

STATE OF TEXAS §
 §
COUNTY OF FORT BEND §

AGREEMENT FOR PROFESSIONAL ENGINEERING SERVICES

THIS AGREEMENT is made and entered into by and between Fort Bend County, (hereinafter "County"), a body corporate and politic under the laws of the State of Texas, and CivilTech Engineering, Inc., (hereinafter "Contractor"), a company authorized to conduct business in the State of Texas.

WITNESSETH

WHEREAS, County desires that Contractor provide professional engineering services for the construction of a four-lane concrete roadway with a divided median and underground storm sewer from SH 99 to Beechnut Street for the Peek Road – Segment 1 Project, Number 17307, under 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 design, final design and drainage study services for the project as described Contractor's Professional Engineering Services Proposal dated May 4, 2018 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.

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 four hundred sixty-seven thousand seven hundred seventy-seven dollars and no/100 (\$467,777.00) 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 four hundred sixty-seven thousand seven hundred seventy-seven dollars and no/100 (\$467,777.00) 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 four hundred sixty-seven thousand seven hundred seventy-seven dollars and no/100 (\$467,777.00).

Section 5. Time of Performance

Time for performance of the Scope of Services under this Agreement shall begin with receipt of the Notice to Proceed and end no later than December 31, 2022. 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 st Floor Richmond, Texas 77469
Contractor:	CivilTech Engineering, Inc. Attn: Melvin G. Spinks, P.E., C.F.M., President 11821 Telge Road Houston, Texas 77429

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.

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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

CIVILTECH ENGINEERING, INC

Robert E. Hebert, County Judge



Darrell L. Kaderka, P.E., Vice President

Date

05/10/2018

Date

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 \$_____ to accomplish and pay the obligation of Fort Bend County under this contract.

Robert Ed Sturdivant, County Auditor

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EXHIBIT A

CivilTech Engineering, Inc.

Civil Engineering
Water Resources
Transportation
Structures
Economic Analysis
GIS

May 4, 2018

Mr. Mark Dessens, PE
Schaumburg & Polk, Inc.
11767 Katy Freeway, Suite 900
Houston, TX 77079

Re: Professional Engineering Services Proposal

Peek Road – Segment 1
Ft. Bend County, Precinct 3

Mr. Dessens,

We are pleased to submit the following proposal to provide Professional Engineering Services for the design of Peek Road – Segment 1 from the Grand Parkway (SH 99) to Beechnut Road in Ft. Bend County, Precinct 3.

Attached are our proposed scope of services, professional engineering services compensation, manhour breakdown (preliminary and final design & drainage study), and project schedule.

Please review the attached documents and let us know if you have any comments, questions, or require any additional information. We look forward to working with you and Ft. Bend County on this important project.

Respectfully,
CIVILTECH ENGINEERING, INC.



Paul M. Baxter, P.E.
Sr. Project Manager

SCOPE OF SERVICES

Peek Road Segment 1 – from the Grand Parkway (SH 99) to Beechnut Road

CivilTech Engineering, Inc., (CivilTech) as the lead Design Consultant, will be responsible for the overall project management, technical accuracy and design schedule. Mr. Paul M. Baxter, PE will serve as the Project Manager and will be County's and/or its Project Manager's primary contact through completion of the identified scope of services.

SCOPE OF WORK

Peek Road Segment 1 will be constructed as a four-lane concrete roadway with a divided median and underground storm sewer from the Grand Parkway (SH 99), north to Beechnut Road; a length of approximately 2,650 feet in northern Ft. Bend County, Precinct 3. The proposed project will include analysis and/or design at the following intersections:

- Grand Parkway (SH 99) – tie-in to existing pavement, traffic signal warrant analysis, traffic signals, and UVE analysis.
- Beechnut Road – tie-in to proposed roundabout (designed by others)

The proposed roadway will consist of a four-lane, concrete curb and gutter roadway with storm sewers and/or open ditches constructed in a typical 100-foot right-of-way. The project will include signing and striping, traffic signals at the Grand Parkway (SH 99) northbound and southbound frontage roads, utility conflicts identification, and storm water runoff mitigation.

A Category 1B, Condition II Urban Standard Land Survey to identify existing right-of-way will be performed. The existing right-of-way will be verified, and recommendations for the proposed alignment and right-of-way will be made to achieve the minimum overall width of 100 feet. Right-of-way recommendations shall give consideration to the impact to existing properties, structures, drainage conveyance, utilities, any environmentally sensitive areas, impacts to remaining parcels, and constructions costs.

A Category 6, Condition II Topographic field survey to support the design of the proposed roadway will be performed once an alignment is agreed upon by the County and/or its Project Manager. The topographic survey will include survey of the existing intersections and intersecting roadways, all above ground features, and quality Level B SUE (without electronic toning). Soil borings performed for the project will be located and identified on the survey maps with horizontal and vertical locations/information. All necessary rights of entry (ROE) will be obtained from the private landowners using request letters that are approved by the County and/or its Project Manager.

Category 1A, Condition II right-of-way mapping will be provided for all proposed parcel acquisitions and include existing right-of-way information, right-of-way layouts, boundary surveys of parent tracts, metes and bonds descriptions.

A geotechnical soils investigation will be performed in accordance with the HCED "*Guidelines for Consultants Performing Geotechnical Investigations*". The soils investigation will include soil borings along the proposed section of Peek Road generally spaced at 500-foot intervals, and borings at the Grand Parkway (SH 99) northbound and southbound frontage roads. All necessary rights of entry (ROE) will be coordinated with the Surveyor. The findings will be summarized and provided in a signed and sealed Geotechnical Engineering report.

