STATE OF TEXAS §
§
COUNTY OF FORT BEND §

AGREEMENT FOR PROFESSIONAL ENGINEERING SERVICES

(Powerline Road, Seg 1 - Project No. 23405)

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 infraTECH Engineers & Innovators, LLC ("Engineer"), a Texas limited liability company. County and Engineer may be referred to individually as a "Party" or collectively as the "Parties."

WHEREAS, Engineer provides professional engineering services in the Greater Houston Area; and

WHEREAS, County desires for Engineer to provide such services for professional engineering, surveying and design services for the reconstruction of Powerline Road, Seg 1 from FM 2281 to Highland Meadow Drive under Mobility Bond Project No. 23405; 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 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 Five Hundred Twenty-Nine Thousand Nine Hundred Eighty and 45/100 Dollars ($1,529,980.45). 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 $1,529,980.45. 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 $1,529,980.45 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 $1,529,980.45.

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, ENGINEER SHALL 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 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, which consent shall not be unreasonably withheld, conditioned, or delayed. Any purported or attempted assignment or transfer in violation of this Section shall be null and void.

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:
Infratech Engineers & Innovators, LLC
11111 Wilcrest Green Dr., Suite 410
Houston, Texas 77042

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. **Multiple Counterparts.** This Agreement may be executed in multiple counterparts, each having equal force and effect of an original.

42. **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

INFRATECH ENGINEERS & INNOVATORS, LLC

_____
Authorized Agent – Signature

Anwar Zahid
Authorized Agent- Printed Name

President & CEO
Title

May 27, 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)

April 10, 2025

Mr. Stacy Slawinski, P.E.
Fort Bend County Engineer
C/O Robert McBride, P.E.
LJA Engineering, Inc.
3600 W Sam Houston Parkway S Suite 600
Houston, Texas 77042

Re: Powerline Road (Seg 1) from FM 2281 to Highland Meadow Drive
2023 Mobility Engineering and Surveying
Project No. 23405

Subject: Proposal for PER, Final Design & Limited Construction Admin. Services

Dear Mr. Slawinski:

We are pleased to provide you with this proposal to perform professional engineering and surveying services in connection with reconstruction of Powerline Road (Seg 1) from FM 2281 to Highland Meadow Drive, in PCT 4, designated as the Fort Bend County Mobility Bond Program Project No. 23405.

Enclosed please find attachments A-D for infraTECH Engineers & Innovators, LLC (infraTECH) proposed level of efforts including detailed scope of services, project schedule, and probable construction cost estimate for completing preliminary engineering, final design, bidding, and limited phase III construction administration services. The proposal also includes scope and associated compensations for additional services to perform the required geotechnical investigation, topographical and abstracting surveys, and subsurface utility engineering (SUE). Additionally, the proposal includes the anticipated scope and budget for optional additional services determined to be necessary during the final design phase for completion of the project's construction documents for the above-referenced project.

infraTECH proposed budget is as follows:

Basic Services (infraTECH, Prime Consultant)

Phase I – Preliminary Design Services (Lump-Sum).....	$ 262,752.00
Phase II- Final Design Services (Lump-Sum)	$ 536,408.50
Phase I & II- Project Management and ODE (Lump-Sum).....	$ 79,677.00
Subtotal Phases I & II Basic Services, Prime Fee	$ 878,837.50

Basic Services (Subconsultant)

FCM Engineers, PC (Lump-Sum)	$ 91,535.00
Roadway Design Support Coordination, Prime	$ 9,133.50
Subtotal Subconsultants Additional Services Subconsultants Fee	$ 100,668.50
Subtotal Phases I & II (PER & Final Design), Prime and Subconsultant	**$979,506.00**

Additional Services (infraTECH, Prime Consultant)

Detention Pond Design (Lump-Sum).....	$ 22,328.00
Signal Design at Spacek Road with Traffic count (Lump-Sum)	$ 34,605.00
Phase III - Limited construction phase service(T&M)	$ 49,998.00
Subtotal Additional Services, Prime Fee.....	**$106,931.00**

Additional Services (Subconsultants)

SUE QL C & D and Utility Coordination & Engineering- LAN (Lump-Sum).....	134,816.82
SUE Coordination, Prime	$ 13,481.68
Geotechnical - All-Terra Engineering (Lump-Sum).....	$ 31,142.00
Geotechnical Subconsultant Coordination, Prime	$ 3,114.20
Survey, Existing ROW Mapping and Topographic Survey -CivilCorp (Lump-Sum).....	$ 107,340.30
Survey Coordination, Prime	$ 10,734.03
Subtotal Subconsultants Additional Services Subconsultants Fee.....	**$ 300,629.03**

Optional Add Services (Subconsultants)

SUE QL A & B- LAN	$ 49,530.00
SUE Coordination, Prime	$ 4,953.00
Survey Construction Services, CivilCorp	$ 29,349.20
Survey ROW Parcels M&B 20 @ $2,552.15/Each, CivilCorp	$ 51,043.00
Survey Coordination, Prime	$ 8039.22
Subtotal Subconsultants Optional Add Services Subconsultants Fee	**$ 142,914.42**

TOTAL PROFESSIONAL SERVICES, PRIME & SUBCONSULTANTS $1,529,980.45

We respectfully request a total budget of $1,529,980.45 for the abovementioned professional services. Detailed scope of services and the level of effort for the basic, additional, and optional services are attached. Also attached are the proposals from subconsultant for the roadway support, surveying, SUE, geotechnical investigation services.

Please note that additional and optional additional services will only be performed with prior written authorization by the Fort Bend County Engineer and/or LJA Engineering's designated project manager, the Fort Bend County Managing Consultant.

We will commence upon receipt of the written notice to proceed with the work. Please call me at 832-552-9195 should you have any questions, or require additional information,

Sincerely,

infraTECH Engineers & Innovators, LLC

Syed S. Haq, P.E.
Executive Vice President

Attachment "A"
Powerline Road Segment 1 Reconstruction
from FM 2218 to Highland Meadow Drive

Scope of Services

Existing Conditions

The existing Powerline Road is a 2-lane asphalt road with roadside ditches from FM 2218 to Highland Meadow Drive for approximately 6,300 linear feet or (1.19 mile) in length. The existing right-of-way (ROW) for most of the Powerline Road within this segment appears to be 60-ft wide within the project limits.
The following intersections are within the project limits:

- Three (3) non-signalized intersecting streets with "T" configuration approaching from the north,
    - Ray Allen Road
    - Spacek Road
    - Highland Meadow Drive
- One (1) signalized intersection
    - FM 2216

The posted speed limit is 45 MPH and there are 27 driveways accessing the roadway comprised of residential homesteads, farmland and commercial businesses.
There are several existing dry and wet utilities within the project limits. Identified utilities include:

1. CenterPoint Power
2. CenterPoint Energy
3. AT&T
4. Comcast
5. PS Lightwave Fiber
6. Fort Bend County MUD #162 – Water
7. Fort Bend County MUD #162 – Wastewater

Powerline Road drains via open ditches on either side of the road, which flow south and fall into the Big Creek. The creek ultimately flows towards the Southeast and eventually outfalls into the Brazos River.

Proposed Scope

The proposed scope is comprised of 3 phases: Study (PER)/preliminary engineering, final design & bidding phase services in addition to phase III, limited construction administration services. The scope of services will include professional engineering, topographical surveying & ROW mapping, hydrologic & hydraulic (H&H) analysis and design, traffic engineering, sub-surface utility engineering (SUE) and geotechnical investigation services. The project will involve reconstruction of approximately 6,300 LF of 4-Lane divided concrete pavement, 2-12' lanes with curb & gutter pavement and storm sewer drainage system within the proposed 80-ft ROW. The project may require potential detention site(s) for drainage mitigation to be determined upon completion of the drainage analysis during the PER/Study phase. The project will also include construction of 5-ft sidewalks on both sides. The proposed roadway project survey control, horizontal and vertical alignment and drainage components will be coordinated with Fort Bend County consultant designated to work on segment 2 of the Powerline Road east of Highland Meadow Drive.
The following constitute the primary goals of the study phase:

1. Prepare proposed pavement typical section layout.
2. Determine the impacts of the proposed roadway widening on existing properties and identify number of right-of-way (ROW) parcel required for the recommended roadway expansion and drainage improvements.
3. Coordination with MUD district for the existing drainage, water and wastewater utilities.
4. Coordination with TxDOT, Fort Bend County Drainage District, Homeowners Associations as needed in addition to consultants designing Powerline Road Segment 2.
5. Determine potential conflicts and provide feasible conflict resolution for existing private utilities within the corridor.
6. Early identification of critical path items such as number of ROW parcels and major utility conflicts including determination of any/all permitting and regulatory requirements if needed.
7. Prepare preliminary drainage mitigation and Identify drainage problem areas associated with the Powerline Road segment 1 and provide mitigation alternatives with resolution(s),
8. Review contents and recommendations of drainage report to be prepared by the designated Fort Bend County design consultant responsible for study and design of segment 2 of the project.
9. Prepare preliminary schematics of the proposed typical section and alignment alternatives as part of the PER to be used towards final PS&E efforts, and
10. Develop preliminary construction cost estimate for the recommended alignment and typical section alternative.
11. Complete the parcel mapping

The Preliminary Engineering Report (PER)/Study Phase

The purpose of the PER/Study is to clearly depict refined horizontal and vertical alignments and to document the goals stated above. infraTECH (the Engineer) will prepare a PowerPoint presentation depicting the project visually for the meeting attendees to better understand the project findings and recommendations as the report will remain internal to Fort Bend County Engineering staff and the County's project management consultant. The PER/Technical Memorandum will include an executive summary, preliminary schematics of the proposed typical section alternatives, a drainage report, and preliminary construction cost estimates for the proposed roadway section, and the geotechnical report as applicable. infraTECH will deliver an electronic copy of the report in PDF format to the County. infraTECH will commence the parcel mapping after PER meeting and be completed within 2 weeks.

Surveying and ROW Mapping

Beginning at FM 2218 proceeding southeast along Powerline Road, a distance of 6,700 feet. The Intersections shall be tied a distance of 300 feet in each direction for a total approximate length of 8,200 linear feet

1. Existing Right of Way Mapping
   a. Project abstracting; without the benefit of a title company, obtain deeds of records and plats relating to Powerline Road, adjoining tracts, and intersecting roadways.
   b. Establish the existing right-of-way of the Powerline Road and intersecting roadways.
   c. Prepare existing right-of-way map of the project, meeting TSPS Category 2 Route survey in PDF format.
   d. Prepare Survey Control Sheets to be delivered in PDF format
   e. Prepare .kml or .shp files as needed for GIS submission of the existing right-of-way.

2. Topographic survey
    a. Establish horizontal and vertical control (baseline and Temporary Benchmark) at intervals not to exceed 1,000 feet. We will coordinate with adjoining project surveyors and design consultants to confirm a single datum is utilized for control.
    b. We will prepare right of entry (ROE) agreements to allow for fieldwork outside of the right-of-way, short of litigation. Letters will be sent via regular mail or certified mail to landowners as listed by the Fort Bend County Central Appraisal District.
    c. Cross sections shall be taken at 100 foot intervals and extend 50 feet beyond the proposed right-of-way line where accessible. The topographic survey is to include edge of pavements, driveways, signs, mailboxes, traffic signals, sidewalks, pavement markings, etc. Structures in clear view and within 100 feet of the existing right-of-way should be surveyed. Crossing drainage channels will be profiled and cross sectioned up and down stream. Existing underground utilities will be collected as marked by other as well as visible surface features. Overhead utilities will be indicated. Gravity sanitary and storm sewers will be located as to top of manholes and inlets, flow line elevations, type, size, and direction of pipes. Water lines will be located by tops of valves, fire hydrants (flush valves) and visible surface features.
    d. Cross culverts shall be tied to include headwall, wingwall, flowline, and size information. Hydraulic Cross sections shall be taken at 100’ intervals to a distance of 500’ both up and downstream of the cross structure.
    e. Orthometric photos will be obtained with a UAV to create a mosaic of the project limits.
    f. We will perform a Texas 811 One Call for the project limits. All public utility, private utility and pipeline providers will be contacted via the current utility coordination process and all on-site utility markings and other information provided to CivilCorp by these utility and pipeline providers will be collected by standard survey methods and incorporated into the topographic survey base map.
    g. We will prepare a TSPS Category 6, Condition 2 Topographic Survey delivered in PDF format.
    h. A 2D and 3D survey base map including a digital terrain model or surface will be created and delivered utilizing Microstation Open Roads Designer, release 10.12 or other agreed to version.

3. Construction Service
    a. Check and/or re-set project control referenced to the project baseline and stake the proposed right-of-way limits immediately prior to construction, estimate 3 separate mobilizations

4. Parcel Descriptions
    a. Prepare TSPS Category 1A, Condition 3 Land Title Survey- Prepare survey drawing and metes and bounds description in accordance with Fort Bend County Guidelines for property acquisition and add parcels to the existing right-of-way maps.

Drainage Study & Report

The drainage study report will be prepared to document the existing conditions and provide basic design considerations along with estimated construction cost of drainage related items.

The following tasks will be performed and will be included in the drainage study report:

1. The Engineer will request, obtain, review, and evaluate available data for the study area including Fort Bend County and Fort Bend Drainage District (FBCDD) drainage studies, as-built plans, the latest version of the reference standards and criteria and other information.
    a. Obtain, review, and evaluate available existing public and private utility information relevant to the characteristic of the existing storm sewer systems and outfall drainage channels/systems for the study area.
2. The Engineer will perform field visits to the study area and vicinity to photograph and adequately document existing conditions and special concerns as necessary.
    a. Research and review the reported findings of all available, previous studies related to the study area and vicinity.
    b. Gather existing roadside ditch, culvert, and overland flow information using LiDAR, FEMA FIRM maps and collected survey data. The survey shall include the location of all drainage appurtenances (i.e., ditches, culverts, equalizers, inlets, manholes, and detention facilities) to be adequately identified to display their respective geometric positions within the right-of-way. In addition, the identification of high points in roadways and ditches shall be determined from the best management practices during the site visits.

3. Perform Existing Condition Analysis:
    a. Analyze LiDAR Data to determine existing condition overland sheet flow patterns
    b. Identify and locate existing condition outfall locations and drainage systems
    c. Analyze existing terrain for overland flow paths
    d. Determine overland sheet flow patterns which contribute flow to crossing locations.
    e. Determine drainage area boundaries for areas that contribute flow to crossing locations from within the ROW as well as outside contributing areas.
    f. Determine Time of Concentration.
    g. Determine land use based on FBC Drainage Criteria Manual and/or Houston-Galveston Area Council (H-GAC) landuse files.
    h. Obtain hydrologic loss parameters from FEMA HEC-HMS models associated with the watershed in which the crossing is located.
    i. Determine peak flows at each crossing using the Rational Method for drainage areas under 200 acres and FBC drainage area-discharge curves for drainage areas greater than 200 acres in size.
    j. Perform hydrologic & hydraulic analysis using appropriate hydraulic methods, which may include computer models such as HEC-RAS 1D/2D, HEC-HMS, and/or XP-SWMM/SWMM for the project.

4. Perform Proposed Condition Analysis and coordinate with the Fort Bend County Drainage District in order to obtain their approval and acceptance of the project:
    a. Determine proposed condition drainage areas and create drainage area map
    b. Determine Level of Service (LOS) for proposed drainage crossings and storm sewers.
    c. Perform proposed condition hydrologic calculations per FBCDD drainage criteria and determine the water surface elevations for the 2, 5, 10, 25, 50 and 100-year Atlas-14 storm events.
    d. Determine preliminary proposed crossing sizes and/or extension of the existing crossings.
    e. Generate hydrologic and hydraulic models and assess the impacts to abutting properties and the 100-year floodplain (or 500-year floodplain for FEMA/FBCDD modeled streams as applicable) due to proposed roadway and drainage system improvements.
    f. Determine preliminary detention volume necessary to mitigate negative impacts to receiving

streams resulting from the proposed roadway and drainage improvements.

g. Determine preliminary size and locations for calculated detention volume storage. evaluate both wet and dry bottom detention pond and suggest the best alternative to FBC.
h. Estimate the preliminary cost for the proposed drainage system including detention.

5. Prepare a report with maps, exhibits and an estimated construction cost for drainage-related items. Drainage meeting will determine which option the county would like to move forward with, and report will be updated/finalized to reflect comments from meeting. The study/report will conform to FCBDD standards and approval.

Utilities

UTILITY ADJUSTMENT COORDINATION

Utility Adjustment Coordination includes communicating, coordinating, and conducting meetings with individual utility companies, Local Public Agencies (LPAs), Texas Department of Transportation staff, maintenance staff, and Fort Bend County staff. The Engineer's utility coordination duties include preparation or assisting others in preparing utility agreement assemblies including utility agreements, utility reimbursable billings, joint use agreements, assisting utility companies with utility permit submittals, and assisting with documentation for advance funding agreements (AFAs).

A. Utility Coordination

Provide utility coordination and liaison activities with involved utility owners, their consultants, and the County to achieve reasonable, timely project notifications. In conjunction with coordination meetings, prepare meeting notes, create and update a utility conflict table, create action item log, perform document control, and assist with conflict analysis and resolution. Provide services as the "Responsible Party" as referenced in TxDOT's– Utility Cooperative Management Process and Right of Way Utility Adjustment Subprocess (See the TxDOT Right of Way (ROW) Utilities Manual, Chapter 2).

