

STATE OF TEXAS                   §  
  §  
COUNTY OF FORT BEND       §

**AGREEMENT FOR PROFESSIONAL ENGINEERING SERVICES**

THIS AGREEMENT is made and entered into by and between Fort Bend County, (hereinafter “County”), a body corporate and politic under the laws of the State of Texas, and HJ Consulting, Inc., (hereinafter “Consultant”), a company authorized to conduct business in the State of Texas.

WITNESSETH

WHEREAS, County desires that Consultant provide professional engineering services for the Westenfeldt Road Project No. 17124x under the Fort Bend County Mobility Program (hereinafter “Services”) pursuant to SOQ 14-025; and

WHEREAS, County has determined Consultant is the most highly qualified provider of the desired Services on the basis of demonstrated competence and qualifications, and County and Consultant have negotiated to reach a fair and reasonable amount of compensation for the provision of such Services, as required under Chapter 2254 of the Texas Government Code; and

WHEREAS, Consultant represents that it is qualified and desires to perform such services.

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

**AGREEMENT**

**Section 1. Scope of Services**

Consultant shall render the professional engineering services as described in Consultant’s Scope of Services dated August 24, 2020, attached hereto as Exhibit A, and incorporated herein for all purposes.

**Section 2. Personnel**

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

2.2 All employees of Consultant shall have such knowledge and experience as will enable them to perform the duties assigned to them. Any employee of Consultant who, in the opinion of County, is incompetent or by his conduct becomes detrimental to the project shall, upon request of County, immediately be removed from association with the project.

### **Section 3. Compensation and Payment**

3.1 Consultant's fees shall be calculated at the rates set forth in the attached Exhibit A. The Maximum Compensation for the performance of Services within the Scope of Services described in Exhibit A is three hundred thousand one hundred forty dollars and 27/100 (\$300,140.27) as set forth in Exhibit A. In no case shall the amount paid by County under this Agreement exceed the Maximum Compensation without a written agreement executed by the parties.

3.2 All performance of the Scope of Services by Consultant including any changes in the Scope of Services and revision of work satisfactorily performed will be performed only when approved in advance and authorized by County.

3.3 County will pay Consultant based on the following procedures: Upon completion of the tasks identified in the Scope of Services, Consultant 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. 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. County reserves the right to withhold payment pending verification of satisfactory work performed.

### **Section 4. Limit of Appropriation**

4.1 Consultant 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 three hundred thousand one hundred forty dollars and 27/100 (\$300,140.27) specifically allocated to fully discharge any and all liabilities County may incur.

4.2 Consultant does further understand and agree, said understanding and agreement also being of the absolute essence of this Agreement, that the total maximum compensation that Consultant may become entitled to and the total maximum sum that County may become liable to pay to Consultant shall not under any conditions, circumstances, or interpretations thereof exceed three hundred thousand one hundred forty dollars and 27/100 (\$300,140.27).

### **Section 5. Time of Performance**

Time for performance of the Scope of Services under this Agreement shall begin with receipt of the Notice to Proceed and end no later than December 31, 2022. Consultant shall complete the tasks described in the Scope of Services, within this time or within such additional time as may be extended by the County.

## **Section 6. Modifications and Waivers**

6.1 The parties may not amend or waive this Agreement, except by a written agreement executed by both parties.

6.2 No failure or delay in exercising any right or remedy or requiring the satisfaction of any condition under this Agreement, and no course of dealing between the parties, operates as a waiver or estoppel of any right, remedy, or condition.

6.3 The rights and remedies of the parties set forth in this Agreement are not exclusive of, but are cumulative to, any rights or remedies now or subsequently existing at law, in equity, or by statute.

## **Section 7. Termination**

7.1 Termination for Convenience – County may terminate this Agreement at any time upon forty-eight (48) hours written notice.

### **7.2 Termination for Default**

7.2.1 County may terminate the whole or any part of this Agreement for cause in the following circumstances:

7.2.1.1 If Consultant fails to perform services within the time specified in the Scope of Services or any extension thereof granted by the County in writing;

7.2.1.2 If Consultant 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, and in any of these circumstances does not cure such breach or failure to County's reasonable satisfaction within a period of ten (10) calendar days after receipt of notice from County specifying such breach or failure.

7.2.2 If, after termination, it is determined for any reason whatsoever that Consultant was not in default, or that the default was excusable, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of the County in accordance with Section 7.1 above.

7.3 Upon termination of this Agreement, County shall compensate Consultant in accordance with Section 3, above, for those services which were provided under this Agreement prior to its termination and which have not been previously invoiced to County. Consultant's final invoice for said services will be presented to and paid by County in the same manner set forth in Section 3 above.

7.4 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 Consultant.

## **Section 8. Ownership and Reuse of Documents**

All documents, data, reports, research, graphic presentation materials, etc., developed by Consultant as a part of its work under this Agreement, shall become the property of County upon completion of this Agreement, or in the event of termination or cancellation thereof, at the time of payment under Section 3 for work performed. Consultant shall promptly furnish all such data and material to County on request.

## **Section 9. Inspection of Books and Records**

Consultant will permit County, or any duly authorized agent of County, to inspect and examine the books and records of Consultant for the purpose of verifying the amount of work performed under the Scope of Services. County's right to inspect survives the termination of this Agreement for a period of four years.

## **Section 10. Insurance**

10.1 Prior to commencement of the Services, Consultant 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. Consultant shall provide certified copies of insurance endorsements and/or policies if requested by County. Consultant 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. Consultant shall obtain such insurance written on an Occurrence form (or a Claims Made form for Professional Liability insurance) 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:

10.1.1 Workers' Compensation insurance. Substitutes to genuine Workers' Compensation Insurance will not be allowed.

10.1.2 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.

10.1.3 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.

10.1.4 Business Automobile Liability insurance with a combined Bodily Injury/Property Damage limit of not less than \$1,000,000 each accident. The policy shall cover liability arising from the operation of licensed vehicles by policyholder.

10.1.5 Professional Liability insurance may be made on a Claims Made form with limits not less than \$1,000,000.

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

10.3 If required coverage is written on a claims-made basis, Consultant warrants that any retroactive date applicable to coverage under the policy precedes the effective date of the contract; 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 that work under the Agreement is completed.

### **Section 11. Indemnity**

**CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS COUNTY AGAINST LOSSES, LIABILITIES, CLAIMS, AND CAUSES OF ACTION, INCLUDING THE REIMBURSEMENT OF COUNTY'S REASONABLE ATTORNEYS FEES IN PROPORTION TO CONTRACTOR'S LIABILITY, ARISING FROM ACTIVITIES OF CONTRACTOR, ITS AGENTS, SERVANTS OR EMPLOYEES, PERFORMED UNDER THIS AGREEMENT THAT RESULT FROM THE NEGLIGENT ACT, INTENTIONAL TORT, ERROR, OR OMISSION OF CONTRACTOR OR ANY OF CONTRACTOR'S AGENTS, SERVANTS OR EMPLOYEES.**

### **Section 12. Confidential and Proprietary Information**

12.1 Consultant 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 Consultant 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 Consultant 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 Consultant) publicly known or is contained in a publicly available document; (b) is rightfully in Consultant'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 Consultant who can be shown to have had no access to the Confidential Information.

12.2 Consultant agrees to hold Confidential Information in strict confidence, using at least the same degree of care that Consultant 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. Consultant 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, Consultant shall advise County

immediately in the event Consultant 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 Consultant will at its expense cooperate with County in seeking injunctive or other equitable relief in the name of County or Consultant against any such person. Consultant agrees that, except as directed by County, Consultant 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, Consultant will promptly turn over to County all documents, papers, and other matter in Consultant's possession which embody Confidential Information.

12.3 Consultant 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. Consultant 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.

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

12.5 Consultant expressly acknowledges that County is subject to the Texas Public Information Act, TEX. GOV'T CODE ANN. §§ 552.001 *et seq.*, as amended, and notwithstanding any provision in the Agreement to the contrary, County will make any information related to the Agreement, or otherwise, available to third parties in accordance with the Texas Public Information Act. Any proprietary or confidential information marked as such provided to County by Consultant shall not be disclosed to any third party, except as directed by the Texas Attorney General in response to a request for such under the Texas Public Information Act, which provides for notice to the owner of such marked information and the opportunity for the owner of such information to notify the Attorney General of the reasons why such information should not be disclosed.

### **Section 13. Independent Consultant**

13.1 In the performance of work or services hereunder, Consultant 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 contractor or, where permitted, of its subcontractors.

13.2 Consultant 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.

**Section 14. Notices**

14.1 Each party giving any notice or making any request, demand, or other communication (each, a "Notice") pursuant to this Agreement shall do so in writing and shall use one of the following methods of delivery, each of which, for purposes of this Agreement, is a writing: personal delivery, registered or certified mail (in each case, return receipt requested and postage prepaid), or nationally recognized overnight courier (with all fees prepaid).

14.2 Each party giving a Notice shall address the Notice to the receiving party at the address listed below or to another address designated by a party in a Notice pursuant to this Section:

County: Fort Bend County Engineering Department  
Attn: County Engineer  
301 Jackson Street  
Richmond, Texas 77469

With a copy to: Fort Bend County  
Attn: County Judge  
401 Jackson Street, 1<sup>st</sup> Floor  
Richmond, Texas 77469

Consultant: HJ Consultants, Inc.  
4771 Sweetwater Boulevard, Suite 254  
Sugar Land, Texas 77479

14.3 A Notice is effective only if the party giving or making the Notice has complied with subsections 14.1 and 14.2 and if the addressee has received the Notice. A Notice is deemed received as follows:

14.3.1 If the Notice is delivered in person, or sent by registered or certified mail or a nationally recognized overnight courier, upon receipt as indicated by the date on the signed receipt.

14.3.2 If the addressee rejects or otherwise refuses to accept the Notice, or if the Notice cannot be delivered because of a change in address for which no Notice was given, then upon the rejection, refusal, or inability to deliver.

**Section 15. Compliance with Laws**

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

**Section 16. Standard of Care**

Consultant represents shall perform the Services to be provided under this Agreement with the professional skill and care ordinarily provided by competent engineers practicing under the same or similar circumstances and professional license. Further, Consultant shall perform the Services as expeditiously as is prudent considering the ordinary professional skill and care of a competent engineer.

