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STATE OF TEXAS §
 §
COUNTY OF FORT BEND §

AGREEMENT FOR PROFESSIONAL ENGINEERING SERVICES - DESIGN

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 IDC, Inc. (hereinafter "Contractor"), a company authorized to conduct business in the State of Texas.

WITNESSETH

WHEREAS, County desires that Contractor provide certain professional engineering services for final design of FM 2759/FM 762 (Crabb River Road) Phase II from Rabbs Bayou to George Ranch High School (LCISD), under the FM 2759/FM 762 (Crabb River Road) Phase II – Project No. X28 (hereinafter "Services") pursuant to SOQ 07-080; 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 Services to County as defined in the Scope of Services (attached hereto as Exhibit A).

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 two million one hundred sixty-five thousand fifty-nine dollars and 00/100 (\$2,165,059.00). In no case shall the amount paid by County under this Agreement exceed the Maximum Compensation without an approved change order.

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 and two (2) original hard copies of invoices 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 two million one hundred sixty-five thousand fifty-nine dollars and 00/100 (\$2,165,059.00), 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 two million one hundred sixty-five thousand fifty-nine dollars and 00/100 (\$2,165,059.00).

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 forty-two (42) months thereafter. 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

7.1.1 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, excluding Professional Liability, 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 DEFEND COUNTY AGAINST ALL LOSSES, LIABILITIES, CLAIMS, CAUSES OF ACTION, AND OTHER EXPENSES, INCLUDING REASONABLE ATTORNEYS FEES, ARISING FROM ACTIVITIES OF CONTRACTOR, ITS AGENTS, SERVANTS OR EMPLOYEES, PERFORMED UNDER THIS AGREEMENT THAT RESULT FROM THE NEGLIGENT ACT, 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, 1st Floor
Richmond, Texas 77469

Contractor: IDC, Inc.
Attn: Jim Gonzales, President and CEO
11111 Wilcrest Green, Suite 250
Houston, Texas 77042

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. Performance Warranty

16.1 Contractor warrants to County that Contractor has the skill and knowledge ordinarily possessed by well-informed members of its trade or profession practicing in the greater Houston metropolitan area and Contractor will apply that skill and knowledge with care and diligence to ensure that the Services provided hereunder will be performed and delivered in accordance with the highest professional standards.

16.2 Contractor warrants to County that the Services will be free from material errors and will materially conform to all requirements and specifications contained in the attached Exhibit A.

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.

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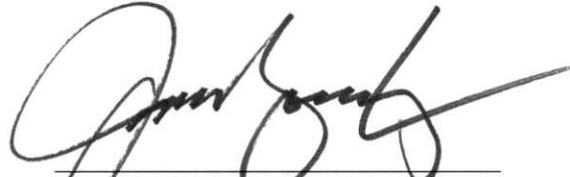
IN WITNESS WHEREOF, the parties hereto have signed or have caused their respective names to be signed to multiple counterparts to be effective on the 5 day of May, 2015.

FORT BEND COUNTY


Robert E. Hebert, County Judge

5-5-2015
Date

IDC, INC.


Jim Gonzales, President and CEO


4-29-15
Date

ATTEST:


Laura Richard, County Clerk



APPROVED:


Richard W. Stolleis, P.E., County Engineer

AUDITOR'S CERTIFICATE

I hereby certify that funds are available in the amount of \$ 2,165,059.⁰⁰ to accomplish and pay the obligation of Fort Bend County under this contract.


Robert Edward Sturdivant, County Auditor

MDS

EXHIBIT A



Planners - Engineers - Program Managers

April 22, 2015

Mr. Richard Stolleis, P.E.
Fort Bend County Engineer
301 Jackson Street, 4th Floor
Richmond, Texas 77469

Re: FM2759/FM762 (Crabb River Road) Phase II Improvements Cost Proposal
from Rabbs Bayou to George Ranch High School (LCISD)

Dear Mr. Stolleis:

IDC is pleased to submit its proposal to provide professional services for final design of Crabb River Rd Phase II improvements from Rabbs Bayou to George Ranch High School (LCISD). The work will be performed by IDC and its three subconsultants. IDC will provide overall project management and coordination, roadway design, drainage design, signing and pavement markings and traffic signal design. PB (Parsons Brinckerhoff) will provide professional services for Traffic Control Plan, Bridge/Culvert Design, Noise Wall Design, SW3P, Illumination and Lighting design. Huitt-Zollars will provide professional services for engineering survey. HTS, Inc. will provide Geotechnical investigations.

The following is the breakdown of cost proposal:

IDC	\$ 1,502,332.00
PB	\$ 352,410.00
Huitt-Zollars	\$ 250,305.00
HTS, Inc	\$ 60,012.00
Total	\$ 2,165,059.00

The detailed cost proposal and scope of services are attached.

Sincerely,

Jim Gonzales, MBA

President & CEO

IDC Inc.

ATTACHMENT

PLANS, SPECIFICATIONS AND ESTIMATE

Crabb River Road Improvements from Rabbs Bayou to George Ranch High School (LCISD)

IDC, INC. FEE

Task I - ROADWAY DESIGN CONTROLS	\$364,406.00
Task II - DRAINAGE DESIGN	\$384,007.00
Task III - SIGNING AND PAVEMENT MARKINGS	\$77,433.00
Task IV - TRAFFIC SIGNALIZATION	\$95,396.00
Task V - MISCELLANEOUS ROADWAY	\$258,911.00
Task VI - GENERAL NOTES & SPECIFICATIONS	\$34,377.00
Task VII - CONSTRUCTION COST ESTIMATE	\$20,112.00
Task VIII - PREPARATION & SUBMITTAL OF PS&E	\$29,209.00
Task IX - PROJECT MGMT & COORDINATION	\$231,255.00
Sub Total IDC FEE (Labor)	\$1,495,106.00
Sub Total IDC FEE (Expenses)	\$7,226.00
GRAND TOTAL IDC, Inc (Labor & Expense)	\$1,502,332.00

SUB-CONSULTANT FEE STRUCTURE

1. Parsons Brinckerhoff, Inc. FEE	
Task - I - PROJECT MANAGEMENT	\$21,577.00
Task II - SW3P	\$31,023.00
Task III - TRAFFIC CONTROL PLANS	\$91,742.00
Task IV - RABBS BAYOU BRIDGE DESIGN	\$116,171.00
Task V - GAPPS SLOUGH CULVERT LAYOUT DESIGN	\$20,165.00
Task VI - NOISE WALL DESIGN	\$32,519.00
TASK VII - ILLUMINATION/SAFETY LIGHTING DESIGN	\$15,147.00
TASK VIII - SUBMITTAL	\$15,471.00
Sub Total PB Fee (Labor)	\$343,815.00
Sub Total PB Fee (Expenses)	\$8,595.00
GRAND TOTAL PB, Inc (Labor & Expense)	\$352,410.00
2. SURVEYING by HUITT-ZOLLARS, INC. FEE	
Task - Topographic & Planimetric Survey with H/V Controls	
GRAND TOTAL SURVEYING - HZI Services	\$250,305.00
3. GEOTECHNICAL INVESTIGATION by HTS, Inc	
Task - Provide Geotechnical Services For Phase II	
GRAND TOTAL GEOTECHNICAL INVESTIGATION - HTS, Inc Services	\$60,012.00
GRAND TOTAL PRELIM. & FINAL DESIGN SERVICES CRABB RIVER ROAD - PHASE II	\$ 2,165,059.00

**ATTACHMENT A
SCOPE OF SERVICES
CRABB RIVER RD. PHASE II**

IDC, Inc

SCOPE OF SERVICES

**Final Design & PS&E FM 2759/FM 762 (Crabb River Road)
Phase II Improvements
From North of Rabbs Bayou to South of George Ranch High School (LCISD)

(Station 142+00 to Station 296+00)**

GENERAL DESCRIPTION

The work to be performed by IDC, Inc under this scope of work consists of providing various design engineering and coordination services for the development of Final Design PS&E package for the Crabb River Road Phase II project, a distance of approximately 2.9 miles.

Crabb River Road will be widened from existing 3-lane open ditch roadway and 2-lane open ditch roadway to 4-lane divided curb and gutter roadway from north of Rabbs Bayou to BNSF RR and 4-lane divided open ditch roadway from BNSF RR to south of George Ranch High School (LCISD).

GENERAL REQUIREMENTS

Produce roadway plans including cross-sections, specifications and estimates (PS&E); and prepare construction bid documents.

Furnish computer media and computer graphics files in compliance with the FB County Engineer's requirements.

Submit 30%, 60%, 90% and final (signed/sealed) PS&E packages for review by the FB County Engineer.

Coordinate contract documents preparation with the FB County Engineer.

Provide project planning and control to include quality management.

Provide an accurate, complete and constructible set of contract documents.

If so directed by FB County, make the revisions to the contract documents, as reported during the design process.

1) ROADWAY

The purpose of this task is to prepare the roadway design and develop the final drawings, using the CADD standards provided by the FB County Engineer and required by FB County, which will be included in the contract documents for construction.

**ATTACHMENT A
SCOPE OF SERVICES
CRABB RIVER RD. PHASE II**

The scope for Roadway work is as follows:

- a) Develop existing typical sections for all Crabb River Road elements.
- b) Develop proposed typical section sheets for Crabb River Road.
- c) Develop proposed typical section sheets for side streets.
- d) Prepare roadway plan and profile sheets for the proposed Crabb River Road (1" = 50' H, 1" = 4' V) showing horizontal and vertical geometric designs, which will be based on the approved schematic. Refine the horizontal and vertical alignments as needed for the detailed PS&E phase design.
- e) Prepare horizontal alignment data sheets. (1"=100')
- f) Prepare Thompson Rd P&P sheets.
- g) Prepare intersection layouts and grading for side streets.

Prepare intersection layouts including the following side streets:

- 1. Greatwood Knoll Dr.
- 2. Tara Dr.
- 3. Rabb Ridge Dr.
- 4. Harpers Dr.
- 5. River Rd.
- 6. Thompson Rd.
- 7. Exist Dr.
- 8. Bridlewood Dr.
- 9. Berdett Rd.
- 10. Future Rd.
- 11. School Entrance

- h) Prepare miscellaneous roadway details.
- i) Provide driveway connection details for Crabb River Road.
- j) Select roadway standards.
- k) Prepare roadway summary sheets.

2) DRAINAGE

The purpose of this task is to prepare drainage plans and details, including:

**ATTACHMENT A
SCOPE OF SERVICES
CRABB RIVER RD. PHASE II**

- a) Prepare overall drainage area maps for proposed improvements within the project limits.
- b) Prepare inlet drainage area map layouts.
- c) Prepare drainage plan/profile sheets for storm drain systems and outfall ditches, outlet structures. Prepare storm sewer plan/profile drawings and special plan details, where required, for storm sewer system, laterals, junction boxes, outfall structures, etc. Identify and resolve potential utility conflicts during project design. Drawings will be prepared on 11"X 17" sheet at horizontal scale of 1"=50' and vertical scale of 1"=4'.
- d) Prepare Thompson Rd. drainage P&P sheets.
- e) Prepare runoff calculations sheets and WinStorm model calculation sheets.
- f) Prepare drainage ditch calculation sheets.
- g) Develop proposed bridge crossing analysis calculation sheets at Rabbs Bayou.
- h) Develop proposed culvert crossing analysis calculation sheets at Gapps Slough.
- i) Prepare drainage lateral pipe layout sheets.
- j) Prepare miscellaneous drainage details for outlet protection, outlet structures and utility accommodation structures.
- k) Prepare three detention ponds design:
 - i. Detention Pond #1 @ Rabbs Bayou
 - ii. Detention Pond #2 @ Gapps Bayou
 - iii. Detention Pond #3 @ Gapps Bayou
- l) Select drainage standards sheets.
- m) Prepare drainage summaries.

