

STATE OF TEXAS §
 §
 COUNTY OF FORT BEND §

AGREEMENT FOR PROFESSIONAL ENGINEERING SERVICES

(Masterson Road – Project No. 23206)

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 MV Engineering, Inc. (“Engineer”), a Texas corporation. 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 professional engineering services and design services for Masterson Road under Mobility Bond Project No. 23206; 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 Four Hundred Thirty-Seven Thousand, One Hundred Twenty-Five and 00/100 Dollars (\$437,125.00). In no event shall the amount paid by County to Engineer under this Agreement exceed said Maximum Compensation without an approved change order.

- (a) Engineer understands and agrees that the Maximum Compensation stated is an all-inclusive amount and no additional fee, cost or reimbursed expense shall be added whatsoever to the fees stated in the attached Exhibit "A."
 - (b) County will pay Engineer based on the following procedures: Upon completion of the tasks identified in the Scope of Services, Engineer shall submit to County staff person designated by the County Engineer, one (1) electronic (pdf) copy of the invoice showing the amounts due for services performed in a form acceptable to County. Engineer shall submit invoices no more frequently than on a monthly basis. County shall review such invoices and approve them within 30 calendar days with such modifications as are consistent with this Agreement and forward same to the Auditor for processing. County shall pay each such approved invoice within thirty (30) calendar days.
 - (c) Accrual and payment of interest on any overdue payments assessed by Engineer, if any, shall be governed by Chapter 2251 of the Texas Government Code.
 - (d) Engineer understands and agrees that County's obligation to make any payment(s) hereunder is dependent upon Engineer's completion of the Services in a timely, good, and professional manner and in accordance with the performance representations made in Section 25 of this Agreement. Therefore, County reserves the right to withhold payment pending verification of satisfactory work performed.
5. **Limit of Appropriation.** Engineer understands and agrees that the Maximum Compensation for the performance of the Services within the Scope of Services described in Section 2 above is \$437,125.00. In no event shall the amount paid by County under this Agreement exceed the Maximum Compensation without a County approved change order. Engineer clearly understands and agrees, such understanding and agreement being of the absolute essence of this Agreement, that County shall have available the total

maximum sum of \$437,125.00 specifically allocated to fully discharge any and all liabilities County may incur under this Agreement. Engineer does further understand and agree, said understanding and agreement also being of the absolute essence of this Agreement, that the total Maximum Compensation that Engineer may become entitled to and the total maximum sum that County may become liable to pay Engineer under this Agreement shall not under any conditions, circumstances, or interpretations thereof exceed \$437,125.00.

6. **Non-appropriation.** Engineer understands and agrees that in the event no funds or insufficient funds are appropriated by the County under this Agreement, County shall immediately notify Engineer in writing of such occurrence and the Agreement shall thereafter terminate and be null and void on the last day of the fiscal period for which appropriations were received or made without penalty, liability or expense to the County. In no event shall said termination of this Agreement or County's failure to appropriate said funds be deemed a breach or default of this Agreement or create a debt by County in any amount(s) in excess of those previously funded.
7. **Taxes.** Engineer understands and agrees that County is a governmental entity and political subdivision of the state of Texas, and as such, is exempt from payment of any sales and use taxes. County shall furnish evidence of its tax-exempt status upon written request by Engineer.
8. **Insurance.** Prior to commencement of the Services, Engineer shall furnish County with properly executed certificates of insurance which shall evidence all insurance required and provide that such insurance shall not be canceled, except on 30 days' prior written notice to County. Engineer shall provide certified copies of insurance endorsements and/or policies if requested by County. Engineer shall maintain such insurance coverage from the time Services commence until Services are completed and provide replacement certificates, policies and/or endorsements for any such insurance expiring prior to completion of Services. Engineer shall obtain such insurance written on an Occurrence form from such companies having Best's rating of A/VII or better, licensed or approved to transact business in the State of Texas, and shall obtain such insurance of the following types and minimum limits:
 - (a) Workers Compensation in accordance with the laws of the State of Texas. Substitutes to genuine Workers' Compensation Insurance will not be allowed.
 - (b) Employers' Liability insurance with limits of not less than \$1,000,000 per injury by accident, \$1,000,000 per injury by disease, and \$1,000,000 per bodily injury by disease.
 - (c) Commercial general liability insurance with a limit of not less than \$1,000,000 each occurrence and \$2,000,000 in the annual aggregate. Policy shall cover liability for bodily injury, personal injury, and property damage and

products/completed operations arising out of the business operations of the policyholder.

- (d) Business Automobile Liability coverage applying to owned, non-owned and hired automobiles with limits not less than \$1,000,000 each occurrence combined single limit for Bodily Injury and Property Damage combined.
- (e) Professional Liability insurance with limits not less than \$1,000,000.

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

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

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

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

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

9. **Indemnity. PURSUANT TO SECTION 271.904 OF THE TEXAS LOCAL GOVERNMENT CODE, ENGINEER SHALL INDEMNIFY AND HOLD HARMLESS COUNTY, ITS OFFICIALS, OFFICERS, AND EMPLOYEES FROM AND AGAINST ALL CLAIMS, LOSSES, DAMAGES, CAUSES OF ACTION, SUITS, LIABILITY, AND COSTS, INCLUDING THE REIMBURSEMENT OF REASONABLE ATTORNEY FEES, ARISING OUT OF OR RESULTING FROM AN ACT OF NEGLIGENCE, INTENTIONAL TORT, INTELLECTUAL PROPERTY INFRINGEMENT, OR FAILURE TO PAY A SUBCONTRACTOR OR SUPPLIER COMMITTED BY ENGINEER OR ENGINEER'S AGENTS, EMPLOYEES, OR ANOTHER ENTITY OVER WHICH ENGINEER EXERCISES 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: MV Engineering, Inc.
3600 W Sam Houston Pkwy S., Suite 600
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 ACKNOWLEDGED BY ENGINEER THAT NO OFFICER, AGENT, EMPLOYEE, OR REPRESENTATIVE OF COUNTY HAS ANY AUTHORITY TO CHANGE THE TERMS OF THIS AGREEMENT OR ANY ATTACHED EXHIBITS HERETO UNLESS EXPRESSLY AUTHORIZED BY THE FORT BEND COUNTY COMMISSIONERS COURT.**
32. **Conflict.** In the event there is a conflict among the terms of this document entitled “Agreement for Professional Engineering Services” and the terms of Engineer’s Proposal or any other exhibit attached hereto, the terms of this document shall prevail with regard to the conflict.
33. **Understanding Fair Construction.** By execution of this Agreement, the Parties acknowledge that they have read and understood each provision, term, and obligation contained herein. This Agreement, although drawn by one party, shall be construed fairly and reasonably and not more strictly against the drafting Party than the non-drafting Party.
34. **Severability.** In case any one or more of the provisions contained in this Agreement shall for any reason be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provision hereof and this Agreement shall be construed as if such invalid, illegal or unenforceable provision had never been contained herein.
35. **No Waiver of Immunity.** Neither the execution of this Agreement nor any other conduct of either Party relating to this Agreement shall be considered a waiver or surrender by County of its governmental powers or immunity under the Texas Constitution or the laws of the state of Texas.
36. **Applicable Law and Venue.** This Agreement shall be construed according to the laws of the state of Texas. Venue for any claim arising out of or relating to the subject matter of this Agreement shall lie in a court of competent jurisdiction of Fort Bend County, Texas.
37. **Certain State Law Requirements for Contracts** The contents of this Section are required by Texas law and are included by County regardless of content For purposes of Sections 2252.152, 2271.002, and 2274.002, Texas Government Code, as amended, Engineer hereby verifies that Engineer and any parent company, wholly owned subsidiary, majority-owned subsidiary, and affiliate:
- (a) Unless affirmatively declared by the United States government to be excluded from its federal sanctions regime relating to Sudan or Iran or any federal sanctions regime relating to a foreign terrorist organization, Engineer is not identified on a

list prepared and maintained by the Texas Comptroller of Public Accounts under Section 806.051, 807.051, or 2252.153 of the Texas Government Code.

- (b) If employing ten (10) or more full-time employees and this Agreement has a value of \$100,000.00 or more, Engineer does not boycott Israel and is authorized to agree in such contracts not to boycott Israel during the term of such contracts. "Boycott Israel" has the meaning provided in § 808.001 of the Texas Government Code.
 - (c) If employing ten (10) or more full-time employees and this Agreement has a value of \$100,000.00 or more, Engineer does not boycott energy companies and is authorized to agree in such contracts not to boycott energy companies during the term of such contracts. "Boycott energy company" has the meaning provided in § 809.001 of the Texas Government Code.
 - (d) If employing ten (10) or more full-time employees and this Agreement has a value of \$100,000.00 or more, Engineer does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association and is authorized to agree in such contracts not to discriminate against a firearm entity or firearm trade association during the term of such contracts. "Discriminate against a firearm entity or firearm trade association" has the meaning provided in § 2274.001(3) of the Texas Government Code. "Firearm entity" and "firearm trade association" have the meanings provided in § 2274.001(6) and (7) of the Texas Government Code.
38. **Human Trafficking.** BY ACCEPTANCE OF THIS AGREEMENT, ENGINEER ACKNOWLEDGES THAT FORT BEND COUNTY IS OPPOSED TO HUMAN TRAFFICKING AND THAT NO COUNTY FUNDS WILL BE USED IN SUPPORT OF SERVICES OR ACTIVITIES THAT VIOLATE HUMAN TRAFFICKING LAWS.
39. **Captions.** The section captions used in this Agreement are for convenience of reference only and do not affect the interpretation or construction of the Agreement.
40. **Electronic and Digital Signatures.** The Parties to this Agreement agree that any electronic and/or digital signatures of the Parties included in this Agreement are intended to authenticate this writing and shall have the same force and effect as the use of manual signatures.
41. **Certification.** By his or her signature below, each signatory individual certifies that he or she is the properly authorized person or officer of the applicable Party hereto and has the requisite authority necessary to execute this Agreement on behalf of such Party, and each Party hereby certifies to the other that it has obtained the appropriate approvals or authorizations from its governing body as required by law.

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

FORT BEND COUNTY, TEXAS

MV ENGINEERING, INC.

KP George, County Judge



Authorized Agent – Signature

Date

SYED NAVED AFTAB

Authorized Agent- Printed Name

ATTEST:

PRESIDENT

Title

4/22/2025

Date

Laura Richard, County Clerk

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)



MV ENGINEERING, INC.

mv-engineering.com

2/26/2025

Mr. Kevin Mineo, P.E.

Vice President – Transportation Binkley & Barfield, Inc.

1710 Seamist Dr., Houston TX 77008

RE: Proposal for Professional Engineering Services
23206 – Masterson Road
Precinct 2
Fort Bend County

Dear Mr. Mineo:

MV Engineering, Inc. (MVE), is pleased to submit our proposal for Professional Services to develop Plans, Specifications and Estimates (PS&E) for the above-mentioned project. This proposal is based upon our project understanding and the terms and conditions of the Fort Bend County Standard Professional Services Agreement.

PROJECT UNDERSTANDING:

Project Assignment

The design assignment entails the preparation of Plans, Specifications, and Estimates (PS&E) for the upgrade and construction of Masterson Road, converting the current dirt road into a 2-lane HMA with ditches. The project extends from FM 521 to the existing section of Masterson Road at the Airport and includes provisions for a railroad crossing and a potential detention pond. This development integrates with TxDOT's future improvements to FM 521, remaining outside the railroad right of way, and necessitates the enhancement of existing culverts, replacing the current corrugated plastic pipes with concrete ones. Masterson Road intersects FM 521 in Fort Bend County, Texas, where an upcoming project plans to widen FM 521 from two to four lanes, incorporating new traffic signals, turn lanes, and pedestrian paths to enhance mobility and alleviate congestion in the area. According to the current published FEMA map 48157CO315L, revised on April 2, 2014, the project site is not situated within the 100-year or 500-year floodplains.

MVE will adhere to the Fort Bend County Drainage District requirements, including providing a drainage impact analysis report and a sizing analysis of the existing trunkline will be prepared and included with the Preliminary Engineering Report.

A geotechnical report will be prepared in accordance with the current Fort Bend County Engineering Department Engineering Design Manual (EDM), March 2022 Edition.

It is our understanding that any required environmental services will be provided by Fort Bend County via an independent consultant, not included in this proposal. A stormwater pollution prevention report is not included in this proposal.