A Drainage Impact & Mitigation Analysis will be performed per the requirements of the Ft. Bend County Drainage District criteria for the proposed project. The drainage study will be performed after an alignment is identified. The drainage study will present the existing site conditions, drainage patterns and existing drainage infrastructure; determine the impacts associated with the proposed roadway improvements, identify, proposed drainage systems, and identify and quantify mitigation measures. The findings will be summarized and provided in a signed and sealed study report.

A Traffic Study will be performed at the Grand Parkway (SH 99) intersection, to include the northbound and southbound frontage roads. The warrant study will include obtaining 24-hour traffic counts on each leg of the intersection, and a Synchro Analysis to determine signal timing and phasing. The warrant study and analysis, and traffic signal plans will be prepared in accordance with the Texas Department of Transportation standards and criteria.

Utility Investigation will be performed for the project area to identify existing utilities with the project area, and along the proposed project alignment. The investigation will be limited to record drawing research, utility company notifications, and field investigations. A utility conflict table will be generated identifying the existing utilities, the utility owners, and any known conflicts.

The findings of the survey, geotechnical investigations, drainage impact and mitigation study, traffic signal warrant analysis, and utility investigation will be summarized in a Preliminary Engineering Report (PER) to be submitted to the County and/or its Project Manager for review and approval. The PER will include sufficient information to identify the following:

- Proposed Roadway Alignment
- Proposed Roadway Typical Section
- Proposed Right-of-Way
- Proposed Drainage System & Mitigation Needs
- Potential Conflicts (Utilities & Existing Features)
- Estimated Probable Construction Costs
- Estimated Probable Construction Time
- Preliminary Construction Plans (Existing Features w/Proposed Plan View)

BASIC PROFESSIONAL SERVICES

The Engineer shall render the following professional services in connection with the Project:

I. PRELIMINARY DESIGN SERVICES

All Preliminary Design Services shall be paid for in a Single Lump Sum. Upon receiving written authorization to proceed with the Preliminary Design Services, the Design Consultant shall:

- b. Attend meetings with the County and/or its Project Manager as required, establishing the design parameters of the Project. These will include, but no limited to:
 - Preliminary Design Kickoff Meeting
 - Alignment & ROW Review Meeting
 - Technical Review Committee Presentation
- c. Participate in progress meetings with County and/or its Project Manager.
- d. Perform Preliminary Engineering Investigations for the Project to include:
 - Geotechnical Investigation
 - Survey Data including existing right-of-way
 - Drainage Impact & Mitigation Study
 - Traffic Signal Warrant Study & Analysis
- e. The Preliminary Design shall include:
 - Proposed Alignment
 - Proposed Right-of-way
 - UVE & Sight Triangle Analysis at identified intersections
 - Preliminary roadway layouts
 - i. Existing Elements in Plan & Profile
 - ii. Proposed Elements in Plan Only
 - Utility investigation, conflict analysis, and utility conflict table
 - Preliminary drainage design
 - Estimated probable construction costs
- f. Prepare a PowerPoint Presentation and attend a Technical Review Committee Meeting County and/or its Project Manager, presenting a summary of the information and findings from the preliminary design.

- g. The Preliminary Engineering Report shall be prepared in sufficient detail so as to clearly indicate recommended alignment including right-of-way acquisitions, typical roadway cross-sections, existing utilities, storm sewer and any anticipated conflicts or design issues. The report shall address any comments from the Technical Review Committee. The report shall also present probable cost associated with the recommended improvements.

II. FINAL DESIGN SERVICES

All Final Design Services shall be paid for in a Single Lump Sum. Upon receiving written authorization to proceed with the Final Design Phase Services, the Design Consultant shall:

- a. Attend coordination meetings with the County and/or its Project Manager as required. These will include, but not limited to:
- Design Phase Kickoff Meeting
 - Monthly Coordination Meetings (as needed)
- a. Prepare final designs, drawings and specifications for the Project. Drawings shall be submitted for review at the following Milestones:
- 70% Milestone Submittal: Preliminary plans to include:
 - 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)

- Specification table of contents (use Harris County Specifications)
 - Bid form with estimated unit and total costs (spreadsheet based)
 - Deliverables:
 - Three (3) Hard Copies on 11 x 17 Sheets
 - Adobe PDF Electronic Copy
- 95% Milestone Submittal: Complete drawings with interim seal to include all information from the 70% Milestone Submittal in addition to 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
 - Deliverables:
 - Three (3) Hard Copies on 11 x 17 Sheets
 - Adobe PDF Electronic Copy
- 100% Milestone Submittal: Final signed and sealed drawings, specifications, and estimate.
 - Deliverables:
 - One (1) Final Set of Drawings
 - Adobe PDF Electronic Copy

III. BID & CONSTRUCTION PHASE SERVICES

All Bid and Construction Phase Services will be paid on a time-and-materials basis. The not-to-exceed fee for these services will be determined by the County and/or its Project Manager and the Design Consultant. Monthly billing will include a breakdown of hours spent by personnel in the various employee categories, at billing rates agreed to by the County and the Design Consultant.

