engineer.

(b) With Cause. County, in its sole discretion, and without prejudice to any other remedy to which it may be entitled to at law or in equity, may terminate this Agreement, in whole or in part, with cause, for any of the following reasons, each of which shall constitute a material breach and "Default" of the Agreement:

(1) Engineer fails to perform any portion of the Scope of Services within the timeframe(s) provided under this Agreement.

(2) Engineer fails to comply with County's documentation and reporting requirements, terms and requirements of this Agreement, or applicable federal, state, or local laws and regulations.

(3) Non-performance and suspension of the Agreement by Engineer that exceeds thirty (30) calendar days due to Force Majeure.

(4) Engineer fails to perform any obligation under this Agreement or as required by law, ordinance, or regulation and such failure creates an imminent threat to the public health and/or safety.

(5) Engineer otherwise materially breaches any of the covenants or terms and conditions set forth in this Agreement or fails to perform any of the other provisions of this Agreement or so fails to make progress as to endanger performance of this Agreement in accordance with its terms.

(6) County shall notify Engineer in writing of the alleged Default in reasonable detail ("Notice"). Upon receipt of said Notice, Engineer shall have opportunity to cure such Default within the time specified in the Notice by County. If Engineer fails to cure such Default within such time, and to the reasonable satisfaction of County, then County may elect to terminate this Agreement for cause.

(7) If, after termination of the Agreement by County for cause, it is determined for any reason whatsoever that Engineer was not in Default, or that the Default was excusable, the rights and obligations of the Parties hereunder shall be the same as if the termination had been issued by County without cause in accordance with this Agreement.

(c) Upon termination of this Agreement for any reason, Engineer shall cease all work and activity for the Services by the date specified by County and shall not incur any new obligations or perform any additional services for the work performed hereunder beyond the specified date. County shall compensate Engineer in accordance with Section 4, above, for such work provided by Engineer under this Agreement prior to its termination and which has not been previously presented for payment by Engineer to County.

(d) If County 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 Engineer.

20. **Force Majeure.** In the event either Party is rendered unable, wholly or in part, by Force Majeure to carry out any of its obligations under this Agreement, then, within a reasonable time after the occurrence of such event, but no later than ten (10) calendar days after, the Party whose obligations are so affected (the "Affected Party") thereby shall notify the other in writing stating the nature of the event and the anticipated duration. The Affected Party's obligations under this Agreement shall be suspended during the continuance of any delay or inability caused by the event, but for no longer period. The Affected Party shall further endeavor to remove or overcome such delay or inability as soon as is reasonably possible.

For purposes of this Agreement, Force Majeure includes, but is not limited to: acts of God, strikes, lockouts, or other industrial disturbances, acts of the public enemy, orders

of any kind of the government of the United States of America or the State of Texas or any civil or military authority other than a Party to this Agreement, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, hurricanes, severe storms, floods, washouts, drought, arrests, restraint of government and people, civil disturbances, explosions, breakage or accidents to machinery, pipelines or canals, and any other inabilities of any Party, similar to those enumerated, which are not within the control of the Party claiming such inability, which such Party could not have avoided by the reasonable exercise of due diligence and care.

21. **Assignment.** Engineer shall not assign this Agreement to another party without the prior written consent of County.

22. **Successors and Assigns Bound.** County and Engineer each bind themselves and their successors and assigns to the other Party and to the successors and assigns of such other Party, with respect to all covenants of this Agreement.

23. **Publicity.** Contact with citizens of Fort Bend County, media outlets, or other governmental agencies shall be the sole responsibility of County. Under no circumstances, whatsoever, shall Engineer release any material or information developed or received during the performance of Services hereunder unless Engineer obtains the express written approval of County or is required to do so by law.

24. **Notice.** Any and all notices required or permitted under this Agreement shall be in writing and shall be mailed by certified mail, return receipt requested, or personally delivered to the following addresses:

If to County:
Fort Bend County Engineering
Attn: County Engineer
301 Jackson Street, 4th Floor
Richmond, Texas 77469

And

Fort Bend County, Texas
Attn: County Judge
401 Jackson Street, 1st Floor
Richmond, Texas 77469

If to Engineer:
Entech Civil Engineers, Inc
Attn: _____
15021 Katy Freeway
Suite 500
Houston, Texas 77094

Within five (5) business days of the Effective Date of this Agreement, each Party to this Agreement shall designate in writing to the other Party one person and one alternate person to be that Party's designated spokesperson for communications between the Parties.

25. **Standard of Care**. Pursuant to Section 271.904 of the Texas Local Government Code, Engineer represents to County that Engineer has the skill and knowledge ordinarily possessed by well-informed members of its trade or profession ("Professionals") practicing in the greater Houston metropolitan area. Engineer shall provide the Services to County with the same professional skill and care ordinarily provided by such Professionals under the same or similar circumstances and professional license and as expeditiously as is prudent considering the ordinary professional skill and care of a competent Professional.

26. **Travel Policy.** Mutually approved travel and mileage expenses incurred in the performance of the Services hereunder will be reimbursed to Engineer only to the extent that those costs do not exceed Fort Bend County travel reimbursement allowances. A copy of County's Travel Policy with those reimbursement limits shall be provided to Engineer upon request.

27. **Arbitration, Litigation Waiver, and Attorney Fees.** County does not agree to submit disputes arising out of this Agreement to binding arbitration nor does County agree to pay any and/or all attorney fees incurred by Engineer in any way associated with this Agreement. Therefore, any references in Engineer's Proposal to binding arbitration, waiver of a right to litigate a dispute, or payment of attorney fees are hereby deleted.

28. **No Waiver of Jury Trial.** County does not agree that all disputes (including any claims or counterclaims) arising from or related to this Agreement shall be resolved without a jury. Therefore, any references in Engineer's Proposal to County's waiver of jury trial are hereby deleted.

29. **Limitations.** Limitations for the right to bring an action, regardless of form, shall be governed by the applicable laws of the State of Texas, and any provisions to the contrary in Engineer's Proposal are hereby deleted.

30. **Indemnification by County. ENGINEER UNDERSTANDS AND AGREES THAT UNDER THE TEXAS CONSTITUTION AND THE LAWS OF THE STATE OF TEXAS, COUNTY CANNOT ENTER INTO AN AGREEMENT WHEREBY COUNTY AGREES TO INDEMNIFY OR HOLD HARMLESS ANOTHER PARTY. THEREFORE, ANY AND ALL REFERENCES IN ENGINEER'S PROPOSAL TO COUNTY DEFENDING, INDEMNIFYING, OR HOLDING OR SAVING HARMLESS ENGINEER OR ANY OTHER PARTY, FOR ANY REASON WHATSOEVER, ARE HEREBY DELETED.**

31. **Entire Agreement and Modification.** This Agreement constitutes the entire Agreement between the Parties and supersedes all previous agreements, written or oral, pertaining to the subject matter of this Agreement. Any amendment to this Agreement must be in writing and signed by each Party to come into full force and effect. **IT IS ACKNOWLEDEDGED BY ENGINEER THAT NO OFFICER, AGENT, EMPLOYEE, OR REPRESENTATIVE OF COUNTY HAS ANY AUTHORITY TO CHANGE THE TERMS OF THIS AGREEMENT OR ANY ATTACHED EXHIBITS HERETO UNLESS EXPRESSLY AUTHORIZED BY THE FORT BEND COUNTY COMMISSIONERS COURT.**

32. **Conflict.** In the event there is a conflict among the terms of this document entitled "Agreement for Professional Engineering Services" and the terms of Engineer's Proposal or any other exhibit attached hereto, the terms of this document shall prevail with regard to the conflict.

33. **Understanding Fair Construction.** By execution of this Agreement, the Parties acknowledge that they have read and understood each provision, term, and obligation contained herein. This Agreement, although drawn by one party, shall be construed fairly and reasonably and not more strictly against the drafting Party than the non-drafting Party.

34. **Severability.** In case any one or more of the provisions contained in this Agreement shall for any reason be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provision hereof and this Agreement shall be construed as if such invalid, illegal or unenforceable provision had never been contained herein.

35. **No Waiver of Immunity.** Neither the execution of this Agreement nor any other conduct of either Party relating to this Agreement shall be considered a waiver or surrender by County of its governmental powers or immunity under the Texas Constitution or the laws of the state of Texas.

36. **Applicable Law and Venue.** This Agreement shall be construed according to the laws of the state of Texas. Venue for any claim arising out of or relating to the subject matter of this Agreement shall lie in a court of competent jurisdiction of Fort Bend County, Texas.

37. **Certain State Law Requirements for Contracts.** The contents of this Section are required by Texas law and are included by County regardless of content For purposes of Sections 2252.152, 2271.002, and 2274.002, Texas Government Code, as amended, Engineer hereby verifies that Engineer and any parent company, wholly owned subsidiary, majority-owned subsidiary, and affiliate:

(a) Unless affirmatively declared by the United States government to be excluded from its federal sanctions regime relating to Sudan or Iran or any federal sanctions regime relating to a foreign terrorist organization, Engineer is not identified on a list prepared and maintained by the Texas Comptroller of Public Accounts under Section 806.051, 807.051, or 2252.153 of the Texas Government Code.

(b) If employing ten (10) or more full-time employees and this Agreement has a value of $100,000.00 or more, Engineer does not boycott Israel and is authorized to agree in such contracts not to boycott Israel during the term of such contracts. "Boycott Israel" has the meaning provided in § 808.001 of the Texas Government Code.

(c) If employing ten (10) or more full-time employees and this Agreement has a value of $100,000.00 or more, Engineer does not boycott energy companies and is authorized to agree in such contracts not to boycott energy companies during the term of such contracts. "Boycott energy company" has the meaning provided in § 809.001 of the Texas Government Code.

(d) If employing ten (10) or more full-time employees and this Agreement has a value of $100,000.00 or more, Engineer does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association and is authorized to agree in such contracts not to discriminate against a firearm entity or firearm trade association during the term of such contracts. "Discriminate against a firearm entity or firearm trade association" has the meaning provided in § 2274.001(3) of the Texas Government Code. "Firearm entity" and "firearm trade association" have the meanings provided in § 2274.001(6) and (7) of the Texas Government Code.

38. **Human Trafficking. BY ACCEPTANCE OF THIS AGREEMENT, ENGINEER ACKNOWLEDGES THAT FORT BEND COUNTY IS OPPOSED TO HUMAN TRAFFICKING AND THAT NO COUNTY FUNDS WILL BE USED IN SUPPORT OF SERVICES OR ACTIVITIES THAT VIOLATE HUMAN TRAFFICKING LAWS.**

39. **Captions.** The section captions used in this Agreement are for convenience of reference only and do not affect the interpretation or construction of the Agreement.

40. **Electronic and Digital Signatures.** The Parties to this Agreement agree that any electronic and/or digital signatures of the Parties included in this Agreement are intended to authenticate this writing and shall have the same force and effect as the use of manual signatures.

41. **Certification.** By his or her signature below, each signatory individual certifies that he or she is the properly authorized person or officer of the applicable Party hereto and has the requisite authority necessary to execute this Agreement on behalf of such Party, and each

Party hereby certifies to the other that it has obtained the appropriate approvals or authorizations from its governing body as required by law.

IN WITNESS WHEREOF, and intending to be legally bound, County and Engineer hereto have executed this Agreement to be effective on the date signed by the last Party hereto.

FORT BEND COUNTY, TEXAS

_____
KP George, County Judge

_____
Date

ATTEST:

_____
Laura Richard, County Clerk

ENTECH CIVIL ENGINEERS, INC

_____
Authorized Agent – Signature

Ovidio N. Alanis
Authorized Agent- Printed Name

Executive Vice President
Title

1/28/2025
Date

APPROVED:

_____
J. Stacy Slawinski, County Engineer

AUDITOR'S CERTIFICATE

I hereby certify that funds in the amount of **$**_____ are available to pay the obligation of Fort Bend County, Texas within the foregoing Agreement.

_____
Robert Ed Sturdivant, County Auditor

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EXHIBIT A

(Engineer's Proposal Follows Behind)

October 16, 2024

Mr. Kevin Mineo, P.E.
Manager of Precinct 2 Mobility Projects (Fort Bend County)
Binkley & Barfield, Inc.

RE: 23222x Ricefield Road Segment 1: From FM 2977 to Benton Road

Dear Mr. Mineo:

Entech Civil Engineers Inc. (Entech) is pleased to have the opportunity to submit the attached proposal to Fort Bend County for the above referenced project. The following items are included for your review:

Exhibit A – Scope of Services
Exhibit B – Study and Design Phase Schedules
Exhibit C – Fee Schedule
Exhibit C1 – Geotechnical Scope and Fee (sub-consultant)
Exhibit C2 – Survey Scope and Fee (sub-consultant)
Exhibit C3 - Subsurface Utility Engineering Scope and Fee (sub-consultant)

Entech Civil Engineers, Inc. is pleased to provide engineering services to Fort Bend County for this project.

Sincerely,

Chris Orosco, P.E.
Project Manager

Attached: Exhibits

"EXHIBIT A" - Scope of Services
Ricefield Road Segment 1
From FM 2977 to Benton Road

Fort Bend County has requested a proposal for preliminary studies, design services, and bid support services to construct a new boulevard roadway with concrete curb and gutter and roadside ditches. This project includes two bridges over existing drainage canal and a new ditch culvert and traffic signal at FM 2977. Additional services include detention pond design, survey and geotechnical investigation. if necessary.

LIMITS

The Ricefield Road project will reconstruct the existing two-lane Ricefield Road from FM 2977 to Benton Road. The project will require additional ROW at the intersection of Ricefield road and FM 2977 to accommodate the proposed improvements and realignment of the intersection. This project is Segment 1 or a two-segment plan for the future expansion of Ricefield Road.

ALIGNMENT

The Engineer is to consider the existing vertical and horizontal alignments provided by Fort Bend County. The final alignment will be approved by Fort Bend County and stakeholders.

PROJECT SCOPE

STUDY PHASE

The Study Report shall serve as a summary document that incorporates the recommendations from the supporting investigative reports, working meetings with Fort Bend County, necessary approvals and final recommendations for all agencies including TxDOT and Fort Bend County Drainage District. The document will serve as the framework for the design phase, having addressed the major issues that affect the roadway design and supporting infrastructure.

An outline is attached that identifies those sections that are required for the Study Report, including the exhibits and attachments as identified below. The Study Phase shall include the preparation and approval of reports necessary to support the recommendations and design of the roadway and all appurtenances including, but not limited to, Geotechnical Investigations and Drainage Studies. The preparation of a preliminary a schematic layout will be developed.

The study phase shall include one presentation meeting to Fort Bend County Engineering, prepared by the consultant.