“The Solution Starts Here”

Houston

11011 Richmond Ave, Suite 875
Houston, TX 77042



MV ENGINEERING, INC.

mv-engineering.com

MVE shall initiate coordination with TxDOT once BBI and Fort Bend County consider opportune and prepare the necessary exhibits to facilitate any permitting process.

Introduction of the MVE Team

MV Engineering, Inc. (MVE) is the lead firm. Serving as your single point of contact will be Fabian Herrera, P.E. Project Manager focused on roadway design aspects of the project, as well as coordination, quality control, schedule, and team compliance with Fort Bend County Design and Construction standards.

Kavi Engineering, Inc. (KAVI) will responsible for providing the drainage analysis and drainage design for the proposed culvert crossing.

Rekha Engineering, Inc. (REKHA) will provide control, design, and right of way survey services, including preparing metes and bounds surveys and parcel mapping for appraisals and land acquisition by others.

Geotech Engineering and Testing (GET) will provide geotechnical engineering services.

Management Structure

MV Engineering understands BBI Engineering, Inc. will serve as Program Manager; and, as an extension of Fort Bend County Engineering Department will continue as our single point of contact with the county throughout the duration of the design phase of this project.

SCOPE OF BASIC SERVICES:

Basic services will generally follow the design process outlined in the Fort Bend County Engineering Department Engineering Design Manual (EDM), March 2022 Edition.

Preliminary Design Phase

MVE will prepare the design to a 30% completion level based on preliminary topographic surveys. This milestone will include a Preliminary Engineering Report (PER) analyzing up to three alternate roadway options and recommending a preferred design. The PER will cover the project location and scope, assess existing conditions and utilities, detail the proposed roadway design, and address drainage and detention systems. It will also include information on right-of-way, geotechnical and environmental investigations, permit and regulatory requirements, and a cost estimate. Appendices will feature review meeting minutes, project maps, alignment and roundabout exhibits, FEMA flood maps, drainage area maps, sight triangle exhibits, right-of-way exhibits, cost estimates, and utility information.

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Roadway

MVE will develop plans for a two-lane, 24-foot HMAC roadway between the existing asphalt section to the UPRR ROW to connect to the Masterson St turnout under design by the FM 521 consultant on the TxDOT project. The proposed cross section will have a rural section with ditches. The design will include possible detention. No construction will take place within the UPRR ROW. The culverts will be sized appropriately.

The design will comply with the latest AASHTO standards. MVE will advance the preferred alternative, identify ROW requirements, and develop a preliminary roadway profile and traffic control plan, in accordance with Fort Bend County Engineering Department EDM March 2022 Edition. For the 30% drawing submittal, MVE will provide preliminary typical sections, project layout, roadway plan sheets, and the total project footprint.

Utilities

The team shall research and obtain record documents for all known existing utilities within the road ROW. MVE will prepare and maintain utility log through the Final Design phase. MVE will establish contact with utility companies and provide plan set roadway drawings to the applicable utility companies for their use in developing any utility adjustment plans. It is understood that MVE will identify major utilities and coordinate directly with utility companies; BBI will assist in facilitating utility adjustment process during the construction phase as required to verify the utilities are relocated. MVE to provide utility relocation plan review once plans are finalized by the utility entities.

Metes and Bounds Right of Way Taking Mapping

Per Fort Bend County Engineering Department EDM March 2022 Draft, Unrestricted Visibility Easements (UVEs) should not be acquired as separate easements, but instead included in the proposed right-of-way acquisition. Parcel Plats and Metes and Bounds for UVEs are not included in this proposal. The following surveying services are included in this proposal and further described in the attached proposal from REKHA:

- Survey Control Map
- Topographic Survey and Mapping
- Parcel Plat and Metes and Bounds Mapping for Land Acquisitions
- Construction Staking
- Optional Topographic Survey for Detention Pond

See attached proposal by REKHA for detailed description of services.

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Geotechnical

The work involves field and laboratory investigations, testing, and analysis, including producing a project geotechnical report in accordance with the Fort Bend County Engineering Department EDM March 2022 Edition guidelines. The geotechnical report will include a description of subsurface conditions, groundwater information, boring logs, and pavement recommendations in typical FBCED format. Boring logs will become part of the final PS&E package for the construction contractor's use.

See attached proposal by GET for additional details.

Permits

MVE will work closely with BBI to meet county requirements during the design phase, maintaining communication and providing regular updates. MVE will review and feedback on County permits within 48 hours and assist in preparing documentation for TxDOT Permits for Roadway/Drainage Tie-In if necessary.

Final Design Phase

Upon FBC concurrence and approval of PER, MVE will proceed with completing the PS&E, including 70%, 95%, and 100% submittals to BBI. MVE will address comments presented in the Preliminary Design Phase review meeting and provide responses to 70% and 95% BBI review comments. Per the Fort Bend County Engineering Department EDM March 2022 Edition, 70% and 95% submittals shall include cover sheet, typical and non-standard cross-sections, overall project layout, survey control map, drainage area map with hydraulic calculations, plan and profile sheets, traffic control plan, storm water pollution prevention plan, cross sections at 100' intervals, specification table of contents, and bid form with estimated unit and total costs. A digital copy (Bluebeam Revu format, PDF) at each design milestone will be submitted for BBI's review in 11"x17" sheets including the drawings, cross sections at 100-foot intervals, Specifications Table of Contents (MVE to use Harris County Specifications - TxDOT Specifications to be used as necessary depending on FBC guidance), Construction Cost Estimate (PDF and Excel format), Bid Form (PDF and Excel format of FBC spec table provided by BBI), KMZ file, and Review Checklists.

In addition to the 70% requirements, the 95% submittal shall also include general notes sheet, signage and pavement marking plans, verification of earthwork quantities, with cross sections at 100-foot intervals, standard construction details, project manual, responses to 70% comments and 95% Review Checklist.

The 100% submittal shall consist of a PDF submittal of the drawings, specifications, and estimate and shall be provided to BBI.

MVE will provide monthly progress reports per BBI requirements.

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Drainage

The drainage analysis will follow the effective Fort Bend County Interim Atlas 14 Design Criteria Manual per Fort Bend County Drainage District. Based on scoping discussions with the drainage district on other projects, it is understood that a detailed drainage study is required that includes Data collection and review, Hydrology and Hydraulics analysis of the existing and proposed roadside ditch and crossing culverts, and detention analysis accompanied by maps, exhibits, and other supporting documentation for the drainage study. The project is not located within the 100-year or 500-year floodplains based on the current published FEMA map: 48157CO315L revised 04/02/2014. A FEMA submittal for the project is not included in this proposal. Providing or obtaining a “no impact letter” is not part of this proposal. MVE shall provide Storm Water Pollution Prevention Plan and details.

See attached proposal by KAVI for detailed description of services.

Traffic Control Plans

MVE will prepare the construction phase traffic control plans to accommodate the existing traffic during the construction of the proposed road improvements. The plan will include detailed diagrams, emergency procedures, and traffic management layouts, all in accordance with Fort Bend County Engineering Department EDM March 2022 Edition, to ensure safe and efficient traffic flow during construction.

Coordination

MVE will coordinate with TxDOT and other landowners to explore viable options for the Masterson Road at FM 521 project. This includes attending stakeholder meetings when necessary for coordination. MVE will be responsible for providing exhibits and design plans as necessary, ensuring alignment with the adjacent TxDOT project design. BBI will be included in coordination when required.

Fort Bend County Support

Fort Bend County is expected to provide, but not limited to, the following data:

- C.** As-builts & Right-of-Way maps (PDF and CAD, if available)
- D.** Pertinent engineering studies and models
- E.** Available drainage data and ditch culvert crossing models
- F.** Environmental constraint map (i.e., Wetlands)
- G.** Design and construction standards and details

Bid and Construction Support Services

During the Construction Phase Services, we will provide a comprehensive range of support including printing construction plans, attending the preconstruction conference, and conducting up to 16 site visits for construction observation. Our team will manage document control, review all shop drawings, and handle change orders and RFI logs. Additionally, we will prepare as-built plans to ensure all project documentation is accurate and up-to-date.

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Optional Additional Services

Detention Pond Design - At the request of the Fort Bend Drainage District, MVE may be required to design a detention pond for stormwater runoff management. Key tasks will include site assessment, hydrologic analysis, and calculation of the necessary storage volume. The design will incorporate an appropriate pond configuration, inlet and outlet structures, pretreatment features, and a conveyance system. Furthermore, the plan will ensure maintenance access, landscaping, and adherence to local regulations and standards, including those established by TxDOT and Fort Bend County. Coordination with the adjacent TxDOT project design and participation in stakeholder meetings will also be integral parts of the process.

Sanitary Sewer Relocation - Sanitary Sewer line present within the project area may need to be adjusted and/or relocated. MVE will coordinate with the MUDs and provide design support services to facilitate any modifications.

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COMPENSATION

Apart from mapping and parcel acquisition, the preliminary and final design efforts will be billed monthly on a lump-sum contract fee based on a Schedule of Value and percent complete by work task. Construction phase services will be billed monthly on a Time and Materials (T&M) basis, according to hourly wages at agreed-upon rates.

A level of effort estimate is enclosed based on the scope of work described herein. The Lump-Sum Fee amount, including subconsultants, reimbursable expenses, additional services, and ROW mapping and parcel acquisition is \$437,125.00

FEE SUMMARY				
ENGINEERING FEE - BASE SERVICES				
	MVE	KAVI	GET	REHKA
General Management/Coordination	\$ 32,882.50	\$ -	\$ -	\$ -
Preliminary Design Phase (PER)	\$ 24,730.00	\$ 36,469.00	\$ 42,172.00	\$ 24,840.00
Intermediate Design Phase	\$ 46,032.00	\$ -	\$ -	\$ 6,885.00
Pre-Final Design Phase	\$ 23,387.00	\$ -	\$ -	\$ -
Final Design Phase	\$ 13,085.00	\$ 36,645.00	\$ -	\$ -
A. SUBTOTAL BY FIRM	\$ 140,116.50	\$ 73,114.00	\$ 42,172.00	\$ 31,725.00
I. SUBTOTAL BASE SERVICES				\$ 287,127.50
ENGINEERING FEE - TIME AND MATERIALS				
	MVE	KAVI	GET	REHKA
Direct Expenses	\$ 635.00	\$ -	\$ -	\$ -
Bid and Construction Support Services	\$ 27,096.00	\$ 5,802.00	\$ -	\$ -
B. SUBTOTAL BY FIRM	\$ 27,731.00	\$ 5,802.00	\$ -	\$ -
II. SUBTOTAL TIME AND MATERIALS				\$ 34,848.00
ENGINEERING FEE - OPTIONAL ADDITIONAL SERVICES				
- Detention Pond Design	\$ -	\$ 34,940.00	\$ 41,900.00	\$ 3,915.00
- Parcel Exhibits	\$ -	\$ -	\$ -	\$ 6,150.00
- Construction Staking	\$ -	\$ -	\$ -	\$ 7,897.50
- Sewer Line Relocation	\$ 21,662.00	\$ -	\$ -	\$ -
C. SUBTOTAL BY FIRM	\$ 21,662.00	\$ 34,940.00	\$ 41,900.00	\$ 17,962.50
III. SUBTOTAL OPTIONAL ADDITIONAL SERVICES				\$ 116,464.50
TOTAL BY FIRM (A+B+C)	\$ 189,509.50	\$ 113,856.00	\$ 84,072.00	\$ 49,687.50
GRAND TOTAL (I+II+III)				\$ 437,125.00

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SCHEDULE

MVE anticipates the project will follow the following timeline schedule:

- a. Contract execution and NTP – March 2025
- b. Survey to be provided – May 2025
- c. PER Meeting – July 2025
- d. Metes and bounds parcel mapping; Begin ROW acquisition – August 2025
- e. 70% milestone submittal – December 2025
- f. 95% milestone submittal – May 2026
- g. Final submittal – July 2026
- h. Utility adjustment/relocation – May 2026
- i. Complete ROW acquisition; Complete Utility adjustment/relocations – January 2027

A detailed project design schedule is included as Attachment B.