1. Coordinate utility related activities with the County, or its designee, to facilitate the progress and reasonably timely completion of the County's design phase. Provide the following:
   a. Work Plan. Coordinate a work plan including a list of the proposed meetings and coordination activities, related tasks to be performed, schedule and an estimate for the anticipated impacted utility facilities. The work plan must satisfy the requirements of the project and must be approved by the County prior to commencing work.
   b. Initial Project Meeting. Attend an initial meeting and an onsite inspection to understand existing conditions and project requirements and prepare written notes of the meeting. The Engineer shall prepare the Notice of Proposed Construction (NOPC). If requested by the County, the Engineer shall send the NOPC to the Utility Companies 14 to 30 days prior to the initial project meeting. The Engineer shall send NOPC form to stakeholders in the project limits to give notice of the upcoming construction project.
   c. External Communications. Coordinate activities with the County, its contractors, representatives, and stakeholders, as authorized by the County. Provide the County with copies of diaries, correspondence, and other documentation of work-related communications between the Utility Coordinator, utility owners, and other outside entities at submittal milestones and upon request of the County.
   d. Permits for rights of entry (for access into private property). Apply for and secure reasonably

necessary permits from city, county, municipality, railroad, or other jurisdiction to allow the Engineer to work within existing streets, roads or private property for additional Designating and Utility Engineering Investigation within the project limits.

e. Use the Notice of Required Accommodation (NORA) forms if the utility is found to conflict with the project. The Engineer shall provide documentation to accompany these forms.
f. Progress Meetings. Prepare a schedule of periodic meetings and milestone meetings with each utility company and owner or owner's representatives for coordination purposes. Meetings should commence as early as reasonably possible in the design process and continue until completion of the project. Notify the County at least five business days in advance of each meeting to allow the County the opportunity to participate in the meeting. Prepare and distribute meeting notes of each meeting with said utility companies, owners, or owners' representatives within seven business days.
g. Coordinate with the local utilities committees and councils to present a footprint of the County's projects with represented utility companies and owners.

2. Provide the County and affected utility companies and owners with a contact list, Utility Conflict Table (UCT) and utility conflict layout for each project with information such as: (a) owner's name; (b) contact person; (c) telephone numbers; (d) emergency contact number; (e) e-mail addresses; (f) pertinent information concerning their respective affected utilities and facilities, including items such as the following size, number of poles, material, and other information that readily identifies the utilities companies' facilities. Update the UCT and utility conflict layout as the project progresses.
3. Advise utility companies and owners of the general characteristics of the project and provide an illustration of the project footprint for mark-up of the utility facility locations that occupy the project area by distributing the Subsurface Utility Engineering (SUE) plan sheets of project layout sheets.

B. Utility Agreements for Utility Adjustments

Coordinate with utility owners on the identified conflicts with project construction and address the Utility Accommodations Rules (UAR). Coordinate with the utility companies in the preparation of agreements associated with items such as cost estimates, plans, disposition of existing facilities, schedule, betterment, eligibility ratio, property interest, roadway designation, funding of adjustments, and the occupation of County right of way.

1. Utility Agreement Assemblies: A packaged agreement consisting of a Utility Joint Use Acknowledgement, Standard Utility Agreements, plans on 11x17 sheets, Statement of contract work form, Affidavit form and copy of recorded easement, schedule of work, Buy America compliance Mill Test Reports (MTR's) or Certifications, and various attachments as detailed in the UAR and the TxDOT ROW Utilities Manual
    a. Utility agreements: If a utility is located within an easement, the utility company might have a compensable interest. In such a case, the Engineer should endeavor to obtain a copy of easement agreement from the utility company. The Engineer should review and determine whether a compensable interest exists and the owner's degree of eligibility. Coordinate during preparation of the utility company's adjustment plans and cost estimate. Review the plans to for compliance with the UAR and for the for conflict with the proposed project construction. The Engineer will submit a copy of the easement(s), plans, and estimate to the County via letter recommending approval. Check the estimate to verify inclusion of reimbursing costs the utility

incurs for in kind replacements within the utility's easement limit. If betterment is identified, two estimates (one for in kind replacement and one for betterment), created by the utility company, are required for the Utility Coordinator to calculate the betterment ratio.

b. State Utility Procedure (SUP): When applicable, the Engineer shall follow the procedures found in Chapter 8, Section 6 in the TxDOT ROW Utilities Manual.
c. Local Utility Procedure (LUP): When applicable, the Engineer shall follow the procedure found in Chapter 8, Section 8 in the TxDOT ROW Utilities Manual.

2. Electronically submit the executed Utility Agreement assemblies, which include the appropriate forms as detailed in the UAR and supplied by the County, a copy of the recorded easement deed, plans, and estimate to the County along with a cover letter recommending approval. The utility must be reimbursed eligible costs incurred within their easement limits for replacement in kind. The transmittal letter should also include a description of the work being done as well as the estimated cost and schedule of work.
3. Determine which utilities will be installed by agreement between the utility and County. Process Joint Use Agreement Acknowledgement (ROW-U-JUA), utility agreements, and determine necessity of escrow agreements, and forward these documents to the County for final approval.
4. Coordination, review, and submit of documentation to be included in all the utility agreements conforming to the requirements of 23 C.F.R. Section 645A. Coordinate preparation, compilation, gathering, and collection of required and supporting documents to be included with the utility agreements.
5. For each utility, the records for all utility owners' costs should be in accordance with the requirements of 23 C.F.R. Section 645A, in a format that is compatible with the estimate attached to the utility agreement and detail as determined necessary for analysis. The totals for labor, overhead, construction costs, travel, transportation, equipment, materials, supplies, and other services should be presented in such a manner as to permit comparison with the approved estimate.
6. Maintain a set of records for each utility adjustment costs for each utility for a period of time sufficient to complete all final payments to the utility companies or owners.

UTILITY ENGINEERING

Utility Engineering includes the identification of utility conflicts, coordination, compliance with the Utility Accommodation Rules (UAR), and resolution of utility conflicts. Coordinate activities with the County, or the County's designee, to facilitate the progress and reasonably timely completion of the County's design phase.

A. Coordination of Engineering Activities
   1. Utility Layout: Maintain a utility layout in the current approved version of OpenRoads Civil Design system used by the County. The layout should include existing utilities which are to remain in place or be abandoned, and adjusted utilities. Use the layout to monitor the necessity of relocation and evaluate alternatives. Use the layout of existing utilities as prepared and make a determination of the following:
      a. Facilities in conflict with the proposed project that are to be relocated.
      b. Facilities to be removed or abandoned in place.
      c. Facilities to remain in service and in place because of roadway design adjustments and meeting the current UAR.
      d. If there are additional facilities, not shown in the Subsurface Utility Engineering (SUE) documents, which require relocation, the Engineer should coordinate this information with the

County with reasonable promptness upon discovery.

2. Public and Individual Meetings with Utility Companies
   Facilitate utility conflict identification and resolution by the following actions:
   a. Establish contact with each existing utility within and adjacent to the project limits and set up utility coordination meetings to discuss concepts and options for construction.
   b. Schedule utility coordination meetings and to facilitate compatibility with the schedule of the County.
   c. Set agenda for each coordination meeting and coordinate agenda items requested by the County.
   d. Initial Project Meeting: Attend an initial meeting and an on-site inspection to become familiar with existing conditions, project requirements and prepare and distribute written notes for the meeting.
   e. Progress Meetings: Meet with the County and Prime periodically to coordinate the work effort and resolve problems and prepare written notes meetings. During the progress meetings, review the following:
      I. Activities completed since the last meeting.
      II. Problems encountered.
      III. Late activities.
      IV. Activities required by the next progress meeting.
      V. Solutions for unresolved and/or anticipated problems.
      VI. Information or items required from other agencies/consultants.
3. Review of Utility's Proposed Adjustments
   a. Evaluate alternatives: Evaluate alternative in the adjustment of utilities balancing the needs of both the County and the Utility. Use the AMA strategy as part of evaluating the alternatives.
   b. Review plans for compliance with UAR, Buy America materials and proposed location data.
   c. Check with utility owners to confirm their receipt of updates for project design development so that utility owners are reviewing the most current plans, quality and accuracy of utility adjustment data, as well as compliance of UAR, as it pertains to the plans. The responsibility for compliance, quality, and accuracy of utility adjustment plans will remain with the utility companies.

UTILITY ENGINEERING INVESTIGATION

Utility engineering investigation includes utility investigations subsurface and above ground prepared in accordance with ASCE/CI Standard 38-22 [(http://www.fhwa.dot.gov/programadmin/asce.cfm)] and Utility Quality Levels.

A. Utility Quality Levels (QL)
   Utility Quality Levels are defined in cumulative order (least to greatest) as follows:
   1. Quality Level D - Quality level value assigned to a utility segment or utility feature after a review and compilation of data sources such as existing records, oral recollections, One-Call markings, and data repositories.
   2. Quality Level C - Quality level value assigned to a utility segment or utility feature after surveying aboveground (i.e., visible) utility features and using professional judgement to correlate the surveyed locations of these features with those from existing utility records. Prime or consultant surveyor to provide these surveyed features.
   3. Quality Level B - Quality level value assigned to a utility segment or subsurface utility feature whose

existence and position is based upon appropriate surface geophysical methods combined with professional judgment and whose location is tied to the project survey datum. Horizontal accuracy of Designated Utilities is 18” (including survey tolerances) unless otherwise indicated for a specific segment of the deliverable. Quality Level B incorporates quality levels C and D information. A composite plot is created.

4. Quality Level A – Quality level value assigned to a portion (x, y, and z geometry) of a point of a subsurface utility feature that is directly exposed, measured, and whose location and dimensions are tied to the project survey datum. Other measurable, observable, and judged utility attributes are also recorded. The utility location must be tied to the project survey datum with an accuracy of 0.1 feet (30-mm) vertical and to 0.2 feet (60-mm) horizontal. As test holes may be requested up front or during the project, test holes done prior to completion of QL D, C, or B deliverables must be symbolized on the QL B deliverable with a call out indicating test holes number. This is in addition to and not in lieu of the test hole.

B. Utility Investigations Methodology

1. Utility Investigation Quality Level D

   The Engineer shall:

   a. Perform records research from reasonably available resources. Sources include but are not limited to: Texas811, Railroad Commission of Texas (Texas RRC), verbal recollection, record drawing information from plans, plats, permits and other applicable information provided by the utility owners or other stakeholders.
   b. Document utility owners and contact information.
   c. Create a utility drawing of information gathered.
      I. The Utility Engineer shall perform 18,400 LF of QL D SUE.

2. Utility Investigation Quality Level C

   The Engineer shall:

   a. In combination with existing Quality Level D information, utilize surveyed above-ground utility features and professional judgement to upgrade Quality Level D information to Quality Level C. For those utilities unable to be upgraded, retain as Quality Level D.
   b. Overhead utilities information should be gathered and depicted. Document sag elevations of lowest utility at road crossings, per best practices document.
   c. Gather storm and sanitary sewer information from Level D and upgraded to Level C as possible, unless otherwise directed by the County.
   d. Mapping of underground vaults may be requested by the County.
   e. Create composite utility drawing of information gathered.
      I. The Utility Engineer shall perform 13,200 LF of QL C SUE.

3. Designate (Quality Level B)

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

   The Utility Engineer must:

   a. As requested by the County, compile "record drawing " information from plans, plats and other location data as provided by the utility owners.
   b. Coordinate with utility owner when utility owner's policy is to designate their own facilities at

no cost for preliminary survey purposes. Review utility owner's work for accuracy and completeness.

c. Designate, record, and mark the horizontal location of the existing utility facilities using non-destructive surface geophysical techniques.
d. Using both active and passive scans to attempt to locate any additional utilities, including unrecorded and abandoned storm and sanitary sewer facilities, at the direction of the County, may be investigated using additional methods such as rodding that would then classify them as Quality Level B. A non-water based pink paint or pink pin flags must be used on all surface markings of underground utilities.
e. Correlate utility owner records with designating data and resolve discrepancies using professional judgment. Prepare and deliver to the County a color-coded composite utility facility plan with utility owner names, quality levels, line sizes and subsurface utility locate (test hole) locations. The Engineer and County acknowledge that the line sizes of designated utility facilities detailed on the deliverable will be from the best available records and that an actual line size is normally determined from a test hole vacuum excavation. A note should be placed on the designate deliverable that states "lines sizes are from best available records". All above-ground utility feature locations must be included in the deliverable to the County. Provided in the latest version of OpenRoads civil design system used by the County. The electronic file will be delivered on CD, DVD, or USB flash drive, as required by the County. A hard copy is required and should be signed, sealed, and dated by the Engineer. When requested by the County as an additional service the designated utility information should be over laid on the County's design plans.
f. Determine and inform the County of the approximate electronic utility depths at critical locations as determined by the County. The limits of this additional information should be determined prior to the commencement of work. This depth indication is understood by both the Engineer and the County to be approximate only and is not intended to be used preparing the right of way and construction plans.
g. Provide a monthly summary, with weekly updates, of work completed and in process with adequate detail to verify compliance with agreed work schedule.
h. Provide close-out permits when determined necessary by the Engineer.
i. Identify utilities discovered from Quality Levels C and D investigation but cannot be depicted in Quality Level B standards. Document these utilities using a unique line style and symbology in the designate (Quality Level B) deliverable.
j. Comply with all applicable TxDOT policy and procedural manuals.

I. The Utility Engineer shall perform 12,000 LF of QLB SUE

4. Subsurface Utility Locate (Test Hole) Service (Quality Level A) Locate is the process used to obtain precise horizontal and vertical position, material type, condition, size, and other data that may be obtainable about the utility facility and its surrounding environment through exposure by non-destructive excavation techniques that ensures the integrity of the utility facility. Subsurface Utility Locate (Test Hole) Services (Quality Level A) are inclusive of Quality Levels B, C, and D.
   The Utility Engineer must:
   a. Review requested test hole locations and advise the County in the development of a recommended locate (test hole) work plan relative to the existing utility infrastructure and proposed project design elements.
   b. Coordinate with utility owner inspectors as may be required by law or utility owner policy.

c. Place Texas 811 ticket 48 hours prior to excavation.
d. As neatly as practical cut and remove existing pavement material, such that the cut does not exceed 0.10 square meters (1.076 square feet) unless unusual circumstances exist.
e. Measure and record the following data on a mutually agreed test hole data sheet that has been sealed and dated by the Engineer:
    I. Elevation of top of utility tied to the datum of the furnished plan.
    II. Minimum of two benchmarks utilized. Elevations must be within an accuracy of 15mm (.591 inches) of utilized benchmarks.
    III. Elevation of existing grade over utility at test hole location.
    IV. Horizontal location referenced to project coordinate datum.
    V. Outside diameter of pipe or width of duct banks and configuration of non-encased multi-conduit systems.
    VI. Utility facility material(s).
    VII. Utility facility condition.
    VIII. Pavement thickness and type.
    IX. Coating/wrapping information and condition.
    X. Unusual circumstances or field conditions.

f. Excavate test holes in such a manner as to avoid damage to wrappings, coatings, cathodic protection or other protective coverings and features. Water excavation can only be utilized with written approval from the County.
g. Be responsible for damage to the utility during the locating process. In the event of damage, the Engineer must stop work, notify the appropriate utility facility owner, the County and appropriate regulatory agencies. The regulatory agencies include: the Railroad Commission of Texas and the Texas Commission on Environmental Quality. The Engineer must not resume work until the utility facility owner has determined the corrective action to be taken.
h. Back fill excavations with material determined by Engineer to be appropriate and compact backfill. The Engineer is responsible for the backfill and surface restoration for a period of three years.
i. Provide restoration of work site and landscape determined by the Engineer to be equal or better condition than before excavation.
j. Plot utility location position information to scale and provide a utility plan signed and sealed by the responsible Engineer. Provide documentation in the latest version of MicroStation and be fully compatible with the OpenRoads civil design system used by the County. The electronic file will be delivered on CD, DVD or USB flash drive as requested. When requested by the County, the locate information must be over laid on the County's design plans.
k. Return plans, profiles, and test hole data sheets to the County. If requested, conduct a review of the findings with the County.
l. Close-out permits as required.
    I. The Utility Engineer shall perform 6 test holes of QLA SUE

PROJECT MANAGEMENT AND ADMINISTRATION

The Engineer, in association with the Prime and County Project Managers (PM), will direct and coordinate activities associated with this project to comply with County policies and procedures, and to deliver that work on time.

1. Project Management

   Manage activities including preparing correspondence, invoicing, progress reports, and reviewing schedules.

   The Utility Engineer must:

   a. Prepare monthly written progress reports for this project.
   b. Develop and maintain a project schedule to track project deadlines. The scheduled submittals must be provided in hard copy and electronic format.
   c. Meet on a monthly scheduled basis with the County to review project progress.
   d. Prepare, distribute, and file both written and electronic correspondence.
   e. Prepare and distribute meeting minutes within 72 hours after the meeting.
   f. Document phone calls and conference calls during the project to coordinate the work for various team members.
   g. Update UCT and utility layout sheets at each milestone, prior to each utility meeting.

Geotechnical Investigation

1. Field Investigation
   - Drill/sample a total of fifteen (15) geotechnical borings to a depth of 20 feet beneath the surface within the stretch of the roadway reconstruction and detention pond (to be identified/located later) as shown on the attached Plate No. 1. Prior to the soil drilling/sampling, the existing asphalt pavement will be cored and thicknesses of the existing asphalt and base layers will be measured. GPS coordinates of the actual boring locations during drilling will be obtained for documentation and inclusion on the boring logs of the report. Prior to the drilling/coring activities, a utility clearance will be applied (through Texas 811) in order to ensure that the drilled locations are clear of underground utilities.
   - Continuously sample each boring continuously to a depth of 12 feet (continuously to 20 feet for the detention pond borings) and intermittently thereafter, with both disturbed (cohesionless soils) and relatively undisturbed (cohesive soils) samples being obtained, as applicable.
   - Measure the depth to groundwater during drilling, approximately 10 minutes after the water is initially encountered, as applicable, and within 15 minutes after the completion of drilling.
   - Backfill the boreholes with cement grout after the completion of the drilling activities. The top 18 inches of the boreholes will be backfilled with 12 inches of quickcrete topped with 6 inches of asphalt.
   - Clearly mark each boring location and provide the client a layout and GPS coordinates of the borings for the surveyor's use in obtaining boring location survey elevations, stationing, and offset distances, as applicable.
2. Laboratory Testing
   - Perform laboratory testing on soil samples obtained such as moisture content tests, unit weight determinations, Atterberg limits tests, tests to determine the percent soil particles passing a No. 200 sieve, dry density tests, unconfined compression tests, moisture-density relationship test of soils (Standard Proctor), and California Bearing Ratio (CBR) of soils in order to define soil classifications and physical soil properties of the site soils.
   - Analyze the laboratory test data to define the engineering characteristics of each soil type.
   - Prepare boring logs based upon the results of laboratory tests and visual soil classifications.

