

STATE OF TEXAS           §  
   §  
 COUNTY OF FORT BEND   §

**AGREEMENT FOR PROFESSIONAL DESIGN ENGINEERING AND SURVEYING 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 R.G. Miller Engineers, Inc., (hereinafter "Contractor"), a company authorized to conduct business in the State of Texas.

**WITNESSETH**

WHEREAS, County desires that Contractor provide professional design engineering and surveying services for the widening and reconstruction of Beechnut Street from 1,650 feet east of Ashton Brook Lane to 650 feet west of Peek Road under the Beechnut Street Project, Number 17410 of the 2017 Mobility Bond Program (hereinafter "Services") pursuant to SOQ 14-025; and

WHEREAS, County has determined Contractor is the most highly qualified provider of the desired Services on the basis of demonstrated competence and qualifications, and County and Contractor 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, Contractor 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**

Contractor shall render the professional engineering services, including the preliminary engineering, final design, contract and construction phase engineering services to develop construction documents for the project as described Scope of Services attached hereto as Exhibit A, and incorporated herein for all purposes.

**Section 2. Personnel**

2.1 Contractor 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 Contractor 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.

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Agreement for Professional Engineering Services  
 2017 Mobility Bond Program – Project No. 17410  
 Page 1 of 10

2.2 All employees of Contractor shall have such knowledge and experience as will enable them to perform the duties assigned to them. Any employee of Contractor 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 Contractor'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 one million three hundred thirty-five thousand nine hundred fifty-eight dollars and 88/100 (\$1,335,958.88) 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 Contractor 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 Contractor based on the following procedures: Upon completion of the tasks identified in the Scope of Services, Contractor 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 Contractor clearly understands and agrees, such understanding and agreement being of the absolute essence of this Agreement, that County shall have available the total maximum sum of one million three hundred thirty-five thousand nine hundred fifty-eight dollars and 88/100 (\$1,335,958.88) specifically allocated to fully discharge any and all liabilities County may incur.

4.2 Contractor does further understand and agree, said understanding and agreement also being of the absolute essence of this Agreement, that the total maximum compensation that Contractor may become entitled to and the total maximum sum that County may become liable to pay to Contractor shall not under any conditions, circumstances, or interpretations thereof exceed one million three hundred thirty-five thousand nine hundred fifty-eight dollars and 88/100 (\$1,335,958.88).

### **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, 2020. Contractor 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 Contractor 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 Contractor 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 Contractor 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 Contractor 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. Contractor'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 Contractor.

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

All documents, data, reports, research, graphic presentation materials, etc., developed by Contractor 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. Contractor shall promptly furnish all such data and material to County on request.

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

Contractor will permit County, or any duly authorized agent of County, to inspect and examine the books and records of Contractor 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, Contractor 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. Contractor shall provide certified copies of insurance endorsements and/or policies if requested by County. Contractor 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. Contractor 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. 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.

10.1.2 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.

10.1.3 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.

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

12.2 Contractor agrees to hold Confidential Information in strict confidence, using at least the same degree of care that Contractor 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. Contractor 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, Contractor shall advise County immediately in the event Contractor 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 Contractor will at its expense cooperate with County in seeking injunctive or other equitable relief in the name of County or Contractor against any such person. Contractor agrees that, except as directed by County, Contractor 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, Contractor will promptly turn over to County all documents, papers, and other matter in Contractor's possession which embody Confidential Information.

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

12.5 Contractor 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 Contractor**

13.1 In the performance of work or services hereunder, Contractor 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 Contractor 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
Contractor:	R.G. Millers Engineers, Inc. Attn: Jack P. Miller, President 16340 Park Ten Place, Suite 350 Houston, Texas 77084

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**

Contractor 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, Contractor shall furnish County with

certification of compliance with said laws, statutes, ordinances, rules, regulations, orders, and decrees above specified.

**Section 16. Standard of Care**

Contractor 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, Contractor 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 Contractor 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 Contractor 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 2270 Texas Government Code: By signature below, Contractor verifies Contractor does not boycott Israel and will not boycott Israel during the term of this Agreement.

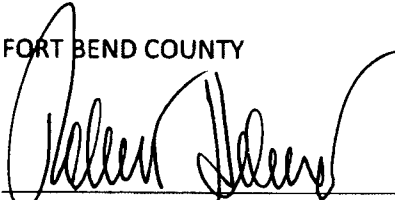
25.2 Texas Government Code Section 2251.152 Acknowledgment: By signature below, Contractor represents pursuant to Section 2252.152 of the Texas Government Code, that Contractor is not listed on the website of the Comptroller of the State of Texas concerning the listing of companies that are identified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

[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

R.G. MILLER ENGINEERS, INC

  
Robert E. Hebert, County Judge

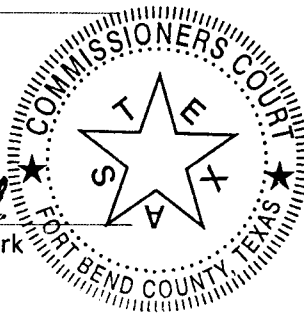
  
Jack P. Miller, President

Date 9-4-2018

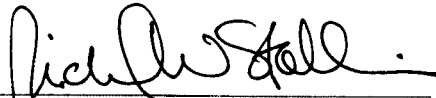
Date August 22, 2018

ATTEST:

  
Laura Richard, County Clerk



APPROVED:

  
Richard W. Stolleis, 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 \$1,335,958.<sup>88</sup> to accomplish and pay the obligation of Fort Bend County under this contract.

  
Robert Ed Sturdivant, County Auditor

# EXHIBIT A



Proposal No. 17102rev3  
July 19, 2018

Mr. Richard W. Stolleis, P.E.  
County Engineer  
Fort Bend County  
301 Jackson  
Richmond, TX 77469  
281-633-7506

Re: **Revised Proposal for Engineering Services to Design the Widening and reconstruction of Beechnut Street from 1,650 feet east of Ashton Brook Lane to 650 feet west of Peek Road Fort Bend County, Texas**

Dear Mr. Stolleis;

R. G. Miller Engineers, Inc. (RGME) is pleased to submit this second revision to our proposal for professional engineering and surveying services to Fort Bend County (FBC) for the above referenced project. This proposal is in accordance with our scoping meetings with Mr. Robert Barnett, P.E., of LJA Engineering, Inc. the Precinct Program Manager. Based on those conversations and an initial assessment to record field conditions at the project location it is our understanding that RGME is to provide Preliminary Engineering, Final Design, Contract, and Construction Phase Engineering Services to develop construction documents for the reconstruction and widening of Beechnut Street from 1,650 feet east of Ashton Brook Lane to 650 feet west of Peek Road. The proposal has been revised further per comments received from Mr. Barnett on June 26, 2018 and negotiation between R.G. Miller Engineers and Our subconsultant Kelly R. Kaluza & Associates.

Currently Beechnut Street within the project area is a narrow two-lane asphalt roadway with open ditch drainage. The existing properties along the corridor are mostly vacant with some commercial development west of Peek Road and residential homes in the center section. The existing Beechnut Street roadway is approximately 10,000 feet in length and intersects the major thoroughfares of Peek Road and Mason Road. The proposed roadway from Peek Road to the eastern limits will consist of a continuous four-lane concrete boulevard roadway with a raised median, including storm sewer and drainage system and any necessary appurtenances. The intersections of Peek Road and Mason Road will be developed in a modern roundabout configuration. The design process will be a collaborative effort between the Design Consultant (RGME), the Project Manager (BBI) and County staff (FBCE). Based on this understanding we propose to provide the basic services as outlined in the scope of services shown in **EXHIBIT A**.

It is proposed that these services will be provided for a total sum of \$ 1,335,958.88. An estimated level of effort to perform the above services is shown in the revised **EXHIBIT B** - Engineers Fee Schedule.

If through the results of preliminary investigations and studies additional work is required to develop the project, the additional design work will be handled by separate agreement at that time.

r. g. miller  
engineers, inc.

**Prime Engineering Fee by R.G. Miller Engineers, Inc.**

The Total Prime Engineering Services by R.G. Miller Engineering is divided into the following phases:

100 - Project Coordination/Management

(LUMP SUM) \$ 72,708.75

200 - Preliminary Design

(LUMP SUM) \$ 235,008.50

300 - Final Design

(LUMP SUM) \$ 409,273.50

500 - Contract-Construction Phase

(Hourly) \$ 34,114.00

**Total Prime Engineering Fee**

**\$ 751,104.75**

**Subconsultant Engineering Fee by Kelly R. Kaluza & Associates, Inc.**

The Total Prime Engineering Services by Kelly R. Kaluza & Associates, Inc. is divided into the following phases:

100 - Project Coordination/Management

(LUMP SUM) \$ 13,257.88

200 - Preliminary Design

(LUMP SUM) \$ 165,798.50

300 - Final Design

(LUMP SUM) \$ 232,458.50

500 - Contract-Construction Phase

(Hourly) \$ 18,220.25

**Total Prime Engineering Fee**

**\$ 429,735.13**

r. g. miller  
engineers, inc.

**Additional Services**

The Total Additional Engineering Services Fee is divided into the following phases:

212-GEOTECHNICAL (Aviles. - see attached Budget)

(LUMP SUM) \$ 59,184.00

214 -SURVEY (Kaluza & Associates, Inc. - see attached Budget)

(LUMP SUM) \$ 83,935.00

215-SURVEY-Parcel Acquisition (Kaluza & Associates, Inc. - see attached Budget)

(Allowance based on 5 parcels) \$ 12,000.00

**Total for Additional Services = \$ 155,119.00**

**TOTAL PROJECT FEE = \$ 1,335,958.88**

r. g. miller  
engineers, inc.

## **TIME OF PERFORMANCE**

It is estimated the design services will be performed in 13 calendar months in accordance with the attached **EXHIBIT C** - Work Schedule.

This proposal does not include any work concerning ADA accessibility review nor construction inspection or administration.

If additional services are required, RGME will prepare a work authorization defining the scope of services with an estimated cost based on the attached rate schedule and will not proceed until receiving a signed authorization from FBC. RGME will submit invoices monthly for payment by FBC.

RGME will not exceed the fees outlined in this proposal without prior written authorization.

If a contract is offered by the County the Authorized Signer for RGME will be:

Jack P. Miller, President  
R.G. Miller Engineers, Inc.  
16340 Park Ten Place, Suite 350, Houston TX 77084  
713-961-4600  
JMiller@rgmiller.com

We appreciate the opportunity to provide these services to you and look forward to working with you and Fort Bend County Precinct 1 on this important project.

If you have any questions or need additional information, please feel free to phone.

Sincerely,

**R. G. Miller Engineers, Inc.**



Patrick J. Ross, P. E.

Transportation Department Manager

t:\04401.000 fbc-04 beechnut street\admin\contract\rgme-beechnut street proposal\_jul-19-2018.doc

## EXHIBIT A

### Scope of Work to be provided by R.G. Miller Engineers, Inc.

#### GENERAL DESCRIPTION

It is our understanding that RGME's scope of work is to provide Preliminary Engineering, Final Design, Contract, and Construction Phase Engineering Services to develop construction documents for the reconstruction and widening of Beechnut Street from 1,650 feet east of Ashton Brook Lane to 650 feet west of Peek Road. The corridor is approximately 10,000 feet in length and will consist of a continuous four-lane concrete boulevard roadway with a raised median, including storm sewer and drainage system and any necessary appurtenances. It is further understood that the County would like to construct a modern roundabout at the intersection of Beechnut Street with both Peek Road and Mason Road. The design process will be a collaborative effort between the Design Consultant (RGME), the Project Manager (LJA) and County staff (FBCE).

#### GENERAL REQUIREMENTS

##### Design Criteria

1. The Engineer shall prepare all work in accordance with the latest version of the Fort Bend County (FBC) Regulations of Subdivisions and applicable FBC design standards and details. When design criteria are not identified in FBC manuals, the Engineer shall refer to the American Association of Highway and Transportation Officials (AASHTO), A Policy on Geometric Design of Highways and Streets (latest edition), TMUTCD and municipal and/or ETJ design criteria.
2. Produce roadway plans including typical-sections, specifications and estimates (PS&E) and prepare construction bid documents.
3. All designs for the above work will be in accordance with standards for Major Thoroughfares in the FBC "Regulations of Subdivisions" (latest edition).
4. The project is to be designed to minimize the acquisition of new right-of-way (ROW) to the greatest extent possible.
5. Drainage system design will follow the recommendation of the existing drainage studies and will conform to the FBC Drainage District Drainage Criteria Manual, Revised 2011.
6. Submit 30% plans during the preliminary design phase, as well as, 70%, and 95% PS&E packages for review by FBC Engineering. The final 100% set will incorporate any revisions from FBC comments on the 95% set.
7. The scope of this project will not include any improvements or changes to the cross streets except signage and/or striping where needed.
8. Provide project planning and control to include quality management.