**Section 17. Assignment**

17.1 Neither party may assign any of its rights under this Agreement, except with the prior written consent of the other party. That party shall not unreasonably withhold its consent. All assignments of rights are prohibited under this subsection, whether they are voluntarily or involuntarily, by merger, consolidation, dissolution, operation of law, or any other manner.

17.2 Neither party may delegate any performance under this Agreement.

17.3 Any purported assignment of rights or delegation of performance in violation of this Section is void.

**Section 18. Applicable Law**

The laws of the State of Texas govern all disputes arising out of or relating to this Agreement. The parties hereto acknowledge that venue is proper in Fort Bend County, Texas, for all legal actions or proceedings arising out of or relating to this Agreement and waive the right to sue or be sued elsewhere. Nothing in the Agreement shall be construed to waive the County's sovereign immunity.

**Section 19. Successors and Assigns**

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

**Section 20. Third Party Beneficiaries**

This Agreement does not confer any enforceable rights or remedies upon any person other than the parties.

**Section 21. Severability**

If any provision of this Agreement is determined to be invalid, illegal, or unenforceable, the remaining provisions remain in full force, if the essential terms and conditions of this Agreement for each party remain valid, binding, and enforceable.

**Section 22. Publicity**

Contact with citizens of Fort Bend County, media outlets, or governmental agencies shall be the sole responsibility of County. Under no circumstances whatsoever, shall Consultant release any material or information developed or received in the performance of the Services hereunder without the express written permission of County, except where required to do so by law.

**Section 23. Captions**

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

**Section 24. Conflict**

In the event there is a conflict between this Agreement and the attached exhibits, this Agreement controls.

**Section 25. Certain State Law Requirements for Contracts**

25.1 Agreement to Not Boycott Israel Chapter 2271 Texas Government Code: By signature below, Consultant verifies that if Consultant employs ten (10) or more full-time employees and this Agreement has a value of \$100,000 or more, Consultant does not boycott Israel and will not boycott Israel during the term of this Agreement.

25.2 Texas Government Code Section 2251.152 Acknowledgment: By signature below, Consultant represents pursuant to Section 2252.152 of the Texas Government Code, that Consultant is not listed on the website of the Comptroller of the State of Texas concerning the listing of companies that are identified under Section 806.051, Section 807.051 or Section 2253.153.

**Section 26. Human Trafficking**

BY ACCEPTANCE OF AGREEMENT, CONSULTANT ACKNOWLEDGES THAT THE 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.

[THE REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK.]

IN WITNESS WHEREOF, the parties hereto have signed or have caused their respective names to be signed to multiple counterparts to be effective on the date signed by the last party hereto.

FORT BEND COUNTY

HJ CONSULTING, INC

\_\_\_\_\_  
KP George, County Judge

Harish Jajoo  
Authorized Agent – Signature

\_\_\_\_\_  
Date

HARISH JAJOO, P.E.  
Authorized Agent – Printed Name

ATTEST: \_\_\_\_\_

PRESIDENT  
Title

\_\_\_\_\_  
Laura Richard, County Clerk

09-21-2020  
Date

APPROVED:  
J. Stacy Slawinski  
J. Stacy Slawinski, P.E., County Engineer

APPROVED AS TO LEGAL FORM:

\_\_\_\_\_  
Marcus D. Spencer, First Assistant County Attorney

**AUDITOR'S CERTIFICATE**

I hereby certify that funds are available in the amount of \$ \_\_\_\_\_ to accomplish and pay the obligation of Fort Bend County under this contract.

\_\_\_\_\_  
Robert Ed Sturdivant, County Auditor

# EXHIBIT A



August 24, 2020

## **“EXHIBIT A” – Scope of Services**

### **Westenfeldt Road**

Rabb Road to State Highway 6, Precinct

### **FBC Project # 17124x**

Fort Bend County has requested a proposal to provide professional engineering services (Preliminary Engineering Phase, Design Phase, and Bid Phase services) for the design and construction/reconstruction of the existing 2-lane narrow asphalt roadway with roadside ditches to proposed 2-lane asphalt roadway with 6' shoulders and open ditch from Rabb Road to State Highway 6 (SH 6), utilizing the latest FBC standards.

#### **PROJECT LIMITS AND DETAILS:**

1. Develop existing 2 lane roadway with 3 lane asphalt roadway with 6' shoulders and open ditch from Rabb Road to SH 6. The ROW will be increased to 80' to accommodate the project.
2. The flow from the ditches will be directed to proposed detention pond, whose location is yet to be determined.
3. There are no signalized intersections within the project limits. The traffic is currently controlled through stop signs.
4. Coordination will be required from TxDOT for the tie in for the proposed project at SH 6.

#### **ROADWAY ALIGNMENT:**

The proposed Westenfeldt Road will run from North to South with slight curve to connect to SH 6. Right of way restrictions posed by any structures will be considered for the design. Sight triangles will be developed at all the existing intersections.

#### **BASIC SERVICES:**

#### **PRELIMINARY ENGINEERING PHASE:**

The Preliminary Engineering Phase Letter Report shall serve as a summary document that incorporates the recommendations from the supporting investigative reports,

### **Civil Engineers | Construction Managers**

4771 Sweetwater Boulevard, Suite 254, Sugar Land, Texas 77479  
832-338-3202 (C) | 832-553-3103 (F) | [www.hjconsultinginc.com](http://www.hjconsultinginc.com)

## **Westenfeldt Road, FBC Precinct 1**

Proposal for Professional Engineering Services

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results from working meeting with Fort Bend County, necessary approvals, and final recommendations from the Consultant's efforts. The document will serve as the framework for the design phase, having addressed the major issues that affect the roadway design and supporting infrastructure.

### **The primary goals of Preliminary Engineering Phase are:**

1. Establish a typical cross section and cross sections in non-standard areas
2. Determine drainage system needs (drainage study)
3. Positively determine right-of-way acquisition needs
4. Determine potential conflicts with existing facilities
5. Identify critical path items
6. Identify problem areas and potential resolution(s)
7. Determine permit and regulatory requirements
8. Prepare a reasonable construction cost estimate
9. Prepare a "30 percent" plan set, consisting of all existing features (seen and unseen) shown in plan and profile, and proposed improvements in plan only with minor annotations.
10. Prepare preliminary design review checklist

### **The Preliminary Engineering Phase includes, but not limited to the following major tasks:**

- Review and Research existing conditions from the field visits and existing record drawings (to be confirmed with the topographic survey)
- Send Utility requests to the Utility companies and prepare Preliminary Utility Conflict Table
- Obtain Record Drawings from other entities as required for the project
- Creating existing Base maps
- Initiate Roadway Geometry
- Approved Geotechnical Reports
- Signed and Sealed Topographic Survey
- Signed and Sealed Signal Warrant Analysis
- Exhibits and Drawings
- Construction Cost Estimate
- Coordination with sub-consultants
- Drainage Study (Detention Pond Requirements)

We will follow the latest Fort Bend County Design Guidelines and Standards for this project.

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The Preliminary Engineering Phase shall include the preparation and approval of reports necessary to support the recommendations and design of the roadway and all appurtenances included, but not limited to Geotechnical Investigations.

HJ will coordinate with sub-consultants as necessary throughout the project. HJ will coordinate with TxDOT to obtain permit for SH6 tie in.

The Preliminary Engineering Phase shall include a Client Presentation meeting.

A 90% working meeting will be scheduled if required. At the 90% working meeting, the Consultant shall present the status of the of the project to include, but not limited to, Survey/Right-of-Way Maps, Roadway Alignment, Geotechnical, Drainage Concept, Utility Conflicts, and any Variance Requests if required. Consultant shall provide preliminary schematics and exhibits to supports discussions to solicit input from Fort Bend County on decision items.

At the Client Presentation meeting, the Consultant shall present the revisions from the 90% working meeting as well as the final working draft of the Preliminary Engineering Phase Letter Report including exhibits, supporting reports, and final recommendations. Any remaining issues identified during the Consultant's work effort to get to this project stage that require decision from Fort Bend County should be presented at this meeting for confirmation prior to finalizing the Preliminary Engineering Report such that approval can be granted upon report submittal.

### **Exhibits/Attachments shall include:**

- **Aerial Exhibit**
  - Provide an exhibit that shows the project limits and surrounding features. Identify notable features of interest, including drainage channels, floodplains, pipelines, roadways, future roadway alignments shown on the Fort Bend County's Major Thoroughfare Plan, latest available aerial photographs, and developments.
  
- **Schematic Layout of Roadway**
  - Provide a plan view layout with sufficient detail to ensure that the final design can be constructed without any major issues. The schematic layout shall be as a KMZ file and identify ROW parcels to be taken. The schematic should show the pavement marking concept so that traffic movements can be considered and reviewed during the Preliminary Engineering Phase. Provide the proposed typical sections on the schematic. Typical Sections shall be drawn at 1"=20' horizontal and 1"=2' vertical scale on 11"x17" sheets.

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- **Cost Estimates**
  - Provide a preliminary construction cost estimate for the final recommendation provided in the Preliminary Engineering Report.
  
- **Utility Tables**
  - The consultant shall coordinate with utility companies that have existing facilities in or adjacent to project limits. The coordination shall include:
  
- **Level D SUE**
  - Identify all existing utilities within the existing and proposed rights-of-way. Provide list of existing utilities with owner and contact information. Meet with the utility companies and provide information and schematics as necessary.
  
  - Identify major utilities that will potentially require relocation. Major utilities are defined pipelines, concrete incased conduits, or other utilities of this nature. Overhead power lines, small gas service lines and other lines other line of this nature as not a concern. Provide a table of the existing utilities. The table shall include ID number for the potential conflicts, stations at the left right-of-way, the centerline, and right-of-way, the owner of the utility, contact name, address, phone number, and email address, any notes such as it may be in possible conflict. The table shall also include clearances from overhead or underground utilities to the proposed roadway features noting utility diameters and clearances from the utility to proposed feature (depth top utility to proposed finished grade elevation).
  
  - Identify any utilities that are within dedicated easements that will be within the proposed right-of-way.