3) SIGNING & PAVEMENT MARKINGS

Prepare layouts (1" = 100' double bank) showing signs and pavement markings. IDC shall design all permanent signing and markings in accordance with TxDOT Houston District guidelines and the *1980 Texas Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways* (latest revision). After a full review of the final proposed roadway plans, the locations and type of all necessary proposed warning and regulatory signs shall be determined. IDC shall then prepare drawings depicting all proposed pavement markings, and all proposed signing for the Project. Permanent

**ATTACHMENT A
SCOPE OF SERVICES
CRABB RIVER RD. PHASE II**

signing and marking design shall consist of the following drawings for the entire Project:

- a) Signing and Pavement Marking Layouts (Details for all special signs and marking as required for the Project).
- b) Small Sign Summary (to identify all proposed small signs and mounting materials).
- c) Pavement Marking Summary (to identify all proposed pavement markings and delineators).
- d) Standard Detail Drawings (to provide guidance to the contractor during construction of all small signing). Existing Small Signing and Inventory (to identify all existing signs).

4) TRAFFIC SIGNALIZATION

Prepare traffic signal warrant study and traffic signal designs at following intersections:

- a) Tara Drive
- b) Thompson Road
- c) LCISD school entrance

5) MISCELLANEOUS ROADWAY

- a) Title sheet - Include a vicinity map of the project limits, project title and signature blocks.
- b) Index sheet(s) - List the sheets and standard drawings to be used on this project. All the sheets in the plan set will be numbered continuously including standard drawings.
- c) Project layout sheets – Prepare a small-scale plan view plot (1"=200', double bank) of the project showing/summarizing the alignment data, horizontal control, and the vertical control. Provide benchmark data and boring locations.

- d) Demolition layout sheets
- e) Earth cross-sections

Cross-sections will be submitted (Geopak) for review at 30%, 60%, 90% and final submittals. Copies will be given to the contractors prior to receiving bids.

- f) Existing utility plan layouts
- g) Proposed utility plan layouts
- h) Utility details

**ATTACHMENT A
SCOPE OF SERVICES
CRABB RIVER RD. PHASE II**

- i) Utility summaries
- j) RR exhibits

6) GENERAL NOTES AND SPECIFICATIONS

- a) Using latest TX DOT Houston District Master General Notes, prepare final general notes documents and specification list in Microsoft Word format.
- b) The FB County will supply the Authority's specific standard general notes and specifications for use by IDC, Inc. IDC will modify the notes and specifications to conform to the specific requirements for the section.

7) CONSTRUCTION COST ESTIMATE

- a) An estimate of the construction costs will be prepared based on plan quantities in standard TX DOT bid format at the 30%, 60%, 90%, 100% and final submittal stages of the project. More detailed and refined quantities will be updated for each successive submittal. All estimates shall be in Microsoft Excel format.
- b) The estimate may be based on TxDOT Houston District's average low bid unit prices, but modified based on quantities, phasing and other reasons pertinent to this project.

8) PREPARATION AND SUBMITTAL OF PS&E

- a) Provide submittals for the design for interim progress reviews by FB County at the 30%, 60%, 90% and final completion stage. Incorporate plan sheets and submittals prepared by other subconsultants for this project. All submittals will follow the PMP for content.
 - i. The 30% submittal shall include five (5) sets of legible 11"x17" construction drawings, construction cost estimate, and electronic file of the drawings in MicroStation V8 format.
 - ii. The 60% submittal shall include five (5) sets of legible 11"x17" construction drawings, construction cost estimate, and electronic file of the drawings in MicroStation V8i format.
 - iii. The 90% submittal shall include five (5) complete sets of legible 11"x17" construction drawings, two (2) specification lists, construction cost estimate, and electronic file of the drawings in MicroStation V8i format.
 - iv. The final 100% complete (Bid Ready) submittal shall include an electronic file of the Bid Ready set of drawings in MicroStation V8i format – for reproduction during the

**ATTACHMENT A
SCOPE OF SERVICES
CRABB RIVER RD. PHASE II**

bidding period, five (5) complete sets of legible 11"x17" construction drawings, and one reproducible (Mylar) set.

- b) Upon award of construction contract, provide electronic files of the conformed set of the Contract Drawings in MicroStation V8i format, and the Specifications in Microsoft Word, to FB County.

9) PROJECT MANAGEMENT and SECTION LEAD MANAGEMENT TASKS

The purpose of this task is to provide the overall management of this design contract. Project files will be set up and overall coordination of the team and contact with FB County, TxDOT and sub-consultants (team members) will be maintained.

- a) Provide general coordination with the team members concerning administrative and technical issues. Report and coordinate with the FB County Engineer on any design issues and requests for information from sub-consultants.
- b) Prepare and submit monthly progress reports and invoices to the FB County Engineer 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.
- c) Provide internal administration of the project files. At the completion of the work, the project files will be submitted to the FB County Engineer.
- d) Prepare an overall project design schedule detailing the progression of the work. This schedule will include review dates by the FB County Engineer, submittal dates for deliverables, and estimated time frame to complete the work. 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 FB County Engineer.
- e) 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.
- f) Provide utility coordination to the FB County Engineer, including
- i. Coordinate with the FB County Engineer during the identification of utility conflicts.
 - ii. Obtain plans of utility locations from the various utility companies (private and public).
 - iii. Prepare utility conflict list and submit to the FB County Engineer at 30% submittal.
 - iv. Develop designs to avoid and/or minimize conflicts with existing and proposed utilities.

**ATTACHMENT A
SCOPE OF SERVICES
CRABB RIVER RD. PHASE II**

g) QA/QC Plan

Prepare and implement QA/QC program prior to submitting plans to the FB County Engineer for 30%, 60%, 90% and final submittal.

ATTACHMENT B

Crabb River Road Improvements from Rabbs Bayou to George Ranch High School (LCISD)

4/22/2015

IDC, INC FEE

Task Description	Sheet Count	Principal \$70	Project Manager \$65	Project Engineer \$55	Designer \$38	CADD Tech. \$28	Clerical \$25	Total Labor (Hours)	Direct Labor (Dollars)	Overhead 161.00% (Dollars)	Fixed Fee 12% (Dollars)	30% Submittal	60% Submittal	90% Submittal	100% Submittal	Total Amount (Dollars)
Task I - ROADWAY DESIGN CONTROLS																
A. Typical Sections - Existing	4	8	10	22	20	20		80	\$3,740	\$6,021	\$1,171	\$3,280	\$3,280	\$3,280	\$1,093	\$10,933
B. Crabb River Road Typical Sections - Proposed	7	16	60	80	80	80		316	\$14,700	\$23,667	\$4,604	\$12,891	\$12,891	\$12,891	\$4,297	\$42,971
C. Proposed Typical Sections (Side Street)	3	10	14	20	28	28		100	\$4,558	\$7,338	\$1,428	\$3,997	\$3,997	\$3,997	\$1,332	\$13,324
D. Roadway P&P Sheets (1"=50')	25	18	180	280	302	302		1,082	\$48,292	\$77,750	\$15,125	\$42,350	\$42,350	\$42,350	\$14,117	\$141,167
E. Horizontal Alignment Data Sheets (1"=100')	3	10	20	25	25	25		105	\$5,025	\$8,090	\$1,574	\$4,407	\$4,407	\$4,407	\$1,469	\$14,689
F. Thompson Rd. P&P Sheets (1"=50')	5	10	20	40	60	60		190	\$8,160	\$13,138	\$2,556	\$7,156	\$7,156	\$7,156	\$2,385	\$23,853
G. Intersection Layouts & Grading Sheets	12	10	50	120	120	120		420	\$18,470	\$29,737	\$5,785	\$16,197	\$16,197	\$16,197	\$5,399	\$53,992
H. Misc. Roadway Details	3	10	20	40	40	40		150	\$6,840	\$11,012	\$2,142	\$5,998	\$5,998	\$5,998	\$1,999	\$19,995
I. Driveway Table and Details	2	4	18	18	20	20		80	\$3,760	\$6,054	\$1,178	\$3,297	\$3,297	\$3,297	\$1,099	\$10,991
J. Select Roadway Standard		4	10	15	15	15		59	\$2,745	\$4,419	\$860	\$2,407	\$2,407	\$2,407	\$802	\$8,024
K. Roadway Summary Sheets	3	4	50	40	40	40		174	\$8,370	\$13,476	\$2,621	\$7,340	\$7,340	\$7,340	\$2,447	\$24,467
Subtotal	64	96	392	645	695	695	0	2,523	\$113,645	\$200,702.60	\$35,562.29	\$109,322	\$109,322	\$109,322	\$36,441	\$364,406
Task II - DRAINAGE DESIGN																
A. Overall Drainage Area Map	1	2	15	12	10	10		49	\$2,435	\$3,920	\$763	\$2,135	\$2,135	\$2,135	\$712	\$7,118
B. Inlet drainage area map layouts	13	4	30	120	100	100		354	\$15,430	\$24,842	\$4,833	\$13,531	\$13,531	\$13,531	\$4,510	\$45,105
C. Drainage P&P Sheets (1"=50')	25	10	160	200	180	180		730	\$33,980	\$54,708	\$10,643	\$29,799	\$29,799	\$29,799	\$9,933	\$99,330
D. Thompson Rd. Drainage P&P Sheets	5	4	22	60	60	60		206	\$8,970	\$14,442	\$2,809	\$7,866	\$7,866	\$7,866	\$2,622	\$26,221
E. Crabb River Road Runoff Calculations & Winstorm Model	10	4	40	100	100	100		344	\$14,980	\$24,118	\$4,692	\$13,137	\$13,137	\$13,137	\$4,379	\$43,790
F. Drainage Ditch Calculation Sheet	1	2	10	12	12	12		48	\$2,242	\$3,610	\$702	\$1,966	\$1,966	\$1,966	\$655	\$6,554
G. Rabbs Bayou Bridge Crossing Calculation Sheets	2	2	15	30	30	30		107	\$4,745	\$7,639	\$1,486	\$4,161	\$4,161	\$4,161	\$1,387	\$13,871
H. Gapps Bayou Culvert Crossing Calculation Sheets	2	2	15	30	30	30		107	\$4,745	\$7,639	\$1,486	\$4,161	\$4,161	\$4,161	\$1,387	\$13,871
I. Lateral Sheets	12	2	40	100	100	100		342	\$14,840	\$23,892	\$4,648	\$13,014	\$13,014	\$13,014	\$4,338	\$43,380
J. Miscellaneous Drainage Details	2	2	10	20	40	40		112	\$4,530	\$7,293	\$1,419	\$3,973	\$3,973	\$3,973	\$1,324	\$13,242
K. Detention Pond Design																
i. Detention Pond #1 @ Rabbs Bayou	3	4	22	40	40	30		136	\$6,270	\$10,095	\$1,964	\$5,499	\$5,499	\$5,499	\$1,833	\$18,328
ii. Detention Pond #2 @Gapps Slough	2	2	16	40	30	20		108	\$5,080	\$8,179	\$1,591	\$4,455	\$4,455	\$4,455	\$1,485	\$14,850
iii. Detention Pond #3 @Gapps Slough	2	2	16	40	30	20		108	\$5,080	\$8,179	\$1,591	\$4,455	\$4,455	\$4,455	\$1,485	\$14,850
L. Select Drainage Standards		2	10	18	18	18		66	\$2,968	\$4,778	\$930	\$2,603	\$2,603	\$2,603	\$868	\$8,676
M. Drainage Summaries	2	2	20	30	30	30		112	\$5,070	\$8,163	\$1,588	\$4,446	\$4,446	\$4,446	\$1,482	\$14,821
Subtotal	82	46	441	852	810	780	0	2,929	\$131,365	211,498	41,144	115,202	115,202	115,202	38,401	\$384,007
Task III - SIGNING AND PAVEMENT MARKINGS																
A. Sign & Pavement Marking Layouts (1"=50')	26	2	30	120	120	120		392	\$16,610	\$26,742	\$5,202	\$14,566	\$14,566	\$14,566	\$4,855	\$48,554
B. Small Sign Summary	4	2	15	18	18	18		71	\$3,293	\$5,302	\$1,031	\$2,888	\$2,888	\$2,888	\$963	\$9,626
C. Pavement Marking Summary	1	2	15	18	18	18		71	\$3,293	\$5,302	\$1,031	\$2,888	\$2,888	\$2,888	\$963	\$9,626
D. Standard Detail Drawings, Existing Small Signing & Inventory	8	2	15	18	18	18		71	\$3,293	\$5,302	\$1,031	\$2,888	\$2,888	\$2,888	\$963	\$9,626
Subtotal	39	8	75	174	174	174	0	605	\$26,489	\$42,647	\$8,296	\$23,230	\$23,230	\$23,230	\$7,743	\$77,433
Task IV - TRAFFIC SIGNALIZATION																
Traffic Signal Warrant Study at Tara Drive		2	10	18	18	18		66	\$2,968	\$4,778	\$930	\$2,603	\$2,603	\$2,603	\$868	\$8,676
Traffic Signal Warrant Study at Thompson		2	10	18	18	18		66	\$2,968	\$4,778	\$930	\$2,603	\$2,603	\$2,603	\$868	\$8,676
Traffic Signal Warrant Study at School Entrance		2	10	18	18	18		66	\$2,968	\$4,778	\$930	\$2,603	\$2,603	\$2,603	\$868	\$8,676
Traffic Signal Design at Tara Drive		8	20	50	50	50		178	\$7,910	\$12,735	\$2,477	\$6,937	\$6,937	\$6,937	\$2,312	\$23,123
Traffic Signal Design at Thompson		8	20	50	50	50		178	\$7,910	\$12,735	\$2,477	\$6,937	\$6,937	\$6,937	\$2,312	\$23,123