At the Preliminary Engineering Report (PER) meeting, the Consultant shall present the status of the project and go over key items from the draft PER to include, but not limited to, ROW, Alignment, Utilities, Parcels, Site triangles, Construction cost. Consultant shall provide preliminary schematics and exhibits to supports discussions to solicit input from Fort Bend County on decision items.

Any issues identified during the Consultant's work effort to get to this project stage that require decision from Fort Bend County should be presented at this meeting for confirmation prior to finalizing the PER such that approval can be granted upon report submittal.

Exhibits/Attachments shall include, but not limited to the following:

- Aerial Exhibit

  Provide an exhibit that shows the project limits and surrounding features. Identify notable features of interest, including drainage channels, floodplains, pipelines, roadways, future roadway alignments on the latest available aerial photographs, and developments.

- Schematic Layout of Roadway and Detention

  Provide a plan view layout with sufficient detail to ensure that the final design can be constructed without any major issues. Include the location of the proposed trunk storm sewer and detention facilities. The schematic layout shall be at a scale of 1" = 40' on 11"x17" sheets. Include a Cover Sheet with a Vicinity Map with the project limits. The schematic should include the pavement marking concept so that traffic movements can be considered and reviewed during the study phase. Provide the proposed typical sections on the schematic. Typical Sections shall be drawn at 1"=20' horizontal and 1"=2' vertical scale on 11"x17" sheets. Identify the location of soil borings.

- Cost Estimates

  Provide a preliminary construction cost estimate for the final recommendation provided in the Study Report.

- Utility Tables

  The Consultant shall provide a table with all identified utilities along with the contact information. The table shall include ID number for the potential conflicts, stations at the left right-of-way, the centerline, and Right right-of-way, the owner of the utility, contact name, address, phone number, email address and any notes such as no conflict, potential conflict and/or relocation resolution.

  The consultant shall coordinate with utility companies that have existing facilities in or adjacent to the project limits. The coordination shall include:

  1. Identify utilities that will potentially require relocation. Major utilities are defined pipelines, concrete incased conduits, or other utilities of this nature. Overhead power lines, small gas service lines and other lines of this nature are not identified as major conflicts but will be identified in the utility table.

2. Identify any utilities that are within dedicated easements that will be within the proposed right-of-way. These are utilities identified and potential conflicts and will need to be designed around when possible.

- Sight Distance Evaluation

The consultant shall investigate sight distance restrictions and general operating conditions of all existing and proposed intersections within the project limits. Prepared exhibits which include the ROW and parcel lines, proposed layout of paving, features on private property that affect the sight distance and square footage of takings that would be required.

Topographic Survey and ROW mapping: ***(Attached)***

Surveying for Detention Pond:
Survey shall conform to Fort Bend County Requirements

1. Additional abstracting may be required, if the detention pond is located on a parcel outside the project limits.

2. Survey will document structures within the 60' limit required for parcel takings for the pond.

3. Should the detention pond location be located in an area that requires additional level of effort (i.e. swamps, dense vegetation, etc.), Fort Bend County will be notified prior to commencing work.

4. TOPO Boundary would be 50' beyond the limits of the proposed detention pond

5. Locate trees on pond site (8" and above).

6. Pond description and taking will be included in the right-of-way taking description and exhibit.

Geotechnical: ***(Attached)***

Drainage Impact Analysis:

- Obtain and review existing drainage data.
- Field reconnaissance
- Develop & present options (pre-modeling).
- Account for latest Atlas 14 rainfall data.

- Determine existing overall hydrologic conditions.
- Determine proposed overall hydrologic conditions.
- Existing SWMM Hydraulic Analysis
- Proposed SWMM Hydraulic Analysis
- Determine outfall requirements and downstream impact evaluation.
- Determine detention requirements and provide necessary mitigation.
- Obtain approval from Fort Bend County Drainage District, if required.
- Prepare Drainage Impact Report.
- Meet with Fort Bend County staff and Drainage District staff.

Table of Deliverables for Study Phase:

PER Submittal to include at a minimum:

A. Project location and scope of the project
B. Existing Conditions
C. Existing Utilities, including potential conflicts
D. Proposed Roadway Design, highlighting any deviation from applicable design criteria
E. Existing and Proposed Drainage and Detention
F. Proposed Right-of-Way
G. Proposed Traffic Signal, if applicable
H. Geotechnical Investigation
I. Environmental Investigation (letter report to be provided to Design Consultant by the County)
J. Permit and Regulatory Requirements
K. Cost Estimate
L. Appendices
    1. PER review meeting minutes
    2. Project Location Map
    3. Alignment Exhibit showing ultimate configuration
    4. Roundabout Exhibit, if applicable
    5. FEMA Flood Insurance Rate Maps (FIRM)
    6. Preliminary Drainage Area Map and calculations taking into account the ultimate roadway configuration
    7. Sight Triangle Exhibit
    8. Right-of-Way Exhibit

9. Cost Estimate
10. Utilities
    a. Utility Conflict Table. CenterPoint and AT&T ID numbers are to be included in the table. See Appendix B for Fort Bend County Utility Conflict Table.
    b. Include any correspondence with utility companies (AT&T, CenterPoint, pipelines, etc.) that contain pertinent information.
11. 30 percent drawing submittal, to include:
    a. Typical sections
    b. Plan and profile sheets shall consist of all existing features (seen and unseen) shown in plan and profile, as well as proposed improvements in plan only with minor annotation.
    c. Traffic control plan (preliminary phasing and detour needs)
    d. Bridge layout, if applicable
12. Reports to be included are:
    a. Drainage Study taking into account the ultimate roadway configuration
    b. Geotechnical Report
    c. Environmental Report (provided by Fort Bend County)
    d. Signal Warrant Analysis, if applicable

DESIGN PHASE

The design phase of the project shall consist of the preparation of complete construction documents that reflect the approved Study Report, (Plans, Specifications & Estimate (PS&E)). The final design shall be in accordance with the latest Fort Bend County Engineering Design Manual.

The Design shall build upon the framework identified in the Study Report and include roadway design, profiles, drainage system and appurtenances, details and the bid documents necessary for a complete design. The construction document PS&E submittal shall be considered final and ready for construction, barring minor comments from Fort Bend County.

Provide a list of traffic control standards to be used at the ends of the project.

The Design Submittal (PS&E) shall address all comments from the study phase of the project and the construction review meeting. The Design Submittal (PS&E) shall include the submittal of the construction ready plans on 11”x17”, the project manual, and a final cost estimate.

The design phase shall also include, but is not limited to the following:

1. The coordination of utilities. The coordination shall include, but not be limited to:

    a) Meet with the utility companies and provide information and plans as necessary.

    b) Provide any documentation as necessary and assist Fort Bend County in entering into an agreement with the utility companies for the relocation of the facility.

2. Design of proposed improvements shall be in accordance with the Fort Bend County guideline.

3. The pavement elevation shall be set in accordance with the Fort Bend County Guidelines.

4. Culvert at existing FM 2977 to be removed (ditch regraded) and new culvert to be designed for proposed tie-in to FM 2977.

5. The pavement section shall be designed in accordance with the Guidelines. The results of the coring tests will be utilized to verify that the existing concrete pavement meets the Fort Bend County guidelines.

6. Update cost estimates for each submittal (70%, 95% and 100%).

Table of Deliverables for Design Phase:

70% Submittal

A. A digital copy (Adobe Acrobat format, PDF) of the drawings, specifications, and estimate will be required and shall be submitted to the Program Manager.
B. The 70 percent submittal shall include the following:
   1. Cover Sheet with a 70 percent interim seal
   2. Index of Sheet
   3. General Notes
   4. Typical and Non-standard Cross Sections
   5. Project Layout Sheet
   6. Survey Control
   7. Right-of-way (Existing and Proposed)
   8. Horizontal Alignment Data
   9. Plan and Profile Sheets (detailed callouts not required at 70 percent)
   10. Bridge Layout and Details (if applicable)
   11. Culvert Layout (Bridge Class if applicable)
   12. Drainage Area Map with Hydraulic Calculations
   13. Traffic Control Plan
   14. Signing and Striping Plan
   15. Traffic Signal and Details (if applicable)
   16. Storm Water Pollution Prevention Plan
   17. Cross Sections (100 foot intervals with earthwork calculations)
   18. Specification Table of Contents (Use Harris County Specifications. TxDOT Specifications and others to be used as necessary depending on jurisdiction). Refer to Appendix B for Fort Bend County Specification Table of Contents template.
   19. Construction Cost Estimate (PDF and Excel format)
   20. Bid Form (PDF and Excel format). Ensure that bid items and units match those shown in the applicable specification. Refer to Appendix B for Fort Bend County Bid template.
   21. KMZ file of current design with proposed right-of-way.
   22. 70 Percent Review Checklist.

95% Submittal

M. A digital copy (Adobe Acrobat format, PDF) of the drawings, specifications, and estimate will be required and shall be submitted to the Program Manager.

N. The 95 percent submittal should be considered complete with 95 percent interim seal, and shall include all the 70 percent requirements plus the following:

O. Verify earthwork quantities with cross sections at 100-foot intervals.

P. Standard construction details.

Q. Project manual (bid form, specification table of contents, any special specifications or conditions; contract documents excluded)

R. KMZ file of current design with proposed right-of-way.

S. Responses to 70 percent comments

T. 95 Percent Review Checklist.

100% Submittal

A. Project manual

B. Construction cost estimate

C. KMZ file of current design with proposed right-of-way.

D. Responses to 95 percent comments.

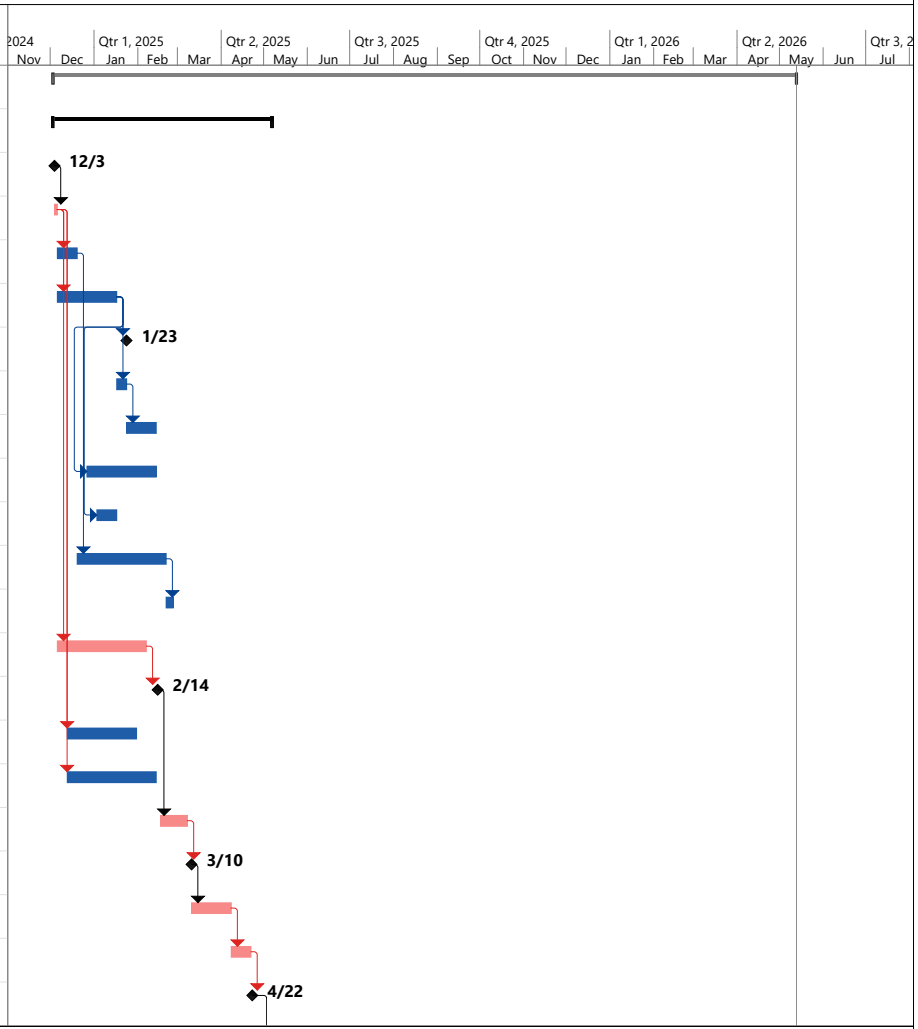
E. Recommended maximum number of calendar days for construction.

F. 100 Percent Review Checklist

Exhibit B - Design Schedule
Ricefield Road - Seg. 1 From FM 2977 to Benton Road
23222x

PO No.

ID	Task Mode	Task Name	Duration	Start	Finish
0		**Ricefield Road - Segment 1**	**376 days**	**Tue 12/3/24**	**Tue 5/12/26**
1		**Preliminary Engineering Report (PER)**	**111 days**	**Tue 12/3/24**	**Tue 5/6/25**
2		Notice to Proceed	1 day	Tue 12/3/24	Tue 12/3/24
3		Project Coordination and Meetings	2 days	Wed 12/4/24	Thu 12/5/24
4		Review Right-of-Way Maps (Cat 1B, Cond II)	10 days	Fri 12/6/24	Thu 12/19/24
5		Topographic Survey (Cat 6, Cond. I)	30 days	Fri 12/6/24	Thu 1/16/25
6		Topo Field Meeting	1 day	Thu 1/23/25	Thu 1/23/25
7		Survey Control Sheets	5 days	Fri 1/17/25	Thu 1/23/25
8		Right-of-Way Exhibits	15 days	Fri 1/24/25	Thu 2/13/25
9		Utility Coordination	35 days	Fri 12/27/24	Thu 2/13/25
10		Traffic Signal Warrant Analysis	10 days	Fri 1/3/25	Thu 1/16/25
11		Prepare 30% design plans	45 days	Fri 12/20/24	Thu 2/20/25
12		Prepare Cost Estimate	3 days	Fri 2/21/25	Tue 2/25/25
13		Draft Drainage Report	45 days	Fri 12/6/24	Thu 2/6/25
14		Drainage Meeting w/ HCED	1 day	Fri 2/14/25	Fri 2/14/25
15		Geotechnical Investigations	35 days	Fri 12/13/24	Thu 1/30/25
16		SUE QL-D	45 days	Fri 12/13/24	Thu 2/13/25
17		Prepare Preliminary Engineering Report	15 days	Mon 2/17/25	Fri 3/7/25
18		Submit Draft PER	1 day	Mon 3/10/25	Mon 3/10/25
19		FBC/FBCDD Review	20 days	Tue 3/11/25	Mon 4/7/25
20		Incorporate PER Comments	10 days	Tue 4/8/25	Mon 4/21/25
21		FBC PER Presentation	1 day	Tue 4/22/25	Tue 4/22/25