9. Provide an accurate, complete and constructible set of contract documents.
10. FBC will have the ultimate authority for determining what constitutes an accurate, complete and constructible set of contract documents.

## **100-PROJECT COORDINATION/MANAGEMENT**

RGME shall be responsible for directing and coordinating all activities associated with the project and to deliver the work on time

### **110 - Project Coordination**

1. Provide general coordination with the Project team members concerning administrative and technical issues. Report and coordinate with FBC on any design issues and requests for information.
2. Internal administration of the project files. At the completion of the work, the project files will be shipped to the FBC, if requested.

### **120 - Invoicing/Progress Reports**

1. Prepare and submit monthly progress reports and invoices to FBC for review and approval. The invoices will include the progress report and invoice. The progress report will list outstanding issues that need resolution, as well as, progress of the tasks and estimated completion dates for the work.

### **130 - Project Scheduling**

1. Prepare an overall project design schedule detailing the progression of the work. This schedule will include review dates by FBC, submittal dates for deliverables, and estimated time frame to complete the work. The schedule will be updated monthly and included in the progress report. Changes or adjustments in the schedule caused by delays due to unforeseen task difficulties or lengthy review times will be shown and reported to the FBC.

### **140 - Progress Meetings**

1. Attend coordination and interim progress review meetings every month or as necessary, to be scheduled on an as-needed basis. Prepare and distribute meeting minutes within five working days after the meeting.

## **200-PRELIMINARY DESIGN**

The primary goals are to (1) establish a typical cross section and cross sections in non-standard areas, (2) determine drainage system needs (drainage report and/or preliminary roadway drainage design), (3) positively determine right-of-way (ROW) 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, and (8) prepare a reasonable construction cost estimate. Normally, a "30 percent" plan set will be prepared, consisting of all existing features (seen and unseen) shown in plan and profile, and proposed

improvements in plan only with minor annotation. RGME will prepare a Preliminary Design Memo (PDM) and 30% design submittal as described below.

### **210 - Collect Existing Data**

1. Gather and review as-built drawings for Beechnut Street and adjacent areas and roadways.
2. Collect and review as-built drawings for storm sewers, channels, ditches, drainage systems, detention basins, and other related systems in the project area.
3. Collect and review drainage studies, master drainage plans, and similar related drainage, floodplain, or storm water management plans in the project area.
4. Collect and review property boundaries, jurisdictional boundaries, and ROW boundary information.
5. Collect and review existing traffic data, studies and plans pertaining to the project area.

### **212 – Geotechnical (See attached Scope from Aviles)**

**The budget will be included for an additional service to provide Geotechnical services. The budget shall include the following:**

1. Soil borings, analysis, and recommendations for pavement subgrade design, storm sewer/culvert bedding, and trench safety, performed in accordance with typical FBC procedures.
2. Prepare a Geotechnical Investigation Report to include boring logs, verification of FBCE standard pavement design and bedding recommendations for the anticipated structures.

### **214 - Surveying (see attached Scope from Kelly R. Kaluza & Associates)**

**Limits of Survey work will be from 650 feet west of Peek Road to 1,650 feet east of Ashton Brook Lane. The budget for Survey Services shall include the following:**

1. Establish inter-visible survey control at intervals not to exceed 1000 feet for the project, meeting TxDOT Level 4 criteria, with horizontal controls based on GPS observations and Vertical control based on digital leveling, tied to NAD 83 (2011), Epoch 2010.00 and NAVD 88.
2. Tie into other horizontal and vertical control reference markers identified by NGS, FEMA, TxDOT, FBGPTRA and COSL for comparison and datum conversions, if needed.
3. Identify property ownership along current right-of-way.
4. Locate sufficient monumentation to identify the limits and width of the current right-of-way.

5. Prepare a right-of-way sheet suitable for evaluation from engineer's schematic and typical sections as to any additional right-of-way needs, including but not limited to corner clips, turn lanes, embankments and open ditch drainage.
6. Locate all visible and apparent improvements within the existing right-of-way and a minimum of 20 feet beyond, wherever feasible, and extend a minimum of 100 feet at all intersecting streets. Include structures within 100 feet of the existing right-of-way.
7. Provide topographic sections at 100 foot intervals, plus grade breaks, for the existing right-of-way, extending a minimum of 20 feet beyond from the proposed ROW, wherever feasible, and extending a minimum of 100 feet at all intersecting streets, measured from the end of returns of the paving.
8. Provide a Utility One Call notification and locate all pin flags and markings established within 48 hours of the notification.
9. Provide elevations and measure downs on all accessible manholes, inlets, headwalls, drainage structures and culverts. No buried lines will be probed or excavated.
10. Locate and identify utility/pipeline conflicts with the proposed construction, including obtaining information from utility owners record drawings and site reconnaissance, as well as shooting elevations marked or uncovered by others.
11. Prepare a TIN with breaklines suitable for rendering representative one-foot contour lines.
12. Prepare deliverables compatible without modification in MicroStation V8i and Geopak, including reference files for the right-of-way, baseline alignment and stations, 2d files, 3d files, underground utility lines, contour lines, and survey raw data points.
13. Tie soil boring locations and provide a spreadsheet of locations and elevations.
14. Provide a Survey Control Index Sheet and Horizontal and Vertical Control Sheet signed, sealed and dated by a Registered Public Land Surveyor for insertion into the plans.
15. Provide an ASCII file of the survey points, DGN and PDF files of the deliverables.

**215 - Survey-Parcel Acquisition, if required (see attached Scope from Kelly R. Kaluza & Associates)**

1. Upon authorization by the County, Meet with RGM and County Staff to determine final location of right-of-way acquisition; Prepare individual metes and bounds descriptions of additional right-of-way acquisition; Prepare individual parcel maps of right-of-way on 8-1/2" x 11" legible print showing visual representation, as well as, any other pertinent information that needs to be shown; Set property acquisition monumentation for each individual parcel; and Surveying services for retracement and monumentation of the existing rights-of-way and easement. Provide deliverables in PDF and in DOC format for descriptions, DGN format for the parcel sketches.
2. Upon authorization by the County, stake the proposed right-of-way at 500 foot stations on both sides, and all angle points, points of curvature, and point of tangency.

**220 - Conduct Field Reconnaissance**

1. Perform site visits to observe and photograph existing conditions.
2. Observe existing utilities.
3. Observe existing drainage facilities.
4. Observe existing traffic, signage, and signal facilities.
5. Observe existing vegetation and landscaping features.

**230 - Utility Coordination**

1. Utilities will be researched and located in the field to determine the existence and location of underground utilities (pipelines, duct banks, etc.). RGME shall identify and coordinate with all utility owners for relocations required. Any subsurface utility investigation (SUI) should be at the expense of the utility company. Utility company signatures will not be required on completed drawings.
2. Perform records research and field visits to determine the presence of underground or overhead private or public utilities. Collect as-built plans and/or maps from all utilities having facilities within the project limits.
3. Send records requests to utility companies and obtain I.D. numbers (CenterPoint and AT&T)
4. Coordinate with FBC and adjacent MUDs during the identification of utility conflicts.
5. Depict utilities to a reasonable degree of accuracy on the plan and profile drawings.
6. 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.
7. Develop designs to avoid and/or minimize conflicts with existing and proposed utilities.
8. Send roadway design plans to all utility companies. Coordinate relocations or adjustments with utility companies.

**240 - Traffic Studies**

1. FBC will provide current and future traffic information and any previously completed Traffic Studies applicable to the project area.
2. Utilize existing traffic data and perform warrant analysis for the intersection of Beechnut Street at S. Mason Road. Define any required future improvements at the intersection and provide an ultimate intersection design. The design will be used to define any extra ROW that will need to be acquired for this project to allow for a modern roundabout intersection and the ultimate build-out of the intersection.

**250 - Hydrological or Hydraulic Studies**

1. Determine drainage areas associated with the project area.
2. Determine outfall depths and locations for all project related drainage areas.
3. Determine peak flow rates generated by design storms for each drainage area.
4. Size storm water conveyances to handle peak flows and to result in water surface elevations that conform to applicable criteria.
5. The design and construction of all drainage systems within FBC shall comply with the established standard principles and practices given in the FBC "Drainage Criteria Manual, 2011".
6. Review existing data and confirm that the existing detention is adequate to mitigate the proposed improvements. If additional detention is required, propose a mitigation solution and identify any ROW required. This review will be coordinated with FBC, adjacent Municipal Utility Districts (MUDs), and the Levee Improvement District.

**270 - Review and Identify Right-of-Way Requirements**

1. The project is to be designed within the existing ROW to the maximum extent possible.
2. Evaluate proposed roadway design alignments and identify the right of way requirements for the intersecting cross streets of Peek Road and S. Mason Road which do not currently have dedicated ROW.
3. Identify any design elements (sight triangles, traffic signal corner clips, additional turn bays, etc.) that may require additional ROW.
4. Coordinate with the surveyor on dedications or acquisition of any additional ROW.

**280 - 30% Design Drawings**

1. Provide 30% submittals for the design, including drainage design, for interim progress reviews by FBC.
2. Prepare and submit a set of 30% design drawing on 11"x17" plan sheets for review by FBC. The 30 % design plans will include the following design sheets:
  - a. Draft Cover Sheet
  - b. Typical Sections
  - c. Plan & Profile Sheets
  - d. Intersection Layouts
  - e. Drainage Area Map
  - f. Drainage Design Layout
  - g. Existing Utility Layout

**290 - Preliminary Engineering Report (PER)**

1. Prepare and submit a draft letter report (3 copies) entitled Preliminary Engineering Report (PER) which will:
  - a. Briefly summarize existing conditions in narrative and photographic format;
  - b. Identify key design issues and how they should be addressed;
  - c. Identify utility conflicts;
  - d. Identify critical path items;
  - e. Identify proposed access, detour, and traffic control approaches to support construction activities;
  - f. Recommend appropriate construction phasing;
  - g. Recommend appropriate pavement type and cross section;
  - h. Recommend any required structures or cross culverts;
  - i. Recommend location and number of left turn lanes and median cuts;
  - j. Recommend signalization, if warranted;
  - k. Incorporate a Drainage Report that summarizes Hydrological and Hydraulic investigations and recommends appropriate drainage system design elements including detention requirements;
  - l. Incorporate a Geotechnical Report
  - m. Identify ROW needs
  - n. Prepare an engineer's construction cost estimate.
2. Present PER
3. Prepare and submit a final PER based on FBC written comments.

**300-FINAL DESIGN PHASE**

Provide detailed construction plans, specifications, final design calculations and estimates as necessary for the improvements to Beechnut Street based on the scope of work provided above and the results of the Preliminary Engineering Phase defined in the PDM and approved by FBC. Typical items during this phase include the following:

**310 - Utility Coordination**

1. Continue to provide utility coordination to address any potential conflicts on the project including the development of designs to avoid and/or minimize conflicts with existing and proposed utilities
2. Submit milestone-level drawings to applicable utility companies for their review.
3. If conflict exists with a waterline or Sanitary Sewer, RGME is to prepare design plans unless otherwise coordinated with MUD

**320 - Roadway**

1. Prepare the roadway design and develop the final drawings. The following tasks describe the work to be performed:
  - Conduct field trips to the project site to investigate and confirm data and assumptions and assess general conditions as needed.
  - Geometric Design - using previously approved plans provided, define the horizontal and vertical alignments and typical sections to meet project requirements.
  - Prepare plan and profile sheets for roadway to a scale of 1"=40' horizontal and 1"=4' vertical on 11"x17" format sheets.

**330 - Drainage**

1. Conduct field trips to the project site to investigate and confirm data and assumptions and assess general drainage conditions as needed.
2. Prepare drainage area maps for proposed improvements within the project limits to be included in the project plan set.
3. The drainage calculations should be prepared to provide for the ultimate four-lane boulevard section. At a minimum the drainage items to be provided shall include the drainage area maps showing the final drainage areas and inlet and storm sewer calculations for revised storm sewer flow elements. All drainage designs shall be prepared to conform to existing hydraulic studies identified in the Preliminary Engineering Phase.
4. Design and analyze the storm sewer system (including the existing system) utilizing the WINSTORM program or similar spreadsheet analysis program and incorporate calculations output to the project plan set.

5. Drainage system design will be completed depicting locations of inlets, manholes, storm sewers, culverts, utilities, channel improvements, and ditch locations with flow lines as required. This design will be incorporated into the Roadway Plan and Profile sheets to a scale of 1"=40' horizontal and 1"=4' vertical on 11"x17" format sheets. Profiles will show conveyance size and type, slope, existing and proposed grade lines, pertinent hydraulic information, and locations and sizes of inlets and junctions.