### **Survey Scope of Services:**

The surveying services will be performed in accordance with Chapters 6 and 7 of the Fort Bend County Mobility Bond Design Manual:

1. Perform Control Surveys and Prepare Signed and Sealed Survey Control Maps:
  - 1.1. Project Control will be tied to and based on existing control established for adjacent projects. Existing control will be provided to Landtech by HJ Consulting or Fort bend County. If existing control is not available, the project horizontal datum will be the Texas Coordinate System of 1983, and the vertical datum will

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- be the North American Vertical Datum of 1988, based on GPS RTN observations processed using Geoid18. Use of existing control and project horizontal and vertical datum is subject to approval by the Project Design Consultant. Control points will be spaced at a maximum of 1,000 feet through the project limits.
- 1.2. Stake the project baseline alignment in field at all PCs, PTs, PIs, and 1,000-foot stations. The baseline alignment will be provided to Landtech by HJ Consulting.
  - 1.3. Prepare a signed and sealed survey control map consisting of:
    - 1.3.1. Cover/index sheet showing the project datum statement, approximate existing right of way (ROW) lines, the baseline alignment including monumentation, alignment bearings and distances and curve data, side street construction centerlines, project control point locations, and coordinate tables for alignment monumentation and control points.
    - 1.3.2. Control monument detail sheet showing ties to planimetric features and monument details.
  2. Perform Topographic Surveys and prepare CAD file deliverables:
    - 2.1. Prepare Right of Entry (ROE) letters and mail to landowners along route to request permission to enter private properties for surveying purposes. Track responses to coordinate field survey efforts on private properties. Properties without ROE will not be surveyed.
    - 2.2. Collect Topographic Survey data within the project limits along West Sycamore Road and along intersecting roadways 100 feet beyond proposed improvements. Cross sections will be collected along the route every 100 feet and will extend 50 feet beyond existing and proposed ROW. Survey visible surface features. Surveys within intersecting roadways will be confined to public right of way. Survey will not extend into fenced backyards of the subdivision lots on the east side of West Sycamore Road. In wooded areas we will survey the tree line; individual trees will not be picked up. Deliverables will consist of plan view CAD file in AutoCAD DWG format and Digital Terrain Model with 1-ft contours in Civil3D format.
    - 2.3. Survey visible surface utilities. Request One Call marking of utilities, survey resulting markings.
    - 2.4. Perform Property Title Abstracting for preliminary ownership determination. Survey front property corners for right of way (ROW) location. Adjoining property ownership information and existing ROW lines will be shown in the CAD file deliverable.
    - 2.5. Survey approximately 6 Geotechnical Borings after they are drilled.
  3. Perform proposed ROW surveys and prepare Proposed ROW Map and parcel document deliverables. Deliverables will conform with Texas Society of Professional

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Surveyors Category 1B, Condition II standards and will be signed and sealed by a Texas Registered Professional Land Surveyor.

- 3.1. Prepare Proposed ROW Map showing existing and proposed ROW and proposed acquisition parcels. Includes field survey of back corners of parent tracts of proposed acquisition parcels.
- 3.2. Prepare KMZ file showing existing ROW with ownership information, proposed takings with parcel numbers, and a preliminary roadway layout. The preliminary roadway layout will be provided to Landtech by HJ Consulting.
- 3.3. Prepare parcel map and metes and bounds description for each proposed ROW parcel to be acquired for the project. There are an estimated fourteen (14) proposed acquisition parcels. Includes field staking of acquisition parcel corners along the proposed ROW at angle points, PCs, PTs, and intersecting property lines.

### **Geotechnical Scope of Services:**

The proposed scope of this geotechnical investigation will entail conducting a geotechnical investigation involving six (6) at 10-ft deep soil borings for the road improvements, to evaluate the subsurface soils and groundwater conditions.

The scope of the project includes roadway improvements, and construction of open ditches along the Westenfeldt Road starting from Rabb Road to SH 6 of approximately 2,524 linear ft.

Recommendations regarding paving including thickness and reinforcement design, subgrade preparation and stabilization, pavement construction based on Fort Bend County Guidelines.

### **Field Exploration**

ATL performed site reconnaissance. Project alignment will be accessible with our truck-mounted drill rig, and traffic officer and flag man with control signs and cones will be use during drilling operation for work personnel safety.

Based on Boring Depth and Frequency requirements provided conduct geotechnical investigation involving six (6) at 10-ft deep soil borings for the road improvements.

Soil samples will be obtained continuously to a depth of 10 ft. Standard Penetration Tests (SPT) will be performed in sands, if encountered, and clays will be sampled by Shelby tube. Shear strengths of the clays will be measured in the field with a hand penetrometer and correlations between this data and laboratory shear strength data will be made during analysis.

## **Westenfeldt Road, FBC Precinct 1**

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Depth to ground water will be important for the design and construction of this project. For this reason, the borings will be drilled dry and the depth at which groundwater is encountered will be recorded. The boreholes will be grouted with cement-bentonite slurry after the completion of drilling and sampling.

### **Laboratory Testing**

Laboratory tests will be assigned corresponding to the types of soils encountered, with the objective of classifying the soils physical and index properties, moisture contents, unconfined compressive strength, undrained unconsolidated compressive strength, Atterberg limits, percent finer than No. 200 sieve, and total unit weight tests.

All laboratory tests will be performed in accordance with appropriate ASTM standards. We will keep the samples for 30 days after the final report is presented. We will discard the samples after that time, unless instructed otherwise.

### **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 in accordance with the Fort Bend County Engineering Guidelines. The following geotechnical information and recommendations will be provided:

The field and laboratory data will be presented in a geotechnical report. Geotechnical analyses will be conducted using the field and laboratory test data to provide geotechnical data for the design and construction of the proposed improvements, including (but not limited to) the following:

- Generalized soils stratigraphy
- Piezometer installation and groundwater measurements
- Preliminary fault review based on the review of the available fault maps
- Excavation and trench construction and safety requirements
- Recommendations regarding bedding and backfill for utilities construction
- Loads on buried pipes including dead and live loads (vehicle loads)
- Recommendations regarding paving including thickness and reinforcement design, subgrade preparation and stabilization, pavement construction
- Storm sewer installations
- Construction consideration

One (1) electronic PDF copy of the draft geotechnical report will be submitted. Once we have received the review comments, a final report addressing the review comments will be issued. One (1) copies of final report and an electronic copy (PDF) of the final report will also be issued.

## **Westenfeldt Road, FBC Precinct 1**

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### ***DESIGN PHASE:***

The design phase of the project shall consist of the preparation of completely approved construction documents that reflect the approved Preliminary Engineering Report.

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

The Design Submittal shall address all comments from the Preliminary Engineering Phase of the project. The Design Submittal shall include the submittal of the construction ready plans on 11"x17", the project manual, final utility conflict table, and a final cost estimate in accordance with FBCED requirements. The design submittal includes the following milestones:

- **70% Submittal (1<sup>st</sup> Submittal):** The submittal shall consist of:
  - Address 30% Comments
  - Coversheet
  - Index of Sheets
  - Existing and Proposed Typical Sections
  - Project Layout Sheet
  - Survey Control Map
  - Right of Way Map
  - Horizontal Alignment Data
  - Plan and Profile
  - Drainage Area Map
  - Hydraulic Calculations
  - Detention Plan
  - Traffic Control Plan
  - Storm Water Pollution Prevention Plan
  - Cross Sections
  - Standard Details
  - Specifications Table of Contents
  - Spreadsheet based Bid Form with Estimated Unit and Total Costs

## Westenfeldt Road, FBC Precinct 1

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- 70% Plans on 11"x17" Sheets with Electronic PDF files, and KMZ file of existing conditions and current design
  - Submit drawings for regulatory permit and utility reviews
  - 70% Review Checklist
- **95% Submittal (2<sup>nd</sup> Submittal):** The submittal shall consist of all the 70% requirements plus the following:
  - Address 70% Comments & Comment Resolution Spreadsheet
  - Bid Ready (Not Sealed)
  - Index of Sheets
  - General Notes
  - Signage and Pavement Marking Plans
  - Project Manual with Bid Form, Specification Table of Contents, Special Specifications or Conditions, and Contract Documents Excluded
  - 95% Plans on 11"x17" Sheets with Electronic PDF files, and KMZ file of existing conditions and current design
  - 95% Review Checklist
- **Final Submittal:** The submittal shall consist of all the 95% requirements plus the following:
  - Address 95% Comments & Comment Resolution Spreadsheet
  - Project Manual in Adobe Acrobat with Administrative Documents, Bid Form, Sealed Specification Table of Contents, and Applicable Specifications and Documents
  - 27 compact discs each with one project manual file and one drawing file
  - Completed signed and sealed plans, approved, and signed by County engineer, signed by utilities and other permits

The design phase shall also include the design (if needed) of any water line or sanitary sewer adjustment and the coordination of private utilities. The coordination shall include, but not limited to:

- Perform records research and field visits to determine the presence of underground or overhead private or public utilities during the Preliminary Design phase. A reasonable amount of research should be conducted, including but not limited to contact with companies identified on above-ground markers, Railroad

## **Westenfeldt Road, FBC Precinct 1**

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Commission website research, and map requests from prominent companies (i.e. CenterPoint Energy, AT&T, etc.)

- Send records requests to utility companies and obtain I.D. numbers (CenterPoint and AT&T)
- Depict utilities to a reasonable degree of accuracy on the plan and profile drawing
- Prepare a conflict table during the Preliminary Design phase to highlight conflicts between existing utilities and proposed improvements, to be updated during the Final Design phase as required. Refer to Appendix C, Fort Bend County Utility Conflict Table template.
- Submit milestone-level drawings to applicable utility companies for review
- Meet with the utility companies and provide information and plans as necessary.
- Provide any documentation as necessary and assist Fort Bend County into entering an agreement with the utility companies for the relocation of the facility.
- Obtain approval from the Fort Bend County for all request made by utility companies prior to implementing changes.

### **Additional Considerations for the Design Phase are:**

1. These services shall be performed in accordance with the latest Fort Bend County Design Guidelines.
2. The pavement elevation shall be set in accordance with the Fort Bend County Guidelines, or from coordination with FBCED if there are any special circumstances.
3. The pavement section shall be designed in accordance with the Guidelines. The results of the coring tests will be utilized to verify that the existing concrete pavement meets the Fort Bend County guidelines.
4. All the CAD work will follow Fort Bend County design standards.
5. Standard Sheets per Fort Bend County as provided on the website.
6. Any public utilities in conflict with the road construction will be adjusted in this phase. However, if public utility relocation is needed, additional appropriation and authorization by Fort Bend County will be required.

