



PROFESSIONAL SERVICES AGREEMENT

(version 5-1-2020)

This AGREEMENT (“Agreement”) is entered by and between **Gauge Engineering, LLC** (“Professional”), located at **3200 Wilcrest Dr, Suite 220, Houston, TX 77042** and the **City of League City** (“City”), a home-rule municipality, located at 300 W. Walker St., League City, Texas 77573 on the date set forth below.

Terms:

1. **Scope of Services:** Professional will perform the services as set forth in **Exhibit A**, which is attached and incorporated herein, and which can be generally described as **Hurricane Harvey Drainage Repair Project, Phase 1**. Services related to design, bid, or construction of a public work shall conform to the requirements set forth in **Exhibit B**. If there is a conflict between the terms of this Agreement and Exhibits A or B, the terms of this Agreement will prevail.
2. **Term and Termination:** This Agreement shall commence on **July 23, 2020** and shall expire on **July 2, 2021**. City reserves the right to terminate this Agreement for convenience upon seven (7) days written notice to Professional. Upon such termination, City shall pay Professional, at the rate set out in **Exhibit A**, for services satisfactorily performed up through the date of termination. Notwithstanding any provision in this Agreement to the contrary, City will not be required to pay or reimburse Professional for any services performed or for expenses incurred by Professional after the date of the termination notice that could have been avoided or mitigated by Professional.
3. **Compensation:** Professional shall be paid for the services as set forth in **Exhibit A**. In no event shall the total compensation exceed **\$525,560.00** during the term of this Agreement. City shall tender payment (including progress/partial payments) for services only after such services are completed and are deemed to be acceptable under this Agreement, in the sole reasonable discretion of City. Professional must submit to City invoices for all services provided, which invoices must include details and dates of service. Payment by City shall be made within thirty (30) days of receipt of an invoice, except for any portion of the invoiced amount that City disapproves as not compliant under this Agreement, in the sole reasonable discretion of City. If City disapproves any amount submitted for payment by Professional, City shall give Professional specific reasons for disapproval in writing.
4. **Insurance:** Professional **is** required during the Contract Term to maintain insurance as set forth below:
 - (a) Comprehensive General Commercial Liability insurance covering bodily injury and property damage, with minimum coverage limits—exclusive of defense costs—of \$1,000,000 per occurrence and \$2,000,000 aggregate;
 - (b) Professional Liability (errors and omissions/malpractice) insurance with minimum coverage limits—exclusive of defense costs—of \$2,000,000 per occurrence; and
 - (c) If at any point during the Contract Term it is foreseeable that Professional will enter upon City premises:
 - (i) Worker’s Compensation coverage with statutory limits for the State of Texas, and
 - (ii) Commercial Automobile Liability coverage with minimum coverage limits—exclusive of defense costs—of \$1,000,000 per occurrence and \$2,000,000 aggregate.All policies must contain a waiver of subrogation against City. Comprehensive General Liability and Commercial Automobile Liability policies must name the City as Additional Insured. Professional shall pay all insurance deductibles and deductibles must not exceed \$10,000 unless approved in advance by City.

Professional shall provide City Certificates of Insurance evidencing these insurance requirements prior to the start of work.

5. **Liquidated Damages:** Professional acknowledges that time is of the essence in performing this Agreement. City and Professional (collectively, the “Parties”) agree that if Professional is late in performing any service designated as Time Critical on the Scope of Services attached to this Agreement, City will suffer loss, damages, or other harm from Professional’s delay. The Parties agree that the amount of loss, damages, or harm likely to be incurred as a result of Professional’s delay is incapable or difficult to precisely estimate, and therefore the Parties desire to stipulate the amount of such loss, damages, or harm. Accordingly, Professional shall have deducted from any amounts owed under this Agreement liquidated damages equal to the number of calendar days of the delay(s) times the daily rate, which rate shall be one-tenth of one percent (0.1%) times the compensation shown in the Scope of Services for such Time Critical service. The Parties further agree that: (i) the liquidated damages specified herein are not a penalty but rather bear a reasonable relationship to, and is not plainly or grossly disproportionate to, the probable loss likely to be incurred by City as a result of Professional’s delay; (ii) one of the reasons for City and Professional to agree to such amounts is the uncertainty and cost of litigation regarding the question of actual damages; and (iii) City and Professional are sophisticated business parties and negotiated this Agreement at arm’s length.
6. **Independent Professional:** Professional is an independent Professional and is not an employee, partner, joint venture, or agent of City. Professional understands and agrees that he/she will not be entitled to any benefits generally available to City employees. Professional shall be responsible for all expenses necessary to carry out the services under this Agreement and shall not be reimbursed by City for such expenses except as otherwise provided in this Agreement.
7. **Intellectual Property:** This Agreement shall be an Agreement for services and the parties intend and consider any work created as a result of this Agreement, including any and all documentation, images, products or results, to be a work (the “Work”) for hire under federal copyright law. Ownership of the Work shall belong to and remain the exclusive property of City. The Work may be edited at any time within City’s discretion. If the Work would not be considered a work-for-hire under applicable law, Professional hereby assigns, transfers, and conveys any and all rights, title and interest to City, including without limitation all copyrights, patents, rights of reproduction, rights to ownership, and right to secure registrations, renewals, reissues and extensions thereof. As the sole copyright holder of the Work, City maintains and asserts the rights to use, reproduce, make derivative works from, and/or edit the Work in any form of medium, expression or technology now known or hereafter developed, at any time within City’s discretion. Professional shall not sell, disclose or obtain any other compensation for the services provided herein or the Work. If the Work is one to which the provisions of 17 U.S.C. § 106A apply, Professional hereby waives and appoints City to assert on Professional's behalf Professional's moral rights or any equivalent rights regarding the form or extent of any alteration to the Work (including, without limitation, removal or destruction) or the making of any derivative works based on the Work, including, without limitation, photographs, drawings or other visual reproductions of the work, in any medium, for City’s purposes.
8. **Confidentiality:** During the course of the services to be provided under this Agreement, Professional may become privy to confidential information of City. Professional agrees to treat as confidential the information or knowledge that becomes known to Professional during performance of this Agreement and to not use, copy, or disclose such information to any third party unless authorized in writing by City. This provision does not restrict the disclosure of any information that is required to be disclosed under applicable law. Professional shall promptly notify City of any misuse or unauthorized disclosure of City’s confidential information and upon expiration of this Agreement shall return to City all confidential information in Professional’s possession or control. Professional shall further comply with all information security policies of City that may apply and shall not make any press releases, public statements or advertisement referring to the services provided under this Agreement or the engagement of Professional without the prior written approval of City.

9. **Warranties and Representations:** Professional warrants and agrees that Professional shall perform its services and conduct all operations in conformity with all applicable federal, state, and local laws, rules, regulations, and ordinances. For any service performed on premises owned or controlled by City, Professional warrants and agrees that Professional will perform said services in compliance with all City rules, including but not limited to, prohibitions related to tobacco use, alcohol, and other drugs.
10. **Licenses/Certifications:** Professional represents and warrants that it will obtain and maintain in effect, and pay the cost of, all licenses, permits or certifications that may be necessary for Professional's performance of this Agreement. If Professional is a business entity, Professional warrants, represents, covenants, and agrees that it is duly organized, validly existing and in good standing under the laws of the state of its formation; and is duly authorized and in good standing to conduct business in the State of Texas, that it has all necessary power and has received all necessary approvals to execute and deliver the Agreement and is authorized to execute this Agreement according to its terms on behalf of Professional.
11. **Performance/Qualifications:** Professional agrees and represents that Professional has the personnel, experience, and knowledge necessary to qualify Professional for the particular duties to be performed under this Agreement. Professional warrants that all services performed under this Agreement shall be performed consistent with generally prevailing professional or industry standards.
12. **Conflict of Interest:** Professional warrants, represents, and agrees that Professional presently has no interest and shall not acquire any interest, direct or indirect, that would conflict in any manner or degree with Professional's performance of the services hereunder. Professional further warrants and affirms that no relationship or affiliation exists between Professional and City that could be construed as a conflict of interest with regard to this Agreement.
13. **INDEMNIFICATION: PROFESSIONAL SHALL DEFEND, INDEMNIFY AND HOLD HARMLESS CITY , AND EACH OF ITS OFFICIALS, OFFICERS, AGENTS AND EMPLOYEES FROM AND AGAINST ALL CLAIMS, ACTIONS, SUITS, DEMANDS, PROCEEDINGS, COSTS, DAMAGES AND LIABILITIES, INCLUDING WITHOUT LIMITATION ATTORNEYS' FEES AND REASONABLE LITIGATION COSTS, ARISING OUT OF, CONNECTED WITH, OR RESULTING FROM ANY ACTS OR OMISSIONS OF PROFESSIONAL OR ANY AGENT, EMPLOYEE, SUBPROFESSIONAL, OR SUPPLIER OF PROFESSIONAL IN THE EXECUTION OR PERFORMANCE OF THIS CONTRACT, TO THE EXTENT THE CLAIM ARISES FROM NEGLIGENCE, WILLFUL ACT, BREACH OF CONTRACT OR VIOLATION OF LAW.**
14. **Force Majeure:** Neither party shall be liable to the other for (i) any delay in performance; (ii) any other breach; (iii) any loss or damage; or (iv) any contribution to or aggravation of any of the foregoing; arising solely from uncontrollable forces such as fire, theft, storm, war, or any other cause that could not have been reasonably avoided by the party's exercise of due diligence.
15. **Notices:** Any notice given under this Agreement by either party to the other may be effected either by personal delivery in writing or by mail, registered or certified postage prepaid with return receipt requested. Mailed notices shall be addressed to the addresses of the Parties as they appear in the contract. Notices delivered personally shall be deemed communicated at the time of actual receipt. Mailed notices shall be deemed communicated three (3) days after mailing.

16. **Texas Family Code Child Support Certification:** Pursuant to Section 231.006 of the Texas Family Code, Professional certifies that it is not ineligible to receive the award of or payments under the Agreement and acknowledges that the Agreement may be terminated, and payment may be withheld if this certification is inaccurate.
17. **State Auditor:** Professional understands that acceptance of funds under the Agreement constitutes acceptance of the authority of the Texas State Auditor's Office, or any successor agency (collectively, the "Auditor"), to conduct an audit or investigation in connection with those funds. Professional agrees to cooperate with the Auditor in the conduct of the audit or investigation, including without limitation providing all records requested. Professional will include this provision in all contracts with permitted subprofessionals.
18. **Jurisdiction:** Any disputes under this Agreement shall be brought in a court of competent jurisdiction in Galveston, Texas and governed by Texas law.
19. **Alternative Dispute Resolution:** To the extent that Chapter 2260, Texas Government Code, is applicable to this Contract and is not preempted by other applicable law, the dispute resolution process provided for in Chapter 2260 and the related rules adopted by the Texas Attorney General Pursuant to Chapter 2260, shall be used by City and Professional to attempt to resolve any claim for breach of contract made by Professional that cannot be resolved in the ordinary course of business. The Director of Finance of City shall examine Professional's claim and any counterclaim and negotiate with Professional in an effort to resolve such claims. This provision shall not be construed as a waiver by City of its right to seek redress in the courts.
20. **Entire Agreement:** This Agreement contains the entire understanding between the Parties and supersedes all prior agreements, arrangements, and understanding, oral or written between the Parties relating to this Agreement. This Agreement may not be modified except by mutual written agreement of the Parties executed subsequent to this Agreement.
21. **Eligibility to Receive Payment:** Professional certifies that, as a matter of state law, it is not ineligible to receive the Agreement and payments pursuant to the Agreement and acknowledges that the Agreement may be terminated, and payment withheld if this representation is inaccurate.
22. **Payment of Debt/Delinquency to State:** Professional certifies that it is not indebted to the City of League City and is current on all taxes owed to the City of League City. Professional agrees that any payments owing to Professional under the Agreement may be applied directly toward any debt or delinquency that Professional owes the City of League City regardless of when it arises, until such debt or delinquency is paid in full.
23. **Products and Materials Produced in Texas:** If Professional will provide services under the Agreement, Professional covenants and agrees that in performing its duties and obligations under the Agreement, it will purchase products and materials produced in Texas when such products and materials are available at a price and delivery time comparable to products and materials produced outside of Texas.
24. **Risk of Loss:** If applicable, all work performed by Professional pursuant to the Agreement will be at Professional's exclusive risk until final and complete acceptance of the work by City. In the case of any loss or damage to the work prior to City's acceptance, bearing such loss or damage will be Professional's responsibility.
25. **Publicity:** Professional shall not use City's name, logo or likeness in any press release, marketing materials or other public announcement without receiving City's prior written approval.
26. **Legal Construction/Severability:** In the event that any one or more of the provisions contained in this Agreement shall for any reason be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provision, and this Agreement shall be construed as

if such invalid, illegal or unenforceable provisions had never been contained in it. To this end, the provisions of this Agreement are declared to be severable. The Parties may mutually agree to renegotiate the Agreement to cure such illegality/invalidity or unconstitutionality if such may be reasonably accomplished.