ATTACHMENT B

Crabb River Road Improvements from Rabbs Bayou to George Ranch High School (LCISD)
4/22/2015

IDC, INC FEE

Task Description	Sheet Count	Principal \$70	Project Manager \$65	Project Engineer \$55	Designer \$38	CADD Tech. \$28	Clerical \$25	Total Labor (Hours)	Direct Labor (Dollars)	Overhead 161.00% (Dollars)	Fixed Fee 12% (Dollars)	30% Submittal	60% Submittal	90% Submittal	100% Submittal	Total Amount (Dollars)
Traffic signal Design at School Entrance		8	20	50	50	50		178	\$7,910	\$12,735	\$2,477	\$6,937	\$6,937	\$6,937	\$2,312	\$23,123
Subtotal		24	60	150	150	150	0	534	\$23,730	38,205	7,432	28,619	28,619	28,619	9,540	95,396

Task V - MISCELLANEOUS ROADWAY

A. Title Sheet	1	2	15	20	18	12		67	\$3,235	\$5,208	\$1,013	\$2,837	\$2,837	\$2,837	\$946	\$9,457
B. Index Sheet	2	2	20	20	20	20		82	\$3,860	\$6,215	\$1,209	\$3,385	\$3,385	\$3,385	\$1,128	\$11,284
C. Project Layout Sheets	10	2	30	100	100	100		332	\$14,190	\$22,846	\$4,444	\$12,444	\$12,444	\$12,444	\$4,148	\$41,480
D. Demolition Layout Sheets (1"=100')	7	15	20	80	60	60		235	\$10,710	\$17,243	\$3,354	\$9,392	\$9,392	\$9,392	\$3,131	\$31,307
E. Earth Cross-Sections		20	80	100	100	100		400	\$18,700	\$30,107	\$5,857	\$16,399	\$16,399	\$16,399	\$5,466	\$54,664
F. Existing utility Layouts	6	16	20	80	80	80		276	\$12,100	\$19,481	\$3,790	\$10,611	\$10,611	\$10,611	\$3,537	\$35,371
G. Proposed Utility Plan	6	16	20	80	80	80		276	\$12,100	\$19,481	\$3,790	\$10,611	\$10,611	\$10,611	\$3,537	\$35,371
H. Utility Details	6	4	20	40	40	40		144	\$6,420	\$10,336	\$2,011	\$5,630	\$5,630	\$5,630	\$1,877	\$18,767
I. Utility Summaries	1	4	16	16	16	16		68	\$3,256	\$5,242	\$1,020	\$2,855	\$2,855	\$2,855	\$952	\$9,518
J. RR Exhibit	2	4	20	20	20	20		84	\$4,000	\$6,440	\$1,253	\$3,508	\$3,508	\$3,508	\$1,169	\$11,693
Subtotal	41	57	185	400	378	372	0	1,392	\$62,795	\$101,099.95	\$19,667.39	\$77,673	\$77,673	\$77,673	\$25,891	\$258,911

Task VI - GENERAL NOTES & SPECIFICATIONS

A. Prepare Final General Notes Documents & Specs List in Word	1		16	40	40	40		136	\$5,880	\$9,467	\$1,842	\$5,157	\$5,157	\$5,157	\$1,719	\$17,188
B. Modify Notes & Specs to Conform to Requirements	1		16	40	40	40		136	\$5,880	\$9,467	\$1,842	\$5,157	\$5,157	\$5,157	\$1,719	\$17,188
Subtotal	2		32	80	80	80	0	272	\$11,760	\$18,934	\$3,683	\$10,313	\$10,313	\$10,313	\$3,438	\$34,377

Task VII - CONSTRUCTION COST ESTIMATE

A. Estimate of Construction Costs at 30%, 60%, 90%, 100% & Final Subm	1		20	60	60			140	\$6,880	\$11,077	\$2,155	\$6,033	\$6,033	\$6,033	\$2,011	\$20,112
Subtotal	1	0	20	60	60	0	0	140	\$6,880	\$11,077	\$2,155	\$6,033	\$6,033	\$6,033	\$2,011	\$20,112

Task VIII - PREPARATION & SUBMITTAL OF PS&E

Submission Preparation & QA/QC Review																
1. 30% Submittal		2	20	6	8	8	8	52	\$2,498	\$4,022	\$782	\$2,191	\$2,191	\$2,191	\$730	\$7,302
2. 60% Submittal		2	20	6	8	8	8	52	\$2,498	\$4,022	\$782	\$2,191	\$2,191	\$2,191	\$730	\$7,302
3. 90% Submittal		2	20	6	8	8	8	52	\$2,498	\$4,022	\$782	\$2,191	\$2,191	\$2,191	\$730	\$7,302
5. Final Submittal		2	20	6	8	8	8	52	\$2,498	\$4,022	\$782	\$2,191	\$2,191	\$2,191	\$730	\$7,302
Subtotal	0	8	80	24	32	32	32	208	\$9,992	\$16,087	3,129	\$8,763	\$8,763	\$8,763	\$2,921	\$29,209

Task IX - PROJECT MGMT & COORDINATION

A. Coordination w/ FB County/TxDOT Engineer /Sub-Consultants		20	120	120				40	\$300	\$16,800	\$27,048	\$5,262	\$14,733	\$14,733	\$14,733	\$4,911	\$49,110
B. Monthly Progress Reports & Invoices to FBGPTRA (9 Months)		15	60	60				50	185	\$9,500	\$15,295	\$2,975	\$8,331	\$8,331	\$8,331	\$2,777	\$27,770
C. Internal Administration of Project Files		6	80	80				50	216	\$11,270	\$18,145	\$3,530	\$9,883	\$9,883	\$9,883	\$3,294	\$32,944
D. Prepare Construction Timeline Schedule		12	100	100				20	232	\$13,340	\$21,477	\$4,178	\$11,699	\$11,699	\$11,699	\$3,900	\$38,995
E. Attend Coord & Interim Progress Review Mtg. w/ Minutes		20	60	60				50	190	\$9,850	\$15,859	\$3,085	\$8,638	\$8,638	\$8,638	\$2,879	\$28,794
F. Coordination for Utility Conflict		20	60	60				50	190	\$9,850	\$15,859	\$3,085	\$8,638	\$8,638	\$8,638	\$2,879	\$28,794
G. QA/QC Plan		10	60	60				24	154	\$8,500	\$13,685	\$2,862	\$7,454	\$7,454	\$7,454	\$2,485	\$24,847
Subtotal	0	103	540	540	0	0	284	1,467	\$79,110	\$127,367	\$24,777	\$69,376	\$69,376	\$69,376	\$23,125	\$231,255	

ATTACHMENT B

Crabb River Road Improvements from Rabbs Bayou to George Ranch High School (LCISD)

4/22/2015

IDC, INC FEE

Task Description	Sheet Count	Principal	Project Manager	Project Engineer	Designer	CADD Tech.	Clerical	Total Labor (Hours)	Direct Labor (Dollars)	Overhead 161.00% (Dollars)	Fixed Fee 12% (Dollars)	30% Submittal	60% Submittal	90% Submittal	100% Submittal	Total Amount (Dollars)
		\$70	\$65	\$55	\$38	\$28	\$25									

Total Labor **\$1,495,106**

Direct Costs	Unit	Qty	Unit Cost	
Deliveries	Each	20	50	\$1,000
Mileage	Mi	400	0.565	\$226
Outside Reproduction (30%, 60%, 90%, 100% Submissions)	Printing	4	1,500	\$6,000

Total Direct Costs (IDC) **\$7,226**

TOTAL IDC COSTS **\$1,502,332**

**ATTACHMENT A
SCOPE OF SERVICES
CRABB RIVER RD IMPROVEMENTS (PHASE II)**

**PARSONS BRINCERHOFF, INC.
SCOPE OF SERVICES
CRABB RIVER ROAD IMPROVEMENTS (PHASE II)
DESIGN SERVICES**

(Limits: From Rabbs Bayou to George Ranch High School (Lamar CISD))

Task I. PROJECT MANAGEMENT

The purpose of this task is to provide the overall management of this design contract. Project files will be set up and overall coordination with IDC will be maintained.

- a) Provide general coordination with the team members concerning administrative and technical issues. Report and coordinate with IDC on any design issues and requests for information.
- b) Prepare and submit monthly progress reports and invoices to IDC 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.
- c) Internal administration of the project files. At the completion of the work, the project files will be submitted to IDC.
- d) Prepare an overall project design schedule detailing the progression of the work. This schedule will include review dates IDC, submittal dates for deliverables, and estimated time frame to complete the work. Changes or adjustments in the schedule caused by delays due to unforeseen task difficulties or lengthy review times will be shown and reported to IDC.
- e) Attend coordination and interim progress review meetings every month or as necessary, to be scheduled on an as-needed basis.

Task II. SW3P

The Engineer shall develop SW3P plans for Crabb River Rd from Rabbs Bayou to George Ranch High School (LCISD).

- a) Storm Water Pollution Prevention Plans (SW3P)
 - 1) Develop SW3P, based on latest NPDES and any Fort Bend County requirements, on separate sheets (may be double banked) but in conformance with the TCP, to minimize potential impact to receiving

**ATTACHMENT A
SCOPE OF SERVICES
CRABB RIVER RD IMPROVEMENTS (PHASE II)**

waterways. The SW3P shall include text describing the plan, quantities, type, phase and locations of erosion control devices and any required permanent erosion control measures.

Task III. TRAFFIC CONTROL PLANS

The purpose of this task is to prepare traffic control plans and details, including:

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.

a) General

- 1) A TCP shall show the various construction sequences (phases) and phases with barricades, signing, striping, delineation, detours, temporary retaining walls, temporary drainage, and any other devices used for control of traffic during construction.

b) Manuals and Guidelines

- 1) The following manuals will be used in the development of the TCP:
 - (a) Texas Department Of Transportation (TXDOT) 2014 Standard Specifications For Construction and Maintenance Of Highways, Streets, And Bridges
 - (b) Texas Manual On Uniform Traffic Control Devices, latest version, (TMUTCD)
 - (c) AASHTO's "A Policy on Geometric Design of Highways and Streets", latest version

c) Traffic Control Plans:

- 1) Traffic control plan layouts will be prepared for the various phases and steps of the project according to the TMUTCD and the General Guidelines for Traffic Handling. Each phase of the TCP shall show the location of the traffic flow indicated by directional arrows. The construction areas will be clearly defined. All barricades, traffic barriers, concrete traffic barrier end treatments, pavement markings, signing (regulatory, warning, and guide), flaggers, temporary roadways and walls, and drainage shall be shown on the plans. Features that are existing or under construction, such as, roadways, retaining walls, bridges, drainage structures, etc. shall also be shown.
- 2) Traffic control plan typical sections will be prepared for each stage of the construction sequence to delineate the position of the existing traffic with respect to the proposed construction and will be shown on each TCP layout sheet. Detour

**ATTACHMENT A
SCOPE OF SERVICES
CRABB RIVER RD IMPROVEMENTS (PHASE II)**

pavement design will be provided by FBGPTRA; roadway section width will be provided by the Engineer.