### **340 - Storm Water Pollution Prevention Plans (SW3P)**

RGME shall develop SW3P, on separate sheets consistent with the project construction phases, to minimize sediment discharge from the project site through runoff to receiving waterways.

1. Prepare an erosion control plan at a 1" = 100' scale or as directed by FBC. The plan will identify the SW3P components that will mitigate the impacts of construction activities. An Erosion Control Plan will be prepared in compliance with FBC regulations and in accordance with the current Texas Commission on Environmental Quality (TCEQ), TPDES General Permit for storm water discharges associated with construction activities.

### **350 - Construction Sequencing and Traffic Control**

1. Prepare traffic control plans and details. The traffic control work consists of preparation of Traffic Control Plans (TCP), specifications and general notes, and cost estimate for the various traffic control measures.
2. The Engineer shall prepare a TCP with proposed phasing of construction at a scale of 1" = 100' or as directed by FBC. The plan shall identify advanced warning signs on approaches, work areas, temporary paving, temporary signing, detour alignment (approved by FBC), barricades, and other TCP related items. A narrative will be prepared and submitted to the County for review and incorporation into the plans.

### **360 - Pavement Marking and Signing**

1. Prepare Pavement Marking and Signing Plans for the project as necessary and defined in the PER, including modifications to existing signage and cross streets.

### **372 - General Notes and Specifications**

1. Coordinate and combine general notes and specifications applicable to the project design. Prepare final general notes documents and specification list in Microsoft Word format. Use Harris County Public Infrastructure Department Standard Engineering Design Specifications for Construction and Maintenance of Roads and Bridges dated 2012, unless instructed otherwise.

**374 - Quantity Take-offs and Quantity Summaries**

1. Quantities for construction bid items will be calculated. The quantities will be summarized in tables and organized according to the bid item codes that will be used for construction. A quantity spreadsheet, organized by item per sheet and totaled for the item and the project, will be included with each submittal to FBC.

**376 - Construction Cost estimate**

1. An estimate of the construction costs will be prepared based on plan quantities in standard Harris County bid format at the 70%, 95%, and final submittal stages of the project. More detailed and refined quantities will be updated for each successive submittal. All estimates shall also be submitted in Microsoft Excel format.

**378 - Miscellaneous Drawings**

1. Project Title Sheet-RGME shall prepare a title sheet to be used for the construction plans.
2. Index of Sheets-RGME will complete a detailed Index of Sheets that identifies each sheet location in the plan set, as well as its corresponding sheet number. The Index of Sheets will be updated throughout the submittal process to allow for easier reference during the review process.
3. Horizontal Data Sheet-RGME shall prepare Horizontal Data Sheets.

**380 - Preparation and Submittal of PS&E**

1. Provide submittals for the design, including drainage design, for interim progress reviews by FBC at the 70%, 95%, and final completion stage. Incorporate plan sheets and submittals prepared by any subconsultants for this project. All submittals will follow the FBC requirements for content.
2. Three (3) copies of the 70 percent submittal will be required for County review, and drawings can be submitted on 11"x17" sheets. A digital copy in Adobe Acrobat format (PDF) of the drawings, specifications and estimate will also be required.
3. The 70 percent submittal should include the following:
  - Cover sheet (Fort Bend County name and seal, project name with limits, vicinity and location maps, names of County Judge and Commissioners, signature line for County Engineer, design firm name and registration number)
  - Typical and non-standard cross sections (not-to-scale proposed sections with station limits for each section; show pavement/subgrade material and thickness, right-of-way and roadway width, applicable dimensions, profile grade line, and general location of existing and proposed utilities)
  - Overall project layout (scale as appropriate with sheet references left blank since they are subject to change in subsequent submittals)

- Survey control map
  - Drainage area map with hydraulic calculations (display calculations clearly for future use by area developers)
  - Plan and profile sheets (1" =20' plan scale but printed half-size for a 1"=40' scale; all existing and proposed facilities correctly shown in plan and profile; separate drawings for roadway and storm sewer are not necessary; detailed callouts not required at 70%)
  - Traffic control plan (phasing and traffic control; avoid detours unless approved by the County; use of construction zone standards is encouraged)
  - Storm Water Pollution Prevention Plan (drawings and text; drawings may consist of a layout and details)
  - Bridge layout and details (if applicable)
  - Specification table of contents (use Harris County Specifications)
  - Bid form with estimated unit and total costs (spreadsheet based)
4. Three (3) copies of the 95 percent submittal will be required for County review, and drawings can be submitted on 11"x17" sheets. A digital copy in Adobe Acrobat format (PDF) of the drawings, specifications and estimate will also be required.
5. The 95 percent submittal should be considered complete with 95% interim seal, and shall include all of the 70 percent requirements plus the following:
- General notes sheet
  - Verify earthwork quantities with cross sections at 100-foot intervals (only non-standard sections should be included in plans)
  - Signage and pavement marking plans (signs may be shown on plan and profile sheets and use of pavement marking standards is encouraged)
  - Standard construction details
  - Project manual (bid form, specification table of contents, any special specifications or conditions; contract documents excluded)
  - Responses to 70 percent comments

6. The 100 percent design submittal shall consist of one sealed and signed set of drawings delivered to the County, along with a PDF submittal of the drawings, specifications and estimate sent to the Project Manager. Final design efforts will be considered complete when the County has approved the documents as evidenced by the County Engineer's signature on the drawings.
7. The final complete (Bid Ready) submittal shall include twenty-seven (27) CDs with the electronic files of the Bid Ready set of drawings and specifications and Project Manual in Adobe Acrobat (pdf) format. The entire set of construction drawings will be single file in PDF format. Except for the cover sheet, which contains approval signature(s), all drawings may be printed directly to Adobe Acrobat format with electronic seal and signature. Of these, 25 compact discs will be delivered to the County Purchasing Agent for advertising, and two discs will be provided to the Project Manager. Printed documents are not required.

## **500-CONTRACT-CONSTRUCTION PHASE**

### **510 - Contract Phase Meeting**

1. Attend Pre-bid meeting if required, furnish revisions related to an addendum, if required.
2. The Purchasing Agent will forward bidder questions to the Design Consultant. Answers to questions, as well as any other required changes, will be included in an addendum, prepared by the Design Consultant if necessary. The Purchasing Agent will distribute the addendum.
3. Bid Tabulation and recommendation of award will be performed by the Program Manager for FBC.

### **515 - Preconstruction Meeting**

1. Attend and assist the County in pre-construction conferences.

### **520 - Submittal Reviews**

1. Review, and submit comments on all project schedules as submitted by the Contractor.
2. Review shop and working drawings, furnished by Contractors, for compliance with design concepts and specifications and with the information given in the contract documents

**530 - RFI Review and Response**

1. Review all instructions, requests for information, and non-conformance reports as requested by FBC.
2. Review shop, laboratory and mill tests of material and equipment.
3. Provide Changes to plans as necessary to address construction issues.

**540 - Monthly Construction Progress Meetings**

1. Attend monthly and other project meetings as requested by FBC. Provide meeting minutes for each construction meeting.
2. Make periodic visits to become familiar with the project progress.
3. Participate with the FBC representatives in a substantial completion and/or final inspection of the Project.
4. Completion Letter.

**550 - Construction Record Drawings**

1. After project completion, the Design Consultant will prepare record drawings based on contractor as-built markups. The record drawings may be printed on paper and delivered to the County.
2. Provide final Record Drawings in Adobe Acrobat (pdf) format.

PROJECT NAME: Beechnut Street Beechnut Street From 1650 feet east of Ashton Brook Lane to Peek Road  
 CONTRACT NUMBER: 17410  
 PRIME PROVIDER NAME: R.G. MILLER ENGINEERS INC.

<b>FEE SUMMARY</b>
<b>R.G. Miller Engineers, Inc.</b>

SUMMARY									TOTAL COSTS TASK
<b>BASIC SERVICES - To be Provided by R.G. Miller Engineers, Inc.</b>	Payment Basis								
100-PROJECT COORDINATION/MANAGEMENT	Lump Sum								\$72,708.75
200-PRELIMINARY ENGINEERING	Lump Sum								\$235,008.50
300-DESIGN PHASE	Lump Sum								\$409,273.50
500-CONTRACT-CONSTRUCTION PHASE	Time & Materials								\$34,114.00
									<b>\$751,104.75</b>
<b>BASIC SERVICES - To be Provided by Kaluza</b>	Payment Basis								
100-PROJECT COORDINATION/MANAGEMENT	Lump Sum								\$13,257.88
200-PRELIMINARY ENGINEERING	Lump Sum								\$165,798.50
300-DESIGN PHASE	Lump Sum								\$232,458.50
500-CONTRACT-CONSTRUCTION PHASE	Time & Materials								\$18,220.25
									<b>\$429,735.13</b>
<b>ADDITIONAL SERVICES - To be Provided by Subconsultants</b>									
212-GEOTECHNICAL (Aviles. - see attached Budget)	Lump Sum								\$59,184.00
214 -SURVEY (Kaluza & Associates, Inc. - see attached Budget)	Lump Sum								\$83,935.00
215-SURVEY-Parcel Acquisition (Kaluza & Associates, Inc. - see attached Budget)	Lump Sum								\$12,000.00
									<b>\$155,119.00</b>
<b>GRAND TOTAL</b>									<b>\$1,335,958.88</b>

SUMMARY	
BASIC SERVICES - RGME	\$751,104.75
BASIC SERVICES - Kaluza	\$429,735.13
ADDITIONAL SERVICES	\$155,119.00
<b>GRAND TOTAL</b>	<b>\$1,335,958.88</b>

<b>RGME</b>	\$751,104.75
<b>Kaluza</b>	\$525,670.13
<b>Aviles</b>	\$59,184.00
	<b>\$1,335,958.88</b>

**EXHIBIT 'B'  
ENGINEERING FEE SCHEDULE**

PROJECT NAME: Beechnut Street/Beechnut Street From 1650 feet east of Ashton Brook Lane to Peek Road  
 CONTRACT NUMBER: 17410  
 PRIME PROVIDER NAME: R.G. MILLER ENGINEERS INC.

<b>FEE SUMMARY</b>									
<b>R.G. Miller Engineers, Inc.</b>									
<b>TASK DESCRIPTION</b>	<b>DEPARTMENT MANAGER</b>	<b>PROJECT MANAGER</b>	<b>SENIOR ENGINEER</b>	<b>PROJECT ENGINEER</b>	<b>EIT</b>	<b>SENIOR ENGINEER TECH</b>	<b>CADD TECHNICIAN</b>	<b>CLERICAL</b>	<b>TOTAL LABOR HRS. &amp; COSTS</b>
<b>100-PROJECT COORDINATION/MANAGEMENT</b>	\$230.00	\$200.00	\$175.00	\$150.00	\$110.00	\$120.00	\$80.00	\$80.00	
110-PROJECT COORDINATION	32	60		24					116
120-INVOICES/PROJECT PROGRESS REPORTS	16	36						40	92
130-PROJECT SCHEDULING	16	24							40
140-PROGRESS MEETINGS	16	96						40	152
Project Management & Meetings (3 months Typical)									
<b>HOURS SUB-TOTALS</b>	<b>80</b>	<b>216</b>	<b>0</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>80</b>	<b>400</b>
<b>TOTAL LABOR COSTS</b>	<b>\$18,400.00</b>	<b>\$43,200.00</b>	<b>\$0.00</b>	<b>\$3,600.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$6,400.00</b>	<b>\$71,600.00</b>
<b>SUBTOTAL</b>									<b>\$71,600.00</b>
<b>DIRECT EXPENSES PROJECT COORDINATION</b>									
MILEAGE ( @ \$0.545 per mile)	25 Trips x 30miles per trips		750	\$0.545					\$408.75
PHOTO COPIES (BW-8 1/2" x 11": @ \$0.10 per copy)			1000	\$0.10					\$100.00
PHOTO COPIES (BW-11" x 17": @ \$0.20 per copy)			1000	\$0.20					\$200.00
PHOTO COPIES (Color-8 1/2" x 11": @ \$0.70 per copy)			250	\$0.70					\$175.00
PHOTO COPIES (Color-BW-11" x 17": @ \$1.50 per copy)			150	\$1.50					\$225.00
<b>SUBTOTAL</b>									<b>\$1,108.75</b>
<b>100-PROJECT COORDINATION/MANAGEMENT SUBTOTAL</b>									<b>\$72,708.75</b>

<b>TASK DESCRIPTION</b>	<b>DEPARTMENT MANAGER</b>	<b>PROJECT MANAGER</b>	<b>SENIOR ENGINEER</b>	<b>PROJECT ENGINEER</b>	<b>EIT</b>	<b>SENIOR ENGINEER TECH</b>	<b>CADD TECHNICIAN</b>	<b>CLERICAL</b>	<b>TOTAL LABOR HRS. &amp; COSTS</b>
<b>200-PRELIMINARY ENGINEERING</b>	\$230.00	\$200.00	\$175.00	\$150.00	\$110.00	\$120.00	\$80.00	\$80.00	
<b>210-COLLECT EXISTING DATA</b>	4	32	4	40	24	8	0	8	120
Early Stakeholder Coordination	4	16		8					28
Obtain related data, plans, studies and reports		0		8	24	8		8	48
Review Data		8		16					24
Design Criteria		8	4	8					20
212 - GEOTECHNICAL (SEE ATTACHED SCOPE FROM EARTH ENGINEERING) <i>Geotechnical Investigation (BY OTHERS)</i>	0	0	0	0	0	0	0	0	0
214 - SURVEYING (SEE ATTACHED SCOPE FROM TEJAS SURVEYING) <i>Topographic Survey (BY OTHERS)</i>	0	0	0	0	0	0	0	0	0
220 - CONDUCT FIELD RECONNAISSANCE	0	4	0	8	16	16	0	0	44
Site Visits		4		8	16	16			44

EXHIBIT 'B'  
ENGINEERING FEE SCHEDULE

PROJECT NAME: Beechnut Street  
 CONTRACT NUMBER: 17410  
 PRIME PROVIDER NAME: R.G. MILLER ENGINEERS INC.