27. **Limitations:** The Parties are aware that there are constitutional and statutory limitations on the authority of City to enter into certain terms and conditions of the Agreement, including, but not limited to, those terms and conditions relating to liens on City's property; disclaimers and limitations of warranties; disclaimers and limitations of liability for damages; waivers, disclaimers and limitations of legal rights, remedies, requirements and processes; limitations of periods to bring legal action; granting control of litigation or settlement to another party; liability for acts or omissions of third parties; payment of attorneys' fees; dispute resolution; indemnities; and confidentiality (collectively, the "Limitations"). Any terms and conditions related to the Limitations will not be binding on City except to the extent authorized by the laws and Constitution of the State of Texas.
28. **Sovereign Immunity:** The Parties agree that neither the execution of the Agreement by City nor any other conduct, action or inaction of any City representative relating to the Agreement constitutes a waiver of sovereign immunity by City.
29. **Authority:** Professional warrants and represents that Professional has full power and authority to enter into and perform this Agreement and to make the grant of rights contained herein. The person signing on behalf of City represents that he/she has authority to sign this Agreement on behalf of City.
30. **Non-Waiver:** The Parties specifically agree that neither the occurrence of an event giving rise to a breach of contract claim nor the pendency of a claim constitute grounds for the suspension of performance by Professional. No covenant or condition of this Agreement may be waived except by written consent of the waiving party. Forbearance or indulgence by one party in any regard whatsoever shall not constitute a waiver of the covenant or condition to be performed by the other party.
31. **Prohibition on Boycotting Israel:** Pursuant to Section 2270.002 of the Texas Government Code, by executing this Agreement Professional verifies that Professional: (1) does not boycott Israel; and (2) will not boycott Israel during the term of this Agreement.
32. **Prohibition Against Business with Iran, Sudan or Foreign Terrorists Organizations:** Professional warrants, covenants, and represents that Professional is not engaged in business with Iran, Sudan, or any company identified on the list referenced in Section 2252.152 of the Texas Government Code.

(signature block on next page)

Executed on _____. *(date to be filled in by City Secretary)*

GAUGE ENGINEERING, LLC - “Professional”

Derek St. John, PE, CFM – Principal for Gauge Engineering, LLC.

CITY OF LEAGUE CITY – “City”

John Baumgartner, City Manager

Attest:

Diana Stapp, City Secretary

Approved as to Form:

Office of the City Attorney

Exhibit A

Scope of Services/Description of Products/Payment Schedule
(33 number of pages, including this page)

See attached documents



June 24, 2020

Marcos Garcia, PE
Senior Project Manager
City of League City
300 W Walker St
League City, TX 77573

Re: Hurricane Harvey Channel Repair – Proposal for Engineering Services

Mr. Garcia,

Gauge Engineering, LLC (Gauge) is pleased to submit this proposal to support the City of League City with engineering design services for the repair of channels due to damage caused by Hurricane Harvey. The attached scope of services and level of effort estimate pertain to the following project sites.

1. Gum Bayou – 83974
2. Interurban (Power) Ditch – 83983
3. Newport Ditch – 83984
4. North Point Detention Pond – 83982
5. Robinson Bayou

The scope of services for the above sites includes to following tasks:

1. Project Management
2. Construction Documents (60%, 90%, 100% and Final submittals)
3. Bid Phase Services
4. Construction Phase Services
5. Sub-Consultant Services: Survey, Geotechnical, SUE

The scope of Additional Services consists of the following tasks.

- A. Preparation of construction documents for Genco Canal
- B. USACE Permitting
- C. Construction Inspection Services
- D. Public Engagement and Council Engagement
- E. Separation of the Bid Package into 2 Packages

We propose to accomplish this scope within 6 months following notice to proceed. Compensation is proposed on a Lump Sum basis for Basic Services and a Time and Material not to exceed basis for Additional Services. The following is a summary of the project costs.

- I. Basic Services: \$160,790.00
- II. Additional Services: \$301,382.52
- III. Sub Services: \$60,836.60
- IV. Expenses: \$2,550.00

See Exhibit A for a detailed description of the scope of work and Exhibit B for an itemized level of effort breakdown. Please feel free to contact me at (713) 269-7782 if you have any questions or need additional information.

Sincerely,

Accepted for Client



Derek St. John, PE, CFM
Principal

Signature

Date

Attachments: Exhibit A – Scope of Work
Exhibit B – Level of Effort
Exhibit C – Project Cost Summary
Exhibit D – Rate Sheet
Exhibit E – Schedule
Exhibit F – Survey Sub Proposal
Exhibit G – Geotechnical Sub Proposal
Exhibit H – SUE Sub Proposal

EXHIBIT A – SCOPE OF WORK

HURRICANE HARVEY CHANNEL REPAIR

GENERAL SCOPE OF BASIC SERVICES

The intent of the basic services is to prepare construction documents 83974 Gum Bayou, 83983 Interurban (Power) Ditch), 83984 Newport Ditch, 83982 North Point Detention Pond, and Robinson. The scope of services for basic services is as follows:

GENERAL REQUIREMENTS

1. Design Guidelines and Standards
 - A. City of League City
 - a. General Design and Construction Standards
 - B. Harris County Flood Control District:
 - b. Criteria Manual for the Design of Flood Control and Drainage Facilities in Harris County
 - c. Geotechnical Guidelines
 - C. Wherever there are differences in requirements between the reference materials and standards and this scope, Engineer shall perform services in accordance with the stricter requirements.
2. Units of Measure - This Project shall be prepared using English units.
3. Deliverables in Electronic Format: In addition to the hard copy Project deliverables required below, Engineer shall submit electronic copies of intermediate and final reports, documents, plans and other work products on a flash drive or other suitable media.
 - A. Submit text files in Microsoft Word 97 or later version.
 - B. Submit design drawing files and exhibits in AutoCAD Civil 3D 2011 or later version format.
 - C. Submit a duplicate of text and drawing files in PDF format using Acrobat 5.0 or later version of Bluebeam.
4. Design Consultant shall have four (4) submittals and three (3) reviews: 60%, 90%, 100% and Final Design (signed).
5. The five (5) repairs sites are expected to be packaged into a single construction package for bid. Per the City's request, the effort to divide the package into 2 separate packages is included under additional services.

REPAIR AND MITIGATION PROJECTS

1. Gum Bayou – 83974
 - A. Total Project: \$59,757.00

- B. Base Cost Include: \$10,000.00
 - a. Project Management: \$1,255.75
 - b. Design Phase Services: \$6,096.36
 - c. Bid Phase Services: \$279.56
 - d. Construction Phase Services: \$1,048.33
 - e. Survey: \$1,320
- 2. Interurban (Power) Ditch – 83983
 - A. Total Project: \$1,637,031.00
 - B. Base Cost Include: \$68,508.19
 - a. Project Management: \$7,628.42
 - b. Design Phase Services: \$36,920.11
 - c. Bid Phase Services: \$1,642.59
 - d. Construction Phase Services: \$8,017.06
 - e. Survey: \$14,300.00
 - C. Sub-Consultant Services: \$55,587.62
 - a. Geotechnical: \$13,200.00
 - b. Environmental: \$19,800.00
 - c. SUE: \$22,587.62
- 3. Newport Ditch– 83984
 - A. Total Project: \$44,812.50
 - B. Base Cost Include: \$7,500.00
 - a. Project Management: \$903.59
 - b. Design Phase Services: \$5,548.93
 - c. Bid Phase Services: \$256.81
 - d. Construction Phase Services: \$790.67
 - C. No Sub-Consultant Services: \$0
- 4. North Point Detention Pond – 83982
 - A. Total Project: \$241,624.10
 - B. Base Cost Include: \$31,603.18
 - a. Project Management: \$4,344.76
 - b. Design Phase Services: \$21,558.02
 - c. Bid Phase Services: \$967.23
 - d. Construction Phase Services: \$4,733.16
 - C. No Sub-Consultant Services: \$0
- 5. Robinson Bayou
 - A. Total Project: \$133,250
 - B. Base Cost Include: \$67,048.64

- a. Project Management: \$8,147.48
 - b. Design Phase Services: \$40,426.58
 - c. Bid Phase Services: \$1,813.80
 - d. Construction Phase Services: \$8,410.78
 - e. Survey: \$8,250.00
- C. Sub-Consultant Services: \$34,387.10
- a. Geotechnical: \$13,382.60
 - b. Environmental; \$19,800.00
 - c. SUE: \$1,204.50

GENERAL CONSTRUCTION PACKAGE TASKS

The following tasks represent the general design approach for each of the repair sites.

1. Project Management

- D. Perform tasks associated with project management and administration necessary for completion of the project.
- E. Provide sub-consultant contract management. Engineer shall be responsible for services performed by Sub-Consultants to the same extent as if the services were performed by Engineer.
- F. Attend Project kickoff meeting and monthly status meetings. Provide an agenda for each Design Progress meeting and follow up with meeting minutes after each meeting.
- G. Provide monthly Project Status updates to document progress.
- H. Develop and maintain a project schedule in Microsoft Project format. Submit schedule updates on a monthly basis.

2. Construction Documents

Prepare and submit drawings in accordance with the City's latest standards, and guidelines. Construction drawings shall be prepared so they are legible and to scale when printed on 11"x17" size paper. Prepare and submit special provisions, final opinion of probable cost estimate and other supporting documentation, as required, for the Project Manual. Prepare the Project Manual including all front end documentation and standard specification using go-by and templates provided by the City. Prepare interim and final estimates of probable construction cost for the 90% and Final submittal. Quality Assurance/Quality Control (QA/QC) procedures shall be followed. Prepare a comprehensive monthly report and submitted with monthly invoices.

- A. The 60% Design Review Submittal Plans shall consist of the following minimal sheets and information:
 - a. Cover Sheet -
 - i. Sheet Index
 - ii. Overall Vicinity Map with Precinct and Key Map references
 - b. General Notes
 - c. Site and Construction access plan for each site

- d. Survey Project Control sheet(s) with Surveyor's logo, contact information and interim review seal showing Survey and/or Project Baseline, XYZ for beginning and ending of baseline(s), Primary Benchmark, Temporary Project Benchmark(s) that can be recovered in the field, public right of way, project surface-to grid scale factor, all pertinent notes as required by the Surveying Board.
 - e. Quantity estimate page(s) for each Project site
 - f. Preliminary Plan and Profile Sheets with proposed design top of banks, bottom widths, flowlines, hydraulic structures, piping and appropriate design labeling. Engineer will include existing and proposed right of way, existing topography baseline location/control, existing and proposed drainage structures/features, and existing utilities (public and private).
 - g. Typical cross sections and point tables.
 - h. Appropriate standard detail sheets.
 - i. Utility conflict spreadsheet. If no conflicts exist a spreadsheet will be submitted that indicate no conflicts for each utility company identified.
 - j. Sealed Geotechnical Letter Report with recommendations.
 - k. Engineers estimate using City of HCFCD pay items.
- B. The 90% Design Review Submittal Plans shall consist of the following minimal sheets and information:
- a. Cover Sheet -
 - i. Sheet Index
 - ii. Overall Vicinity Map with Precinct and Key Map references
 - b. General Notes
 - c. Site and Construction access plan for each site
 - d. Survey Project Control sheet(s) with Surveyor's logo, contact information and interim review seal showing Survey and/or Project Baseline, XYZ for beginning and ending of baseline(s), Primary Benchmark, Temporary Project Benchmark(s) that can be recovered in the field, public right of way, project surface-to grid scale factor, all pertinent notes as required by the Surveying Board.
 - e. Quantity estimate page(s) for each Project site
 - f. Preliminary Plan and Profile Sheets with proposed design top of banks, bottom widths, flowlines, hydraulic structures, piping and appropriate design labeling. Engineer will include existing and proposed right of way, existing topography baseline location/control, existing and proposed drainage structures/features, and existing utilities (public and private).
 - g. Typical cross sections and point tables.
 - h. Appropriate standard detail sheets.
 - i. Utility conflict spreadsheet. If no conflicts exist a spreadsheet will be submitted that indicate no conflicts for each utility company identified.
 - j. Sealed Geotechnical Letter Report with recommendations.
 - k. Engineers estimate using City of HCFCD pay items.
- C. The 100% Design Review Submittal Plans shall consist of the following minimal sheets and information:
- 1. Deliver 1 set of 11"x17" plans, a PDF file of the plans, and all CAD and support files. The submittal shall include the following, as a minimum, and shall have been reviewed

for quality assurance, and incorporate all sheets and comments from the 60% and 90% Design Review:

- a. Cover Sheet
 - i. Final Sheet Index
 - ii. Overall Vicinity Map with Precinct and Key Map references
 - b. General Notes
 - c. Final Site and Construction access plan for each site.
 - d. Survey Project Control sheet(s) signed and sealed by Surveyor.
 - e. Final Quantity estimate page(s) for each Project site (updated from 2d above).
 - f. Final Plan and Profile Sheets with proposed design top of banks, bottom widths, flowlines, hydraulic structures, piping and appropriate design labeling. Engineer will include existing and proposed right of way, existing topography baseline location/control, existing and proposed drainage structures/features, and existing utilities (public and private).
 - g. Stormwater Pollution Prevention Plan (SWPPP) standard BMP details sheet.
 - h. Appropriate standard detail sheets as required.
2. Prepare and submit the final Project Manual signed and sealed by the engineer of record including special provisions, Summary of Work, and all project specific specifications ready for bidding and bookmarked for each section.
 3. Submit an updated final engineers' opinion of probable construction cost.
 4. Final Utility Conflict Table showing all utilities in conflict, whether or not a relocation is required, if so, who is responsible for coordinating the relocation, and indicating all conflicts have been addressed.
 5. Plans shall include signatures of all external agency signatures including utility companies as necessary/required. If required due to presence of utility conflicts, place utility signature block on the general notes sheet.
 6. Final Geotechnical Report.
 7. Submit a bound PDF file of the plans set signed and sealed by a Professional Engineer licensed in the State of Texas.
 8. Submit all CAD files, support files in AutoCAD Civil 3D as applicable.
- D. Final Design Submittal ("Issued for Construction Drawings"):
1. Address final comments from the City
 2. Signed and sealed plan set
 3. Approval signatures

3. Bidding Phase

- A. Attend and assist the City in conducting the pre-bid conference including answering questions and interpreting the drawings and specifications.
- B. Prepare necessary addenda to address issues or clarifications necessary for completion of the bidding process.
- C. Tabulate and review bid results for discrepancies including potential unbalancing of unit bid prices and provide a written recommendation issued on company letterhead for the award of a construction contract.
- D. Provide clarification, correct discrepancies, correct errors and omissions; assist the City in evaluating the bid proposals.

4. Construction Phase Services
 - A. Attend the pre-construction conference scheduled and conducted by the City.
 - B. Attend monthly construction progress meetings at the project site with the City and the Contractor in attendance.
 - C. Make visits to the Project sites at appropriate intervals (not less than twice a month) as construction proceeds to observe and provide a written construction site observation report in a format provided by the City.
 - D. Review and fully respond to Requests for Information (RFIs) to the Construction Manager within max. 3 days, or as otherwise directed.
 - E. Review and fully respond to Submittals to the Construction Manager within max. 3 days, or as otherwise directed.
 - F. Assist Construction Manager in issuing Supplementary Instructions to the Contractor when necessary to correct and/or clarify Plans or Specifications or to avoid potential problems identified by the team.
 - G. Assist City with evaluating contractor's change order and cost proposals, including changes by RFIs.
 - H. Engineer shall review material test results received from the City as necessary if warranted by failing report.
 - I. Attend Substantial Completion inspections (a definition of Substantially Complete is provided in the Project Manual General Conditions or as provided in Special Provisions). Engineer shall assist in preparing a list of items remaining to be completed or corrected by the Contractor (the Punch List)
 - J. Attend Final Inspections to verify all Punch List items have been corrected by the Contractor. Prepare a Certificate of Final Completion and other closeout documentation for approval by the City.
 - K. Prepare, seal and submit the Record Drawings to the City Design Project Manager within 30 days of receipt of contractor's red-line as-built.

GENERAL SCOPE OF ADDITIONAL SERVICES

The Engineer shall render the following Additional Services in connection with the Project when authorized in writing by the City including

1. The preparation of construction documents for 83981 Genco in accordance with the services outlined under Basic Services. It is understood that the Genco construction documents will be included in the construction package as defined under Basic Services.
 - a. Genco Canal – 83981
 - i. Total Project: \$660,000.00
 - ii. Base Cost Include: \$69,470.00
 - iii. Sub-Consultant Services: \$29,429.40
 1. Geotechnical: \$21,916.40
 2. Environmental: \$5,500.00
 3. SUE: \$2,013.00
2. USACE permitting will focus on Nationwide Permits (NWP) 2 (Structures in Artificial Canals), 3 (Maintenance), and 13 (Bank Stabilization). All reasonable attempts will be made to permit the project without a pre-construction Notification (PCN). This is an estimated budget value. The final scope of services will be determined upon initial site investigation but is not expected to exceed the following.
 - a. Interurban: \$18,000
 - b. Robinson Bayou: \$18,000
 - c. Genco Canal: \$5,000
3. Construction Inspection Services – Cost based on a 6 month duration.
4. Public Meetings – Three public meetings are anticipated. The Engineer will work with the City to develop prepare for and run the meeting. The Engineer will develop a presentation that can be used for each public meeting. This effort includes 1 meeting with the City (3 total) to review the presentation and prepare for each public meeting. It is understood that the City will secure the venue and advertise the meeting. The unit cost per meeting is \$7,643.33.
5. City Council and Other Political Meetings – Three political meetings are anticipated. The Engineer will develop material for the meetings and participate in the meetings. The unit cost per meeting is \$2,155.00.
6. Two Bid Packages – The Engineer will develop two bid packages at the request of the City. This effort involves \$11,600.00
7. Construction Inspection Services
 - a. Observe contactor's work and material furnished to confirm that they are in general conformance with the drawings and specifications. This includes checking the Contractor's material certifications and samples, observing, and verifying delivered materials are the same as the samples and may.
 - b. Review the Contractor's traffic control methods with the submitted traffic control plans and identify any noncompliance. The Inspector shall verify governmental agency approvals are received prior to traffic relocations.
 - c. Include quantities completed and materials received in the daily reports to verify monthly progress. Inspector's daily reports shall be reviewed against the plans and previously reported completed work.

- a. Provide a substantial completion inspection of the project working with the City's Construction Manager and prepare for City's approval a Certificate of Substantial Completion and a list of work to be completed or corrected.
- b. Provide a final inspection of the project working with the City's Project Manager and Construction Manager.



EXHIBIT B
HURRICANE HARVEY CHANNEL REPAIR
PLANS, SPECIFICATIONS AND ESTIMATES - LEVEL OF EFFORT



I. BASIC -PLANS, SPECIFICATIONS AND ESTIMATES

| DESCRIPTION OF WORK TASKS | PROJ MGR | PROJECT ENGINEER | EIT | CADD TECH | ADMIN ASST | TOTAL HOURS | LABOR COSTS |
|---|-----------|------------------|-----------|------------|------------|-------------|--------------------|
| A. General Plan Sheets (90%, 100%) | | | | | | | |
| 1 Title Sheet (1 Sheet) | | 1 | 2 | 6 | | 9 | \$1,030.00 |
| 2 Sheet Index (1 Sheet) | | 1 | 2 | 6 | | 9 | \$1,030.00 |
| 3 Vicinity Map (1 Sheet) | | 1 | 4 | 8 | | 13 | \$1,480.00 |
| 4 General Notes (2 Sheets) | 1 | 1 | 4 | 6 | | 12 | \$1,490.00 |
| 5 Private Utility Notes (1 Sheet) | | 1 | 2 | 6 | | 9 | \$1,030.00 |
| 6 Legend & Abbreviations | | 1 | 3 | 6 | | 10 | \$1,150.00 |
| 7 Summary of Quantities (2 Sheets) | | 1 | 3 | 6 | | 10 | \$1,150.00 |
| Total | 1 | 7 | 20 | 44 | 0 | 72 | \$8,360.00 |
| B. Gum Bayou (83974) | | | | | | | |
| 1 Construction Control Sheets (1 Sheet) | | 1 | | 2 | | 3 | \$370.00 |
| 2 Access Plan (1 Sheet) | | | 1 | 3 | | 4 | \$435.00 |
| 3 Sheet Layout Plan (1 Sheet) | | 1 | | 2 | | 3 | \$370.00 |
| 4 Plan and Profile (1 Sheets) | | 1 | 2 | 6 | | 9 | \$1,030.00 |
| 5 Cross Sections (1 Sheets) | | 1 | 2 | 4 | | 7 | \$820.00 |
| 6 Earthwork Quantities (1 Sheet) | | 1 | 1 | 4 | | 6 | \$700.00 |
| 7 SWPPP (1 Sheet) | | 1 | 1 | 4 | | 6 | \$700.00 |
| Total | 0 | 6 | 7 | 25 | 0 | 38 | \$4,425.00 |
| C. Interurban (Power) Ditch (83983) | | | | | | | |
| 1 Construction Control Sheets (3 Sheets) | | 2 | 2 | 8 | | 12 | \$1,400.00 |
| 2 Access Plan (1 Sheet) | | 2 | 2 | 8 | | 12 | \$1,400.00 |
| 3 Sheet Layout Plan (1 Sheet) | | 1 | 6 | 12 | | 19 | \$2,140.00 |
| 4 Plan and Profile (900 LF - 3 Sheets) | 4 | 8 | 24 | 40 | | 76 | \$9,240.00 |
| 5 Cross Sections (3 x Sheet, @ 200' spacing - 3 Sheets) | 2 | 6 | 18 | 36 | | 62 | \$7,340.00 |
| 6 Earthwork Quantities (1 Sheet) | 1 | 2 | 8 | 10 | | 21 | \$2,550.00 |
| 7 SWPPP (1 Sheet) | | 1 | 6 | 10 | | 17 | \$1,930.00 |
| Total | 7 | 22 | 66 | 124 | 0 | 219 | \$26,000.00 |
| D. Newport Ditch (83984) | | | | | | | |
| 1 Access Plan (1 Sheet) | | 1 | 1 | 4 | | 6 | \$700.00 |
| 2 Sheet Layout Plan (1 Sheet) | | 1 | 1 | 3 | | 5 | \$595.00 |
| 3 Plan and Profile (1 Sheets) | 1 | 1 | 2 | 6 | | 10 | \$1,250.00 |
| 4 Cross Sections (1 Sheets) | | 1 | 2 | 4 | | 7 | \$820.00 |
| 5 SWPPP (1 Sheet) | | 1 | 1 | 4 | | 6 | \$700.00 |
| Total | 1 | 5 | 7 | 21 | 0 | 34 | \$4,065.00 |
| E. North Point Detention Pond (83982) | | | | | | | |
| 1 Access Plan (1 Sheet) | | 2 | 2 | 8 | | 12 | \$1,400.00 |
| 2 Sheet Layout Plan (1 Sheet) | | 2 | 6 | 12 | | 20 | \$2,300.00 |
| 3 Plan and Profile (1 Sheets) | 4 | 8 | 12 | 18 | | 42 | \$5,490.00 |
| 4 Cross Sections (1 Sheets) | 1 | 4 | 12 | 18 | | 35 | \$4,190.00 |
| 5 SWPPP (1 Sheet) | | 1 | 6 | 10 | | 17 | \$1,930.00 |
| Total | 5 | 17 | 38 | 66 | 0 | 126 | \$15,310.00 |
| F. Robinson Bayou | | | | | | | |
| 1 Construction Control Sheets (2 Sheets) | | 2 | 4 | 8 | | 14 | \$1,640.00 |
| 2 Access Plan (1 Sheet) | | 2 | 4 | 8 | | 14 | \$1,640.00 |
| 3 Sheet Layout Plan (1 Sheet) | 1 | 2 | 6 | 12 | | 21 | \$2,520.00 |
| 4 Plan and Profile (400 LF - 2 Sheets) | 6 | 8 | 24 | 40 | | 78 | \$9,680.00 |
| 5 Cross Sections (2 Sheets) | 3 | 6 | 20 | 40 | | 69 | \$8,220.00 |
| 6 Earthwork Quantities (1 Sheet) | 1 | 4 | 8 | 12 | | 25 | \$3,080.00 |
| 7 SWPPP (1 Sheet) | | 1 | 6 | 10 | | 17 | \$1,930.00 |
| Total | 11 | 25 | 72 | 130 | 0 | 238 | \$28,710.00 |
| G. Miscellaneous Sheets | | | | | | | |
| 1 TCP (One Lane) | | 1 | 2 | 4 | | 7 | \$820.00 |
| 2 TCP (Right Lane Closure) (2 Sheets) | | 1 | 2 | 6 | | 9 | \$1,030.00 |
| 3 Repair Details | 1 | 4 | 8 | 16 | | 29 | \$3,500.00 |
| 4 Concrete Channle Lining Details | 1 | 2 | 6 | 6 | | 15 | \$1,890.00 |
| 5 Interceptor Structure Details | | 1 | 4 | 6 | | 11 | \$1,270.00 |
| 6 Precast Storm Sewer Manhole Details | | 1 | 4 | 6 | | 11 | \$1,270.00 |
| 7 Storm Sewer and Riprap Details | | 1 | 4 | 6 | | 11 | \$1,270.00 |
| 8 Stormwater Pollution Prevention Details | | 1 | 4 | 6 | | 11 | \$1,270.00 |
| Total | 2 | 12 | 34 | 56 | 0 | 104 | \$12,320.00 |