- 3) Where detours or temporary pavement are required, a separate phase shall be shown for this construction, with traffic handling, profiles and typical sections.
- 4) At a minimum, the following sheets are to be included in the TCP package:
 - (a) TCP Layouts (1"=100' Scale) – Number of Phases as required.
 - (b) TCP Overview with Narrative (if more than one phase)
 - (c) Typical Sections
 - (d) Detour Layouts for temporary Road Closures
 - (e) Quantities

TASK IV. RABBS BAYOU BRIDGE DESIGN

The purpose of this task is to prepare bridge plans and details for the Crabb River Road bridge at Rabbs Bayou. The bridge is approximately 250' long and 85' wide.

The design of bridges will conform to the FBGPTRA aesthetic standards or the City of Sugar Land aesthetic program as applicable for the project

The bridge plans will include:

a) Bridge Layouts.

- 1) The Engineer shall prepare bridge layout plans and elevations for all bridge locations in accordance with the latest edition of the TxDOT's *Bridge Design Manual*, *Bridge Division Operation and Planning Manual*, and *Bridge Detailer's Manual*. All bridge layouts shall be at 1"= 40' scale (11"x17" plan sheets) and shall contain geotechnical boring locations.

The Bridge layouts in Plan View shall contain the following information, where applicable:

- (a) Horizontal curve information or bearing of centerline/baseline, including horizontal, vertical and template information of all roadways or railroads crossed
- (b) Including horizontal, vertical and template information of all roadways or railroads crossed
- (c) Bearing of centerline or reference line
- (d) Skew angle(s)
- (e) Slope for header banks and approach fills
- (f) Control stations at beginning and ending of bridge (with deck elevation)
- (g) Approach pavement and crown width

**ATTACHMENT A
SCOPE OF SERVICES
CRABB RIVER RD IMPROVEMENTS (PHASE II)**

- (h) Bridge roadway width and curbs, face of rail, shoulders or sidewalks
- (i) Approach slab and curb returns
- (j) Limits and type of riprap
- (k) Proposed features under structure
- (l) Location of profile grade line
- (m) North Arrow
- (n) Typical bridge roadway section including preliminary proposed beam types and spacings.
- (o) Cross slope and superelevation data
- (p) Minimum horizontal clearance
- (q) Location of soil core holes (station and offset)
- (r) Bent stations and bearings
- (s) Retaining wall locations
- (t) Traffic flow directional arrows
- (u) Railing types shown
- (v) Joint types and seal size, if used
- (w) Beam line numbers consistent with span details
- (x) Critical horizontal clearances (location of railroad tracks, nearby structures and utilities)

The Bridge layouts in Elevation View shall contain the following information, where applicable:

- (a) Type of foundation
 - (b) Finished grade elevations at beginning and end of bridge
 - (c) Overall length of structure
 - (d) Length, type of spans and units
 - (e) Type of railing
 - (f) Minimum calculated vertical clearance(s)
 - (g) Existing and proposed ground lines clearly marked
 - (h) Grid elevations and stations
 - (i) Bent numbers encircled
 - (j) Standard Title
 - (k) Profile grade data
 - (l) Type of riprap
 - (m) Soil Core Hole information with penetrometer test data
 - (n) Fixed/expansion condition of all bents
 - (o) Number, size and length of foundations
- 2) The Engineer shall evaluate and prepare bridge typical sections for bridges that require hydraulic modeling, or require fast track construction and construction sequencing.
- b) Bridge Design and Details
- (a) The Engineer shall perform designs and prepare detail drawings in accordance with standard requirements of the **County**. All bridge design shall be in conformance with the latest edition of TxDOT's Bridge Design Manual, Bridge

**ATTACHMENT A
SCOPE OF SERVICES
CRABB RIVER RD IMPROVEMENTS (PHASE II)**

Project Development Manual, Bridge Detailing Manual, and AASHTO LRFD Bridge Design Specifications.

c) Final Design Calculations and Details

- 1) All highway bridge structures shall be designed for HL 93 loading. All bridge design shall be in conformance with the latest edition of the TxDOT's *Bridge Design Manual, Bridge Division Operation and Planning Manual, Bridge Detailer's Manual*, and AASHTO *LRFD Bridge Design Specifications, 7th Edition* with the current interim. Final design calculations and final detail drawings for each structure will be provided in notebook format upon submission of structural review to the FBGPTRA ENGINEER.

d) Bridge Quantities Summary

- 1) Quantities for the bridge will be provided. These quantities will be incorporated onto summary sheets to be included in the plan set as part of the individual bridge plans.

TASK V. GAPPS SLOUGH CULVERT LAYOUT DESIGN

- 1) The purpose of this task is to prepare a culvert layouts for the cross culvert at Middle Bayou:

- a) Prepare a culvert layout(s) for the Gapps Slough cross culvert. Drawings will be prepared on 11"x17" sheets at a horizontal scale of 1"=100' and vertical scale of 1"=10'.

- 2) Temporary Drainage Facilities

Develop plans for temporary drainage facilities necessary during staged construction of the project. Ponding on or diverting of water onto roadways is not permissible. All temporary drainage facilities shall be shown on the Traffic Control Plan Sheets.

TASK VI. NOISE WALL DESIGN

The purpose of this task is to prepare noise wall layout sheets base upon the noise wall study recommendations performed by Parsons Brinckerhoff, Inc. Drawings will be prepared on 11"x17" sheets at a horizontal scale of 1" = 40' and vertical scale of 1" = 4'.

**ATTACHMENT A
SCOPE OF SERVICES
CRABB RIVER RD IMPROVEMENTS (PHASE II)**

TASK VII. ILLUMINATION/SAFETY LIGHTING DESIGN

The purpose of this task is to prepare separate safety lighting plans at three intersection locations: Tara Rd, FM 2759, and the entrance of George Ranch High School. Additional safety lighting will also be included at the north and south approaches of Crabb River Rd at the FM 2759 intersection location.

Task VIII. SUBMITTAL

GENERAL DESCRIPTION

The work to be performed by the Engineer under this scope of work consists of providing various roadway design engineering services for Crabb River Road PHASE 1A (Grand Parkway Segment C Frontage Road). The following is a detailed list of tasks which will be performed by the Engineer for this portion of Segment C.

GENERAL REQUIREMENTS

Furnish computer media and computer graphics files in compliance with the FBGPTRA Engineer's requirements.

Submit 30%, 60%, 90%, 95% and final (signed/sealed) PS&E packages for review by the Fort Bend Grand Parkway Toll Road Authority (FBGPTRA) Engineer.

Coordinate contract documents preparation with the FBGPTRA Engineer.

Provide project planning and control to include quality management.

The FBGPTRA will have the ultimate authority for determining what constitutes an accurate, complete and constructible set of design documents.

If so directed by FBGPTRA, make the revisions to the **design** documents, as reported during the design process.

1) GENERAL NOTES AND SPECIFICATIONS

- a) Using latest TxDOT Houston District Master General Notes, prepare final general notes documents and specification list in Microsoft Word format.
- b) The FBGPTRA will supply the Authority's specific standard general notes and specifications for use by the Engineer. The Engineer will modify the notes and specifications to conform to the specific requirements for the section.

**ATTACHMENT A
SCOPE OF SERVICES
CRABB RIVER RD IMPROVEMENTS (PHASE II)**

2) STANDARD DRAWINGS

- a) Select standard drawings applicable to the project from those provided by FBGPTRA ENGINEER. All standards should be obtained in an electronic format and comply with all CADD standards set forth by the FBGPTRA Engineer.
- b) Coordinate and combine standard drawings from other team members. Prepare final set standard drawings for submittal.

3) QUANTITY TAKE-OFFS AND QUANTITY SUMMARIES

- a) Quantities will be determined and included on summary sheets. The quantities will be included in tables and organized according to the bid item codes that will be used for construction. Quantities should be organized by item per sheet and totaled for the item and the project. Quantity calculations should be organized and easily verified by the FBGPTRA Engineer. Sample calculations should be prepared for each submittal for review by the FBGPTRA Engineer. Calculations should be organized by item, clear and concise, and in an electronic format that can be transmitted via e-mail, if necessary.
- b) Coordinate and combine quantity take-offs (stand alone sheets) from other program team members into overall project summary sheets for plans.

4) CONSTRUCTION COST ESTIMATE

- a) An estimate of the construction costs for items designed will be prepared based on plan quantities in standard TxDOT bid format at the 30%, 60%, 90%, 95% and final submittal stages of the project. More detailed and refined quantities will be updated for each successive submittal. All estimates shall be in Microsoft Excel format.
- b) The estimate may be based on TxDOT Houston District's average low bid unit prices, but modified based on quantities, phasing and other reasons pertinent to this project.

5) PREPARATION AND SUBMITTAL OF PS&E

- a) Provide submittals for the design, for interim progress reviews by FBGPTRA at the 30%, 60%, 90%, 95%, and final completion stage. All submittals will follow the Project Management Plan (PMP) for content.

**ATTACHMENT A
SCOPE OF SERVICES
CRABB RIVER RD IMPROVEMENTS (PHASE II)**

- 1) The 30% submittal shall include five (5) sets of legible 11"x17" construction drawings, construction cost estimate, and electronic file of the drawings in Microstation V8 format.
 - 2) The 60% submittal shall include five (5) sets of legible 11"x17" construction drawings, construction cost estimate, and electronic file of the drawings in Microstation V8 format.
 - 3) The 90% submittal shall include five (5) complete sets of legible 11"x17" construction drawings, two (2) specification lists, construction cost estimate, and electronic file of the drawings in Microstation V8 format.
 - 4) The 95% submittal shall include five (5) complete sets of legible 11"x17" construction drawings, two (2) specification lists, construction cost estimate, and electronic file of the drawings in Microstation V8 format.
 - 5) The final 100% complete (Bid Ready) submittal shall include an electronic file of the Bid Ready set of drawings in Microstation V8 format – for reproduction during the bidding period, five (5) complete sets of legible 11"x17" construction drawings, and one reproducible (mylar) set.
- b) All submittals shall include a copy of the engineer's internal QA/QC mark-ups.
- c) Upon award of construction contract, provide electronic files of the conformed set of the Contract Drawings in Microstation V8 format, and the Specifications in Microsoft Word, to FBGPTRA.

ATTACHMENT B
PARSONS BRINCKERHOFF
Crabb River Road Improvements from Rabbs Bayou to George Ranch High School (LCISD)