FEE SUMMARY									
R.G. Miller Engineers, Inc.									
<b>230 - UTILITY COORDINATION</b>	2	42	0	88	92	0	40	16	280
Identify Existing Utilities and Owners		8		8	24				40
Determine Potential Conflicts with existing facilities & utilities		8		32	24		8		72
Prepare utility conflict list at 30% submittal		4		16	16				36
Develop design to avoid/minimize existing and proposed Utilities		8		8			16		32
Coordination with Utility Companies		8		16	24		16	16	80
Review Survey	2	6		8	4				20
<b>240 - TRAFFIC STUDIES</b>	0	10	18	0	32	0	32	0	92
Intersection LOS Analysis		8	16		24		16		64
Intersection Sight Triangle Analysis		2	2		8		16		28
<b>250 - HYDROLOGICAL OR HYDRAULIC STUDIES</b>	18	88	120	84	60	0	28	6	404
Develop Drainage Area maps		8	8	8	16		16		56
Evaluate Design Storm Flows and Outfall depths		8	16	8	8				40
Analyze and size conveyance system		8	16	12	16				52
Precinct and MUD Meetings/Coordination	8	32	32	16					88
Draft Memorandum	8	24	32	16	16		8	4	108
Final Memorandum	2	8	16	24	4		4	2	60
<b>270 - REVIEW AND IDENTIFY RIGHT-OF-WAY REQUIREMENTS</b>	2	8	8	16	16	0	6	0	56
Determine ROW Acquisition Needs	2	8	8	16	16		6		56

EXHIBIT 'B'  
ENGINEERING FEE SCHEDULE

PROJECT NAME: Beechnut Street/Beechnut Street From 1650 feet east of Ashton Brook Lane to Peek Road  
 CONTRACT NUMBER: 17410  
 PRIME PROVIDER NAME: R.G. MILLER ENGINEERS INC.

<b>FEE SUMMARY</b>									
<b>R.G. Miller Engineers, Inc.</b>									
<b>280 - 30% DESIGN DRAWINGS</b>	<b>6</b>	<b>32</b>	<b>40</b>	<b>80</b>	<b>112</b>	<b>192</b>	<b>48</b>	<b>0</b>	<b>510</b>
Establish a Typical Cross Section		4		8	8				20
Prepare 30% Plans									0
Draft Cover Sheet		2		8	8	16			34
Draft Typical Sections		2		8	8	24			42
Plan & Profile Sheets		4		8	8	24	24		68
Intersection Layouts-Peek Road Roundabout		2	16	8	8	24			58
Intersection Layouts-Mason Road Roundabout		2	16	8	8	24			58
Drainage Area Maps		2		8	16	24			50
Drainage Design Layout	4	4	4	8	24	24			68
Existing Utilities Layout		4	4	8	8	24	24		72
Construction Cost Estimate	2	6		8	16	8			40
<b>290 - PRELIMINARY DESIGN MEMORANDUM (PER)</b>	<b>16</b>	<b>20</b>	<b>24</b>	<b>48</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>156</b>
Draft Memorandum	8	16	16	32	16			16	104
Final Memorandum	8	4	8	16	8			8	52
<b>HOURS SUB-TOTALS</b>	<b>48</b>	<b>236</b>	<b>214</b>	<b>364</b>	<b>376</b>	<b>216</b>	<b>154</b>	<b>54</b>	<b>1662</b>
<b>TOTAL LABOR COSTS</b>	<b>\$11,040.00</b>	<b>\$47,200.00</b>	<b>\$37,450.00</b>	<b>\$54,600.00</b>	<b>\$41,360.00</b>	<b>\$25,920.00</b>	<b>\$12,320.00</b>	<b>\$4,320.00</b>	<b>\$234,210.00</b>
<b>SUBTOTAL</b>									<b>\$234,210.00</b>
<b>DIRECT EXPENSES</b>									
MILEAGE (@ \$0.545 per mile)	10 Trips x 30miles per trips		300	\$0.545					\$163.50
PHOTO COPIES (BW-8 1/2" x 11"; @ \$0.10 per copy)			500	\$0.10					\$50.00
PHOTO COPIES (BW-11" x 17"; @ \$0.20 per copy)			500	\$0.20					\$100.00
PHOTO COPIES (Color-8 1/2" x 11"; @ \$0.70 per copy)			50	\$0.70					\$35.00
PHOTO COPIES (Color-BW-11" x 17"; @ \$1.50 per copy)			100	\$1.50					\$150.00
DELIVERIES (@ \$20.00 per delivery)			15	\$20.00					\$300.00
<b>SUBTOTAL</b>									<b>\$798.50</b>
<b>200-PRELIMINARY ENGINEERING SUBTOTAL</b>									<b>\$235,008.50</b>

EXHIBIT 'B'  
ENGINEERING FEE SCHEDULE

PROJECT NAME: Beechnut Street/Beechnut Street From 1650 feet east of Ashton Brook Lane to Peek Road  
 CONTRACT NUMBER: 17410  
 PRIME PROVIDER NAME: R.G. MILLER ENGINEERS INC.

**FEE SUMMARY**  
**R.G. Miller Engineers, Inc.**

TASK DESCRIPTION	DEPARTMENT MANAGER	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	EIT	SENIOR ENGINEER TECH	CADD TECHNICIAN	CLERICAL	TOTAL LABOR HRS. & COSTS
<b>300-DESIGN PHASE</b>	\$230.00	\$200.00	\$175.00	\$150.00	\$110.00	\$120.00	\$80.00	\$80.00	
<b>310-UTILITY COORDINATION</b>	0	16	0	30	28	0	0	8	82
Identification of utility conflicts		4		8	8				20
Revise utility conflict list at 70% and 95% submittal		4		6	16			8	34
Develop design to avoid/minimize existing and proposed Utilities		8		16	4				28
Coordination on Relocations/Removals									0
<b>320-ROADWAY</b>	24	74	44	104	62	244	252	10	814
Review and refine approved Preliminary Roadway Design	2	8		8	2		4	4	28
Geometric Roadway Design	2	6	8	8	4		16		44
Prepare Existing and Proposed Typical Sections (70% - Final)		4		4	8	12	32		60
Plan and Profile Sheets (Roadway) (70% - Final) (includes Drainage Design)	12	32	32	36	32	120	160		424
Cross Street / DWY Details		4	4	8		80			96
Roadway Details	8	12		32		32	32	4	120
Design Cross Sections with earthwork calculations		8		8	16		8	2	42
<b>330-DRAINAGE</b>	6	66	24	140	120	36	48	6	446
Agency Coordination	4	16	16	36	24				96
Field Visits / Data Verification		4		8	8				20
Drainage Area Maps/Calculations		6	4	16	16		16	4	62
Drainage Design at Retaining Walls									0
Storm Sewer Design and Hydraulic Data Sheets		8		32	32	16	16		104
Verification of Existing Storm Sewer Capacity	2	12	4	16	32				66
Storm Sewer Plan and Profile design including laterals		16		24					40
Temporary Drainage Design		4		8	8	20	16	2	58
<b>340 - STORM WATER POLLUTION PREVENTION PLANS (SW3P)</b>	0	4	6	8	16	32	24	0	90
Investigate and Prepare SWPPP Report		2	4	4	8	8			26
Prepare SWPPP Plan Sheets (70% - Final)		2	2	4	8	24	24		64
<b>350 - CONSTRUCTION SEQUENCING AND TRAFFIC CONTROL</b>	16	36	0	92	36	128	176	0	484
TCP Advance Warning Signs	2	4		16	8	24	24		78
TCP Overview & Narrative	6	8		32	12		8		66
Detour Plans (with County Approval Only)	2	8		12	4	24	24		74
Traffic Control Plan	6	16		32	12	80	120		266
<b>360 - PAVEMENT MARKING AND SIGNING</b>	4	12	2	16	32	32	32	0	130
Prepare Signing & Pavement Marking Sheets (70% - Final)	4	12	2	16	32	32	32		130
<b>372-GENERAL NOTES &amp; SPECIFICATIONS</b>	10	30	0	20	18	16	0	8	102
Develop any Special Specifications for Bid Items	4	10		8	6				28
Prepare Standard Specifications for Bid Items	4	10		8	6	8			36
Prepare General Notes	2	10		4	6	8		8	38

EXHIBIT 'B'  
ENGINEERING FEE SCHEDULE

PROJECT NAME: Beechnut Street/Beechnut Street From 1650 feet east of Ashton Brook Lane to Peek Road  
 CONTRACT NUMBER: 17410  
 PRIME PROVIDER NAME: R.G. MILLER ENGINEERS INC.

FEE SUMMARY									
R.G. Miller Engineers, Inc.									
374-QUANTITY TAKE-OFFS AND QUANTITY SUMMARIES	8	12	0	24	72	36	0	0	152
Quantities (Summary Sheets - Optional) (70%, 95%, FINAL)	8	12		24	72	36			152
376-CONSTRUCTIONCOST ESTIMATES	2	16	2	16	24	0	0	0	60
Construction Cost Estimate (70%, 95%, FINAL)	2	16	2	16	24				60
378-MISCELLANEOUS DRAWINGS	10	10	24	70	44	136	112	0	406
Cover Sheet & Index	2	2		2	4	16	8		34
Intersection Detail Sheets (Roundabouts)	4	4	24	32	24	80	80		248
Horizontal Data Sheets	2	2		32	8	24	24		92
Retaining Wall Sheets, If Required									0
Prepare Standard Details Sheets	2	2		4	8	16			32
									0
380-PREPARATION AND SUBMITTAL OF PS&E	20	84	0	30	80	108	108	0	430
70% PS&E SUBMITTALS	8	24		32	40	48	48		200
Responses to Comments		12							12
95% PS&E SUBMITTALS	8	24		24	30	36	36		158
Responses to Comments		12							12
100% PS&E SUBMITTALS	4	8		12	10	24	24		82
Bid Form									0
Utility & Agency Approvals & Signatures		4		4					8
									0
HOURS SUB-TOTALS	100	360	102	550	532	768	752	32	3196
TOTAL LABOR COSTS	\$23,000.00	\$72,000.00	\$17,850.00	\$82,500.00	\$58,520.00	\$92,160.00	\$60,160.00	\$2,560.00	\$408,750.00
SUBTOTAL									\$408,750.00
<b>DIRECT EXPENSES</b>									
MILEAGE (@ \$0.545 per mile)	10 Trips x 30miles per trips		300	\$0.545					\$163.50
PHOTO COPIES (BW-8 1/2" x 11": @ \$0.10 per copy)			200	\$0.10					\$20.00
PHOTO COPIES (BW-11" x 17": @ \$0.20 per copy)			200	\$0.20					\$40.00
PHOTO COPIES (Color-8 1/2" x 11": @ \$0.70 per copy)			50	\$0.70					\$35.00
PHOTO COPIES (Color-BW-11" x 17": @ \$1.50 per copy)			50	\$1.50					\$75.00
DATA CD-ROMS (@\$3.00/EA)			30	\$3.00					\$90.00
DELIVERIES (@ \$20.00 per delivery)			5	\$20.00					\$100.00
SUBTOTAL									\$523.50
<b>300-DESIGN PHASE SUBTOTAL</b>									<b>\$409,273.50</b>

EXHIBIT 'B'  
ENGINEERING FEE SCHEDULE

PROJECT NAME: Beechnut StreetBeechnut Street From 1650 feet east of Ashton Brook Lane to Peek Road  
 CONTRACT NUMBER: 17410  
 PRIME PROVIDER NAME: R.G. MILLER ENGINEERS INC.