3. Engineering & Project Delivery
    - 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, and OSHA soil type classifications pertinent to trench shoring and bracing design as applicable to underground utilities.
    - Provide a trench safety letter report that may be used for the design of protection systems for excavations pertaining to the installation of underground utilities.
    - Perform rigid pavement design analysis for the proposed roadway reconstruction project using the requirements and guidelines of the American Association of State Highway and Transportation Officials (AASHTO) "AASHTO Guide for Design of Pavements" as well as the requirements and guidelines of Fort Bend County and provide the recommended rigid pavement section.
    - Provide recommendations for subgrade preparation and stabilization (depending on the soil type encountered) for the proposed roadway reconstruction.
    - Perform a desktop review of published and proprietary records on surface faults within the location of the proposed development in order to determine presence of a surface fault that could adversely impact the proposed development.
    - Provide design parameters (bearing, lateral, and torsional) that may be used for the foundation design of traffic signal poles that are included in the proposed project.
    - Provide recommendations for subgrade preparation of driveways that will be impacted by the proposed project.
    - Provide site and subgrade preparation recommendations as well as erosion control recommendations for the proposed detention pond.
    - Perform slope stability analyses to determine the stability of the side slopes of the proposed detention pond in the short-term, rapid drawdown, and long term conditions using subsoil parameters derived from field and laboratory tests. All-Terra will coordinate with the design engineers for the updated designs and cross sections in order to assure proper applicability of our engineering analyses.
    - Submit a pdf file of a full geotechnical engineering report that presents the results of the geotechnical engineering study. The report will be prepared and sealed by a Licensed Professional Engineer trained and experienced in the practice of geotechnical engineering.

Traffic Engineering

Traffic Control Plans - The Engineer shall prepare detailed traffic control plans (TCP) based on the approach and the number of construction phases decided in the conceptual TCP as part of the study. TCP will be designed according to the latest edition of The Texas Manual on Uniform Traffic Control Devices (TMUTCD).
Traffic Signal Warrant Analysis - The Engineer shall conduct a traffic signal warrant analysis based on the TMUTCD guidelines for the intersection of Powerline Road and Spacek Road. The Engineer shall collect 13-hour traffic counts for the analysis. The Engineer shall prepare a report documenting the findings of the study and provide recommendations.
Traffic Signal Design- The Engineer shall provide signal design utilizing mast arms for the following intersections:

- Powerline Road at FM 2218. Existing traffic signal will be modified to accommodate the widening of Powerline Road.

- Powerline Road at Spacek Road, if warranted.

Additionally, the Engineer shall prepare temporary signal plans for the intersection of Powerline Road and FM 2218 for various phases and steps of TCPs.

These proposed traffic signal improvements shall be provided in a set of plans, as required by the County, which include the following:

- Existing Condition Diagram
- Proposed Traffic Signal Layout (Permanent and Temporary)
- Electrical Schedule, Sign Design, Phasing Diagram
- General Notes
- Traffic Signal Notes
- Applicable TxDOT Standards

Confirmation of Power - The Engineer shall coordinate with CenterPoint Energy (or other responsible power company) to confirm the existing and/or proposed power locations. The Engineer shall obtain a letter from CenterPoint Energy (or other responsible power company) documenting their acceptance to the power source.

Construction Estimate and Quantities - The Engineer shall develop construction estimates and quantities for signal designs and will include in the overall project package.

Traffic Signal Timings - The Engineer shall develop traffic signal timings for the intersection of Powerline Road and Spacek Road, if traffic signal is installed, utilizing Synchro software and traffic counts mentioned above for AM Peak, PM Peak & off-peak period.

SWPPP

Storm water pollution prevention plans (SWPPP) will be prepared and included in the construction documents and project manual based on FBC and/or HCFCD criteria.

Design Reviews/Permitting/Coordination

We will coordinate with the following entities/agencies as needed throughout the project design cycle for obtaining agency plan approval for construction permitting process:

- Texas Department of Transportation (TxDOT)
- Existing MUD Districts for the subdivision plats, utility layouts & ultimately approval of the modifications or betterments.
- Fort Bend County Engineering for approval of the design plans and construction administration
- Fort Bend County Drainage District for approval of the drainage study report & drainage design plans
- Potential private utility impacts as identified with utility owners
- HOA Management for surrounding neighborhoods
- Design Consultant of Powerline Road segment 2.

Schedule

infraTECH anticipates concluding phase I, draft PER, in 3 months and phase II, final design, of construction documents in 8 months from the notice to proceed dates respectively. It must be noted that

abovementioned durations for document delivery do not include the project management consultant (PMC), TxDOT, and Fort Bend County's intermediate reviews in addition to an acceptance of the PER by the Fort Bend County Commissioner's Court.

Compensations

It is mutually agreed that the fee for the preliminary and final design efforts will be paid in lump-sum basis to be billed monthly on a percent complete basis by respective tasks performed. The invoices to the County will also accompany itemized major tasks for preliminary design, final design, survey, geotechnical, etc. performed within each billing cycle.

Design Criteria

Applicable design criteria include, in order of priority, (1) Fort Bend County Engineering Design manual dated March 2022 and construction standards (2) *Fort Bend County Drainage Criteria Manual* (Fort Bend County Drainage District, November 1987, revised April 1999), (3) Municipal design criteria if the project is located within the limits of a municipality and/or ETJ that has design criteria, (4) The City of Houston *Infrastructure Design Manual* (IDM). Current version of IDM used for infrastructure for which design criteria do not exist in the preceding documents/guidelines, (5) Fort Bend County Fresh Water District #1, (6) applicable Texas Department of Transportation design criteria.

Final Design Deliverables (70%, 95%, and Final Submittal)

InfraTECH will deliver 70%, 95%, 100% completed plans, and the final bid ready submittal at the scheduled milestones.

The **70%** submittal will include the following deliverables:

1. 30% Comments Addressed
2. Cover Sheet.
3. Index of Drawings.
4. General notes.
5. Existing and proposed typical sections with station limits for each section; show pavement/subgrade material and thickness, ROW & roadway width, applicable dimensions, profile grade line, and general location of existing and proposed utilities)
6. Overall project layout sheet
7. Survey control map
8. Right-Of-Way (ROW) existing & proposed.
9. Horizontal Alignment Data.
10. Plan and profile sheets (1" = 20' plan scale (full size) but printed half-size at a 1" = 40' scale; all existing and proposed facilities correctly shown in plan and profile; separate drawings for water and sanitary to be produced if needed; Check for potential design issues.
11. Drainage area map & Hydraulic calculations.
12. Traffic control plan
13. Signage and pavement marking plans
14. Storm Water Pollution Prevention Plan (drawings and text including details)
15. Cross Sections (100-foot intervals with earthwork calculations).
16. Specification table of contents.

17. Construction Cost Estimate in PDF & Excel format.
18. Bid form in PDF & Excel format.
19. 70% plans in PDF format and a KMZ file depicting the current design with proposed ROW.
20. Internal QA/QC set of comments
21. Regulatory permitting if applicable.
22. Private and public utility submitted separately for review with the following:
    a. Updated utility table identifying utilities in ROW and conflict
    b. Private utilities including CenterPoint, AT&T & pipelines
    c. Public utilities including MUD and privately owned utilities

The **95%** submittal deliverables will encompass the following:

1. 70% Comments addressed.
2. 95% Bid Ready Plans (Not Sealed) in PDF format in addition to a KMZ file of the current design with proposed ROW.
3. Verify earthwork quantities with cross sections at 100-ft intervals which will be incorporated into the final plans for contractor's information.
4. Standard construction details for the following:
    a. Roadway, Pavement, Curb
    b. Driveway, sidewalk & Ramps
    c. Drainage, Manholes, inlets & outfalls
    d. Signing & striping
    e. Storm Water Pollution Prevention
    f. Project Sign
5. Construction Cost Estimate in PDF & Excel format.
6. Project manual:
    a. bid form in PDF & Excel format
    b. Specification table of contents
    c. Special specifications, or conditions
    d. Contract documents excluded)
7. InfraTECH will address the 70% comments and submit an electronic copy of the 95% completed plans in PDF format to the PMC for review & comments.
8. Internal QA/QC set of comments

The final **100%** deliverable will encompass the following:

1. 95% Comments addressed.
2. Bid Ready Plans (Sealed) in PDF format & a KMZ file of current design with proposed ROW
3. Internal QA/QC set of comments
4. Construction Cost Estimate in PDF & Excel format.
5. Project manual:
    a. bid form in PDF & Excel format
    b. Specification table of contents
    c. Special specifications, or conditions
    d. Contract documents excluded)

Bidding and Limited Construction Administration Phase Services

Upon completion of final design services, the County will determine an advertisement and bid opening schedule. All administrative project manual documents (cover page, Notice to Bidders, etc.) will be prepared by the County and InfraTECH will be provided with the document in PDF format.
A single project manual file in Adobe Acrobat format will be prepared which will include the following:

(1) Administrative documents,
(2) The bid form to be prepared by InfraTECH in Microsoft Excel format with requirement set forth by Fort Bend County,
(3) A sealed specification table of contents, and
(4) Applicable specifications and documents.

InfraTECH will prepare and provide to the County with a single file in Adobe Acrobat format for the entire drawing set excluding the cover sheet, which contains approval signature(s), all drawings will be printed directly to Adobe Acrobat format with electronic seal and signature.
InfraTECH will provide the following services during the Bid phase services:

1. Prepare an electronic PDF document containing the project manual file and the entire plan set to be uploaded onto the FBC engineering purchasing and the County's project management consultant. Additionally, 2 USB memory sticks will be delivered to the County Engineer's office and Purchasing Agent for advertising.
2. Attend a pre-bid meeting at the County Purchasing Office.
3. Briefly describe the project and will not prepare meeting minutes.
4. Receive bidder questions and clarifications from the County's Purchasing Agent.
5. Answers to questions and clarifications as well as any other required changes and prepare an addendum to include the responses and changes. The addendum will be distributed by the County's Purchasing Agent.

After the bid, the County's project management consultant will prepare a bid tabulation and provide a copy to the design consultant for filing.
Prior to the meeting, the project management consultant will inform InfraTECH of how many drawing and project manual sets are required, and the design consultant will provide these documents at the pre-construction meeting.

The following services will be performed by InfraTECH during the construction phase services:

1. Attend a pre-construction meeting with the County, project management consultant, general contractor, and construction materials testing contractor.
2. Review Shop Drawings (including detailed structural components)
3. Respond to contractors RFI's (justifiable number of RFI's)
4. Participate in a substantial completion walkthrough
5. Prepare record drawings after project completion based on contractor as-built markups, the record drawings will be printed on paper and delivered to the County
6. Field visits and progress meetings will not be required unless requested by the County as an additional service.

The construction duration for this project is estimated to take 24 months. It is our mutual understanding that the construction phase services will be paid on a time-and-materials basis. The not-to-exceed fee for these services will be determined by the County and/or its project management consultant and InfraTECH. The construction phase services will be performed and continued with prior Fort Bend County

authorization. Monthly billing will include a breakdown of hours spent by personnel in the various employee categories, at billing rates agreed to by the County and the design consultant. Reimbursable expenses, such as scanning and reproduction, will be billed at actual cost (no markup).

PRIME AND SUBCONSULTANT LOE SUMMARY

Project Name	**Powerline Road (Seg. 1)**
Prime Consultant	**infraTECH Engineers & Innovators, LLC**
Project No.	**23405**
Date:	**2025-02-06**

SUMMARY BASIC SERVICES - PRIME & SUBCONSULTANTS

TASK DESCRIPTION	CONSULTANT	TOTAL LABOR HRS. & COSTS
PROJECT MANAGEMENT		
PRIME	infraTECH Engineers & Innovators, LLC	$ 76,476.00
	SUBTOTAL- PROJECT MANAGEMENT	**$ 76,476.00**
PRELIMINARY ENGINEERING REPORT-PER (30%)		
PRIME	infraTECH Engineers & Innovators, LLC	$ 262,752.00
	SUBTOTAL- PRELIMINARY ENGINEERING REPORT	**$ 262,752.00**
FINAL DESIGN		
PRIME	infraTECH Engineers & Innovators, LLC	$ 536,408.50
ROADWAY DESIGN SUPPORT	FCM Engineers PC	$ 91,335.00
ROADWAY DESIGN SUPPORT COORDINATION	infraTECH Engineers & Innovators, LLC	$ 9,133.50
	SUBTOTAL-FINAL DESIGN	**$ 636,877.00**
	TOTAL BASIC SERVICES	**$ 976,105.00**

SUMMARY OTHER DIRECT EXPENSES - PRIME & SUBCONSULTANTS

TASK DESCRIPTION	CONSULTANT	TOTAL LABOR HRS. & COSTS
PRIME	infraTECH Engineers & Innovators, LLC	$ 3,201.00
ROADWAY DESIGN SUPPORT	FCM Engineers PC	$ 200.00
	TOTAL OTHER DIRECT EXPENSES	**$ 3,401.00**

PROJECT SUMMARY (BASIC SERVICES)		
TOTAL BASIC SERVICES	$	976,105.00
TOTAL OTHER DIRECT EXPENSES	$	3,401.00
TOTAL	**$**	**979,506.00**

SUMMARY ADDITIONAL SERVICES - PRIME & SUBCONSULTANTS

TASK DESCRIPTION	CONSULTANT	TOTAL LABOR HRS. & COSTS
PRIME	infraTECH Engineers & Innovators, LLC	$ 106,931.00
SURVEY	CivilCorp	$ 107,340.30
SURVEY COORDINATION	infraTECH Engineers & Innovators, LLC	$ 10,734.03
GEOTECHNICAL	All-Terra Engineering	$ 31,142.00
GEOTECHNICAL COORDINATION	infraTECH Engineers & Innovators, LLC	$ 3,114.20
SUE	LAN	$ 134,816.82
SUE COORDINATION	infraTECH Engineers & Innovators, LLC	$ 13,481.68
	SUBTOTAL	**$ 407,560.03**
	TOTAL ADDITIONAL SERVICES	**$ 407,560.03**

SUMMARY OPTIONAL ADDITIONAL SERVICES - PRIME & SUBCONSULTANTS

TASK DESCRIPTION	CONSULTANT	TOTAL LABOR HRS. & COSTS
SURVEY	CivilCorp	$ 80,392.20
SURVEY COORDINATION	infraTECH Engineers & Innovators, LLC	$ 8,039.22
SUE	LAN	$ 49,530.00
SUE COORDINATION	infraTECH Engineers & Innovators, LLC	$ 4,953.00
	SUBTOTAL	**$ 142,914.42**
	TOTAL ADDITIONAL SERVICES	**$ 142,914.42**

PROJECT SUMMARY		
TOTAL BASIC SERVICES	$	979,506.00
TOTAL ADDITIONAL SERVICES	$	407,560.03
TOTAL OPTIONAL ADDITIONAL SERVICES	$	142,914.42
TOTAL	**$**	**1,529,980.45**

Project Name	**Powerline Road (Seg. 1)**
Consultant	**infraTECH Engineers & Innovators, LLC**
Project Number	**23405**
Date	**2025-02-06**

BASIC SERVICES

TASK DESCRIPTION	Project Manager	Senior Engineer	Project Engineer	Design Engineer	Engineer In Training	Administrative/ Clerical	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
PROJECT MANAGEMENT									
Project Kick-off Meeting	2	2	4				8	N/A	
Project Status Meetings and Status Update Reports (12)	24	24	24				72	N/A	
Project Coordination	90	24	60				174	N/A	
Prepare Invoices (Monthly)	12					24	36	N/A	
SUBTOTAL PROJECT MANAGEMENT	**128**	**50**	**88**	**0**	**0**	**24**	**290**		
HOURS SUB-TOTALS	128	50	88	0	0	24	**290**		
CONTRACT RATE PER HOUR (INCLUDE AVG HOURLY RATE TIME OVERHEAD AND FF)	$ 330.00	$ 260.00	$ 215.00	$ 162.00	$ 120.00	$ 96.50			
TOTAL LABOR COSTS	$ 42,240.00	$ 13,000.00	$ 18,920.00	$ -	$ -	$ 2,316.00	**$ 76,476.00**		
% DISTRIBUTION OF STAFFING	55.23%	17.00%	24.74%	0.00%	0.00%	3.03%	**100%**		