EXHIBIT B
HURRICANE HARVEY CHANNEL REPAIR
PLANS, SPECIFICATIONS AND ESTIMATES - LEVEL OF EFFORT



I. BASIC -PLANS, SPECIFICATIONS AND ESTIMATES

| DESCRIPTION OF WORK TASKS | PROJ MGR | PROJECT ENGINEER | EIT | CADD TECH | ADMIN ASST | TOTAL HOURS | LABOR COSTS |
|---|--------------------|--------------------|--------------------|--------------------|-----------------|-------------|---------------------|
| H. Project Management/Specs/Agencies & Team Coordination/Quantities/Misc | | | | | | | |
| 1 Project Management/Team Coordination/ Meetings | 12 | 18 | | | 4 | 34 | \$5,820.00 |
| 2 Data Collection and Site Visits | 4 | 8 | 8 | | 2 | 22 | \$3,270.00 |
| 3 City/HCFCD Coordination/meetings/approvals/signatures | 2 | 8 | 8 | | | 18 | \$2,680.00 |
| 4 Private Utility Coordination | 1 | 4 | 4 | | | 9 | \$1,340.00 |
| 5 Project Manual/Specifications | 2 | 8 | 20 | | 4 | 34 | \$4,420.00 |
| 6 Quantities and Opinion of Probable Construction Cost - 90%,Final | 2 | 8 | 24 | | 2 | 36 | \$4,750.00 |
| Total | 23 | 54 | 64 | 0 | 12 | 153 | \$22,280.00 |
| I. Permitting and Bid Phase | | | | | | | |
| 1 Pre Bid Conference | 2 | 2 | | | | 4 | \$760.00 |
| 2 Addenda Responses | 1 | 2 | 6 | 2 | | 11 | \$1,470.00 |
| 3 RFI responses | 1 | 2 | 6 | 2 | | 11 | \$1,470.00 |
| 4 Review, tabulate and evaluate bids | 1 | 2 | 6 | | | 9 | \$1,260.00 |
| Total | 5 | 8 | 18 | 4 | 0 | 35 | \$4,960.00 |
| J. QUALITY ASSURANCE/QUALITY CONTROL | | | | | | | |
| 1 QA/QC (60%, 90%, 100% & Final) | 20 | 16 | | 16 | | 52 | \$8,640.00 |
| 2 Independent Constructability Review at 60% | 8 | 6 | | | | 14 | \$2,720.00 |
| Total | 28 | 22 | 0 | 16 | 0 | 66 | \$11,360.00 |
| K. CONSTRUCTION PHASE SERVICES (6 MONTHS) | | | | | | | |
| 1 Preconstruction Meeting | 2 | 2 | 2 | | | 6 | \$1,000.00 |
| 2 Monthly Progress Meetings | 2 | 4 | 4 | | | 10 | \$1,560.00 |
| 3 Review pay apps, submittals, RFI's, & other data , Site Visits | 8 | 48 | 72 | | | 128 | \$18,080.00 |
| 4 Substantial & Final Walk Through | 2 | 6 | 8 | | | 16 | \$2,360.00 |
| Total | 14 | 60 | 86 | 0 | 0 | 160 | \$23,000.00 |
| TOTAL HOURS | 97 | 238 | 412 | 486 | 12 | 1245 | |
| Contract Labor Rate | \$220.00 | \$160.00 | \$120.00 | \$105.00 | \$75.00 | | |
| TOTAL LABOR COSTS BASIC ENGINEERING SERVICES | \$21,340.00 | \$38,080.00 | \$49,440.00 | \$51,030.00 | \$900.00 | | \$160,790.00 |

II. ADDITIONAL SERVICES

| | | | | | | | |
|--|-----------|-----------|------------|------------|----------|------------|---------------------|
| K. Genco Canal (10 sites) - Base Fee Cost | | | | | | | |
| 1 Construction Control Sheets (10 Sheets) | 1 | 2 | 12 | 16 | | 31 | \$3,660.00 |
| 2 Access Plan (3 Sheets) | 1 | 6 | 12 | 18 | | 37 | \$4,510.00 |
| 3 Sheet Layout Plan (2 Sheets) | 1 | 4 | 8 | 16 | | 29 | \$3,500.00 |
| 4 Plan and Profile (9 Sheets) | 10 | 22 | 48 | 80 | | 160 | \$19,880.00 |
| 5 Cross Sections (4 Sheets) | 4 | 12 | 36 | 58 | | 110 | \$13,210.00 |
| 6 Earthwork Quantities (1 Sheet) | 1 | 6 | 16 | 12 | | 35 | \$4,360.00 |
| 7 SWPPP (4 Sheet) | 1 | 8 | 16 | 24 | | 49 | \$5,940.00 |
| Total | 19 | 60 | 148 | 224 | 0 | 451 | \$55,060.00 |
| L. Other Add services | | | | | | | |
| 1 Full Time Inspector (6 month duration at \$113 per hr) | | | | | | | \$108,480.00 |
| 2 Genco Canal - Subs | | | | | | | |
| 3 Surveying - Landtech (\$13,100 + 10% Sub Markup) | | | | | | | \$14,410.00 |
| 4 Geotechnical - Aviles (\$19,924 + 10% Sub Markup) | | | | | | | \$21,916.40 |
| 5 SUE/Utility Coord-Cobb Fend. (\$14,019.2 + 10% Sub Markup) | | | | | | | \$15,421.12 |
| 6 Ex. C - USACE Permitting (\$41,000 +10% Sub Markup) | | | | | | | \$45,100.00 |
| 7 Public Meetings x 3 | 24 | 40 | 48 | 48 | 6 | 166 | \$22,930.00 |
| 8 City Council & Other Meetings x 3 | 12 | 12 | 12 | 3 | 2 | 41 | \$6,465.00 |
| 9 Two Bid Packages (Plans, OPCC & Project Manual) | 6 | 8 | 40 | 40 | | 94 | \$11,600.00 |
| Total | 42 | 60 | 100 | 91 | 8 | 301 | \$246,322.52 |
| TOTAL HOURS | 42 | 60 | 100 | 91 | 8 | 301 | |

| SUBCONTRACTED ENGINEERING SERVICES | COST | MARK-UP | TOTAL |
|--|--------------|---------|---------------------|
| 1 Ex. A-Surveying - Landtech | \$ 21,700.00 | 10% | \$ 23,870.00 |
| 2 Ex. B-Geotechnical - Aviles Corporation | \$ 24,166.00 | 10% | \$ 26,582.60 |
| 3 Ex. D -SUE & Utility Coordination - Cobb Fendley | \$ 9,440.00 | 10% | \$ 10,384.00 |
| TOTAL SUBCONTRACTED ENGINEERING SERVICES | | | \$ 60,836.60 |

| EXPENSES | QUANTITY | COST | TOTAL |
|------------------------------------|----------|----------|--------------------|
| 1 Printing and Reproduction (LS) | 1 | 2,000.00 | \$ 2,000.00 |
| 2 Mileage (Miles) | 1,000 | 0.55 | \$ 550.00 |
| 3 | | | |
| TOTAL REIMBURSABLE EXPENSES | | | \$ 2,550.00 |

Note, there will be no need for City Review fees

| PS&E TOTAL | |
|----------------------|------------------|
| I. Basic Services | \$160,790.00 |
| II. Add Services | \$301,382.52 |
| III. Sub Services | \$60,836.60 |
| IV. Expenses | \$2,550.00 |
| PROJECT TOTAL | \$525,559 |

EXHIBIT C
HURRICANE HARVEY CHANNEL REPAIR
PROJECT COST SUMMARY

| # | Project Name | Award Breakdown | | | Base Fees | | | | | | | | | Other Sub-Consultant Work | | | | Total Estimated Engineering |
|---|----------------------------|-----------------------|----------------------|----------------------------|-------------------|------------------|-------------|--------------------|---------------------|------------|------------|-------------|-------------------|---------------------------|-------------|-------------|-------------|-----------------------------------|
| | | Federal Cost Share | City's Cost Share | Total Est. Project Cost | General Sheets | Design Sheets | Misc Sheets | PM Coordination | Permitting & Bid | QA/QC | CPS | Survey | Total Base Fee | Geotech | ENV | SUE | Subs Total | |
| 1 | Gum Bayou | \$53,617.50 | \$5,957.50 | \$59,575.00 | \$336.70 | \$4,425.00 | \$694.38 | \$1,255.75 | \$279.56 | \$640.28 | \$1,048.33 | \$1,320.00 | \$10,000.00 | | | | | \$10,000.00 |
| 2 | Interurban Ditch | \$1,473,328.00 | \$163,703.00 | \$1,637,031.00 | \$2,903.05 | \$26,000.00 | \$4,079.99 | \$7,628.42 | \$1,642.59 | \$3,937.07 | \$8,017.06 | \$14,300.00 | \$68,508.19 | \$13,200.00 | \$19,800.00 | \$22,587.62 | \$55,587.62 | \$124,095.81 |
| 3 | Newport Ditch | \$40,331.25 | \$4,481.25 | \$44,812.50 | \$432.85 | \$4,065.00 | \$637.89 | \$903.59 | \$256.81 | \$413.18 | \$790.67 | | \$7,500.00 | | | | | \$7,500.00 |
| 4 | North Point Detention Pond | \$217,461.69 | \$24,162.41 | \$241,624.10 | \$1,630.26 | \$15,310.00 | \$2,402.49 | \$4,344.76 | \$967.23 | \$2,215.28 | \$4,733.16 | | \$31,603.18 | | | | | \$31,603.18 |
| 5 | Robinson Bayou | \$119,925.00 | \$13,325.00 | \$133,250.00 | \$3,057.13 | \$28,710.00 | \$4,505.25 | \$8,147.48 | \$1,813.80 | \$4,154.19 | \$8,410.78 | \$8,250.00 | \$67,048.64 | \$13,382.60 | \$19,800.00 | \$1,204.50 | \$34,387.10 | \$101,435.74 |
| 6 | Genco Canal Option 1 | | | \$660,000.00 | | \$55,060.00 | | | | | | \$14,410.00 | \$69,470.00 | \$21,916.40 | \$5,500.00 | \$2,013.00 | \$29,429.40 | \$98,899.40 |



EXHIBIT D

Rate Sheet:

6/24/2020

| | Classification | Hourly Rate | Overhead 1.9 | Rate per Hr. |
|----|---|------------------------|-------------------------|---------------------|
| 1 | Principal | \$79.31 | \$121.05 | \$230 |
| 2 | Sr. Project Manager | \$77.59 | 118.42 | \$225 |
| 3 | Team Leader | \$74.14 | 113.16 | \$215 |
| 4 | Project Manager | \$75.86 | 115.79 | \$220 |
| 5 | Senior Professional Engineer | \$60.34 | 92.11 | \$175 |
| 6 | Senior Hydrologist | \$53.45 | 81.58 | \$155 |
| 7 | Professional Engineer | \$55.17 | 84.21 | \$160 |
| 8 | GIS Specialist | \$44.83 | 68.42 | \$130 |
| 9 | Engineer in Training | \$41.38 | 63.16 | \$120 |
| 10 | Senior Designer | \$39.66 | 60.53 | \$115 |
| 11 | Sr. Inspector (1.6 Overhead Multiplier) | \$43.37 | 69.38 | \$113 |
| 12 | Senior CADD Tech | \$36.21 | 55.26 | \$105 |
| 13 | Administrative Assistant | \$25.86 | 39.47 | \$75 |
| 14 | Clerical | \$22.41 | 34.21 | \$65 |