Project: Ricefield Road - Segment 1
Date: Thu 10/17/24

Task	Inactive Task	Manual Summary Rollup	External Milestone	Manual Progress
Split	Inactive Milestone	Manual Summary	Deadline	
Milestone	Inactive Summary	Start-only	Critical	
Summary	Manual Task	Finish-only	Critical Split	
Project Summary	Duration-only	External Tasks	Progress	

ENTECH CIVIL ENGINEERS, INC F-6932
15021 Katy Freeway, Ste. 500
Houston TX 77094

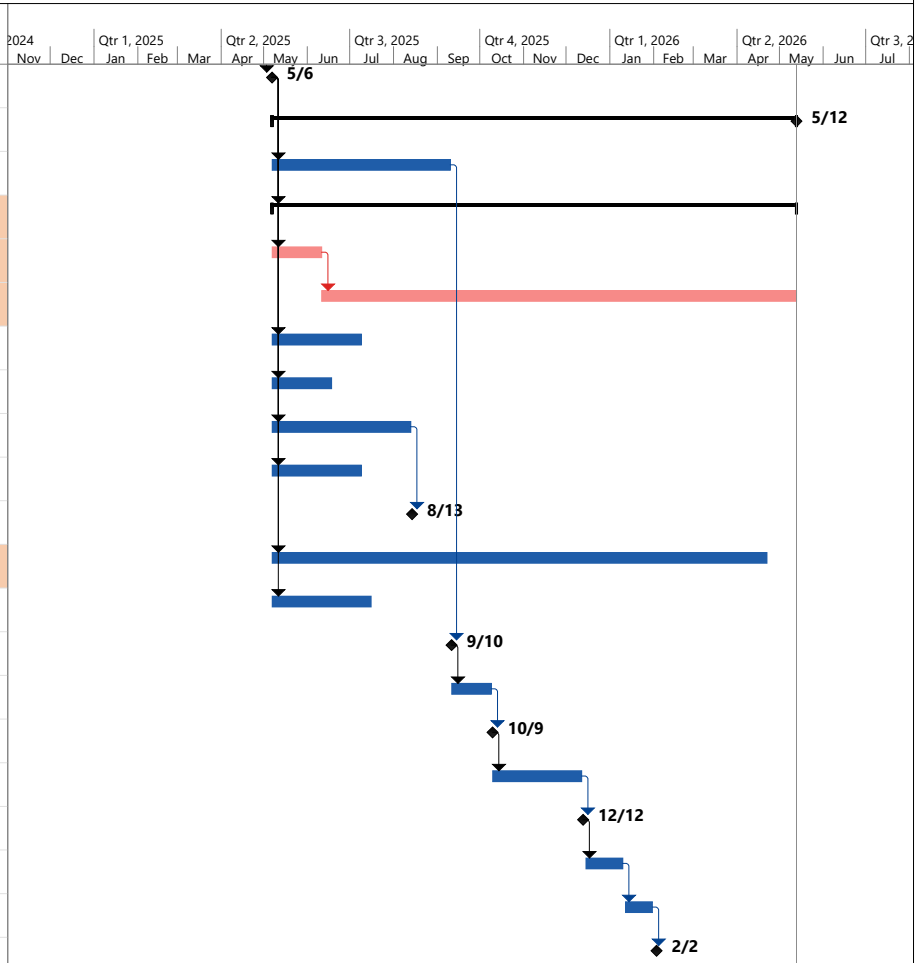
EXHIBIT "B"

Prj #0032-24-001

Exhibit B - Design Schedule
Ricefield Road - Seg. 1 From FM 2977 to Benton Road
23222x

PO No.

ID	Task Mode	Task Name	Duration	Start	Finish
22		Submit Final PER	10 days	Wed 4/23/25	Tue 5/6/25
23		**Final Design**	**265 days**	**Wed 5/7/25**	**Tue 5/12/26**
24		Prepare 70% Submittal Documents	90 days	Wed 5/7/25	Tue 9/9/25
25		**ROW Acquisition Process**	**265 days**	**Wed 5/7/25**	**Tue 5/12/26**
26		Parcel Mapping	25 days	Wed 5/7/25	Tue 6/10/25
27		Parcel Acquisition	240 days	Wed 6/11/25	Tue 5/12/26
28		Hydraulic Designs	45 days	Wed 5/7/25	Tue 7/8/25
29		SUE QL-B/A	30 days	Wed 5/7/25	Tue 6/17/25
30		Structures/Bridge Designs	70 days	Wed 5/7/25	Tue 8/12/25
31		Traffic Signal design	45 days	Wed 5/7/25	Tue 7/8/25
32		Public Agency Coordination	1 day	Wed 8/13/25	Wed 8/13/25
33		**TxDOT Permit Process**	**250 days**	**Wed 5/7/25**	**Tue 4/21/26**
34		Develop Traffic Control Plans w/ typicals	50 days	Wed 5/7/25	Tue 7/15/25
35		**Submit Design Phase (70% Submittal)**	**1 day**	**Wed 9/10/25**	**Wed 9/10/25**
36		Fort Bend County Review of 70% Submittal	20 days	Thu 9/11/25	Wed 10/8/25
37		Public Agency Coordination #2	1 day	Thu 10/9/25	Thu 10/9/25
38		Address Comments and prepare 95% submittal	45 days	Fri 10/10/25	Thu 12/11/25
39		**Submit 95% Submittal and Final Construction Documents**	1 day	Fri 12/12/25	Fri 12/12/25
40		Fort Bend County Review of 95% Submittal	20 days	Mon 12/15/25	Fri 1/9/26
41		Address Comments and prepare 100% submittal	15 days	Mon 1/12/26	Fri 1/30/26
42		**Submit 100% Submittal and Final Construction Documents**	1 day	Mon 2/2/26	Mon 2/2/26



Project: Ricefield Road - Segment 1
Date: Thu 10/17/24

Task	Inactive Task	Manual Summary Rollup	External Milestone	Manual Progress
Split	Inactive Milestone	Manual Summary	Deadline	
Milestone	Inactive Summary	Start-only	Critical	
Summary	Manual Task	Finish-only	Critical Split	
Project Summary	Duration-only	External Tasks	Progress	

EXHIBIT "B"

Prj #0032-24-001

ENTECH CIVIL ENGINEERS, INC **F-6932**
15021 Katy Freeway, Ste. 500
Houston TX 77094

EXHIBIT C - Compensation for Professional Services
Fort Bend County Engineering Department
Project Name/Limits: Ricefield Road Seg. 1 From FM 2977 to Benton Road
Precinct 2, UPIN: 22102MF2FC01
Construction Cost Estimate: $16,318,000

Project Management		$ 65,378.00
Pre-Design (Study) Phase		$ 349,075.00
Design Phase		$ 405,530.00
SUE		
Subsurface Utility Engineering	$ 42,600.00	
		$ 42,600.00
Geotechnical		
Geotechnical Borings, Investigation, and Geotechnical Report	$ 36,689.00	
		$ 36,689.00
Survey		
Existing Right-of-Way Maps (Cat 1B Condition II)	$ 35,235.00	
Topographic Survey (Cat. 6 Condition II)	$ 68,695.00	
Overall Parcel Map	$ 16,160.00	
Individual Parcel Map (12 @ $3,935/Parcel)	$ 47,220.00	
		$ 167,310.00
Subtotal Basic Services		**$ 1,066,582.00**
Optional Additional Services including, but not limited to:		
Bid Phase Services	$ 11,054.00	
Field Staking	$ 9,810.00	
Detention Pond Survey ($3990/Acre)	$ 3,990.00	
Detention Pond Geotechnical Investigation	$ 16,016.00	
UVE Documents ($1,500 ea)	$ 1,500.00	
Traffic Signal Design	$ 109,050.00	
Subtotal Optional Additional Services		$ 151,420.00
TOTAL SERVICES (BASIC & OPTIONAL ADDITIONAL)		**$ 1,218,002.00**

Project Name	**Ricefield Road Seg. 1 From FM 2977 to Benton Road**
Consultant	**ENTECH CIVIL ENGINEERS, INC.**
Unique Project Number (UPIN)	**23222x**
Date	**2024-10-17**

BASIC SERVICES

TASK DESCRIPTION	Project Manager	Senior Engineer	Project Engineer	Engineering In Training (EIT)	Sr Engineering Tech	Admin/Clerical	TOTAL LABOR HRS. & COSTS	Hours / Month (14)	LABOR HRS PER SHEET
A. Project Management									
1. Project Coordination									
Sub-Consultants	32	24	24		20	16	116	8	14
MUDS and other entities/landowners	8		8			2	18	1	14
TxDOT Permits	8	20	12			4	44	3	14
Fort Bend County Drainage District	4	4				2	10	1	14
Public Utilities (waterline/sanitary sewer)	6	6	2				14	1	14
ROE letters/approval	2		4			4	10	1	14
2. Bi-weekly Meetings	12	4	10			2	28	2	14
3. Monthly Progress Reports	8		8			8	24	2	14
4. Project Schedule (Develop and update)	8	8	4				20	1	14
SUBTOTAL PROJECT MANAGEMENT	**88**	**66**	**72**	**0**	**20**	**38**	**284**		
HOURS SUB-TOTALS	88	66	72	0	20	38	284		
CONTRACT RATE PER HOUR (INCLUDE AVG HOURLY RATE TIME OVERHEAD AND FF)	$ 335.00	$ 234.00	$ 195.00	$ 120.00	$ 144.00	$ 93.00			
TOTAL LABOR COSTS	$ 29,480.00	$ 15,444.00	$ 14,040.00	$ -	$ 2,880.00	$ 3,534.00	**$ 65,378.00**		
% DISTRIBUTION OF STAFFING	8.45%	4.42%	4.02%	0.00%	0.83%	1.01%	**19%**		

Project Management	**$ 65,378.00**

TASK DESCRIPTION	Project Manager	Senior Engineer	Project Engineer	Engineering In Training (EIT)	Sr Engineering Tech	Admin/Clerical	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
PRE-DESIGN (STUDY) PHASE									
Drainage Study									
DATA COLLECTION & SITE VISITS									
DATA COLLECTION AND REVIEW (FEMA, FBC, FBCDD, CANAL & AS-BUILT)	1	4	4				9		N/A
FIELD VISIT		2	2	4	4		12		N/A
REVIEW SURVEY AND LIDAR DATA	1	2	4	2			9		N/A
HYDROLOGIC ANALYSIS									
OVERALL DRAINAGE AREAS AND HYDROLOGIC PAREAMETERS	1	2	4	8			15		N/A
DETAILED DRAINAGE AREAS AND HYDROLOGIC PARAMETERS	1	2	16	24			43		N/A
HEC-HMS MODEL FOR OVERALL FLOWS AND FLOWS AT DRY CREEK	1	2	16	16			35		N/A
RATIONAL FLOW CALCULATIONS FOR DETAIL DRAINAGE AREAS USING FBCDD METHOD	1	2	24	24			51		N/A
HYDRAULIC ANALYSIS - DRY CREEK AND BRIDGE									
PROCESSING GIS DATA AND SURVEY DEM FOR HEC-RAS		2	8	8			18		N/A
EFFECTIVE AND CORRECTED EFFECTIVE HEC-RAS MODELS	1	2	16	8			27		N/A
EXISTING HEC-RAS MODEL FOR DRY CREEK AND BRIDGE (5,10,25,50&100YR)	1	2	8	8			19		N/A
PROPOSED HEC-RAS MODEL FOR DRY CREEK AND BRIDGE (5,10,25,50&100YR)	1	2	8	8			19		N/A

LOE

Project Name	**Ricefield Road Seg. 1 From FM 2977 to Benton Road**
Consultant	**ENTECH CIVIL ENGINEERS, INC.**
Unique Project Number (UPIN)	**23222x**
Date	**2024-10-17**

DETENTION AND MITIGATION									
RUNOFF IMPACT ANALYSIS FOR PROPOSED ROADWAY IMPROVEMENTS	1	4	4	4			13		N/A
DETERMINE REQUIRED DETENTION USING FBC METHODOLOGY	1	4	8	8			21		N/A
PROVIDE RECOMMENDED DETENTION MITIGATION	1	4	8	8	4		25		N/A
PRESENT DETENTION OPTIONS	2	4	8	8	4		26		N/A
XP-SWMM ANALYSIS									
PROCESSING SURFACE DATA AND SWMM MODEL SET UP	1	4	8	8			21		N/A
EXISTING XP-SWMM 2D MODEL FOR DITCH SYSTEMS AND SHEETFLOW (5,10 AND 100 YR)	1	4	16	16			37		N/A
PROPOSED XP-SWMM 2D MODEL FOR PROPOSED DITCH,TRUNKLINE, DETENTION AND SHEETFLOW (5,10 AND 100 YR)	1	12	24	24			61		N/A
ANALYZE FLOW IMPACTS TO DRY CREEK (10 AND 100YR)	1	6	8	8			23		N/A
ANALYZE IMPACTS ALONG ROAWAY (5, 10 AND 100 YR)	1	4	6	6			17		N/A
REPORT									
DRAFT REPORT, INCLUDING EXHIBITS AND APPENDICES	4	20	16	16	16	8	80		N/A
FINAL REPORT, INCLUDING EXHIBITS AND APPENDICES	2	12	16	6	8	4	48		N/A
ADDRESS COMMENTS FROM FBC AND FBCDD	2	12	6	4	6		30		N/A
QAQC-MODELS, DRAFT AND FINAL REPORT	6	6					12		N/A
Traffic Study/Evaluation									
COLLECT AND REVIEW AVAILABLE EXISTING AND HISTORICAL DATA	2	4	24	24			54		N/A
COORDINATE, REVIEW PROPOSED DEVELOPMENTS DATA INCLUDING TRAFFIC IMPACT STUDIES, FORECAST FUTURE TRAFFIC	2	16	36	36			90		N/A
CAPACITY ANALYSIS - EXISTING CONDITIONS	2	16	24	16			58		N/A
CAPACITY ANALYSIS - FUTURE CONDITIONS	2	16	40	40			98		N/A
SIGNAL WARRANT ANALYSIS	2	4	24	24			54		N/A
TRAFFIC ANALYSIS REPORT	4	16	40	40		4	104		N/A
Roadway Study									
REVIEW EXISTING WATER, STORM & SANITARY UTILITIES PLANS			4	8	6		18		N/A
REVIEW TOPOGRAPHIC SURVEY ROW, EASEMENT, ROADWAY, UTILITIES		6	8		4		18		N/A
EXISTING UTILITIES LAYOUTS		8	8		12		28		N/A
ROADWAY ALIGNMENTS		8	24	8	12		52		N/A
ROADWAY SCHEMATIC	1	1	4	8	16		30	1	30.0
PLAN & PROFILE SHEETS (30%) (13 SHTS @ 1"=40')	4	8	12	32	48		104	13	8.0
TYPICAL SECTIONS		1	4	8	4		17	3	5.7
EARTHWORK CROSS SECTIONS		2	24	8	8		42	10	4.2
TRAFFIC CONTROL PLAN (CONCEPT)	1	8	16	8	16		49	3	16.3
TRAFFIC CONTROL PLAN DETOURS	1	6	12	24	24		67	6	11.2
PROPOSED STORM SEWER LAYOUT		2	6	16	24		48	13	3.7
QUANTITIES/COST ESTIMATE		2	8	16	4		30	4	7.5