Basic Services- Project Management	**$ 76,476.00**

TASK DESCRIPTION	Project Manager	Senior Engineer	Project Engineer	Design Engineer	Engineer In Training	Administrative/ Clerical	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
PRELIMINARY ENGINEERING REPORT-PER (30%)									
Data Collection and Review									
Data collection	4		8	24	16		52	N/A	
Conduct field visits & evaluation of existing site condition	4		4	8	8		24	N/A	
Collect & review FEMA models, FIRMs, FIS etc.		1	4	16	8		29	N/A	
Collect & review topographic and hydroghic GIS data		1	2	16	4		23	N/A	
H&H-Existing Conditions Analysis									
Determine outfalls, delieneate drainage area boundaries, time of concentration, and landuse pattern		2	4	16	24		46	N/A	
Obtain hydrologic loss parameters, determine peak flow for internal and external drainage areas		1	2	8	16		27	N/A	
Develop flow hoydrographs		1	2	8	16		27	N/A	
Update FEMA models for all range of design periods and determine water surface elevations at the outfall channel from FEMA models. Extend models for minor channels not included in FEMA model.		2	8	16	16		42	N/A	
Generate SWMM model to simulate existing drainage conditions		2	8	16	16		42	N/A	
H&H-Proposed Conditions Analysis									
Determine proposed outfalls, delieneate drainage area boundaries, time of concentration, and proposed landuse pattern		4	8	24			36		
Delineate preliminary inlet location and storm trunk line in SWMM		4	8	24			36		
Determine peak flows in inlets		2	4	16			22		
Develop flow hoydrographs for inlets using Malcom Small Watershed Method		2	4	16			22		
Input flow data in SWMM, complete preliminary sizing of storm sewer trunk line for design year		2	8	32	8		50		
Determine flow at the outfalls for all range of storm events in SWMM based on preliminary trunk line size in previous step		1	4	16	4		25		
Preliminary design of Detention System							0		
Calculate detention volume based on existing and proposed condition model in SWMM		1	2	8	4		15		
Delineate detention area, calculate detention depth based on detention area and volume		1	2	8	4		15		
Model detention system in SWMM, incorporate detention pond with the proposed trunkline model and ensure the outflow match or decreases than the existing condition		2	8	24	16		50		
Preliminary sizing of Cross-Drainage Structures									
Determine flow at the cross- drainage structure from the proposed trunkline.		1	2	8			11		
Model cross-drainage structure in HEC-RAS to determine preliminary size, determine the length of the structure based on proposed roadway improvement		1	4	12			17		
Drainage Report and Deliverables							0		
Prepare exhibits for project location, topography, hydrology, outfalls, internal drainage area, external drainage area existing drainage system, proposed drainage system, and detention		1	4	16	36		57		
Prepare draft and final drainage report		4	8	32	24		68		
Schematic Development									
Typical Sections	2		2	4	8		16		
Develop horizontal alignment and vertical profile	4	8	16	32	32		92		
Schematic layout/ 30% Plan Production	12	12	24	80	80		208		
Cross sections to check pavement, drainage, and cut & fill quantities		4	24	40	60		128		
Water and wastewater line analysis for conflicts, relocation	2	4	8	16			30		
Traffic									
Traffic signal warrant analysis (Powerline Road at Spacek Road)	1	2	4		8		15		
Traffic Signal Warrant Analysis Memo	1	4	8		16		29		

Project Name	**Powerline Road (Seg. 1)**
Consultant	**infraTECH Engineers & Innovators, LLC**
Project Number	**23405**
Date	**2025-02-06**

Existing Condition Diagram (Powerline Road at FM 2218)	1		4	8	32		45	1	45
Preliminary Proposed Signal Layout (Powerline Road at FM 2218)	2		4	8	32		46	1	46
PER Report									
Quantity Take-0ff		4	8	12	24		48		
Prepare preliminary construction cost estimate	2	2	4	8	8		24		
Draft and Final PER Reports	8	8	16	40	24		96		
QA/QC	8	16							
PowerPoint Presentation of the PER Report	8	4	8	4			24		
							0	N/A	
TOTAL PER	**59**	**104**	**238**	**616**	**544**	**0**	**1561**		
HOURS SUB-TOTALS	59	104	238	616	544	0	**1561**		
CONTRACT RATE PER HOUR (INCLUDE AVG HOURLY RATE TIME OVERHEAD AND FF)	$ 330.00	$ 260.00	$ 215.00	$ 162.00	$ 120.00	$ 96.50			
TOTAL LABOR COSTS	$ 19,470.00	$ 27,040.00	$ 51,170.00	$ 99,792.00	$ 65,280.00	$ -	**$ 262,752.00**		
% DISTRIBUTION OF STAFFING	25.46%	35.36%	66.91%	130.49%	85.36%	0.00%	**344%**		

Basic Services-Preliminary Engineering Report	**$ 262,752.00**

TASK DESCRIPTION	Project Manager	Senior Engineer	Project Engineer	Design Engineer	Engineer In Training	Administrative/ Clerical	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
FINAL DESIGN									
Final Design - 70% Design									
Title sheet			1		2		3	1	3.0
Index sheet	1		2		4		7	1	7.0
Overall project layout	1		2	2	8		13	2	6.5
Typical sections	2	4	8	8	16		38	2	19.0
General notes	1	2	2	4	4		13	2	6.5
Demolition sheet		2	8	14	42		66	7	9.4
Refine horizontal alignment and vertical profile		2	4	8	8		22	N/A	
Horizontal alignment data sheet					2		2	1	2.0
Roadway plan and profile sheets (500 LF/Sheet)	8	14	42	84	168		316	14	22.6
Intersection grading and detail sheets		2	4	8	24		38	2	19.0
Roadway details		4	4	8	16		32	1	32.0
Driveway table and detail		4	4	16	16		40	1	40.0
Water and wastwater relocation sheets		8	16	40	60		124	7	17.7
Cross Sections (Every 100')		8	24	40	80		152	24	6.3
Roadway standard drawings			1		4		5	8	0.6
Prepare overall drainage areas maps (external and internal)		1	6	34	60		101	10	10.1
Determine proposed peak flows for the subcomponents of the drainage system		1	8	12	4		25	N/A	
Design and analyze proposed storm sewer systems using OpenROADS/GEOPAK		4	16	100	48		168	N/A	
Design of temporary drainage system		2	8	16	8		34	N/A	
Hydrologic data sheets		1	2	6	12		21	2	10.5
Hydraulic data sheets		1	2	8	24		35	4	8.8
Culvert layout sheets		2	4	16	24		46	2	23.0
Drainage plan and profile sheets including profile grade line of parallel ditches (if applicable)	2	4	2	56	68		132	14	9.4
Drainage laterals sheet		1	4	12	12		29	2	14.5
Miscellaneous and special drainage details sheets		1	2	4	8		15	2	7.5
Drainage standards		2			8		10	10	1.0
Boring Logs		2	1	20	8		31	4	7.8
SPM- Signing and Pavement Marking Layout	2		16	32	56		106	7	15.1
SPM-Summary of Small Signs	1			4	8		13	1	13.0
SPM- Standards				2	4		6	8	0.8
Refine Existing Condition Diagram (Powerline Road at FM 2218)			2		4		6	1	6.0
Refine Existing Condition Diagram (Powerline Road at Spacek Road)			1		2		3	1	3.0
Proposed Signal Layout (Powerline Road at FM 2218)			2	4	24		30	1	30.0
Proposed Signal Details (Powerline Road at FM 2218)	1		4	8	16		29	1	29.0
Temporary Signal Details (Powerline Road at FM 2218) (2 Phases/2 Steps)	2		4	8	32		46	2	23.0
Temporary Signal Layout (Powerline Road at FM 2218) (2 Phases/2 Steps)	2		2	4	16		24	2	12.0
Traffic Signal Notes and Standard Drawings	1		4	4	16		25	15	1.7
Quantities	2	4	16	60	60		142		
Cost Estimates	2	4	8	16			30		
QA/QC	24	48					72	N/A	
Subtotal Final Design - 70% Design	52	128	236	658	976	0	2050	162	

LOE

Project Name	**Powerline Road (Seg. 1)**
Consultant	**infraTECH Engineers & Innovators, LLC**
Project Number	**23405**
Date	**2025-02-06**

Final Design - 95% Design									
Title sheet					1		1	2	0.5
Index sheet			1		2		2	1	2.0
Overall project layout			2		2		4	2	2.0
Typical sections				2	4		6	2	3.0
General notes	1	1	1	2	2		7	2	3.5
Demolition sheet				1	4		5	7	0.7
Horizontal alignment sheet					1		1	1	1.0
Roadway plan and profile sheet (500 LF/Sheet)	2	2	8	28	42		82	14	5.9
Intersection details		1	1	2	8		12	2	6.0
Roadway details		1	2	4	4		11	1	11.0
Driveway table and detail		1	2	4	4		11	1	11.0
Water and wastwater relocation sheets		4	8	24	24		60	3	20.0
Cross Sections (Every 100')		1	2	8	24		35	24	1.5
Roadway standard drawings					1		1	8	0.1
Prepare overall drainage areas maps (external and internal)		1	1	4	16		22	10	2.2
Determine proposed peak flows for the subcomponents of the drainage system		1	2	8	4		15	N/A	
Design and analyze proposed storm sewer systems using OpenROADS/GEOPAK		4	8	40	16		68	N/A	
Design of temporary drainage system		1	4	16	8		29	N/A	
Hydrologic data sheets			1	2	4		7	2	3.5
Hydraulic data sheets			1	8	8		17	4	4.3
Culvert layout sheets		1	2	8	12		23	2	11.5
Drainage plan and profile sheets including profile grade line of parallel ditches (if applicable)	2	4	2	24	32		64	14	4.6
Drainage laterals sheet		2	8	16	16		42	2	21.0
Miscellaneous and special drainage details sheets		1	6	8	12		27	2	13.5
SPM- Signing and Pavement Marking Layout	1		2	4	8		15	7	2.1
SPM-Summary of Small Signs	1			1	2		4	1	4.0
SPM- Standards					1		1	8	0.1
Proposed Signal Layout (Powerline Road at FM 2218)			1	4	16		21	1	21.0
Proposed Signal Details (Powerline Road at FM 2218)			1	2	8		11	1	11.0
Temporary Signal Details (Powerline Road at FM 2218) (2 Phases/2 Steps)	1		2	4	8		15	2	7.5
Temporary Signal Layout (Powerline Road at FM 2218) (2 Phases/2 Steps)			1	2	4		7	2	3.5
Traffic Signal Notes and Standard Drawings				2	1		3	15	0.2
Confirmation of Power Source				2	2		4		
Quantities	1	2	8	24	40		75		
Cost Estimates	1	1	4	8			14		
Prepare project Manual (specification, bid forms)	8	4	16	24	4		56		
QA/QC	16	40					56	N/A	
Subtotal Final Design - 95% Design	34	73	97	286	345	0	834	143	
Bid Ready 100% Design - Final Submittal									
Title sheet	0.5				0.5		1	1	1.0
Index sheet	0.5		0.5		1		2	1	2.0
Overall project layout					1		1	1	1.0
Typical sections				0.5	1		1.5	1	1.5
General notes	1		1		1		3	1	3.0
Demolition sheet					2		2	7	0.3
Horizontal alignment sheet							0	1	0.0
Roadway plan and profile sheet (500 LF/Sheet)	1	1	2	8	16		28	14	2.0
Intersection details				1	2		3	1	3.0
Roadway details		1	1	2	2		6	1	6.0
Driveway table and detail			1	2	4		7	1	7.0
Water and wastwater relocation sheets		2	4	4	16		26	3	8.7
Cross Sections (Every 100')		1	1	4	16		22	22	1.0
Roadway standard drawings							0	8	0.0
Prepare overall drainage areas maps (external and internal)			1	2	4		7	10	0.7
Determine proposed peak flows for the subcomponents of the drainage system			1	2			3	N/A	
Design and analyze proposed storm sewer systems using OpenROADS/GEOPAK		2	4	20	8		34	N/A	
Design of temporary drainage system		1	4	8	4		17	N/A	
Hydrologic data sheets				1	2		3	2	
Hydraulic data sheets				1	2		3	4	0.8
Culvert layout sheets			1	4	4		9	2	4.5
Drainage plan and profile sheets including profile grade line of parallel ditches (if applicable)		1		8	8		17	14	1.2
Drainage laterals sheet		1	2	4	4		11	2	5.5
Miscellaneous and special drainage details sheets			1	2	4		7	2	3.5

Project Name	**Powerline Road (Seg. 1)**
Consultant	**infraTECH Engineers & Innovators, LLC**
Project Number	**23405**
Date	**2025-02-06**

Drainage standards					1		1	10	0.1
SPM- Signing and Pavement Marking Layout			1	2	4		7	7	1.0
SPM-Summary of Small Signs				1	2		3	1	3.0
SPM- Standards					1		1	8	0.1
Proposed Signal Layout (Powerline Road at FM 2218)			1	2	4		7	1	7.0
Proposed Signal Details (Powerline Road at FM 2218)			1	1	2		4	1	4.0
Temporary Signal Details (Powerline Road at FM 2218) (2 Phases/2 Steps)	1		1	2	4		8	2	4.0
Temporary Signal Layout (Powerline Road at FM 2218) (2 Phases/2 Steps)			1	1	2		4	2	2.0
Traffic Signal Notes and Standard Drawings							0	15	0.0
Traffic Signal Quantities	1			2	8		11		
Confirmation of Power Source				1			1		
Prepare TxDOT permit /LOSA package	2			4	8		14		
Quantities	1	2	4	12	12		191		
Cost Estimates	1	1	2	4			8		
Prepare project Manual (specification, bid forms)	4	2	2	8	2		18		
QA/QC	8	40					48		
Subtotal Bid Ready 100% Design - Final Submittal	21	55	37.5	113.5	152.5	0	539.5	146	
Contract/Bidding									
Attend Pre-Bid Meeting	2		2				4	1	4.0
Questions & Addenda	4	1	4	8	16		33	1	33.0
Subtotal Contract/Bid	6	1	6	8	16	0			
TOTAL FINAL DESIGN	**113**	**257**	**376.5**	**1065.5**	**1489.5**	**0**	**3461.5**		
HOURS SUB-TOTALS	113	257	376.5	1065.5	1489.5	0	**3461.5**		
CONTRACT RATE PER HOUR (INCLUDE AVG HOURLY RATE TIME OVERHEAD AND FF)	$ 330.00	$ 260.00	$ 215.00	$ 162.00	$ 120.00	$ 96.50			
TOTAL LABOR COSTS	$ 37,290.00	$ 66,820.00	$ 80,947.50	$ 172,611.00	$ 178,740.00	$ -	**$ 536,408.50**		
% DISTRIBUTION OF STAFFING	6.95%	12.46%	15.09%	32.18%	33.32%	0.00%	**100%**		

Basic Services- Final Design	**$ 536,408.50**

OTHER DIRECT EXPENSES	QTY	UNIT	RATE	COST
Mileage (billed at current IRS rate)	300	mile	$	$ 201.00
Reproduction (Report, Project Manual, Plans)	1	LS		$ 3,000.00

ODE SUBTOTAL	**$ 3,201.00**

PRIME SUMMARY (BASIC SERVICES)	
TOTAL BASIC SERVICES	$ 875,636.50
TOTAL OTHER DIRECT EXPENSES	$ 3,201.00
TOTAL	$ 878,837.50

Project Name	**Powerline Road (Seg. 1)**
Consultant	**infraTECH Engineers & Innovators, LLC**
Project Number	**23405**
Date	**2025-02-06**

ADDITIONAL SERVICES

TASK DESCRIPTION	Project Manager	Senior Engineer	Project Engineer	Design Engineer	Engineer In Training	Administrative/ Clerical	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
DETENTION POND									
Detention pond design, layout , detail and cross section sheets		4	24	64	48		140	3	46.7
SIGNAL DESIGN AT SPACEK ROAD									
Condition Diagram (Powerline Road at Spacek Road)		1	2	4	16		23	1	23
Preliminary Proposed Signal Layout (Powerline Road at Spacek Road)		1	2	8	32		43	1	43
Preliminary Traffic Signal Timings (Powerline Road at Spacek Road)		2	8	2	2		14	N/A	
Proposed Signal Layout (Powerline Road at Spacek Road) (at 70%, 95% and FINAL Submittals)		1	2	10	28		41	1	41.0
Proposed Signal Details (Powerline Road at Spacek Road)(at 70%, 95% and FINAL Submittals)		2	6	10	22		40	1	40.0
Traffic Signal Timings (Powerline Road at Spacek Road)		4		18			22	N/A	
Traffic Signal Quantity		2	4	12	24		42	1	42.0
LIMITED CONSTRUCTION PHASE SERVICE (T&M)									
Attend a pre-construction meeting	2		2				4	N/A	
Review Shop Drawings	2			16			18	N/A	
Respond to contractors RFI's (justifiable number of RFI's)	30	12	40	48	43.5		173.5	N/A	
Participate in a substantial completion walkthrough	4		4				8	N/A	
Prepare record drawings after project completion	2		8	40			50	N/A	
HOURS SUB-TOTALS	40	29	102	232	215.5	0	**618.5**		
CONTRACT RATE PER HOUR (INCLUDE AVG HOURLY RATE TIME OVERHEAD AND FF)	$ 330.00	$ 260.00	$ 215.00	$ 162.00	$ 120.00	$ 96.50			
TOTAL LABOR COSTS	$ 13,200.00	$ 7,540.00	$ 21,930.00	$ 37,584.00	$ 25,860.00	$ -	**$ 106,114.00**		
% DISTRIBUTION OF STAFFING	2.46%	1.41%	4.09%	7.01%	4.82%	0.00%	**20%**		

Additional Services	**$ 106,114.00**

Project Name	**Powerline Road (Seg. 1)**
Consultant	**infraTECH Engineers & Innovators, LLC**
Project Number	**23405**
Date	**2025-02-06**

OTHER DIRECT EXPENSES	QTY	UNIT	COST	COST
Milage (billed at current IRS rate)	100	mile	$	$ 67.00
Turning Movement Count (Weekday)-13 Hours	1	each	$ 750.00	$ 750.00

ODE SUBTOTAL	**$ 817.00**

PRIME SUMMARY (ADDITIONAL SERVICES)	
TOTAL ADDITIONAL SERVICES	$ 106,114.00
TOTAL OTHER DIRECT EXPENSES	$ 817.00
TOTAL	$ 106,931.00