- a. Upon completion of Final Design Services, the County will determine an advertisement and bid opening schedule. All administrative project manual documents (cover page, Notice to Bidders, etc.) will be prepared by the County and provided to the Design

Consultant in PDF format. The Design Consultant will prepare a single project manual file in PDF format, consisting of:

- Administrative documents
 - The bid form (prepared by the Design Consultant)
 - A sealed specification table of contents
 - Applicable specifications and documents
- b. The Design Consultant will prepare a single file in PDF format for the entire drawing set. 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.
- c. The Design Consultant will prepare 27 compact discs, each with one project manual file and one drawing file. 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.
- d. The Design Consultant will attend a pre-bid meeting at the County Purchasing Office. It is not necessary to prepare for the meeting, other than to be able to briefly describe the project.
- e. 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.
- f. After the bid, the Project Manager will prepare a bid tabulation and provide a copy to the Design Consultant for filing.
- g. The Design Consultant will attend a pre-construction meeting with County staff, Project Manager, general contractor, and construction materials testing contractor. Prior to the meeting, the Project Manager will inform the Design Consultant of how many drawing and project manual sets are required, and the Design Consultant will provide these documents at the pre-construction meeting.
- h. The Design Consultant will be responsible for reviewing contractor submittals and responding to Requests for Information.
- i. Field visits and progress meetings will not be required unless requested by the County.
- j. The Design Consultant will participate in a substantial completion walkthrough.
- k. 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.

IV. INVOICING

The Design Consultant may prepare invoices in the format of its accounting system. However, the following will apply for invoices:

- a. When the first invoice is prepared, all major billing tasks anticipated for the project duration (Preliminary Design, Final Design, Survey, etc.) should be listed with budgets included. The sum of the task budgets must equal the amount in the Design Consultant's agreement. If tasks must be added or revised during the course of the project, budgets must be revised to ensure that the total budget remains the same (unless the budget is revised by amendment). Columns should be included, for each task, to show percent complete, amount earned, previously billed and current billing.
- b. A sequential numbering must be included with each invoice, i.e. Invoice 1 followed by Invoice 2, etc. Another invoice number may be included for internal purposes, but the sequential numbering should be included as well.
- c. The Purchase Order number must be included on the invoice.
- d. Markups for subconsultant services or reimbursable expenses are not allowed. A line item may be included in the fee proposal for subconsultant coordination.
- e. The County is tax-exempt and will not reimburse tax expenses. The Project Manager can provide a tax exemption form to the Design Consultant to ensure that tax is not charged.
- f. For lump sum tasks, subconsultant invoices do not need to be included in the Design Consultant's invoice.
- g. A brief progress report must be submitted with each invoice, to include efforts reflected in the invoice. Employee hourly breakdowns are not required for lump sum tasks but are required for time-and-materials tasks. Although employee timesheets are not required for time-and-materials tasks, the County reserves the right to request them in an audit.
- h. Invoices shall be submitted in PDF format to the County Engineering Department with copy to the Project Manager. The Project Manager will approve or require revisions within five days of invoice submission or revision, as applicable. The Project Manager will provide the email addresses of all to be included in the invoice submittals.

SURVEYING SERVICES

I. LAND SURVEYING SERVICES

The Land Surveying Services will the necessary rights of entry (ROE) from the private landowners using request letters that are approved by the County and/or its Project Manager.

A. Establish Control and TBMs

Horizontal control points and vertical benchmarks by others will be recovered and/or will be established at an approximate 1,000-foot interval from beginning to end of the project for construction purposes. Every attempt will be made to select locations that will not be lost during construction.

All bearings and coordinates will be based on the Texas Coordinate System of 1983 (NAD 83), South Central Zone 4204. Benchmark elevations will be referenced to the same datum as the effective Fort Bend County Flood Insurance Rate Map by observations on a minimum of three existing Reference Monuments.

B. Abstract and Document Existing Boundaries

This survey will be performed in accordance with the Manual of Practice for Land Surveying in Texas for a Category 1B, Condition II Urban Standard Land Survey. Improvements will be shown with transparency behind the Existing Boundary. Crossing and adjacent easements will be shown within the Topographic Survey limits defined below; However, Off-site easement estates and non-exclusive easement routes to off-project facilities are not included in this proposal.

This proposal includes hiring title research by a qualified provider. An Abstractor's Certificate will be ordered by a third-party provider for deed information and other easements/encumbrances affecting the immediate project area. Adjoining property owner deeds and adjacent easement documents will also be ordered. Additional research; surveying services required to address comments, etc. outside the original scope of this proposal; or changes made to the survey after completion (if so required), will be considered additional services and can be provided to you on an hourly basis and a separate budget.

C. Topographic Survey (~3,800 linear feet (LF))

Prepare a base map of the route in a format suitable to the engineer for design purposes. This survey will be performed in accordance with the Manual of Practice for Land Surveying in Texas for a Category 6, Condition II Urban Topographic Survey Plat. The project area is marked on the attached exhibit and will be defined as:

- Grand Parkway (SH 99) – Intersection with proposed Peek Road (600 LF)

- Proposed Peek Rd Alignment – Grand Parkway to the intersection of Peek Rd and Beechnut Road (2400 LF). These limits exclude under construction or as-built of the proposed Beechnut Road Project and roundabout.

The topographic survey deliverable will be provided in a digital CAD file (plan view only) at a scale suitable to the engineer for design purposes and will be limited to the following:

- Tie visible improvements from Right-of-way to Right-of-way plus 20 feet on either side within the project area above. Right-of-entry to be secured by the client within private property
- 50-foot grid within existing ROW, 100-foot grid within the proposed ROW
- Show contours at 1-foot intervals
- Utility flowlines will be tied where physically accessible
- The Surveyor will coordinate with state One-Call resources to determine the existence and location of existing subsurface utilities within the project limits. The Surveyor will survey the utility markings and depict these findings in the Topographic Survey. Should the need for further investigation be needed, Halff has included an Additional Services fee for utility pot holing at conflict locations as determined by design consultant.
- Overhead Sag elevation for crossing overhead electrical utilities
- Locate trees over 6" and the perimeter of existing heavily brushed areas
- Tie environmental and geotechnical marks/locations. Location exhibit to be provided by client
- Tie location of structures within 100 feet of existing ROW

D. Survey Control Maps

The Surveyor will prepare a sealed Survey Control Map Sheet and a Control Detail Sheet for the project which includes the proposed right-of-way line, the survey control baseline, Temporary Benchmarks and the project baseline. Client to provide a digital copy of the sheet file border and format for use by Halff Associates.