FEE SUMMARY									
R.G. Miller Engineers, Inc.									
TASK DESCRIPTION	DEPARTMENT MANAGER	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	EIT	SENIOR ENGINEER TECH	CADD TECHNICIAN	CLERICAL	TOTAL LABOR HRS. & COSTS
<b>500-CONTRACT-CONSTRUCTION PHASE</b>	\$230.00	\$200.00	\$175.00	\$150.00	\$110.00	\$120.00	\$80.00	\$80.00	
510-CONTRACT PHASE	4	8	0	18	4	0	0	0	34
Project Manual & Plans (PDF Format on Compact Disc *28)	2			8	4				14
Attend Pre-Bid Meeting		4		2					6
Answer Bidder Questions & Addendum	2	4		8					14
550-PRE-CONSTRUCTION MEETING	0	4	0	4	0	0	0	0	8
Attend Pre-Construction Meeting		4		4					8
520-SUBMITAL REVIEW	4	8	0	20	16	0	0	0	48
Review Contractor Submittals	4	8		20	16				48
530-RFI REVIEW AND RESPONSE	2	4	0	24	8	0	0	0	38
Answering Requests for information	2	4		24	8				38
540 - MONTHLY CONSTRUCTION PROGRESS MEETINGS	0	24	0	24	0	0	0	0	48
Attend Monthly Progress Meeting		18		18					36
Substantial Completion Walkthrough		6		6					12
550 - CONSTRUCTION RECORD DRAWINGSE	2	2	0	8	4	0	24	0	40
Record Drawings	2	2		8	4		24		40
<b>HOURS SUB-TOTALS</b>	12	50	0	98	32	0	24	0	216
<b>TOTAL LABOR COSTS</b>	\$2,760.00	\$10,000.00	\$0.00	\$14,700.00	\$3,520.00	\$0.00	\$1,920.00	\$0.00	\$32,900.00
<b>SUBTOTAL</b>									\$32,900.00
<b>DIRECT EXPENSES</b>									
MILEAGE ( @ \$0.545 per mile)	40 Trips x 30miles per trips		1200	\$0.545					\$654.00
PHOTO COPIES (BW-8 1/2" x 11"; @ \$0.10 per copy)			200	\$0.10					\$20.00
PHOTO COPIES (BW-11" x 17"; @ \$0.20 per copy)			200	\$0.20					\$40.00
PHOTO COPIES (Color-8 1/2" x 11"; @ \$0.70 per copy)			50	\$0.70					\$35.00
PHOTO COPIES (Color-BW-11" x 17"; @ \$1.50 per copy)			50	\$1.50					\$75.00
DATA CD-ROMS (@\$3.00/EA)			30	\$3.00					\$90.00
DELIVERIES (@ \$20.00 per delivery)			15	\$20.00					\$300.00
<b>SUBTOTAL</b>									\$1,214.00
<b>500-CONTRACT-CONSTRUCTION PHASE SUBTOTAL</b>									\$34,114.00
<b>SUBTOTAL BASIC SERVICES</b>									\$751,104.75

EXHIBIT 'B'  
ENGINEERING FEE SCHEDULE

PROJECT NAME: Beechnut Street/Beechnut Street From 1650 feet east of Ashton Brook Lane to Peek Road  
 CONTRACT NUMBER: 17410  
 PRIME PROVIDER NAME: R.G. MILLER ENGINEERS INC.

**FEE SUMMARY**  
**Kelly R. Kaluza & Associates, Inc.**

TASK DESCRIPTION	PRINCIPAL	SENIOR PROJECT MANAGER	PROJECT MANAGER	PROJECT ENGINEER	SENIOR DESIGNER	DESIGNER	CADD TECHNICIAN	CLERICAL	TOTAL LABOR HRS. & COSTS
<b>100-PROJECT COORDINATION/MANAGEMENT</b>	\$175.00	\$150.00	\$145.00	\$110.00	\$90.00	\$80.00	\$70.00	\$60.00	
110-PROJECT COORDINATION	8	4			11			8	31
120-INVOICES/PROJECT PROGRESS REPORTS	4	3	9	7				12	35
130-PROJECT SCHEDULING	2	6	4						12
140-PROGRESS MEETINGS	5	8			8				21
Project Management & Meetings (3 months Typical)									
<b>HOURS SUB-TOTALS</b>	19	21	13	7	19	0	0	20	99
<b>TOTAL LABOR COSTS</b>	\$3,325.00	\$3,150.00	\$1,885.00	\$770.00	\$1,710.00	\$0.00	\$0.00	\$1,200.00	\$12,040.00
<b>SUBTOTAL</b>									\$12,040.00
<b>DIRECT EXPENSES PROJECT COORDINATION</b>									
MILEAGE (@ \$0.545 per mile)	15 Trips x 45miles per trips		675	\$0.545					\$367.88
PHOTO COPIES (BW-8 1/2" x 11"; @ \$0.10 per copy)			1500	\$0.10					\$150.00
PHOTO COPIES (BW-11" x 17"; @ \$0.20 per copy)			1500	\$0.20					\$300.00
PHOTO COPIES (Color-8 1/2" x 11"; @ \$0.70 per copy)			250	\$0.70					\$175.00
PHOTO COPIES (Color-BW-11" x 17"; @ \$1.50 per copy)			150	\$1.50					\$225.00
<b>SUBTOTAL</b>									\$1,217.88
<b>100-PROJECT COORDINATION/MANAGEMENT SUBTOTAL</b>									\$13,257.88

TASK DESCRIPTION	PRINCIPAL	SENIOR PROJECT MANAGER	PROJECT MANAGER	PROJECT ENGINEER	SENIOR DESIGNER	DESIGNER	CADD TECHNICIAN	CLERICAL	TOTAL LABOR HRS. & COSTS
<b>200-PRELIMINARY ENGINEERING</b>	\$175.00	\$150.00	\$145.00	\$110.00	\$90.00	\$80.00	\$70.00	\$60.00	
<b>210-COLLECT EXISTING DATA</b>	16	22	10	30	12	0	0	0	90
Early Stakeholder Coordination	4	8		10					22
Obtain related data, plans, studies and reports			10	20					30
Review Data	4	6			12				22
Design Criteria	8	8							16
212 - GEOTECHNICAL (SEE ATTACHED SCOPE FROM EARTH ENGINEERING) <i>Geotechnical Investigation (BY OTHERS)</i>	0	0	0	0	0	0	0	0	0
214 - SURVEYING (SEE ATTACHED SCOPE FROM TEJAS SURVEYING) <i>Topographic Survey (BY OTHERS)</i>	0	0	0	0	0	0	0	0	0
<b>220 - CONDUCT FIELD RECONNAISSANCE</b>	7	10	0	14	0	0	0	0	31
Site Visits	7	10		14					31

PROJECT NAME: Beechnut Street  
 CONTRACT NUMBER: 17410  
 PRIME PROVIDER NAME: R.G. MILLER ENGINEERS INC.

FEE SUMMARY									
Kelly R. Kaluza & Associates, Inc.									
<b>230 - UTILITY COORDINATION</b>	8	15	18	38	30	22	15	8	154
Identify Existing Utilities and Owners		3		8		14			25
Determine Potential Conflicts with existing facilities & utilities	3	6			7				16
Prepare utility conflict list at 30% submittal			8	10				8	26
Develop design to avoid/minimize existing and proposed Utilities	5		10	20	18		15		68
Review Survey		6			5	8			19
<b>240 - TRAFFIC STUDIES</b>	0	0	0	0	0	0	0	0	0
Intersection LOS Analysis									0
Intersection Sight Triangle Analysis									0
<b>250 - HYDROLOGICAL OR HYDRAULIC STUDIES</b>	84	79	77	143	52	44	60	70	609
Develop Drainage Area maps	12	15			24		26		77
Evaluate Design Storm Flows and Outfall depths			30	46		44	22		142
Analyze and size conveyance system			29	64	28				121
Precinct and MUD Meetings	24		18	24					66
Draft Memorandum	32	44					12	52	140
Final Memorandum	16	20		9				18	63
<b>270 - REVIEW AND IDENTIFY RIGHT-OF-WAY REQUIREMENTS</b>	4	0	12	0	14	0	10	0	40
Determine ROW Acquisition Needs	4		12	0	14		10		40

EXHIBIT 'B'  
ENGINEERING FEE SCHEDULE

PROJECT NAME: Beechnut Street/Beechnut Street From 1650 feet east of Ashton Brook Lane to Peek Road  
 CONTRACT NUMBER: 17410  
 PRIME PROVIDER NAME: R.G. MILLER ENGINEERS INC.

FEE SUMMARY									
Kelly R. Kaluza & Associates, Inc.									
<b>280 - 30% DESIGN DRAWINGS</b>	24	45	48	94	52	96	95	0	454
Establish a Typical Cross Section	4	14				12			30
Prepare 30% Plans									0
Draft Cover Sheet				9			12		21
Draft Typical Sections			10		14		14		38
Plan & Profile Sheets			12		38		20		70
Intersection Layouts		12		18		27			57
Drainage Area Maps		8		15		8	23		54
Drainage Design Layout	12		26			25			63
Existing Utilities Layout				12		10	26		48
Construction Cost Estimate	8	11		40		14			73
<b>290 - PRELIMINARY DESIGN MEMORANDUM (PER)</b>	18	3	38	0	0	0	0	26	85
Draft Memorandum	12		30					20	62
Final Memorandum	6	3	8					6	23
<b>HOURS SUB-TOTALS</b>	161	174	203	319	160	162	180	104	1463
<b>TOTAL LABOR COSTS</b>	\$28,175.00	\$26,100.00	\$29,435.00	\$35,090.00	\$14,400.00	\$12,960.00	\$12,600.00	\$6,240.00	\$165,000.00
<b>SUBTOTAL</b>									\$165,000.00
<b>DIRECT EXPENSES</b>									
MILEAGE ( @ \$0.545 per mile)	10 Trips x 30miles per trips			300	\$0.545				\$163.50
PHOTO COPIES (BW-8 1/2" x 11": @ \$0.10 per copy)			500	\$0.10					\$50.00
PHOTO COPIES (BW-11" x 17": @ \$0.20 per copy)			500	\$0.20					\$100.00
PHOTO COPIES (Color-8 1/2" x 11": @ \$0.70 per copy)			50	\$0.70					\$35.00
PHOTO COPIES (Color-BW-11" x 17": @ \$1.50 per copy)			100	\$1.50					\$150.00
DELIVERIES (@ \$20.00 per delivery)			15	\$20.00					\$300.00
<b>SUBTOTAL</b>									\$798.50
<b>200-PRELIMINARY ENGINEERING SUBTOTAL</b>									\$165,798.50

EXHIBIT 'B'  
ENGINEERING FEE SCHEDULE

PROJECT NAME: Beechnut Street/Beechnut Street From 1650 feet east of Ashton Brook Lane to Peek Road  
 CONTRACT NUMBER: 17410  
 PRIME PROVIDER NAME: R.G. MILLER ENGINEERS INC.