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ATTACHMENTS

- **Attachment A – MV Engineering, Inc.’s Proposal Fee**
- **Attachment B – Project Anticipated Design Schedule**
- **Attachment C – KAVI Engineering, Inc.’s Drainage Design Services Proposal – KAVI**
- **Attachment D – REKHA Engineering Company’s Surveying Services Proposal – REKHA**
- **Attachment E – Geotech Engineering and Testing’s Geotechnical Investigation Proposal – GET**

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Attachment A

MV Engineering, Inc.'s Proposal Fee

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Summaries of all fee schedules
Design Services for
23206 Masterson Road. Survey, Geotechnical, and PS&E for Precinct 2, Fort Bend County, Texas
2023 Mobility Project

Firm Name	Fee	Percentage of Budget	Percentage of Entire Contract	SBE	Remarks
MV Engineering, Inc. (MVE)	\$ 189,509.50		43.35%	43.35%	
Kavi Consulting Inc. (KAVI)	\$ 113,856.00		26.05%	26.05%	
Geotechnical Engineering and Testing (GET)	\$ 84,072.00		19.23%	19.23%	
Rehka Engineering, Inc. (REHKA)	\$ 49,687.50		11.37%	11.37%	
Total	\$ 437,125.00		100.00%	100.00%	



Exhibit A :Scope of Services / Schedule of Fees & Rates
Design Services for
PS&E Design for 23206 Masterson Road, Fort Bend County, Texas

Task No.	Task Description	Basis for Hour Estimate	Est. No. of Sheets	Labor (hours)						Total Hours/Task	Total Labor Cost	Cost/Sheet
				Project Manager	Senior Engineer	Project Engineer	EIT	CADD	Admin			
	Basic Services			\$308.00	\$267.00	\$166.00	\$120.00	\$135.00	\$88.50			
I	General Management/Coordination			10	53	56	44	6	3	172	\$32,882.50	
A	Project Management/Coordination											
A1	Internal Team Meetings			1	3	12	12	6	3	37	\$5,617	
A2	QA/QC			2	12					14	\$3,820	
A3	Pre-Design Coordination Meeting			1	8					9	\$2,444	
A4	Quarterly Project Update Meetings			2	4					6	\$1,684	
B	Progress Schedule											
B1	Prepare Baseline Schedule			2		4				6	\$1,280	
B2	Prepare Monthly Progress Reports and Update Monthly Schedule				12	6				18	\$4,200	
C	Research and Data Gathering											
C1	Attend Kick-off Meeting			2	2	2				6	\$1,482	
C2	Field Visit					8	8			16	\$2,288	
C3	Data Collection					12	24			36	\$4,872	
D	Project Progress Meetings											
D3	Bi-Weekly Meetings				12	12				24	\$5,196	
II	Preliminary Design Phase			0	12	34	56	60	12	174	\$24,730.00	
A	Roadway Details											
A1	Typical Sections		1		1	2	4	8		15	\$2,159	\$2,159
A2	Roadway Plan Sheets (1"=40')		2		1	4	8	16		29	\$4,051	\$2,026
B	Traffic Control Plan											
B1	Traffic Control Plan (2-Phases) (1"=100')		2			4	8	16		28	\$3,784	\$1,892
C	Preliminary Engineering Report											
C1	Existing Condition Analysis					4	8			12	\$1,624	
C2	Utility Conflict Analysis and Coordination					4	8	8	8	28	\$3,412	
C3	Prepare Construction Cost Estimate				4	8	8			20	\$3,356	
D	30% Deliverables											
D1	QC/QA 30% Plans and Preliminary Engineering Report				4	4	12	12		32	\$4,792	
D2	Submit 30% to County				2	4			4	10	\$1,552	
III	Intermediate Design Phase (70%)			0	18	72	106	120	4	320	\$46,032.00	
A	General											
A1	Cover Sheet, Index		1		1	2	4	8		15	\$2,159	\$2,159
A2	General Notes		1			4	4			8	\$1,144	\$1,144
A3	TypicalSection		1			1	4	8		13	\$1,726	\$1,726
A4	Non-Standard Cross Sections		1			4	4	8		16	\$2,224	\$2,224
A5	Project Layout		1			1	4	4		9	\$1,186	\$1,186
A6	Survey Control		1			1	2	2		5	\$676	\$676
A7	Right-of-way		1			1	2	2		5	\$676	\$676
B	Roadway Details											
B1	Horizontal and Vertical Alignments 1"=40		1			2	4	4		10	\$1,352	\$1,352



Exhibit A :Scope of Services / Schedule of Fees & Rates
Design Services for
PS&E Design for 23206 Masterson Road, Fort Bend County, Texas

Task No.	Task Description	Basis for Hour Estimate	Est. No. of Sheets	Labor (hours)						Total Hours/Task	Total Labor Cost	Cost/Sheet
				Project Manager	Senior Engineer	Project Engineer	EIT	CADD	Admin			
	Basic Services			\$308.00	\$267.00	\$166.00	\$120.00	\$135.00	\$88.50			
B2	Plan and Profile Sheets		1			2	4	4		10	\$1,352	\$1,352
C	Traffic Items											
C1	Traffic Control Plan (2-Phases)	15	2		2	4	8	16		30	\$4,318	\$2,159
C2	Signing and Striping Plan 1"=100	16	1			2	6	8		16	\$2,132	\$2,132
D	Environmental Issues											
D1	Storm Water Pollution Prevention Plan 1"=100	7	3		2	4	8	8		22	\$3,238	\$1,079
E	Construction Cross Sections (3D Modelling)	22	3		2	8	24	32		66	\$9,062	\$3,021
F	70% Deliverables											
F1	QC/QA 70% Plans and/or Documentation	1	19		2	4	8	8		22	\$3,238	\$170
F2	Develop Earthwork Quantities				1	4	8	8		21	\$2,971	
F3	Develop 70% Construction Specifications and Supporting Forms				2	8				10	\$1,862	
F4	Develop 70% Construction Quantities and Cost Estimate				2	8	8			18	\$2,822	
F5	Prepare KMZ file of current design with proposed ROW						4			4	\$480	
F6	Submit 70% Design to County				2	4			4	10	\$1,552	
F7	Utility Conflict Analysis and Coordination					8				8	\$1,328	
F8	Comment Resolution				2					2	\$534	
IV	Pre-Final Design (95%)			0	16	32	36	65	8	157	\$23,387.00	
A	95% Deliverables											
A1	Revise Plans and Cross Sections per 70% Comments	3	19		4	8	16	32		60	\$8,636	\$455
A2	Prepare Standard Construction Details	1	16		1	2	4	8		15	\$2,159	\$135
A3	QC/QA 95% Plans and/or Documentation	1	19		2	4	8	8		22	\$3,238	\$170
A4	Develop Earthwork Quantities				1	2		8		11	\$1,679	
A5	Develop 95% Construction Quantities and Cost Estimate				2	4	8	8		22	\$3,238	
A6	Develop 100% Final Construction Specifications and Supporting Forms				2	4				6	\$1,198	
A7	Prepare KMZ file of current design with proposed ROW							1		1	\$135	
A8	Submit 95% Design to County				2				8	10	\$1,242	
A9	Utility Conflict Analysis and Coordination					8				8	\$1,328	
A10	Comment Resolution				2					2	\$534	
V	Final Design (100%)			0	14	14	20	29	8	85	\$13,085.00	
A	100% Deliverables											
A1	Revise Plans and Cross Sections per 95% Comments	2	19		2	4	8	16		30	\$4,318	\$227
A2	QC/QA 100% Plans and/or Documentation				2	4	8	8		22	\$3,238	
A3	Develop Earthwork Quantities				1	2		4		7	\$1,139	
A4	Develop 100% Final Construction Quantities and Cost Estimate				2	2	4			8	\$1,346	
A5	Develop 100% Final Construction Specifications and Supporting Forms				4					4	\$1,068	
A6	Prepare KMZ file of current design with proposed ROW							1		1	\$135	
A7	Submit 100% Design to County				2				8	10	\$1,242	



Exhibit A :Scope of Services / Schedule of Fees & Rates
Design Services for
PS&E Design for 23206 Masterson Road, Fort Bend County, Texas

Task No.	Task Description	Basis for Hour Estimate	Est. No. of Sheets	Labor (hours)						Total Hours/Task	Total Labor Cost	Cost/Sheet
				Project Manager	Senior Engineer	Project Engineer	EIT	CADD	Admin			
	Basic Services			\$308.00	\$267.00	\$166.00	\$120.00	\$135.00	\$88.50			
A8	Develop Estimated Construction Schedule				1	2				3	\$599	
Total Basic Services (MVE)				10	117	218	274	288	40	947	\$ 140,116.50	
VI	Bid Phase Services (T&M)			0	2	6	4	0	5	17	\$2,452.50	
A	Bid Support											
A1	Attend Pre-Bid Conference					4				4	664	
A2	Develop Project Manual				2				1	3	\$623	
A3	Tabulation of Bids					2	4		4	10	\$1,166	
VII	Construction Phase Services (T&M)			2	19	38	38	54	9	160	\$ 24,643.50	
A	Attend Preconstruction Conference				2	2				4	\$866	
B	Construction Observation Up to 16 Visit					16				16	\$2,656	
C	Review all shop drawings				8					8	\$2,136	
D	Prepare, Respond to RFIs			2	8	16	32	48	8	114	\$16,436	
E	Prepare As-Built Plans				1	4	6	6	1	18	\$2,550	
Total Time and Materials (MVE)				2	19	38	38	54	9	160	\$ 27,096.00	
VIII	Optional Additional Services			0	2	8	120	40	0	170	\$ 21,662.00	
B	Sewerline Relocation Design				2	8	120	40		170	\$21,662	
Total Basic Services (MVE)				0	2	8	120	40	0	170	\$ 21,662.00	\$ -

OTHER DIRECT EXPENSES - MVE	Unit	Unit Cost	Quantity	Rate	Cost
Mileage	mile	\$0.70	100	Current IRS Approved Rate	\$ 70.00
Postage	each	\$0.73		\$ 0.73	\$ -
Courier Services	each	\$ 25.00	3	\$ 25.00	\$ 75.00
Photocopies B/W (8.5 X 11)	each	\$ 0.10	150	\$ 0.10	\$ 15.00
Photocopies B/W (11 X 17)	each	\$ 0.20	500	\$ 0.20	\$ 100.00
Photocopies Color (8.5 X 11)	each	\$ 1.00	150	\$ 1.00	\$ 150.00
Photocopies Color (11 X 17) - for field work	each	\$ 1.50	150	\$ 1.50	\$ 225.00
GPS Unit	day	\$ 125.00	0	\$ 125.00	\$ -
TDLR Project Filing Fee	each	\$ 175.00	0	\$ 175.00	\$ -
TDLR Project Inspection Fee	hour	\$ 215.00		\$ 215.00	\$ -
TOTAL:					\$ 635.00

Direct Expenses: \$ 635.00

TOTAL BASIC SERVICES + DIRECT EXPENSES : \$ 140,751.50
TOTAL TIME AND MATERIALS \$ 27,096.00
TOTAL OPTIONAL ADDITIONAL SERVICES : \$ 21,662.00
TOTAL SERVICES : \$ 189,509.50