## **Westenfeldt Road, FBC Precinct 1**

Proposal for Professional Engineering Services

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### **Traffic Control Plans (TCP):**

The Traffic Control Plans will be prepared per Fort Bend County Standards and per the latest Texas Manual on Uniform Traffic Control Devices.

As the project anticipates for construction of the new concrete pavement over existing pavement, the Traffic control plan can be phased to use the existing pavement for one-way traffic.

### **Storm Water Pollution Prevention Plans (SWPPP):**

The Storm Water Pollution Prevention Plans will be prepared per Fort Bend County Standards and will follow TPDES General Permit # TXR150000 requirements.

1. Prepare the drawings based on Fort Bend County Criteria.
2. Prepare the SWPPP written plan including two Notices of Intent (NOI), two Notices on Termination (NOT), and two Construction Site Notices as/if required in accordance with the current Texas Commission on Environmental Quality, TPDES General Permit for storm water discharges associated with construction activities.

### ***BID PHASE:***

The bid phase of the project shall consist of submitting final drawings (11x17), Project Manual, attending pre-bid meeting, answering questions from the bidders, preparation of addenda, preparation of bid tabs, review for unbalanced bids and recommendation of award of the project. This task will include submitting CDs with all of Bid Documents after the project has been awarded.

### ***CONSTRUCTION PHASE (To Be Billed as Time & Material):***

The construction phase shall consist of attending Pre-Construction and Progress Meetings (when requested by FBC). The engineer will review and respond to Submittals, RFIs, RFPs and Change Orders as required. Substantial and Final Completion Walk-Thru and Punch List and Record Drawings will also be provided as required by Fort Bend County.

Construction Surveying Services will be performed once during a single mobilization prior to commencement of construction. These services will not be performed on an

**Westenfeldt Road, FBC Precinct 1**

Proposal for Professional Engineering Services

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ongoing basis during the construction process without additional compensation. Construction Surveying Services do not include construction layout.

1. Recover, verify, and mark control and baseline alignment monumentation established for the project as described in item 1. above.
2. Stake ROW lines every 100 feet, at angle points, and at the beginning and end of curves.







"EXHIBIT C" - Compensation for Professional Services

Project Name: Westenfeldt Road

Project Limits: Rabb Road to State Highway 6

FBC Project # 20XXX

Construction Cost Estimate: \$ 1,846,580.00

**BASIC SERVICES**

<b>1</b>	<b>Preliminary Design Phase (Lumpsum)</b>		<b>\$ 66,851.00</b>
	Preliminary Engineering Subtotal	\$	50,391.00
	Project Management Subtotal	\$	15,960.00
	Other Expenses Subtotal	\$	500.00
<b>2</b>	<b>Final Design Phase (Lumpsum)</b>		<b>\$ 136,367.00</b>
	Drawings & Documents (70% Submittal) Subtotal	\$	52,838.00
	Drawings & Documents (95% Submittal) Subtotal	\$	30,661.00
	Drawings & Documents (Final Submittal) Subtotal	\$	20,655.00
	Bid Phase Subtotal	\$	8,175.00
	Project Management Subtotal	\$	22,788.00
	Other Expenses Subtotal	\$	1,250.00
<b>3</b>	<b>Construction Phase (Time &amp; Materials)</b>		<b>\$ 32,453.65</b>
	Construction Phase Engineering Subtotal	\$	25,059.00
	Construction Phase Surveying Subtotal	\$	6,294.65
	Other Expenses Subtotal	\$	1,100.00

**Sub-Total Basic Services (1-3): \$ 235,671.65**

**ADDITIONAL SERVICES**

<b>4</b>	<b>Survey</b>		
	Control Surveying	\$	5,868.81
	Topographic Surveying and Mapping	\$	18,611.70
	Proposed ROW Surveying & Mapping	\$	8,790.11
			<b>\$ 33,270.62</b>
<b>5</b>	<b>Geotechnical</b>		
	Geotechnical Investigation	\$	11,128.00
			<b>\$ 11,128.00</b>
<b>6</b>	<b>Traffic Signal Warrant Analysis</b>		
	TIA N/A	\$	-
			<b>\$ -</b>

**Sub-Total Additional Services (4-6): \$ 44,398.62**

**TOTAL SERVICES (BASIC & ADDITIONAL): \$ 280,070.27**

**RIGHT OF WAY ACQUISITION SERVICES (APPROXIMATE)**

<b>A</b>	<b>Right of Way Acquisition</b>		
	Parcel Meets & Bounds (6 Parcels (Approx) @ \$3345/Parcel)	\$	20,070.00
			<b>\$ 20,070.00</b>

**Right of Way Acquisition Services (Approximate): \$ 20,070.00**

**TOTAL SERVICES (BASIC, ADDITIONAL & ROW ACQUISITION): \$ 300,140.27**



**WESTENFELDT ROAD  
(RABB ROAD TO STATE HIGHWAY 6)  
FBC PROJECT# 20XXX  
HJ CONSULTING, INC.**

**LEVEL OF EFFORT FOR PRELIMINARY DESIGN PHASE, AUGUST 2020**

Employee Classification		No. of Sheets	Principal	Project Manager	QA/QC Engineer	Project Engineer	Senior Designer	Graduate Engineer	Designer	CAD Technician	Admin	Total
Raw Labor Rates			\$195.00	\$165.00	\$150.00	\$120.00	\$105.00	\$105.00	\$80.00	\$78.00	\$60.00	
<b>LEVEL OF EFFORT (PRELIMINARY DESIGN PHASE)</b>												
TASK	TASK DESCRIPTION	<b>ESTIMATED HOURS</b>										
<b>PRELIMINARY ENGINEERING</b>												
<b>1</b>	<b>Maps</b>			1	2							\$ 465.00
1.1	Project Location Map									2		\$ 156.00
1.2	Alignment Exhibit					1				4		\$ 432.00
1.3	FEMA FIRM Map									2		\$ 156.00
1.4	Prelim. Drainage Area Map & Calcs					1		2		4		\$ 642.00
1.5	Sight Triangle Exhibit					1				4		\$ 432.00
1.6	Right of Way Exhibit					1				4		\$ 432.00
1.7	FEMA FIRM Map									2		\$ 156.00
<b>2</b>	<b>Narrative</b>			1	2	6		8				\$ 2,025.00
2.1	Introduction, Limits, Purpose and Scope			1		4		8				\$ 1,485.00
2.2	Existing Conditions			1		4		8				\$ 1,485.00
2.3	Proposed Improvements			2		6		8				\$ 1,890.00
<b>3</b>	<b>Right of Way Acquisition Needs</b>			2	1	6						\$ 1,200.00
<b>4</b>	<b>Identify Potential Conflicts with Facilities and Utilities</b>			1		4						\$ 645.00
<b>5</b>	<b>Utility Conflicts List</b>			1		2						\$ 405.00
5.1	Public water and sewer Private utilities and pipelines							4				\$ 420.00
<b>6</b>	<b>Identify Critical Path Items</b>			2								\$ 330.00
6.1	Level 1 schedule with Design, ROW, Bidding, and Construction					2		4				\$ 660.00



**WESTENFELDT ROAD  
(RABB ROAD TO STATE HIGHWAY 6)  
FBC PROJECT# 20XXX  
HJ CONSULTING, INC.**

**LEVEL OF EFFORT FOR PRELIMINARY DESIGN PHASE, AUGUST 2020**

Employee Classification		No. of Sheets	Principal	Project Manager	QA/QC Engineer	Project Engineer	Senior Designer	Graduate Engineer	Designer	CAD Technician	Admin	Total
Raw Labor Rates			\$195.00	\$165.00	\$150.00	\$120.00	\$105.00	\$105.00	\$80.00	\$78.00	\$60.00	
<b>LEVEL OF EFFORT (PRELIMINARY DESIGN PHASE)</b>												
TASK	TASK DESCRIPTION	ESTIMATED HOURS										
<b>7</b>	<b>Identify Problem Areas and Potential Resolution</b>			1		2		4				\$ 825.00
<b>8</b>	<b>Identify Permit and Regulatory Requirements</b>			1		2		4				\$ 825.00
8.1	<i>Environmental, FEMA, others as needed</i>			1		1						\$ 285.00
<b>9</b>	<b>Construction Cost Estimate</b>			1	1	4		8		8		\$ 2,259.00
<b>10</b>	<b>Drainage Study</b>											
10.1	<i>Drainage Design</i>			2	4	8		18				\$ 3,780.00
10.2	<i>Drainage Study Report</i>			2	4	8		18				\$ 3,780.00
10.3	<i>Drainage Maps and Exhibits</i>			1	1	2		4		8		\$ 1,599.00
<b>11</b>	<b>Waterline Relocation Design</b>											
<b>12</b>	<b>Roadway Design</b>											
12.1	<i>Horizontal Alignment (Plan)/Design</i>			2	2	16		32				\$ 5,910.00
12.2	<i>Vertical Alignment (Profile)/Design</i>			2	2	16		32				\$ 5,910.00
<b>13</b>	<b>30% Plans (11"x17" Sheets)</b>											
13.1	<i>Existing Typical Section</i>	1		1	1	2				4		\$ 867.00
13.2	<i>Proposed Typical Section</i>	1		1	1	2			4			\$ 875.00
13.3	<i>Plan &amp; Profile</i>	6										
13.3.1	<i>Existing Features in Plan &amp; Profile</i>				3	3		9		60		\$ 6,435.00
13.3.2	<i>Minor Annotations</i>			1	2	6		8	20			\$ 3,625.00
<b>PRELIMINARY ENGINEERING SUBTOTAL</b>		<b>8</b>										<b>\$ 50,391.00</b>