The survey control deliverables will be provided at a suitable scale for use in 11" x 17" and 22" x 34" formats.

E. CenterPoint Energy Grants to Others Exhibit

Up to One (1) Exhibit and one (1) revision for use in a Grants to Others application to CenterPoint Energy. The Engineer to prepare the required plan and profile drawing of proposed improvements for inclusion in the application. Application and submittal to be completed by the County or their Project Manager.

F. Optional Additional Services

The Surveyor if authorized will perform the following:

- Up to Four (4) Parcel Descriptions and Exhibits for proposed parcel acquisition. This service includes providing a ROW map sheet for the proposed parcels. This item does not include off-site easements which may require additional boundary retracement or professional ROW acquisition services. This service may be performed under separate proposal.
- 5 Acre Boundary and Topographic Survey adjacent to proposed Peek Road. This item does not include preparing temporary construction easements or right-of-way parcel preparation and acquisition.
- Provide topographic survey of a future roundabout at Beechnut Road to supplement the design.
- Reestablish project survey control and stake out proposed centerline for the County's contractor.

DRAINAGE IMPACT & MITIGATION ANALYSIS

A Drainage Impact & Mitigation Analysis will be performed and a Drainage Report will be prepared and submitted as part of the Preliminary Engineering Report. The Drainage Impact & Mitigation Study will include the following:

- a. Perform an analysis to define existing drainage areas and drainage patterns along the roadway and evaluate changes to the existing conditions as a result of the proposed roadway alignments. Evaluate sheet flow drainage patterns along the roadway corridor to define runoff flows from within 150 feet of the ROW versus runoff defined by the existing drainage areas based on LIDAR topography, topographic survey and Fort Bend County drainage criteria.
- b. Determine the size and flow line of storm sewers along the proposed roadway to effectively convey storm water runoff to the proposed detention facilities and outfall sites.
- c. Determine any potential requirements or constraints due to being located within a Levee Improvement District.
- d. Determine the size and flow line of potential cross drainage culverts along the proposed roadway to effectively convey offsite flow under the proposed roadway utilizing Fort Bend County criteria.
- e. Identify possible outfall locations and detention sites necessary to accommodate runoff from the proposed roadway improvements. Determine the required detention facility capacity. Consideration of overflows during extreme events will be made.

- f. Prepare drainage report detailing findings utilizing Fort Bend County criteria to establish pre and post improvement conditions and identify how potential impacts are addressed.

GEOTECHNICAL INVESTIGATION

The purpose of our geotechnical investigation will be to determine subsurface conditions along the proposed road alignment and to develop geotechnical engineering recommendations for the design of new rigid pavement and storm drainage, as well as to provide foundation recommendations for the 2 new traffic signals. The following sections of this proposal further describe our proposed geotechnical scope of services. The Equivalent Single Axle Load (ESAL) value will be calculated based on Ft. Bend's County standard pavement design consisting of 8 inches of concrete underlain by 8 inches of lime-treated subgrade.

A. Field Study

Based on the project's layout and considering the inclusion of storm drainage and the 2 traffic signal structures, we propose to conduct the following drilling scheme in order to assess subsurface conditions along the proposed road alignment.

Proposed Improvements	Number of Borings	Depth, ft⁽¹⁾	Total Depth, ft
New Road w/Storm Drainage	6	20	120
2 Traffic Signals	2	40	80
Total Drilling Footage			190

1. Below the existing ground surface elevation.

The six (6), 20-ft deep each borings are based on utilizing a spacing interval of approximately 500-ft along the roadway alignment as provided by the Design Consultant.

The geotechnical engineer will perform the necessary One-Call notifications prior to beginning the field drilling activities. The borings will be located in the field using recreational grade GPS and/or by pacing distances from known landmarks or reference points. The geotechnical engineer will coordinate with the surveyor to have the final boring locations be surveyed in the field.

Traffic control will likely be required to safely route traffic around the drilling crew during the field work activities of the 2 traffic signal borings. The geotechnical engineer will provide off-duty police officers and/or other certified traffic subcontractor to perform traffic control duties.

The field work for the 6, 20-ft deep borings will be conducted using standard geotechnical drilling and sampling procedures. The soil borings will be sampled continuously to 10 feet and thereafter, they will be sampled at 5-ft intervals. Samples will be taken using conventional split-spoon and/or Shelby tube sampling techniques in general accordance

with applicable American Society for Testing and Materials (ASTM) standards. Representative portions of the samples will be sealed, identified, packaged, and transported to our laboratory for subsequent testing and classification.

The field work for the 2, 40-ft deep signal borings will be conducted using Texas Cone Penetration (TCP) techniques in general accordance with the Texas Department of Transportation (TxDOT) Geotechnical Manual, dated March 2018. Typically, drilling will cease if five consecutive TCP results of 100 blows for less than 4 inches of penetration are recorded. In order to collect samples from these 2 borings for laboratory testing purposes, Shelby tube sampling techniques or grab samples from the auger cuttings will be obtained in between each TCP sampling event. Representative portions of the samples will be sealed, identified, packaged, and transported to our laboratory for subsequent testing and classification.