PARSONS BRINCKERHOFF	Project Principal \$264.71		Project Manager \$200.00		Sr. Bridge Engr. \$191.18		Sr Planner \$132.35		Sr. Engineer \$191.18		Sr. Traffic Engr \$170.59		Traffic Engineer \$141.18		Engineer \$129.41		EIT \$94.12		Sr. Designer \$123.53		CADD \$141.18		ADMIN \$100.00		Total			
	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost		
Project Management																												
Project Management		\$0	20	\$4,000		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0	20	\$4,000
Meetings	4	\$1,059	20	\$4,000		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0	24	\$5,059
QA/QC	8	\$2,118	18	\$3,600		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0	26	\$5,718
Monthly Reporting Invoices		\$0	18	\$3,600		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0	18	\$3,600
Project Schedule		\$0	16	\$3,200		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0	16	\$3,200
Subtotal Task	12	3,177	92	\$18,400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	104	\$21,577
SW3P PLANS																												
General Notes		\$0	1	\$200		\$0		\$0	1	\$191		\$0		\$0	2	\$259	4	\$376		\$0		\$0		\$0		\$0	8	\$1,026
SW3P Plans Per TCP Phasing		\$0	1	\$200		\$0		\$0	18	\$3,441		\$0		\$0	40	\$5,176	100	\$9,412		\$0		\$0		\$0		\$0	159	\$18,229
Quantity Summary		\$0	1	\$200		\$0		\$0	2	\$382		\$0		\$0	8	\$1,035	20	\$1,882		\$0		\$0		\$0		\$0	31	\$3,499
Standard sheets		\$0	1	\$200		\$0		\$0	2	\$382		\$0		\$0	8	\$1,035	12	\$1,129		\$0		\$0		\$0		\$0	23	\$2,746
QC Revisions /City and TxDOT		\$0	1	\$200		\$0		\$0	2	\$382		\$0		\$0	12	\$1,553	36	\$3,388		\$0		\$0		\$0		\$0	51	\$5,523
Subtotal Task	0	0	5	\$1,000	0	0	0	0	25	4,778	0	0	0	0	70	9,058	172	16,187	0	0	0	0	0	0	0	0	272	\$31,023
TRAFFIC CONTROL PLANS																												
General Notes		\$0	1	\$200		\$0		\$0	2	\$382		\$0		\$0	4	\$518		\$0		\$0		\$0		\$0		\$0	7	\$1,100
Quantity Summary		\$0	1	\$200		\$0		\$0	2	\$382		\$0		\$0	16	\$2,071	24	\$2,259		\$0		\$0		\$0		\$0	43	\$4,912
TCP Narrative		\$0	1	\$200		\$0		\$0	4	\$765		\$0		\$0	16	\$2,071	24	\$2,259		\$0		\$0		\$0		\$0	44	\$6,095
Advance Warning Signs		\$0	1	\$200		\$0		\$0	2	\$382		\$0		\$0	16	\$2,071	24	\$2,259		\$0		\$0		\$0		\$0	40	\$4,330
Bridge TCP Typical Sections		\$0	1	\$200	4	\$765		\$0	4	\$765		\$0		\$0	16	\$2,071	24	\$2,259		\$0		\$0		\$0		\$0	45	\$5,295
Roadway TCP Typical Sections		\$0	1	\$200		\$0		\$0	4	\$765		\$0		\$0	16	\$2,071	24	\$2,259		\$0		\$0		\$0		\$0	45	\$5,295
TCP Layouts (Sta 140+00 to Sta 180+00) 2 Phases 1" = 100'		\$0	1	\$200		\$0		\$0	16	\$3,059		\$0		\$0	24	\$3,106	60	\$5,647		\$0		\$0		\$0		\$0	101	\$12,012
TCP Layouts (Sta 180+00 to Sta 200+00) 3 Phases 1" = 100'		\$0	1	\$200		\$0		\$0	24	\$4,588		\$0		\$0	32	\$4,141	80	\$7,530		\$0		\$0		\$0		\$0	137	\$16,459
TCP Layouts (Sta 200+00 to Sta 294+00) 2 Phases 1" = 100'		\$0	1	\$200		\$0		\$0	20	\$3,824		\$0		\$0	24	\$3,106	40	\$3,765		\$0		\$0		\$0		\$0	85	\$10,895
TCP Intersection Details (2 Estimated)		\$0	1	\$200		\$0		\$0	10	\$1,912		\$0		\$0	20	\$2,588	40	\$3,765		\$0		\$0		\$0		\$0	71	\$8,485
Temporary Drainage Details		\$0	1	\$200		\$0		\$0	8	\$1,529		\$0		\$0	16	\$2,071	32	\$3,012		\$0		\$0		\$0		\$0	57	\$6,812
Standard sheets		\$0	1	\$200		\$0		\$0	4	\$765		\$0		\$0	8	\$1,035	16	\$1,506		\$0		\$0		\$0		\$0	20	\$2,271
TCP Details (Special) (2 Estimated)		\$0	1	\$200		\$0		\$0	4	\$765		\$0		\$0	8	\$1,035	16	\$1,506		\$0		\$0		\$0		\$0	29	\$3,506
QC Revisions /City and TxDOT		\$0	1	\$200		\$0		\$0	4	\$765		\$0		\$0	16	\$2,071	24	\$2,259		\$0		\$0		\$0		\$0	45	\$5,295
Subtotal Task	0	0	11	\$2,200	4	\$765	0	0	102	\$19,501	0	0	0	0	224	\$28,991	428	\$40,285	0	0	0	0	0	0	0	0	769	\$91,742
Bridge over Rabbs Bayou																												
Bridge Layout		\$0		\$0	8	\$1,529		\$0		\$0		\$0		\$0	24	\$3,106	12	\$1,129		\$0	16	\$2,259		\$0		\$0	60	\$8,023
Bridge Typical Section		\$0		\$0	6	\$1,147		\$0		\$0		\$0		\$0	16	\$2,071	12	\$1,129		\$0	24	\$3,388		\$0		\$0	58	\$7,736
EQ and Bearing Seat Elevations		\$0		\$0	6	\$1,147		\$0		\$0		\$0		\$0	16	\$2,071	12	\$1,129		\$0	12	\$1,694		\$0		\$0	46	\$6,041
Foundation Layouts		\$0		\$0	6	\$1,147		\$0		\$0		\$0		\$0	16	\$2,071	8	\$753		\$0	12	\$1,694		\$0		\$0	42	\$5,665
Foundation Details		\$0		\$0	6	\$1,147		\$0		\$0		\$0		\$0	16	\$2,071	12	\$1,129		\$0	12	\$1,694		\$0		\$0	46	\$6,041
Abutment Plan & Elevation		\$0		\$0	20	\$3,824		\$0		\$0		\$0		\$0	54	\$6,988	32	\$3,012		\$0	36	\$5,082		\$0		\$0	142	\$18,906
Abutment Details		\$0		\$0	8	\$1,529		\$0		\$0		\$0		\$0	28	\$3,623	18	\$1,694		\$0	16	\$2,259		\$0		\$0	70	\$9,105
Bent Plan & Elevation		\$0		\$0	12	\$2,294		\$0		\$0		\$0		\$0	32	\$4,141	16	\$1,506		\$0	24	\$3,388		\$0		\$0	84	\$11,329
Bent Details		\$0		\$0	12	\$2,294		\$0		\$0		\$0		\$0	32	\$4,141	16	\$1,506		\$0	24	\$3,388		\$0		\$0	84	\$11,329
Framing Plan		\$0		\$0	6	\$1,147		\$0		\$0		\$0		\$0	24	\$3,106	22	\$2,071		\$0	12	\$1,694		\$0		\$0	64	\$8,018
Slab Plan & Typical sections		\$0		\$0	6	\$1,147		\$0		\$0		\$0		\$0	18	\$2,329	12	\$1,129		\$0	56	\$7,906		\$0		\$0	92	\$12,511
Beam Design Data Sheet		\$0		\$0	6	\$1,147		\$0		\$0		\$0		\$0	18	\$2,329	12	\$1,129		\$0	12	\$1,694		\$0		\$0	48	\$6,299
Boring logs		\$0		\$0	2	\$382		\$0		\$0		\$0		\$0	12	\$1,553	8	\$753		\$0	8	\$1,129		\$0		\$0	30	\$3,817
Standard sheets		\$0		\$0	0	\$0		\$0	0	\$0		\$0		\$0	1	\$129	11	\$94		\$0	8	\$1,129		\$0		\$0	10	\$1,352
Subtotal Task	0	0	0	0	104	\$19,881	0	0	0	0	0	0	0	0	307	\$39,729	193	\$18,163	0	0	272	\$8,398	0	0	0	0	876	\$116,171
Gapps Slough Bridge-Class Culvert Layout Design																												
General Notes		\$0	1	\$200		\$0		\$0	2	\$382		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0	3	\$582
Culvert Layout/Plan and Profile		\$0	2	\$400		\$0		\$0	4	\$765		\$0		\$0		\$0	8	\$753	12	\$1,482		\$0		\$0		\$0	26	\$3,400
Drainage Details (Special)		\$0	1	\$200		\$0		\$0	4	\$765		\$0		\$0		\$0	4	\$376	12	\$1,482		\$0		\$0		\$0	21	\$2,823
Box Culvert Summary (BCS) Sheet		\$0	1	\$200		\$0		\$0	2	\$382		\$0		\$0		\$0	4	\$376	12	\$1,482		\$0		\$0		\$0	19	\$2,440
Quantity Summary		\$0	1	\$200		\$0		\$0	2	\$382		\$0		\$0		\$0	4	\$376	16	\$1,976		\$0		\$0		\$0	23	\$2,934
Standard sheets		\$0		\$0		\$0		\$0	2	\$382		\$0		\$0		\$0	4	\$376	16	\$1,976		\$0		\$0		\$0	22	\$2,734
QC Revisions /City and TxDOT		\$0		\$0		\$0		\$0	2	\$382		\$0		\$0		\$0	36	\$3,388	12	\$1,482		\$0		\$0		\$0	50	\$5,252
Subtotal Task	0	0	6	\$1,200	0	0	0	0	18	3,440	0	0	0	0	60	5,645	80	9,880	0	0	0	0	0	0	0	0	164	\$20,165
Noise Wall Design																												
General Notes		\$0		\$0		\$0		\$0	4	\$765		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0	4	\$765
Noise Wall Layout - NB-1A (Plan & Profile) 40 Scale		\$0																										

SUBMITTAL																										
QA (5 submittals)		\$0	30	\$6,000		\$0		\$0							\$0		\$0	30	\$2,824		\$0		\$0	60	\$8,624	
Plot, Assemble and Submit Plans (5 submittals)		\$0	5	\$1,000		\$0		\$0							\$0		\$0	20	\$1,882		\$0		\$0	25	\$2,882	
Cost Estimate		\$0	5	\$1,000	5	\$956		\$0	5	\$956	5	\$853		\$0		\$0					\$0		\$0	20	\$3,765	
Subtotal Task	0	0	40	\$8,000	5	\$956	0	0	5	\$956	5	\$853	0	0	0	0	0	50	\$4,706	0	0	0	0	0	105	\$14,471
Total Hours and Labor Cost	12	\$3,177	154	\$30,800	113	\$21,602	0	\$0	196	\$37,468	5	\$853	0	\$0	673	\$87,098	1,217	\$114,539	80	\$9,880	272	\$38,398	0	0	2,722	\$343,818
ODCs as 2.5% of Labor Plus Travel																										\$8,596
Total Cost																										\$352,410

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Billing Rate Calculator:

Direct Labor Rate:	90.00	88.00	85.00	45.00	85.00	56.00	48.00	44.00	32.00	42.00	48.00	34.00
Overhead (less FCC):	142.20	107.44	102.70	71.10	102.70	91.54	75.84	69.32	50.56	66.36	75.84	53.72
Facilities Cost of Capital (FCC):	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Profit:	32.51	24.56	23.48	16.25	23.48	20.95	17.34	15.89	11.56	15.17	17.34	12.28
Loaded Billing Rate:	264.71	200.00	191.18	132.35	191.18	170.95	141.18	129.41	94.12	123.53	141.18	100.00
Overhead Rate:	168.00%											
FCC Rate:	0.00%											
Profit Rate:	14.00%											

Notes: Changing the rates (labor, overhead, FCC and Profit) will change spreadsheet calculations.
 Any sum in the "Variance 1" line above may indicate a calculation error in the spreadsheet.
 Any "major" total in the "Variance 2" line above may indicate an error not attributable to "rounding."
 Rates have been escalated by 2% to take into account the August 09 rate increases.

April 20, 2015

Mr. Brian Zhang
Project Manager
IDC, Inc.
11111 Wilcrest Green Drive, Ste. 250
Houston, Texas 77042

**Re: Revised Proposal for Professional Surveying Services
Crabb River Road, Phase II**

Dear Mr. Zhang:

Huitt-Zollars, Inc. (Huitt-Zollars) appreciates the opportunity to provide this revised proposal for professional services to IDC, Inc. (Client) in connection with professional survey services along approximately 15,400 linear feet of Crabb River Road from the northern bank of Rabb's Bayou to approximately 1,200 feet south of Lamar Consolidated High School in Fort Bend County, Texas (Project). Our proposal is based upon the following scope of services, compensation, schedule and terms and conditions and attachments contained herein.

SCOPE OF SERVICES:

1.0 Basic Services

1.1 Task 1

1. Acquire rights-of-entry for the length of the project on both sides, as required, adhering to the standards as promulgated by the Houston District of TxDOT.