**FEE SUMMARY**  
**Kelly R. Kaluza & Associates, Inc.**

TASK DESCRIPTION	PRINCIPAL	SENIOR PROJECT MANAGER	PROJECT MANAGER	PROJECT ENGINEER	SENIOR DESIGNER	DESIGNER	CADD TECHNICIAN	CLERICAL	TOTAL LABOR HRS. & COSTS
<b>300-DESIGN PHASE</b>	\$175.00	\$150.00	\$145.00	\$110.00	\$90.00	\$80.00	\$70.00	\$60.00	
<b>310-UTILITY COORDINATION</b>	3	10	14	14	6	12	8	10	77
Identification of utility conflicts		4		6		6			16
Revise utility conflict list at 70% and 95% submittal		6		8				6	20
Develop design to avoid/minimize existing and proposed Utilities	3		8		6		8		25
Coordination on Relocations/Removals			6		6			4	16
<b>320-ROADWAY</b>	20	35	37	78	72	106	161	0	509
Review and refine approved Preliminary Roadway Design	4	4		6		15			29
Geometric Roadway Design	8	15		24			35		82
Prepare Existing and Proposed Typical Sections (70% - Final)			12			25			37
Plan and Profile Sheets (Roadway) (70% - Final)	8		15		72		90		185
Intersection Layouts or Cross Street Details		8		14		36			58
Roadway Details			10	10			36		56
Design Cross Sections with earthwork calculations		8		24		30			62
<b>330-DRAINAGE</b>	25	35	54	130	79	81	15	0	419
Agency Coordination	9	10		36	24				79
Field Visits / Data Verification		8		14		24			46
Drainage Area Maps/Calculations	8		23		33				64
Drainage Design at Retaining Walls									0
Storm Sewer Design and Hydraulic Data Sheets		9		42					51
Verification of Existing Storm Sewer Capacity		4	13		22				39
Storm Sewer Plan and Profiles	8			38		25	15		86
Temporary Drainage Design		4	18			32			54
<b>340 - STORM WATER POLLUTION PREVENTION PLANS (SW3P)</b>	2	3	21	15	12	0	12	8	73
Investigate and Prepare SWPPP Report	2	3	8		12			8	33
Prepare SWPPP Plan Sheets (70% - Final)			13	15			12		40
<b>350 - CONSTRUCTION SEQUENCING AND TRAFFIC CONTROL</b>	20	40	60	68	50	8	240	0	486
TCP Advance Warning Signs		8		20			40		68
TCP Overview & Narrative	12		30			8			50
Detour Plans (with County Approval Only)		32		48			80		160
Traffic Control Plan	8		30		50		120		208
<b>360 - PAVEMENT MARKING AND SIGNING</b>	8	20	0	40	50	0	65	0	183
Prepare Signing & Pavement Marking Sheets (70% - Final)	8	20		40	50		65		183
<b>372-GENERAL NOTES &amp; SPECIFICATIONS</b>	6	21	0	30	0	0	0	26	83
Develop any Special Specifications for Bid Items	6	8		6				6	26
Prepare Standard Specifications for Bid Items		10		16				14	40
Prepare General Notes		3		8				6	17

EXHIBIT 'B'  
ENGINEERING FEE SCHEDULE

PROJECT NAME: Beechnut Street/Beechnut Street From 1650 feet east of Ashton Brook Lane to Peek Road  
 CONTRACT NUMBER: 17410  
 PRIME PROVIDER NAME: R.G. MILLER ENGINEERS INC.

FEE SUMMARY									
Kelly R. Kaluza & Associates, Inc.									
374-QUANTITY TAKE-OFFS AND QUANTITY SUMMARIES	6	10	0	54	0	42	0	0	112
Quantities (Summary Sheets - Optional) (70%, 95%, FINAL)	6	10		54		42			112
375-CONSTRUCTIONCOST ESTIMATES	0	10	0	12	15	0	0	0	37
Construction Cost Estimate (70%, 95%, FINAL)		10		12	15				37
378-MISCELLANEOUS DRAWINGS	2	14	4	24	12	26	32	0	114
Cover Sheet & Index		2					8		10
Intersection Detail Sheets	2		4	16		18			40
Horizontal Data Sheets		4		8		8			20
Retaining Wall Sheets, If Required									0
Prepare Standard Details Sheets		8			12		24		44
									0
380-PREPARATION AND SUBMITTAL OF PS&E	9	17	38	30	35	15	0	26	170
70% PS&E SUBMITTALS		8		12					20
Responses to Comments			10		13				23
95% PS&E SUBMITTALS		4		8					12
Responses to Comments			8		10			6	24
100% PS&E SUBMITTALS		3		8					11
Bid Form	9		12		12			8	41
Utility & Agency Approvals & Signatures		2	8	30		15		12	67
HOURS SUB-TOTALS	101	215	228	495	331	290	533	70	2263
TOTAL LABOR COSTS	\$17,675.00	\$32,250.00	\$33,060.00	\$54,450.00	\$29,790.00	\$23,200.00	\$37,310.00	\$4,200.00	\$231,935.00
SUBTOTAL									\$231,935.00
<b>DIRECT EXPENSES</b>									
MILEAGE ( @ \$0.545 per mile)	10 Trips x 30miles per trips		300	\$0.545					\$163.50
PHOTO COPIES (BW-8 1/2" x 11": @ \$0.10 per copy)			200	\$0.10					\$20.00
PHOTO COPIES (BW-11" x 17": @ \$0.20 per copy)			200	\$0.20					\$40.00
PHOTO COPIES (Color-8 1/2" x 11": @ \$0.70 per copy)			50	\$0.70					\$35.00
PHOTO COPIES (Color-BW-11" x 17": @ \$1.50 per copy)			50	\$1.50					\$75.00
DATA CD-ROMS (@\$3.00/EA)			30	\$3.00					\$90.00
DELIVERIES (@ \$20.00 per delivery)			5	\$20.00					\$100.00
SUBTOTAL									\$523.50
<b>300-DESIGN PHASE SUBTOTAL</b>									<b>\$232,458.50</b>

EXHIBIT 'B'  
ENGINEERING FEE SCHEDULE

PROJECT NAME: Beechnut Street/Beechnut Street From 1650 feet east of Ashton Brook Lane to Peek Road  
 CONTRACT NUMBER: 17410  
 PRIME PROVIDER NAME: R.G. MILLER ENGINEERS INC.

**FEE SUMMARY**  
**Kelly R. Kaluza & Associates, Inc.**

TASK DESCRIPTION	PRINCIPAL	SENIOR PROJECT MANAGER	PROJECT MANAGER	PROJECT ENGINEER	SENIOR DESIGNER	DESIGNER	CADD TECHNICIAN	CLERICAL	TOTAL LABOR HRS. & COSTS
<b>500-CONTRACT-CONSTRUCTION PHASE</b>	\$175.00	\$150.00	\$145.00	\$110.00	\$90.00	\$80.00	\$70.00	\$60.00	
510-CONTRACT PHASE	0	9	0	11	0	0	0	4	24
Project Manual & Plans (PDF Format on Compact Disc *28)		2		4					6
Attend Pre-Bid Meeting		3		3					6
Answer Bidder Questions & Addendum		4		4				4	12
550-PRE-CONSTRUCTION MEETING	2	4	0	4	0	0	0	0	10
Attend Pre-Construction Meeting	2	4		4					10
520-SUBMITAL REVIEW	0	6	0	12	0	0	0	4	22
Review Contractor Submittals		6		12				4	22
530-RFI REVIEW AND RESPONSE	0	4	0	8	0	0	0	0	12
Answering Requests for information		4		8					12
540 - MONTHLY CONSTRUCTION PROGRESS MEETINGS	4	24	0	24	0	0	0	0	52
Attend Monthly Progress Meeting	4	16		16					36
Substantial Completion Walkthrough		8		8					16
550 - CONSTRUCTION RECORD DRAWINGSE	0	3	0	5	0	0	8	0	16
Record Drawings		3		5			8		16
<b>HOURS SUB-TOTALS</b>	6	50	0	64	0	0	8	8	136
<b>TOTAL LABOR COSTS</b>	\$1,050.00	\$7,500.00	\$0.00	\$7,040.00	\$0.00	\$0.00	\$560.00	\$480.00	\$16,630.00
<b>SUBTOTAL</b>									\$16,630.00
<b>DIRECT EXPENSES</b>									
MILEAGE (@ \$0.545 per mile)	25 Trips x 30miles per trips		450	\$0.545					\$245.25
PHOTO COPIES (BW-8 1/2" x 11"; @ \$0.10 per copy)			1500	\$0.10					\$150.00
PHOTO COPIES (BW-11" x 17"; @ \$0.20 per copy)			1500	\$0.20					\$300.00
PHOTO COPIES (Color-8 1/2" x 11"; @ \$0.70 per copy)			400	\$0.70					\$280.00
PHOTO COPIES (Color-BW-11" x 17"; @ \$1.50 per copy)			200	\$1.50					\$300.00
DATA CD-ROMS (@\$3.00/EA)			30	\$3.00					\$90.00
DELIVERIES (@ \$45.00 per delivery)			5	\$45.00					\$225.00
<b>SUBTOTAL</b>									\$1,590.25
<b>500-CONTRACT-CONSTRUCTION PHASE SUBTOTAL</b>									\$18,220.25
<b>SUBTOTAL BASIC SERVICES</b>									\$429,735.13

PROJECT NAME: Beechnut Street  
Beechnut Street From 1650 feet east of Ashton Brook  
Lane to Peek Road  
CONTRACT NUMBER: 17410  
PRIME PROVIDER NAME: R.G. MILLER ENGINEERS INC.

**ADDITIONAL SERVICES Provided by Subconsultants**

SUMMARY							
<b>ADDITIONAL SERVICES LABOR EXPENSES (see attached Individual Budgets)</b>							
<b>212-GEOTECHNICAL (Aviles. - see attached Budget)</b>							<b>\$59,184.00</b>
A. Field Exploration							\$39,422.00
B. Geotechnical Laboratory Testing							\$9,454.00
C. Engineering and Report Preparation							\$10,308.00
<b>214 -SURVEY (Kaluza &amp; Associates, Inc. - see attached Budget)</b>							<b>\$83,935.00</b>
1- Collect City Record Drawings and available information							\$3,390.00
2- Staff Field visits							\$3,480.00
3- Establish Vertical and Horizontal Control							\$2,200.00
4- Establish Right-of-way Centerline							\$6,660.00
5- Obtain Utility System Drawings							\$1,560.00
6- Locate existing facilities							\$17,035.00
7- Complete detailed Topographic Survey							\$30,930.00
8- Complete Right-of-way Survey							\$9,700.00
9- Prepare existing alignment and profile drawings							\$8,980.00
<b>215-SURVEY-Parcel Acquisition (Kaluza &amp; Associates, Inc. - see attached Budget)</b>							<b>\$12,000.00</b>
1 - Project Meetings and administration						(Estimate based on 5 parcels)	\$1,605.00
2 - Survey Crew field work						(Estimate based on 5 parcels)	\$2,600.00
3 - Review deeds and available information						(Estimate based on 5 parcels)	\$1,500.00
4 - prepare exhibit and overall right-of-way map				Overall Parcel Acquisition -= \$12,000 at \$2,400 per parcel		(Estimate based on 5 parcels)	\$1,920.00
5 - Establish new right-of-way boundary line and field notes						(Estimate based on 5 parcels)	\$2,405.00
6 - Set property corner						(Estimate based on 5 parcels)	\$1,970.00
<b>SUBTOTAL ADDITIONAL SERVICES</b>							<b>\$155,119.00</b>

**KELLY R. KALUZA & ASSOCIATES, INC.**

*Consulting Engineers & Surveyors*

Engineering Firm No. F-1339 | Surveying Firm No. 10010000

3014 Avenue I, Rosenberg, Texas 77471

(281) 341-0808 ■ (281) 341-6333

*Revised July 3, 2018*

May 24, 2018

Mr. Patrick J. Ross, P.E.  
R.G. Miller Engineers  
16340 Park Ten Place, Suite 350  
Houston, Texas 77084

**RE: Proposal for Engineering and Surveying for Fort Bend County 2017 Mobility Project 4-10, Beechnut Street Extension in the Grand Mission Municipal Utility District Area, Fort Bend County, Texas**

Dear Mr. Ross:

We propose to render professional engineering and surveying services in connection with the above-referenced project (hereinafter referred to as the "Project"). It is our understanding that you will furnish us with full information as to your requirements of land use, including any special services needed, and also to make available pertinent existing data.

Kelly R. Kaluza & Associates, Inc. (KALUZA) proposes to provide the necessary engineering and surveying services to complete the following work on the Project:

**I. Engineering Services**

Engineering and surveying services for the project are based on the attached scope of work prepared by R.G. Miller (RGM) dated April 14, 2018. It is our understanding that RGM scope of work is to provide Preliminary Engineering, Final Design, Contract, and Construction Phase Engineering Services to develop construction documents for the reconstruction and widening of Beechnut Street. KALUZA project limits are from 1,650 feet east of Ashton Brook Lane to 1,350 feet east of Mason Road. The corridor is approximately 4,000 feet in length and will consist of a continuous four-lane concrete boulevard roadway with a raised median, including storm sewer and drainage system and any necessary appurtenances. The design process will be a collaborative effort between the Design Consultant (KALUZA), the Project Manager (LJA) and County staff (FBCE).