"EXHIBIT E"
PROJECT SCHEDULE
HARVEY DRAINAGE REPAIR PROJECT



| | Activity Name | Start Date | Finish Date | Duration (Cal. Days) | 2020 | | | | | | 2021 |
|----|---|-----------------|-----------------|-------------------------|-------------|-----|------|-------------|-----|-----|-------------|
| | | | | | 3rd Quarter | | | 4th Quarter | | | 1st Quarter |
| | | | | | Jul | Aug | Sept | Oct | Nov | Dec | Jan |
| 1 | PROJECT DURATION | Tues 07/14/2020 | Fri 01/29/2021 | 200 | | | | | | | |
| 2 | PROJECT INITIATION | | | | | | | | | | |
| 3 | Contract Approval at City Council Meeting | Tues 07/14/2020 | Tues 07/14/2020 | 0 | | | | | | | |
| 4 | Kick-off Meeting | Thur 07/23/2020 | Thur 07/23/2020 | 0 | | | | | | | |
| 5 | Issue Agreements to Sub-Consultants | Fri 07/24/2020 | Fri 07/24/2020 | 0 | | | | | | | |
| 6 | DESIGN PHASE | | | | | | | | | | |
| 7 | Topographic Survey/ SUE Work | Mon 07/27/2020 | Mon 08/24/2020 | 29 | | | | | | | |
| 8 | Environmental Investigation (If needed) | Mon 07/27/2020 | Mon 08/24/2020 | 29 | | | | | | | |
| 9 | Geotechnical Investigation | Mon 07/27/2020 | Mon 08/24/2020 | 29 | | | | | | | |
| 10 | 60% Design | Mon 08/24/2020 | Mon 09/14/2020 | 22 | | | | | | | |
| 11 | 60% DESIGN SUBMITTAL | Mon 09/14/2020 | Mon 09/14/2020 | 0 | | | | | | | |
| 12 | City Review Period | Mon 09/14/2020 | Mon 09/28/2020 | 15 | | | | | | | |
| 13 | 90% Design | Mon 09/28/2020 | Mon 10/19/2020 | 22 | | | | | | | |
| 14 | 90% DESIGN SUBMITTAL | Mon 10/19/2020 | Mon 10/19/2020 | 0 | | | | | | | |
| 15 | City Review Period | Mon 10/19/2020 | Mon 11/02/2020 | 15 | | | | | | | |
| 16 | 100% Design | Mon 11/02/2020 | Fri 11/20/2020 | 19 | | | | | | | |
| 17 | 100% DESIGN SUBMITTAL | Fri 11/20/2020 | Fri 11/20/2020 | 0 | | | | | | | |
| 18 | City Review Period | Fri 11/20/2020 | Mon 12/07/2020 | 18 | | | | | | | |
| 19 | Address City Comments | Mon 12/07/2020 | Fri 12/18/2020 | 12 | | | | | | | |
| 20 | FINAL SIGNED & SEALED PS&E SUBMITTAL | Fri 12/18/2020 | Fri 12/18/2020 | 0 | | | | | | | |
| 21 | Utility Signatures | Mon 12/21/2020 | Mon 01/04/2021 | 15 | | | | | | | |
| 22 | BID PHASE | | | | | | | | | | |
| 23 | Request Permission to Bid at City Meeting | Tues 01/05/2021 | Tues 01/05/2021 | 0 | | | | | | | |
| 24 | 1st Advertisement Date | Fri 01/08/2021 | Fri 01/08/2021 | 0 | | | | | | | |
| 25 | 2nd Advertisement Date | Fri 01/15/2021 | Fri 01/15/2021 | 0 | | | | | | | |
| 26 | Bids Opening | Fri 01/29/2021 | Fri 01/29/2021 | 0 | | | | | | | |
| | | | | | J | A | S | O | N | D | J |

Note, Project Duration can potentially increase due to normal and abnormal project activity including:

- Environmental permitting: 18 to 24 month schedule impact for an Individual Permit and 8 months for Pre-Construction Notification
- Unexpected site conditions that require additional time for design modifications
- Unavoidable utility conflict issues that require additional time for coordination and design modification
- Covid 19 delays associated with agency approval.

June 24, 2020

Mr. Derek St. John, PE, CFM
Principal
Gauge Engineering
3200 Wilcrest Drive, Suite 220
Houston, Texas 77042

Re: League City's Harvey Repair Projects

Dear Mr. St. John:

It is my pleasure to submit the following proposal for providing professional surveying services for the above referenced project. The scope of work and associated fee are as follows:

Genco Canal - Topographic survey of locations "A" to "J" on Genco Canal for point repairs. Locate washout, erosion area, channel flowline and outfalls. Prepare CAD file of the field data. Tie survey to City of League City benchmark.

\$13,100.00

Gum Bayou - Topographic survey of the washout area at the Bayridge Detention Pond at Gum Bayou. Tie survey to the City of League City benchmark. Prepare CAD file of the field data.

\$ 1,200.00

Interurban Ditch - Topographic survey of the channel from FM 518 to McKibben Lane. Cross section at 50 foot interval, locate Centerpoint transmission towers, washouts, failure area, and channel flow line. Deed research of the Centerpoint Fee Strip (Old Galveston Houston Electric Railway). Prepare CAD file of the field data. Tie survey to City of League City benchmark.

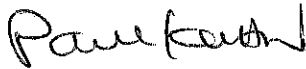
\$13,000.00

Robinson Ditch - Topographic survey of 800 linear feet of the channel at the end of Abilene Street for repair work. Cross section of the channel at 50 foot interval, locate washout, channel flowline and outfall structure. Prepare CAD file and field data. Tie survey to City of League City benchmark.

\$7,500.00

Thank you for the opportunity to submit this proposal.

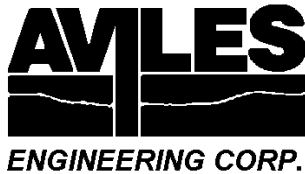
Sincerely,

A handwritten signature in black ink, appearing to read "Paul Kwan".

Paul Kwan, RPLS, President

S:\USERS\RECEPTIONIST\PROPOSAL\League City's Harvey Repair Projects

Exhibit G - Geotechnical Proposal



June 17, 2020

Mr. Derek St. John, P.E., CFM
Principal
Gauge Engineering
3200 Wilcrest Drive, Suite 220
Houston, TX 77042

Re: Revised Geotechnical Investigation Proposal /Agreement
Proposed League City's Harvey Repair Projects
League City, Texas
AEC Proposal No. G2020-06-02R2

Dear Mr. St. John,

Aviles Engineering Corporation (AEC) is pleased to submit this revised geotechnical investigation proposal for Proposed League City's Harvey Repair Projects with 3 locations: (i) approximately 6,700 feet long section of Genco Canal located at south of Marina Bay Drive (Galveston County Key Map KM 619 Y&Z, 659 B&C); (ii) approximately 600 feet long section of Interurban Ditch located at just north of FM 518 (KM 658M); and (iii) approximately 700 feet long section of Robinson Bayou located just north of Abilene Street (KM 659F) in League City, Texas. According to the information and maps provided, and AEC's site visit, the slopes of the three channel sections have experienced erosion/scouring/sloughing, and slope failure; the approximately channel depths are: (a) 16 to 17 feet along Genco Canal; (b) 12 to 14 feet along Interurban Ditch; and (c) 12 to 15 feet along Robinson Bayou. AEC understand that League City plans to repair failed slopes of these channels.

Per your request, AEC proposes to drill 4 borings: (i) two 35-foot deep borings along Genco Canal; (ii) one 25 feet deep boring along Interurban Ditch; and (iii) one 30-foot deep boring for Robinson Bayou. Total drilling footage is 125 feet. The proposed borings are shown on the attached boring location plans. AEC personnel will mark the boring locations and contact Texas 811 to check underground utilities. However, Texas 811 does not check underground water line, storm sewer, and sanitary sewer. We request that the existing underground utilities drawings be provided to AEC at the project onset.

Based on Google Earth and our site visit, we anticipate that the access to most of the borings (except Boring B-3) will require a buggy rig. Boring B-3 will be located on FM 518 (due to access issue along the channel) where concrete coring and traffic control will be required; *if the City of League City can provide access to the private property where B-3A is located at no cost to AEC, we will drill Boring B-3A (instead of B-3) which is closer to the failed slope.* Samples will be obtained continuously in the top 20 feet and at 5-foot intervals thereafter. Undisturbed samples will be obtained of cohesive soils by pushing a Shelby tube (ASTM D-1587). Standard Penetration Test samples will be obtained of granular soils (ASTM D-1586). We will note any visual evidence of odor indicating hazardous materials if encountered in the samples. Representative portions of all soil samples will be sealed, packaged and transported to our laboratory. Water level readings will be noted during drilling, upon completion of drilling, and 24 hours (where possible) after completion of drilling, then the boreholes off pavement will be backfilled with bentonite chips; and the borehole on pavement will be grouted with cement-bentonite grout. Boring locations will be surveyed by others to determine X-Y coordinates and surface elevations.

Laboratory testing may consist of moisture contents, Atterberg limits, percentage passing No. 200 sieve, sieve analysis, dry density, specific gravity tests, and unconfined compression and unconsolidated-undrained triaxial tests depending on the soil types encountered. Four (4) consolidated-undrained (CU) triaxial tests, eight (8) crumb tests, and four (4) double hydrometer analysis will be performed depending on the soil types encountered.

We will analyze the field and laboratory data to develop geotechnical engineering recommendations in a single report for (i) boring logs; (ii) summary of subsurface soil conditions and groundwater levels encountered; (iii) sieve analysis and double hydrometer test results for detention basin and channels, evaluation if the soils at the site are dispersive; (iv) d_{50} for granular soils, if required, for scour analysis (by others); (v) slope stability analyses on 3 or 4 selected cross-sections of the channels, and recommendations for the stable slope inclination; (vi) recommendations for erosion protection measures, and criteria for riprap if it is to be used; (vii) criteria of select fill to be used for slope reconstruction; and (9) recommendations and dewatering guidelines for the slope reconstruction.

The estimated lump sum (or time and materials) fees for the services described in this proposal are (i) **\$19,994.00** for Genco Canal; (ii) **\$14,859.00** for Interurban Ditch; and (iii) **\$12,166.00** for Robinson Bayou, with a total fee of **\$46,949.00** as shown on the attached itemized fee estimates which include one mob/demob for an ATV rig (assuming we will do all the three channel borings at one time), a site visit to mark the borings, 3 copies of final report. The fee is based on the following assumptions: (1) the entry permit will be provided to AEC with no cost; (2) the field personnel will use Level D protection gear during the field exploration; (3) no standby time (weather-related or incurred due to reasons beyond AEC's control) are included; and (4) fence/gate removal, pavement coring, fault study, surveying, plan/specification review, and environmental assessment are not included.

Weather permitting, and assuming no field delays, we plan to start the field exploration about two weeks after receiving your notice to proceed. The permit for drilling on FM 518 may take 4 to 5 weeks. The field drilling will take about 2 to 3 weeks; soil laboratory testing will require 5 to 7 weeks (due to CU triaxial tests) to complete. We will submit draft report 3 to 4 weeks after completion of the laboratory soil testing as long as preliminary project layout is provided to AEC before we start the engineering analysis. Final report and trench report will be issued 2 weeks after we receive your comments on the draft report. To help the design engineer on project schedule, AEC will provide draft boring logs and preliminary geotechnical recommendations prior to draft geotechnical report.

To reduce delays in the schedule and avoid additional fees, we request that we be provided with any proposed or preferred geotechnical-related design details including existing utility drawings, and proposed detention pond and channel drawings, and design 100-year flood elevation at the onset.

If any of the project details described in this proposal are incorrect or the scope described or the assumptions listed need to be revised, please inform us immediately so we can revise the proposal as necessary. To authorize us to proceed with the proposed geotechnical services, you may sign and return a copy of this proposal to authorize AEC to proceed with the services, or issue us a Professional Services Contract to proceed with the services clearly reflecting the scope of services to be performed and referencing this proposal.

Gauge Engineering.
Proposed League City's Harvey Repair Projects
League City, Texas
AEC Proposal No. G2020-06-02R2
June 17, 2020



Page 3 of 4

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

Respectfully submitted,
Aviles Engineering Corporation
(TBPE Firm Registration No. 42)

A handwritten signature in blue ink, appearing to read "Shou Ting Hu", is written over a light blue circular stamp.