2.1 Task 2

1. Establish horizontal and vertical control for the Project. Vertical control will be based on NAVD 88 Geoid 12A. Horizontal control will be based on NAD 83 CORS 2011, EPOCH 2010.00. A conversion factor will be given to match pre-existing vertical data, if necessary.
2. Perform a planimetric and topographic survey extending outwardly 50 feet on both sides of the proposed right-of-way of Crabb River Road within the limits as stated above. The survey shall include readily apparent improvements, readily apparent underground and readily apparent aboveground utilities. The topographic survey shall consist of cross-sections at every 100 feet, with densification for swales, ditches, mounds, etc., as needed.
3. Prepare a Digital Terrain Model (DTM) drawing with 1 foot contours in MicroStation.

3.1 Task 3

1. Perform cross-sections across Rabb's Bayou at every 100-feet beginning at the edge of the existing bridge over the waterway and continuing for a total distance of approximately 200 feet from the bridge, on both the upstream and downstream sides of the bridge.
2. Perform cross-sections across Gapp's Slough at every 100-feet beginning at the edge of the existing bridge over the waterway and continuing for a total distance of approximately 200 feet from the bridge, on both the upstream and downstream sides of the bridge.

4.1 Task 4

1. Prepare Right-of-Way maps of the proposed right-of-way of Crabb River Road, as provided by client, within the extents listed above adhering to standards as promulgated by the Houston District of TxDOT.
2. Perform right-of-way and deed research, field survey, and boundary calculations as necessary to accurately determine the locations of said right-of-way.

5.1 Task 5

1. Locate existing monumentation for parcel acquisition.
2. Acquire as necessary deed research to meet the minimum standards of the Professional Land Surveying Practices Act as promulgated by the Texas Board of Professional Land Surveying.
3. Resolve locations of parcels designated for acquisition, prepare metes and bounds descriptions and boundary drawings of 29 parcels of land as delineated by the schematic attached to this proposal (CRR_SCH_PH2_#_25_2015.pdf) to TxDOT standards as promulgated by the Houston District of TxDOT.
4. Set monumentation along the proposed Right-of-Way, at the corners of said 29 parcels, according to TxDOT standards.

6.1 Task 6

1. Perform a topographic, planimetric and right-of-way survey of the Union Pacific Railroad (UPRR) along Thompsons Road, extending approximately 1,000 feet from the centerline of Crabb River Road in each direction, to the same standards as listed above.
2. Subcontract with UPRR consultants/flagmen as required by UPRR.

7.1 Task 7

1. Perform a topographic, planimetric and right-of-way survey of Thompsons Road, extending approximately 1,000 feet from the centerline of Crabb River Road in each direction, to the same standards as listed above.

8.1 Task 8

1. Perform a topographic, planimetric and boundary of up to three (3) detention ponds as outlined by the attached schematic.

9.1 Deliverables:

1. The survey shall be prepared in MicroStation. Two (2) hard copies of the survey shall be provided to the Client.
2. An ASCII file with point data.
3. A Digital Terrain Model (DTM) drawing with 1-foot contours prepared in MicroStation.
4. Documents used to ascertain the right-of-way of Crabb River Road and the adjoining rights-of-way (in electronic format), public and private utilities and deeds of properties affected by acquisitions.
5. Right-of-Way maps of Crabb River Road and Thompsons Road (2000 linear feet)
6. Metes and bounds descriptions and parcel maps for up to twenty nine (29) parcels
7. Metes and Bounds descriptions with exhibits for up to three (3) detention ponds

2.0 Additional Services

Services not mentioned in the above Scope of Services will be completed based upon a mutually agreed new proposal and lump sum fee with prior written approval from the Client. Additional Services can include but are not limited to the following:

1. Certifying to another type of survey other than the type referenced above.
2. Changes in the limits of the survey.
3. Preparation of documents for easements.
4. Platting

3.0 Client Provided Services:

The Client shall provide to Huitt-Zollars the following:

1. Any TxDOT and/or Fort Bend County right-of-way maps and drawings, if available.

COMPENSATION:

1.0 Fee Budget

1.1 Our estimated fee budgets for the above services are as follows:

Task 1	\$ 3,000.00 (Lump Sum)
Task 2	\$ 90,000.00 (Lump Sum)
Task 3	\$ 6,380.00 (Lump Sum)
Task 4	\$ 38,920.00 (Lump Sum)
Task 5	\$ 64,205.00 (Lump Sum)
Task 6	\$ 17,880.00 (Lump Sum)
Task 7	\$ 14,260.00 (Lump Sum)
Task 8	\$ 15,660.00 (Lump Sum)

Total: \$ 250,305.00 (Lump Sum)

2.0 Total Estimated Budget

2.1 Our total estimated budget for this project is \$ 250,305.00.

3.0 Invoicing

3.1 Invoices will be submitted monthly. Lump sum tasks shall be invoiced based upon percentage of work completed. Hourly not to exceed tasks shall be compensated based upon the number of hours of direct work on the project at the hourly rates for each discipline in the attached Hourly Rate Sheet.

SCHEDULE

The Scope of Services above shall be completed within approximately sixty (60) business days from the receipt of the signed and executed contract.

TERMS & CONDITIONS

Following are the Terms and Conditions that will apply to this AGREEMENT:

1. AUTHORIZATION FOR WORK TO PROCEED

Signing of this AGREEMENT for services shall be authorization by the CLIENT for HUITT-ZOLLARS, INC. to proceed with the work.

2. ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COSTS

Construction cost estimates provided by HUITT-ZOLLARS are prepared from experience and judgment. HUITT-ZOLLARS has no control over market conditions or construction procedures and does not warrant that proposals, bids, or actual construction costs will not vary from HUITT-ZOLLARS estimates.

3. STANDARD OF CARE

Services performed by HUITT-ZOLLARS under this AGREEMENT will be conducted in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently

practicing in the same locality under similar conditions. No other representation, expressed or implied, and no warranty or guarantee is included or intended in this AGREEMENT, or in any report, opinion, document or otherwise.

4. TAXES

All taxes, including but not limited to gross receipts tax, sales tax, etc., required to be paid will be billed to the CLIENT in addition to fees.

5. BILLING AND PAYMENT

The CLIENT, recognizing that timely payment is a material part of the consideration of this AGREEMENT, shall pay HUITT-ZOLLARS for services performed in accordance with the rates and charges set forth herein. Invoices will be submitted by HUITT-ZOLLARS on a monthly basis and shall be due and payable within thirty (30) calendar days of invoice date. If the CLIENT objects to all or any portion of an invoice, the CLIENT shall so notify HUITT-ZOLLARS in writing within ten (10) calendar days of receipt of the invoice in question, but will pay, when due, that portion of the invoice not in dispute.

The CLIENT shall pay an additional charge of one-and-one-half percent (1.5%) (or the maximum percentage allowed by law, whichever is lower) of the invoiced amount per month for any payment received by HUITT-ZOLLARS more than thirty (30) calendar days from date of the invoice, excepting any portion of the invoiced amount in dispute and resolved in favor of CLIENT. Payment thereafter shall first be applied to accrued interest and then to the principal unpaid amount.

If CLIENT, for any reason, fails to pay an invoice or the undisputed portion of a HUITT-ZOLLARS invoice within sixty (60) calendar days of invoice date, HUITT-ZOLLARS will notify the CLIENT by registered mail that HUITT-ZOLLARS shall cease work on the project in ten (10) calendar days if the invoice in question is not paid. In this case, the CLIENT shall waive any claim against HUITT-ZOLLARS, and shall defend and indemnify HUITT-ZOLLARS from and against any claims for injury or loss stemming from HUITT-ZOLLARS' cessation of service. CLIENT shall also pay HUITT-ZOLLARS the cost associated with premature project demobilization. In the event the project is remobilized, CLIENT shall also pay the cost of remobilization, and shall renegotiate appropriate contract terms and conditions, such as those associated with budget, schedule or scope of service.

In the event any invoice or portion thereof is disputed by CLIENT, CLIENT shall notify HUITT-ZOLLARS within ten (10) calendar days of receipt of the bill in question, and CLIENT and HUITT-ZOLLARS shall work together to resolve the matter within forty-five (45) days of its being called to HUITT-ZOLLARS' attention. If resolution of the matter is not attained within forty-five (45) calendar days, either party may terminate this AGREEMENT.

6. CONSEQUENTIAL DAMAGES

The CLIENT shall not be liable to HUITT-ZOLLARS and HUITT-ZOLLARS shall not be liable to the CLIENT for any consequential damages incurred by either due to the fault of the other, regardless of the nature of this fault, or whether it was committed by the CLIENT or HUITT-ZOLLARS, their employees, agents or subcontractors. Consequential damages include, but are not limited to loss of use and loss of profit.

7. TERMINATION

In the event termination becomes necessary, the party (CLIENT or HUITT-ZOLLARS) effecting termination shall so notify the other party, and termination will become effective fourteen (14) calendar days after receipt of the termination notice. Irrespective of which party shall effect termination or the cause of termination, the CLIENT shall within thirty (30) calendar days of termination remunerate HUITT-ZOLLARS for services rendered and costs incurred up to the effective time of termination, in accordance with HUITT-ZOLLARS' prevailing Fee Schedule and Expense Reimbursement Policy.

8. ADDITIONAL SERVICES

Any services beyond those specified herein will be provided for separately under a mutually agreed upon Scope of Services, Budget and Schedule and an additional written authorization from the CLIENT.

9. GOVERNING LAW

The laws of the State of Texas will govern the validity of this AGREEMENT, its interpretation and performance. Any litigation arising in any way from this AGREEMENT shall be brought to the courts of that State.

10. HAZARDOUS MATERIALS--SUSPENSION OF SERVICES

As used in this Agreement, the term *hazardous materials* shall mean any substances, including without limitation asbestos, toxic or hazardous waste, PCBs, combustible gases and materials, petroleum or radioactive materials (as each of these is defined in applicable federal statutes) or any other substances under any conditions and in such quantities as would pose a substantial danger to persons or property exposed to such substances at or near the Project site.

Both parties acknowledge that HUITT-ZOLLARS' scope of services does not include any services related to the presence of any hazardous or toxic materials. In the event HUITT-ZOLLARS or any other party encounters any hazardous or toxic materials, or should it become known to HUITT-ZOLLARS that such materials may be present on or about the jobsite or any adjacent areas that may affect the performance of HUITT-ZOLLARS' services, HUITT-ZOLLARS may, at its sole option and without liability for consequential or any other damages, suspend performance of its services under this AGREEMENT until the CLIENT retains appropriate consultants or contractors to identify and abate or remove the hazardous or toxic materials and warrants that the jobsite is in full compliance with all applicable laws and regulations.

11. CONSTRUCTION OBSERVATION

If Construction Phase Services are part of this AGREEMENT, HUITT-ZOLLARS shall visit the site at intervals agreed to in writing by the CLIENT and HUITT-ZOLLARS, in order to observe the progress and quality of the Work completed by the Contractor. Such visits and observation are not intended to be an exhaustive check or a detailed inspection of the Contractor's work but rather are to allow HUITT-ZOLLARS to become generally familiar with the Work in progress and to determine, in general, if the Work is proceeding in accordance with the Contract Documents.

Based on this general observation, HUITT-ZOLLARS shall keep the CLIENT informed about the progress of the Work and shall advise the CLIENT about observed deficiencies in the Work.

If the CLIENT desires more extensive project observation or fulltime project representation, the CLIENT shall request that such services be provided by HUITT-ZOLLARS as Additional Services in accordance with the terms of this AGREEMENT. HUITT-ZOLLARS shall not supervise, direct or have control over the Contractor's work nor have any responsibility for the construction means, methods, techniques, sequences or procedures selected by the Contractor nor for the Contractor's safety precautions or programs in connection with the Work. These rights and responsibilities are solely those of the Contractor in accordance with the Contract Documents.

HUITT-ZOLLARS shall not be responsible for any acts or omissions of the Contractor, any subcontractor, any entity performing any portions of the Work, or any agents or employees of any of them. HUITT-ZOLLARS does not guarantee the performance of the Contractor and shall not be responsible for the Contractor's failure to perform its Work in accordance with the Contract Documents or any applicable laws, codes, rules or regulations.