Project Name	**Powerline Road (Seg. 1)**
Consultant	**FCM Engineers, PC**
Project No.	**23405**
Date	**2025-02-06**

BASIC SERVICES

TASK DESCRIPTION	Principal	Sr. Project Manager	Senior Project Engineer	Project Engineer	CADD Technician	Administrative/Clerical	TOTAL LABOR HRS. & COSTS	NO OF DWGS
PRELIMINARY ENGINEERING REPORT-PER (30%)								
TCP-Review Alternative Concepts to Implement the Project	1	2	2	2			7	
TCP-Conduct Site Visits to Review Conditions and Detours		3		3			6	
TCP-Review Existing Data		2	2	2			6	
TCP-Project Coordination Meetings		6					6	
TCP-Develop TCP Phasing with Exhibits		2	4	8	24		38	
							0	
FINAL DESIGN								
Develop TCP General Sheets,Phases 1 & 2 Construction Phaseings, Sequencing Detour Plans		16	32	36	48		132	10
Prepare TCP Layou for Phases 1 and 2		16	36	24	60		136	13
Prepare TCP Intersection Plans for Minor, Major and Signalized Intersections Including Standard Details and Miscellaneous Details		4	8	16	48		76	5
QA/QC	4	6	6				16	
Addressing submittal comments		6	6				12	
Project management and meetings		8					8	
TCP SUBTOTAL	5	71	96	91	180	0	443	
Storm Water Pollution Prevention Plan (SW3P)								
SWPPP drawings	2	8	16	24	40		90	6
SWPPP Standard details			1	1	4		6	4
Field visit and site reconnaissance		2	2	2			6	N/A
SWPPP specification		1	2	2			5	N/A
SWPPP construction quantities & cost estimate			2	2			4	N/A
QAQC	1	3	3				7	N/A
Addressing submittal comments		4	4				8	N/A
Project management and meetings		2	2	2			6	N/A
SW3P SUBTOTAL	3	20	32	33	44	0	132	
							0	N/A
SUBTOTAL-FINAL DESIGN	**8**	**91**	**128**	**124**	**224**	**0**	**575**	
HOURS SUB-TOTALS	8	91	128	124	224	0	**575**	
CONTRACT RATE PER HOUR (INCLUDE AVG HOURLY RATE TIME OVERHEAD AND FF)	$ 240.00	$ 225.00	$ 195.00	$ 165.00	$ 105.00	$ 99.00		
TOTAL LABOR COSTS	$ 1,920.00	$ 20,475.00	$ 24,960.00	$ 20,460.00	$ 23,520.00	$ -	**$ 91,335.00**	
% DISTRIBUTION OF STAFFING	2.10%	22.42%	27.33%	22.40%	25.75%	0.00%	**100%**	

BASIC SERVICES SUBTOTAL	**$ 91,335.00**

OTHER DIRECT EXPENSES	QTY	UNIT	RATE	COST
Printing / Copying	1	LS	$ 200.00	$ 200.00

ODE SUBTOTAL	**$ 200.00**

SUMMARY (BASIC SERVICES)	
TOTAL BASIC SERVICES	$ 91,335.00
TOTAL OTHER DIRECT EXPENSES	$ 200.00
TOTAL	$ 91,535.00

Project Name	**Powerline Road (Seg. 1)**
Consultant	**All-Terra Engineering**
Project No.	**23405**
Date	**2025-02-06**

ADDITIONAL SERVICES

TASK DESCRIPTION	Senior Engineer	Graduate Engineer	Engineering Assistant	Project Engineer	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
GEOTECHNICAL							
PER PHASE							
Initial site visit	4				4	N/A	#VALUE!
Engineering, coordination, supervision, analysis, slope stabilities, and report preparation	24	60	8		92	N/A	#VALUE!
SUBTOTAL 2.P STUDY PHASE	**28**	**60**	**8**	**0**	**96**		
3.P DESIGN PHASE							
					0	N/A	#VALUE!
					0	N/A	#VALUE!
SUBTOTAL 3.P DESIGN PHASE	**0**	**0**	**0**	**0**	**0**		
HOURS SUB-TOTALS	28	60	8	0	**96**		
CONTRACT RATE PER HOUR (INCLUDE AVG HOURLY RATE TIME OVERHEAD AND FF)	$ 150.00	$ 85.00	$ 60.00	$ -			
TOTAL LABOR COSTS	$ 4,200.00	$ 5,100.00	$ 480.00	$ -	**$ 9,780.00**		
% DISTRIBUTION OF STAFFING	42.94%	52.15%	4.91%	0.00%	**100%**		

ADDITIONAL SERVICES SUBTOTAL	**$ 9,780.00**

Field Activities	QTY	UNIT	RATE	COST
Mobe/demobe of drill rig (1 for roadway and 1 for pond)	2	LS	$ 300.00	$ 600.00
Coring of existing pavement at 13 locations	13	each	$ 80.00	$ 1,040.00
Drilling/sampling of 15 borings to 20 feet	300	feet	$ 18.00	$ 5,400.00
Locate/identify/mark borings in the field (including Texas 811 clearance application) by graduate engineer	6	hours	$ 85.00	$ 510.00
Field logging of soil samples by qualified technician	30	hours	$ 65.00	$ 1,950.00
Traffic control (cones, signs, technician as flagman during coring, drilling, hole grouting along the roadway)	1	LS	$ 1,600.00	$ 1,600.00
Grouting of 13 boreholes along the existing pavement	300	feet	$ 9.00	$ 2,700.00
Vehicle Charge	5	per trip	$ 60.00	$ 300.00
FIELD ACTIVITY SUBTOTAL				**$ 14,100.00**
Laboratory Testing	QTY	UNIT	RATE	COST
Atterberg Limits (ASTM D4318)	48	each	$ 60.00	$ 2,880.00
% Pass No. 200 Sieve (ASTM D1140)	36	each	$ 46.00	$ 1,656.00
Moisture Content (ASTM D2216)	124	each	$ 9.00	$ 1,116.00
Unconfined Compression (ASTM D2166)	20	each	$ 44.00	$ 880.00
Standard Proctor Test (ASTM D698)	1	each	$ 175.00	$ 175.00
California Bearing Ratio, 3-Points per set (ASTM D1883)	3	each	$ 185.00	$ 555.00
LABORATORY TESTING SUBTOTAL				**$ 7,262.00**

GEOTECHNICAL SUMMARY	
TOTAL ADDITIONAL SERVICES	$ 9,780.00
TOTAL FIELD ACTIVITY	$ 14,100.00
TOTAL LABORATORY TESTING	$ 7,262.00
TOTAL	$ 31,142.00

Project Name	**Powerline Road (Seg. 1)**
Consultant	**CivilCorp**
Project No.	**23405**
Date	**2025-02-06**

ADDITIONAL SERVICES

TASK DESCRIPTION	Support Manager	RPLS Project Manager	Senior Survey Technician	Survey Technician	GIS Operator	2 - Person Survey Crew	3 - Person Survey Crew	Administrative/Clerical	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
SURVEY											
Existing Right of Way Mapping											
Project Abstracting and boundary/ROW determination (approx 35 adjoining tracts)	3	22	27	53	4	70			179		
Prepare Control Index Sheet	1	1	3	8					13		
Prepare Horizontal and Vertical Control Sheets	1	1	3	8					13		
Prepare Existing ROW map Cat 2in PDF format	8	19	38	52	7				124		
Topographic Survey and Control											
Establish Project Control (5/8 IR W/Cap at 1000' interval)	1	3	4	4		6	12		30		
Obtain Right of Entry (est 35 parcels)	1	12		4	6	8		35	66		
Topographic Survey (up to 50' past existing ROW)	1	6	6	12		55	15		95		
Topographic Survey for detention pond		1	1	1		7			10		
Hydraulic X sections to 500' upstream and downstream at 2 locations		1	1	2		15			19		
Perform 811 One Call and Tie Marked and above ground utilities	1	2	1	2	5	12			23		
Prepare 2D and 3D deliverables and Cat 6 Cond II topo map	1	12	28	36				2	79		
Update Orthometric Photos (UAV)	1	1	3		5	12			22		
SUBTOTAL PER PHASE	**19**	**81**	**115**	**182**	**27**	**185**	**27**	**37**	**673**		
HOURS SUB-TOTALS	19	81	115	182	27	185	27	37	**673**		
CONTRACT RATE PER HOUR (INCLUDE AVG HOURLY RATE TIME OVERHEAD AND FF)	$ 238.00	$ 212.00	$ 126.00	$ 101.00	$ 108.00	$ 190.00	$ 225.00	$ 96.50			
TOTAL LABOR COSTS	$ 4,522.00	$ 17,172.00	$ 14,490.00	$ 18,382.00	$ 2,916.00	$ 35,150.00	$ 6,075.00	$ 3,570.50	**$ 102,277.50**		
% DISTRIBUTION OF STAFFING	4.42%	16.79%	14.17%	17.97%	2.85%	34.37%	5.94%	3.49%	**100%**		

ADDITIONAL SERVICES SUBTOTAL	**$ 102,277.50**

OTHER DIRECT EXPENSES	QTY	UNIT	RATE	COST
Mileage (billed at current IRS rate)	840	each	$	$ 562.80
GPS RTK Base	150	hour	$ 30.00	$ 4,500.00

ODE SUBTOTAL	**$ 5,062.80**

SURVEY SUMMARY	
TOTAL ADDITIONAL SERVICES	$ 102,277.50
TOTAL OTHER DIRECT EXPENSES	$ 5,062.80
TOTAL	$ 107,340.30

OPTIONAL ADDITIONAL SERVICES

TASK DESCRIPTION	Support Manager	RPLS Project Manager	Senior Survey Technician	Survey Technician	GIS Operator	2 - Person Survey Crew	3 - Person Survey Crew	Administrative/Clerical	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
SURVEY											
Construction Servcies (T&M)											
Verify project control (3 mobilizations)	3	3	9	6			30		51		
Stake proposed ROW (3 mobilizations)	3	3	8	10			60		84		
									0	N/A	
SUBTOTAL -ADDITIONAL SERVICES	**6**	**6**	**17**	**16**	**0**	**0**	**90**	**0**	**135**		
HOURS SUB-TOTALS	6	6	17	16	0	0	90	0	**135**		
CONTRACT RATE PER HOUR (INCLUDE AVG HOURLY RATE TIME OVERHEAD AND FF)	$ 238.00	$ 212.00	$ 126.00	$ 101.00	$ 108.00	$ 190.00	$ 225.00	$ 96.50			
TOTAL LABOR COSTS	$ 1,428.00	$ 1,272.00	$ 2,142.00	$ 1,616.00	$ -	$ -	$ 20,250.00	$ -	**$ 26,708.00**		
% DISTRIBUTION OF STAFFING	1.40%	1.24%	2.09%	1.58%	0.00%	0.00%	19.80%	0.00%	**26%**		

ADDITIONAL SERVICES SUBTOTAL	**$ 26,708.00**

OTHER DIRECT EXPENSES	QTY	UNIT	RATE	COST
Mileage (billed at current IRS rate)	360	each	$	$ 241.20
GPS RTK Base	80	hour	$ 30.00	$ 2,400.00

Project No.	**23405**
Date	**2025-02-06**
ODE SUBTOTAL	**$ 2,641.20**

OPTIONAL ADDITIONAL SERVICES

TASK DESCRIPTION	Support Manager	RPLS Project Manager	Senior Survey Technician	Survey Technician	GIS Operator	2 - Person Survey Crew	3 - Person Survey Crew	Administrative/Clerical	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
SURVEY											
FINAL DESIGN											
Plats (T&M)											
Prepare Parcel Plats and Metes and bounds (per parcel)	1	2	4	8	1	2			18		
									0	N/A	
SUBTOTAL 3.P DESIGN PHASE	**1**	**2**	**4**	**8**	**1**	**2**	**0**	**0**	**18**		
HOURS SUB-TOTALS	1	2	4	8	1	2	0	0	**18**		
CONTRACT RATE PER HOUR (INCLUDE AVG HOURLY RATE TIME OVERHEAD AND FF)	$ 238.00	$ 212.00	$ 126.00	$ 101.00	$ 108.00	$ 190.00	$ 225.00	$ 96.50			
TOTAL LABOR COSTS	$ 238.00	$ 424.00	$ 504.00	$ 808.00	$ 108.00	$ 380.00	$ -	$ -	**$ 2,462.00**		
% DISTRIBUTION OF STAFFING	0.23%	0.41%	0.49%	0.79%	0.11%	0.37%	0.00%	0.00%	**2%**		

ADDITIONAL OPTIONAL SERVICES SUBTOTAL	**$ 2,462.00**

OTHER DIRECT EXPENSES	QTY	UNIT	RATE	COST
Mileage (billed at current IRS rate)	45	each	$	$ 30.15
GPS RTK Base	2	hour	$ 30.00	$ 60.00

ODE SUBTOTAL	**$ 90.15**

Estimated Fee per parcel	**$ 2,552.15**
Estimated Fee for 20 parcels	**$ 51,043.00**

SURVEY SUMMARY	
TOTAL OPTIONAL ADDITIONAL SERVICES	$ 26,708.00
TOTAL OTHER DIRECT EXPENSES	$ 2,641.20
TOTAL OPTIONAL ADDITIONAL SERVICES-PARCEL PLATS AND METES & BOUNDS (20 parcels)	$ 51,043.00
TOTAL	$ 80,392.20

Project Name	**Powerline Road (Seg. 1)**
Consultant	**LAN**
Project No.	**23405**
Date	**2025-02-06**

ADDITIONAL SERVICES

TASK DESCRIPTION	Utility Project Manager	Senior Engineer	Project Engineer	Engineer In Training	Senior Engineer Tech	SUE Field Manager	Senior Utility Coordinator	Utility Coordinator	Administrative/ Clerical	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
PROJECT MANAGEMENT AND ADMINISTRATION												
1. Project Management and Coordination	30								8	38		
UTILITY ADJUSTMENT COORDINATION												
A. Utility Coordination												
1a. Develop Work Plan	2	2					2	2		8		
1b. Initial Project Meeting and Notice of Proposed Construction (NOPC) Forms	1		1				8	8		18		
1c. External Communications	4		4				8	8		24		
1d. Permits for Right of Entry	1							2	2	5		
1e. Notice of Required Accommodation (NORA) Forms	1		1				8	8		18		
1f. Progress Meetings	6		6				16	16		44		
1g. Coordinate with Local Committees and Councils	1		1				4	4		10		
3. Develop and Maintain Utility Conflict Table	2		12				16	16		46		
4. Advise Utility Companies on Project Characteristics	2		2				6	6		16		
B. Utility Agreement Assemblies										0		
1. Utility Agreement Assemblies (Assume 7 Assemblies)	4		4				16	16		40		
2. Electronically Submit Utility Agreement Assemblies	1						1		2	4		
3. Determine and Process Joint Use Agreements		4	4				4	4		16		
4. Prepare, Compile and Review Supporting Documents		4	8				8	8		28		
5. Maintain Set of Records for Adjustment Costs			4				8	8		20		
UTILITY ENGINEERING												
A. Coordination of Engineering Activities												
1. Create and Maintain Utility Layout Sheets	2			20	20					42		
1a. Determine Facilities in Conflict		4	4				8	8		24		
1b. Determine Facilities to be Removed or Abandoned		2	2				4	4		12		
1c. Determine Facilities to Remain in Place		2	2				4	4		12	14	
2. Public and Individual Meetings with Utility Owners	4	4					16	16		40		
3. Review of Utility's Proposed Adjustments	4	4					8	8		24		
UTILITY ENGINEERING INVESTIGATION												
A. Quality Levels (QL)												
1. Coordinate/ Manage/ Quality Control QL D	4					4						
2. Coordinate/ Manage/ Quality Control QL C	4					4						
3. Coordinate/ Manage/ Quality Control QL B	8					8						
4. Coordinate/ Manage/ Quality Control QL A	4					4						
5. Create and Maintain Existing Utility CADD File		4		8	8							
SUBTOTAL -PRELIMINARY ENGINEERING PHASE	**85**	**30**	**55**	**28**	**28**	**20**	**145**	**146**	**12**	**451**		
HOURS SUB-TOTALS	85	30	55	28	28	20	145	146	12			
CONTRACT RATE PER HOUR (INCLUDE AVG HOURLY RATE TIME OVERHEAD AND FF)	$ 292.58	$ 292.58	$ 220.93	$ 133.48	$ 164.20	$ 154.42	$ 164.95	$ 134.35	$ 116.89			
TOTAL LABOR COSTS & REIMBURSABLE EXPENSES	$ 24,869.30	$ 8,777.40	$ 12,151.15	$ 3,737.44	$ 4,597.60	$ 3,088.40	$ 23,917.75	$ 19,615.10	$ 1,402.68	**$ 102,156.82**		
% DISTRIBUTION OF STAFFING	24.34%	8.59%	11.89%	3.66%	4.50%	3.02%	23.41%	19.20%	1.37%	**100%**		

TASK DESCRIPTION	UNIT	RATE	ESTIMATED QUANTITY	TOTAL ESTIMATED COST
SUBSURFACE UTILITY ENGINEERING (SUE)				
SUE Quality Level D				
Includes labor and equipment for records research, CADD, and mapping.	LF	$0.95	18,400	$17,480.00
SUE Quality Level C				
Includes labor and equipment for records research, CADD, and mapping.	LF	$1.15	13,200	$15,180.00