**WESTENFELDT ROAD  
(RABB ROAD TO STATE HIGHWAY 6)  
FBC PROJECT# 20XXX  
HJ CONSULTING, INC.**

**LEVEL OF EFFORT FOR PRELIMINARY DESIGN PHASE, AUGUST 2020**

Employee Classification		No. of Sheets	Principal	Project Manager	QA/QC Engineer	Project Engineer	Senior Designer	Graduate Engineer	Designer	CAD Technician	Admin	Total
Raw Labor Rates			\$195.00	\$165.00	\$150.00	\$120.00	\$105.00	\$105.00	\$80.00	\$78.00	\$60.00	
<b>LEVEL OF EFFORT (PRELIMINARY DESIGN PHASE)</b>												
TASK	TASK DESCRIPTION	<b>ESTIMATED HOURS</b>										
<b>PROJECT MANAGEMENT</b>												
14	Field Visit (Investigations and Findings)					6		6				\$ 1,350.00
15	Coordination with TxDOT		2	8								\$ 1,710.00
16	Coordination for Survey, Geotechnical & TIA		2	18		9						\$ 4,440.00
17	Coordination with Public Utilities for Obtaining Record Drawings			4		4						\$ 1,140.00
18	Coordination with Centerpoint Energy, AT&T, Comcast and Other (Private Utilities)			4		4						\$ 1,140.00
19	Project Management and Meetings (Includes Study Phase Meetings)		4	12		12					6	\$ 4,560.00
20	Submittal Milestones (Draft & Final)			4		4					8	\$ 1,620.00
<b>PROJECT MANAGEMENT SUBTOTAL</b>												<b>\$ 15,960.00</b>
<b>OTHER EXPENSES</b>												
21	Printing/Plotting/Copying											\$ 200.00
22	Mileage/Postage/Courier											\$ 300.00
<b>OTHER EXPENSES SUBTOTAL</b>												<b>\$ 500.00</b>
<b>TOTAL HOURS</b>			8	78	26	149	0	185	24	102	14	
<b>TOTAL ESTIMATE</b>			\$1,560	\$12,870	\$3,900	\$17,880	\$0	\$19,425	\$1,920	\$7,956	\$840	<b>\$ 66,851.00</b>



**WESTENFELDT ROAD  
(RABB ROAD TO STATE HIGHWAY 6)  
FBC PROJECT# 20XXX  
HJ CONSULTING, INC.**

**LEVEL OF EFFORT FOR FINAL DESIGN PHASE, AUGUST 2020**

Employee Classification		No. of Sheets	Principal	Project Manager	QA/QC Engineer	Project Engineer	Senior Designer	Graduate Engineer	Designer	CAD Technician	Admin	Total
Raw Labor Rates			\$195.00	\$165.00	\$150.00	\$120.00	\$105.00	\$105.00	\$80.00	\$78.00	\$60.00	
<b>LEVEL OF EFFORT (DESIGN PHASE)</b>												
TASK	TASK DESCRIPTION	<b>ESTIMATED HOURS</b>										
<b>DRAWINGS &amp; DOCUMENTS (70% Submittal)</b>												
1	Coversheet	1		1	1	1				4		\$ 747.00
2	Update Proposed & Existing Typical Sections	4		1	1	2		4		8		\$ 1,599.00
3	Update Drainage Area Maps	4		1	1	2			8			\$ 1,195.00
4	Update Hydraulic Calculations	4		1	1	2		6				\$ 1,185.00
5	Update Plan and Profile Sheets	6		1	2	3		8	8	24		\$ 4,177.00
5.1	Intersection Details/Layouts	2		1	1	2		6		12		\$ 2,121.00
5.2	Street/Driveway Connection Details and Calculations	1		1	1	1	2			4		\$ 957.00
5	Detention Plans & Calculations	2		1	1	4		6		8		\$ 2,049.00
6	Demolition Plans	2		1	1	4		6		8		\$ 2,049.00
7	Traffic Control Plans	10		8	4	30		26		52	1	\$ 12,366.00
8	Storm Water Pollution Prevention Plans	3		1	1	12	12			14		\$ 4,107.00
9	Cross Sections & Earthwork Calculations	8		1	2	24		24		48		\$ 9,609.00
10	Project Manual											\$ -
10.1	Bid Form (Est Unit and w/wo Total Costs)			2	2	12		30		16		\$ 6,468.00
10.2	Specification Table of Contents			2	2	6		12				\$ 2,610.00
11	Fort Bend County Standard Sheets	4		1	1	2		4		8		\$ 1,599.00
<b>DRAWINGS &amp; DOCUMENTS (70% Submittal) SUBTOTAL</b>		<b>51</b>										<b>\$ 52,838.00</b>



**WESTENFELDT ROAD  
(RABB ROAD TO STATE HIGHWAY 6)  
FBC PROJECT# 20XXX  
HJ CONSULTING, INC.**

**LEVEL OF EFFORT FOR FINAL DESIGN PHASE, AUGUST 2020**

Employee Classification		No. of Sheets	Principal	Project Manager	QA/QC Engineer	Project Engineer	Senior Designer	Graduate Engineer	Designer	CAD Technician	Admin	Total
Raw Labor Rates			\$195.00	\$165.00	\$150.00	\$120.00	\$105.00	\$105.00	\$80.00	\$78.00	\$60.00	
<b>LEVEL OF EFFORT (DESIGN PHASE)</b>												
TASK	TASK DESCRIPTION	<b>ESTIMATED HOURS</b>										
<b>DRAWINGS &amp; DOCUMENTS (95% Submittal)</b>												
1	General Notes	2		1	2	4		8		16		\$ 3,033.00
2	Index of Sheets	1		1	1	2		2		4		\$ 1,077.00
3	Update Plan and Profile Sheets			1	2	4		8	8	20		\$ 3,985.00
3.1	Update Intersection Details/Layouts			1	1	2		4		8		\$ 1,599.00
3.2	Update Street/Driveway Connection Details and Calculations			1	1	1	2			4		\$ 957.00
4	Update Detention Plans & Calculations			1	1	2		2		4		\$ 1,077.00
5	Update Demolition Plans			1	1	2		2		8		\$ 1,389.00
6	Update Traffic Control Plans			2	2	8		10		20		\$ 4,200.00
7	Update Storm Water Pollution Prevention Plans			1	1	4	4			6		\$ 1,683.00
8	Update Cross Sections & Earthwork Calculations			1	2	8		10		20		\$ 4,035.00
9	Update Project Manual Bid Forms, Cost Estimates, Specs			2	2	4		6		12		\$ 2,676.00
9.1	Administrative Documents		2	2	2	6		12				\$ 3,000.00
9.2	Special Specifications or Conditions			2	2	4		8				\$ 1,950.00
<b>DRAWINGS &amp; DOCUMENTS (95% Submittal) SUBTOTAL</b>		<b>3</b>										<b>\$ 30,661.00</b>
<b>DRAWINGS &amp; DOCUMENTS (Final Submittal)</b>												
1	Update Drawings for Final Submittal			6	6	32		32		74		\$ 14,862.00
2	Update Project Manual Bid Forms, Cost Estimates, Specs			3	3	16		16		16		\$ 5,793.00
<b>DRAWINGS &amp; DOCUMENTS (Final Submittal) SUBTOTAL</b>												<b>\$ 20,655.00</b>
<b>BID PHASE</b>												
1	Submit Final Drawings & Documents			12								\$ 1,980.00
2	Pre-Bid Meeting			4		4						\$ 1,140.00
3	Addendum (if required)			3	2	12		12		20		\$ 5,055.00
4	Bid Recommendation and Award of Contract (not required)											\$ -
<b>BID PHASE SUBTOTAL</b>												<b>\$ 8,175.00</b>



**WESTENFELDT ROAD  
(RABB ROAD TO STATE HIGHWAY 6)  
FBC PROJECT# 20XXX  
HJ CONSULTING, INC.**

**LEVEL OF EFFORT FOR FINAL DESIGN PHASE, AUGUST 2020**

Employee Classification		No. of Sheets	Principal	Project Manager	QA/QC Engineer	Project Engineer	Senior Designer	Graduate Engineer	Designer	CAD Technician	Admin	Total
Raw Labor Rates			\$195.00	\$165.00	\$150.00	\$120.00	\$105.00	\$105.00	\$80.00	\$78.00	\$60.00	
<b>LEVEL OF EFFORT (DESIGN PHASE)</b>												
TASK	TASK DESCRIPTION	<b>ESTIMATED HOURS</b>										
<b>PROJECT MANAGEMENT</b>												
1	Field Visit (Investigations and Findings)			4		12		12			8	\$ 3,840.00
2	Coordination and Permitting with TxDOT			4		20					4	\$ 3,300.00
3	Coordination with Public Utilities for Obtaining Record Drawings			4		8					4	\$ 1,860.00
4	Coordination with Centerpoint Energy, AT&T, Comcast and Other (Private Utilities)			4		8					4	\$ 1,860.00
5	Project Management and Meetings (Includes 2 Design Phase Meetings)		8	16		20					8	\$ 7,080.00
6	Submittal Milestones ( <b>Design Submittals - 70%, 95% and Final</b> ) & Attend to Comments			8		8		8		16	8	\$ 4,848.00
<b>PROJECT MANAGEMENT SUBTOTAL</b>												<b>\$ 22,788.00</b>
<b>OTHER EXPENSES</b>												
1	Printing/Plotting/Copying (Including Mylars)											\$ 750.00
2	Mileage/Postage/Courier											\$ 500.00
<b>OTHER EXPENSES SUBTOTAL</b>												<b>\$ 1,250.00</b>
<b>TOTAL HOURS</b>		10	109	53	298	20	284	24	454	37		
<b>TOTAL ESTIMATE</b>		\$1,950	\$17,985	\$7,950	\$35,760	\$2,100	\$29,820	\$1,920	\$35,412	\$2,220	\$	<b>\$ 136,367.00</b>



**WESTENFELDT ROAD  
(RABB ROAD TO STATE HIGHWAY 6)  
FBC PROJECT#  
HJ CONSULTING, INC.  
LEVEL OF EFFORT FOR CONSTRUCTION PHASE, AUGUST 2018**

