EXHIBIT
"A"

BRUSHY CREEK
REGIONAL UTILITY AUTHORITY
A Partnership of Cedar Park, Leander, and Round Rock

BRUSHY CREEK REGIONAL UTILITY AUTHORITY
CONTRACT FOR ENGINEERING SERVICES

FIRM: **WALKER PARTNERS/FREESE AND NICHOLS JOINT VENTURE ("Engineer")**
ADDRESS: **804 Las Cimas Parkway, Suite 150, Austin, TX 78746**
PROJECT: **BCRUA Phase 2 Raw Water Delivery System**

THE STATE OF TEXAS §
§
COUNTY OF WILLIAMSON §

THIS CONTRACT FOR ENGINEERING SERVICES ("Contract") is made and entered into on this the ____ day of _____, 2018 by and between the BRUSHY CREEK REGIONAL UTILITY AUTHORITY, a Texas local government corporation, whose offices are located at 221 East Main Street, Round Rock, Texas 78664-5299, (hereinafter referred to as "BCRUA"), and Engineer, and such Contract is for the purpose of contracting for professional engineering services.

RECITALS:

WHEREAS, V.T.C.A., Government Code §2254.002(2)(A)(vii) under Subchapter A entitled "Professional Services Procurement Act" provides for the procurement by municipalities of services of professional engineers; and

WHEREAS, BCRUA and Engineer desire to contract for such professional engineering services; and

WHEREAS, BCRUA and Engineer wish to document their agreement concerning the requirements and respective obligations of the parties;

NOW, THEREFORE, WITNESSETH:

That for and in consideration of the mutual promises contained herein and other good and valuable considerations, and the covenants and agreements hereinafter contained to be kept and performed by the respective parties hereto, it is agreed as follows:

CONTRACT DOCUMENTS

The Contract Documents consist of this Contract and any exhibits attached hereto (which exhibits are hereby incorporated into and made a part of this Contract) and all Supplemental Contracts (as defined herein in Article 13) which are subsequently issued. These form the entire contract, and all are as fully a part of this Contract as if attached to this Contract or repeated herein.

ARTICLE 1
BCRUA SERVICES

BCRUA shall perform or provide services as identified in Exhibit A entitled "BCRUA Services."

ARTICLE 2
ENGINEERING SERVICES

Engineer shall perform Engineering Services as identified in Exhibit B entitled "Engineering Services."

Engineer shall perform the Engineering Services in accordance with the Work Schedule as identified in Exhibit C entitled "Work Schedule." Such Work Schedule shall contain a complete schedule so that the Engineering Services under this Contract may be accomplished within the specified time and at the specified cost. The Work Schedule shall provide specific work sequences and definite review times by BCRUA and Engineer of all Engineering Services. Should the review times or Engineering Services take longer than shown on the Work Schedule, through no fault of Engineer, Engineer may submit a timely written request for additional time, which shall be subject to the approval of the General Manager.

ARTICLE 3
CONTRACT TERM

(1) Term. The Engineer is expected to complete the Engineering Services described herein in accordance with the above described Work Schedule. If Engineer does not perform the Engineering Services in accordance with the Work Schedule, then BCRUA shall have the right to terminate this Contract as set forth below in Article 20. So long as the BCRUA elects not to terminate this Contract, it shall continue from day to day until such time as the Engineering Services are completed. Any Engineering Services performed or costs incurred after the date of termination shall not be eligible for reimbursement. Engineer shall notify BCRUA in writing as soon as possible if he/she/it determines, or reasonably anticipates, that the Engineering Services will not be completed in accordance with the Work Schedule.

(2) Work Schedule. Engineer acknowledges that the Work Schedule is of critical importance, and agrees to undertake all necessary efforts to expedite the performance of Engineering Services required herein so that construction of the project will be commenced and completed as scheduled. In this regard, and subject to adjustments in the Work Schedule as provided in Article 2 herein, Engineer shall proceed with sufficient qualified personnel and consultants necessary to fully and timely accomplish all Engineering Services required under this Contract in a professional manner.

(3) Notice to Proceed. After execution of this Contract, Engineer shall not proceed with Engineering Services until authorized in writing by BCRUA to proceed as provided in Article 7.

ARTICLE 4
COMPENSATION

BCRUA shall pay and Engineer agrees to accept the amounts shown below as full compensation for the Engineering Services performed and to be performed under this Contract.