ADDITIONAL SERVICES SUBTOTAL	**$ 134,816.82**

TASK DESCRIPTION	UNIT	RATE	ESTIMATED QUANTITY	TOTAL ESTIMATED COST
SUBSURFACE UTILITY ENGINEERING (SUE)				
SUE Quality Level B				
Includes labor and equipment for records research, designating, engineering, CADD, mapping, and limited traffic control	LF	$2.25	12,000	$27,000.00
SUE Quality Level A				
Test holes 5'-10' deep (Includes labor and equipment for engineering, CADD,surveying, vacuum excavation and limited traffic control)	EA	$1,500.00	6	$9,000.00
SUE Mobilization/Demobilization				
This cost is intended to be an expense compensation for mobilizing/demobilizing personnel and equipment portal to portal. Vacuum excavation truck, equipment, travel time for 2-man crew, fuel. Mileage log to be provided.	MILE	$4.00	400	$1,600.00
SUBTOTAL - SUBSURFACE UTILITY ENGINEERING (SUE)				**$37,600.00**

Project No.	**23405**
Date	**2025-02-06**

OTHER DIRECT EXPENSES	UNIT	AUTHORIZED RATE	ESTIMATED QUANTITY	TOTAL ESTIMATED COST
Mileage (billed at current IRS rate)	MILE		400	$280.00
Environmental Field Supplies (lathes, stakes, flagging, spray paint, etc.)	DAY	$35.00	10	$350.00
Portable Message Board	DAY	$500.00	2	$1,000.00
Traffic Control Services, Arrow Boards and Attenuator Trucks - (includes labor, equipment and fuel)	DAY	$5,150.00	2	$10,300.00
SUBTOTAL DIRECT EXPENSES				**$11,930.00**

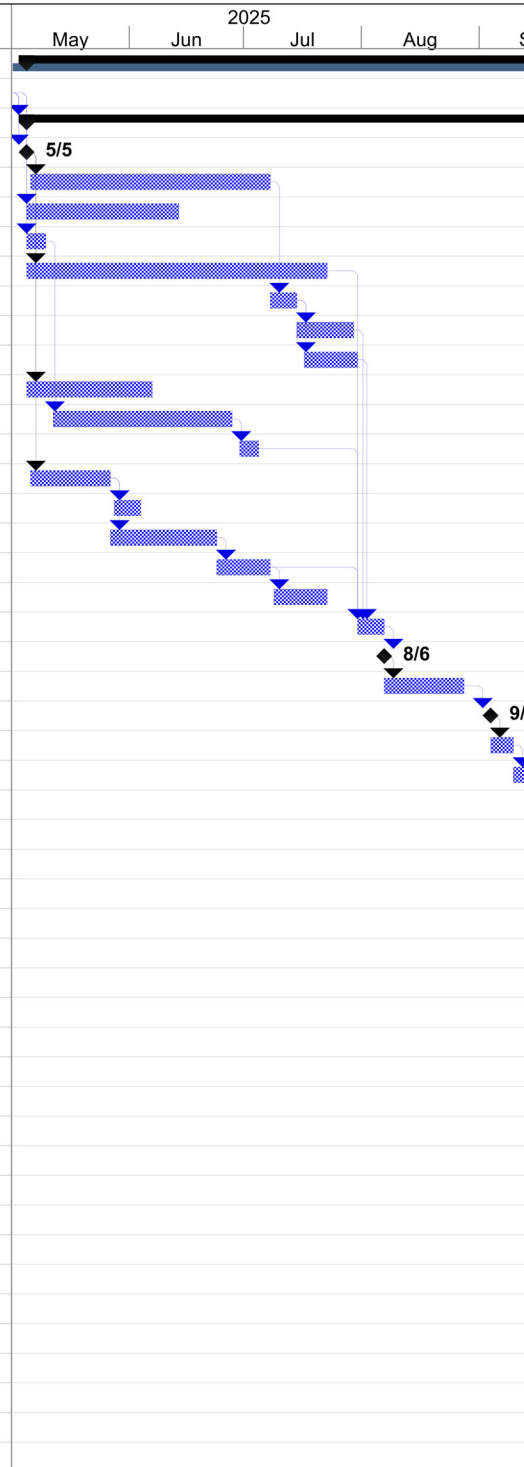
OPTIONAL ADDITIONAL SERVICES SUBTOTAL	**$49,530.00**

OTHER SUMMARY	
TOTAL ADDITIONAL SERVICES	$ 134,816.82
TOTAL OPTIONAL ADDITIONAL SERVICES	$49,530.00
TOTAL	$ 184,346.82

Project Name: Powerline Road Segment 1
Provider: infraTECH Engineers & Innovators, LLC
Project No. 23405

EXHIBIT "C"
Project Schedule
4/10/2024

ID	Task Name	Duration	Start	Finish	Predecessors
1	**Powerline Road_Seg 1 (PROJECT#23405x)**	**283 days**	**Mon 5/5/25**	**Fri 6/5/26**	
2	Start Work = Date of Execution	1 day	Tue 4/1/25	Tue 4/1/25	
3	**PRELIMINARY ENGINEERING REPORT (PER)-PHASE I**	**97 days**	**Mon 5/5/25**	**Tue 9/16/25**	2
4	Kick-Off Meeting	0 days	Mon 5/5/25	Mon 5/5/25	2FS+2 days
5	Field Survey (Topo)+Controlled Survey	45 days	Tue 5/6/25	Mon 7/7/25	4FS+1 day
6	Existing Right-of-Ways Maps Preparation	30 days	Mon 5/5/25	Fri 6/13/25	2FS+5 days
7	Evaluation of Existing Site Conditions	5 days	Mon 5/5/25	Fri 5/9/25	2
8	Drainage Analysis and Report	57 days	Mon 5/5/25	Tue 7/22/25	4
9	Develop Horizontal Alignment and Vertical Profile	5 days	Tue 7/8/25	Mon 7/14/25	5
10	Schematic Layout	11 days	Tue 7/15/25	Tue 7/29/25	9
11	Preliminary Cross Sections	10 days	Thu 7/17/25	Wed 7/30/25	9FS+2 days
12	Traffic Data Collection & Signal Warrant Analysis	25 days	Mon 5/5/25	Fri 6/6/25	4
13	Geotechnical Investigation	35 days	Mon 5/12/25	Fri 6/27/25	7
14	Geotechnical Report	5 days	Mon 6/30/25	Fri 7/4/25	13
15	SUE QL C AND D	15 days	Tue 5/6/25	Mon 5/26/25	4FS+1 day
16	Initial Utility Coordination	5 days	Wed 5/28/25	Tue 6/3/25	15FS+1 day
17	SUE QL B	20 days	Tue 5/27/25	Mon 6/23/25	15
18	Prepare Perliminary Utility Conflict Table	10 days	Tue 6/24/25	Mon 7/7/25	17
19	SUE QL A	10 days	Wed 7/9/25	Tue 7/22/25	18FS+1 day
20	Draft Preliminary Engineering Report	5 days	Thu 7/31/25	Wed 8/6/25	10,11,8,14,18
21	Submit Draft PER Report to FBC & Drainage Study Report to FBCDD	0 days	Wed 8/6/25	Wed 8/6/25	20
22	Client Review of Draft PER Report	15 days	Thu 8/7/25	Wed 8/27/25	21
23	PER Presentation Meeting	0 days	Wed 9/3/25	Wed 9/3/25	22FS+5 days
24	Address Comments and Submit Final PER Report	4 days	Thu 9/4/25	Tue 9/9/25	23
25	FBCDD Approavl of Drainage Study	3 days	Wed 9/10/25	Fri 9/12/25	24
26	FBC Approval of Final PER Report	2 days	Mon 9/15/25	Tue 9/16/25	25
27	**FINAL DESIGN - PHASE II**	**182 days**	**Wed 9/17/25**	**Tue 6/2/26**	
28	Design Kick-Off Meeting	0 days	Wed 9/17/25	Wed 9/17/25	26FS+1 day
29	**1st Submittal (70% Submittal)**	**114 days**	**Thu 9/18/25**	**Thu 2/26/26**	
30	Prepare Construction Plans	82 days	Thu 9/18/25	Tue 1/13/26	28
31	Prepare Utility Conflict Table	2 days	Wed 1/14/26	Thu 1/15/26	30
32	Prepare Construction Cost	2 days	Wed 1/14/26	Thu 1/15/26	30
33	QCQA Plans	4 days	Fri 1/16/26	Wed 1/21/26	32
34	Regulatory Permit Submittal	1 day	Thu 1/22/26	Thu 1/22/26	33
35	Submittal to Private and Public Utilty	1 day	Thu 1/22/26	Thu 1/22/26	33
36	Submittal to County	0 days	Thu 1/22/26	Thu 1/22/26	34,35,33
37	County Review	15 days	Fri 1/23/26	Thu 2/12/26	36
38	Review By Utility Companies & TxDOT	25 days	Fri 1/23/26	Thu 2/26/26	34,35
39	**2nd Submittal (95% Submittal)**	**78 days**	**Fri 2/13/26**	**Tue 6/2/26**	
40	Prepare 95% Set	25 days	Fri 2/13/26	Thu 3/19/26	37
41	Address Utility Comments	15 days	Fri 2/27/26	Thu 3/19/26	38
42	Update Utility Conflcit Table	5 days	Fri 3/20/26	Thu 3/26/26	40
43	Update Construction Cost Estimate	3 days	Fri 3/20/26	Tue 3/24/26	40
44	Prepare Project Manual	5 days	Fri 3/20/26	Thu 3/26/26	40
45	Assessment of Expected Construction Time	3 days	Fri 3/20/26	Tue 3/24/26	40
46	Prepare Bid Form	2 days	Wed 3/25/26	Thu 3/26/26	43
47	QCQA Plans	3 days	Fri 3/27/26	Tue 3/31/26	46,40,44,45,43
48	Submittal to County	0 days	Tue 3/31/26	Tue 3/31/26	40,47



FCM Engineers, P.C.

3300 S. Gessner Road
Suite 249
Houston, Texas 77063
T-713-706-4414
F-713-706-4410

February 6, 2025

Mr. Syed Haq, PE, MBA
Vice President
InfraTech Engineers & Innovators, LLC
11111 Wilcrest Green Dr, Suite 410
Houston, TX 77042

Re: Fort Bend County 2023 Mobility Project – Powerline Road Seg 1 from FM2218 to Highland Meadows Drive

Subject: Design Fee Proposal for Traffic Control Plan (TCP) and Storm Water Pollution Prevention Plan (SW3P)

Dear Mr. Haq:

Attached are the fee proposals for Phases I and II design for Traffic Control Plan (TCP) and Storm Water Pollution Prevention Plan (SW3P). The fee proposals assume that InfraTech Engineers & Innovators, LLC will provide a CAD file of a complete topographic and boundary survey along the streets located in the area within the scope. The topographic and boundary survey will include the drainage inlets, ditches and any drainage appurtenances, pavement limits, ROW limits and proposed cross section of existing and proposed roadway. The TCP fee proposal is in the amount of Sixty-Nine Thousand Nine Hundred Ten Dollars and Zero Cent ($69,910.00) and SW3P fee proposal is in the amount of Twenty-One Thousand Six Hundred Twenty-Five Dollars and Zero Cent ($21,625.00). The total fee proposal for both TCP and SW3P is in the amount of Ninety-One Thousand Five Hundred Thirty-Five Dollars and Zero Cent ($91,535.00).

Design Scope and Deliverables

The followings are the design scope and deliverables associated with the fee proposal:

1. Prepare Traffic Control Plans for Powerline Road Seg 1 from FM2218 to Highland Meadows Drive in conformance with the latest edition of MUTCD and Fort Bend County design manuals.
2. TCP and SW3P Drawings will be prepared on 1” to 40’ scale
3. SW3P will be prepared based on Stormwater Quality Management Guidance manual and Storm Water Management handbook for Construction Activities prepared by City of Houston, Harris County and Harris County Flood Control District current edition; and Fort Bend design Manual.
4. Deliverables will be made to Infra-Tech Engineers & Innovators, LLC based on submittal schedule. The deliverable will include cost estimate, TCP and SW3P drawings. The final drawings will be signed and sealed.
5. Deliverables sizes and format will be in accordance to the requirements and as requested by InfraTech Engineers & Innovators, LLC.

We look forward to working with InfraTech Engineers & Innovators, LLC in this very important Fort Bend County Mobility Project. If you have any questions, please let me know.

Sincerely
FCM Engineers P.C.

Dr. Frank C. Mbachu, P.E., DEE
President

FCM/mh
cc: FCM Project File # 2024101

FCM Engineers, PC

3300 S. Gessner Rd. Suite 249, Houston, Texas 77063
T-713-706-4414 F-713-706-4410

Project Name: Powerline Road Seg 1 from FM 2218 to Highland meadows Drive										Sub consultant's Name: FCM Engineers, PC
Fort Bend County Mobility Project No. 23405 Proposal Breakdown Date: February 6, 2025		Principal	Senior Project Manager	Senior Project Engineer	Project Engineer	CADD Technician	Clerical	Sub-total Hours	Subtotal (Cost $)	Subtotal (Cost $) w/ 10% Markup
		Billing Rate per Hour								
Task No.	Task Description	$240.00	$225.00	$195.00	$165.00	$105.00	$99.00			
TRAFFIC CONTROL PLAN PHASES I & II		* L E V E L O F E F F O R T								
	Phase I Preliminary Engineering									
1	Review Alternative Concepts to Implement the Project	1	2	2	2			7	$1,410.00	
2	Conduct Site Visits to Review Conditions and Detours		3		3				$1,170.00	
3	Review Existing Data		2	2	2				$1,170.00	
4	Project Coordination Meetings		6						$1,350.00	
5	Develop TCP Phasing with Exhibits		2	4	8	24			$5,070.00	
	Phase II Design									
6	Develop TCP General Sheets,Phases 1 & 2 Construction Phaseings, Sequencing Detour Plans (Approx 10 sheets)		16	32	36	48		132	$20,820.00	
7	Prepare TCP Layou for Phases 1 and 2 (Approx.13 Sheets)		16	36	24	60		136	$20,880.00	
8	Prepare TCP Intersection Plans for Minor, Major and Signalized Intersections Including Standard Details and Miscellaneous Details (Approx 5 Sheets)		4	8	16	48		76	$10,140.00	
9	QA/QC	4	6	6				16	$3,480.00	
10	Addressing Submittal Comments for 70%, 95% &100%		6	6				12	$2,520.00	
11	Project Management and Meetings		8					8	$1,800.00	
	Sub-total Hours	5	71	96	91	180		387	$69,810.00	
	**** Reimbursable Expenses**	**Details**								
12	Travel								$0.00	
13	Postage / Courier								$0.00	
14	Printing / Copying								$100.00	
	Sub-total Hours								$100.00	
								Total:	**$69,910.00**	

* Level of Effort should be ordinary, realistic and reasonable
** Copy of actual receipts will be required for reimbursable expenses at the time of invoicing

FCM Engineers, PC

3300 S. Gessner Rd. Suite 249, Houston, Texas 77063
T-713-706-4414 F-713-706-4410

Project Name: Powerline Road Seg 1 from FM 2218 to Highland meadows Drive									Sub consultant's Name: FCM Engineers, PC		
Fort Bend County Mobility Project No. 23405 Proposal Breakdown Date: February 6, 2025		Principal	Senior Project Manager	Senior Project Engineer	Project Engineer	CADD Technician	Clerical	Sub-total Hours	Subtotal (Cost $)	Subtotal (Cost $) w/ 10% Markup	
		Billing Rate per Hour									
Task No.	Task Description	$240.00	$225.00	$195.00	$165.00	$105.00	$99.00				
STORM WATER POLLUTION PREVENTION PLAN (SW3P)		* L E V E L O F E F F O R T									
	Drawings										
1	SWPPP Drawings (6 Sheets)	2	8	16	24	40		90	$13,560.00		
2	SWPPP Standard Details (X sheet)			1	1	4		6	$780.00		
	Engineering / Project Management										
3	Field Visit and Site Reconnaissance		2	2	2			6	$1,170.00		
4	SWPPP Specifications		1	2	2			5	$945.00		
5	SWPPP Construction Quantities & Cost Estimate			2	2			4	$720.00		
6	QA/QC	1	3	3				7	$1,500.00		
7	Addressing Submittal Comments for 70%, 90% & 100%		4	4				8	$1,680.00		
8	Project Management and Meetings		2	2	2			6	$1,170.00		
	Sub-total Hours	3	20	32	33	44		132	$21,525.00		
	**** Reimbursable Expenses**	**Details**									
11	Travel								$0.00		
12	Postage / Courier								$0.00		
13	Printing / Copying								$100.00		
	Sub-total Hours								$100.00		
								Total:	**$21,625.00**		

* Level of Effort should be ordinary, realistic and reasonable
** Copy of actual receipts will be required for reimbursable expenses at the time of invoicing

CivilCorp
ENGINEERS • SURVEYORS

4611 E. Airline Rd, Ste 300
Victoria, Texas 77904
Telephone: (361) 570-7500
E-Mail: babsher@civilcorp.us

February 5, 2025

Infratech.
Attn: Syed Haq

Re: Fee Proposal for Surveying Services – Powerline Road (Segment 1) from FM 2218 to Highland Meadows Dr

CivilCorp, LLC is pleased to submit this fee proposal for surveying services for the above referenced project. Survey shall conform to Fort Bend County Engineering Design Manual, March 2022 edition.

I. SCOPE OF WORK

Specific survey limits for Powerline Road, Segment 1 area are as follows:
Beginning at FM 2218 proceeding southeast along Powerline Road, a distance of 6,700 feet. The Intersections shall be tied a distance of 300 feet in each direction for a total approximate length of 8,200 linear feet

1. **Existing Right of Way Mapping**
    a. Project abstracting; without the benefit of a title company, obtain deeds of records and plats relating to Powerline Road, adjoining tracts, and intersecting roadways.
    b. Establish the existing right-of-way of the Powerline Road and intersecting roadways.
    c. Prepare existing right-of-way map of the project, meeting TSPS Category 2 Route survey in PDF format.
    d. Prepare Survey Control Sheets to be delivered in PDF format
    e. Prepare .kml or .shp files as needed for GIS submission of the existing right-of-way.