Employee Classification		No. of Sheets	Principal	Project Manager	QA/QC Engineer	Project Engineer	Graduate Engineer	CAD Technician	Admin	Total
Raw Labor Rates			\$195.00	\$165.00	\$150.00	\$120.00	\$105.00	\$78.00	\$60.00	
<b>LEVEL OF EFFORT (CONSTRUCTION ENGINEERING)</b>										
TASK	TASK DESCRIPTION	<b>ESTIMATED HOURS</b>								
<b>CONSTRUCTION PHASE ENGINEERING</b>										
1	Pre-Construction Meeting/Progress Meetings (as needed)			8		24			16	\$ 5,160.00
2	Construction Site Observation Visits (not required)									\$ -
3	Review and Respond to Submittals/RFI's/RFP's			8		32		40	12	\$ 9,000.00
4	Monthly Construction Activity Reports until Completion (not required)									\$ -
5	Substantial/Final Completion Walk Through			4		8	8		4	\$ 2,700.00
6	Record Drawings (Review/Verify As-Built Drawings)		1	4		16	16	48		\$ 8,199.00
<b>CONSTRUCTION PHASE ENGINEERING SUBTOTAL</b>										<b>\$ 25,059.00</b>
Employee Classification		No. of Sheets	PM RPLS	Project Surveyor	Survey Tech	CADD Tech	Admin/ Clerical	2-Person Crew	3-Person Crew	Total
Raw Labor Rates			\$204.00	\$148.11	\$105.41	\$103.00	\$68.23	\$150.00	\$180.00	
<b>LEVEL OF EFFORT (CONSTRUCTION SURVEYING)</b>										
TASK	TASK DESCRIPTION	<b>ESTIMATED HOURS</b>								
<b>CONSTRUCTION PHASE SURVEYING</b>										
7	Recover, verify and mark control and baseline alignment monumentation established for the project			1	2			10		\$ 1,858.93
8	Stake ROW lines every 100 feet, at angle points, and at the beginning and end of curves			4	8			20		\$ 4,435.72
<b>CONSTRUCTION PHASE SURVEYING SUBTOTAL</b>										<b>\$ 6,294.65</b>
<b>OTHER EXPENSES</b>										
9	GPS Receiver (4 days @ \$225/day)									\$ 900.00
10	Surveyor Mileage									\$ 200.00
<b>OTHER EXPENSES SUBTOTAL</b>										<b>\$ 1,100.00</b>
<b>TOTAL HOURS</b>			1	29	10	80	24	118	32	
<b>TOTAL ESTIMATE</b>										<b>\$ 32,453.65</b>

August 19, 2020  
Proposal No: GP2020-0718

**Mr. Harish Jajoo, P. E., CFM**  
**HJ Consulting, Inc.**  
**4771 Sweetwater Boulevard, Suite 245**  
**Sugar Land, Texas 77479**

**Reference: Proposal for Geotechnical Investigation**  
**Westenfeldt Road from Rabb Road to SH 6**  
**Fort Bent County, Texas**

Dear Mr. Jajoo,

Associated Testing Laboratories, Inc. (ATL) is pleased to submit the proposal for the above-referenced project. The scope of work entails a Geotechnical Investigation in accordance with procedures and guidelines of Fort Bend County Engineering Guidelines. The project alignment is approximately 2,524-ft in length, see **Figure 1: Proposed Improvement Alignment**.

### **PROJECT DESCRIPTION**

The project consists of widening of existing roadway at Westenfeldt Road starting from Rabb Road to SH 6 in Fort Bend County, Texas. Upgrade existing narrow 2-lane road to 36' asphalt roadway with open ditches.

### **SCOPE OF WORK**

The proposed scope of this geotechnical investigation will entail conducting a geotechnical investigation involving six (6) at 10-ft deep soil borings for the road improvements, to evaluate the subsurface soils and groundwater conditions.

The scope of the project includes roadway improvements, and construction of open ditches along the Westenfeldt Road starting from Rabb Road to SH 6 of approximately 2,524 linear ft.

Recommendations regarding paving including thickness and reinforcement design, subgrade preparation and stabilization, pavement construction based on Fort Bend County Guidelines

**GEOTECHNICAL INVESTIGATION**

**Field Exploration**

*ATL performed site reconnaissance. Project alignment will be accessible with our truck-mounted drill rig, control signs and cones will be use during drilling operation for work personnel safety.*

Based on the Boring Depth and Frequency Requirements provided, ATL proposes the following borings to investigate the subsurface soils and groundwater conditions along the site boring location plan as presented in **Figure 2: Proposed Boring Location**.

<b>Boring /Piezometer</b>	<b>Total No</b>	<b>Depth (ft)</b>	<b>Total Depth (ft)</b>
Borings B-1 thru B-6	6	10	60

Soil samples will be obtained continuously to a depth of 10 ft. the termination of boring. Standard Penetration Tests (SPT) will be performed in sands, if encountered, and clays will be sampled by Shelby tube. Shear strengths of the clays will be measured in the field with a hand penetrometer and correlations between this data and laboratory shear strength data will be made during analysis.

Depth to ground water will be important for the design and construction of this project. For this reason, the borings will be drilled dry and the depth at which groundwater is encountered will be recorded. The boreholes will be grouted with cement-bentonite slurry after the completion of drilling and sampling.

**Laboratory Testing**

Laboratory tests will be assigned corresponding to the types of soils encountered, with the objective of classifying the soils physical and index properties, moisture contents, unconfined compressive strength, undrained unconsolidated compressive strength, Atterberg limits, percent finer than No. 200 sieve, and total unit weight tests.

All laboratory tests will be performed in accordance with appropriate ASTM standards. We will keep the samples for 30 days after the final report is presented. We will discard the samples after that time, unless instructed otherwise.

**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 in accordance with the Fort Bend County Engineering Guidelines. The following geotechnical information and recommendations will be provided:

The field and laboratory data will be presented in a geotechnical report. Geotechnical analyses will be conducted using the field and laboratory test data to provide geotechnical data for the design and construction of the proposed improvements, including (but not limited to) the following:

- Generalized soils stratigraphy
- Piezometer installation and groundwater measurements
- Preliminary fault review based on the review of the available fault maps
- Excavation and trench construction and safety requirements
- Recommendations regarding bedding and backfill for utilities construction
- Loads on buried pipes including dead and live loads (vehicle loads)
- Recommendations regarding paving including thickness and reinforcement design, subgrade preparation and stabilization, pavement construction based on Fort Bend County Guidelines
- Construction consideration

One (1) electronic PDF copy of the draft geotechnical report will be submitted. Once we have received the review comments, a final report addressing the review comments will be issued. One (1) copies of final report and an electronic copy (PDF) of the final report will also be issued.

### **COST ESTIMATE**

Based on the scope of work outlined above, we estimate the cost for field, laboratory, and engineering services for the geotechnical services presented in this proposal to be **\$14,528.00 (including coring pavement)**.

The cost estimates using the estimated project quantities and requirements are presented in the enclosed **Itemized Geotechnical Fee Estimate** spreadsheet. This estimate assumes: underground utilities at proposed boring locations will be cleared by One Call Service and/or private property maintenance personnel; boring locations and elevations will be surveyed by others; and that the sites will be accessible to our truck-mounted equipment; and, environmental sampling/ handling/ transportation/ disposal are not in the scope of this project. Permission/permit to access site, if needed, will be arranged by others at no cost to ATL.

### **TIME SCHEDULES**

We estimated that the fieldwork can be started shortly after authorization is received. The actual drilling work is expected to take about 1 week, assuming no delays in permission to access the sites. The laboratory testing will take approximately 1 to 2 weeks. Weather permitting, we anticipate submitting a draft report about 2 weeks after completion of all laboratory testing. A final report will be issued about 1 week after receiving your review comments.

We appreciate the opportunity to submit this proposal and look forward to being of service to you on this project.

Very truly yours,  
ASSOCIATED TESTING LABORATORIES, INC.



Nutan V. Palla, Ph.D., P.E.  
Director, Geotechnical Services

Enclosure:

Figure 1: Proposed Improvement Alignment  
Figure 2: Proposed Boring Location  
Itemized Geotechnical Fee Estimate



<b>PROJECT:</b> WESTENFELDT RD
<b>PROJECT No.</b> FROM: RABB RD TO: HW 6
LENGTH: 2,524 FT
<b>DESCRIPTION:</b> UPGRADE EXISTING NARROW 2 LANE ROAD TO 36' ASPHALT ROADWAY WITH OPEN DITCHES.
FORT BEND COUNTY 2020 MOBILITY BOND PROGRAM