Water level readings will be recorded for the open boreholes during drilling and at drilling completion. If free water is encountered during drilling, the RKC logger will temporarily suspend drilling operations and obtain water level measurements in the open borehole at 5-minute intervals over a 15-minute time interval. Water level measurements will also be recorded at completion of drilling prior to backfilling the boreholes with the auger cuttings and spoils generated during the drilling operations. The top 8 inches of the 2 traffic signal borings will be plugged and sealed with bitumen or ready-mix concrete up to the surrounding surface elevation.

B. Laboratory Testing

Upon completion of the subsurface exploration, a general testing program will be designed to define the moisture condition, classification, strength, and shrink/swell characteristics of the subsurface soil samples. The laboratory testing program is anticipated to include moisture content determinations, Atterberg Limits, percent passing No. 200 sieve, grain size analyses, unit dry weights, unconfined compressive strength tests, and corrosivity tests (to include electrical resistivity, pH, sulfate, and chloride content determinations). However, the actual type and number of laboratory tests will be based on the subsurface conditions encountered in the borings. The laboratory testing will be performed in general accordance with applicable ASTM standards and samples will be kept for 30 days upon submittal of the final report.

In addition to the above-described testing program, representative surficial specimens will be obtained from the pavement borings and will be subjected to a California Bearing Ratio (CBR) test. The CBR testing will provide information regarding inundated strength and swell characteristics of the surficial subgrade soils for direct use in pavement design analyses, which will be conducted in accordance with the 1993 American Association of State Highway and Transportation Officials (AASHTO) pavement design method.

C. Engineering Analyses & Report

The results of the field and laboratory studies will be reviewed by our staff of engineers and geologists. The results of our review, together with the supporting field and laboratory data, will be presented in a draft geotechnical report which will be finalized after we receive CLIENT comments. The Geotechnical Engineering Report may also include the following information and recommendations:

- A summary of the field and laboratory sampling and testing program
- Boring logs and laboratory testing results
- A review of the general site conditions including a description of the site, the subsurface stratigraphy, groundwater conditions, and the presence and condition of fill materials, if encountered.
- Signal foundation design considerations and recommendations, including:
 - i. Expansive, soil-related movements using an empirical method for predicting Potential Vertical Rise (PVR) developed by TxDOT;
 - ii. shallow and/or deep foundation recommendations;
 - iii. available soil-bearing pressures;
 - iv. settlement estimations, where applicable;
 - v. utility trenching and backfill considerations; and
 - vi. groundwater considerations.
- Foundation construction considerations, including:
 - i. site drainage;
 - ii. site preparation;
 - iii. select fill materials;
 - iv. shallow and/or deep foundation excavations;
 - v. potential reuse of onsite materials as select fill materials;
 - vi. excavation considerations; and
 - vii. fill placement compaction requirements.
- Seismic region condition evaluations.

Also included in the report will be general guidelines for the construction of pavements for the proposed road alignment. These guidelines will be based on the results of the classification testing and the CBR test and will be based utilizing the 1993 AASHTO pavement design method. As mentioned previously, the ESAL value will be calculated based on Ft. Bend's County standard pavement design consisting of 8 inches of concrete underlain by 8 inches of lime-treated subgrade.

Our scope of work does not include a geologic fault study nor does it include conducting test pits at the site. Since site grading plans can result in changes in the foundation and pavement subgrade conditions, final site grading plans will be helpful information in the preparation of engineering recommendations. In the absence of final site grading information, we will prepare recommendations based on the existing ground surface elevations. Also, specific information concerning anticipated traffic loadings and frequencies to be provided by the CLIENT for the pavement areas will be critical in the computation of the pavement sections.

Electronic copies of the draft geotechnical report and final geotechnical report will be provided.

TRAFFIC STUDY

The purpose of the traffic study is to design plans for the traffic signalization for the intersection of Grand Parkway and Peek Road. The design includes peak hour traffic counts (tube counters only), traffic signal design, Synchro analysis, and general intersection lane marking recommendations.

A. Traffic Study Deliverables

The Design Consultant will be provided with a short memo explaining a warrant analysis and proposed phasing for the signal. The warrant analysis will be based on future roadway traffic volumes provided by others. The memo will include results from Synchro analysis. Additionally, signal plans will be completed for the signalization of the intersection.

B. Project Tasks

The study will be conducted in three phases, which are listed below with a brief description for each phase.

- **Phase I: Traffic Data Collection** – Data Collection, Survey & Initial Analysis
 - i. 24-Hour traffic volumes will be collected by machine on each approach leg of the intersection.
 - ii. Traffic count information will be summarized in tabular and graphical formats and included in the final memo. The data will be reviewed, and a Quality Assurance/Quality Control will be performed on the data by a licensed professional engineer (PE) in addition to a professional traffic operations engineer (PTOE).
- **Phase II: Intersection Analysis** – Traffic Signal Warrant Analyses, timings and Synchro
 - i. Base Synchro files: TranSystems will create a Synchro file with the existing geometric data, lane usage, phasing and basic signal timing.