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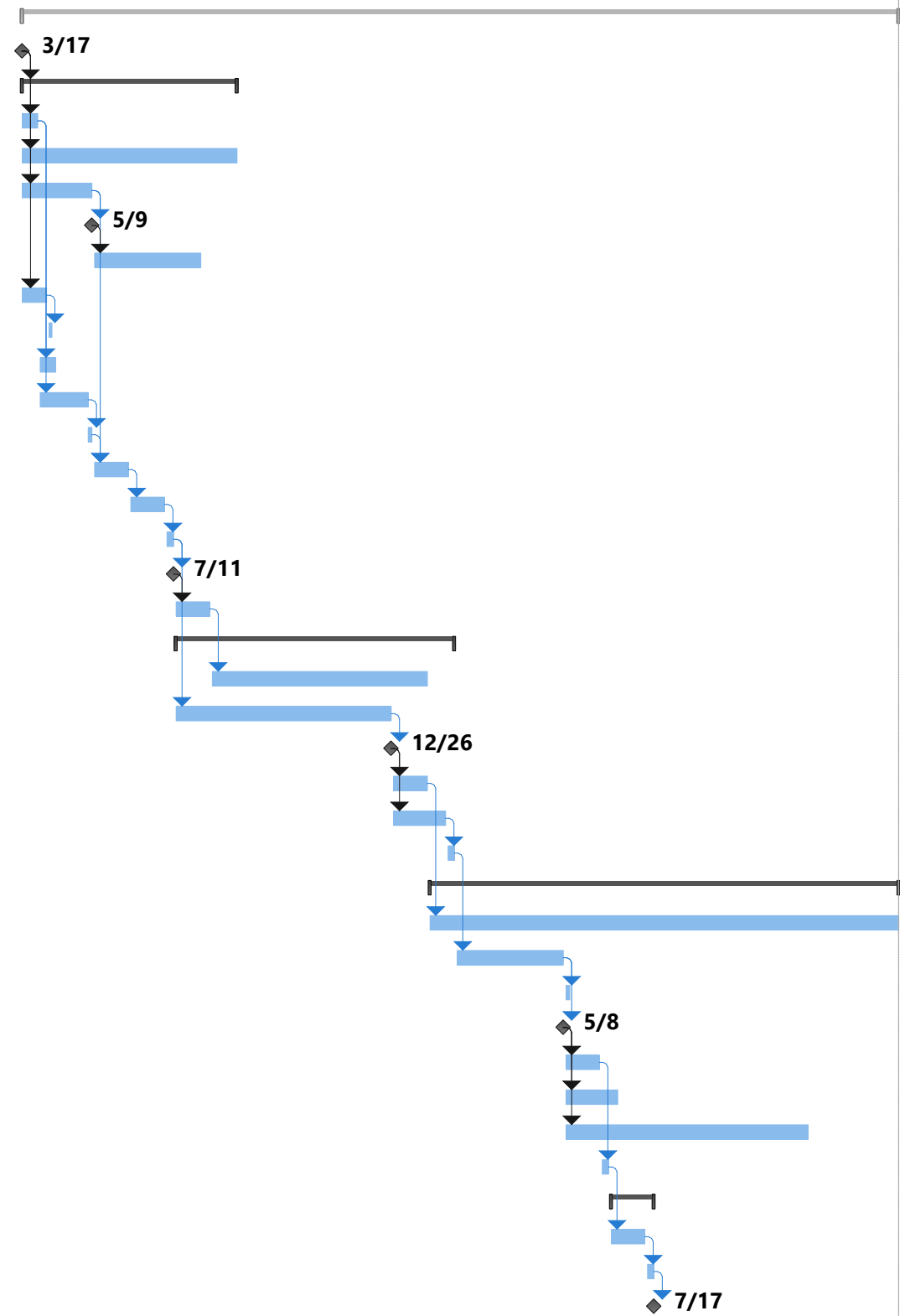
Attachment B

Project Anticipated Design Schedule

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ID	Task Name	Duration	Start	Finish	<div><div>Q4</div><div>O</div><div>N</div><div>D</div><div>Q1</div><div>J</div><div>F</div><div>M</div><div>Q2</div><div>A</div><div>M</div><div>J</div><div>Q3</div><div>J</div><div>A</div><div>S</div><div>Q4</div><div>O</div><div>N</div><div>D</div><div>Q1</div><div>J</div><div>F</div><div>M</div><div>Q2</div><div>A</div><div>M</div><div>J</div><div>Q3</div><div>J</div><div>A</div><div>S</div><div>Q4</div><div>O</div><div>N</div><div>D</div><div>Q1</div><div>J</div><div>F</div></div>																											
0	23206 - Materson Road - Pct. 2	485 days?	Mon 3/17/25	Fri 1/22/27	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div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Attachment C

KAVI Engineering, Inc.'s Drainage Design Services Proposal

“The Solution Starts Here”

Houston
11011 Richmond Ave, Suite 875
Houston, TX 77042

Kavi Consulting, Inc.

December 05, 2024

David M. Hosseiny, P.E.
MV ENGINEERING, INC.
14850 Quorum Dr #120
Dallas, TX 75254 US

RE: Masterson Rd from FM 521 to Intersection at Airport

Dear Mr. Hosseiny:

Attached please find our fee proposal for the drainage design of Masterson Rd- from FM 521 to Intersection at Airport. Also attached is our level of effort spreadsheet. Our proposed fee for drainage portion design of the project is \$ 79,810.00 and additional services fee of \$44,325.00. Total fee is 124,135.00.

Please call me at 281-772-9643 if you have any questions. We look forward to working with CP&Y and Fort Bend County on this project.

Sincerely,



Vijaya Rapolu, P.E.
Kavi Consulting, Inc.

Encl:

Scope of Services
LOE (KAVI)

1011 Highway 6S, # 307
Houston TX-77077
Ph: 281.772.9643

E-Mail: rapolu.vijaya@kaviconsultinginc.com

SCOPE OF SERVICES

Masterson Rd from FM 521 to Existing Intersection at Airport

SCOPE OF SERVICES

This scope includes a Preliminary Design, and Final Design per Fort Bend County Design Standards and Manual for Masterson Rd from FM 521 to Existing Intersection at Airport.

Following are the basic services that will be required for this project:

Preliminary Design Phase

The preliminary design will include the following:

- MUD, Fort Bend County and other applicable public and private agencies' coordination.
- Field verification for Drainage Facilities
- Drainage will be performed per Atlas 14 or Fort Bend County Drainage District recommended rainfall.
- Perform Drainage Study for Existing Conditions for Conveyance
- Perform Drainage Study for Proposed Conditions for Conveyance
- Propose Typical sections for drainage
- Evaluate the Existing and Proposed flows and determine the impact due to increased runoff. For the required mitigation volume evaluate the alternatives such as in-line detention and off-line detention. Provide the County various alternatives with cost-estimate for the comparison and present it.
- Preliminary cost estimate preparation for drainage facilities
- Drainage improvements support for 30% design plan set

Final Design Phase (70, 95 and 100%)

The final design phase will include the following:

- Preparation of construction plans that include:
overall layout; drainage area maps, drainage calculations, culvert layouts, Drainage design support for P&P drawings; and other applicable details.
- Perform any necessary changes in the drawings and specifications for drainage that are outside the scope of the project.
- Detention Pond analysis and design as needed (Optional).
- Plans will be done in AutoCAD format. Land acquisition services are not included.
- Construction Plans submittals for 70, 95 and 100 percent.
- Finalize the preliminary construction cost estimate for drainage facilities

Construction Phase Services for Drainage Work

- a. Attend and assist the County in pre-construction conferences. Attend bi-weekly (once every two weeks) and other project meetings as requested by the County for drainage construction.

- b. Make periodic visits (not less than bi-weekly), as distinguished from the continuous services of a resident project representative, in order to become familiar with the progress of the work, and to determine if the work is proceeding in accordance with the contract documents.
- c. Review, and submit comments on all project schedules as submitted by the Contractor for drainage facilities.
- d. Participate with the County's representatives in a substantial completion and/or final inspection of the Project. The Engineer must conduct inspections to determine the dates of substantial and final completion.
- e. Correct errors and omissions in the drawings and specifications as requested by the County.

SCHEDULE

The Preliminary Design Report will be submitted for review within 60 days after Survey data received. Phase II final design will take 60 days (not including County review time).

FEE BREAKDOWN

The fees for Phase I and Phase II will be paid on a lump sum basis. The following table gives a breakdown of the total fee by phase:

Phase	Fee
Preliminary Design (KAVI)	\$26,350.00
Final Basic Design (KAVI)	\$46,340.00
Construction Phase (KAVI)	\$7,120.00
Additional Services Optional (KAVI)	\$44,325.00
Design (Total)	\$79,810.00
Additional Services (Total)	\$44,325.00
Total	\$124,135.00

Fort Bend County 2023 Mobility Bond Program Fee Estimate Worksheet

Masterson Rd- Fort Bend County Precinct 2

TASK DESCRIPTION	PRINCIPAL	DEPARTMENT MANAGER	SENIOR PROJECT MANAGER	PROJECT MANAGER	SENIOR PROJECT ENGINEER	PROJECT ENGINEER	ASSOCIATE ENGINEER	GIS SPECIALIST	CADD MANAGER	SENIOR DESIGNER	DESIGNER	SENIOR CADD TECHNICIAN	CADD TECHNICIAN	SURVEY CREW CHIEF	SURVEY CREW	CLERICAL	TOTAL HOURS	Task Total
1. Preliminary Design (LS)																		\$ 26,350.00
Site Visit				4		4											8	\$ 1,230.00
Drainage Area Maps		1		2	2	4				6							15	\$ 1,915.00
H&H Analysis for Existing Conditions for road side ditch and culvert(s) under the Masterson Rd		2		4	4	32				4							46	\$ 6,190.00
H&H Analysis for Proposed Conditions for road side ditch and culvert(s) under the Masterson Rd		1		4	4	24				4							37	\$ 4,955.00
Identify the mitigation alternatives		1		4	4	20				4							33	\$ 4,435.00
Prepare a Construction Cost Estimate		1		3	3	6				4					4		21	\$ 2,530.00
Drainage Design Support for 50% plans		1		4	2	8				20							35	\$ 4,115.00
Preliminary Phase Expenses				4	4	4												\$ 1,000.00
																		\$
2. Final Design (LS) (70%, 95% and 100%)																		\$ 46,340.00
Quantities (Summary Sheets - Optional)				2		4				4							10	\$ 1,250.00
Typical Sections (70%-Final)				4	4	4				2							14	\$ 1,970.00
Drainage Area Maps	1	1		4	4	12				4							26	\$ 3,605.00
Evaluate the H&H analysis for final design	1	1		4	4	8				4							22	\$ 3,085.00
Plan and Profile Sheets (Drainage Ditch and Cross Structure)	1	1		8	4	24				48							86	\$ 10,045.00
Detail Sheets				2		2											4	\$ 610.00
Standard Details				2		2											4	\$ 610.00
Technical Specifications	1			2	2	4				2							11	\$ 1,550.00
Construction Cost Estimate	1	1		2	2	12				4							22	\$ 2,975.00
Responses to Comments				2	2	8				8							20	\$ 2,430.00
Project Management & Meetings (2 Months Typical)				4	4	4											12	\$ 1,780.00
Final Design Phase Expenses																		\$ 1,590.00
																		\$
3. Bid & Construction Phase Services (T&M)																		\$ 7,120.00
Answer Bidder Questions & Addendum				2	2	2				2							8	\$ 1,080.00
Attend Pre-Construction Meeting				2	4												6	\$ 910.00
Review Contractor Submittals		1		2	2	2				4							11	\$ 1,465.00
Answering Requests for Information		1		6	4	2				2							15	\$ 2,255.00
Substantial Completion Walkthrough				2	4												6	\$ 910.00
Bid & Construction Phase Expenses																		\$ 500.00
																		\$
4. Additional Services (Optional)																		\$ 44,325.00
Evaluate the Mitigation analysis for final design	1	1		10	4	12				4							32	\$ 4,855.00
Storm Sewer Design (if roadside ditch is not viable)	2			16	4	24				32							78	\$ 9,940.00
Detention Analysis	1			12	4	32				12							61	\$ 8,170.00
Detention Pond and Outfall Structure Design	4			24	24	32				48					16		148	\$ 18,000.00
Project Management & Meetings (2 Months Typical)				4	4	4											12	\$ 1,780.00
Final Design Phase Expenses				4	4	4											12	\$ 1,780.00
Right-of-way Parcel Exhibits (\$ per parcel) - small parcels (size limits) (by others)																	0	\$ -
Right-of-way Parcel Exhibits (\$ per parcel) - medium parcels (size limits)																	0	\$ -
Right-of-way Parcel Exhibits (\$ per parcel) - large parcels (size limits)																	0	\$ -
Overall Parcel Map																	0	\$ -
Topographic Survey (By others)																	0	\$ -
																	0	\$ -
																	0	\$ -
																	0	\$ -
																	0	\$ -
																	0	\$ -
MAN-HOUR SUBTOTAL	13	14	0	149	109	300	0	0	0	228	0	0	0	0	0	24	823	
	2%	2%	0%	18%	13%	36%	0%	0%	0%	27%	0%	0%	0%	0%	0%	3%		
LABOR RATE PER HOUR	\$210.00	\$195.00	\$185.00	\$175.00	\$140.00	\$130.00	\$100.00	\$60.00	\$105.00	\$95.00	\$80.00	\$75.00	\$65.00	\$1.00	\$1.00	\$55.00		
SUBTOTAL LABOR	\$2,730.00	\$2,730.00	\$0.00	\$26,075.00	\$15,260.00	\$39,000.00	\$0.00	\$0.00	\$0.00	\$21,470.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,320.00		\$ 79,810.00
SUBTOTAL BASIC																		\$ 44,325.00
SUBTOTAL ADDITIONAL																		
TOTAL																		\$ 124,135.00



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mv-engineering.com

Attachment D

REKHA Engineering Company's Surveying Services Proposal

"The Solution Starts Here"

Houston
11011 Richmond Ave, Suite 875
Houston, TX 77042



REKHA ENGINEERING, INC.