Shou Ting Hu, MSCE, P.E.
President

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

AGREED TO THIS _____ DAY OF _____, _____

BY (Signature): _____

NAME (Print): _____

TITLE: _____

FIRM: _____



GEOTECHNICAL INVESTIGATION TERMS AND CONDITIONS

STANDARD OF CARE

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

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

SCOPE OF SERVICES

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

SITE ACCESS AND SITE CONDITIONS

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

BILLING AND PAYMENT

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

LIMITATION OF LIABILITY / INDEMNIFICATION

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

Genco Canal ITEMIZED FEE ESTIMATE

2 borings @35'

| A. FIELD EXPLORATION | QTY | UNIT | | RATE | AMOUNT |
|--|----------------------------|-------------|---|-------------|--------------------|
| Mobilization/Demobilization (Buggy-Mounted Rig) | 0.33333 | LS | @ | \$900.00 | \$300.00 |
| Drill Crew Travel | 1 | hrs. | @ | \$150.00 | \$150.00 |
| Coordination & Utility Checking (Graduate Engineer) | 2 | hrs. | @ | \$115.00 | \$230.00 |
| Boring Layout & Site Reconnaissance (Graduate Engineer) | 4 | hrs. | @ | \$115.00 | \$460.00 |
| Boring Logging and Field Supervising (Technician) | 10 | hrs. | @ | \$65.00 | \$650.00 |
| Concrete Coring and Patching (6" diameter, 0"-6" thick, min \$350) | 0 | ea. | @ | \$170.00 | \$0.00 |
| Soil Drilling w/truck-mounted rig (0'-20' continuous) | 40 | ft. | @ | \$25.00 | \$1,000.00 |
| Soil Drilling w/truck-mounted rig (20'-50' continuous) | 30 | ft. | @ | \$30.00 | \$900.00 |
| Soil Drilling w/truck-mounted rig (20 to 50 ft intermittent) | 0 | ft. | @ | \$23.00 | \$0.00 |
| Grouting Holes (Bentonite Chips) | 70 | ft. | @ | \$12.00 | \$840.00 |
| Surcharge for Drilling with Buggy Rig | 70 | ft. | @ | \$10.00 | \$700.00 |
| Metal Cover for Piezometers | 0 | ea. | @ | \$100.00 | \$0.00 |
| Installing Piezometers | 0 | ft. | @ | \$24.00 | \$0.00 |
| 24 Hour Groundwater Monitoring (Technician) | 4 | hrs. | @ | \$65.00 | \$260.00 |
| Plug and Abandon Piezometers | 0 | ea. | @ | \$20.00 | \$0.00 |
| Standby Time (Drill Crew) | 0 | hrs. | @ | \$300.00 | \$0.00 |
| Vehicle Charge | 18 | hrs. | @ | 12.00 | \$216.00 |
| | SUBTOTAL | | | | \$5,706.00 |
| B. ALLOWANCE | | | | | |
| Permit for Lane Closure and Traffic Control (Graduate Engineer) | 0 | hrs. | @ | \$115.00 | \$0.00 |
| Traffic Control along FM 518 (Crash Truck and 2 Flaggers) | 0 | day | @ | \$2,000.00 | \$0.00 |
| | SUBTOTAL | | | | \$0.00 |
| C. GEOTECHNICAL LABORATORY TESTING | | | | | |
| Atterberg Limits (ASTM D-4318) | 8 | ea. | @ | \$71.00 | \$568.00 |
| Passing No. 200 Sieve (ASTM D-1140) | 4 | ea. | @ | \$55.00 | \$220.00 |
| Sieve Analysis w/o Hydrometer (ASTM D-422) | 2 | ea. | @ | \$65.00 | \$130.00 |
| Moisture Content (ASTM D-2216) | 26 | ea. | @ | \$11.00 | \$286.00 |
| Unconfined Compression (ASTM D-2166) | 4 | ea. | @ | \$51.00 | \$204.00 |
| Unconsolidated-Undrained Triaxial Test (ASTM D-2850) | 4 | ea. | @ | \$72.00 | \$288.00 |
| Double Hydrometer (ASTM D-4221, Code 91600) | 2 | ea. | @ | \$250.00 | \$500.00 |
| Crumb Test (ASTM D-6572, Code 91500) | 4 | ea. | @ | \$43.00 | \$172.00 |
| Consolidated-Undrained Triaxial Test (ASTM D-4767) | 2 | ea. | @ | \$1,800.00 | \$3,600.00 |
| | SUBTOTAL | | | | \$5,968.00 |
| D. ENGINEERING ANALYSIS & REPORT PREPARATION | | | | | |
| Senior Engineer, P.E. | 8 | hrs. | @ | \$205.00 | \$1,640.00 |
| Project Engineer, P.E. | 16 | hrs. | @ | \$165.00 | \$2,640.00 |
| Graduate Engineer, EIT | 32 | hrs. | @ | \$115.00 | \$3,680.00 |
| Senior Technician | 2 | hrs. | @ | \$90.00 | \$180.00 |
| Engineering Assistant | 1 | hrs. | @ | \$70.00 | \$70.00 |
| Reproduction (Final Report) | 1 | copies | @ | \$40.00 | \$40.00 |
| | SUBTOTAL | | | | \$8,250.00 |
| | TOTAL ESTIMATED FEE | | | | \$19,924.00 |

Interurban Ditch ITEMIZED FEE ESTIMATE

One boring@25'

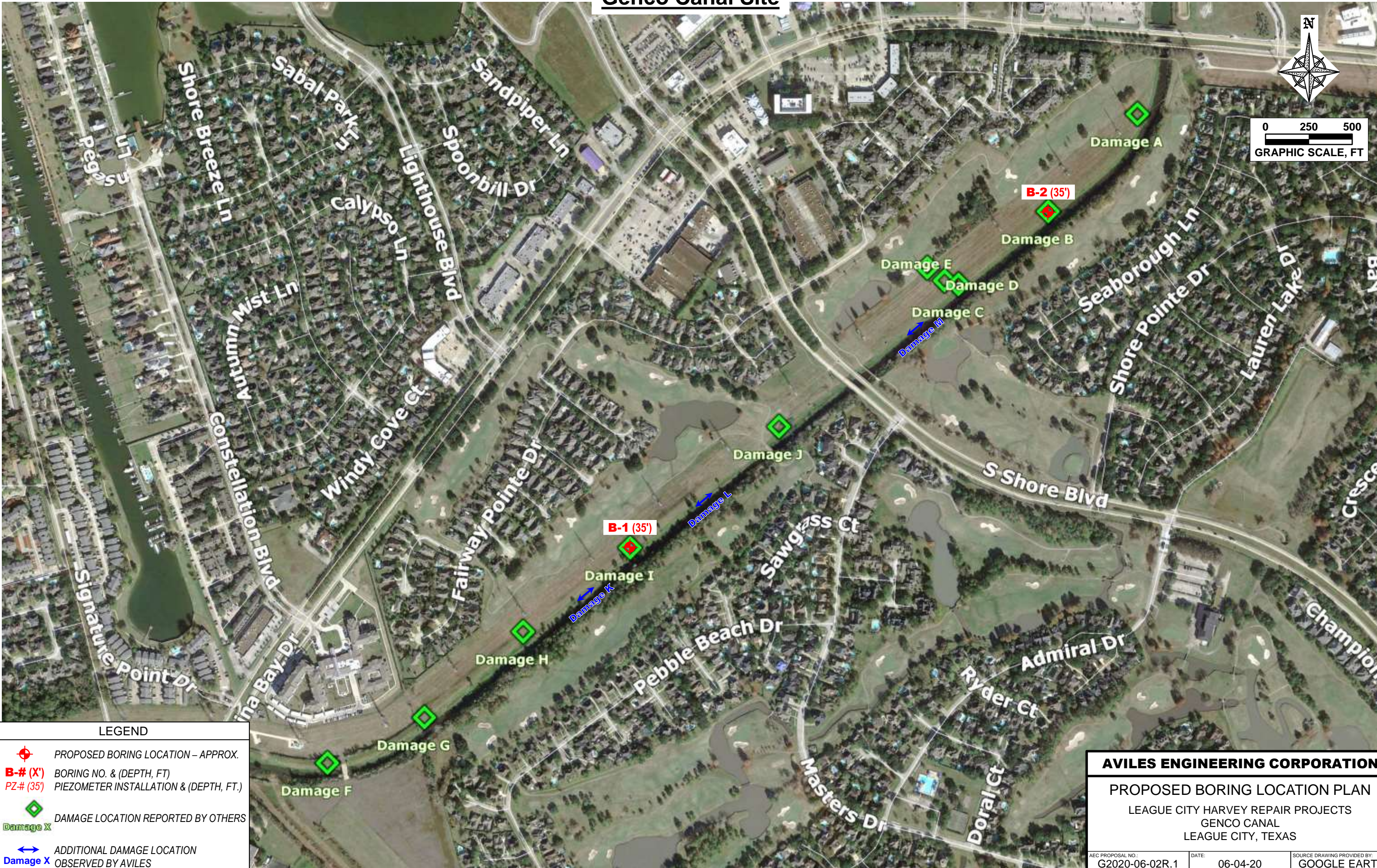
| A. FIELD EXPLORATION | QTY | UNIT | | RATE | AMOUNT |
|--|----------------------------|-------------|---|-------------|--------------------|
| Mobilization/Demobilization (Buggy-Mounted Rig) | 0.33333 | LS | @ | \$900.00 | \$300.00 |
| Drill Crew Travel | 0.5 | hrs. | @ | \$150.00 | \$75.00 |
| Coordination & Utility Checking (Graduate Engineer) | 2 | hrs. | @ | \$115.00 | \$230.00 |
| Boring Layout & Site Reconnaissance (Graduate Engineer) | 4 | hrs. | @ | \$115.00 | \$460.00 |
| Boring Logging and Field Supervising (Technician) | 8 | hrs. | @ | \$65.00 | \$520.00 |
| Concrete Coring and Patching (6" diameter, 0"-6" thick, min \$350) | 1 | ea. | @ | \$170.00 | \$350.00 |
| Soil Drilling w/truck-mounted rig (0'-20' continuous) | 20 | ft. | @ | \$25.00 | \$500.00 |
| Soil Drilling w/truck-mounted rig (20'-50' continuous) | 5 | ft. | @ | \$30.00 | \$150.00 |
| Soil Drilling w/truck-mounted rig (20 to 50 ft intermittent) | 0 | ft. | @ | \$23.00 | \$0.00 |
| Grouting Holes (Bentonite Chips) | 25 | ft. | @ | \$12.00 | \$300.00 |
| Surcharge for Drilling with Buggy Rig | 25 | ft. | @ | \$10.00 | \$250.00 |
| Metal Cover for Piezometers | 0 | ea. | @ | \$100.00 | \$0.00 |
| Installing Piezometers | 0 | ft. | @ | \$24.00 | \$0.00 |
| 24 Hour Groundwater Monitoring (Technician) | 4 | hrs. | @ | \$65.00 | \$260.00 |
| Plug and Abandon Piezometers | 0 | ea. | @ | \$20.00 | \$0.00 |
| Standby Time (Drill Crew) | 0 | hrs. | @ | \$300.00 | \$0.00 |
| Vehicle Charge | 16 | hrs. | @ | 12.00 | \$192.00 |
| | SUBTOTAL | | | | \$3,587.00 |
| B. ALLOWANCE | | | | | |
| Permit for Lane Closure and Traffic Control (Graduate Engineer) | 4 | hrs. | @ | \$115.00 | \$460.00 |
| Traffic Control along FM 518 (Crash Truck and 2 Flaggers) | 1 | day | @ | \$2,000.00 | \$2,000.00 |
| | SUBTOTAL | | | | \$2,460.00 |
| C. GEOTECHNICAL LABORATORY TESTING | | | | | |
| Atterberg Limits (ASTM D-4318) | 4 | ea. | @ | \$71.00 | \$284.00 |
| Passing No. 200 Sieve (ASTM D-1140) | 2 | ea. | @ | \$55.00 | \$110.00 |
| Sieve Analysis w/o Hydrometer (ASTM D-422) | 1 | ea. | @ | \$65.00 | \$65.00 |
| Moisture Content (ASTM D-2216) | 11 | ea. | @ | \$11.00 | \$121.00 |
| Unconfined Compression (ASTM D-2166) | 2 | ea. | @ | \$51.00 | \$102.00 |
| Unconsolidated-Undrained Triaxial Test (ASTM D-2850) | 2 | ea. | @ | \$72.00 | \$144.00 |
| Double Hydrometer (ASTM D-4221, Code 91600) | 1 | ea. | @ | \$250.00 | \$250.00 |
| Crumb Test (ASTM D-6572, Code 91500) | 2 | ea. | @ | \$43.00 | \$86.00 |
| Consolidated-Undrained Triaxial Test (ASTM D-4767) | 1 | ea. | @ | \$1,800.00 | \$1,800.00 |
| | SUBTOTAL | | | | \$2,962.00 |
| D. ENGINEERING ANALYSIS & REPORT PREPARATION | | | | | |
| Senior Engineer, P.E. | 4 | hrs. | @ | \$205.00 | \$820.00 |
| Project Engineer, P.E. | 12 | hrs. | @ | \$165.00 | \$1,980.00 |
| Graduate Engineer, EIT | 24 | hrs. | @ | \$115.00 | \$2,760.00 |
| Senior Technician | 2 | hrs. | @ | \$90.00 | \$180.00 |
| Engineering Assistant | 1 | hrs. | @ | \$70.00 | \$70.00 |
| Reproduction (Final Report) | 1 | copies | @ | \$40.00 | \$40.00 |
| | SUBTOTAL | | | | \$5,850.00 |
| | TOTAL ESTIMATED FEE | | | | \$14,859.00 |