12. JOBSITE SAFETY

Neither the professional activities of HUITT-ZOLLARS, nor the presence of HUITT-ZOLLARS or its employees and subconsultants at a construction/project site, shall impose any duty on HUITT-ZOLLARS, nor relieve the Contractor of its obligations, duties and responsibilities including, but not limited to, construction means, methods, sequence, techniques or procedures necessary for performing, superintending and coordinating the Work in accordance with the Contract Documents and any health or safety precautions required by any regulatory agencies. HUITT-ZOLLARS and its personnel have no authority to exercise any control over any construction contractor or its employees in connection with their work or any health or safety programs or procedures. The CLIENT agrees that the Contractor shall be solely responsible for jobsite and worker safety and warrants that this intent shall be carried out in the CLIENT's contract with the Contractor.

The CLIENT also agrees that the Contractor shall defend and indemnify the CLIENT, HUITT-ZOLLARS and HUITT-ZOLLARS' subconsultants. The CLIENT also agrees that the CLIENT, HUITT-ZOLLARS and HUITT-ZOLLARS' subconsultants shall be made additional insureds under the Contractor's policies of general liability insurance. The CLIENT shall furnish to HUITT-ZOLLARS certificates of insurance from the Contractor evidencing the required coverage specified above. The certificates shall include a provision that HUITT-ZOLLARS shall receive thirty (30) days minimum written notification in the event of cancellation, non-renewal or material change of coverage.

13. RIGHT TO RELY ON CLIENT-PROVIDED INFORMATION

CLIENT shall be responsible for, and HUITT-ZOLLARS may rely upon, the accuracy and completeness of all requirements, programs, instructions, reports, data, and other information furnished by CLIENT or any of its other consultants (collectively the CLIENT) to HUITT-ZOLLARS pursuant to this Agreement. HUITT-ZOLLARS may use such requirements, programs, instructions, reports, data, plans and information in performing or furnishing services under this Agreement. Any increased costs incurred by HUITT-ZOLLARS due to changes in or the incorrectness of information provided by the CLIENT shall be compensable to HUITT-ZOLLARS.

14. OWNERSHIP OF INSTRUMENTS OF SERVICE

All reports, drawings, specifications, computer files, field data, notes and other documents and instruments prepared by HUITT-ZOLLARS as instruments of service shall remain the property of HUITT-ZOLLARS. HUITT-ZOLLARS shall retain all common law, statutory and other reserved rights, including the copyright thereto.

15. SEVERABILITY

Any term or provision of this AGREEMENT found to be invalid under any applicable statute or rule of law shall be deemed omitted and the remainder of this AGREEMENT shall remain in full force and effect.

16. ASSIGNMENT

Neither party to this Agreement shall transfer, sublet or assign any rights or duties under or interest in this Agreement, including but not limited to monies that are due or monies that may be due, without the prior written consent of the other party. Subcontracting to subconsultants, normally contemplated by HUITT-ZOLLARS as a generally accepted business practice, shall not be considered an assignment for purposes of this Agreement.

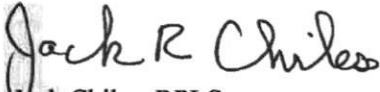
17. LIMITATION OF LIABILITY

IN ORDER FOR THE CLIENT TO OBTAIN THE BENEFITS OF A FEE WHICH INCLUDES A LESSER ALLOWANCE FOR RISK FUNDING, THE CLIENT AGREES TO LIMIT HUITT-ZOLLARS' LIABILITY ARISING FROM HUITT-ZOLLARS' PROFESSIONAL ACTS, ERRORS OR OMISSIONS, SUCH THAT THE TOTAL AGGREGATE LIABILITY OF HUITT-ZOLLARS SHALL NOT EXCEED HUITT-ZOLLARS' TOTAL COMPENSATION FOR THE SERVICES RENDERED ON THIS PROJECT.

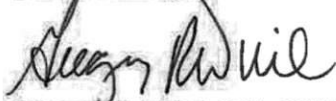
Authorization

Should this proposal meet with your approval and acceptance, please sign and return to our office by facsimile at 281/496-0220. We will schedule the above services as soon as we receive your authorization. If you have any questions, please call.

Sincerely,
HUITT-ZOLLARS, INC.



Jack Chiles, RPLS
Survey Manager



Gregory R. Wine, P.E., LEED AP
Senior Vice President

Enclosure

**Accepted and Approved for
IDC, Inc.**

(Signature)

(Name)

(Title)

(Date)

HUITT-ZOLIARS

Houston West

2015

HOURLY RATE SHEET

Engineering/Architecture

Principal-In-Charge	\$ 225.00
QA Manager	\$ 180.00
Sr. Project Manager	\$ 180.00
Project Manager	\$ 170.00
Sr. Civil Engineer	\$ 175.00
Sr. Structural Engineer	\$ 175.00
Sr. Mechanical Engineer	\$ 175.00
Sr. Electrical Engineer	\$ 175.00
Civil Engineer	\$ 170.00
Structural Engineer	\$ 165.00
Mechanical Engineer	\$ 165.00
Electrical Engineer	\$ 165.00
Plumbing Engineer	\$ 165.00
Engineer Intern	\$ 115.00
Sr. Architect	\$ 175.00
Architect	\$ 145.00
Architect Intern	\$ 115.00
Sr. Landscape Architect	\$ 140.00
Landscape Architect	\$ 90.00
Landscape Architect Intern	\$ 80.00
Sr. Planner	\$ 185.00
Planner	\$ 150.00
Planner Intern	\$ 110.00
Sr. Interior Designer	\$ 110.00
Interior Designer	\$ 95.00
Sr. Designer	\$ 125.00
Designer	\$ 115.00
Sr. CADD Technician	\$ 125.00
CADD Technician	\$ 90.00

Survey

Survey Manager	\$ 155.00
Sr. Project Surveyor	\$ 130.00
Project Surveyor	\$ 120.00
Surveyor Intern	\$ 115.00
Survey Technician	\$ 90.00

Survey Crews

1-Person Survey Crew	\$ 90.00
2-Person Survey Crew	\$ 135.00
3-Person Survey Crew	\$ 185.00

Construction

Construction Manager	\$ 175.00
Resident Engineer	\$ 160.00
Sr. Project Representative	\$ 120.00
Resident Project Representative	\$ 95.00

Administrative

Sr. Project Support	\$ 85.00
Project Support	\$ 70.00

Reimbursable Expenses

Consultants	Cost + 10%
Other Direct Costs	Cost + 10%
Mileage	IRS Standard Business Mileage Rate




 THE MISSISSIPPI COUNTY RECORD
 DECEMBER 19, 1911
 MISSISSIPPI COUNTY, MISSOURI
 PAGE 5



Excellence in Engineering, Consulting, Testing and Inspection

April 20, 2015

**IDC, Inc
1111 Wilcrest Green Dr, Suite 250
Houston, Texas 77042**

Attn: Mr. Brian Zhang, P.E.

**Re: Proposal
Geotechnical Investigation
Proposed Crabb River Road Improvements
Phase II
Fort Bend County, Texas**

HTS Proposal No.: IDC-3918 Revision 3

Dear Mr. Zhang:

1.0 INTRODUCTION

It is our understanding that HTS, Inc. Consultants (HTS) has been chosen to conduct a geotechnical investigation for the above-referenced project located in Fort Bend County, Texas. This project includes approximately ±15,400 l.f. of additional roadway (Station 142+00 to Station 296+00) along Crabb River Road.

The remaining portions of this proposal provide HTS' proposed work scope, budget, and schedule to complete the geotechnical investigation for the proposed facilities.

2.0 SCOPE OF WORK

We understand that the scope of work for the geotechnical investigation will be as follows:

- HTS representatives will locate the borings in the field using existing maps and aerial photographs. Each location will be established using GPS coordinate system. The borings will be located in the field using the established GPS coordinates. Texas One Call will be notified and an HTS representative will be available to provide assistance to insure boring locations are identified and properly cleared of known utilities. After drilling is completed, the boring locations will be marked by an HTS representative using wooden stakes. A sketch of the boring locations with GPS coordinates will be**

submitted to the client for their surveyor's use for obtaining boring coordinates and elevations.

- Drill and sample a total of 37 geotechnical borings; where Boring Nos. 1 through 31 will be drilled to a depth of 10 feet below the surface at the location of Crabb River Road improvements, and Boring Nos. 32 through 37 will be drilled to a depth of 20 feet below the surface at the locations of proposed detention ponds. Pavement coring will be required for 13 boring locations. The boring locations are shown in Figure 1 of this proposal.
- Obtain both disturbed and relatively undisturbed soil samples from the borings with continuous samples being taken from the ground surface to a depth of 20 feet, as applicable.
- Measure the depth to groundwater during drilling, approximately 15 minutes after the water is initially encountered, and 24 hours after the completion of drilling.
- Backfill the borings, within the proposed roadway, with bentonite grout after obtaining 24-hour groundwater level measurements. All grouting will be performed with the drill rigs providing continuous grouting for the full depth of the borings.
- Install 2 piezometer at the locations of Boring No. 35 and Boring No. 36 (detention pond locations) to a depth of 20 feet. The piezometers will be installed and plugged in accordance with the Texas Department of Licensing and Regulations (TDLR) requirements.
- Measure groundwater levels in the piezometers at 1 day, 2 weeks, and 1 month after the installation of the piezometers.
- Perform geotechnical laboratory tests on soil samples recovered during drilling in order to determine the engineering properties of the site subgrade soils. Laboratory testing will include Atterberg limits, percent soil finer than the No. 200 sieve, sieve analysis, unit weight of soils, pinhole dispersion tests, crumb tests, unconfined compression tests, unconsolidated undrained triaxial tests, and consolidated undrained triaxial tests with pore pressure measurements, moisture density relationship, and California Bearing Ratio tests. Laboratory tests will be performed in accordance with applicable ASTM test procedures and methods. Soil classifications will be performed in strict accordance with ASTM D 2488.
- Characterize the site subsoil and groundwater conditions and provide the results on both the boring logs and soil profiles.
- Provide recommended subgrade preparation and construction requirements for the proposed roadway.

- Perform slope stability analyses in order to determine the stability of the side walls of the proposed open channel improvement portion in the short-term, rapid drawdown, and long term conditions using subsoil parameters, peak and residual, derived from field and laboratory tests.
- Analyze erosion potential as a result of water flow velocities, wave action, rainfall, runoff, and dispersive soils and provide erosion control recommendations.
- Prepare a report of the geotechnical investigation that presents the results of our data, findings, and recommendations. All calculations pertaining to the investigation will be included as an appendix to the report.

3.0 COST AND SCHEDULE

HTS' proposed lump sum cost to complete the scope of work as defined in Section 2.0 above is \$ 60,012.00 and is itemized as follows:

Item	Estimated Quantity	Unit	Unit Price	Estimated Cost
<i>Field Activities:</i>				
Mob/demobe of drill rig	lump sum		\$ 349.00	\$ 349.00
Drill/sample 35 borings (31@10', 6@ 20')				
Drilling, continuous 3" diameter (0' to 20')	430	feet	\$ 21.00	\$ 9,030.00
Coring of Existing Pavement	13	each	\$ 90.00	\$ 1,170.00
Grouting of completed boreholes	310	feet	\$ 10.00	\$ 3,100.00
Locate/identify borings, qualified technician	16	hours	\$ 51.00	\$ 816.00
Field logging/supervising, qualified technician	60	hours	\$ 51.00	\$ 3,060.00
Vehicle	76	hours	\$ 10.00	\$ 760.00
Traffic control – Drilling, Police officer	40	hours	\$ 70.00	\$ 2,800.00
Traffic control – Coring, Police officer	12	hours	\$ 70.00	\$ 840.00
Traffic control – Signs/Barrels	lump sum		\$ 500.00	\$ 500.00
			Sub-Total	\$ 22,425.00
<i>Piezometer Installation/Monitoring/Plugging:</i>				
Install piezometers, 2 @ 20'	40	feet	\$ 18.00	\$ 720.00
Piezometer abandonment	40	feet	\$ 18.00	\$ 720.00
Field supervision of piezometer installation/ obtain water levels*	16	hours	\$ 51.00	\$ 816.00
Vehicle charge	16	hours	\$ 10.00	\$ 160.00
			Sub-Total	\$ 2,416.00



Item	Estimated Quantity	Unit	Unit Price	Estimated Cost
<i>Laboratory Testing:</i>				
Atterberg Limits (ASTM D-4318)	70	each	\$ 62.00	\$ 4,340.00
% Pass No. 200 Sieve (ASTM D-1140)	70	each	\$ 48.00	\$ 3,360.00
Moisture Content (ASTM D-2166)	120	each	\$ 9.00	\$ 1,080.00
Unconfined Compression (ASTM D-2216)	40	each	\$ 45.00	\$ 1,800.00
Triaxial UU Compression Test (ASTM D2850)	9	each	\$ 63.00	\$ 567.00
Triaxial CU Compression Test with pore pressures (ASTM D4767) 3-sample test	3	each	\$1,200.00	\$ 3,600.00
Pinhole Dispersion Test (ASTM D4647)	2	each	\$ 286.00	\$ 572.00
Crumb Test (ASTM D 6572)	6	each	\$ 38.00	\$ 228.00
Particle Size Analyses (ASTM D422)	2	each	\$ 128.00	\$ 256.00
California Bearing Ratio (ASTM D-1883)	6	each	\$ 215.00	\$ 1,290.00
Moisture-Density Relationship (ASTM D-698)	2	each	\$ 204.00	\$ 408.00
Sub-Total				\$ 17,501.00
<i>Engineering, supervision, analysis, and report preparation:</i>				
Senior engineer, P.E.	90	hours	\$ 183.00	\$ 16,470.00
Engineering Assistant	20	hours	\$ 60.00	\$ 1,200.00
Sub-Total				\$ 17,670.00
TOTAL				\$ 60,012.00

We estimate that about 5 to 6 weeks will be required to complete the projects if no delays are encountered with respect to weather conditions or site access.