**Project Proposal:**  
 Westenfeldt Road Improvements  
 Fort Bend County, Texas



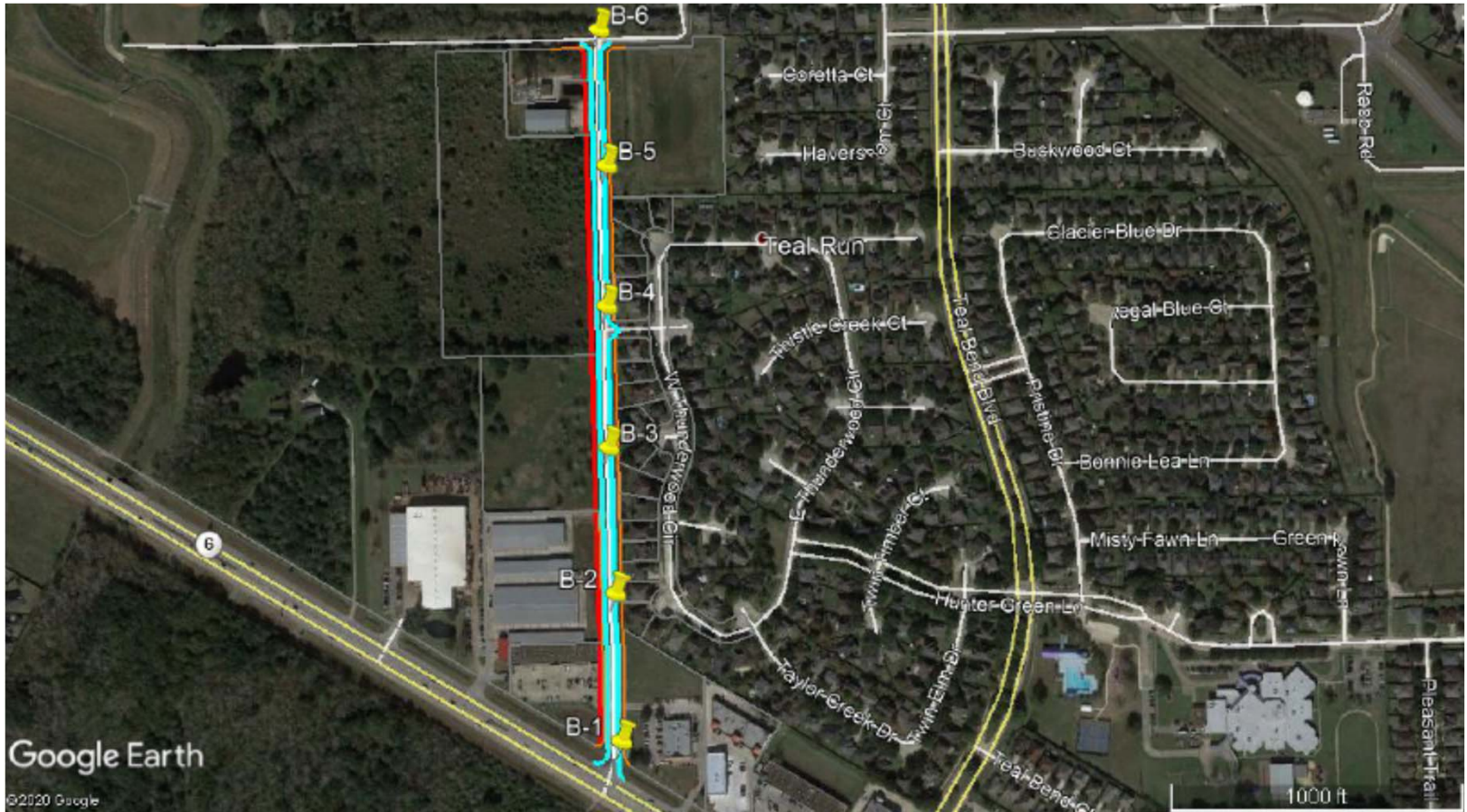
Proposal No.: GP2020-0718

**Client:**  
 HJ Consulting, Inc.  
 Sugar Land, Texas

Proposed Improvement Alignment

Not to Scale

FIGURE 1



NORTH

**Notes:**

1. Borings B-1 through B-6 @ 10-ft deep

<b>Project Proposal:</b> Westenfeldt Road Improvements Fort Bend County, Texas	<b>ASSOCIATED TESTING LABORATORIES</b>   	Proposal No.: GP2020-0718
		Scale: 1 inch : 500 feet
<b>Client:</b> HJ Consulting, Inc. Sugar Land, Texas	Proposed Boring Location	<b>FIGURE 2</b>

**Geotechnical Investigation Proposal**  
 Westenfeldt Road (From SH 6 to Rabb Rd)  
 Fort Bend County, Texas  
 ATL Proposal No. GP2020-0718  
 August 19, 2020

## ITEMIZED GEOECHANICAL FEE ESTIMATE

Borings: 6@10' (60 LF)

<b>A. FIELD EXPLORATION</b>	<b>Qty.</b>	<b>Unit</b>	<b>Unit Rate</b>	<b>Amount</b>
Mobilization/Demobilization (Truck Rig)	1	LS	\$500.00	\$500.00
Technician for Staking, Utilities Clearance, Coordination	8	hrs.	\$50.00	\$400.00
Soil Drilling and Sampling (continuous; <50')	60	ft.	\$21.00	\$1,260.00
Soil Drilling and Sampling (continuous; >50')	0	ft.	\$24.00	\$0.00
Soil Drilling and Sampling (<50' intermittent)	0	ft.	\$18.00	\$0.00
Soil Drilling and Sampling (intermittent; over 50' )	0	ft.	\$21.00	\$0.00
Grouting Holes	60	ft.	\$7.00	\$420.00
Piezometer Installation	0	ft.	\$16.00	\$0.00
Piezometer Abandonment	0	ft.	\$14.00	\$0.00
24-Hour, 7- and 30-day PZ Water Level Readings	0	hrs.	\$50.00	\$0.00
Vehicle Charge	8	hrs.	\$10.00	\$80.00
Mobilization/Demobilization (ATVrig), Surcharge	0	LS	\$132.00	\$0.00
Soil Drilling and Sampling (Surcharge for drilling using ATV rig)	0	ft.	\$6.00	\$0.00
Pavement Coring and Patching (up to 6 inches thick)	6	ea.	\$150.00	\$900.00
Pavement Coring and Patching (>6 inches thick)	36	in.	\$9.00	\$324.00
				<b>\$3,884.00</b>
<b>B. GEOTECHNICAL LABORATORY TESTING</b>	<b>Qty.</b>	<b>Unit</b>	<b>Unit Rate</b>	<b>Amount</b>
Moisture Content (ASTM D-2216)	30	ea.	\$9.00	\$270.00
Atterberg Limits (ASTM D-4318)	12	ea.	\$60.00	\$720.00
Passing No. 200 Sieve (ASTM D-1140)	12	ea.	\$46.00	\$552.00
Unconfined Compression (ASTM D-2166)	6	ea.	\$44.00	\$264.00
Unconsolidated-Undrained Triaxial Test (ASTM D-2850)	6	ea.	\$61.00	\$366.00
			<b>SUBTOTAL</b>	<b>\$2,172.00</b>
<b>C. ANALYSES &amp; REPORT PREPARATION</b>	<b>Qty.</b>	<b>Unit</b>	<b>Unit Rate</b>	<b>Amount</b>
Senior Engineer-Project Manager (P.E.)	4	hrs.	\$150.00	\$600.00
Project Engineer (P.E.)	16	hrs.	\$105.00	\$1,680.00
Civil Engineer	24	hrs.	\$83.00	\$1,992.00
Draftsman	35	hrs.	\$60.00	\$2,100.00
Word Processor	35	hrs.	\$60.00	\$2,100.00
			<b>SUBTOTAL</b>	<b>\$8,472.00</b>
<b>D. ALLOWANCES</b>	<b>Qty.</b>	<b>Unit</b>	<b>Unit Rate</b>	<b>Amount</b>
Traffic Control Equipment (low volume traffic)	0	days	\$122.00	\$0.00
Peace Officer	0	hrs.	\$50.00	\$0.00
Flagman	0	hrs.	\$26.50	\$0.00
			<b>SUBTOTAL</b>	<b>\$0.00</b>
<b>TOTAL ESTIMATED FEE</b>				<b>\$14,528.00</b>

August 13, 2020

Mr. Harish Jajoo, PE, CFM  
HJ Consulting, Inc.  
4771 Sweetwater Boulevard, Suite 254  
Sugar Land, TX 77479

RE: Proposal to Provide Professional Surveying Services for Fort Bend County 2020 Mobility Bond Program Westenfeldt Road Project – Topographic and Right-of-Way Surveying

Dear Mr. Jajoo:

It is my pleasure to submit the following proposal for providing professional surveying services for the above referenced project. The route is from Rabb Road to SH 6 as shown on '2020063-Westenfeldt.pdf' received in email dated 7/27/2020 and attached hereto. The Surveying Services will be performed in accordance with Chapters 6 and 7 of the Fort Bend County Mobility Bond Design Manual:

1. Perform Control Surveys and Prepare Signed and Sealed Survey Control Maps:
  - 1.1. Project Control will be tied to and based on existing control established for adjacent projects. Existing control will be provided to Landtech by HJ Consulting or Fort bend County. If existing control is not available, the project horizontal datum will be the Texas Coordinate System of 1983, and the vertical datum will be the North American Vertical Datum of 1988, based on GPS RTN observations processed using Geoid18. Use of existing control and project horizontal and vertical datum is subject to approval by the Project Design Consultant. Control points will be spaced at a maximum of 1,000 feet through the project limits.
  - 1.2. Stake the project baseline alignment in field at all PCs, PTs, PIs, and 1,000-foot stations. The baseline alignment will be provided to Landtech by HJ Consulting.
  - 1.3. Prepare a signed and sealed survey control map consisting of:
    - 1.3.1. Cover/index sheet showing the project datum statement, approximate existing right of way (ROW) lines, the baseline alignment including monumentation, alignment bearings and distances and curve data, side street construction centerlines, project control point locations, and coordinate tables for alignment monumentation and control points.
    - 1.3.2. Control monument detail sheet showing ties to planimetric features and monument details.
2. Perform Topographic Surveys and prepare CAD file deliverables:
  - 2.1. Prepare Right of Entry (ROE) letters and mail to landowners along route to request permission to enter private properties for surveying purposes. Track responses to coordinate field survey efforts on private properties. Properties without ROE will not be surveyed.
  - 2.2. Collect Topographic Survey data within the project limits along Westenfeldt Road and along intersecting roadways 100 feet beyond proposed improvements. Cross sections will be collected along the route every 100 feet and will extend 50 feet beyond existing and proposed ROW. Survey visible surface features. Surveys within intersecting roadways will

be confined to public right of way. Survey will not extend into fenced backyards of the subdivision lots on the east side of Westenfeldt Road. In wooded areas we will survey the tree line; individual trees will not be picked up. Deliverables will consist of plan view CAD file in DWG format and Digital Terrain Model with 1-ft contours in Civil3D format.

- 2.3. Survey visible surface utilities. Request One Call marking of utilities, survey resulting markings.
  - 2.4. Perform Property Title Abstracting for preliminary ownership determination. Survey front property corners for right of way (ROW) location. Adjoining property ownership information and existing ROW lines will be shown in the CAD file deliverable.
  - 2.5. Survey approximately 6 Geotechnical Borings after they are drilled.
3. Perform proposed ROW surveys and prepare Proposed ROW Map and parcel document deliverables. Deliverables will conform with Texas Society of Professional Surveyors Category 1B, Condition II standards and will be signed and sealed by a Texas Registered Professional Land Surveyor.
    - 3.1. Prepare Proposed ROW Map showing existing and proposed ROW and proposed acquisition parcels. Includes field survey of back corners of parent tracts of proposed acquisition parcels.
    - 3.2. Prepare KMZ file showing existing ROW with ownership information, proposed takings with parcel numbers, and a preliminary roadway layout. The preliminary roadway layout will be provided to Landtech by HJ Consulting.
    - 3.3. Prepare parcel map and metes and bounds description for each proposed ROW parcel to be acquired for the project. There are an estimated six (6) proposed acquisition parcels. Includes field staking of acquisition parcel corners along the proposed ROW at angle points, PCs, PTs, and intersecting property lines.
  4. Construction Surveying Services will be performed once during a single mobilization prior to commencement of construction. These services will not be performed on an ongoing basis during the construction process without additional compensation. Construction Surveying Services do not include construction layout.
    - 4.1. Recover, verify, and mark control and baseline alignment monumentation established for the project as described in item 1. above.
    - 4.2. Stake ROW lines every 100 feet, at angle points, and at the beginning and end of curves.