- ii. The County and/or its Project Manager will provide future traffic volumes for the intersection. These traffic volumes will be the basis for the traffic signal warrant and signal timing optimization.
 - iii. Signal Timing Optimization: evaluate the proposed signal utilizing the Synchro software for peak periods. It should be noted that this task does not take into account the development of a detailed micro-simulation model beyond SimTraffic's default characteristic model. Should it be deemed necessary to develop a detailed model (VISSIM, etc.), a separate agreement would be required. This will be completed using proposed future counts provided by others.
 - iv. Using Synchro traffic analysis software, conduct capacity analyses for the study intersection and identify necessary improvements to maintain acceptable intersection operations at the study intersection for the following scenarios:
 - 1. Future Conditions
 - v. Evaluate Left Turn Phasing: TranSystems will evaluate protected, protected-permitted, permitted, lead-lag, Flashing Yellow Arrow use, etc. that may be beneficial to the signal timing. It is assumed that both frontage roads will be operated by one signal using Texas Diamond phasing (4-phase and 6-phase operation will be reviewed for best application).
 - vi. Clearance Intervals: Yellow and Red intervals will be evaluated for accuracy and sufficiency using NCHRP 731 recommended procedures.
 - vii. Pedestrian Timings: Pedestrian timings are to be evaluated based on current MUTCD requirements.
 - viii. Memo: Prepare a brief memo for the County and/or its Project Manager review that summarizes the traffic count data, explains the warrant analysis procedure, and presents the recommendations. This memo will include proposed Synchro reports and count summaries
 - ix. Review Geometric needs; a review of beneficial geometric changes that may help other signalization changes will be completed.
- **Phase III: Final Plans** – Prepare Final Plans and coordinate power drop
 - i. Plans Preparation- 30%, 70%, 95% and Final reviews are planned. Final plans are assumed to include the following items:
 - 1. General Notes
 - 2. Signal Plan Sheets
 - 3. Miscellaneous Details
 - 4. Summary of Quantities

5. Traffic Control/Construction Phasing (for signal only; the overall traffic control developed by others will be used to the extent possible)
6. Coordination with the local power company to provide a power drop at the intersection will be done.
7. Known utility conflicts based on information provided to TranSystems will be provided to CivilTech for their use in coordination with existing utility companies to be relocated prior to letting.

C. Scope & Proposal Assumptions

The following is a list of conditions that were the basis for this proposal:

- Signal will be designed using TxDOT standards, specifications and bid items to the extent feasible.
- Existing geometry for the intersection is to remain.
- Traffic signal is to operate as an isolated signal with no interconnection anticipated between adjacent traffic signals.
- No temporary signal plans are anticipated as part of the project.
- Traffic data collection is anticipated to occur while local schools/colleges are in session.
- Two in person design reviews are assumed.
- No interconnection design is assumed as part of the project.
- No aesthetics including special lighting, graphics, form liner, artwork or landscaping are including in the plans.
- No permitting is included in this contract.

It is anticipated that the Design Consultant will coordinate to obtain the following:

- Future traffic volumes (including approach volumes to the intersection in 15-minute intervals for a full 24 hours and future turning movement counts).
- Crash data within 500 feet of the intersection for the last 3 years
- Details on controller and other pertinent design standards that the County desires to be included to be consistent with their other traffic signals.

Compensation for Professional Services
Project Name: Peek Road - Segment 1
Project Limits: From Grand Parkway (SH 99) to Beechnut Road
Construction Cost Estimate: \$3,445,000.00

1	Preliminary Design Services	\$75,150.00
2	Final Design Services	\$166,105.00
3	Bid & Construction Phase Services	\$30,000.00
4	Survey Services	\$41,462.00
5	Geotechnical Investigations	\$19,290.00
6	Drainage Impact & Mitigation Analysis	\$65,090.00
7	Traffic Study	\$34,000.00
Subtotal Basic Services (1-7):		\$431,097.00
8	*Optional Additional Services including, but not limited to	
	Four (4) Parcel Descriptions & Exhibits, ROW Map Sheet	\$16,020.00
	5 Ac Boundary & Topographic Survey (Off-site Detention)	\$8,660.00
	Additional Survey/Re-establishing Survey Control	\$12,000.00
Subtotal Optional Additional Services(8):		\$36,680.00
TOTAL SERVICES (BASIC & OPTIONAL ADDITIONAL)		\$467,777.00

Ft. Bend County - Precinct 3
 Peak Road - Segment 1(Grand Parkway (SH 99) to Beechnut Road
 From Grand Parkway (SH 99) to Beechnut Road