The total compensation for the Phase 2 Deep Water Intake Final Design Project shall be paid as follows: (1) a lump sum payment of Twelve Million Five Hundred Eighteen Thousand Thirty-Seven and No/100 Dollars ($12,518,037.00) for services set forth in Exhibit D, excluding Task 5.3.1 – Geotechnical Investigation; and (2) an amount not-to-exceed One Million One Hundred Three Thousand Seven Hundred Fifty-Eight and No/100 Dollars ($1,103,758.00) for time and materials services for Task 5.3.1 – Geotechnical Investigation set forth in Exhibit D.

(1) Lump Sum:

The lump sum payable under this Contract, without modification of the Contract as provided herein, is the sum of Twelve Million Five Hundred Eighteen Thousand Thirty-Seven and No/100 Dollars ($12,518,037.00) as shown in Exhibit D, excluding Task 5.3.1 – Geotechnical Investigation. The lump sum amount payable shall be revised equitably only by written Supplemental Contract in the event of a change in Engineering Services as authorized by BCRUA.

Engineer shall prepare and submit to BCRUA monthly progress reports in sufficient detail to support the progress of the Engineering Services and to support invoices requesting monthly payment. Any preferred format of BCRUA for such monthly progress reports shall be identified in Exhibit B. Satisfactory progress of Engineering Services shall be an absolute condition of payment.

The fee herein referenced in this Section (1) may be adjusted for additional Engineering Services requested and performed only if approved by written Supplemental Contract.

(2) Time and Materials:

Engineer shall be paid on the basis of actual hours worked by employees performing work associated with this Contract for Task 5.3.1 – Geotechnical Investigation, in accordance with the Fee Schedule attached hereto as Exhibit D. The maximum amount payable under this Contract for time and materials services is One Million One Hundred Three Thousand Seven Hundred Fifty-Eight and No/100 Dollars ($1,103,758.00). Payment of monies due for the Engineer's subconsultant's services shall be based on the actual amount billed to the Engineer by the subconsultant. Payment of monies due for direct cost expenses shall be based on the actual costs.

Engineer shall prepare and submit to City monthly progress reports in sufficient detail to support the progress of the work and to support invoices requesting monthly payment. Any preferred format of City for such monthly progress reports shall be identified in Exhibit B entitled "Engineering Services". Satisfactory progress of work shall be an absolute condition of payment.

The maximum amount payable reference in this Section (2) may be adjusted for additional work requested and performed only if approved by written Supplemental Agreement.

ARTICLE 5
METHOD OF PAYMENT

Payments to Engineer shall be made while Engineering Services are in progress. Engineer shall prepare and submit to BCRUA, not more frequently than once per month, a progress report as referenced in Article 4 above. Such progress report shall state the percentage of completion of Engineering Services accomplished during that billing period and to date. Simultaneous with submission of such progress report, Engineer shall prepare and submit one (1) original and one (1) copy of a certified invoice in a form acceptable to BCRUA. This submittal shall also include a progress assessment report in a form acceptable to BCRUA.

Progress payments shall be made in proportion to the percentage of completion of Engineering Services identified in Exhibit D. Progress payments shall be made by BCRUA based upon Engineering Services actually provided and performed. Upon timely receipt and approval of each statement, BCRUA shall make a good faith effort to pay the amount which is due and payable within thirty (30) days. BCRUA reserves the right to withhold payment pending verification of satisfactory Engineering Services performed. Engineer has the responsibility to submit proof to BCRUA, adequate and sufficient in its determination, that tasks were completed.

The certified statements shall show the total amount earned to the date of submission and shall show the amount due and payable as of the date of the current statement. Final payment does not relieve Engineer of the responsibility of correcting any errors and/or omissions resulting from his/her/its negligence.

ARTICLE 6
PROMPT PAYMENT POLICY

In accordance with Chapter 2251, V.T.C.A., Texas Government Code, payment to Engineer will be made within thirty (30) days of the day on which the performance of services was complete, or within thirty (30) days of the day on which BCRUA receives a correct invoice for services, whichever is later. Engineer may charge a late fee (fee shall not be greater than that which is permitted by Texas law) for payments not made in accordance with this prompt payment policy; however, this policy does not apply in the event:

A. There is a bona fide dispute between BCRUA and Engineer concerning the supplies, materials, or equipment delivered or the services performed that causes the payment to be late; or

B. The terms of a federal contract, grant, regulation, or statute prevent BCRUA from making a timely payment with federal funds; or

C. There is a bona fide dispute between Engineer and a subcontractor or between a subcontractor and its supplier concerning supplies, materials, or equipment delivered or the Engineering Services performed which causes the payment to be late; or

D. The invoice is not mailed to BCRUA in strict accordance with instructions, if any, on the purchase order, or this Contract or other such contractual agreement.