Project Name	**Ricefield Road Seg. 1 From FM 2977 to Benton Road**
Consultant	**ENTECH CIVIL ENGINEERS, INC.**
Unique Project Number (UPIN)	**23222x**
Date	**2024-10-17**

Utility Contact List and Preliminary Utility Conflict Table									
Assist with coordination (Public and Private utiity companies)	2	12	6	6			26		N/A
Generation of QL-C&D SUE file / Record requests / Utility research		28	24	54			106		N/A
Provide plans to utility companies for review/signatures	2	4	2	6			14		N/A
Indentify ROW needs	2	6	6	4			18		N/A
Identify Utility Conflicts	2	12	6	12			32		N/A
Review, Update and Maintain Utility Conflict Table for Submittals		12	2	10			24		N/A
Coordinate with MUD's and other agencies	8	12	2				22		N/A
Utility Coordination Meetings	8	12	2	12			34		N/A
Review utility relocation plans, schedules and cost estimates	4	8	6	10			28		N/A
Study Report									
PER Meeting (Preperation and attendance)	2	2	4	2	6		16		N/A
Response to comments from PER Meeting	2	2	6		4		14		N/A
Document and Summarize All Project Findings into Study Report & Incorporation of Feedback	2	2			2	2	8		N/A
Deliverables:									
Study Report (Signed and Sealed)	1	1	2				4		N/A
SUBTOTAL PRE-DESIGN (STUDY) PHASE	**89**	**357**	**624**	**658**	**232**	**18**	**1978**		
HOURS SUB-TOTALS	89	357	624	658	232	18	1978		
CONTRACT RATE PER HOUR (INCLUDE AVG HOURLY RATE TIME OVERHEAD AND FF)	$ 335.00	$ 234.00	$ 195.00	$ 120.00	$ 144.00	$ 93.00			
TOTAL LABOR COSTS	$ 29,815.00	$ 83,538.00	$ 121,680.00	$ 78,960.00	$ 33,408.00	$ 1,674.00	**$ 349,075.00**		
% DISTRIBUTION OF STAFFING	8.54%	23.93%	34.86%	22.62%	9.57%	0.48%	**100%**		

Study Phase - Basic Services	**$ 349,075.00**

TASK DESCRIPTION	Project Manager	Senior Engineer	Project Engineer	Engineering In Training (EIT)	Sr Engineering Tech	Admin/Clerical	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
ROADWAY DESIGN PHASE									
Plan Sheets									
COVER SHEET		1	2		4		7	1	7.0
INDEX SHEET			4				4	1	4.0
PROJECT LAYOUT SHEET			2		8		10	2	5.0
GENERAL NOTES SHEET(S)	1	2	4		2		9	1	9.0
PROPOSED AND EXISTING TYPICAL SECTIONS		2	4		6		12	3	4.0
PLAN & PROFILE SHEETS	4	24	48	64	84		224	13	17.2
DRAINAGE AREA MAPS (EXIST & PROP Plans)		8	16	8	16		48	4	12.0
HYDRAULIC DATA SHEETS		8	10	6	16		40	2	20.0
CROSS SECTION SHEETS	2	6	24	12	40		84	21	4.0
EARTHWORK CALCULATIONS		1	8	16	4		29	3	9.7
TRAFFIC CONTROL PLANS	4	8	32	16	40		100	10	10.0
TRAFFIC CONTROL PLAN (DETOURS)	2	4	24	32	40		102	6	17.0
SIGNING AND PAVEMENT MARKING LAYOUT		2	8	4	16		30	8	3.8
BRIDGE DESIGN / CULVERT LAYOUT SHEETS (2 LOCATIONS)	8	40	12	8	48		116	4	29.0
SW3P		2	4	4	12		22	2	11.0
UPDATE QUANTITIES / COST ESTIMATE (70%,95%, 100%)	4	8	4	16	16		48	3	16.0

Project Name	**Ricefield Road Seg. 1 From FM 2977 to Benton Road**
Consultant	**ENTECH CIVIL ENGINEERS, INC.**
Unique Project Number (UPIN)	**23222x**
Date	**2024-10-17**

Utility Contact List and Preliminary Utility Conflict Table									
Assist with coordination (Public and Private utiity companies)	4	28	16	16			64		N/A
QL-A&B SUE Recommendations / Review of QL-A&B SUE investigation		10	8	24			42		N/A
Provide plans to utility companies for review/signatures	2	10	4	16			32		N/A
Indentify ROW needs	2	16	10	10			38		N/A
Identify Utility Conflicts	2	20	16	24			62		N/A
Review, Update and Maintain Utility Conflict Table for Submittals		28	4	20			52		N/A
Coordinate with MUD's and other agencies	12	28	4				44		N/A
Utility Coordination Meetings	12	28	6	32			78		N/A
Review utility relocation plans, schedules and cost estimates	8	20	14	20			62		N/A
Details									
ROADWAY DETAILS		4	8	4	4		20	2	10
TCP DETAILS		4	8	8	12		32	4	8
DRAINAGE DETAILS		4	8	2	6		20	2	10
EXCAVATION, BEDDING, BACKFILL & PAVEMENT REPAIR DETAILS		1	2	2	2		7	1	7
SAFETY END TREATMENT DETAILS		2	2	2	8		14	1	14
SW3P DETAILS		2	2	2	8		14	2	7
STANDARD PAVEMENT MARKING DETAILS		2	2	2	8		14	2	7
SUBTOTAL PLANS	**67**	**323**	**320**	**370**	**400**	**0**	**1480**		
Specifications									
								N/A	#VALUE!
SUBTOTAL SPECIFICATIONS	**0**	**0**	**0**	**0**	**0**	**0**	**0**		
Utility Signatures & Agency Approvals									
								N/A	#VALUE!
SUBTOTAL SPECIFICATIONS	**0**	**0**	**0**	**0**	**0**	**0**	**0**		
HOURS SUB-TOTALS	67	323	320	370	400	0	**1480**		
CONTRACT RATE PER HOUR (INCLUDE AVG HOURLY RATE TIME OVERHEAD AND FF)	$ 335.00	$ 234.00	$ 195.00	$ 120.00	$ 144.00	$ 93.00			
TOTAL LABOR COSTS	$ 22,445.00	$ 75,582.00	$ 62,400.00	$ 44,400.00	$ 57,600.00	$ -	**$ 262,427.00**		
% DISTRIBUTION OF STAFFING	8.55%	28.80%	23.78%	16.92%	21.95%	0.00%	**100%**		

ROADWAY SUBTOTAL	**$ 262,427.00**

Project Name	**Ricefield Road Seg. 1 From FM 2977 to Benton Road**
Consultant	**ENTECH CIVIL ENGINEERS, INC.**
Unique Project Number (UPIN)	**23222x**
Date	**2024-10-17**

TASK DESCRIPTION	Project Manager	Senior Engineer	Project Engineer	Engineering In Training (EIT)	Sr Engineering Tech	Admin/Clerical	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
TRAFFIC									
DESIGN PHASE									
TRAFFIC SIGNAL (FM2977@RICEFIELD)									
TRAFFIC SIGNAL PLANS (EXIST. COND/PROP. LAYOUTS, WIRING &PHASING)	4	8	24	32	120		188		N/A
TRAFFIC SIGNAL GENERAL NOTES AND BASIS OF ESTIMATE	1	2	8	12	16		39		N/A
TRAFFIC SIGNAL DETAILS SHEETS (INCL STREET SIGN)	1	1	4	8	16		30		N/A
TRAFFIC SIGNAL STANDARDS	1	1	2	4	12		20		N/A
PROPOSED TRAFFIC SIGNAL REVISIONS (70%, 95%, 100%)	2	2	4	8	24		40		N/A
PROJECT COORDINATION AND PERMIT PROCESS (TxDOT)	4	4	8	8	24		48		N/A
SIGNING AND PEVEMENT MARKINGS (SPM)									
SPM SUMMARY OF QUANTITIES	1	2	4	8	12		27		N/A
SPM SMALL SIGN SUMMARY	1	2	4	8	16		31		N/A
SPM PLAN LAYOUTS (1"=100')	4	8	24	40	120		196		N/A
SPM SIGN DETAILS	1	1	2	8	16		28		N/A
PROPOSED SPM REVISIONS (70%, 95%, 100%)	4	4	8	8	24		48		N/A
HOURS SUB-TOTALS	24	35	92	144	400	0	**695**		
CONTRACT RATE PER HOUR (INCLUDE AVG HOURLY RATE TIME OVERHEAD AND FF)	$ 335.00	$ 234.00	$ 195.00	$ 120.00	$ 144.00	$ 93.00			
TOTAL LABOR COSTS	$ 8,040.00	$ 8,190.00	$ 17,940.00	$ 17,280.00	$ 57,600.00	$ -	**$ 109,050.00**		
% DISTRIBUTION OF STAFFING	7.37%	7.51%	16.45%	15.85%	52.82%	0.00%	**100%**		

TRAFFIC SUBTOTAL	**$ 109,050.00**

Project Name	**Ricefield Road Seg. 1 From FM 2977 to Benton Road**
Consultant	**ENTECH CIVIL ENGINEERS, INC.**
Unique Project Number (UPIN)	**23222x**
Date	**2024-10-17**

TASK DESCRIPTION	Project Manager	Senior Engineer	Project Engineer	Engineering In Training (EIT)	Sr Engineering Tech	Admin/Clerical	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
BRIDGE (STRUCTURAL)									
DESIGN PHASE									
Ricefield Bridge (eastbound) - Assume Single Span (150')									
BRIDGE LAYOUTS (H: 1"=20' and V:1"=20')	2	12	4	48	48		114		N/A
SUMMARY OF BRIDGE QUANTITIES/BRG SEAT ELEVATIONS (INCLUDING COST ESTIMATE)	2	8	4	24	16		54		N/A
FOUNDATION LAYOUT INCLUDING LOCATING BORINGS	1	10	12	4	40		67		N/A
ABUTMENT DETAILS	1	4	4	20	32		61		N/A
Ricefield Bridge (westbound) - Assume Single Span (150')									
BRIDGE LAYOUTS (H: 1"=20' and V:1"=20')	2	12	4	48	48		114		N/A
SUMMARY OF BRIDGE QUANTITIES/BRG SEAT ELEVATIONS (INCLUDING COST ESTIMATE)	2	8	4	24	16		54		N/A
FOUNDATION LAYOUT INCLUDING LOCATING BORINGS	1	10	12	4	40		67		N/A
ABUTMENT/FOOTING DETAILS	1	4	4	20	32		61		N/A
Retaining Walls, Aprons, Wingwalls									
Retaining Wall Layouts and Control Elevations	2	4	8	12	24		50		N/A
Common to All Walls									
Structural Details and Retaining Wall Standards		6	12	8	12		38		N/A
Compute and Tabulate Structural Quantities	2	4	4	12			22		N/A
Common to All Bridges and Retaining Walls									
SUBMITTALS, CALCULATIONS PACKAGE AND ADDRESSING COMMENTS	2	2	12	8	8		32		N/A
Ditch Culvert at FM 2977 and Ricefield Road									
Bridge Class Culvert layout	2	12	4	12	24		54		N/A
Bridge Class Culvert quanitites		4	4	8	8		24		N/A
Wingwall Design	2	4	4	8	16		34		N/A
Culvert Details	1	4	4	8	12		29		N/A
HOURS SUB-TOTALS	23	108	100	268	376	0	**875**		
CONTRACT RATE PER HOUR (INCLUDE AVG HOURLY RATE TIME OVERHEAD AND FF)	$ 335.00	$ 234.00	$ 195.00	$ 120.00	$ 144.00	$ 93.00			
TOTAL LABOR COSTS	$ 7,705.00	$ 25,272.00	$ 19,500.00	$ 32,160.00	$ 54,144.00	$ -	**$ 138,781.00**		
% DISTRIBUTION OF STAFFING	5.55%	18.21%	14.05%	23.17%	39.01%	0.00%	**100%**		

BRIDGE (STRUCTURAL) SUBTOTAL	**$ 138,781.00**

Project Name	**Ricefield Road Seg. 1 From FM 2977 to Benton Road**
Consultant	**ENTECH CIVIL ENGINEERS, INC.**
Unique Project Number (UPIN)	**23222x**
Date	**2024-10-17**

TASK DESCRIPTION	Project Manager	Senior Engineer	Project Engineer	Engineering In Training (EIT)	Sr Engineering Tech	Admin/Clerical	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
BID PHASE (Optional Additional Services)									
Pre-Bid Conference	2	2					4		N/A
Answer Bidder Questions	4	8	8				20		N/A
Issue Addenda	2	4	4			2	12		N/A
Bid Review and Award Recommendation	2	4	4			2	12		N/A
HOURS SUB-TOTALS	10	18	16	0	0	4	**48**		
CONTRACT RATE PER HOUR (INCLUDE AVG HOURLY RATE TIME OVERHEAD AND FF)	$ 335.00	$ 234.00	$ 195.00	$ 120.00	$ 144.00	$ 93.00			
TOTAL LABOR COSTS	$ 3,350.00	$ 4,212.00	$ 3,120.00	$ -	$ -	$ 372.00	**$ 11,054.00**		
% DISTRIBUTION OF STAFFING	30.31%	38.10%	28.23%	0.00%	0.00%	3.37%	**100%**		

BID PHASE (Optional Additional Services)	**$ 11,054.00**

OTHER DIRECT EXPENSES	QTY	UNIT	RATE	COST
Mileage (Current IRS Approved Rate)	600	mile	$ 0.56	$ 336.00
Photo Copies 8.5" X11"	1500	sheet	$ 0.10	$ 150.00
Photo Copies 11"X17"	2500	sheet	$ 0.20	$ 500.00
Courier Services	4	each	$ 24.00	$ 96.00
24-Hour Video System Classification Counts - Minor Intersection	1	each	$ 1,200.00	$ 1,200.00
2-Hour TMCs	4	each	$ 250.00	$ 1,000.00
24-Hour Automated Tube Countrs	4	each	$ 260.00	$ 1,040.00
				$ -

ODE SUBTOTAL	**$ 4,322.00**

PRIME SUMMARY	
TOTAL BASIC SERVICES	$ 924,711.00
TOTAL OPTIONAL ADDITIONAL SERVICES	$ 11,054.00
TOTAL OTHER DIRECT EXPENSES	$ 4,322.00
TOTAL	$ 940,087.00

REKHA ENGINEERING, INC.