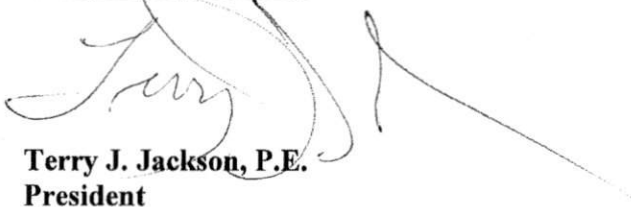
4.0 CLOSING REMARKS

We appreciate the opportunity to present this proposal you and would be pleased to discuss the contents of this proposal with you at your convenience.



Your approval of this proposal and your approval of our proceeding with the work may be indicated by your signing/dating this proposal as provided below. We request that a copy of the signed/dated proposal be provided to HTS. We look forward to being of service to you.

Sincerely,
HTS, Inc. Consultants



Terry J. Jackson, P.E.
President

Attachment: Plates 1 to 3 – Proposed Boring Locations

AGREED TO THIS ____ DAY OF _____,

BY: _____ TITLE: _____

FIRM: _____

TJJ:ba:cg

h:word/proposals-15/IDC-3918 rev3





416 Pickering Street
Houston, Texas 77091

Project:

Proposed Crabb River Road Improvements Phase II

Proposal No.:

IDC-3918 Rev3

Prepared By:

bha

Date:

4/1/2015

Checked By:

Date:

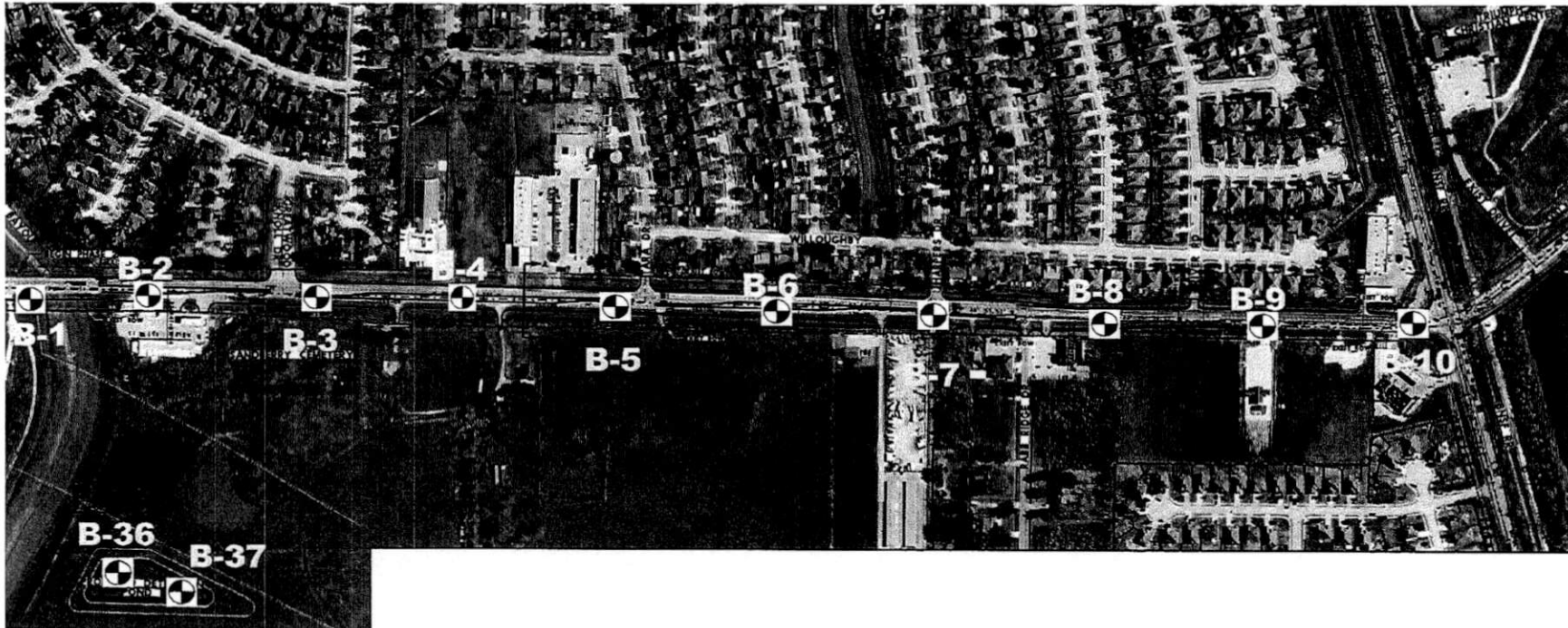
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PROPOSED BORING LOCATIONS



Boring Nos. 1 - 10 along Crabb River RD Improvement and Boring Nos. 36 and 37 at the location of the proposed detention pond.



416 Pickering Street
Houston, Texas 77091

Project:

Proposed Crabb River Road Improvements Phase II

Proposal No.:

IDC-3918 Rev3

Prepared By:

bha

Date:

4/1/2015

Checked By:

Date:

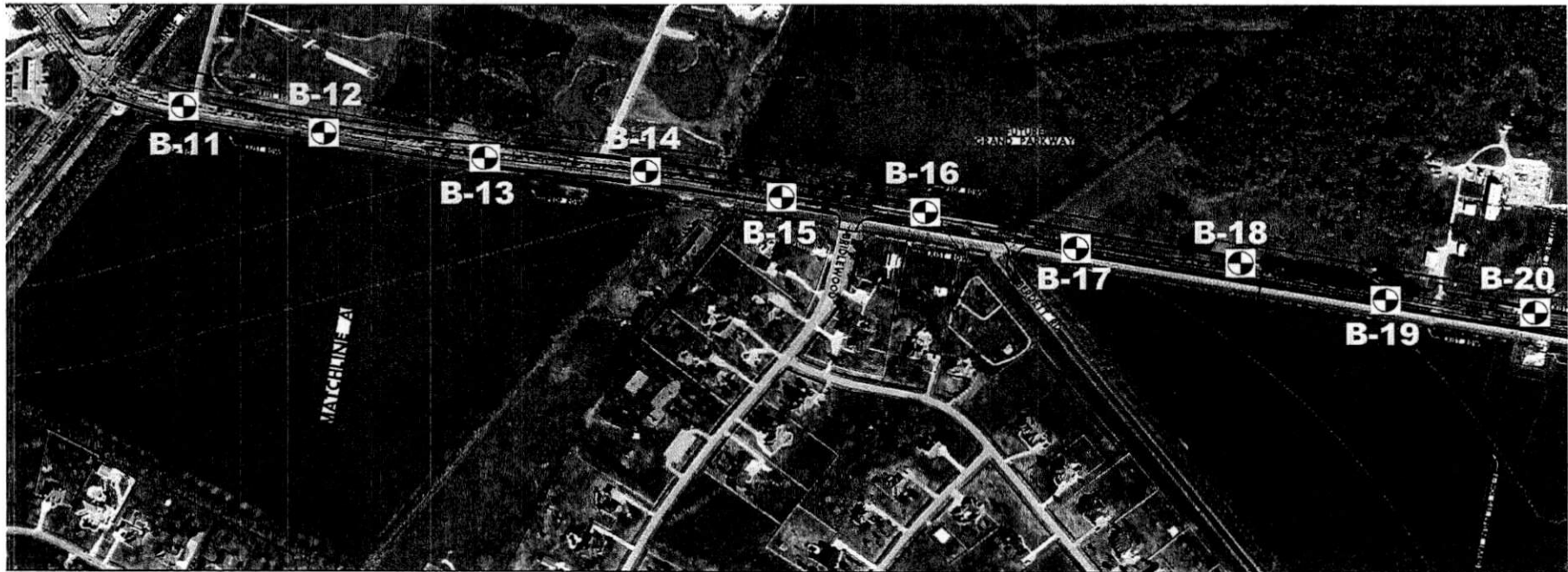
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PROPOSED BORING LOCATIONS



Boring Nos. 11 - 20 along Crabb River RD Improvement.



416 Pickering Street
Houston, Texas 77091

Project:

Proposed Crabb River Road Improvements Phase II

Proposal No.:

IDC-3918 Rev3

Prepared By:

bha

Date:

4/1/2015

Checked By:

Date:

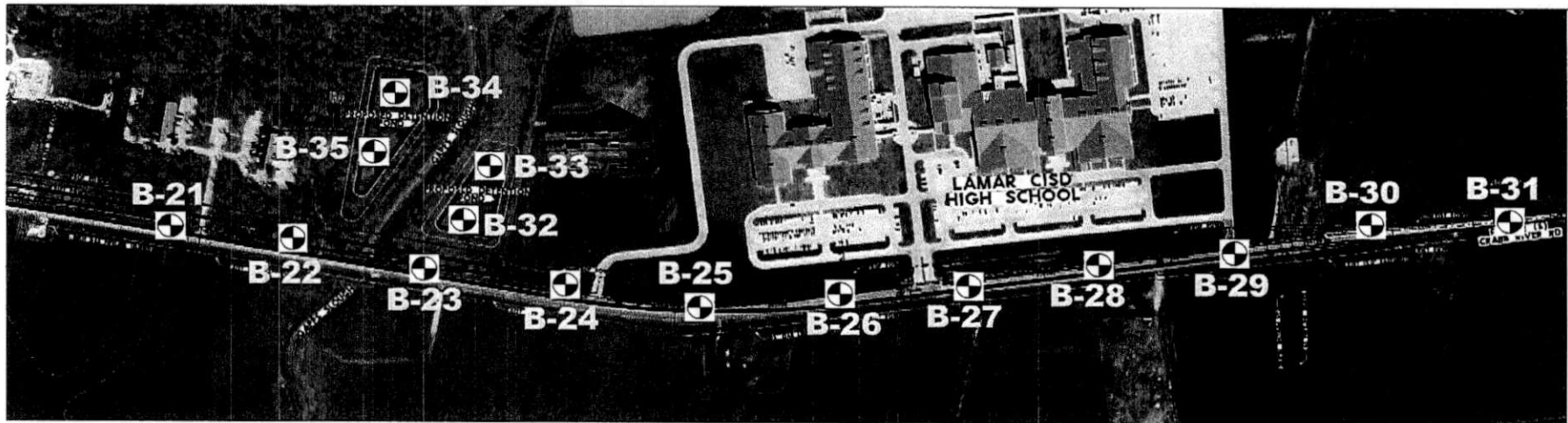
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PROPOSED BORING LOCATIONS



Boring Nos. 21 - 31 along Crabb River RD Improvement and Boring Nos. 32 - 35 at the location of the future detention ponds.