BCRUA shall document to Engineer the issues related to disputed invoices within ten (10) calendar days of receipt of such invoice. Any non-disputed invoices shall be considered correct and payable per the terms of Chapter 2251, V.T.C.A., Texas Government Code.

ARTICLE 7
NOTICE TO PROCEED

The Engineer shall not proceed with any task listed on Exhibit B until the BCRUA has issued a written Notice to Proceed regarding such task. The BCRUA shall not be responsible for work performed or costs incurred by Engineer related to any task for which a Notice to Proceed has not been issued.

ARTICLE 8
PROJECT TEAM

BCRUA's Designated Representative for purposes of this Contract is as follows:

Karen Bondy
General Manager
221 E. Main Street
Round Rock, TX 78664
Cell Number (512) 688-0475
Work Number (512) 215-9151
Email Address kbondy@bcrua.org

BCRUA's Designated Representative shall be authorized to act on BCRUA's behalf with respect to this Contract. BCRUA or BCRUA's Designated Representative shall render decisions in a timely manner pertaining to documents submitted by Engineer in order to avoid unreasonable delay in the orderly and sequential progress of Engineering Services.

Engineer's Designated Representative for purposes of this Contract is as follows:

Aaron Archer, P.E.
Client Manager
804 Las Cimas Parkway, Suite 150
Austin, TX 78746
Telephone Number (512) 382-0021
Email Address aarcher@walkerpartners.com

ARTICLE 9
PROGRESS EVALUATION

Engineer shall, from time to time during the progress of the Engineering Services, confer with BCRUA at BCRUA's election. Engineer shall prepare and present such information as may be pertinent and necessary, or as may be requested by BCRUA, in order for BCRUA to evaluate features of the Engineering Services. At the request of BCRUA or Engineer, conferences shall be provided at Engineer's office, the offices of BCRUA, or at other locations designated by BCRUA. When requested by BCRUA, such conferences shall also include evaluation of the Engineering Services.

Should BCRUA determine that the progress in Engineering Services does not satisfy the Work Schedule, then BCRUA shall review the Work Schedule with Engineer to determine corrective action required.

Engineer shall promptly advise BCRUA in writing of events which have or may have a significant impact upon the progress of the Engineering Services, including but not limited to the following:

(1) Problems, delays, adverse conditions which may materially affect the ability to meet the objectives of the Work Schedule, or preclude the attainment of project Engineering Services units by established time periods; and such disclosure shall be accompanied by statement of actions taken or contemplated, and BCRUA assistance needed to resolve the situation, if any; and

(2) Favorable developments or events which enable meeting the Work Schedule goals sooner than anticipated.

ARTICLE 10
SUSPENSION

Should BCRUA desire to suspend the Engineering Services, but not to terminate this Contract, then such suspension may be effected by BCRUA giving Engineer thirty (30) calendar days' verbal notification followed by written confirmation to that effect. Such thirty-day notice may be waived in writing by agreement and signature of both parties. The Engineering Services may be reinstated and resumed in full force and effect within sixty (60) days of receipt of written notice from BCRUA to resume the Engineering Services. Such sixty-day notice may be waived in writing by agreement and signature of both parties. If this Contract is suspended for more than thirty (30) days, Engineer shall have the option of terminating this Contract.

If BCRUA suspends the Engineering Services, the contract period as determined in Article 3, and the Work Schedule, shall be extended for a time period equal to the suspension period.

BCRUA assumes no liability for Engineering Services performed or costs incurred prior to the date authorized by BCRUA for Engineer to begin Engineering Services, and/or during periods when Engineering Services is suspended, and/or subsequent to the contract completion date.

ARTICLE 11
ADDITIONAL ENGINEERING SERVICES

If Engineer forms a reasonable opinion that any work he/she/it has been directed to perform is beyond the scope of this Contract and as such constitutes extra work, he/she/it shall promptly notify BCRUA in writing. In the event BCRUA finds that such work does constitute extra work and exceeds the maximum amount payable, BCRUA shall so advise Engineer and a written Supplemental Contract will be executed between the parties as provided in Article 13. Engineer shall not perform any proposed additional work nor incur any additional costs prior to the execution, by both parties, of a written Supplemental Contract. BCRUA shall not be responsible for actions by Engineer nor for any costs incurred by Engineer relating to additional work not directly associated with the performance of the Engineering Services authorized in this Contract or any amendments thereto.

ARTICLE 12
CHANGES IN ENGINEERING SERVICES

If BCRUA deems it necessary to request changes to previously satisfactorily completed Engineering Services or parts thereof which involve changes to the original Engineering Services or character of Engineering Services under this Contract, then Engineer shall make such revisions as requested and as directed by BCRUA. Such revisions shall be considered as additional Engineering Services and paid for as specified under Article 11.