Robinson Bayou ITEMIZED FEE ESTIMATE

One boring@30'

| A. FIELD EXPLORATION | QTY | UNIT | | RATE | AMOUNT |
|--|----------------------------|-------------|---|-------------|--------------------|
| Mobilization/Demobilization (Buggy-Mounted Rig) | 0.33333 | LS | @ | \$900.00 | \$300.00 |
| Drill Crew Travel | 0.5 | hrs. | @ | \$150.00 | \$75.00 |
| Coordination & Utility Checking (Graduate Engineer) | 2 | hrs. | @ | \$115.00 | \$230.00 |
| Boring Layout & Site Reconnaissance (Graduate Engineer) | 4 | hrs. | @ | \$115.00 | \$460.00 |
| Boring Logging and Field Supervising (Technician) | 6 | hrs. | @ | \$65.00 | \$390.00 |
| Concrete Coring and Patching (6" diameter, 0"-6" thick, min \$350) | 0 | ea. | @ | \$170.00 | \$0.00 |
| Soil Drilling w/truck-mounted rig (0'-20' continuous) | 20 | ft. | @ | \$25.00 | \$500.00 |
| Soil Drilling w/truck-mounted rig (20'-50' continuous) | 10 | ft. | @ | \$30.00 | \$300.00 |
| Soil Drilling w/truck-mounted rig (20 to 50 ft intermittent) | 0 | ft. | @ | \$23.00 | \$0.00 |
| Grouting Holes (Bentonite Chips) | 30 | ft. | @ | \$12.00 | \$360.00 |
| Surcharge for Drilling with Buggy Rig | 30 | ft. | @ | \$10.00 | \$300.00 |
| Metal Cover for Piezometers | 0 | ea. | @ | \$100.00 | \$0.00 |
| Installing Piezometers | 0 | ft. | @ | \$24.00 | \$0.00 |
| 24 Hour Groundwater Monitoring (Technician) | 4 | hrs. | @ | \$65.00 | \$260.00 |
| Plug and Abandon Piezometers | 0 | ea. | @ | \$20.00 | \$0.00 |
| Standby Time (Drill Crew) | 0 | hrs. | @ | \$300.00 | \$0.00 |
| Vehicle Charge | 14 | hrs. | @ | 12.00 | \$168.00 |
| | SUBTOTAL | | | | \$3,343.00 |
| B. ALLOWANCE | | | | | |
| Permit for Lane Closure and Traffic Control (Graduate Engineer) | 0 | hrs. | @ | \$115.00 | \$0.00 |
| Traffic Control along FM 518 (Crash Truck and 2 Flaggers) | 0 | day | @ | \$2,000.00 | \$0.00 |
| | SUBTOTAL | | | | \$0.00 |
| C. GEOTECHNICAL LABORATORY TESTING | | | | | |
| Atterberg Limits (ASTM D-4318) | 4 | ea. | @ | \$71.00 | \$284.00 |
| Passing No. 200 Sieve (ASTM D-1140) | 2 | ea. | @ | \$55.00 | \$110.00 |
| Sieve Analysis w/o Hydrometer (ASTM D-422) | 1 | ea. | @ | \$65.00 | \$65.00 |
| Moisture Content (ASTM D-2216) | 12 | ea. | @ | \$11.00 | \$132.00 |
| Unconfined Compression (ASTM D-2166) | 2 | ea. | @ | \$51.00 | \$102.00 |
| Unconsolidated-Undrained Triaxial Test (ASTM D-2850) | 2 | ea. | @ | \$72.00 | \$144.00 |
| Double Hydrometer (ASTM D-4221, Code 91600) | 1 | ea. | @ | \$250.00 | \$250.00 |
| Crumb Test (ASTM D-6572, Code 91500) | 2 | ea. | @ | \$43.00 | \$86.00 |
| Consolidated-Undrained Triaxial Test (ASTM D-4767) | 1 | ea. | @ | \$1,800.00 | \$1,800.00 |
| | SUBTOTAL | | | | \$2,973.00 |
| D. ENGINEERING ANALYSIS & REPORT PREPARATION | | | | | |
| Senior Engineer, P.E. | 4 | hrs. | @ | \$205.00 | \$820.00 |
| Project Engineer, P.E. | 12 | hrs. | @ | \$165.00 | \$1,980.00 |
| Graduate Engineer, EIT | 24 | hrs. | @ | \$115.00 | \$2,760.00 |
| Senior Technician | 2 | hrs. | @ | \$90.00 | \$180.00 |
| Engineering Assistant | 1 | hrs. | @ | \$70.00 | \$70.00 |
| Reproduction (Final Report) | 1 | copies | @ | \$40.00 | \$40.00 |
| | SUBTOTAL | | | | \$5,850.00 |
| | TOTAL ESTIMATED FEE | | | | \$12,166.00 |

Genco Canal Site



Interurban Ditch Site



0 50 100
GRAPHIC SCALE, FT

League St

Mckibben Ln

B-3A (25')


B-3 (25')

W Main St

Interurban

518

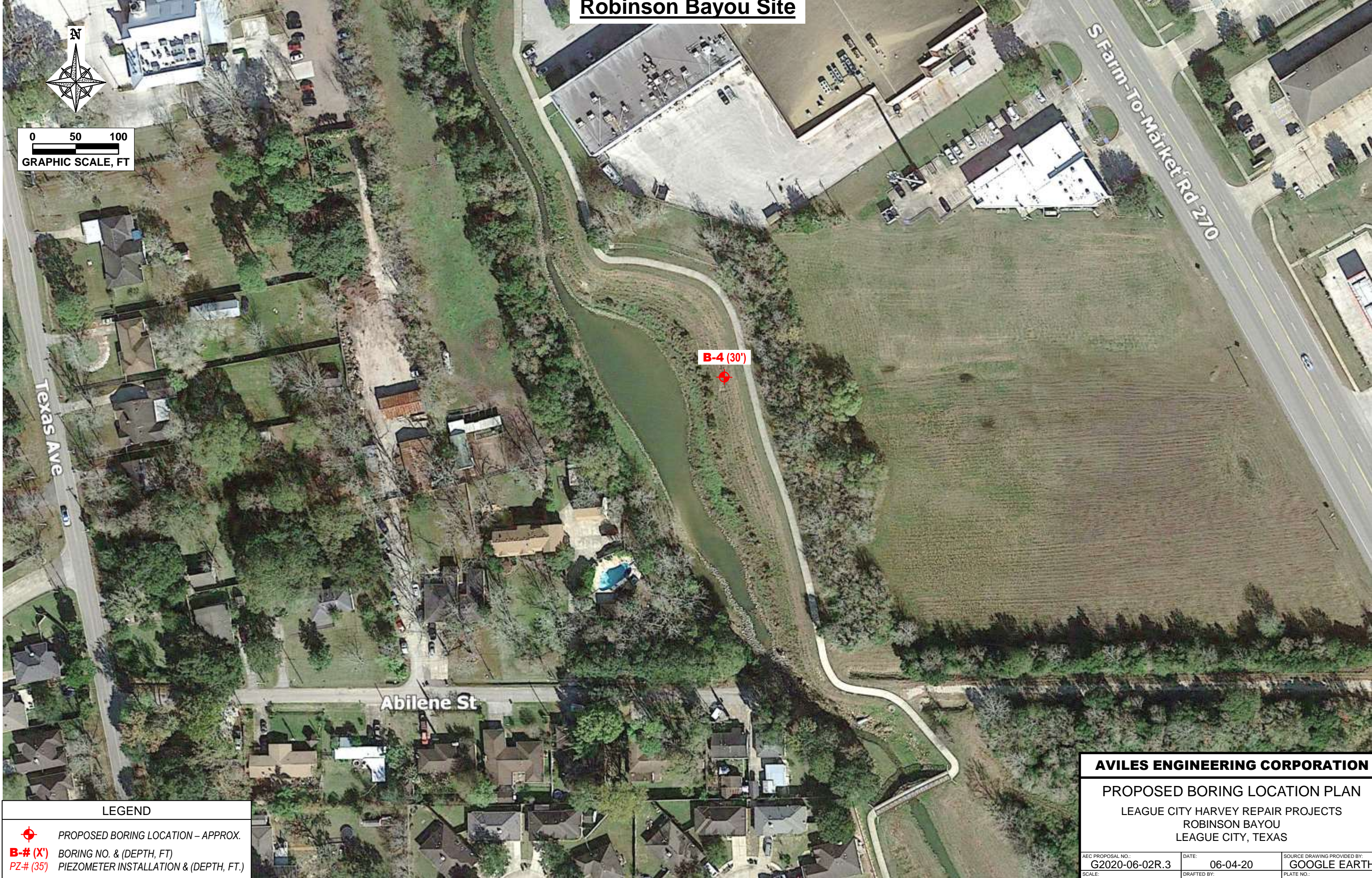
LEGEND

-  PROPOSED BORING LOCATION – APPROX.
- B-# (X')** BORING NO. & (DEPTH, FT)
- PZ-# (35')** PIEZOMETER INSTALLATION & (DEPTH, FT.)

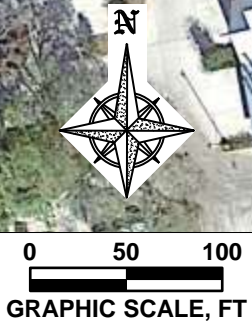
AVILES ENGINEERING CORPORATION

PROPOSED BORING LOCATION PLAN
LEAGUE CITY HARVEY REPAIR PROJECTS
INTERURBAN DITCH
LEAGUE CITY, TEXAS

| | | |
|-------------------------------------|--------------------|---|
| AEC PROPOSAL NO.: G2020-06-02R.2 | DATE: 06-04-20 | SOURCE DRAWING PROVIDED BY: GOOGLE EARTH |
| SCALE: 1" = 100' | DRAFTED BY: BpJ | PLATE NO.: PLATE 2 |



Robinson Bayou Site



B-4 (30')




Abilene St

Texas Ave

S Farm-To-Market Rd 270

LEGEND

-  PROPOSED BORING LOCATION – APPROX.
- B-# (X')** BORING NO. & (DEPTH, FT)
- PZ-# (35')** PIEZOMETER INSTALLATION & (DEPTH, FT.)

AVILES ENGINEERING CORPORATION

PROPOSED BORING LOCATION PLAN

LEAGUE CITY HARVEY REPAIR PROJECTS
ROBINSON BAYOU
LEAGUE CITY, TEXAS

| | | |
|--|---------------------------|--|
| AEC PROPOSAL NO.: G2020-06-02R.3 | DATE: 06-04-20 | SOURCE DRAWING PROVIDED BY: GOOGLE EARTH |
| SCALE: 1" = 100' | DRAFTED BY: BpJ | PLATE NO.: PLATE 3 |



June 24, 2020

Derek StJohn
Gauge Engineering
3200 Willcrest Drive, Ste. 220
Houston, Tx 77042

VIA EMAIL ONLY

Re: **Proposal for Harvey Projects (Interurban, Genco, Robinson), League City, Texas**
Subsurface Utility Engineering (SUE) and Utility Coordination (UC) of Existing
Utilities/Pipelines
Proposal for Professional Engineering Services

Dear Mr. StJohn,

Cobb, Fendley & Associates, Inc. ("CobbFendley") is pleased to submit this proposal for professional engineering services to assist Gauge Engineering ("Client") with SUE and UC of existing utilities at the Interurban site and SUE on the Genco and Robinson sites in League City, Texas. The proposed scope of services, basis of compensation as T&M (Not to Exceed) and schedule are outlined below for your review.

CobbFendley's services are to be performed for the sole benefit of Client, who shall be responsible for payment of those services. When accepted by the signature of Client's authorized representative, the authorization and the documents referenced herein shall constitute the entire agreement between Client and CobbFendley with respect to this project.