**Fee for  
Engineering Services = \$ 429,735.00**

**II. Surveying Services**

Research subdivision plats, right-of-ways, easements and other available survey elements, which may affect the physical boundaries of the project; All the easements with volume and page numbers shall be identified and labeled on the survey submittal; Research Fort Bend County Official Records for current deeds and plats for property affected by the Project; Research County records and public utilities records for existing documents of utilities; Office calculations

Mr. Patrick J. Ross, P.E.  
R.G. Miller Engineers  
Revised July 3, 2018  
May 24, 2018  
Page Two (2)

necessary to check location of the right-of-way line in relation to features found during the course of the topographic survey; Establish horizontal and vertical survey control points at spacing of approximately 1,000 feet along the pavement reconstruction alignment; Reference all survey work to state plane coordinate system and to current Fort Bend County elevation control; Prepare survey control data for existing and proposed right-of-way alignment and for horizontal and vertical control points; Provide georeferenced shapefile line work as requested for project right-of-way and baseline alignment; Identify roadways, driveways, alleys and sidewalks with pavement type; Show centerlines and angles of intersection of the side street(s) with main roadway centerline, as necessary; Show all mailboxes, road signs and signal posts; Locate and describe heavy vegetation brush lines; Show all visible utilities found during the course of obtaining field work; Show on drawings, all underground features and utilities within the entire Project limits from as-built drawings; Show building structures within 30' of road right-of-way; Locate all vegetation lines and special landscaping; Survey boring logs and obtain surface elevation; and Topographic work will extend 20' beyond the existing right-of-way.

**Fee for Surveying Services = \$ 83,935.00**

**III. Parcel Acquisition Services**

Meet with RGM and CountyStaff to determine final location of right-of-way acquisition; Prepare individual metes and bounds descriptions of additional right-of-way acquisition; Prepare individual parcel maps of right-of-way on 8-1/2" x 11" legible print showing visual representation, as well as, any other pertinent information that needs to be shown; Set property acquisition monumentation for each individual parcel; and Surveying services for retracement and monumentation of the existing rights-of-way and easement.

**Fee for  
Parcel Acquisition Services = \$ 12,000.00**

**Total Fees = \$ 525,670.00**

This proposal does not include costs for fees to Grand Mission Municipal Utility District or review fees to utility agencies. Also, this proposal does not include a Traffic Impact Study that may be required. The Traffic Impact Study would be contracted directly between RGM and a traffic engineer consultant. These costs to be borne by RGM.

The work on the project can commence within fifteen (15) days of the receipt of a copy of this proposal signed by an officer of RGM. Work schedule for the project will depend on the overall schedule developed by RGM.

Total fees based on completion of all work described in the foregoing pages are the specified amount, provided the Owner does not make major changes or additions to the scope of work after work is initiated. Additional work will be based and billed on actual hours of work that have been completed at the hourly rates as shown on the attached Exhibit "A".

Mr. Patrick J. Ross, P.E.  
R.G. Miller Engineers  
*Revised July 3, 2018*  
May 24, 2018  
Page Three (3)

Billings for services rendered will be made monthly, and payment is requested within fifteen (15) days from receipt of invoice. Unless special arrangements are made, a finance charge of 1.5% per month will be added to unpaid balances more than thirty (30) days old.

Kelly R. Kaluza & Associates, Inc. makes no warranty, either express or implied, as to its services, including preparation of plans and specifications, cost estimates, surveys, or professional advice, except that they are prepared, issued, and performed in accordance with generally accepted professional engineering and surveying practices. Additionally, it is the desire of our firm to comply with other applicable Federal, State, and local laws during the execution of this contract.

This proposal and Exhibit "A" attached represent the entire understanding between you and this firm in respect to the Project, and may only be modified in writing signed by both of us. If this proposal satisfactorily sets forth your understanding of the arrangement between us, we would appreciate you signing this proposal in the space provided below and returning the signed copy to us.

Thank you for this opportunity to be of assistance to you. We look forward to working with you on this project.

Cordially,

KELLY R. KALUZA & ASSOCIATES, INC.



Llarance L. Turner, R.P.I.S.  
President

LLT/lao

Attachment

\_\_\_\_\_  
Accepted - Title

\_\_\_\_\_  
Date

**Exhibit "A"**

**SCHEDULE OF HOURLY CHARGES BY PERSONNEL CLASSIFICATION**  
**Effective June, 2013**

**KELLY R. KALUZA & ASSOCIATES, INC.**  
**CONSULTING ENGINEERS, SURVEYORS, AND PLANNERS**

The charges for professional Engineering, Surveying, and Drafting services are based on the following daily or hourly rates:

**ENGINEERING, SURVEYING, AND DRAFTING**

Principal.....	\$ 175.00/Hour
Sr. Project Manager.....	\$ 150.00/Hour
Project Manager.....	\$ 145.00/Hour
Survey Manager.....	\$ 140.00/Hour
Project Engineer.....	\$ 110.00/Hour
Project Surveyor.....	\$ 90.00/Hour
Sr. Designer.....	\$ 90.00/Hour
Designer.....	\$ 80.00/Hour
CAD Technician.....	\$ 70.00/Hour
Contract Coordinator.....	\$ 65.00/Hour
Secretarial.....	\$ 60.00/Hour
Field Party (2 Men).....	\$ 120.00/Hour
Field Party (3 Men).....	\$ 140.00/Hour
Field Party (4 Men).....	\$ 150.00/Hour
Construction Observation.....	\$ 750.00/Day

**ADDITIONAL EXPENSES**

1. Reproduction Work - At prevailing commercial rate.
2. Field Note Descriptions - \$70.00/Set.
3. ATV Rental - \$115.00/Day.
4. Other Consultants at actual cost.
5. All Other Expenses at actual cost.
6. Global Positioning System (GPS) Surveying an additional charge of \$25.00 per hour will be charged for equipment.

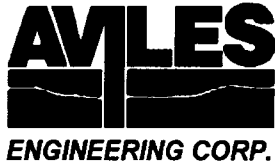
**Charges are due and payable within thirty (30) days after receipt of invoice.**  
**Interest will be charged at the rate of 1.5% per month for late payments.**

**KELLY R. KALUZA & ASSOCIATES, INC.**  
*Consulting Engineers & Surveyors*  
Engineering Firm No. F-1339 Surveying Firm No. 10010000  
3014 Avenue I, Rosenberg, Texas 77471  
Phone: (281) 341-0808  
Fax: (281) 341-6333

*Rates Subject to Change*

06/13

Description	Budget	Principal \$175	Sr. Project Manager \$150	Project Manager \$145	Project Engineer \$110	Project Surveyor \$90	Designer \$80	CAD Technician \$70	Survey Crew (3) \$140	Contract Coordinator \$65
<b>A. Topographic Survey Work</b>										
1 Collect City Record Drawings and available information	\$3,390			6		8	16			8
2 Staff Field visits	\$3,480			12		10		12		
3 Establish Vertical and Horizontal Control	\$2,200					12		8	4	
4 Establish Right-of-way Centerline	\$6,660					18			36	
5 Obtain Utility System Drawings	\$1,560		4				12			
6 Locate existing facilities	\$17,035			7		10		24	96	
7 Complete detailed Topographic Survey	\$30,930	6				38		98	140	
8 Complete Right-of-way Survey	\$9,700					19	8	25	40	
9 Prepare existing alignment and profile drawings	\$8,980		6	4		25		75		
<b>Sub Total</b>	<b>\$83,935</b>	<b>6</b>	<b>10</b>	<b>29</b>	<b>0</b>	<b>140</b>	<b>36</b>	<b>242</b>	<b>316</b>	<b>8</b>
<b>B. Parcel Acquisition</b>										
1 Project Meetings and administration	\$1,605	4		4						5
2 Survey Crew field work	\$2,600					4			16	
3 Review deeds and available information	\$1,500		4			10				
4 prepare exhibit and overall right-of-way map	\$1,920		2			4		18		
5 Establish new right-of-way boundary line and field notes	\$2,405	2		3		18				
6 Set property corner	\$1,970			2					12	
<b>Sub Total</b>	<b>\$12,000</b>	<b>6</b>	<b>6</b>	<b>9</b>	<b>0</b>	<b>36</b>	<b>0</b>	<b>18</b>	<b>28</b>	<b>5</b>
<b>Total Surveying Fees</b>	<b>\$95,935</b>	<b>12</b>	<b>16</b>	<b>38</b>	<b>0</b>	<b>176</b>	<b>36</b>	<b>260</b>	<b>344</b>	<b>13</b>



April 16, 2018

Patrick J. Ross, P.E.  
Manager – Transportation Department  
R.G. Miller Engineers  
16340 Park Ten Place, Suite 350  
Houston, Texas 77084

Re: Revised Geotechnical Investigation Proposal /Agreement  
Improvements of Beechnut Street from 1,650 feet east of Ashton Brook Lane  
to 650 feet west of Peek Road  
Fort Bend County Precinct 4  
Fort Bend County, Texas  
AEC Proposal No. G2018-04-02R

Dear Mr. Ross,

Aviles Engineering Corporation (AEC) is pleased to submit this revised geotechnical investigation proposal for the proposed Improvements of Beechnut Street from 1,650 feet east of Ashton Brook Lane to 650 feet west of Peek Road (Fort Bend County Key Map 525 Q, R, & M, and 536 N & P) in Fort Bend County Precinct 4, Texas. According to the information and drawing provided, AEC understands that the approximately 10,650 feet of improvements include: (i) widening the existing 2 lane asphalt pavement to 4 lane concrete boulevard that will use 8-inches of concrete with 8-inches of lime stabilized subgrade; (ii) installing storm sewer along the roadway; (iii) the maximum invert depth of storm sewer is estimated to be 15 feet below the existing pavement; the lowest points of the storm flow will be at Borings B-7, B-14, and B-17; and (iv) it is anticipated the storm flow along (a) the west portion, i.e. B-1 through B-6, will flow towards to B-7; (b) the central portion, i.e. B-8 through B-13, will flow towards to B-14; while (c) the east portion, i.e. B-18 through B-22, will flow towards to B-17. No detention pond is planned for this project.

Based on the information provided and our discussion, AEC proposes to drill twenty-two borings: five at 25-foot deep, seven at 20 feet deep, and six at 25 feet deep for the roadway as shown on the attached boring location plan. Total drilling footage is 425 feet. We also propose to install two 20 feet deep piezometers. AEC personnel will mark the boring locations along the alignment and contact Texas 811 to check underground utilities. However, Texas 811 does not check underground water line, storm sewer, and sanitary sewer. We request that the existing underground utilities drawings be provided to AEC at the project onset.

Benton Road along the alignment currently is a 2-lane (one lane at each direction) asphalt roadway; traffic control will be required for our field exploration along the alignment. We will core through existing roadway pavement at the boring locations. Samples will be obtained continuously in the top 20 feet and at 5-foot intervals thereafter. Undisturbed samples will be obtained of cohesive soils by pushing a Shelby tube (ASTM D-1587). Standard Penetration Test samples will be obtained of granular soils (ASTM D-1586). We will note any visual evidence of odor indicating hazardous materials if encountered in the samples. Representative portions of all soil samples will be sealed, packaged and

R.G. Miller Engineers

Improvements of Beechnut Street from 1,650 feet east of Ashton Brook Lane to 650 feet west of Peek Road  
Fort Bend County Precinct 4, Texas  
AEC Proposal No. G2018-04-02R  
May 23, 2018



Page 2 of 4

transported to our laboratory. Water level readings will be noted during drilling and obtained upon completion of drilling. The boreholes on existing pavement, except the piezometers, will be backfilled with cement-bentonite grout and then patch the holes with asphalt; while off pavement boreholes will be backfilled with bentonite chips. We will obtain 24-hour and approximately 30-day water level readings in the piezometers, then the piezometers will be plugged.

As part of our services, we will review in-house published fault maps of the alignment to identify documented faults crossing the alignment. Laboratory testing may consist of moisture contents, Atterberg limits, percentage passing No. 200 sieve, sieve analysis and hydrometer analysis, dry density, unconfined compression and unconsolidated-undrained triaxial tests depending on the soil types encountered.

We will analyze the field and laboratory data to develop geotechnical engineering recommendations for (1) summary of existing pavement and stabilized subgrade thicknesses; (2) soil boring logs depicting soil stratigraphy and groundwater depths; (3) calculating the 18-kips equivalent single axle load (ESAL) based on the average daily traffic count (ADT) and pavement design life (in years) to be provided, recommendations for concrete pavement thickness and subgrade preparation; (4) geotechnical guidelines for the storm sewer installation by open-cut method, recommendations for excavation and shoring, and bedding; and (5) geotechnical recommendations and dewatering guideline for the facility construction. Note that slope stability analysis on the existing detention pond slope adjacent to the roadway is beyond AEC's scope of services.