ESTIMATED LUMP SUM FEE: $49,852.60

2. **Topographic Surveying**
    a. Establish horizontal and vertical control (baseline and Temporary Bench Mark) at intervals not to exceed 1,000 feet. CivilCorp shall coordinate with adjoining project surveyors and design consultants to confirm a single datum is utilized for control.
    b. CivilCorp shall prepare right of entry agreements to allow for field work outside of the right-of-way, short of litigation. Letters will be sent via regular mail or certified mail to landowners as listed by the Fort Bend County Central Appraisal District.

c. Cross sections shall be taken at 100 foot intervals and extend 50 feet beyond the proposed right-of-way line where accessible. The topographic survey is to include edge of pavements, driveways, signs, mailboxes, traffic signals, sidewalks, pavement markings, etc. Structures in clear view and within 100 feet of the existing right-of-way should be surveyed. Crossing drainage channels will be profiled and cross sectioned up and down stream. Existing underground utilities will be collected as marked by other as well as visible surface features. Overhead utilities will be indicated. Gravity sanitary and storm sewers will be located as to top of manholes and inlets, flow line elevations, type, size, and direction of pipes. Water lines will be located by tops of valves, fire hydrants (flush valves) and visible surface features.
d. Cross culverts shall be tied to include headwall, wingwall, flowline, and size information. Hydraulic Cross sections shall be taken at 100' intervals to a distance of 500' both up and downstream of the cross structure.
e. Orthometric photos will be obtained with a UAV to create a mosaic of the project limits.
f. CivilCorp shall perform a Texas 811 One Call for the project limits. All public utility, private utility and pipeline providers will be contacted via the current utility coordination process and all on-site utility markings and other information provided to CivilCorp by these utility and pipeline providers will be collected by standard survey methods and incorporated into the topographic survey base map.
g. CivilCorp shall prepare a TSPS Category 6, Condition 2 Topographic Survey delivered in PDF format.
h. A 2D and 3D survey base map including a digital terrain model or surface will be created and delivered utilizing Microstation Open Roads Designer, release 10.12 or other agreed to version.

ESTIMATED LUMP SUM FEE: $57,487.70

3. Construction Services

a. Check and/or re-set project control referenced to the project baseline and stake the proposed right-of-way limits immediately prior to construction, estimate 3 separate mobilizations.

ESTIMATED HOURLY (NOT TO EXCEED) FEE: $29,349.20

4. Parcel Descriptions

a. Prepare TSPS Category 1A, Condition 3 Land Title Survey- Prepare survey drawing and metes and bounds description in accordance with Fort Bend county Guidelines for property acquisition and add parcels to the existing right-of-way maps.

ESTIMATED FEE: $2,552.15 per parcel
(Approximately 20 Parcels= $51,043.00)

If you have any questions or require additional information, please don't hesitate to call me. We are looking forward to working with you on this project.

CivilCorp, LLC

Brandon Absher, RPLS
Survey Manager

Infratech

By: _____

Title: _____

Date: _____

November 6, 2024

InfraTECH Engineers & Innovators, LLC
11111 Wilcrest Green Drive, Suite 410
Houston, Texas 77042

Attn: Mr. Syed S. Haq, P.E.
Executive Vice President

Re: Proposal
Geotechnical Investigation
Proposed Powerline Road Segment 1 Reconstruction
FM 2218 to Highland Meadows Drive
2023 Mobility Bond Program
Fort Bend County, Texas

All-Terra Proposal No.: APE24-2067

Dear Mr. Haq:

All-Terra Engineering, Inc. (All-Terra) appreciates the opportunity to provide this proposal to perform a geotechnical investigation for the above referenced project. This proposal outlines our understanding of the scope of services to be performed by All-Terra for this project and provides an estimated fee for our services.

A. PROJECT INFORMATION

It is our understanding that a portion of Powerline Road from FM 2218 to Highland Meadows Drive (identified as Segment 1) is being designed by Fort Bend County for reconstruction. The existing roadway portion is a 2-way asphalt roadway with a total length of about 6,400 linear feet. The proposed replacement will be a 4-lane concrete pavement w/ storm sewers and a detention pond (to be identified at a later date). Additionally, 2 traffic signals (one at the intersection with FM 2218 to be relocated and the other at the intersection with Spacek Road) will also be included in the proposed development.

The purpose of the geotechnical investigation will be to determine the subsoil and groundwater conditions within the project area and provide data/ parameters/recommendations that can be used for the design and construction of the

proposed roadway reconstruction, associated underground utilities, traffic signals, and detention pond.

B. SCOPE OF SERVICES

Based upon our understanding of the project requirements, it is proposed that the scope of work for the geotechnical investigation consists of the following tasks:

- Drill/sample a total of fifteen (15) geotechnical borings to a depth of 20 feet beneath the surface within the stretch of the roadway reconstruction and detention pond (to be identified/located later) as shown on the attached Plate No. 1. Prior to the soil drilling/sampling, the existing asphalt pavement will be cored and thicknesses of the existing asphalt and base layers will be measured. GPS coordinates of the actual boring locations during drilling will be obtained for documentation and inclusion on the boring logs of the report. Prior to the drilling/coring activities, a utility clearance will be applied (through Texas 811) in order to ensure that the drilled locations are clear of underground utilities.

- Continuously sample each boring continuously to a depth of 12 feet (continuously to 20 feet for the detention pond borings) and intermittently thereafter, with both disturbed (cohesionless soils) and relatively undisturbed (cohesive soils) samples being obtained, as applicable.

- Measure the depth to groundwater during drilling, approximately 10 minutes after the water is initially encountered, as applicable, and within 15 minutes after the completion of drilling.

- Backfill the boreholes with cement grout after the completion of the drilling activities. The top 18 inches of the boreholes will be backfilled with 12 inches of quickcrete topped with 6 inches of asphalt.

- Clearly mark each boring location and provide the client a layout and GPS coordinates of the borings for the surveyor's use in obtaining boring location survey elevations, stationing, and offset distances, as applicable.

- Perform laboratory testing on soil samples obtained such as moisture content tests, unit weight determinations, Atterberg limits tests, tests to determine the percent soil particles passing a No. 200 sieve, dry density tests, unconfined compression tests, moisture-density relationship test of soils (Standard Proctor), and California Bearing Ratio (CBR) of soils in order to define soil classifications and physical soil properties of the site soils.

- Analyze the laboratory test data to define the engineering characteristics of each soil type.

- Prepare boring logs based upon the results of laboratory tests and visual soil classifications.

- 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, and OSHA soil type classifications pertinent to trench shoring and bracing design as applicable to underground utilities.

- Provide a trench safety letter report that may be used for the design of protection systems for excavations pertaining to the installation of underground utilities.

- Perform rigid pavement design analysis for the proposed roadway reconstruction project using the requirements and guidelines of the American Association of State Highway and Transportation Officials (AASHTO) “AASHTO Guide for Design of Pavements” as well as the requirements and guidelines of Fort Bend County and provide the recommended rigid pavement section.

- Provide recommendations for subgrade preparation and stabilization (depending on the soil type encountered) for the proposed roadway reconstruction.

- Perform a desktop review of published and proprietary records on surface faults within the location of the proposed development in order to determine presence of a surface fault that could adversely impact the proposed development.

- Provide design parameters (bearing, lateral, and torsional) that may be used for the foundation design of traffic signal poles that are included in the proposed project.

- Provide recommendations for subgrade preparation of driveways that will be impacted by the proposed project.

- Provide site and subgrade preparation recommendations as well as erosion control recommendations for the proposed detention pond.

- Perform slope stability analyses to determine the stability of the side slopes of the proposed detention pond in the short-term, rapid drawdown, and long term conditions using subsoil parameters derived from field and laboratory tests. All-Terra will coordinate with the design engineers for the updated designs and cross sections in order to assure proper applicability of our engineering analyses.

- Submit a pdf file of a full geotechnical engineering report that presents the results of the geotechnical engineering study. The report will be prepared and sealed by a

Licensed Professional Engineer trained and experienced in the practice of geotechnical engineering.

C. CONDITIONS

If there are any other restrictions, unusual circumstances, or special requirements regarding the site or this proposed geotechnical study, the Client shall communicate these to All-Terra prior to our commencing our field activities.

D. SCHEDULE

Our field investigation assumes that we will have the right-of-entry to the project area and that the boring locations will be readily accessible and be drilled utilizing a truck mounted drilling rig. We can initiate our field operations within several working days following authorization to proceed and Texas 811 clearance, weather permitting. We anticipate completion of our services and submittal of our report within 3 to 4 weeks after the completion of drilling.

E. ESTIMATED COST

For the scope of services outlined within this proposal, we estimate a total cost of about **$31,142.00**. The breakdown of the estimated cost is as follows:

Item	Estimated Quantity	Unit	Unit Price	Estimated Cost
Field Activities:				
Initial site visit by Senior engineer, P.E.	4	hours	$ 150.00	$ 600.00
Mobe/demobe of drill rig (1 for roadway and 1 for pond)	2	Lump Sum		$ 600.00
Coring of existing pavement at 13 locations	13	each	$ 80.00	$ 1040.00
Drilling/sampling of 15 borings to 20 feet	300	feet	$ 18.00	$ 5,400.00
Locate/identify/mark borings in the field (including Texas 811 clearance application) by graduate engineer	6	hours	$ 85.00	$ 510.00
Field logging of soil samples by qualified technician	30	hours	$ 65.00	$ 1,950.00
Traffic control (cones, signs, technician as flagman during coring, drilling, hole grouting along the roadway)	1	Lump Sum		$ 1,600.00
Grouting of 13 boreholes along the existing pavement	300	feet	$ 9.00	$ 2,700.00
Vehicle Charge	5	per trip	$ 60.00	$ 300.00
Sub-Total				**$ 14,700.00**

Item	Estimated Quantity	Unit	Unit Price	Estimated Cost
Laboratory Testing:				
Atterberg Limits (ASTM D4318)	48	each	$ 60.00	$ 2,880.00
% Pass No. 200 Sieve (ASTM D1140)	36	each	$ 46.00	$ 1,656.00
Moisture Content (ASTM D2216)	124	each	$ 9.00	$ 1,116.00
Unconfined Compression (ASTM D2166)	20	each	$ 44.00	$ 880.00
Standard Proctor Test (ASTM D698)	1	each	$ 175.00	$ 175.00
California Bearing Ratio, 3-Points per set (ASTM D1883)	3	each	$ 185.00	$ 555.00
Sub-Total				**$ 7,262.00**
Engineering, coordination, supervision, analysis, slope stabilities, and report preparation:				
Senior engineer, P.E.	24	hours	$ 150.00	$ 3,600.00
Graduate engineer	60	hours	$ 85.00	$ 5,100.00
Engineering Assistant	8	hours	$ 60.00	$ 480.00
Sub-Total				**$ 9,180.00**
TOTAL FOR THE GEOTECHNICAL INVESTIGATION				**$ 31,142.00**

F. CLOSURE

We appreciate the opportunity to offer our services on your project. We look forward to serving you, and welcome any questions or comments you may have concerning this proposal or our services.

Respectfully submitted,

ALL-TERRA ENGINEERING, INC.
(TBPE F-9770)

Bonni F. Musngi, Jr., P. E.
Senior Geotechnical Engineer

Attachment: Plate No. 1 - Proposed Locations of Borings

File:/server/proposals/APE24-2067_powerline.segment1.docx

- Geotechnical borings that are proposed for the study

ALL-TERRA ENGINEERING	Date: 11/04/24	Proposed Powerline Road Segment 1 Reconstruction FM 2218 to Highland Meadows Drive, Richmond, Fort Bend County **Proposed Locations of Borings**	**Proposal No:** **APE24-2067** **Plate No. 1**

Planning
Engineering
Program Management

3700 West Sam Houston Parkway S, Suite 400 | Houston, TX 77042 | 713.266.6900 | lan-inc.com

SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

Roadway: Powerline Road Segment 1
County: Fort Bend
Limits: FM 2218 to Highland Meadows Drive.

UTILITY ADJUSTMENT COORDINATION

Utility Adjustment Coordination includes communicating, coordinating, and conducting meetings with individual utility companies, Local Public Agencies (LPAs), Texas Department of Transportation staff, maintenance staff, and Fort Bend County staff. The Engineer's utility coordination duties include preparation or assisting others in preparing utility agreement assemblies including utility agreements, utility reimbursable billings, joint use agreements, assisting utility companies with utility permit submittals, and assisting with documentation for advance funding agreements (AFAs).

A. Utility Coordination
Provide utility coordination and liaison activities with involved utility owners, their consultants, and the County to achieve reasonable, timely project notifications. In conjunction with coordination meetings, prepare meeting notes, create and update a utility conflict table, create action item log, perform document control, and assist with conflict analysis and resolution. Provide services as the "Responsible Party" as referenced in TxDOT's– Utility Cooperative Management Process and Right of Way Utility Adjustment Subprocess (See the TxDOT Right of Way (ROW) Utilities Manual, Chapter 2).

1. Coordinate utility related activities with the County, or its designee, to facilitate the progress and reasonably timely completion of the County's design phase. Provide the following:

a. Work Plan. Coordinate a work plan including a list of the proposed meetings and coordination activities, related tasks to be performed, schedule and an estimate for the anticipated impacted utility facilities. The work plan must satisfy the requirements of the project and must be approved by the County prior to commencing work.

b. Initial Project Meeting. Attend an initial meeting and an onsite inspection to understand existing conditions and project requirements and prepare written notes of the meeting. The Engineer shall prepare the Notice of Proposed Construction (NOPC). If requested by the County, the Engineer shall send the NOPC to the Utility Companies 14 to 30 days prior to the

initial project meeting. The Engineer shall send NOPC form to stakeholders in the project limits to give notice of the upcoming construction project.

c. External Communications. Coordinate activities with the County, its contractors, representatives, and stakeholders, as authorized by the County. Provide the County with copies of diaries, correspondence, and other documentation of work-related communications between the Utility Coordinator, utility owners, and other outside entities at submittal milestones and upon request of the County.

d. Permits for rights of entry (for access into private property). Apply for and secure reasonably necessary permits from city, county, municipality, railroad, or other jurisdiction to allow the Engineer to work within existing streets, roads or private property for additional Designating and Utility Engineering Investigation within the project limits.

e. Use the Notice of Required Accommodation (NORA) forms if the utility is found to conflict with the project. The Engineer shall provide documentation to accompany these forms.

f. Progress Meetings. Prepare a schedule of periodic meetings and milestone meetings with each utility company and owner or owner's representatives for coordination purposes. Meetings should commence as early as reasonably possible in the design process and continue until completion of the project. Notify the County at least five business days in advance of each meeting to allow the County the opportunity to participate in the meeting. Prepare and distribute meeting notes of each meeting with said utility companies, owners, or owners' representatives within seven business days.

g. Coordinate with the local utilities committees and councils to present a footprint of the County's projects with represented utility companies and owners.

2. Provide the County and affected utility companies and owners with a contact list, Utility Conflict Table (UCT) and utility conflict layout for each project with information such as: (a) owner's name; (b) contact person; (c) telephone numbers; (d) emergency contact number; (e) e-mail addresses; (f) pertinent information concerning their respective affected utilities and facilities, including items such as the following size, number of poles, material, and other information that readily identifies the utilities companies' facilities. Update the UCT and utility conflict layout as the project progresses.

3. Advise utility companies and owners of the general characteristics of the project and provide an illustration of the project footprint for mark-up of the

utility facility locations that occupy the project area by distributing the Subsurface Utility Engineering (SUE) plan sheets of project layout sheets.

B. Utility Agreements for Utility Adjustments

Coordinate with utility owners on the identified conflicts with project construction and address the Utility Accommodations Rules (UAR). Coordinate with the utility companies in the preparation of agreements associated with items such as cost estimates, plans, disposition of existing facilities, schedule, betterment, eligibility ratio, property interest, roadway designation, funding of adjustments, and the occupation of County right of way.

1. Utility Agreement Assemblies: A packaged agreement consisting of a Utility Joint Use Acknowledgement, Standard Utility Agreements, plans on 11x17 sheets, Statement of contract work form, Affidavit form and copy of recorded easement, schedule of work, Buy America compliance Mill Test Reports (MTR's) or Certifications, and various attachments as detailed in the UAR and the TxDOT ROW Utilities Manual

    a. Utility agreements: If a utility is located within an easement, the utility company might have a compensable interest. In such a case, the Engineer should endeavor to obtain a copy of easement agreement from the utility company. The Engineer should review and determine whether a compensable interest exists and the owner's degree of eligibility. Coordinate during preparation of the utility company's adjustment plans and cost estimate. Review the plans to for compliance with the UAR and for the for conflict with the proposed project construction. The Engineer will submit a copy of the easement(s), plans, and estimate to the County via letter recommending approval. Check the estimate to verify inclusion of reimbursing costs the utility incurs for in kind replacements within the utility's easement limit. If betterment is identified, two estimates (one for in kind replacement and one for betterment), created by the utility company, are required for the Utility Coordinator to calculate the betterment ratio.
    b. State Utility Procedure (SUP): When applicable, the Engineer shall follow the procedures found in Chapter 8, Section 6 in the TxDOT ROW Utilities Manual.
    c. Local Utility Procedure (LUP): When applicable, the Engineer shall follow the procedure found in Chapter 8, Section 8 in the TxDOT ROW Utilities Manual.

2. Electronically submit the executed Utility Agreement assemblies, which include the appropriate forms as detailed in the UAR and supplied by the County, a copy of the recorded easement deed, plans, and estimate to the

County along with a cover letter recommending approval. The utility must be reimbursed eligible costs incurred within their easement limits for replacement in kind. The transmittal letter should also include a description of the work being done as well as the estimated cost.
and schedule of work.