SCOPE OF SERVICES

The specific tasks to be performed by CobbFendley in conjunction with this project are limited to the following:

- 1. Interurban site: (SUE):** CobbFendley will collect records for all utilities in the project limits through an 811 design ticket. CobbFendley will then mobilize a field crew to perform Level B designating to determine XY locations of all utilities within. Located lines will be toned and painted/flagged. CobbFendley will then survey all paint marks and tie to a project control provided by the Client. CobbFendley will then process that survey data into a SUE CAD file to be delivered to the client.
- 2. Interurban Site: (UC):** CobbFendley will provide utility coordination for this site. CobbFendley will coordinate with pipeline owners to receive Letters of No Objection (LONO's) and access agreements. CobbFendley will also prepare and deliver a Contact List of all utility companies in the project limits and will deliver a Conflict List of all potential utility conflicts within the project limits. There are 10 pipelines in the area based on both the Texas RRC website and the NPMS website. The repairs exhibit provided does not detail the repair limits. Extensive utility coordination will be needed to contact and follow up with all utility/pipeline owners, obtain records and design/construction guidelines, determine their alignment and depth information, analyze the city's repairs and the pipeline's location to determine any direct or constructability conflicts. If a direct conflict is determined, the relocation will be coordinated with the pipeline owner. If it is determined that the City's repairs are within a pipeline's easement, a LONO will be

coordinated with the pipeline owner. If a constructability conflict is determined, an access agreement will be coordinated with the pipeline owner. There is a CenterPoint Electric (CNPE) corridor at this location for their transmission power lines. A Temporary Access Agreement for the city to cross the CNPE ROW will be coordinated.

3. **Genco Site: (SUE):** CobbFendley will collect records for all utilities within the project limits of this site through an 811 design ticket and provide a Quality Level D SUE CAD file of all the utilities within project limits.
4. **Robinson Site: (SUE):** CobbFendley will collect records for all utilities within the project limits of this site through an 811 design ticket and provide a Quality Level D SUE CAD file of all the utilities within project limits.

BASIS OF COMPENSATION

CobbFendley proposes to perform the described Scope of Services, based on Time & Materials (Not to Exceed), for the following fees:

1. **Interurban Site SUE:** \$6,515.00
(To be invoiced in Accordance with Contract Rates)
2. **Interurban Site UC:** \$14,019.20
(To be invoiced in Accordance with Contract Rates)
3. **Genco Site SUE:** \$1,830.00
(To be invoiced in Accordance with Contract Rates)
4. **Robinson Site SUE:** \$1,095.00
(To be invoiced in Accordance with Contract Rates)

SCOPE OF SERVICES TO BE PROVIDED FOR A TOTAL FEE OF \$23,459.20

ADDITIONAL SERVICES

Any services not included in the above scope of services shall be considered Additional Services. Additional Services, if requested, can be provided based on a negotiated cost per the contract rate schedule. Authorization by the Client and a fully executed Supplemental Agreement shall be obtained prior to any additional services being performed.

1. Level A Test Holes as needed to verify any elevation data on a pipeline or utility can be performed by CobbFendley at an additional agreed upon fee.

EXCLUSIONS FROM THE SCOPE OF SERVICES

Specific items excluded from this proposal are as follows, and CobbFendley shall have no responsibility to perform any of these services.

1. CobbFendley's scope does not include confirming the accuracy and scale representation of record drawing plans or as-built documentation plans received from utility owners.

SCHEDULE OF SERVICES

CobbFendley is authorized to begin work on this project immediately upon receipt of Client's authorization. CobbFendley's will begin field (SUE) and coordination (UC) tasks within 1 (one) week of NTP. The deliverables will be the within 5 (five) weeks of the NTP.

PROPOSAL ACCEPTANCE

If this proposal is acceptable to you, please provide an authorization to begin work or indicate your acceptance by signing in the space provided below and return one original to us for our file. This proposal is void if not accepted within thirty days of the date hereon. The opportunity to propose professional engineering services to your company is appreciated and we look forward to serving you on this project.

Sincerely,

COBB, FENDLEY & ASSOCIATES, INC.



Shawn Conlin
Department Manager
SUE Department

This Proposal Accepted By:

Gauge Engineering

Signature

Print Name

Title

Date of Authorization

ATTACHMENTS:

cc: Diana Ward P.E., Principal, CobbFendley
Paula Martinez E.I.T., Project Engineer, CobbFendley



2020 Standard Rate Schedule

| | |
|--|-----------------|
| Senior Engineer V or Principal | \$290.00/HR |
| Senior Engineer IV or Project Manager V..... | \$270.00/HR |
| Senior Engineer III or Project Manager IV | \$235.00/HR |
| Senior Engineer II or Project Manager III | \$220.00/HR |
| Senior Engineer I or Project Manager II | \$195.00/HR |
| Engineer III or Project Manager I..... | \$170.00/HR |
| Engineer II | \$150.00/HR |
| Engineer I | \$125.00/HR |
| Graduate Engineer..... | \$105.00/HR |
| Senior Technician III (GIS, Telecom, Utility, CAD, Field)..... | \$165.00/HR |
| Senior Technician II (GIS, Telecom, Utility, CAD, Field)..... | \$145.00/HR |
| Senior Technician I (GIS, Telecom, Utility, CAD, Field)..... | \$125.00/HR |
| Technician III (GIS, Telecom, Utility, CAD, Field) | \$100.00/HR |
| Technician II (GIS, Telecom, Utility, CAD, Field) | \$80.00/HR |
| Technician I (GIS, Telecom, Utility, CAD, Field) | \$60.00/HR |
| Licensed State Land Surveyor | \$235.00/HR |
| Senior Registered Professional Land Surveyor..... | \$210.00/HR |
| Registered Professional Land Surveyor | \$170.00/HR |
| 4 Person Survey Crew | \$190.00/HR |
| 3 Person Survey Crew | \$170.00/HR |
| 2 Person Survey Crew | \$145.00/HR |
| 1 Person Survey Crew | \$105.00/HR |
| 2 Person Hy-Drone Crew | \$340.00/HR |
| 2 Person UAV Drone Crew | \$235.00/HR |
| Construction Manager III..... | \$280.00/HR |
| Construction Manager II..... | \$230.00/HR |
| Construction Manager I..... | \$185.00/HR |
| Construction Observer III | \$155.00/HR |
| Construction Observer II | \$130.00/HR |
| Construction Observer I | \$110.00/HR |
| Sr. Right-of-Way Agent III or ROW Project Manager III..... | \$250.00/HR |
| Sr. Right-of-Way Agent II or ROW Project Manager II..... | \$200.00/HR |
| Sr. Right-of-Way Agent I or ROW Project Manager I..... | \$180.00/HR |
| Right-of-Way Agent III or ROW Attorney | \$160.00/HR |
| Right-of-Way Agent II..... | \$140.00/HR |
| Right-of-Way Agent I..... | \$110.00/HR |
| Right-of-Way Technician..... | \$100.00/HR |
| Administrative | \$105.00/HR |
| Clerical..... | \$80.00/HR |
| Field Data Device | \$40.00/HR/unit |

(Continued)

SUBSURFACE UTILITY ENGINEERING

| | |
|--|------------------|
| Two-Man Designating Crew (4-Hour Minimum)..... | \$170/HR |
| One-Man Designating Crew (4-Hour Minimum)..... | \$110/HR |
| Vacuum Excavation Truck with 2 Technicians (Vac 6000) (4-Hour Minimum)..... | \$315/HR |
| Vacuum Excavation Truck with 2 Technicians (Vac 3000 & 4000) (4-Hour Minimum)..... | \$295/HR |
| Ground Penetrating Radar with 1 Technician (4-Hour Minimum) | \$260/HR |
| Traffic Control Officer | @ Cost + 10% |
| Traffic Control (Lane Closures, etc.)..... | To Be Negotiated |
| Permits (Local, State, etc.) | @ Cost + 10% |
| Designation, Location & Traffic Control Vehicles..... | \$6.50/Mile |

REIMBURSABLE EXPENSES

| | |
|--|-----------------------|
| Technology Fee (*) | \$3.75/HR |
| Consultant or Specialty Contractor (Outside Firm) | @ Cost + 10% |
| Courier, Special Equipment Rental | @ Cost + 10% |
| Reasonable Out of Town Travel Expenses (Air, Hotel, Rental, etc.)..... | @ Cost |
| Mileage (Standard Car or Truck) | IRS Approved Rate |
| Per Diem for Out of Town Travel (Per Day/Person) | GSA Standard Rate/Day |
| Title Plant Charges | @ Cost + 10% |
| Other Misc. Expenses Related to the Project | @ Cost + 10% |

In-House Reproduction:

- Copies (Up to 11" x 17").....\$0.15/Each
- Color Prints (Up to 11" x 17")
- Color Prints (Larger than 11" x 17")
- Bluelines (All Sizes)
- Bond Prints (All Sizes)
- Mylar Prints.....
- Vellum Prints

(*) Technology charges added to each billable man-hour.

PSA Exhibit B

PHASE REQUIREMENTS

I. Design Phase Services are considered "Time Critical" and subject to Liquidated Damages as outlined in Item 5 of the Professional Services Agreement. This phase must conform to the following submittal types and requirements:

A. 30% Submittals should, at a minimum, include the following:

1. Plans that contain the following information:
 - a. Cover Sheet
 - b. Field Survey Plan Sheet
 - c. Design Plan Sheets that show Existing Conditions and proposed concepts with the existing and proposed work clearly identified
 - d. Demo Plan
 - e. Typical Cross-Sections
2. List of preliminary Utility Conflicts and contact information for appropriate utilities.
3. Updated Design Schedule
4. Preliminary Opinion of Probable Costs (OPCC)
5. Permitting recommendations/requirements
6. Traffic Impact Analysis (if needed)
7. Draft H&H Study and/or Preliminary Engineering Report (if needed)
8. Preliminary Land Acquisition Information (if needed)
9. Preliminary Geotechnical findings (if needed)
10. Preparation of Exhibits and attendance at Public Meeting (if needed)

B. 60% Submittals should, at a minimum, include the following:

1. Plans that contain the following information:
 - a. Cover Sheet w/ index
 - b. General Notes
 - c. Sheet Layout
 - d. Typical Cross-Sections
 - e. Survey Control
 - f. Demo Plan
 - g. Grading Plan (if needed)
 - h. Tree Protection and/or Landscape Plan (if needed)
 - i. Traffic Control Plan (if needed)
 - j. Proposed Drainage Area Map and calculations
 - k. Plan and Profile drawings with Station Numbers for Water, Sewer, Storm, Street
 - l. Intersection Details
 - m. Sidewalks, Traffic Signage, & Pavement Marking Plans
 - n. SW3P Plan Sheet(s) and Details
 - o. Standard CoLC Details applicable for project
 - p. Project Specific Requirements/Details/Notes such as
 - 1) Electrical Plans/Details
 - 2) Structural Plans/Details
 - 3) Signal Plans/Details
2. Final ROW Documents for Land Acquisition (if needed)
3. Completed Geotechnical Report (if needed)
4. List of Updated Utility Conflicts and contact information for appropriate utilities.

5. List of needed Permits, draft applications for needed Permits
6. List of Technical Specifications that are needed for Project
7. Updated Design Schedule
8. Preliminary Construction Schedule
9. Updated Preliminary OPCC
10. Preparation of Exhibits and attendance at Public Meeting (if needed)

C. 90% Submittals should, at a minimum, include the following:

1. Updated Design Plans noted above
2. Submittal Letter addressing previous comments made on 60% Review
3. Project Manual – Spec Book, Bid forms, etc.
4. SW3P Manual with appropriate documentations/signatures as applicable
5. Updated OPCC
6. Approved Permits
7. Final List of Utility Conflicts and contact information for appropriate utilities.

D. Resubmittals

1. Phase submittals that do not comply with the requirements set forth above may be rejected in the sole absolute discretion of City. Rejected submittals must be resubmitted for review after all comments have been addressed.
2. Professional will have \$400 deducted from its Compensation for each review by City of a phase submittal after two prior reviews for that same phase.

II. Bid Phase Services should, at a minimum, include the following:

- A. 100% Construction Plans submitted for final City signatures (a Digital Copy w/ signed cover sheet to be submitted prior to posting for bids).
- B. Completed Project Manual
- C. Completed SW3P Manual
- D. Final OPCC
- E. Updated Construction Schedule
- F. Preparation of Exhibits and attendance at Public Meeting (if needed)
- G. Assist with the advertisement of the project (if needed)
- H. Address any RFI during Bid process (if needed)
- I. Attend and Assist in running a Pre-Bid Meeting (if needed)
- J. Provide Addendums to Bid Documents (if needed)
- K. Once Bids are opened, prepare Bid Evaluation, check references, and provide recommendation of award to City

III. Construction Phase Services should, at a minimum, include the following:

- A. Preparation of Exhibits and attendance at Public Meeting (if needed) prior to Project Start
- B. Attendance at Construction Progress Meetings (if needed)
- C. Periodic Site Visits (minimum 1 visit per month of construction)
- D. Review, Track, and make recommendations related to RFIS, Material Submittals, Change Orders, etc.
- E. Address found Design Conflicts in the Field
- F. Provide paper & digital copies of As-Builts