The estimated lump sum fees for the services described in this proposal are **\$59,184.00** for the roadway. The fee includes providing services as outlined in this proposal in the quantities indicated on the itemized fee estimate which includes one mob/demob for a truck rig, a site visit to mark the borings, 2 copies of draft and 3 copies of final report. The fee is based on the following assumptions: (1) the field personnel will use Level D during the field exploration; (2) no standby time (weather-related or incurred due to reasons beyond AEC's control) are included; and (3) fence/gate removal, standby time, surveying, plan/specification review, environmental assessment and attendance at meetings are not included.

Weather permitting, and assuming no field delays, we plan to start the field exploration about a week after receiving your notice to proceed. The field exploration including pavement coring and drilling will take about 2 weeks; laboratory soil testing will require 3 to 4 weeks to complete. We will submit draft report 3 weeks after completion of the laboratory soil testing. Final report and trench report will be issued 2 weeks after we receive your comments on the draft report.

To reduce delays in the schedule, we request that we be provided with any proposed or preferred geotechnical-related design details including existing utility drawings, and proposed utility drawings at the onset. If any of the project details described in this proposal are incorrect or the scope of services needs modification, please inform us immediately so we can revise the proposal as necessary.

R.G. Miller Engineers  
Improvements of Beechnut Street from 1,650 feet east of Ashton Brook Lane to 650 feet west of Peek Road  
Fort Bend County Precinct 4, Texas  
AEC Proposal No. G2018-04-02R  
May 23, 2018



Page 3 of 4

We appreciate the opportunity to present this proposal, and look forward to working with you again.

Respectfully submitted,  
*Aviles Engineering Corporation*

A handwritten signature in black ink, appearing to read "Shou Ting Hu". The signature is fluid and cursive, written over a blank space.

Shou Ting Hu, MSCE, P.E.  
President

Attachments: Terms and Conditions, Itemized Fee Estimates, Proposed Boring Location Plan

AGREED TO THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, \_\_\_\_\_

BY (Signature): \_\_\_\_\_

NAME (Print): \_\_\_\_\_

TITLE: \_\_\_\_\_

FIRM: \_\_\_\_\_



## GEOTECHNICAL INVESTIGATION TERMS AND CONDITIONS

### STANDARD OF CARE

The CLIENT recognizes that actual subsurface conditions can vary from those observed and/or encountered at locations where borings, surveys, or explorations are made, and that site conditions may change with time. Data interpretations and recommendations by AVILES ENGINEERING will be based solely on information available to the AVILES ENGINEERING during the investigation. AVILES ENGINEERING is responsible for those data, interpretations, and recommendations, but will not be responsible for other parties' interpretations or use of the information developed.

The CLIENT should expect AVILES ENGINEERING to perform Services under this PROPOSAL/AGREEMENT in a manner consistent with the level of care and skill ordinarily exercised by members of the engineering profession practicing contemporaneously under similar conditions in the locality of the project. No other warranty, expressed or implied, is made.

### SCOPE OF SERVICES

AVILES ENGINEERING will develop a scope of services based on the project information provided by the CLIENT. AVILES ENGINEERING shall not be responsible for problems arising due to inadequate number of borings and/or depths dictated or required by others or inadequate engineering analyses, if the CLIENT reduces the scope of services and/or provides insufficient or invalid project or other relevant information to AVILES ENGINEERING. In the event the CLIENT or his representative orders work described in this PROPOSAL/AGREEMENT, that action shall constitute the CLIENT's acceptance of this PROPOSAL/AGREEMENT and its terms and conditions.

### SITE ACCESS AND SITE CONDITIONS

The CLIENT will grant or obtain free access to the site for all equipment and personnel necessary for AVILES ENGINEERING to perform the services described in this PROPOSAL/AGREEMENT, as well as provide location data for all below and above ground structures, pipelines and utilities. For such items encountered, not called to the attention of AVILES ENGINEERING, the CLIENT shall assume responsibility for any resultant damages. AVILES ENGINEERING will take reasonable precautions to minimize damage to the site, but it is understood by the CLIENT that, in the normal course of work, some damage may occur and the correction of such damage is not part of this AGREEMENT. The CLIENT will notify AVILES ENGINEERING of any known toxic and/or hazardous materials on site and shall assume responsibility for the cost of occurrences due to unknown toxic and/or hazardous materials on site.

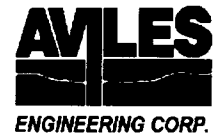
### BILLING AND PAYMENT

The CLIENT will pay AVILES ENGINEERING the lump sum amount(s) shown in the PROPOSAL/AGREEMENT. Invoices will be submitted to the CLIENT by AVILES ENGINEERING, and will be due and payable within thirty (30) days of the invoice date. CLIENT will pay an additional charge of 1.5 percent per month on any delinquent amount, and agrees to pay attorney's fees and/or other costs involved in any required collection activity.

### LIMITATION OF LIABILITY / INDEMNIFICATION

If at any time, there shall be or arise any liability on the part of AVILES ENGINEERING by virtue of this Agreement or because of the relation hereby established, whether due to the negligence of AVILES ENGINEERING (including gross negligence) or otherwise, such liability is and shall be limited to a sum equal in amount to the fee charged by AVILES ENGINEERING. AVILES ENGINEERING and CLIENT agree to indemnify each other from any claims, etc., including attorney's fees and litigation costs, to the proportionate extent caused by each party's own negligence. If AVILES ENGINEERING is found to be prevalent in any third party lawsuits relating to this AGREEMENT, the CLIENT shall pay all AVILES ENGINEERING costs, including legal fees, that were incurred as a result thereof.

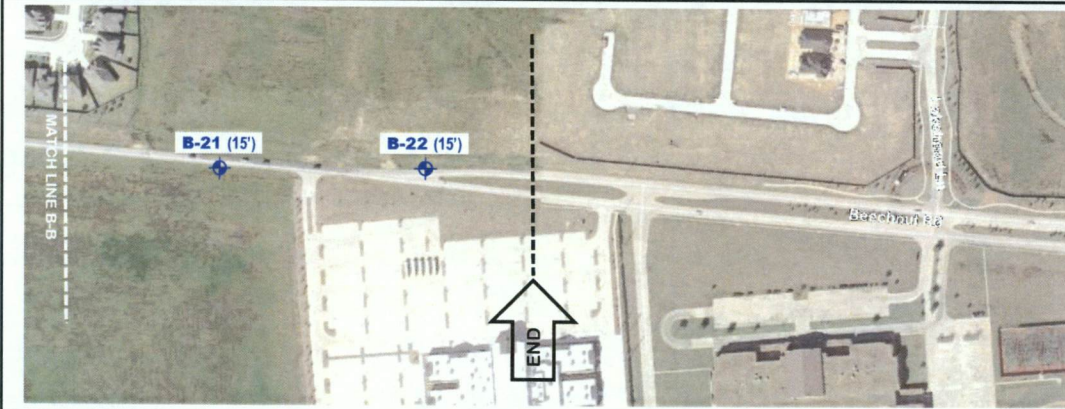
Geotechnical Investigation Proposal  
 Improvements of Beechnut Street from 1,650 feet east of Ashton Brook Lane  
 to 650 feet west of Peek Road  
 Fort Bend County Precinct 4, Texas  
 AEC Proposal No. G2018-04-02R  
 5/23/2018




## ITEMIZED FEE ESTIMATE - ROADWAY

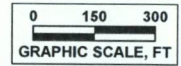
**22 borings: 9@15', 7@20', 6@25', two piezometers @20'**

<b>A. FIELD EXPLORATION</b>	<b>QTY</b>	<b>UNIT</b>		<b>RATE</b>	<b>AMOUNT</b>
Mobilization/Demobilization (Truck Rig)	1	LS	@	\$349.00	\$349.00
Site Reconnaissance (Project Engineer, P.E.)	8	hrs.	@	\$149.00	\$1,192.00
Fault Study (Sr. Geologist)	8	hrs.	@	\$101.00	\$808.00
Layout of Borings and Utilities Check (Technician)	10	hrs.	@	\$65.00	\$650.00
Field Supervision (Technician)	70	hr.	@	\$65.00	\$4,550.00
Pavement Coring (0" - 6" thick)	22	ea.	@	\$105.00	\$2,310.00
Pavement Coring (6" to 12" thick)	132	in.	@	\$9.00	\$1,188.00
Soil Drilling w/truck-mounted rig (0 to 20 ft continuous)	395	ft.	@	\$21.00	\$8,295.00
Soil Drilling w/truck-mounted rig (20 to 50 ft intermittent)	30	ft.	@	\$19.00	\$570.00
Traffic Control (Attenuator, Flashing Arrow Board, and 2 Flaggers)	7	days	@	\$1,650.00	\$11,550.00
Traffic Control (Off Duty Officer for Piezometer Plugging)	10	hrs.	@	\$45.00	\$450.00
Installing Piezometers	40	ft.	@	\$16.00	\$640.00
Grouting Holes	385	ft.	@	\$10.00	\$3,850.00
Piezometer Monitoring (2 Technicians, Two Trips)	8	hrs.	@	\$65.00	\$520.00
Plug and Abandon Piezometers	2	ea.	@	\$360.00	\$720.00
Standby Time for Traffic Control Setup (Drill Rig & Crew)	4	hrs.	@	\$185.00	\$740.00
Vehicle Charge	104	hrs.	@	10.00	\$1,040.00
	<b>SUBTOTAL</b>				<b>\$39,422.00</b>
<b>B. GEOTECHNICAL LABORATORY TESTING</b>					
Atterberg Limits (ASTM D-4318)	50	ea.	@	\$62.00	\$3,100.00
Passing No. 200 Sieve (ASTM D-1140)	30	ea.	@	\$48.00	\$1,440.00
Sieve Analysis w/o Hydrometer (ASTM D-422)	6	ea.	@	\$57.00	\$342.00
Moisture Content (ASTM D-2216)	208	ea.	@	\$9.00	\$1,872.00
Unconfined Compression (ASTM D-2166)	25	ea.	@	\$45.00	\$1,125.00
Unconsolidated-Undrained Triaxial Test (ASTM D-2850)	25	ea.	@	\$63.00	\$1,575.00
	<b>SUBTOTAL</b>				<b>\$9,454.00</b>
<b>C. ENGINEERING &amp; REPORT PREPARATION</b>					
Senior Engineer, P.E.	8	hrs.	@	\$183.00	\$1,464.00
Project Engineer, P.E.	32	hrs.	@	\$149.00	\$4,768.00
Graduate Engineer, EIT	36	hrs.	@	\$101.00	\$3,636.00
Clerical/Word Processor	4	hrs.	@	\$60.00	\$240.00
Reproduction (2 Copies of Draft and 3 Copies of Final Report)	5	copies	@	\$40.00	\$200.00
	<b>SUBTOTAL</b>				<b>\$10,308.00</b>
	<b>TOTAL ESTIMATED FEE</b>				<b>\$59,184.00</b>



- LEGEND:**
-  ← PROPOSED BORING LOCATION
  - B-# (X')** ← BORING NUMBER AND (DEPTH IN FEET)
  - PZ-# (X')** ← PIEZOMETER NUMBER AND (DEPTH IN FEET)

NOTE: BORING LOCATIONS ARE PRELIMINARY AND SUBJECT TO CHANGE UPON THE INFORMATION TO BE PROVIDED TO AEC.



**AVILES ENGINEERING CORPORATION**  
 PROPOSED BORING LOCATION PLAN  
 IMPROVEMENTS OF BEECHNUT ROAD  
 FROM 1650 FEET EAST OF ASHTON BROOK TO PEAK RD  
 FORT BEND COUNTY PRECINCT 4  
 FORT BEND, TEXAS

AEC PROPOSAL NO. G2018-04-02R	DATE 05-23-2018	SOURCE DRAWING PROVIDED BY GOOGLE EARTH PRO.
APPROX. SCALE 1" = 300'	DRAFTED BY CHL	PLATE NO. PLATE 1

# CERTIFICATE OF INTERESTED PARTIES

FORM 1295

1 of 1

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

## OFFICE USE ONLY CERTIFICATION OF FILING

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

R. G. Miller Engineers, Inc.  
Houston, TX United States

Certificate Number:  
2018-395410

Date Filed:  
08/22/2018

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

Fort Bend County

Date Acknowledged:  
09/04/2018

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

17410  
2017 Mobility Bond Program

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary
Paderanga, Andrew	Houston, TX United States	X	
Miller, Jack	Houston, TX United States	X	

**5 Check only if there is NO Interested Party.**

**6 UNSWORN DECLARATION**

My name is \_\_\_\_\_, and my date of birth is \_\_\_\_\_.

My address is \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_.  
(street) (city) (state) (zip code) (country)

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

Executed in \_\_\_\_\_ County, State of \_\_\_\_\_, on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.  
(month) (year)

\_\_\_\_\_  
Signature of authorized agent of contracting business entity  
(Declarant)