CONSULTING CIVIL ENGINEERS AND LAND SURVEYORS

Chris Orosco, P.E. - *Vice-President*

July 24, 2024

ENTECH
CIVIL ENGINEERS, INC
15021 Katy Freeway, Suite 500
Houston, Texas 77094
www.entechcivilengineers.com

RE: **Proposal and Letter of Agreement for: Professional Land Surveying for Fort Bend County Mobility Project - Riceland Road from FM 2977 to Benton Road (6200 L.F.) plus 750 L.F. each at the intersection of FM 2977 & Riceland Rd - Fort Bend County, Tx (total length 6200 + 750 + 750 = 7800 L.F.)**

REKHA ENGINEERING, INC. ("RE") is pleased to submit the following proposal and letter of agreement to provide professional land surveying services for the referenced project. Included in the overall scope is to prepare :

1) Boundary Category 1B survey proposed existing right of way - Survey Control Map
2) Topographic Survey Category 6 with Survey Control Map for Bench marks
3) Overall Parcel Map of complete roadway with existing right of way and proposed right of way Alignments
4) Individual Parcel exhibit maps with metes and bounds per county criteria
5) Stake in the field the Proposed right of way for Clearing Contractor & Utility Company.
6) Optional Topographic survey for proposed detention pond area per 1 acre out of roadway. n/a

All performed by our field land survey crews, calculation and AutoCAD cad technicians with professional review by our inhouse Registered Professional Land Surveyor. Files will be prepared in Autocad 19 3-D at end of survey.

Survey

2S.700 Existing Right-of-Way Maps (Cat. 1B Condition II)

A. Provide deed research to determine existing rights-of-ways throughout the project routes.
B. Tie in property corners and block corners to define the existing rights-of-ways.
C. Prepare right-of-way map of the existing right-of-way in accordance with TSPS Category 1B, Condition II standards and conform to Harris County Standards.

Deliverables: Signed, sealed, and dated right-of-way map of the existing rights-of-ways; Title reports

2S.701 Topographic Survey (Cat. 6 Condition II)

A. Perform topographic survey for 6200 linear feet of street right of way with all intersections along this route, and for additional side streets as noted:
   i. ***Riceland Rd from FM 2977 @ Riceland to Benton Rd @ Riceland Rd.***
B. Perform topographic survey at the following intersections :
   a) 750 L. F. of FM 2977 north of Riceland Rd. and 750 L.F. south of Riceland Rd.
C. Survey to include 20 feet outside of the right-of-way and up to 60 feet outside right- of-way for objects (obstructions), except those that are behind brick walls and buildings.

D. Establish elevations and locations of physical features including buildings, structures, signs, power poles, curbs, driveways, water meters, manholes, pedestals, ponds, light poles, etc. within the proposed and existing right-of-way. Overhead crossing utilities shall be limited to the low chord elevation.

E. Provide pipe flow line elevations, size, material and directions of all sanitary sewer lines, storm sewer lines and driveway culverts. Top of rim or top of grate and flow line elevations shall be recorded on all inlets, manholes and drainage structures.

F. Locate Ornamental trees or Landscape trees with a diameter of 4" and larger shall be located. Wooded/brushed areas shall be limited to an outlined area only. No Individual Trees shall be located on natural vegetation areas.

G. Provide SUE Level A through D provided by engineer.

H. Locate soil borings.

I. Provide all traffic control, labor, and equipment for the Traffic Control Plan (TCP) while performing field services in compliance with the regulations of the most recent edition of the "Texas Manual on Uniform Traffic Control Devices" and HCED Standards.

J. Prepare utility conflict table by engineer.

K. Attend Field Topo Verification Meeting to visibly check that all topo items are currently located as per the field notes. Objectives to be achieved during the field topo verification meeting include impacts that could affect the alignment alternatives have on the Right of Way, existing structures such as signals, utilities, and property, environmental impacts and impacts to existing and proposed improvements.

Deliverables: CADD file along with ASCII point file plus AUTOCAD 19 3 D files with 1-foot contours and TIN file and XML file with break lines; 22"x34" 1" = 20' plan sheets for the topo field walk (6 copies)

2S.702 *Control*

A. Horizontal Survey Control shall be referenced to the Texas State Plane Coordinate System, South Central Zone, NAD83.

B. Vertical Control shall be based on the nearest existing Fort Bend Reference Marker, NAVD 1988, 2001 Adj.

C. Provide adequate number of control points that are set and recoverable.

D. Request information from FBC for directions on tying controls to adjacent projects.

Deliverables: Survey Control Map and three-point sketches, signed and sealed by a Texas RPLS.

S.750 Proposed ROW Maps (Cat 1A, Cond. II) ($/parcel)

Prepare parcel map exhibits and metes and bounds descriptions.

Deliverables: Signed, sealed, and dated Parcel Map and Metes and Bounds.

S.752 Topographic Survey – Detention Pond (Cat 6, Cond. II)

A. Cross sections shall be obtained at 100 feet intervals along the detention pond and shall extend 25 feet beyond the existing right-of-way lines and 60 feet for Structures as applicable.

B. Survey to include 20 feet outside of the right-of-way and up to 60 feet outside right- of-way for objects (obstructions), except those that are behind brick walls and buildings.

C. Establish elevations and locations of physical features including buildings, structures, signs, power poles, curbs, driveways, water meters, manholes, pedestals, ponds, light poles, etc. within the proposed and existing right-of-way. Overhead crossing utilities shall be limited to the low chord elevation.

D. Perform Texas One Call for underground utility locations to mark utilities within the existing right-of-way and existing easements within the take area.

E. Obtain utility maps from CenterPoint Energy and AT&T.

F. Locate markings provided by One-Call and "visible" utilities within 20 feet of the proposed and or existing right-of-way.

G. Provide pipe flow line elevations, size, material and directions of all sanitary sewer lines, storm sewer lines and driveway culverts. Top of rim or top of grate and flow line elevations shall be recorded on all inlets, manholes and drainage structures.

H. Locate Ornamental trees or Landscape trees with a diameter of 4" and larger shall be located. Wooded/brushed areas shall be limited to an outlined area only. No Individual Trees shall be located on natural vegetation areas.

I. Locate soil borings.

J. Horizontal control shall be referenced to the Texas Coordinate System, South Central Zone, North American Datum 1983 (2011 Adjustment) as processed against NGS CORS and Leica Smartnet Network.

K. Vertical control shall be established and referenced to the North American Vertical Datum (NAVD) 1988 (2001 adjustment) as established by local Harris County Reference Marks.

L. Establish survey baselines and temporary benchmarks.

Deliverables: CADD file along with ASCII point file plus CAD files with surface with 1-foot contours and TIN file and XML file with break lines; 22"x34" 1"= 20' plan sheets for the topo field walk; signed, sealed, and dated Control Maps with three-point reference drawings.

S.700C – D760C Survey Coordination

Engineer shall coordinate with the survey provider for the completion of the Surveying tasks, which shall be included in the Study Phase Report or Design Plans.

All performed by our field land survey crews, calculation and AutoCAD cad technicians with professional review by our inhouse Registered Professional Land Surveyor.

Once right-of-way needs have been determined and approved by the county, a Boundary Category 1A survey will be performed to produce: 1) an overall map showing the existing and proposed right-of-way adjoiner tracts with ownership including abstract information and stationing, 2) a parcel map and metes-and-bounds description for each parcel required for right-of-way acquisition plus setting of property corners and 3) a KMZ file (used by Google Earth) showing existing right-of-way with ownership information, proposed takings with parcel numbers, and a preliminary roadway layout. Right-of-way documents will be provided separately from other design documents and paid per-parcel basis.

Deliverable items shall be a) 2D Plainview drawing in AutoCAD Civil 3D Format b) ASCII files c) Texas RPLS signed and stamp Survey Control Map including swing ties.

Note **not included** are the following: any other land surveying services except as referenced above including no profile preparation plus cross section drafting. Proposed schedule is to complete the land surveying this scope in 3 months from NTP notice (90 calendar days) subject to weather/rain days.

REKHA Engineering, Inc. will perform the referenced services for the referenced project for a lump sum fee of:

1) Boundary Category 1B survey proposed existing right of way $ 35,235.00

TBPE FIRM NO. F-3712 TBPLS FIRM NO. 10133800
7676 HILLMONT DRIVE, SUITE 350 - HOUSTON, TEXAS 77040
PHONE: (713) 895-8080/8081 - FAX: (713) 895-7686
Website: www.rekhaengineering.com - E-mail: jake1@pdq.net

REKHA ENGINEERING, INC.

CONSULTING CIVIL ENGINEERS AND LAND SURVEYORS

With Survey Control Map Bench Marks		
2) Topographic Survey Category 6 with Survey Control Map for Bench marks		68,695.00
3) Overall Parcel Map of complete roadway with existing right of way & proposed right of way Alignments		16,160.00
4) Individual Parcel exhibit maps with metes and bounds per county criteria	3,935.00 ea	
Overall Parcels _12__ parcels x 3,935.00 ea parcel =		47,220.00
5) Stake in the field the Proposed right of way for Clearing Contractor		9,810.00
Total		**$ 177,120.00**

6) Optional Detention Pond survey $ 3990.00/ 1.0 acre	if required	3,990.00
7) Optional UVE documents – M&B & Exhibit map	if required	1,500.00 ea.

Including reimbursable expenses and no state sales tax (na). Reimbursable Expenses (RE) consist of mileage, plots, reproduction, filing fees, etc. as shown on Exhibit "A"._Note if the scope of services is adjusted or changed, and upon your **written** approval, we shall invoice extra services on an hourly basis as per Exhibit "A", attached hereto and made a part hereof. If this is acceptable to you, please sign below and return one fully executed original to us, at which time this will become a binding Agreement between us. Upon receipt thereof, we will immediately commence performance of our services. **Payment will be due upon receipt of this invoice per overall agreement.** In the event this account is placed for collection with any party or through judicial proceedings, you agreed to pay all costs incurred and/or are awarded by the court and in addition to any principal, prejudgment interest and all costs associated with the collection, including deliveries, etc... Furthermore, you agree that all past sums bear interest of at the 1.5% per month or 18% per anum on any and all outstanding balances. Venue for any dispute under this contract is Houston, Harris County, Texas. All sums are due and payable in Houston, Harris County, Texas**. Presently, RE has 2,000,000 professional liability Insurance coverage; workman compensation coverage; and $2,000,000 umbrella liability coverage. However, it is agreed that RE will be responsible only for loss or injury caused by acts or omissions of its agents and employees, and Owner will indemnify and hold RE harmless from any and all claims or causes of action arising, in whole or in part, from the act or omissions of Owner, Owner's agents, employees, third parties and/or consultants associated with the Owner & the herein referenced project.**

RE Appreciates the opportunity to submit this proposal and we are ready to perform for you!!

REKHA ENGINEERING, INC.

By: _____

John H. English, Sr. Vice President

AGREED AND ACCEPTED BY CLIENT:

By: _____

(Note: the entity and person that is signing this proposal is responsible for payment).

Type Name: _____ _____

Date_____

Telephone & Email_____

TBPE FIRM NO. F-3712 TBPLS FIRM NO. 10133800
7676 HILLMONT DRIVE, SUITE 350 - HOUSTON, TEXAS 77040
PHONE: (713) 895-8080/8081 - FAX: (713) 895-7686
Website: www.rekhaengineering.com - E-mail: jake1@pdq.net

PROJECT: Fort Bend County Mobility Projects
land Road from FM 2977 to Benton Rd Segment 3 (270

July 22, 2024

PROFESSIONAL LAND SURVEYING SERVICES BY:

REKHA ENGINEERING, INC.
CONSULTING CIVIL ENGINEERS AND LAND SURVEYORS

(a Certified MBE Firm)
7676 Hillmont St. Suite 350
Houston, TX 77040
713-895-8080
jake1@pdq.net
TBPLS: 10133800, TBPE: F-3712

REKHA ENGINEERING, INC.
CONSULTING CIVIL ENGINEERS AND LAND SURVEYORS

PROJECT: Fort Bend County 2023 Mobility Projects
Skinner Lane - Segment 3 (2700LF)

Table of Content

REKHA ENGINEERING, INC.

CONSULTING CIVIL ENGINEERS AND LAND SURVEYORS

PROJECT: Fort Bend County Mobility Projects
Riceland Rd-FM 2977 to Benton Rd & FM 2977 N. & S.

1. Topographic Roadway Survey - 7800 LF

6/12/2024

Description	Survey Crew	Tech	Sr. Tech	RPLS	Total
1. Investigate plats and deeds	0	8	1	1	$1,025.00
2. Utility Investigation: COH Plan, FEMA, GIS, CenterPoint, AT&T, W-S-STM, ROW	0	8	1	1	$1,025.00
3. Field tie in benchmark and establish TBM(s) in field	16	4	0	1	$3,650.00
4. Field- Locate front corners and establish control	24	8	1	1	$5,705.00
5. Topographic street at 500LF/ day of roadway	128	12	1	1	$26,365.00
6. Right of entry coordination of parcels (back P.C)	8	8	1	1	$2,585.00
7. CAD Topographic roadway design plus calculations of control	0	120	16	1	$13,390.00
8. Coordinate utility investigation with field work plus utility conflict table	0	16	4	1	$2,130.00
9. Combine all office and fieldwork to create overall maps coordinations	0	24	4	8	$3,940.00
10. Professional review and issue	0	12	8	16	$4,460.00
11. Control Map with benchmark plus TBMs (1000' intervals)	4	24	4	6	$4,420.00
	0	0	0	0	$0.00

	0	0	0	0	$0.00
Total Hours	180	244	41	38	
Rate/Hr	$195	$95	$115	$150	
Total Fee	$35,100	$23,180	$4,715	$5,700	**$68,695.00**

REKHA ENGINEERING, INC.

CONSULTING CIVIL ENGINEERS AND LAND SURVEYORS

PROJECT: Fort Bend County Mobility Projects
Riceland Rd-FM 2977 to Benton Rd & FM 2977 N. & S.

2. Boundary Determining Existing Right of Way Survey

7/22/2024

Description	Survey Crew	Tech	Sr. Tech	RPLS	Total
1. Investigate plats and deeds plus adjoiner deeds and plats (20-+)	0	12	2	1	$1,520.00
2. Utility Investigation: Plan, FEMA, GIS, CenterPoint, AT&T, W-S-STM, ROW	0	0	0	0	$0.00
3. Field tie in benchmark and establish TBM	0	0	0	0	$0.00
4. Field- Locate back corners adjoining tract and establish control	24	16	1	1	$6,465.00
5. Right of Way street at 500LF/day	40	11	5	5	$10,170.00
6. CAD Right of Way roadway map	0	60	12	12	$8,880.00
7. Combine all office and fieldwork to create overall maps coordinations	0	16	8	8	$3,640.00
8. Professional review and issue	0	16	16	8	$4,560.00
	0	0	0	0	$0.00
	0	0	0	0	$0.00
	0	0	0	0	$0.00
Total Hours	64	131	44	35	
Rate/Hr	$195	$95	$115	$150	
Total Fee	$12,480	$12,445	$5,060	$5,250	**$35,235.00**

REKHA ENGINEERING, INC.
CONSULTING CIVIL ENGINEERS AND LAND SURVEYORS

PROJECT: Fort Bend County 2023 Mobility Projects
Riceland Rd-FM 2977 to Benton Rd & FM 2977 N. & S.