CivilTech Engineering, Inc.
 11821 Tidge Road
 Cypress, Texas

PEEK ROAD - SEGMENT 1: PRELIMINARY DESIGN PHASE: MANHOUR & FEE ESTIMATE

TASK NUMB.	TASK DESCRIPTION	1								TOTAL MHS PER WORK TASK	TOTAL COSTS PER WORK TASK
		SENIOR PROJ MGR.	SENIOR ENGR.	PROJ ENGR.	ASST ENGR.	SR DESIGN TECH.	CADD OPERATOR	ADMIN	CLERICAL		
		\$250.00	\$230.00	\$190.00	\$130.00	\$160.00	\$75.00	\$90.00	\$75.00		
PROJECT MANAGEMENT, MEETINGS, & COORDINATION											
1	SCOPING	10	6	2						16	\$ 3,890.00
2	KICKOFF MEETING	2	2	2						6	\$ 1,290.00
3	ALIGNMENT & ROW MEETING	2	2	2						6	\$ 1,290.00
4	SURVEY COORDINATION	8	8	16	24					48	\$ 7,520.00
5	GEOTECHNICAL COORDINATION	4	4	6						10	\$ 1,890.00
6	TRAFFIC COORDINATION	4	4	8	4					16	\$ 2,720.00
7	MONTHLY COORDINATION MEETINGS	10	10	8	4					32	\$ 6,600.00
8	TECHNICAL REVIEW COMMITTEE PRESENTATION	4	4	4						12	\$ 2,560.00
	SUBTOTAL PROJECT MANAGEMENT, MEETINGS, & COORDINATION - MANHOURS	28	40	46	32					146	\$ 27,720.00
SUBTOTAL PROJECT MANAGEMENT, MEETINGS, & COORDINATION											
ALTERNATIVE ALIGNMENT & ROW											
9	ALTERNATIVE ALIGNMENT & ROW	1	2	10	16					29	\$ 4,390.00
10	PREPARE ALIGNMENT & ROW EXHIBITS	1	2	2	8					29	\$ 3,270.00
	SUBTOTAL ALTERNATIVE ALIGNMENT & ROW - MANHOURS	2	4	12	24					58	\$ 7,660.00
SUBTOTAL ALTERNATIVE ALIGNMENT & ROW											
PRELIMINARY ROADWAY & DRAINAGE DESIGN											
11	UVE & SIGHT TRIANGLE EXHIBITS		2	4	10		12			28	\$ 3,300.00
12	PRELIMINARY ROADWAY DESIGN & LAYOUTS	4	10	12	40		48			114	\$ 14,020.00
13	UTILITY CONFLICT ANALYSIS & TABLE	2	2	4	6					12	\$ 1,890.00
14	PRELIMINARY STORM SEWER DESIGN	1	2	6	16		27			27	\$ 4,070.00
15	ESTIMATED PROBABLE CONSTRUCTION COSTS	1	2	6	10					19	\$ 2,970.00
	SUBTOTAL PRELIMINARY ROADWAY & DRAINAGE DESIGN - MANHOURS	6	18	34	82		60			200	\$ 26,240.00
SUBTOTAL PRELIMINARY ROADWAY & DRAINAGE DESIGN											
PRELIMINARY ENGINEERING REPORT & TRC											
16	TECHNICAL REVIEW COMMITTEE PRESENTATION PREPARATION	4	6	2				4		16	\$ 3,090.00
17	PRELIMINARY ENGINEERING REPORT PREPARATION	6	14	24				4		54	\$ 9,370.00
18	KMZ FILE GENERATION	2	20	26			4	8		66	\$ 1,100.00
	SUBTOTAL PRELIMINARY ENGINEERING REPORT & TRC - MANHOURS	10	20	26			4	8		70	\$ 13,530.00
SUBTOTAL PRELIMINARY ENGINEERING REPORT & TRC											
TOTAL PRELIMINARY ENGINEERING DESIGN PHASE											75,160.00

FL Bend County - Precinct 3
 Peak Road - Segment 1(Grand Parkway (SH 99) to Beechnut Road
 From Grand Parkway (SH 99) to Beechnut Road

CivilTech Engineering, Inc.
 11821 Telge Road
 Cypress, Texas

PEEK ROAD - SEGMENT 1: FINAL DESIGN PHASE: MANHOUR & FEE ESTIMATE

TASK NO.	TASK DESCRIPTION	TOTAL MANHOURS PER WORK TASK BY STAFF CLASSIFICATION								TOTAL MHS PER WORK TASK	ESTIMATED PLAN SHEET REQUIREMENTS	MANHOUR PER SHEET	TOTAL COSTS PER WORK TASK	
		SENIOR PROJ MGR.	SENIOR PROJ ENGR.	PROJ ENGR	ASST ENGR	SR DESIGN TECH	CADD OPERATOR	ADMIN	CLERICAL					
PLAN PRODUCTION		\$250.00	\$230.00	\$160.00	\$130.00	\$150.00	\$75.00	\$90.00	\$75.00					
1	PROJECT TITLE SHEET: LOCATION & VICINITY MAP		1		1		2			4	1	N/A	4	\$ 510.00
2	INDEX OF SHEETS		1		1		1			3	1	N/A	3	\$ 435.00
3	GENERAL NOTES		1		2		4			8	1	N/A	8	\$ 950.00
4	TYPICAL SECTIONS		2		6		6			16	1	N/A	16	\$ 2,010.00
5	PROJECT LAYOUT SHEET		2		4		8			18	1	1"=100'	18	\$ 2,220.00
6	ROADWAY PLAN & PROFILE		8		32		66			154	6	1"=20/1"=2'	26	\$ 18,150.00
7	DRAINAGE AREA MAPS		2		4		24			42	3	1"=50'	14	\$ 4,480.00
8	DRAINAGE COMPUTATIONS		1		2		4			9	2	N/A	5	\$ 1,110.00
9	TRAFFIC CONTROL PLAN - NOTES & PHASING		2		2		2			6	1	N/A	6	\$ 930.00
10	TRAFFIC CONTROL PLAN - ADVANCED WARNING LAYOUT		2		4		12			24	2	VARIES	12	\$ 2,760.00
11	TRAFFIC CONTROL PLAN		6		16		40			86	4	1"=100'	22	\$ 10,060.00
12	SIGNING & STRIPING PLAN		2		6		30			48	3	1"=40'	16	\$ 4,970.00
13	STORM WATER POLLUTION PREVENTION PLAN NOTES		1		2		2			5	1	N/A	5	\$ 700.00
14	STORM WATER POLLUTION PREVENTION PLAN		2		4		32			42	3	1"=40'	14	\$ 4,020.00
15	ROADWAY DETAILS		2		2		4			8	2	N/A	4	\$ 880.00
16	DRAINAGE DETAILS		2		2		4			8	2	N/A	4	\$ 880.00
17	SIGNING & STRIPING DETAILS		2		2		4			8	2	N/A	4	\$ 880.00
18	PROJECT SIGN DETAILS		1		1		2			3	1	N/A	3	\$ 280.00
19	EARTHWORK SUMMARY SHEET		4		4		4			17	1	N/A	17	\$ 2,210.00
20	CROSS SECTIONS		38		97		147		291	573	42	1"=20/1"=2'	16	\$ 6,760.00
PLAN PRODUCTION - MANHOURS														
SUBTOTAL PLAN PRODUCTION														\$ 65,195.00
PROJECT MGMT & DESIGN TASKS														
21	DESIGN KICKOFF MEETING	2	2	2	12					6				\$ 1,260.00
22	COORDINATION W/ XDOT	24	16	10	6					62				\$ 12,840.00
23	MONTHLY COORDINATION MEETINGS	16	16	10	6					48				\$ 10,060.00
24	INTERNAL QA/QC REVIEWS PRIOR TO SUBMITTALS (70%, 95% & FINAL SUBMITTALS)	32	24	14						70				\$ 15,760.00
25	WRITTEN RESPONSES TO REVIEW COMMENTS (70% AND 95% SUBMITTALS)	4	6	10						28	8			\$ 4,580.00
26	DRAINAGE DESIGN	2	12	36	50					100				\$ 15,520.00
27	PAVING & GRADING DESIGN	2	18	50	90					160				\$ 24,340.00
28	MISCELLANEOUS DETAILS	2	2	4						8				\$ 1,600.00
29	PROJECT MANUAL (CONTACT DOCUMENT, BID PROPOSAL AND TECHNICAL SPECIFICATIONS)	8	6	12	28					32	6			\$ 5,750.00
30	QUANTITIES/COST ESTIMATES (70%, 95% & FINAL SUBMITTALS)	4	10	14						56				\$ 9,180.00
SUBTOTAL PROJECT MGMT & DESIGN TASKS - MANHOURS		96	112	162	186				14	570				\$ 100,910.00
SUBTOTAL PROJECT MGMT & DESIGN TASKS														\$ 166,105.00
TOTAL FINAL DESIGN PHASE														\$ 166,105.00