Engineer shall make revisions to Engineering Services authorized hereunder as are necessary to correct errors appearing therein, when required to do so by BCRUA. No additional compensation shall be due for such Engineering Services.

ARTICLE 13
SUPPLEMENTAL CONTRACTS

The terms of this Contract may be modified by written Supplemental Contract if BCRUA determines that there has been a significant change in (1) the scope, complexity or character of the Engineering Services, or (2) the duration of the Engineering Services. Any such Supplemental Contract must be duly authorized by the BCRUA. Engineer shall not proceed until the Supplemental Contract has been executed. Additional compensation, if appropriate, shall be identified as provided in Article 4.

It is understood and agreed by and between both parties that Engineer shall make no claim for extra work done or materials furnished until the BCRUA authorizes full execution of the written Supplemental Contract and authorization to proceed. BCRUA reserves the right to withhold payment pending verification of satisfactory Engineering Services performed.

ARTICLE 14
OWNERSHIP OF DOCUMENTS

All data, basic sketches, charts, calculations, plans, specifications, and other documents created or collected under the terms of this Contract are the exclusive property of BCRUA and shall be furnished to BCRUA upon request. All documents prepared by Engineer and all documents furnished to

Engineer by BCRUA shall be delivered to BCRUA upon completion or termination of this Contract. Engineer, at its own expense, may retain copies of such documents or any other data which it has furnished BCRUA under this Contract.

ARTICLE 15
PERSONNEL, EQUIPMENT AND MATERIAL

Engineer shall furnish and maintain, at its own expense, quarters for the performance of all Engineering Services, and adequate and sufficient personnel and equipment to perform the Engineering Services as required. All employees of Engineer shall have such knowledge and experience as will enable them to perform the duties assigned to them. Any employee of Engineer who, in the opinion of BCRUA, is incompetent or whose conduct becomes detrimental to the Engineering Services shall immediately be removed from association with the project when so instructed by BCRUA. Engineer certifies that it presently has adequate qualified personnel in its employment for performance of the Engineering Services required under this Contract, or will obtain such personnel from sources other than BCRUA. Engineer may not change the Project Manager without prior written consent of BCRUA.

ARTICLE 16
SUBCONTRACTING

Engineer shall not assign, subcontract or transfer any portion of the Engineering Services under this Contract without prior written approval from BCRUA. All subcontracts shall include the provisions required in this Contract and shall be approved as to form, in writing, by BCRUA prior to Engineering Services being performed under the subcontract. No subcontract shall relieve Engineer of any responsibilities under this Contract.

ARTICLE 17
EVALUATION OF ENGINEERING SERVICES

BCRUA, or any authorized representatives of it, shall have the right at all reasonable times to review or otherwise evaluate the Engineering Services performed or being performed hereunder and the premises on which it is being performed. If any review or evaluation is made on the premises of Engineer or a subcontractor, then Engineer shall provide and require its subcontractors to provide all reasonable facilities and assistance for the safety and convenience of BCRUA or other representatives in the performance of their duties.

ARTICLE 18
SUBMISSION OF REPORTS

All applicable study reports shall be submitted in preliminary form for approval by BCRUA before any final report is issued. BCRUA's comments on Engineer's preliminary reports shall be addressed in any final report.

ARTICLE 19
VIOLATION OF CONTRACT TERMS/BREACH OF CONTRACT

Violation of contract terms or breach of contract by Engineer shall be grounds for termination of this Contract, and any increased costs arising from Engineer's default, breach of contract, or violation of contract terms shall be paid by Engineer.

ARTICLE 20
TERMINATION

This Contract may be terminated as set forth below.

(1) By mutual agreement and consent, in writing, of both parties.

(2) By BCRUA, by notice in writing to Engineer, as a consequence of failure by Engineer to perform the Engineering Services set forth herein in a satisfactory manner.

(3) By either party, upon the failure of the other party to fulfill its obligations as set forth herein.

(4) By BCRUA, for reasons of its own and not subject to the mutual consent of Engineer, upon not less than thirty (30) days' written notice to Engineer.

(5) By satisfactory completion of all Engineering Services and obligations described herein.

Should BCRUA terminate this Contract as herein provided, no fees other than fees due and payable at the time of termination shall thereafter be paid to Engineer. In determining the value of the Engineering Services performed by Engineer prior to termination, BCRUA shall be the sole judge. Compensation for Engineering Services at termination will be based on a percentage of the Engineering Services completed at that time. Should BCRUA terminate this Contract under Subsection (4) immediately above, then the amount charged during the thirty-day notice period shall not exceed the amount charged during the preceding thirty (30) days.