3. Parcel Overall Map with Existing Alignment with Proposed Aligment

7/22/2024

Description	Survey Crew	Tech	Sr. Tech	RPLS	Total
1. Coordinate & Review of plats and deeds plus adjoiner deeds	0	8	4	2	$1,520.00
2. Parcels overall right of way parcel map with existing right of way with prop....	0	16	8	8	$3,640.00
3. Coordinate existing right of way with new alignment of right of way	0	32	8	8	$5,160.00
4. Combine all office and fieldwork to create overall maps coordinations	0	8	2	1	$1,140.00
5. Professional review and issue	0	16	12	12	$4,700.00
	0	0	0	0	$0.00
	0	0	0	0	$0.00
	0	0	0	0	$0.00
Total Hours	0	80	34	31	
Rate/Hr	$195	$95	$115	$150	
Total Fee	$0	$7,600	$3,910	$4,650	**$16,160.00**

REKHA ENGINEERING, INC.

CONSULTING CIVIL ENGINEERS AND LAND SURVEYORS

PROJECT: Fort Bend County 2023 Mobility Projects
Riceland Rd-FM 2977 to Benton Rd & FM 2977 N. & S.

4. Individual meets and bound and Exhibit map of individual parcels

7/22/2024

Description	Survey Crew	Tech	Sr. Tech	RPLS	Total
1. Investigate plats and deeds	0	2	0	1	$340.00
2. Existing right of way taken map with proposed right of way	0	10	4	1	$1,560.00
3. Set property corners	5	1	0	1	$1,220.00
4. Combine all office and fieldwork to create overall maps coordinations	0	2	1	1	$455.00
5. Professional review and issue	0	1	1	1	$360.00
	0	0	0	0	$0.00
	0	0	0	0	$0.00
	0	0	0	0	$0.00
Total Hours	5	16	6	5	
Rate/Hr	$195	$95	$115	$150	
Total Fee per parcel	$975	$1,520	$690	$750	**$3,935.00**

REKHA ENGINEERING, INC.
CONSULTING CIVIL ENGINEERS AND LAND SURVEYORS

PROJECT: Fort Bend County 2023 Mobility Projects
Riceland Rd-FM 2977 to Benton Rd & FM 2977 N. & S.

5. Stake property for clearing contractors

7/22/2024

Description	Survey Crew	Tech	Sr. Tech	RPLS	Total
1. Coordinate and calculate staking of property right of way	0	4	1	1	$645.00
2. Stake in field new right of way alignment per civil plans	40	8	1	1	$8,825.00
3. Collect stakes and confirm complete	0	2	0	1	$340.00
	0	0	0	0	$0.00
	0	0	0	0	$0.00
	0	0	0	0	$0.00
	0	0	0	0	$0.00
Total Hours	40	14	2	3	
Rate/Hr	$195	$95	$115	$150	
Total Fee	$7,800	$1,330	$230	$450	**$9,810.00**

REKHA ENGINEERING, INC.

CONSULTING CIVIL ENGINEERS AND LAND SURVEYORS

EXHIBIT "A"

2024 Hourly Rates (for RE, INC. = REKHA Engineering, Inc. REI-RE)) 1-1-24

Principal	$ 195.00 per hour
Project Manager	$ 165.00 per hour
Surveyor (RPLS)	$ 150.00 per hour
Technician	$ 95.00 per hour
Sr. Technician – Designer	$ 125.00 per hour
Secretary	$ 55.00 per hour
Survey Crew (Crew with Data Coll + Robotic Total Station with GPS)	$ 150.00 per hour
Survey Crew (2-Man Crew with Data Coll + Robotic Total Station with GPS)	$ 195.00 per hour
Permitting expediter process and services	$55.00 per hour

All Bid Phase and Construction Services are hourly per this schedule (Specs, Quantities, coordination)

Reimbursable Expenses and Handling Charges (REI) are estimated only per the proposal but are not limited to the amount specified in the proposal – see below list

1. Reproduction (Out of Office)	included
2. Mileage	$ 0.75C per mile
3. *Reproduction - In Office* - computer plots (D size	$ 4.00 per plot
4. *Reproduction - In Office* - computer plots (E size	$ 7.00 per plot
5. Black Line and check plots for design	$ 5.00 each
6. Mylars, Vellums and/or Sepia	$ 20.00 each
7. Field Supplies - Survey lathes, hubs, iron rods, etc...	$ 3.00 each
Delivery including handling in office (separate charge – outside of REI)	$ 45.00 each
Out of Town Expenses- Meal Cost per person per day	$ 45.00 per day
Airplane Flight, rent car, expenses from trip, REI, Motel, Hotel	n.a.

Items which are charged hourly per this exhibit & additional conditions of this agreement

a) Civil Engr. shop Drawing reviews (lift station, bridges, civil items, etc...) is hourly per this Ex. A

b) All Meetings Outside of the REKHA Office shall be charged hourly per this exhibit. - hourly + REI

c) State Sales Tax for boundary surveys and subdivision plats only - 8.25% of total fees + REI

d) In the event that payment is not made within 45 calendar days of the date of the invoice submitted per the proposal agreement, referenced Client agrees fully to make full payment at the time the civil engineering and/or land surveying product is ready for pickup at RE, Inc. office. (RE, Inc.= REKHA Engineering, Inc.). All meetings are port to port.

e) All Fees for application fees, building fee, subdivision plat fees, HL&P (CenterPoint or others) Plan fees ($125.00) plus handling and any other municipal / public utility company fee shall be paid by the client directly plus other consultant fees (soils, etc....). Plus City of Houston plat fees – recordation review fee - $ -+650.00, Harris County plat review fee - $ -+700.00 or as current rates requested from the agencies.

f) Setting Property Corners after the survey is complete is additional hourly as per Exhibit A and shall be charged per rates above port to port.

g) Client to provide all original tax certificates & updated title reports for all subdivision plat submittals for review & recordation at their cost. REKHA can obtain all tax certificates for a hourly charge of a technician rates per this exhibit plus REI.

h) On all update surveys (in the proposal ref: it will say Update), if additional improvements are found compared to the previous survey completed, surveying and cadding the additional improvements shall be charged hourly per this exhibit A plus the original survey update fee plus reimbursable expenses and sale tax.

I) If this proposal is not executed after 30 work days of the date of the proposal, this proposal is void unless RE, Inc. approves an extension. If this proposal is executed for a project and the phases start 3 months after the date of the previous phase ends, this proposal is void unless re-executed or extension is granted by RE, Inc. If work has started on this proposal and then ceased for 60 days – an hourly rate may be charged to re-activate the work per this exhibit rates..

k) **Subdivision Plat – Variance Request and/or Public Hearing** to a Plat- if a Variance and/or Public Hearing for a subdivision plat is required before or after submittal, there is an estimated budget of $ 950.00 charge additional hourly per Exhibit A to the original engineering fee per item plus reimbursable per this exhibit to the original proposal plat fee to prepare, submit and coordinate this submittal for a variance and hopefully approval.

L) Client (name of person/ company that signed the proposal) indemnifies RE, Inc. and limits the amount of liability to REKHA Engineering, Inc. for any and all civil engineering & land surveying services performed for the referenced client to twice the amount of the engineering &/or survey base fee being charged per project as described on the cover sheet of this proposal.

M) All original civil engineering documents, land surveys, exhibits, electronic files and all other items prepared by RE, Inc. for clients on each approved proposals is copy right and the sole ownership of property of REKHA Engineering, Inc.. If clients desires to obtain a copy of the electronic file of a

drawing, there will be a charge of $ 300.00 per sheet , payment prior to release, beyond the original fee of the proposal plus a release noting copyright will need to be executed prior to releasing the file.

M) Classification of completion of projects and invoicing are as follows: a) 40% is Preliminary Engineering, b) 90% is Final Engineering and submittals to agencies - 100% is approvals from agencies for civil engineering. Agency comments being 3 month after the plans has been issued for review shall be hourly as per this Exhibit A.

N) Note that others will provide a title report or city planning letter at their expense with all backup documents plus adjoiner deeds showing the boundary of the tract and REI shall not be responsible for any and all abstracting including adjoiner deeds for the referenced project. Additional updates with new title reports after this survey is issued and attorney comments shall be additional and shall be charged hourly as per Exhibit "A".

o) Note that this proposal for professional services do not include diligence investigations for utility service and connection points for all utilities, platting, approvals, and other items out of the scope of services of the above described proposed services. The land owner / developer is responsible for all diligences for any and all tracts of land they are planning to purchase / lease unless they specifically request REKHA (REI) to perform those services.

P) Note that this proposal for professional services do not include diligence investigations for utility service and connection points for all utilities, platting, approvals, and other items out of the scope of services of the above described proposed services. The land owner / developer is responsible for all diligences for any and all tracts of land they are planning to purchase / lease/ develop unless they specifically request REKHA (REI) to perform those services as described in this proposal.

Q) Based on the execution of this agreement by the client gives permission to RE to enter referenced property to perform all services as quoted attached in this proposal.

R) It is agreed by client that RE will be responsible only for loss or injury caused by acts or omissions of its agents and employees, and Owner will indemnify and hold RE harmless from any and all claims or causes, of action arising, in whole or in part, from the act or omissions of Owner, Owner's agents, employees, third parties and/or consultants associated with the Owner & the herein referenced project.

S) The survey is being provided solely for the use of the current parties and no license has been created, express or implied, to copy the survey except as is necessary in conjunction with the original transaction, as referenced in this proposal, which shall take place within a six months from the date of the referenced proposal is executed.

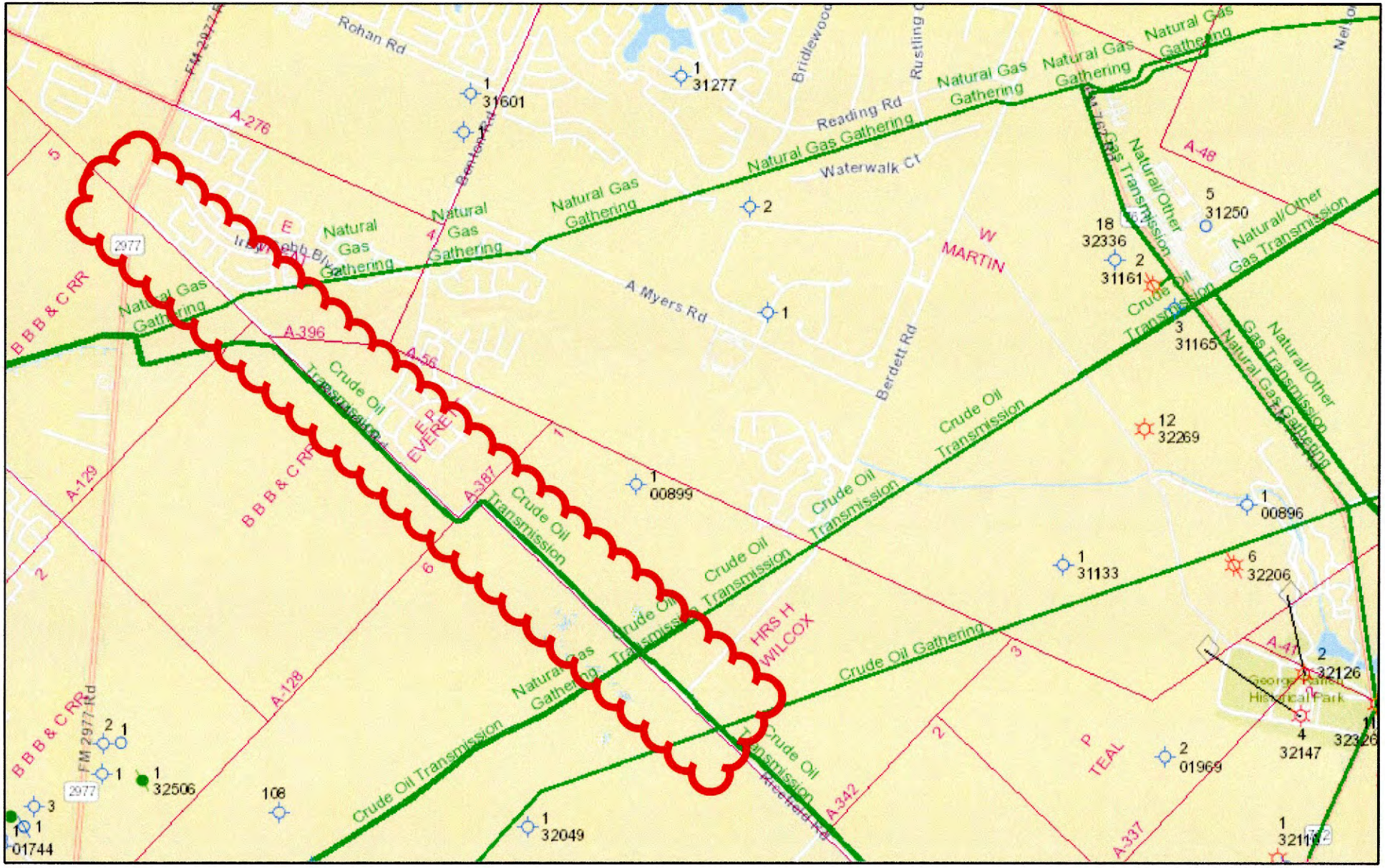
T) Note not included in any survey efforts or feasibility efforts in this proposal are location of fiber optic, electrical, cables and other underground utilities that are installed by owner or other entities that are not located on the top of the ground and/or not disclosed by owner at the time of the approval of this proposal by owner. Surveyor will make best attempt to collect this information and show as estimated locations per maps collected but no warranties are provided for these items in this proposal.

U) For plan and profile approvals at the city of Houston or other agencies, walk through approvals are hourly per this Exhibit A for technician at 85/hr at the city. Walk through for plan and profile plans are meetings at a central location at Washington Street – Permit office Houston and attend walk through on each Thursday of the week only. Meet 6-7 engineers from different departments and obtain their approvals and signature on the referenced set of plans prepared by REKHA Engineering, Inc. The also applies to private utility companies (ATT and CenterPoint) and city of Houston meeting with plan checker. These services are separate and are charged separate for this service at $ 95/hr from port to port.