PEEK ROAD - SEGMENT 1: DRAINAGE IMPACT & MITIGATION STUDY: MANHOUR & FEE ESTIMATE

TASK NUMB.	TASK DESCRIPTION	TOTAL MANHOURS PER WORK TASK BY STAFF CLASSIFICATION									TOTAL HRS PER WORK TASK	TOTAL COSTS PER WORK TASK
		1 SENIOR PROJ MGR.	2 SENIOR PROJ ENGR.	3 PROJ ENGR	4 ASST ENGR	5 SR GIS ANALYST	6 ANALYST	7 CADD OPERATOR	8 ADMIN	9 CLERICAL		
	DRAINAGE IMPACT & MITIGATION STUDY	\$250.00	\$230.00	\$160.00	\$130.00	\$160.00	\$120.00	\$75.00	\$90.00	\$75.00		
1	COORDINATING & MEETINGS		12		8		16	8			28	\$ 4,520.00
2	DATA COLLECTION & REVIEW		4		16		16				36	\$ 4,820.00
3	ANALYZE CROSS DRAINAGE CULVERTS		20		40		16				76	\$ 11,720.00
4	ANALYZE PROPOSED STORM DRAINAGE SYSTEM		48		96		24				190	\$ 25,380.00
5	ANALYZE RUNOFF IMPACTS & DETENTION REQUIREMENTS		16		40		16				72	\$ 10,600.00
6	PREPARE DRAINAGE REPORT		16		16		8				44	\$ 7,020.00
	SUBTOTAL DRAINAGE IMPACT & MITIGATION ANALYSIS - MANHOURS		116		208		80		8	4	416	\$ 64,340.00
SUBTOTAL DRAINAGE IMPACT & MITIGATION ANALYSIS \$												
OTHER DIRECT COSTS												
	MILEAGE											\$ 250.00
	REPRODUCTION DELIVERIES											\$ 500.00
												\$ 750.00
	TOTAL DRAINAGE IMPACT & MITIGATION STUDY \$											\$ 65,090.00

PEEK ROAD SEGMENT 1 AND PARKWAY (SH 99) TO BEECHNUT ROAD PROJECT SCHEDULE

Activity ID	Activity Name	Original Start	Finish	June 2018	July 2018	August 2018	S	October 2018	N	D	January 2019	F	March 2019	April 2019	May 2019	June 2019	7/2019	
	Duration			27/03	10/17/24	01/08/15/22/28/05/12/19/26/02/08/16/23/30/07/14/21/28/04/11/18/25/02/09/16/23/30/06/13/20/27/03/10/17/24/03/10/17/24/31/07/14/21/28/05/12/19/28/02/09/16/23/30/07/												
Peak Road		368	6/1/18	6/3/19	◆ NTP & Preliminary Design Kickoff Meeting													6/3/19, Peak Road
P1000	NTP & Preliminary Design Kickoff Meeting	0	6/1/18															
Preliminary Design		120	6/1/18	9/28/18	◆ NTP & Preliminary Design Kickoff Meeting													
P1010	Preliminary Alignment	30	6/1/18	6/30/18	0%													
P1020	Alignment & ROW Review Meeting	0	7/2/18	◆ Alignment & ROW Review Meeting														
P1030	Preliminary Engineering Report	120	6/1/18	9/28/18	0%													
Develop Row Maps		137	7/2/18	11/15/18	◆ Develop Row Maps													
P1040	Develop Row Maps	119	7/2/18	10/28/18	0%													
P1050	Row Maps Approved	0		11/15/18	◆ Row Maps Approved													
Final Design		246	10/1/18	6/3/19	◆ Design Kickoff Meeting													6/3/19, Final Design
P1060	Design Kickoff Meeting	0	10/1/18															
P1070	70 % Submittal	124	10/1/18	2/1/19	0%													
P1080	Fort Bend County Review	15	2/1/19	2/15/19	0%													
P1090	95 % Submittal	43	2/18/19	4/1/19	0%													
P1100	Fort Bend County Review	15	4/1/19	4/15/19	0%													
P1110	100% Final Submittal	49	4/16/19	6/3/19	0%													