CONSULTING CIVIL ENGINEERS AND LAND SURVEYORS

Cherita Andrews

October 23, 2024 (2-21-25)

MV ENGINEERING, INC.

11011 Richmond Avenue, Suite 875

Houston, Texas 77042

O: (713) 333-0172

C: (713) 240-0284



"The Solution Starts Here"

RE: Proposal and Letter of Agreement for: Professional Land Surveying for 2023 Fort Bend County Mobility Project - Roadway Design Mobility Project - Fort Bend Mobility Project (23206-Masterson Road). - Fort Bend County, Tx

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

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

All performed by our field land survey crews, calculation and AutoCAD 19 3-D cad technicians with professional review by our inhouse Registered Professional Land Surveyor.

Survey

25.700 Existing Right-of-Way Maps (Cat. 1B Condition II)

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

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

25.701 Topographic Survey (Cat. 6 Condition II)

- A. Perform topographic survey for 950+ linear feet with all intersections along this route, and for additional side streets as noted:
 - i. **Masterson RD @ Railroad tracks by FM 521 to Masterson Rd @ Ditch**
- B. Perform topographic survey at the following intersections :

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



REKHA ENGINEERING, INC.

CONSULTING CIVIL ENGINEERS AND LAND SURVEYORS

a) Masterson RD @ Railroad Tracks @ FM 521 plus Masterson Rd @ Ditch (100' ea way)

- C. Survey to include 20 feet outside of the right-of-way and up to 60 feet outside right-of-way for objects (obstructions), except those that are behind brick walls and buildings.
- D. Establish elevations and locations of physical features including buildings, structures, signs, power poles, curbs, driveways, water meters, manholes, pedestals, ponds, light poles, etc. within the proposed and existing right-of-way. Overhead crossing utilities shall be limited to the low chord elevation.
- E. Provide pipe flow line elevations, size, material and directions of all sanitary sewer lines, storm sewer lines and driveway culverts. Top of rim or top of grate and flow line elevations shall be recorded on all inlets, manholes and drainage structures.
- F. Locate Ornamental trees or Landscape trees with a diameter of 4" and larger shall be located. Wooded/brushed areas shall be limited to an outlined area only. No Individual Trees shall be located on natural vegetation areas.
- G. Provide SUE Level A through D provided by engineer.
- H. Locate soil borings.
- I. Provide all traffic control, labor, and equipment for the Traffic Control Plan (TCP) while performing field services in compliance with the regulations of the most recent edition of the "Texas Manual on Uniform Traffic Control Devices" and HCED Standards.
- J. Prepare utility conflict table by engineer.
- K. Attend Field Topo Verification Meeting to visibly check that all topo items are currently located as per the field notes. Objectives to be achieved during the field topo verification meeting include impacts that could affect the alignment alternatives have on the Right of Way, existing structures such as signals, utilities, and property, environmental impacts and impacts to existing and proposed improvements.

Deliverables: CADD file along with ASCII point file plus CAD files to be converted to MicroStation .dgn format, DTM with 1-foot contours and TIN file and XML file with break lines; 22"x34" 1" = 20' plan sheets for the topo field walk (6 copies)

2S.702 Control

- A. Horizontal Survey Control shall be referenced to the Texas State Plane Coordinate System, South Central Zone, NAD83.
- B. Vertical Control shall be based on the nearest existing Fort Bend Reference Marker, NAVD 1988, 2001 Adj.
- C. Provide adequate number of control points that are set and recoverable.
- D. Request information from FBC for directions on tying controls to adjacent projects.

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

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

Prepare parcel map exhibits and metes and bounds descriptions.

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

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

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

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



REKHA ENGINEERING, INC.

CONSULTING CIVIL ENGINEERS AND LAND SURVEYORS

- B. Survey to include 20 feet outside of the right-of-way and up to 60 feet outside right-of-way for objects (obstructions), except those that are behind brick walls and buildings.
- C. Establish elevations and locations of physical features including buildings, structures, signs, power poles, curbs, driveways, water meters, manholes, pedestals, ponds, light poles, etc. within the proposed and existing right-of-way. Overhead crossing utilities shall be limited to the low chord elevation.
- D. Perform Texas One Call for underground utility locations to mark utilities within the existing right-of-way and existing easements within the take area.
- E. Obtain utility maps from CenterPoint Energy and AT&T.
- F. Locate markings provided by One-Call and "visible" utilities within 20 feet of the proposed and or existing right-of-way.
- G. Provide pipe flow line elevations, size, material and directions of all sanitary sewer lines, storm sewer lines and driveway culverts. Top of rim or top of grate and flow line elevations shall be recorded on all inlets, manholes and drainage structures.
- H. Locate Ornamental trees or Landscape trees with a diameter of 4" and larger shall be located. Wooded/brushed areas shall be limited to an outlined area only. No Individual Trees shall be located on natural vegetation areas.
- I. Locate soil borings.
- J. Horizontal control shall be referenced to the Texas Coordinate System, South Central Zone, North American Datum 1983 (2011 Adjustment) as processed against NGS CORS and Leica Smartnet Network.
- K. Vertical control shall be established and referenced to the North American Vertical Datum (NAVD) 1988 (2001 adjustment) as established by local Harris County Reference Marks.
- L. Establish survey baselines and temporary benchmarks.

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

S.700C – D760C Survey Coordination

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

All performed by our field land survey crews, calculation and AutoCAD cad technicians with professional review by our inhouse Registered Professional Land Surveyor. CAD files to be converted to MicroStation .dgn format.

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

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

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Note **not included** are the following: any other land surveying services except as referenced above including no profile preparation plus cross section drafting. Proposed schedule is to complete the land surveying this scope in 6 weeks from NTP notice (45 calendar days) subject to weather/rain days. NO UVE quoted.

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

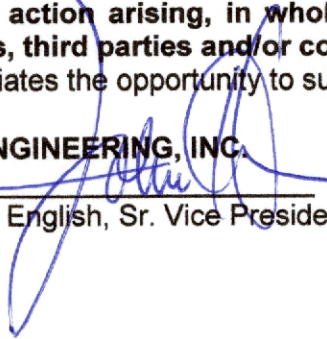
1) Boundary Category 1B survey proposed existing right of way With Survey Control Map Bench Marks	\$ 9,870.00
2) Topographic Survey Category 6 with Survey Control Map for Bench marks	14,970.00
3) Overall Parcel Map of complete roadway with existing right of way & <u>proposed right of way Alignments</u>	6,885.00
total	\$ 31,725.00

Optional Additional Services

4) Individual Parcel exhibit maps with metes and bounds per county criteria (3,075.00 ea) Overall Parcels 2 <i>parcels</i> x 3,075.00 ea. parcel (Estimated # parcels)	6,150.00
5) Stake in the field the Proposed right of way \$2,632.50 x 3 times =	7,897.50
6) Optional Detention Pond survey \$ 3915.00 per 1.0 acre	3,915.00

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

REKHA ENGINEERING, INC.

By: 
John H. English, Sr. Vice President

AGREED AND ACCEPTED BY CLIENT:

By: _____
(Note: the entity and person that is
signing this proposal is responsible for payment).
Type Name: _____
Date _____
Telephone & Email _____

TBPE FIRM NO. F-3712 TBPLS FIRM NO. 10133800
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REKHA ENGINEERING, INC.

CONSULTING CIVIL ENGINEERS AND LAND SURVEYORS

EXHIBIT "A"

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

2-10-25

Principal	\$ 205.00 per hour
Project Manager	\$ 185.00 per hour
Surveyor (RPLS)	\$ 165.00 per hour
Technician	\$ 105.00 per hour
Sr. Technician	\$ 135.00 per hour
Secretary	\$ 55.00 per hour
Survey Crew (Crew with Data Coll + Robotic Total Station with GPS)	\$ 150.00 per hour
Survey Crew (2-Man Crew with Data Coll + Robotic Total Station with GPS)	\$ 195.00 per hour
Permitting expediter process and services	\$55.00 per hour

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

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

- see below list

1. Reproduction (Out of Office)	\$ 0.70¢ per mile
2. Mileage	\$ 4.00 per plot
3. <u>Reproduction - In Office</u> - computer plots (D size)	\$ 7.00 per plot
4. <u>Reproduction - In Office</u> - computer plots (E size)	\$ 5.00 each
5. Black Line and check plots for design	\$ 20.00 each
6. Mylars, Vellums and/or Sepia	\$ 3.00 each
7. Field Supplies - Survey lathes, hubs, iron rods, etc...	\$ 45.00 each
Delivery including handling in office (separate charge -- outside of REI)	\$ 45.00 per day

TBPE FIRM NO. F-3712 TBPLS FIRM NO. 10133800
7676 Hillmont Road, Suite 350 - HOUSTON, TEXAS 77040
PHONE: (713) 895-8080
Website: www.rekhaengineering.com - E-mail: jake1@pdq.net

**PROJECT: Fort Bend County 2023 Mobility Projects
Masterson Rd - FM 521 RR West 950 feet to Ditch**

October 23, 2024

PROFESSIONAL LAND SURVEYING SERVICES BY:



REKHA ENGINEERING, INC.

CONSULTING CIVIL ENGINEERS AND LAND SURVEYORS

**(a Certified MBE Firm)
7676 Hillmont St. Suite 350
Houston, TX 77040
713-895-8080**

jake1@pdg.net

TBPLS: 10133800, TBPE: F-3712



REKHA ENGINEERING, INC.

CONSULTING CIVIL ENGINEERS AND LAND SURVEYORS

PROJECT: Fort Bend County 2023 Mobility Projects Masterson Rd - FM 521 RR West 950 feet to Ditch

1. Boundary Determining Existing Right of Way Survey

10/23/2024

Description	Survey Crew	Tech	Sr. Tech	RPLS	Total
1. Investigate plats and deeds plus adjoiner deeds and plats	0	1	0	1	\$270.00
2. Utility Investigation: COH Plan, FEMA, GIS, CenterPoint, AT&T, W-S-STM, ROW	0	0	0	0	\$0.00
3. Field tie in benchmark and establish TBM	0	0	0	0	\$0.00
4. Field- Locate back corners adjoining tract and establish control	8	1	0	1	\$1,830.00
5. Right of Way street at 400LF/day	16	1	0	1	\$3,390.00
6. CAD Right of Way roadway map	0	24	1	2	\$2,985.00
7. Combine all office and fieldwork to create overall maps coordinations	0	2	1	1	\$510.00
8. Professional review and issue	0	4	1	2	\$885.00
	0	0	0	0	\$0.00
	0	0	0	0	\$0.00
	0	0	0	0	\$0.00
Total Hours	24	33	3	8	
Rate/Hr	\$195	\$105	\$135	\$165	
Total Fee	\$4,680	\$3,465	\$405	\$1,320	\$9,870.00



REKHA ENGINEERING, INC.

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PROJECT: Fort Bend County 2023 Mobility Projects Masterson Rd - FM 521 RR West 950 feet to Ditch

2. Topographic Roadway Survey

10/23/2024

Description	Survey Crew	Tech	Sr. Tech	RPLS	Total
1. Investigate plats and deeds	0	1	0	1	\$270.00
2. Utility Investigation: COH Plan, FEMA, GIS, CenterPoint, AT&T, W-S-STM, ROW	0	2	0	0	\$210.00
3. Field tie in benchmark and establish TBM(s) in field	5	0	0	1	\$1,140.00
4. Field- Locate front corners and establish control	5	1	0	0	\$1,080.00
5. Topographic street at 400LF/ day plus ditch	24	1	0	0	\$4,785.00
6. Right of entry coordination of parcels (back P.C)	4	1	0	1	\$1,050.00
7. CAD Topographic roadway design plus calculations of control	0	32	1	1	\$3,660.00
8. Coordinate utility investigation with field work plus utility conflict table	0	1	0	0	\$105.00
9. Combine all office and fieldwork to create overall maps coordinations	0	1	0	1	\$270.00
10. Professional review and issue	0	4	2	4	\$1,350.00
11. Control Map with benchmark plus TBMs	4	1	0	1	\$1,050.00
	0	0	0	0	\$0.00



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	0	0	0	0	\$0.00
Total Hours	42	45	3	10	
Rate/Hr	\$195	\$105	\$135	\$165	
Total Fee	\$8,190	\$4,725	\$405	\$1,650	\$14,970.00



REKHA ENGINEERING, INC.