Fees for the above described services are as follows (see attached spreadsheet 'W Sycamore\_2020-08-13 x.pdf' for breakdown of tasks, hours, and rates):

1. Control Surveying (Lump Sum)	=	\$ 5,868.81
2. Topographic Surveying and Mapping (Lump Sum)	=	\$ 18,611.70
3.1./3.2. Proposed ROW Surveying & Mapping (Lump Sum)	=	\$ 8,790.11
3.3. Proposed Acquisition Parcels (Lump Sum Per Parcel)	=	\$ 3,344.63
4. Construction Surveying Services (Time & Materials)	=	<u>\$ 7,346.61</u>

Total Estimated Project Fees based on estimated 6 Parcels = \$ 60,685.01

The estimated time to complete the project is as follows:

- Submittal of Topographic Survey CAD deliverables will be 45-90 calendar days after receipt of written Notice to Proceed.
- Submittal of Survey Control Map will be 30 calendar days after receipt of baseline alignment information.

- Submittal of Proposed ROW Map, parcel map and metes and bounds descriptions will be 30-60 days after receipt of authorization to proceed with these tasks.
- Schedule is subject to acquisition of right of entry.

Thank you for the opportunity to submit this proposal. We look forward to working with you.

Sincerely,  
Landtech, Inc.



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Dennis Chalaire, R.P.L.S.  
Vice President

Attachments: Spreadsheet 'Westenfeldt\_2020-08-13 x.pdf'  
20200603-Westenfeldt.pdf

Westenfeldt\_2020-08-13.docx

LANDTECH, INC.  
 PROPOSAL FOR TOPOGRAPHIC, RIGHT-OF-WAY, AND CONSTRUCTION SURVEYING SERVICES  
 CLIENT: HJ Consulting  
 PROJECT: Fort Bend County 2020 Mobility Bond Program Westenfeldt Road Project  
 DATE: 8/13/2020  
 LENGTH (Rt): Westenfeldt Road 2,460  
 Rabb Road 200  
 Hwy 6 200  
 Total = 2,860 ft

- Notes:  
 1. Surveys will be performed per Chapters 6 and 7 of the Fort Bend County Mobility Bond Design Manual  
 2. Please refer to Letter of Proposal of same date for detailed description of scope of work.

DIRECT EXPENSES		Project Manager (RPLS)	Project Surveyor (RPLS)	Survey Tech	CADD Tech	Abstractor	Admin/ Clerical	2-Person Crew	3-Person Crew	TOTAL HR PER TASK	TOTAL FEE PER TASK
TASKS	DESCRIPTION	\$204.00	\$148.11	\$105.41	\$103.00	\$75.93	\$68.23	\$150.00	\$180.00		
<b>1. CONTROL SURVEYS</b>											
1.1.	Project Control will be tied to and based on existing control established for adjacent projects. Existing control will be provided to Landtech by HJ Consulting or Fort Bend County. If existing control is not available, the project horizontal datum will be the Texas Coordinate System of 1983, and the vertical datum will be the North American Vertical Datum of 1988, based on GPS RTN observations processed using Geoid18. Use of existing control and project horizontal and vertical datum is subject to approval by the Project Design Consultant. Control points will be spaced at a maximum of 1,000 feet through the project limits.	1	1	4				9	3	18	\$2,663.75
1.2.	Stake the project baseline alignment in field at all PCs, PTs, PIs and 1,000-foot stations. The baseline alignment will be provided to Landtech by HJ Consulting.		1	1					4	6	\$973.52
1.3.	Prepare a signed and sealed survey control map	1	3	3	12					16	\$1,700.34
<b>SUBTOTAL HOURS</b>		<b>1</b>	<b>3</b>	<b>8</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>7</b>	<b>40</b>	
<b>REIMBURSABLE EXPENSES</b>											
	GPS Receiver		2 days x	\$225.00 =				\$450.00			
	Mileage	140 miles x	\$0.580 =					\$81.20			
										SubTotal Reimbursable Expenses	\$531.20
										<b>SUBTOTAL LUMP SUM FEE TASK 1</b>	<b>\$5,868.81</b>
<b>2. TOPOGRAPHIC SURVEYING AND MAPPING</b>											
2.1.	Prepare Right of Entry Letters and mail them to affected property owners. Track responses.		1	2		4	1			8	\$730.88
2.2.	Collect Topographic Survey data within the project limits along Westenfeldt Road and along intersecting roadways 100 feet beyond proposed improvements. Cross sections will be collected along the route every 100 feet and will extend 50 feet beyond existing and proposed ROW. Survey visible surface features. Surveys within intersecting roadways will be confined to public right of way. Survey will not extend into fenced backyards of the subdivision lots on the east side of Westenfeldt Road. In wooded areas we will survey the tree line, individual trees will not be picked up. Deliverables will consist of plan view CAD file in DWG format and Digital Terrain Model with 1-ft contours in Civil3D format.	1	1	6	32			40		80	\$10,280.57
2.3.	Survey visible surface utilities. Request One Call marking of utilities, field survey resulting markings.				4			10		14	\$1,912.00
2.4.	Perform Property Title Abstracting for preliminary ownership determination. Survey front property corners for right of way (ROW) location. Adjoining property ownership information and existing ROW lines will be shown in the CAD file deliverable.		1	8	8	8	1	8		34	\$3,691.06
2.5.	Survey 6 Geotechnical Borings after drilling.		1	1	1			5		7	\$958.41
<b>SUBTOTAL HOURS</b>		<b>1</b>	<b>3</b>	<b>17</b>	<b>45</b>	<b>12</b>	<b>2</b>	<b>63</b>		<b>143</b>	
<b>REIMBURSABLE EXPENSES</b>											
	GPS Receiver		2 days x	\$225.00 =				\$450.00			
	Mileage	551 miles x	\$0.580 =					\$319.58			
	Certified Letter Return Receipt	8 letters x	\$7.40 =					\$59.20			
	Deed Copies	80 pages x	\$2.00 =					\$160.00			
	Plat Copies	10 sheets x	\$5.00 =					\$50.00			
										SubTotal Reimbursable Expenses	\$1,038.78
										<b>SUBTOTAL LUMP SUM FEE TASK 2</b>	<b>\$18,611.70</b>
<b>3. PROPOSED RIGHT-OF-WAY SURVEYS</b>											
3.1.	Prepare Proposed ROW Map showing existing and proposed ROW and proposed acquisition parcels.		16	16	40	2				74	\$8,328.18
3.2.	Prepare KMZ file showing existing ROW with ownership information, proposed takings with parcel numbers, and a preliminary roadway layout. The preliminary roadway layout will be provided to Landtech by HJ Consulting.		1	2	1					4	\$461.93
<b>SUBTOTAL HOURS</b>											
										<b>SUBTOTAL LUMP SUM FEE TASKS 3.1. &amp; 3.2.</b>	<b>\$8,790.11</b>
3.3.	Prepare parcel map and metes and bounds description for each proposed ROW parcel to be acquired for the project. There are an estimated fourteen (14) proposed acquisition parcels. ROW map and proposed acquisition parcel deliverables will conform with Texas Society of Professional Surveyors Category 1B, Condition II standards and will be signed and sealed by a Texas Registered Professional Land Surveyor. Includes field survey of back corners of parent tracts of proposed acquisition parcels and field staking of acquisition parcel corners along the proposed ROW at angle points, PCs, PTs, and intersecting property lines.	6	30	48	48			24		156	\$19,270.96
<b>SUBTOTAL HOURS</b>		<b>6</b>	<b>47</b>	<b>66</b>	<b>89</b>	<b>2</b>		<b>24</b>		<b>234</b>	
<b>REIMBURSABLE PARCEL EXHIBIT EXPENSES</b>											
	GPS Receiver		3 days x	\$225.00 =				\$675.00			
	Mileage	210 miles x	\$0.580 =					\$121.80			
										SubTotal Reimbursable Expenses	\$796.80
										Per Parcel Expenses	\$132.80
										<b>SUBTOTAL LUMP SUM PARCEL FEES TASK 3.3.</b>	<b>\$20,067.78</b>
										<b>LUMP SUM PER-PARCEL FEES (6 PARCELS)</b>	<b>\$3,344.63</b>
<b>4. CONSTRUCTION SURVEYING SERVICES</b>											
4.1.	Recover, verify and mark control and baseline alignment monumentation established for the project as described in item 1. above.		1	2				10		13	\$1,858.93
4.2.	Stake ROW lines every 100 feet, at angle points, and at the beginning and end of curves. Includes brush cutting for line of sight in heavy vegetation/wooded area on the south side of the route.		4	8				20		32	\$4,435.72
<b>SUBTOTAL HOURS</b>		<b>0</b>	<b>5</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30</b>		<b>45</b>	
<b>REIMBURSABLE EXPENSES</b>											
	GPS Receiver		4 days x	\$225.00 =				\$900.00			
	Mileage	262 miles x	\$0.580 =					\$151.96			
										SubTotal Reimbursable Expenses	\$1,051.96
										<b>SUBTOTAL TIME &amp; MATERIALS FEE TASK 4</b>	<b>\$7,346.61</b>
										<b>TOTAL ESTIMATED FEE ALL TASKS</b>	<b>\$60,685.01</b>



**PROJECT:**  
WESTENFELDT RD

**PROJECT No.**  
**FROM:** RABB RD  
**TO:** HW 6

**LENGTH:** 2,524 FT

**DESCRIPTION:**  
UPGRADE EXISTING NARROW 2 LANE ROAD TO 36' ASPHALT ROADWAY WITH OPEN DITCHES.

FORT BEND COUNTY  
2020 MOBILITY BOND PROGRAM