3. Determine which utilities will be installed by agreement between the utility and County. Process Joint Use Agreement Acknowledgement (ROW-U-JUA), utility agreements, and determine necessity of escrow agreements, and forward
these documents to the County for final approval.
4. Coordination, review, and submit of documentation to be included in all the utility agreements conforming to the requirements of 23 C.F.R. Section 645A. Coordinate preparation, compilation, gathering, and collection of required and supporting documents to be included with the utility
agreements.
5. For each utility, the records for all utility owners' costs should be in accordance with the requirements of 23 C.F.R. Section 645A, in a format that is compatible with the estimate attached to the utility agreement and detail as determined necessary for analysis. The totals for labor, overhead, construction costs, travel, transportation, equipment, materials, supplies, and other services should be presented in such a manner as to permit comparison with the approved estimate.
6. Maintain a set of records for each utility adjustment costs for each utility for a period of time sufficient to complete all final payments to the utility companies or owners.

UTILITY ENGINEERING

Utility Engineering includes the identification of utility conflicts, coordination, compliance with the Utility Accommodation Rules (UAR), and resolution of utility conflicts. Coordinate activities with the County, or the County's designee, to facilitate the progress and reasonably timely completion of the County's design phase.

A. Coordination of Engineering Activities

1. Utility Layout: Maintain a utility layout in the current approved version of OpenRoads Civil Design system used by the County. The layout should include existing utilities which are to remain in place or be abandoned, and adjusted utilities. Use the layout to monitor the necessity of relocation and evaluate alternatives. Use the layout of existing utilities as prepared and make a determination of the following:

a. Facilities in conflict with the proposed project that are to be relocated.
b. Facilities to be removed or abandoned in place.
c. Facilities to remain in service and in place because of roadway design adjustments and meeting the current UAR.
d. If there are additional facilities, not shown in the Subsurface Utility Engineering (SUE) documents, which require relocation, the Engineer should coordinate this information with the County with reasonable promptness upon discovery.

2. Public and Individual Meetings with Utility Companies
Facilitate utility conflict identification and resolution by the following actions:

a. Establish contact with each existing utility within and adjacent to the project limits and set up utility coordination meetings to discuss concepts and options for construction.
b. Schedule utility coordination meetings and to facilitate compatibility with the schedule of the County.
c. Set agenda for each coordination meeting and coordinate agenda items requested by the County.
d. Initial Project Meeting: Attend an initial meeting and an on-site inspection to become familiar with existing conditions, project requirements and prepare and distribute written notes for the meeting.
e. Progress Meetings: Meet with the County and Prime periodically to coordinate the work effort and resolve problems and prepare written notes meetings. During the progress meetings, review the following:

I. Activities completed since the last meeting.
II. Problems encountered.
III. Late activities.
IV. Activities required by the next progress meeting.
V. Solutions for unresolved and/or anticipated problems.
VI. Information or items required from other agencies/consultants.

3. Review of Utility's Proposed Adjustments

a. Evaluate alternatives: Evaluate alternative in the adjustment of utilities balancing the needs of both the County and the Utility. Use the AMA strategy as part of evaluating the alternatives.
b. Review plans for compliance with UAR, Buy America materials and proposed location data.

c. Check with utility owners to confirm their receipt ofupdates for project design development so that utility owners are reviewing the most current plans, quality and accuracy of utility adjustment data, as well as compliance of UAR, as it pertains to the plans. The responsibility for compliance, quality, and accuracy of utility adjustment plans will remain with the utility company.

UTILITY ENGINEERING INVESTIGATION

Utility engineering investigation includes utility investigations subsurface and above ground prepared in accordance with ASCE/CI Standard 38-22 [(http://www.fhwa.dot.gov/programadmin/asce.cfm)] and Utility Quality Levels.

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

1. Quality Level D - Quality level value assigned to a utility segment or utility feature after a review and compilation of data sources such as existing records, oral recollections, One-Call markings, and data repositories.
2. Quality Level C - Quality level value assigned to a utility segment or utility feature after surveying aboveground (i.e., visible) utility features and using professional judgement to correlate the surveyed locations of these features with those from existing utility records. Prime or consultant surveyor to provide these surveyed features.
3. Quality Level B - Quality level value assigned to a utility segment or subsurface utility feature whose existence and position is based upon appropriate surface geophysical methods combined with professional judgment and whose location is tied to the project survey datum. Horizontal accuracy of Designated Utilities is 18” (including survey tolerances) unless otherwise indicated for a specific segment of the deliverable. Quality Level B incorporates quality levels C and D information. A composite plot is created.
4. Quality Level A – Quality level value assigned to a portion (x, y, and z geometry) of a point of a subsurface utility feature that is directly exposed, measured, and whose location and dimensions are tied to the project survey datum. Other measurable, observable, and judged utility attributes are also recorded. The utility location must be tied to the project survey datum with an accuracy of 0.1 feet (30-mm) vertical and to 0.2 feet (60-mm) horizontal. As test holes may be requested up front or during the project, test holes done prior to completion of QL D, C, or B deliverables must be symbolized on the

QL B deliverable with a call out indicating test holes number. This is in addition to and not in lieu of the test hole.

B. Utility Investigations Methodology

1. Utility Investigation Quality Level D

The Engineer shall:

a. Perform records research from reasonably available resources. Sources include but are not limited to: Texas811, Railroad Commission of Texas (Texas RRC), verbal recollection, record drawing information from plans, plats, permits and other applicable information provided by the utility owners or other stakeholders.
b. Document utility owners and contact information.
c. Create a utility drawing of information gathered.

I. The Utility Engineer shall perform 18,400 LF of QL D SUE.

2. Utility Investigation Quality Level C

The Engineer shall:

a. In combination with existing Quality Level D information, utilize surveyed above-ground utility features and professional judgement to upgrade Quality Level D information to Quality Level C. For those utilities unable to be upgraded, retain as Quality Level D.
b. Overhead utilities information should be gathered and depicted. Document sag elevations of lowest utility at road crossings, per best practices document.
c. Gather storm and sanitary sewer information from Level D and upgraded to Level C as possible, unless otherwise directed by the County.
d. Mapping of underground vaults may be requested by the County.
e. Create composite utility drawing of information gathered.

I. The Utility Engineer shall perform 13,200 LF of QL C SUE.

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

The Utility Engineer must:

a. As requested by the County, compile "record drawing " information from plans, plats and other location data as provided by the utility owners.
b. Coordinate with utility owner when utility owner's policy is to designate their own facilities at no cost for preliminary survey purposes. Review utility owner's work for accuracy and completeness.
c. Designate, record, and mark the horizontal location of the existing utility facilities using non-destructive surface geophysical techniques.
d. Using both active and passive scans to attempt to locate any additional utilities, including unrecorded and abandoned storm and sanitary sewer facilities, at the direction of the County, may be investigated using additional methods such as rodding that would then classify them as Quality Level B. A non-water based pink paint or pink pin flags must be used on all surface markings of underground utilities.
e. Correlate utility owner records with designating data and resolve discrepancies using professional judgment. Prepare and deliver to the County a color-coded composite utility facility plan with utility owner names, quality levels, line sizes and subsurface utility locate (test hole) locations. The Engineer and County acknowledge that the line sizes of designated utility facilities detailed on the deliverable will be from the best available records and that an actual line size is normally determined from a test hole vacuum excavation. A note should be placed on the designate deliverable that states "lines sizes are from best available records". All above-ground utility feature locations must be included in the deliverable to the County. Provided in the latest version of OpenRoads civil design system used by the County. The electronic file will be delivered on CD, DVD, or USB flash drive, as required by the County. A hard copy is required and should be signed, sealed, and dated by the Engineer. When requested by the County as an additional service the designated utility information should be over laid on the County’s design plans.
f. Determine and inform the County of the approximate electronic utility depths at critical locations as determined by the County. The limits of this additional information should be determined prior to the commencement of work. This depth indication is understood by both the Engineer and the County to be approximate only and is not intended to be used preparing the right of way and construction plans.
g. Provide a monthly summary, with weekly updates, of work completed and in process with adequate detail to verify compliance with agreed work schedule.
h. Provide close-out permits when determined necessary by the Engineer.

i. Identify utilities discovered from Quality Levels C and D investigation but cannot be depicted in Quality Level B standards. Document these utilities using a unique line style and symbology in the designate (Quality Level B) deliverable.
j. Comply with all applicable TxDOT policy and procedural manuals.

I. The Utility Engineer shall perform 12,000 LF of QLB SUE

4. Subsurface Utility Locate (Test Hole) Service (Quality Level A) Locate is the process used to obtain precise horizontal and vertical position, material type, condition, size, and other data that may be obtainable about the utility facility and its surrounding environment through exposure by non-destructive excavation techniques that ensures the integrity of the utility facility. Subsurface Utility Locate (Test Hole) Services (Quality Level A) are inclusive of Quality Levels B, C, and D.

The Utility Engineer must:

a. Review requested test hole locations and advise the County in the development of a recommended locate (test hole) work plan relative to the existing utility infrastructure and proposed project design elements.
b. Coordinate with utility owner inspectors as may be required by law or utility owner policy.
c. Place Texas 811 ticket 48 hours prior to excavation.
d. As neatly as practical cut and remove existing pavement material, such that the cut does not exceed 0.10 square meters (1.076 square feet) unless unusual circumstances exist.
e. Measure and record the following data on a mutually agreed test hole data sheet that has been sealed and dated by the Engineer:

I. Elevation of top of utility tied to the datum of the furnished plan.
II. Minimum of two benchmarks utilized. Elevations must be within an accuracy of 15mm (.591 inches) of utilized benchmarks.
III. Elevation of existing grade over utility at test hole location.
IV. Horizontal location referenced to project coordinate datum.
V. Outside diameter of pipe or width of duct banks and configuration of non-encased multi-conduit systems.
VI. Utility facility material(s).
VII. Utility facility condition.
VIII. Pavement thickness and type.
IX. Coating/wrapping information and condition.
X. Unusual circumstances or field conditions.

f. Excavate test holes in such a manner as to avoid damage to wrappings, coatings, cathodic protection or other protective coverings and features. Water excavation can only be utilized with written approval from the County.

g. Be responsible for damage to the utility during the locating process. In the event of damage, the Engineer must stop work, notify the appropriate utility facility owner, the County and appropriate regulatory agencies. The regulatory agencies include: the Railroad Commission of Texas and the Texas Commission on Environmental Quality. The Engineer must not resume work until the utility facility owner has determined the corrective action to be taken.

h. Back fill excavations with material determined by Engineer to be appropriate and compact backfill. The Engineer is responsible for the backfill and surface restoration for a period of three years.

i. Provide restoration of work site and landscape determined by the Engineer to be equal or better condition than before excavation.

j. Plot utility location position information to scale and provide a utility plan signed and sealed by the responsible Engineer. Provide documentation in the latest version of MicroStation and be fully compatible with the OpenRoads civil design system used by the County. The electronic file will be delivered on CD, DVD or USB flash drive as requested. When requested by the County, the locate information must be over laid on the County's design plans.

k. Return plans, profiles, and test hole data sheets to the County. If requested, conduct a review of the findings with the County.

l. Close-out permits as required.

I. The Utility Engineer shall perform 6 test holes of QLA SUE

PROJECT MANAGEMENT AND ADMINISTRATION

The Engineer, in association with the Prime and County Project Managers (PM), will direct and coordinate activities associated with this project to comply with County policies and procedures, and to deliver that work on time.

1. Project Management
Manage activities including preparing correspondence, invoicing, progress reports, and reviewing schedules.

The Utility Engineer must:

a. Prepare monthly written progress reports for this project.
b. Develop and maintain a project schedule to track project deadlines. The scheduled submittals must be provided in hard copy and electronic format.
c. Meet on a monthly scheduled basis with the County to review project progress.
d. Prepare, distribute, and file both written and electronic correspondence.
e. Prepare and distribute meeting minutes within 72 hours after the meeting.
f. Document phone calls and conference calls during the project to coordinate the work for various team members.
g. Update UCT and utility layout sheets at each milestone, prior to each utility meeting.

Fee Schedule - Powerline Rd Segment 1
LAN

TASK DESCRIPTION	UTILITY PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	ENGINEER IN TRAINING	SENIOR ENGINEER TECH	M
UTILITY ADJUSTMENT COORDINATION						
A. Utility Coordination						
1a. Develop Work Plan	2	2				
1b. Initial Project Meeting and Notice of Proposed Construction (NOPC) Forms	1		1			
1c. External Communications	4		4			
1d. Permits for Right of Entry	1					
1e. Notice of Required Accommodation (NORA) Forms	1		1			
1f. Progress Meetings	6		6			
1g. Coordinate with Local Committees and Councils	1		1			
3. Develop and Maintain Utility Conflict Table	2		12			
4. Advise Utility Companies on Project Characteristics	2		2			
B. Utility Agreement Assemblies						
1. Utility Agreement Assemblies (Assume 7 Assemblies)	4		4			
2. Electronically Submit Utility Agreement Assemblies	1					
3. Determine and Process Joint Use Agreements		4	4			
4. Prepare, Compile and Review Supporting Documents		4	8			
5. Maintain Set of Records for Adjustment Costs			4			
HOURS SUB-TOTALS	25	10	47	0	0	
CONTRACT RATE PER HOUR	$292.58	$292.58	$220.93	$133.48	$164.20	$
TOTAL LABOR COSTS	$7,314.50	$2,925.80	$10,383.71	$0.00	$0.00	
% DISTRIBUTION OF STAFFING	8.42%	3.37%	15.82%	0.00%	0.00%	
SUBTOTAL - UTILITY ADJUSTMENT COORDINATION						

TASK DESCRIPTION	UTILITY PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	ENGINEER IN TRAINING	SENIOR ENGINEER TECH	M
UTILITY ENGINEERING						
A. Coordination of Engineering Activities						
1. Create and Maintain Utility Layout Sheets	2			20	20	
1a. Determine Facilities in Conflict		4	4			
1b. Determine Facilities to be Removed or Abandoned		2	2			
1c. Determine Facilities to Remain in Place		2	2			
2. Public and Individual Meetings with Utility Owners	4	4				
3. Review of Utility's Proposed Adjustments	4	4				
HOURS SUB-TOTALS	10	16	8	20	20	
CONTRACT RATE PER HOUR	$292.58	$292.58	$220.93	$133.48	$164.20	$
TOTAL LABOR COSTS	$2,925.80	$4,681.28	$1,767.44	$2,669.60	$3,284.00	
% DISTRIBUTION OF STAFFING	10.72%	17.15%	6.47%	9.78%	12.03%	
SUBTOTAL - UTILITY ENGINEERING						

TASK DESCRIPTION	UTILITY PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	ENGINEER IN TRAINING	SENIOR ENGINEER TECH	M
UTILITY ENGINEERING INVESTIGATION						
A. Quality Levels (QL)						
1. Coordinate/ Manage/ Quality Control QL D	4					
2. Coordinate/ Manage/ Quality Control QL C	4					
3. Coordinate/ Manage/ Quality Control QL B	8					
4. Coordinate/ Manage/ Quality Control QL A	4					
5. Create and Maintain Existing Utility CADD File		4		8	8	

Includes labor and equipment for records research, CADD, and mapping.	LF	$0.95	18,400	$17,480.00
SUE Quality Level C				
Includes labor and equipment for records research, CADD, and mapping.	LF	$1.15	13,200	$15,180.00
SUE Quality Level B				
Includes labor and equipment for records research, designating, engineering, CADD, mapping, and limited traffic control	LF	$2.25	12,000	$27,000.00
SUE Quality Level A				
Test holes 5'-10' deep (Includes labor and equipment for engineering, CADD,surveying, vacuum excavation and limited traffic control)	EA	$1,500.00	6	$9,000.00
SUE Mobilization/Demobilization				
This cost is intended to be an expense compensation for mobilizing/demobilizing personnel and equipment portal to portal. Vacuum excavation truck, equipment, travel time for 2-man crew, fuel. Mileage log to be provided.	MILE	$4.00	400	$1,600.00
SUBTOTAL - SUBSURFACE UTILITY ENGINEERING (SUE)				**$70,260.00**

TASK DESCRIPTION	UTILITY PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	ENGINEER IN TRAINING	SENIOR ENGINEER TECH	M
PROJECT MANAGEMENT AND ADMINISTRATION						
1. Project Management and Coordination	30					
HOURS SUB-TOTALS	30	0	0	0	0	
CONTRACT RATE PER HOUR	$292.58	$292.58	$220.93	$133.48	$164.20	
TOTAL LABOR COSTS	$8,777.40	$0.00	$0.00	$0.00	$0.00	
% DISTRIBUTION OF STAFFING	90.37%	0.00%	0.00%	0.00%	0.00%	
SUBTOTAL - PROJECT MANAGEMENT AND ADMINISTRATION						

OTHER DIRECT EXPENSES	UNIT	AUTHORIZED RATE	ESTIMATED QUANTITY	TOTAL ESTIMATED COST
Mileage (billed at current IRS rate)	MILE	$	400	$280.00
Environmental Field Supplies (lathes, stakes, flagging, spray paint, etc.)	DAY	$35.00	10	$350.00
Portable Message Board	DAY	$500.00	2	$1,000.00
Traffic Control Services, Arrow Boards and Attenuator Trucks - (includes labor, equipment and fuel)	DAY	$5,150.00	2	$10,300.00
SUBTOTAL DIRECT EXPENSES				**$11,930.00**

SUMMARY	
TOTAL UTILITY ADJUSTMENT COORDINATION	$52,652.42
TOTAL UTILITY ENGINEERING	$27,300.12
TOTAL UTILITY ENGINEERING INVESTIGATION	$12,491.76
TOTAL SUBSURFACE UTILITY ENGINEERING (SUE)	$70,260.00
PROJECT MANAGEMENT AND ADMINISTRATION	$9,712.52
TOTAL OTHER DIRECT EXPENSES	$11,930.00
GRAND TOTAL	**$184,346.82**