CONSULTING CIVIL ENGINEERS AND LAND SURVEYORS

PROJECT: Fort Bend County 2023 Mobility Projects Masterson Rd - FM 521 RR West 950 feet to Ditch

3. Parcel Overall Map with Existing Alignment with Proposed Alignment

10/23/2024

Description	Survey Crew	Tech	Sr. Tech	RPLS	Total
1. Coordinate & Review of plats and deeds plus adjoiner deeds	0	1	0	1	\$270.00
2. Parcels overall right of way parcel map with existing right of way with prop....	0	16	2	2	\$2,280.00
3. Coordinate existing right of way with new alignment of right of way	0	12	2	8	\$2,850.00
4. Combine all office and fieldwork to create overall maps coordinations	0	0	2	1	\$435.00
5. Professional review and issue	0	4	1	3	\$1,050.00
	0	0	0	0	\$0.00
	0	0	0	0	\$0.00
	0	0	0	0	\$0.00
Total Hours	0	33	7	15	
Rate/Hr	\$195	\$105	\$135	\$165	
Total Fee	\$0	\$3,465	\$945	\$2,475	\$6,885.00



REKHA ENGINEERING, INC.

CONSULTING CIVIL ENGINEERS AND LAND SURVEYORS

PROJECT: Fort Bend County 2023 Mobility Projects Masterson Rd - FM 521 RR West 950 feet to Ditch

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

10/23/2024

Description	Survey Crew	Tech	Sr. Tech	RPLS	Total
1. Investigate plats and deeds	0	1	0	1	\$270.00
2. Existing right of way taken map with proposed right of way	0	8	1	1	\$1,140.00
3. Set property corners	3	1	0	1	\$855.00
4. Combine all office and fieldwork to create overall maps coordinations MB	0	1	1	1	\$405.00
5. Professional review and issue	0	1	1	1	\$405.00
	0	0	0	0	\$0.00
	0	0	0	0	\$0.00
	0	0	0	0	\$0.00
Total Hours	3	12	3	5	
Rate/Hr	\$195	\$105	\$135	\$165	
Total Fee per parcel	\$585	\$1,260	\$405	\$825	\$3,075.00

Number of Parcels:	2
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Total Fee	\$6,150
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REKHA ENGINEERING, INC.

CONSULTING CIVIL ENGINEERS AND LAND SURVEYORS

PROJECT: Fort Bend County 2023 Mobility Projects Masterson Rd - FM 521 RR West 950 feet to Ditch

5. Stake property for clearing contractors

10/23/2024

Description	Survey Crew	Tech	Sr. Tech	RPLS	Total
1. Coordinate and calculate staking of property right of way	0	2	2	1	\$645.00
2. Stake in field new right of way alignment per civil plans	8	1	1	0	\$1,800.00
3. Collect stakes and confirm complete	0	1	0	0.5	\$187.50
	0	0	0	0	\$0.00
	0	0	0	0	\$0.00
	0	0	0	0	\$0.00
	0	0	0	0	\$0.00
Total Hours	8	4	3	1.5	
Rate/Hr	\$195	\$105	\$135	\$165	
Total Fee	\$1,560	\$420	\$405	\$495	\$2632.50



REKHA ENGINEERING, INC.

CONSULTING CIVIL ENGINEERS AND LAND SURVEYORS

PROJECT: Fort Bend County 2023 Mobility Projects Masterson Rd - FM 521 RR West 950 feet to Ditch

6. Optional Detention Pond survey per 1.0 acre

10/23/2024

Description	Survey Crew	Tech	Sr. Tech	RPLS	Total
1. Tie in control & perform a topographic survey of 1 ac of detention pond area adjacent to roadway at 100' interval per proposal	8	2	2	1	\$2,205.00
2. Cad detention pond area per 1 acre	0	8	2	1	\$1,275.00
3. Professional review of survey	0	1	0	2	\$435.00
	0	0	0	0	\$0.00
	0	0	0	0	\$0.00
	0	0	0	0	\$0.00
	0	0	0	0	\$0.00
	0	0	0	0	\$0.00
Total Hours	8	11	4	4	
Rate/Hr	\$195	\$105	\$135	\$165	
Total Fee	\$1,560	\$1,155	\$540	\$660	\$3,915.00

Matterson

Upgrade and construction of Masterson St, transforming the existing dirt road into 2-lane HMAC and shoulders on each side, ditches, and construction of bridge. This road will cross a rail road and there is a potential for the inclusion of a detention pond to manage stormwater runoff





MV ENGINEERING, INC.
mv-engineering.com

Attachment E

Geotech Engineering and Testing's Geotechnical Services Proposal

"The Solution Starts Here"

Houston
11011 Richmond Ave, Suite 875
Houston, TX 77042

**REVISED
PROPOSAL FOR
DESKTOP GEOLOGIC FAULT STUDY AND
GEOTECHNICAL STUDY
MASTERSON STREET PAVING AND DRAINAGE IMPROVEMENTS
FORT BEND COUNTY PROJECT NO. 23206
FORT BEND COUNTY, TEXAS
REVISION II

PROPOSAL NO. P24-381**



**TO

MV ENGINEERS, INC.
HOUSTON, TEXAS

BY

GEOTECH ENGINEERING AND TESTING**

www.geotecheng.com

NOVEMBER 2024

MV Engineering, Inc.
11011 Richmond Avenue, Suite 875
Houston, Texas 77042

Proposal No. P24-381
November 21, 2024
Tel.: 713-333-0172

E-mail: rfields@mv-engineering.com

Attention: Mr. Richard Fields, PE

**REVISED
PROPOSAL FOR
DESKTOP GEOLOGIC FAULT STUDY AND
GEOTECHNICAL STUDY
MASTERSON STREET PAVING AND DRAINAGE IMPROVEMENTS
FORT BEND COUNTY PROJECT NO. 23206
FORT BEND COUNTY, TEXAS
REVISION II**

Gentlemen:


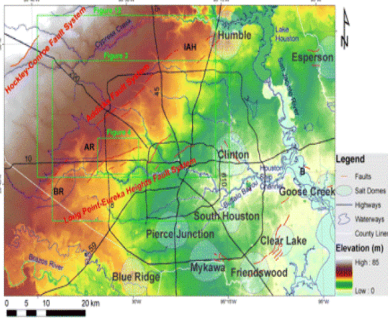


At your request, we are pleased to submit this proposal for the Masterson Street Paving/Drainage Improvement project. The roadway improvement will be about 850-ft, from FM 521 to the new asphalt roughly 850-ft west, under the management of BBI. Existing dirt road shall be converted into a 2-lane asphalt roadway along with storm sewer. A box culvert is proposed at the creek crossing. The planned paving improvements were discussed in detail with Mr. Richard Fields, PE in order to plan a study that would provide the necessary design and construction data.

INTRODUCTION

It is planned to improve approximately 850 linear feet of Masterson St., from FM 521 to the new asphalt roughly 850-ft west in Fort Bend County, Texas. We understand that the proposed improvement will consist of asphalt paving, storm sewers, box culvert and detention pond (optional). The proposed facilities will consist of the following:

Facility	Remarks
Paving	The roadway will be about 850-ft long, asphalt paving. We understand, client will provide the traffic loading in a form of Equivalent Single Axial Load (ESAL). Furthermore, we understand that 20-year design life will be used for asphalt pavement design.
Underground utilities	The underground utilities will consist of storm sewers. We assumed that the depth of the underground utilities will be about 5-ft deep.
Box Culvert	We understand that the planned improvements will include installing RC box culvert be constructed at the creek intersecting Masterson Street. We assume that the creek is less than 10-ft deep.



Facility	Remarks
<p>Detention Pond (Optional)</p> <p>This proposal is divided into two sections. Each section will be discussed and estimated separately. These sections are as follows:</p> <ul style="list-style-type: none"> o Desktop Geologic Fault Study. o Geotechnical Exploration Study for the pavement and drainage improvements. o Geotechnical Exploration Study for detention pond (optional). 	<p>We understand that a detention pond shall be constructed at the project site. The area, depth and location of this proposed pond is not known at this time.</p> 
<p>The scope of our work will be in general accordance with Fort Bend County Geotechnical Guidelines Draft, March 2022. The geotechnical study at the channel/creek crossing along Charlie Roberts Lane shall be conducted in accordance with HCFCD geotechnical guidelines, December 2021. We understand that the scope of our work will not include review of plans and specifications prior to the final design.</p>	
<h3>DESKTOP GEOLOGIC FAULTING</h3>	
<p>The project site is located in Fort Bend County, Texas. Geologic faults are scattered throughout Houston. In general, faults are caused by groundwater and oil removal from the underlying surface. Faults originate several thousand feet below the ground surface and can often cause displacement of the ground surface, causing broken pavement, water lines, and damage to residential and commercial structures.</p> 	
<p>A Desktop Geologic Fault Study will be conducted. A desktop fault study will include a study of published data on surface faults in the area of the site from the Geotech Engineering and Testing Library. A report of our findings will be provided.</p>	
<h3>GEOTECHNICAL STUDY</h3>	
<h4><u>Field Exploration</u></h4>	
<p><u>Site Access.</u> The project alignment is along the existing dirt road. Therefore, site access can be provided, using a truck-mounted drilling rig.</p>	
<p>Due to presence of soft subgrade soils and potential access problems, an ATV rig may have to be used to drill borings for the proposed detention pond. Similarly, ATV rig may be needed to drill borings on the existing dirt road, if soft subgrade soils are encountered at the boring locations at the time of drilling.</p>	
Proposal P24-381	<div> <div>GEOTECH ENGINEERING AND TESTING</div> <div>3</div> </div>

Surveying. The client will establish and provide GET the boring coordinates and ground surface elevations. GET will mark the boring locations in the field so that the survey crew can locate them.

Checking for Utilities. GET will call Texas 811-Call for the locations of utilities. GET will coordinate these activities. GET will not hire a contractor to conduct subsurface utility studies to find location of any and all utilities. This is not the scope of GET work. We recommend the scope of our work to include subsurface utility investigation at boring locations to assess that underground utilities are not hit during field exploration.



Traffic Control. Traffic control will be required along the project alignment during our field exploration. The scope of our field work will require a lane closure during drilling and sampling and borehole grouting. Our traffic control will be subcontracted out.

Drilling and Sampling. We will evaluate the soil stratigraphy and groundwater conditions for the proposed paving and storm sewer improvements by conducting five (5) soil borings to a depth of 20-ft from existing grade. It should be noted that spacing between borings is about 500-ft in accordance with Fort Bend Engineering design manual. We will conduct one (1) soil boring on each side of the creek creek/channel crossing in general accordance with HCFCD geotechnical guidelines. The plan of borings is shown on Plate 2. The borings schedule is as follows:

Facility	Borings	Depth, ft	Remark
Box Culvert	B-1 and B-2	20	A truck-mounted drilling rig. An ATV rig may be needed, if wet and soft soils are encountered at the borings
Paving and Underground Utilities	B-3	10	A truck-mounted drilling rig/ATV rig
Detention Pond (optional)	B-4 and B-5	20	A truck-mounted drilling rig/ATV rig Location of the pond is not known.

Soil samples will be obtained continuously at boring locations from the ground surface to 20-ft. The cohesive soils will be sampled, using a Shelby Tube sampler. Standard Penetration Tests (SPT) will be performed in sands, if encountered. Shear strengths of the clays will be measured in the field with a hand penetrometer and correlations between this data and laboratory unconfined compression and Torvane tests used to supplement laboratory shear strength data.



Groundwater. Depth to groundwater will be important for design and construction of the proposed facilities. For this reason, borings will be drilled dry and the depth at which groundwater is encountered will be recorded. Twenty-four hour water levels will be measured only at Piezometer Boring.