V) REKHA Engineering, Inc draws, drafts and AUTOCAD all land surveys and civil engineering projects in AUTOCAD 19. If REKHA are asked by the owner, signee of this proposal or others for the cad file and upon signing the REKHA release form, the cad file is accepted "as is" . REKHA Engineering, Inc is not responsible or liable for any sub consultant use of that referenced cad file. Also, REKHA is not responsible for CAD files released to sub consultants, owners and all others for AUTOCAD files to be converted to lower versions of AutoCAD. For their use. As-is is a term used in warranty law to disclaim the seller's liability for faults in the item sold or released free. The owner, signee of this proposal or others accepts the item in the present condition, whether the faults are apparent or not. "As-is" language clarifies that no written or verbal warranties were made to the owner, signee of this proposal or others and is used to protect the seller or provider (REKHA Engineering, Inc)

W) All City of Houston Form A for driveway alignment and traffic control in the parking lot submittals will be performed hourly charges per by REKHA Engineering, Inc per Exhibit A of this agreement if requested in city comments by the city of Houston. REKHA Engineering, Inc. Note that RE are not traffic engineers and upon review by RE of comments, RE may recommend client to obtain the services of a traffic engineer to complete Form A at the owner's cost.


Untitled Map
Write a description for your map.
Legend
Anytime Fitness
Feature 1
Feature 2
Feature 3
MT Designs
Playground
Stormux - Branding and Wordpress?
Style10
Style12
Style13
Style9
Thomas Elementary School
Water Plant
Bryan Rd
Playground
Stormux - Branding and Wordpress...
Thomas Elementary School
WALNUT CREEK
Haven Forest
Toby Cobb Blvd
Ashland Terrace Ln
Bloommist Playground
Ricefield Rd
Water Plant
Minonite Rd
2977
Google Earth
Image © 2024 Airbus
2000 ft
N



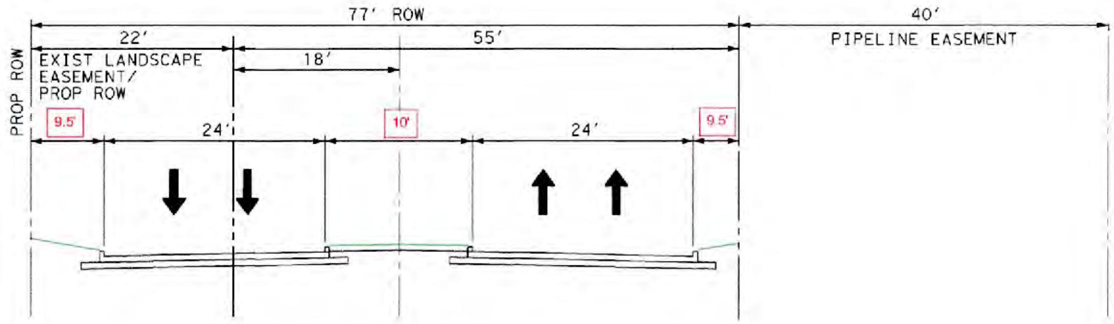
July 22, 2024

1:36,112

0 0.28 0.55 1.1 mi

0 0.42 0.85 1.7 km

HPB, Brazoria County, Esri, HERE, Garmin, INCREMENT P, NGA, USGS



SECTION A-A

NO.	REVISIONS	DATE	NAME
△			
△			
△			
△			
△			

FORT BEND COUNTY
ENGINEERING DEPARTMENT

Binkley & Barfield
DCCM
Binkley & Barfield, Inc. | TxEng F-257
1710 Seamist Dr. Houston, TX 77008
713.869.3433 | BinkleyBarfield.com

PROJECT TITLE: RICEFIELD RD TYPICAL SECTIONS		
DRAWN BY:		FBCED STANDARD
CK'D BY:	SHEET DESCRIPTION:	
SCALE:		SHEET NO:
DATE:	APPROVED BY:	7

FILE:J:\FortBendCo\2100000031.000_FBC 2020 Bond Project\6.00_CADD\6.05_Scratch\ZJ\HSIP Projects.dgn
DATE:9/5/2023 8:56:39 AM PLOTDRIVER: TxDOT_Waco_PDF_Color.plt PENTABLE: TxDOT_PEN.tbl

HTS, Inc. Consultants
416 Pickering Street, Houston, TX 77091
www.htshouston.com

Phone: 713-692-8373
Fax: 713-692-8502
Toll Free: 1-800-692-TEST

Excellence in Engineering, Consulting, Testing and Inspection

August 28, 2024

Entech Civil Engineers, Inc.
15021 Katy Freeway, Suite 500
Houston, Texas 77094

Attn: Mr. Chris Orosco, PE
Vice President

Re: Proposal
Geotechnical Investigation
Ricefield Road Segment 1 from
FM 2977 to Benton Road
Fort Bend County, Texas

HTS Proposal No.: 24-00227 Revision 1

Dear Mr. Orosco:

1.0 INTRODUCTION

HTS, Inc. Consultants (HTS) appreciates the opportunity to submit this proposal to Entech Civil Engineers, Inc., to perform engineering services that will provide geotechnical engineering support for the design and construction activities associated with the proposed Ricefield Road Segment 1 from FM 2977 to Benton Road in Fort Bend County, Texas.

Based on the information provided, HTS understands that the proposed development will include reconstruction of the existing Ricefield Road to a 4-lane condensed boulevard section within a proposed 77 feet ROW for a length of 6,007 feet. The roadway will be concrete curb and gutter with storm sewer and potential detention pond. During the time of writing this proposal the depth of proposed storm sewer line and the detention pond is unknown. HTS assumes the maximum depth of the proposed storm sewer and detention pond will be 10 feet below existing ground surface. The project also includes construction of a 76 feet single span bridge over the existing dry creek.

The proposed improvements will be constructed as per Fort Bend County (FBC) standards.

Based on HTS's review of the information provided and site visit performed, a summary of our understanding of the proposed project is provided in the Table below.

Table: Project Description and Document Basis

Site Location	Ricefield Road Segment 1 between FM 2977 and Benton Rd, Fort Bend County, Texas.
Site History	Based on Google Earth imagery and field visit, the existing road is paved

	with asphalt pavement with roadside ditches.
Project Items	HTS understands that the proposed development will include reconstruction of the existing Ricefield Road to a 4-lane condensed boulevard section within a proposed 77 feet ROW for a length of 6,007 feet. The roadway will be a concrete curb and gutter with storm sewer and potential detention pond. During the time of writing this proposal the depth of proposed storm sewer line and the detention pond is unknown. HTS assumes the maximum depth of the proposed storm sewer and detention pond will be 10 feet below existing ground surface. The project also includes construction of a 76 feet single span bridge over the existing dry creek. The sizes of underground utility lines are not known at this time. The final elevations of the proposed streets are not known at this time. HTS to provide recommendations for: a) Reconstruction of Ricefield Road Segment 1. b) Detention Pond. c) Foundation Design for Bridge over Dry Creek. The depth and location of detention pond is not known at this time. We assumed detention pond depth less than 10 feet for this project.
Site Access	Firm ground conditions are anticipated for the roadway borings and should be accessible by a truck-mounted drill rig when dry, but ground surface could become soft and inaccessible after rainfall. Detention pond borings should be accessible by a truck/track mounted drill rig when dry.

The purpose of this geotechnical investigation is to provide:

- design recommendations for proposed pavement sections for the reconstruction of the roadways,
- bridge foundation design for the proposed bridge over dry creek,
- recommendations as per OSHA trench safety guidelines,
- safe side slope recommendation for the proposed detention pond and creek slope at proposed bridge location, and
- construction recommendations for the proposed pavements, underground utility lines, detention pond, and bridge foundation.

The remaining portions of this proposal present the proposed work scope, estimated costs, and an estimated schedule to provide geotechnical services.

2.0 SCOPE OF WORK

HTS proposes that the scope of work for the geotechnical investigation be as follows:

Task 1 – Geotechnical Scope for Roadway Reconstruction and Bridge

- Core/drill and sample a total of 15 geotechnical borings within the area of the proposed development. Boring spacings and depths are selected as per FBC guidelines. Notification will be provided to the client at least 48 hours prior to the start of our field activities. The depth and number of borings is provided in the table below and also shown in Exhibit A.

Table: Summary of Soil Borings/Coring

Location	Number of Borings	Boring Depth (ft)	Total Footage (ft)
Pavement Reconstruction	13	15	195
Bridge	2	80	160
Total	**15**	**-**	**355**

- Obtain utilities clearance for all the boring locations by calling TX 811.

- Provide traffic control, labor, and equipment for the Traffic Control Plan (TCP) while performing field services for the roadway borings.

- Obtain both disturbed and relatively undisturbed soil samples from the borings with continuous samples being taken from the ground surface to a depth of 15′ and 5′ interval thereafter (as applicable).

- Measure groundwater levels in the borings during drilling and within approximately 24 hours after the completion of drilling. In order to assure that accurate 24-hour water level measurements are obtained, the top of the borings will be provided with protective cover in order to preclude surface water from entering the borings.

- Backfill the borings with cement grout after obtaining 24-hour groundwater level measurements. In the case of borings through pavements, similar or equivalent materials will be used to restore the site. Mark the borings with spray marking/ stakes that extend at least 3 feet above the ground surface, tie survey flagging near the top of the stakes, and label the stakes with the boring number. After the completion of our field activities, the client will be notified for surveying of the boring locations.

- Perform laboratory tests to classify and determine the engineering properties of the subsurface Soil classifications will be performed in strict accordance with ASTM D 2487. The laboratory program may include the tests described in the Table below.

Table: Laboratory Testing General Procedures

Laboratory Test	Applicable ASTM/Standard Procedures
Moisture Content of Soils	ASTM D 2216
Percent Soil Particles Passing a No. 200 Sieve	ASTM D 1140
Liquid Limit, Plastic Limit, and Plasticity Index of Soils	ASTM D 4318
Unconsolidated Undrained Triaxial Compression Test	ASTM D 2850
Particle Size Analysis with Sieve and Hydrometer	ASTM D 6913 and ASTM D 7928
Crumb Test for Determination of Dispersibility of Clayey Soils	ASTM D 6572
Double Hydrometer Test for Determination of Dispersibility of Clayey Soils	ASTM D 4221
Consolidated Undrained Triaxial Test with Pore Pressure Measurements	ASTM D 4767

- Prepare "gINT" boring logs based on the results of the laboratory tests and visual soil classifications.

- Characterize the site subsoil and groundwater conditions and provide the results on both the boring logs and soil profiles.

- Perform engineering analyses as necessary to develop recommendations pertaining to potential uplift of underground structures due to upward acting hydrostatic pressures caused by groundwater conditions, lateral earth pressures on underground structures, dewatering requirements for excavations, utility trench shoring and bracing requirements, OSHA soil type classifications pertinent to trench shoring and bracing design, excavation/backfill requirements, and utility bedding requirements.

- Perform engineering analyses to develop geotechnical recommendations including final pavement recommendations (which will include pavement layer thickness) including subgrade stabilization requirements.

- Perform slope stability analyses in order to determine the stability of the side slopes of the proposed bridge abutment slope in the short-term, rapid drawdown, and long-term conditions using subsoil parameters, peak and residual, derived from field and laboratory tests. Slope stability analyses will be performed on sections defined by the geotechnical borings within the proposed detention pond and bridge. For our slope stability analyses, we will determine the steepest stable side slopes for the proposed abutment slope at the bridge location. HTS will coordinate with the design engineers (Entech) for the outfall feature designs in order to assure proper applicability of our analyses.

- Analyze erosion potential as a result of water flow velocities, wave action, rainfall, runoff, and dispersive soils and provide erosion control recommendations, as needed, in accordance with Item 5.3 in the HCFCD "Geotechnical Investigation Guidelines" dated December 2021.

- Provide active, passive, and at-rest earth pressure coefficients and equivalent fluid unit weights to be used for the design of underground structures.

- Perform engineering analyses pertaining to the foundation systems (drilled shafts) that may be used to support the loads of the proposed bridge.

- Provide data for calculations of local scour around bridge foundations and provide D50 and D95 particle size data for cohesionless soils, as applicable.

- Prepare a report that will present a description of the field investigation, laboratory test results, engineering analyses, the results of the analyses, and design recommendations as required by the work scope items described above. HTS will provide copies of the draft report to the client for review. The final report will incorporate responses to the review comments on the draft report and will be submitted within 2 weeks upon receipt of the comments. Both the draft and final reports will be sealed by a professional engineer licensed in the State of Texas.

  Note: Hard copies of the report will be provided upon request at an additional cost of $30.00 per report.

Task 2 – Geotechnical Scope for Detention Pond (Optional)

- Drill and sample a total of 5 geotechnical borings within the area of the proposed detention pond. Boring spacings and depths are selected as per FBC guidelines. Notification will be provided to the client at least 48 hours prior to the start of our field activities. The depth and number of borings is provided in the table below and also shown in Exhibit A.

Table: Summary of Soil Borings/Coring

Location	Number of Borings	Boring Depth (ft)	Total Footage (ft)
Detention Pond	5	20	100
Total	**5**	**-**	**100**

- Obtain utilities clearance for all the boring locations by calling TX 811.

- Provide traffic control, labor, and equipment for the Traffic Control Plan (TCP) while performing field services for the roadway borings.

- Obtain both disturbed and relatively undisturbed soil samples from the borings with continuous samples being taken from the ground surface to a depth of 15′ and 5′ interval thereafter (as applicable).

- Measure groundwater levels in the borings during drilling and within approximately 24 hours after the completion of drilling. In order to assure that accurate 24-hour water level measurements are obtained, the top of the borings will be provided with protective cover in order to preclude surface water from entering the borings.

- Backfill the borings with cement grout after obtaining 24-hour groundwater level measurements. In the case of borings through pavements, similar or equivalent materials will be used to restore the site. Mark the borings with spray marking/ stakes that extend at least 3 feet above the ground surface, tie survey flagging near the top of the stakes, and label the stakes with the boring number. After the completion of our field activities, the client will be notified for surveying of the boring locations.

- Perform laboratory tests to classify and determine the engineering properties of the subsurface Soil classifications will be performed in strict accordance with ASTM D 2487. The laboratory program may include the tests described in the Table below.

Table: Laboratory Testing General Procedures

Laboratory Test	Applicable ASTM/Standard Procedures
Moisture Content of Soils	ASTM D 2216
Percent Soil Particles Passing a No. 200 Sieve	ASTM D 1140
Liquid Limit, Plastic Limit, and Plasticity Index of Soils	ASTM D 4318
Unconsolidated Undrained Triaxial Compression Test	ASTM D 2850
Particle Size Analysis with Sieve and Hydrometer	ASTM D 6913 and ASTM D 7928
Crumb Test for Determination of Dispersibility of Clayey Soils	ASTM D 6572
Double Hydrometer Test for Determination of Dispersibility of Clayey Soils	ASTM D 4221
Consolidated Undrained Triaxial Test with Pore Pressure Measurements	ASTM D 4767

- Prepare “gINT” boring logs based on the results of the laboratory tests and visual soil classifications.