Piezometer. We recommend one (1) piezometer be installed at the proposed detention pond. The piezometers will be installed in Boring B-5 to a depth of 20-ft. The piezometer will be developed by GET. They will be monitored twice in one month. The piezometer will be abandoned per TDLR Requirements soon after 30-day water level reading.



Borehole Grouting. All of the geotechnical boreholes except, Piezometer Boring will be grouted with cement and bentonite, after drilling and sampling.

LABORATORY TESTING

Laboratory tests will vary with the soils encountered but will be planned to evaluate soils design parameters for the proposed pavements and storm sewers.



It is anticipated that the tests will include hand penetrometer, torvane, unconfined compression, unit weight, moisture content, liquid and plastic limit tests, gradation, and hydrometers.



We will conduct additional detailed testing for slope stability analysis of detention pond side slope. These tests will consist of Consolidated Undrained (CU) Triaxial Tests with pore pressure measurements, Unconsolidated Undrained (UU) Triaxial Tests, two (2) double hydrometer tests and four (4) crumb tests.



All of the subsoils will be classified in general accordance with the American Society of Testing Materials (ASTM) Soil Classification System. All tests will be performed in general accordance with the ASTM Procedures.

ENGINEERING ANALYSES AND REPORTING

The field and laboratory data will be summarized in an engineering report. Analyses of these data will be presented and recommendations made relative to the following:

Facility	Recommendations
General	<ul style="list-style-type: none"> ○ Summary. ○ Project site pictures. ○ Geology. ○ Results of the Desktop Geologic Fault Study and recommendations for Phase I Study, if warranted. ○ Generalized soils stratigraphy and groundwater levels. ○ Boring logs per GET format.



Facility	Recommendations
Road Paving	<ul style="list-style-type: none"> ○ Estimated subgrade properties (based on correlations) including CBR and Resilient Modulus values for natural soils. ○ Asphaltic concrete paving design, using AASHTO 1993 pavement design method. We understand that traffic loading in the form of ESAL shall be provided by the client. ○ Soil stabilization requirements for the pavements. ○ Potential construction problems. ○ Recommendations on site drainage.
Storm Sewers	<ul style="list-style-type: none"> ○ Recommendations on the design of the storm sewers including bedding requirements, dewatering, trench safety etc. ○ In the event that open excavation is used, we will provide bedding, backfilling, excavation wall and bottom stability, thrust restraint, dewatering, pipe design parameters. ○ In the event that tunneling is used, we will provide, soil design parameters, ground stability, tunnel shaft excavation stability and dewatering. ○ Construction requirements for trench excavations and backfilling, including groundwater effects and dewatering considerations. ○ Soil types available from excavations and use of these materials for fill. ○ OSHA soil classification for the trench safety. ○ Trench construction and safety requirements. ○ Trench safety report. ○ Lateral earth pressures for the design of the retention system. ○ Recommendations on design of the shaft structure. ○ Potential for bottom blow up at the trenches and tunnel. ○ Any other soils design or construction problems revealed by the study.



Facility	Recommendations
RC Box Culvert	<ul style="list-style-type: none"> ○ We understand that open excavation is used. We will provide bedding, backfilling, excavation wall and bottom stability, thrust restraint, dewatering and design parameters for the box culverts. ○ OSHA soil classification for the trench safety. ○ Trench safety report. ○ Lateral earth pressures for the design of the box culvert.
Detention Pond (optional)	<ul style="list-style-type: none"> ○ Recommendations on design of detention pond, including the detailed computerized slope stability, erosion protection and testing per HCFCD requirements. ○ Computerized slope-stability recommendations for short-term, long-term and rapid draw down conditions. ○ Recommendations on subsoil dispersive characteristics. ○ Seepage and bottom blow up recommendations. ○ Erosion recommendations, including the use of grass for erosion protection. ○ Recommendations on subsoil stabilization, if necessary. ○ Recommendations on the use of excavated materials as fill, per HCFCD requirements. ○ Recommendations on earthwork, select fill and construction procedures. ○ Recommendations on site drainage. ○ Construction requirements for trench excavations and backfilling, including groundwater effects and dewatering considerations. ○ Soil types available from excavations and use of these materials for fill. ○ Constructability considerations.



COST ESTIMATE

General

Based on the scope of work outlined above, we estimate the cost for field, laboratory, and engineering services based on the Harris County Fee Schedule as shown on Plates 2 through 4. This estimate assumes underground obstructions will not be encountered that require boring relocations. GET is not responsible for damages to underground utilities, man-made utilities, etc. In the event that concrete, rock/rubble is encountered, the boring(s) will be terminated. We understand that all of the boring elevations will be provided by the client prior to completion of GET report. Our cost estimate includes one draft report copy and one final report copy. A digital copy of the report will also be provided. Additional report copies will be provided at a separate charge.



Underground Utilities

The cost estimate for geotechnical services assumes that underground obstructions will not be encountered during boring that requires boring relocation(s). GET will contact Texas 811 for the presence of underground utilities. However, Texas 811 does not have information regarding the presence of underground utilities inside the properties. GET is not responsible for damage to underground utilities, man-made objects, etc., that are not identified by Texas 811. The scope of our work does not include subsurface utility engineering. We recommend the scope of our work to include subsurface utility investigation at boring locations to assess that underground utilities are not hit during field exploration.



Traffic Control Allowance

The cost estimate for traffic control is only an allowance. The actual cost may be lower or higher, depending on access, pavement thickness, concrete strength and daily production. GET is prepared to use any qualified traffic control subcontractor specified by the client. **Our estimated traffic control schedule is as follow:**

	<u>Day</u>	<u>Services</u>
	<u>1.0</u>	Drilling and Sampling, Borehole Grouting (Borings B-1 through B-3 only)
Total:	<u>1.0</u>	

Cost Summary

A summary of estimated cost is presented below:

<u>Scope of Work</u>	<u>Estimated Cost</u>	<u>Cost Breakdown Plate(s)</u>
Desktop Geologic Fault Study	\$ 922.00	2
Geotechnical Exploration for Paving and Storm Sewer	39,268.00	2 – 3
Traffic Control (allowance)	1,496.00	4
ATV Rig (allowance)	<u>486.00</u>	4
Grand Total	\$ <u>42,172.00</u>	
Geotechnical Exploration for Detention Pond (Optional)	38,718.00	2 – 3
ATV Rig (allowance)	706.00	4
Piezometer Installation (Allowance)	<u>2,476.00</u>	4
Detention Pond (Optional) Total	\$ <u>41,900.00</u>	

REPORT REVIEWS AND COMMENTS

Our report will be submitted to MV Engineering, Inc in a draft form for comments. Once these reviews are completed, a final report will be issued. All of these comments will be incorporated in the final report. The client agrees that all reviews are complete once a notice for a final report is issued. Any changes to the final report will be outside the scope of our study. We will incorporate any future comments after the final report is issued on a time and materials basis per the applicable fee schedule.

TIME SCHEDULES

We estimate that the field work can be started about one (1) week after authorization is received. The project schedule will be as follows:

<u>Facility</u>	<u>Right of Way/Utility Clearance</u>	<u>Field Exploration</u>	<u>Laboratory Testing</u>	<u>Engineering</u>	<u>Total</u>
Paving and Utilities & Box Culvert &	8	7	15	20	50
Detention Pond (optional)	8	7	25	30	70

Preliminary recommendations will be submitted during the course of the exploration, if required to expedite design.

We appreciate the opportunity to submit this proposal and look forward to being of service to you on this project. Formal acceptance of this proposal and our general conditions can be acknowledged by signing below and returning one copy for our files.

Very truly yours,

GEOTECH ENGINEERING AND TESTING



James Namekar, Ph D., P.E.
Vice President

ACCEPTED BY: _____

COMAPANY NAME: _____

PRINTED NAME: _____

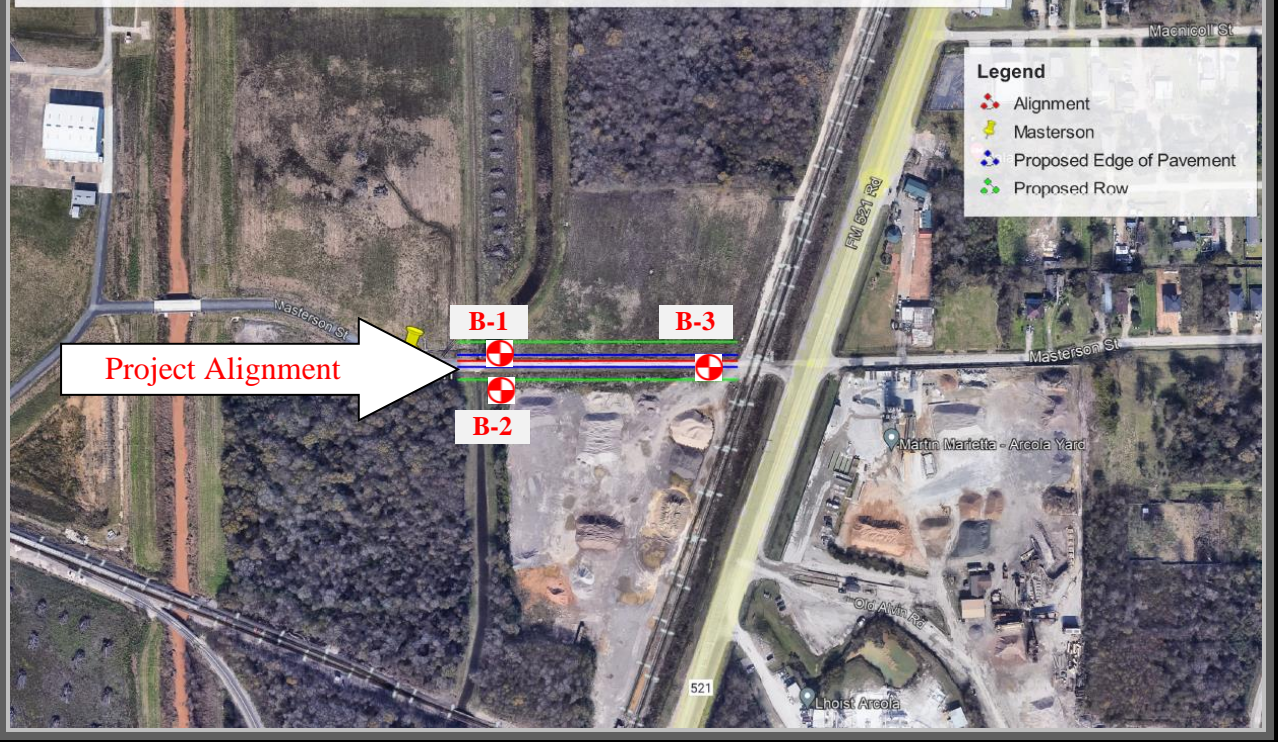
DATE: _____

Enclosures: Plan of Borings – Plate 1
Cost Estimate – Plates 2 through 4
Detention Pond (Optional) Cost Estimate – Plates 5 through 7
General Conditions
Harris County Fee Schedule

Copies Submitted: (1) MV Engineering, Inc. - Mr. Richard Fields, PE
(1) DAE

Matterson

Upgrade and construction of Masterson St, transforming the existing dirt road into 2-lane HMAC and shoulders on each side, ditches, and construction of bridge. This road will cross a rail road and there is a potential for the inclusion of a detention pond to manage stormwater runoff



Notes:

⊕ B-1: Boring B-1

Detention Pond Location is unknown at this time, hence the proposed two borings for the pond are not shown here. Based on the information available, we understand that the proposed pond will be about 2-acre in size.

PLAN OF BORINGS (Boring locations are approximate)

PROJECT: Desktop Geologic Fault Study and Geotechnical Exploration for Masterson Street Paving and Drainage Improvements
Fort Bend County, FBC Project No. 23206, Texas

SCALE: NOT TO SCALE

DATE: OCTOBER 2024

PROPOSAL NO.: 24-381E

NORTH



Estimated Cost Summary (Detailed)
Desktop Geologic Fault Study and Geotechnical Study
MASTERSON ST. PAVING AND DRAINAGE IMPROVEMENTS
Fort Bend County, Texas, Based on Harris County Fee Schedule

P24-381

Consultant Proposal Breakdown									
GEOTECH ENGINEERING AND TESTING		Principal Engineer	Senior Engineer	Project Engineer	Field Technician	Typing/ Drafting	Unit of Measure	Estimated Quantity	Subtotal (Cost \$)
Date: November 21, 2024									
		Billing Rate per Hour							
		\$266.00	\$218.00	\$176.00	\$83.00	\$75.00			
Task No.	Task Description	* LEVEL OF EFFORT							
Desktop Geologic Fault Study									
1	Review of Existing Published Fault Maps by Staff Engineer		0.5	3					\$637.00
2	Reporting		0.5	1					\$285.00
Total:									\$922.00
Project Initiation upon Receiving NTP									
3	Review of the scope of the work	2	8	3					\$2,804.00
4	Coordinate with Client, in obtaining the updated information of the project		2	1					\$612.00
Paving, Utilities box culvert and detention pond, 9 Borings									
Field Investigation									
5	Develop a Drilling Plan			1					\$176.00
6	Staking the three (3) Borings in the Field			6					\$1,056.00
7	Coordinate with Surveyors to Locate & Tie in Borings at Site			1					\$176.00
8	Field Coordination during Drilling Including Utility Clearance, Texas One Call, and/or obtain drilling permission			8					\$1,408.00
9	Mobilization / Demobilization						LS	1	\$746.00
10	Drilling and Sampling three (3) Borings								
11	Continuous (0' - 20')						LF	60	\$27.00
12	Daily Travel						EA	1	\$565.00
13	Borehole Grouting						FT	60	\$13.00
14	Technician, Logging Borings, Borehole cleaning and Water Level Reading				12				\$996.00
15	Vehicle Charge (Boring staking, site visits during field coordination during drilling including utility clearance, Texas One Call etc., and borehole logging and grouting)						HR	26	\$13.00
Subtotal									\$11,277.00
Laboratory Testing									
16	Assign Laboratory Tests, Looking at Soil Samples			4					\$704.00
17	Data Reduction and Evaluation			2					\$352.00
18	Water Content (all samples)						EA	30	\$12.00
19	Liquid and Plastic Limits						EA	6	\$76.00
20	Percent Passing #200 Sieve						EA	4	\$59.00
21	Sieve Analysis						EA	2	\$164.00
22	Unconfined Compression						EA	6	\$54.00
Subtotal									\$2,760.00

Estimated Cost Summary (Detailed)
Desktop Geologic Fault Study and Geotechnical Study
MASTERSON ST. PAVING AND DRAINAGE IMPROVEMENTS
Fort Bend County, Texas, Based on Harris County Fee Schedule

P24-381

Fort Bend County, Texas, Based on Harris County Fee Schedule						Consultant Proposal Breakdown				
GEOTECH ENGINEERING AND TESTING		Principal Engineer	Senior Engineer	Project Engineer	Field Technician	Typing/ Drafting	Unit of Measure	Estimated Quantity	Rate	Subtotal (Cost \$)
Date: November 21, 2024										
		Billing Rate per Hour								
		\$266.00	\$218.00	\$176.00	\$83.00	\$75.00				
Task No.	Task Description	* LEVEL OF EFFORT								
Engineering Analysis and Report										
23	Prepare Plan of Borings			1						\$176.00
24	Analyze field and laboratory test results			2						\$352.00
25	Prepare summary of laboratory test data			1						\$176.00
26	Edit and prepare final boring log profiles			3						\$528.00
27	Prepare and develop boring log profiles			1						\$176.00
	Asphalt Paving									
28	Develop asphalt pavement design based on traffic loading	0.5	2	4						\$1,273.00
31	Recommendations on soil stabilization		1	2						\$570.00
	Underground Utilities									\$0.00
29	Develop Soil parameters and Recommendations for tunneling	0.5	1	5						\$1,231.00
32	Develop soil parameters and recommendations for open excavations	0.5	1	3						\$879.00
33	Develop excavation supprt earth pressures for trench excavation	0.5	1	4						\$1,055.00
34	Recommend dewatering method		1	2						\$570.00
35	Prepare a Geotechnical Trench Safety Letter Report	0.5	3	5						\$1,667.00
	Box Culvert									\$0.00
36	Bedding, backfilling, excavation wall and bottom stability Recommendations	1	3	5						\$1,800.00
37	Design parameters for box culvert		2	6						\$1,492.00
38	Lateral earth pressures for the design pof retention system	0.5	2	4						\$1,273.00
39	Erosion analysis at the side slope of the channel near the road crossing	0.5	2	4						\$1,273.00
46	Document the results of soil exploration, laboratory testing and geotehcnical recommendations in a geotechnical draft report	5	6	22			\$6,510.00			
47	Incorporate the review comments on draft report into final geotechnical report	2	5	8			\$3,030.00			
48	Technical Typing/Drafting					12				\$900.00
49	Report Reproduction Allowance									\$300.00
Plate 3									Subtotal	\$25,231.00
									Total:	\$39,268.00

Estimated Cost Summary (Detailed)
Desktop Geologic Fault Study and Geotechnical Study
MASTERSON ST. PAVING AND DRAINAGE IMPROVEMENTS
Fort Bend County, Texas, Based on Harris County Fee Schedule

P24-381

Fort Bend County, Texas, Based on Harris County Fee Schedule						Consultant Proposal Breakdown				
GEOTECH ENGINEERING AND TESTING		Principal Engineer	Senior Engineer	Project Engineer	Field Technician	Typing/ Drafting	Unit of Measure	Estimated Quantity	Rate	Subtotal (Cost \$)
Date: November 21, 2024										
		Billing Rate per Hour								
		\$266.00	\$218.00	\$176.00	\$83.00	\$75.00				
Task No.		Task Description		* LEVEL OF EFFORT						
ALLOWANCE ITEMS										
Traffic Control/Allowance										
64	Traffic Control (Cost +10%)						DAY	1	\$1,320.00	\$1,320.00
65	Coordination, Project Engineer			1						\$176.00
								Subtotal	\$1,496.00	
ATV Rig Allowance										
66	Mobilization/Demobilization						LS	1	\$266.00	\$266.00
67	Drilling and Sampling Surcharge						FT	20	\$11.00	\$220.00
								Subtotal	\$486.00	
								Total:	\$1,982.00	
								Grand Total:	\$42,172.00	

Estimated Cost Summary (Detailed)
Optional Geotechnical Study for detention pond
MASTERSON ST. PAVING AND DRAINAGE IMPROVEMENTS
Fort Bend County, Texas, Based on Harris County Fee Schedule

P24-381

Fort Bend County, Texas, Based on Harris County Fee Schedule						Consultant Proposal Breakdown				
GEOTECH ENGINEERING AND TESTING		Principal Engineer	Senior Engineer	Project Engineer	Field Technician	Typing/ Drafting	Unit of Measure	Estimated Quantity	Rate	Subtotal (Cost \$)
Date: November 21, 2024										
		Billing Rate per Hour								
		\$266.00	\$218.00	\$176.00	\$83.00	\$75.00				
Task No.	Task Description	* LEVEL OF EFFORT								
Project Initiation upon Receiving NTP										
3	Review of the scope of the work	2	3	3						\$1,714.00
4	Coordinate with Client, in obtaining the updated information of the project		2	1						\$612.00
detention pond, 2 Borings										
Field Investigation										
5	Develop a Drilling Plan			1						\$176.00
6	Staking the two (2) Borings in the Field			5						\$880.00
7	Coordinate with Surveyors to Locate & Tie in Borings at Site			1						\$176.00
8	Field Coordination during Drilling Including Utility Clearance, Texas One Call, and/or obtain drilling permission			6						\$1,056.00
9	Mobilization / Demobilization						LS	1	\$746.00	\$746.00
10	Drilling and Sampling two (2) Borings									
11	Continuous (0' - 20')						LF	40	\$27.00	\$1,080.00
12	Daily Travel						EA	1	\$565.00	\$565.00
13	Borehole Grouting						FT	20	\$13.00	\$260.00
14	Technician, Logging Borings, Borehole cleaning and Water Level Reading				16					\$1,328.00
15	Vehicle Charge (Boring staking, site visits during field coordination during drilling including utility clearance, Texas One Call etc., and borehole logging and grouting)						HR	27	\$13.00	\$351.00
									Subtotal	\$8,944.00
Laboratory Testing										
16	Assign Laboratory Tests, Looking at Soil Samples			2						\$352.00
17	Data Reduction and Evaluation			1						\$176.00
18	Water Content (all samples)						EA	20	\$12.00	\$240.00
19	Liquid and Plastic Limits						EA	4	\$76.00	\$304.00
20	Percent Passing #200 Sieve						EA	3	\$59.00	\$177.00
21	Sieve Analysis						EA	1	\$164.00	\$164.00
22	Unconfined Compression						EA	4	\$54.00	\$216.00
23	UU Triaxial Tests						EA	2	\$77.00	\$154.00
24	Consolidated Undrained Triaxial Test with Pore Pressure						EA	1	\$2,500.00	\$2,500.00
25	Double Hydrometer Test						EA	2	\$266.00	\$532.00
26	Crumb Tests						EA	4	\$46.00	\$184.00
									Subtotal	\$4,999.00

Plate

Plate

Estimated Cost Summary (Detailed)
Optional Geotechnical Study for detention pond
MASTERTSON ST. PAVING AND DRAINAGE IMPROVEMENTS
Fort Bend County, Texas, Based on Harris County Fee Schedule

P24-381

GEOTECH ENGINEERING AND TESTING		Principal Engineer	Senior Engineer	Project Engineer	Field Technician	Typing/ Drafting	Unit of Measure	Estimated Quantity	Rate	Subtotal (Cost \$)	
Date: November 21, 2024											
		Billing Rate per Hour									
		\$266.00	\$218.00	\$176.00	\$83.00	\$75.00					
Task No.	Task Description	* LEVEL OF EFFORT									
Engineering Analysis and Report											
23	Prepare Plan of Borings			1						\$176.00	
24	Analyze field and laboratory test results			1						\$176.00	
25	Prepare summary of laboratory test data			1						\$176.00	
26	Edit and prepare final boring log profiles			2						\$352.00	
27	Prepare and develop boring log profiles			1						\$176.00	
	Detention Pond									\$0.00	
40	Develop parameters for slope-stability		2	6						\$1,492.00	
41	Perform Slope-Stability Analysis	0.5	10	20						\$5,833.00	
43	Recommendation on Erosion Control		1	3						\$746.00	
44	Prepare geotechnical trench safety recommendations	1	2	6						\$1,758.00	
45	Evaluation of Stormwater Basin Constructability		1	2						\$570.00	
46	Document the results of soil exploration, laboratory testing and geotehcnical recommendations in a geotechnical draft report	6	12	22						\$8,084.00	
47	Incorporate the review comments on draft report into final geotechnical report	2	8	10						\$4,036.00	
48	Technical Typing/Drafting					12				\$900.00	
49	Report Reproduction Allowance									\$300.00	
Plate 5										Subtotal	\$24,775.00
										Total:	\$38,718.00

Plate 5

Estimated Cost Summary (Detailed)
Optional Geotechnical Study for detention pond
MASTERTSON ST. PAVING AND DRAINAGE IMPROVEMENTS
Fort Bend County, Texas, Based on Harris County Fee Schedule

P24-381

Fort Bend County, Texas, Based on Harris County Fee Schedule						Consultant Proposal Breakdown						
GEOTECH ENGINEERING AND TESTING				Principal Engineer	Senior Engineer	Project Engineer	Field Technician	Typing/ Drafting	Unit of Measure	Estimated Quantity	Rate	Subtotal (Cost \$)
Date: November 21, 2024												
				Billing Rate per Hour								
				\$266.00	\$218.00	\$176.00	\$83.00	\$75.00				
Task No.		Task Description		* LEVEL OF EFFORT								
ALLOWANCE ITEMS												
ATV Rig Allowance												
66	Mobilization/Demobilization							LS	1	\$266.00	\$266.00	
67	Drilling and Sampling Surcharge						FT	40	\$11.00	\$440.00		
										Subtotal	\$706.00	
Piezometer Installation and Abandonment Allowance												
68	One 20' and 3 inch diameter Piezometers w/ 10' screen (linstallation and abandomnent)						FT	20	\$47.00	\$940.00		
69	Technician Monitoring Piezometer Placement			8						\$664.00		
70	Technician, Piezometer Reading (for a month, twice in one month)			8						\$664.00		
71	Vehicle Charge						HR	16	\$13.00	\$208.00		
										Subtotal	\$2,476.00	
										Total:	\$3,182.00	
										Grand Total:	\$41,900.00	