- Characterize the site subsoil and groundwater conditions and provide the results on both the boring logs and soil profiles.

- Perform engineering analyses as necessary to develop recommendations pertaining to potential uplift of underground structures due to upward acting hydrostatic pressures caused by groundwater conditions, lateral earth pressures on underground structures, dewatering requirements for excavations, utility trench shoring and bracing requirements, OSHA soil type classifications pertinent to trench shoring and bracing design, excavation/backfill requirements,

and utility bedding requirements.

- Perform slope stability analyses in order to determine the stability of the side slopes of the proposed detention pond slope in the short-term, rapid drawdown, and long-term conditions using subsoil parameters, peak and residual, derived from field and laboratory tests. Slope stability analyses will be performed on sections defined by the geotechnical borings within the proposed detention pond and bridge. For our slope stability analyses, we will determine the steepest stable side slopes for the proposed pond. HTS will coordinate with the design engineers (Entech) for the basin and outfall feature designs in order to assure proper applicability of our analyses.

- Develop/provide recommendations for appropriate methods for the proposed control structure at detention pond outfall as well as groundwater control during construction, measures to minimize ground movement during and after the construction operations, design parameters and considerations for control structure.

- Analyze erosion potential as a result of water flow velocities, wave action, rainfall, runoff, and dispersive soils and provide erosion control recommendations, as needed, in accordance with Item 5.3 in the HCFCD "Geotechnical Investigation Guidelines" dated December 2021.

- Prepare a report that will present a description of the field investigation, laboratory test results, engineering analyses, the results of the analyses, and design recommendations as required by the work scope items described above. HTS will provide copies of the draft report to the client for review. The final report will incorporate responses to the review comments on the draft report and will be submitted within 2 weeks upon receipt of the comments. Both the draft and final reports will be sealed by a professional engineer licensed in the State of Texas.

  Note: Hard copies of the report will be provided upon request at an additional cost of $30.00 per report.

3.0 COST AND SCHEDULE

HTS' estimated cost to complete the scope of work for Task 1, as designed in Section 2.0 above, is $36,689.00. The estimated cost is itemized in the attached Cost Estimate for Task 1.

HTS' estimated cost to complete the scope of work for Task 2, as designed in Section 2.0 above, is $16,016.00. The estimated cost is itemized in the attached Cost Estimate for Task 1. If access trail clearing is required, an additional $4,000.00 (estimated 2 days of clearing effort is necessary) will be charged. The estimated cost is provided in the attached cost estimate.

We estimate that about 7 weeks after receipt of the notice to proceed will be required to complete the geotechnical investigation if no delays are encountered with respect to weather conditions and/or site access. The table below summarizes the proposed project schedule.

Table: Approximate Schedule for this Project

Description of Work	Schedule
Beginning of field exploration	Anticipated to be within 1 week after the authorization to perform the work is received
Duration of field exploration	Anticipated to be completed in 1 week
Laboratory testing	Anticipated to be completed within 3 weeks after the completion of the field exploration
Draft Report	Anticipated to be 2 weeks from the completion date of the laboratory testing

4.0 CLOSING REMARKS

We appreciate the opportunity to present this proposal to you and would be pleased to discuss the contents of this proposal with you at your convenience. Your approval of this proposal may be indicated by your signing/dating this proposal as provided below.

We request that a copy of the signed/dated proposal be provided to HTS. We look forward to being of service to you.

Respectfully submitted,

HTS, Inc. Consultants

Jubair Hossain, Ph.D., P.E.
President

Attachment: Cost Estimate
Boring Location

AGREED TO THIS _____ DAY OF _____, 2024

PRINTED NAME: _____ TITLE: _____

SIGNATUERE: _____

FIRM: _____

JH:rg
H:\Proposals All\Proposals-24\ECEINC-24-00227 Revision 1.doc

416 Pickering Street
Houston, Texas 77091

COST ESTIMATE

Proposal No.: 24-00227 Rev 1

Prepared By:	Date:	Checked By:	Date:	Page No.:
JH	08/28/24	RG	08/28/24	1 OF 1

GEOTECHNICAL INVESTIGATION - TASK 1

ITEM	EST. QUANTITY		UNIT PRICE	EST. COST
A) Field Activities				
Mobe/demobe (ATV rig)	Lump Sum		$ 750.00	$ 750.00
Asphalt Corings	15	each	$ 93.00	$ 1,395.00
Traffic control (tech as flagman)	40	hours	$ 50.00	$ 2,000.00
3" diameter (0' to 50')	295	feet	$ 21.00	$ 6,195.00
3" diameter (50' to 100')	60	feet	$ 24.00	$ 1,440.00
Grouting of completed borings	355	feet	$ 10.00	$ 3,550.00
Locate/identify borings	4	hours	$ 60.00	$ 240.00
			SUBTOTAL =	$ 15,570.00
B) Laboratory Analyses				
Atterberg limits (ASTM D 4318)	36	tests	$ 62.00	$ 2,232.00
Unconfined compression test (ASTM D 2166)	20	tests	$ 50.00	$ 1,000.00
Water content (ASTM D 2216)	36	tests	$ 10.00	$ 360.00
Percent material passing No. 200 sieve (ASTM D 1140)	33	tests	$ 55.00	$ 1,815.00
CBR of soils (ASTM D1883) - 3 points/set	3	each	$ 215.00	$ 645.00
Particle size analyses w/ hydrometer (ASTM D 7928)	3	tests	$ 128.00	$ 384.00
Crumb test (ASTM D 6572)	2	tests	$ 43.00	$ 86.00
Pinhole dispersion test (ASTM D 4647)	2	tests	$ 286.00	$ 572.00
UU triaxial compression test (ASTM D 2850)	10	tests	$ 69.00	$ 690.00
CU triaxial compression test (ASTM D 4767)	2	tests	$ 1,500.00	$ 3,000.00
			SUBTOTAL =	$ 10,784.00
C) Engineering Analysis and Report Preparation				
Senior engineer, P.E.	5	hours	$ 183.00	$ 915.00
Project engineer, P.E.	60	hours	$ 149.00	$ 8,940.00
Staff support (CAD/clerical)	8	hours	$ 60.00	$ 480.00
			SUBTOTAL =	$ 10,335.00
			TOTAL COST =	**$ 36,689.00**

416 Pickering Street
Houston, Texas 77091

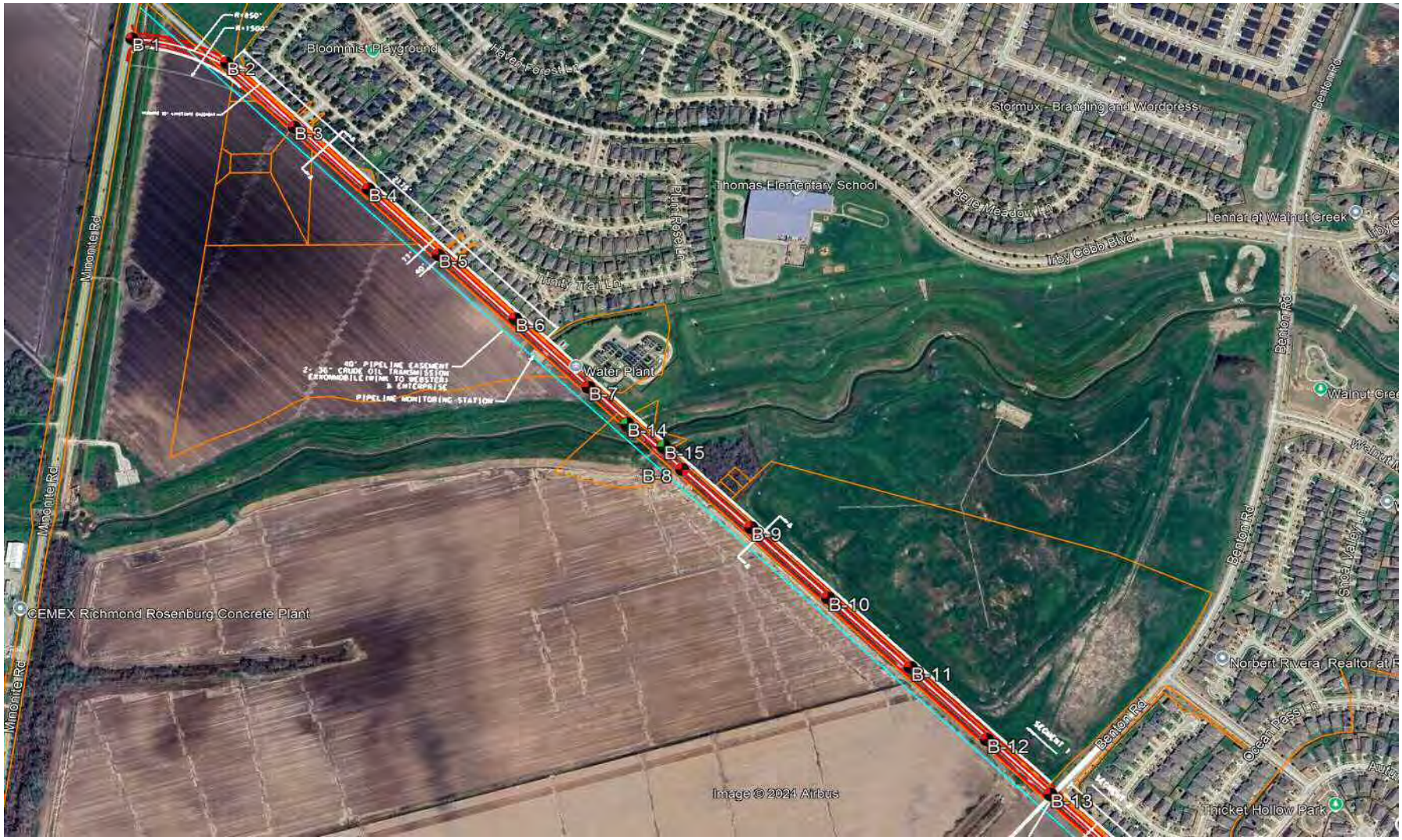
COST ESTIMATE

Proposal No.: 24-00227 Rev 1

Prepared By:	Date:	Checked By:	Date:	Page No.:
JH	08/28/24	RG	08/28/24	1 OF 1

GEOTECHNICAL INVESTIGATION - TASK 2

ITEM	EST. QUANTITY		UNIT PRICE	EST. COST
A) Field Activities				
Mobe/demobe (ATV rig)	Lump Sum		$ 750.00	$ 750.00
3" diameter (0' to 50')	100	feet	$ 21.00	$ 2,100.00
Locate/identify borings	4	hours	$ 60.00	$ 240.00
			SUBTOTAL =	$ 3,090.00
B) Laboratory Analyses				
Atterberg limits (ASTM D 4318)	15	tests	$ 62.00	$ 930.00
Unconfined compression test (ASTM D 2166)	10	tests	$ 50.00	$ 500.00
Water content (ASTM D 2216)	15	tests	$ 10.00	$ 150.00
Percent material passing No. 200 sieve (ASTM D 1140)	10	tests	$ 55.00	$ 550.00
Particle size analyses w/ hydrometer (ASTM D 7928)	3	tests	$ 128.00	$ 384.00
Crumb test (ASTM D 6572)	3	tests	$ 43.00	$ 129.00
Pinhole dispersion test (ASTM D 4647)	3	tests	$ 286.00	$ 858.00
UU triaxial compression test (ASTM D 2850)	10	tests	$ 69.00	$ 690.00
CU triaxial compression test (ASTM D 4767)	1	tests	$ 1,500.00	$ 1,500.00
			SUBTOTAL =	$ 5,691.00
C) Engineering Analysis and Report Preparation				
Senior engineer, P.E.	5	hours	$ 183.00	$ 915.00
Project engineer, P.E.	40	hours	$ 149.00	$ 5,960.00
Staff support (CAD/clerical)	6	hours	$ 60.00	$ 360.00
			SUBTOTAL =	$ 7,235.00
			TOTAL COST =	**$ 16,016.00**



LEGEND

- Boreholes at 25'
- Boreholes at 80'

Geotechnical Investigation

Ricefield Road Segment 1 from
FM 2977 to Benton Road
Fort Bend County, Texas

HTS Proposal No.: 24-00227 Rev. 1

Boring Locations	Exhibit - A

JAYMARK ENGINEERING CORPORATION

Agreement

October 2, 2024

ENTECH Civil Engineers, Inc.
15021 Kathy Freeway, Suite 500
Houston, TX 77094
Attention: Chris Orosco, P.E., Vice President

The purpose of this agreement is to engage the services of Jaymark Engineering Corporation to provide subsurface utility engineering services for the Ricefield Road project.

Scope of Services:

All SUE work will be completed in accordance to FBC Standards.

Subsurface utility engineering services to be provided: Level A (QL-A)

Services to be provided:

1) Utility coordination
2) Test holes for Exxon pipelines
3) Utility mapping
4) Identify conflicts
5) Provide up to date plans at the 70%, 95% and Pre-100% submittals.
6) Attend 30 minute bi-weekly meetings.

Fees:

Civil Engineering design fee: $42,600.00

If this agreement is satisfactory, please sign below:

Mark D. Taylor, P.E., President
Jaymark Engineering Corporation

Client Representative

DESIGN FEE WORKSHEET

JEC Project Number: 24-9100
Project Name: Ricefield Road
Date: 8/28/2024

Description	Structural Engineer Hours	Project Manager Hours	Civil Engineer Hours	Clerical Staff/ Administrative Hours	Draftsman Hours	Total Hours	Total Cost
Meetings		24				24	$ 4,680.00
Underground Utility Research and Coordination			80			80	$ 12,800.00
Indentify Conflicts			20		40	60	$ 7,080.00
Map Underground Utilities			40		120	160	$ 18,040.00
						-	$ -
						-	$ -
						-	$ -
						-	$ -
						-	$ -
						-	$ -
						-	$ -
						-	$ -
						-	$ -
						-	$ -
						-	$ -
						-	$ -
						-	$ -
						-	$ -
Total	-	24	140	-	160	324	
Rates	$ 195.00	$ 195.00	$ 160.00	$ 77.00	$ 97.00		
Total Labor Costs	$ -	$ 4,680.00	$ 22,400.00	$ -	$ 15,520.00		**$ 42,600.00**

Additional Services

Topographic and Boundary Survey and Plat			$ -
Site Evaluation for OSSF			$ -
Onsite Sewage Facility Subdivision Planning Report	-	-	$ -
Onsite Sewage Facility Design		-	$ -
Construction Administration		-	$ -
TDLR Plan Review Fees			$ -
Plan Review Fees			$ -
Reproduction Cost			$ -

Grand Total Proposal Cost **$ 42,600.00**