If Engineer defaults in the performance of this Contract or if BCRUA terminates this Contract for fault on the part of Engineer, then BCRUA shall give consideration to the actual costs incurred by Engineer in performing the Engineering Services to the date of default, the amount of Engineering Services required which was satisfactorily completed to date of default, the value of the Engineering Services which are usable to BCRUA, the cost to BCRUA of employing another firm to complete the Engineering Services required and the time required to do so, and other factors which affect the value to BCRUA of the Engineering Services performed at the time of default.

The termination of this Contract and payment of an amount in settlement as prescribed above shall extinguish all rights, duties, and obligations of BCRUA and Engineer under this Contract, except the obligations set forth herein in Article 21 entitled "Compliance with Laws." If the termination of this Contract is due to the failure of Engineer to fulfill his/her/its contractual obligations, then BCRUA may

take over the project and prosecute the Engineering Services to completion. In such case, Engineer shall be liable to BCRUA for any additional and reasonable costs incurred by BCRUA.

Engineer shall be responsible for the settlement of all contractual and administrative issues arising out of any procurements made by Engineer in support of the Engineering Services under this Contract.

ARTICLE 21
COMPLIANCE WITH LAWS

(1) Compliance. Engineer shall comply with all applicable federal, state and local laws, statutes, codes, ordinances, rules and regulations, and the orders and decrees of any court, or administrative bodies or tribunals in any manner affecting the performance of this Contract, including without limitation, minimum/maximum salary and wage statutes and regulations, and licensing laws and regulations. Engineer shall furnish BCRUA with satisfactory proof of his/her/its compliance.

Engineer shall further obtain all permits and licenses required in the performance of the Engineering Services contracted for herein.

In accordance with Chapter 2270, Texas Government Code, a governmental entity may not enter into an Agreement with a company for goods or services unless the Agreement contains written verification from the company that it: (1) does not boycott Israel; and (2) will not boycott Israel and will not boycott Israel during the term of this Agreement. The signatory executing this Agreement on behalf of Engineer verifies Engineer does not boycott Israel and will not boycott Israel during the term of this Agreement.

(2) Taxes. Engineer will pay all taxes, if any, required by law arising by virtue of the Engineering Services performed hereunder. BCRUA is qualified for exemption pursuant to the provisions of Section 151.309 of the Texas Limited Sales, Excise, and Use Tax Act.

ARTICLE 22
INDEMNIFICATION

Engineer shall save and hold harmless BCRUA and its officers and employees from all claims and liabilities due to activities of his/her/itself and his/her/its agents or employees, performed under this Contract, which are caused by or which result from the negligent error, omission, or negligent act of Engineer or of any person employed by Engineer or under Engineer's direction or control.

Engineer shall also save and hold BCRUA harmless from any and all expenses, including but not limited to reasonable attorneys fees which may be incurred by BCRUA in litigation or otherwise defending claims or liabilities which may be imposed on BCRUA as a result of such negligent activities by Engineer, its agents, or employees.

ARTICLE 23
ENGINEER'S RESPONSIBILITIES

Engineer shall be responsible for the accuracy of his/her/its Engineering Services and shall promptly make necessary revisions or corrections to its work product resulting from errors, omissions, or negligent acts, and same shall be done without compensation. BCRUA shall determine Engineer's responsibilities for all questions arising from design errors and/or omissions. Engineer shall not be relieved of responsibility for subsequent correction of any such errors or omissions in its work product, or for clarification of any ambiguities until after the construction phase of the project has been completed.

ARTICLE 24
ENGINEER'S SEAL

The responsible engineer shall sign, seal and date all appropriate engineering submissions to BCRUA in accordance with the Texas Engineering Practice Act and the rules of the State Board of Registration for Professional Engineers.

ARTICLE 25
NON-COLLUSION, FINANCIAL INTEREST PROHIBITED

(1) Non-collusion. Engineer warrants that he/she/it has not employed or retained any company or persons, other than a bona fide employee working solely for Engineer, to solicit or secure this Contract, and that he/she/it has not paid or agreed to pay any company or engineer any fee, commission, percentage, brokerage fee, gifts, or any other consideration, contingent upon or resulting from the award or making of this Contract. For breach or violation of this warranty, BCRUA reserves and shall have the right to annul this Contract without liability or, in its discretion and at its sole election, to deduct from the contract price or compensation, or to otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift or contingent fee.

(2) Financial Interest Prohibited. Engineer covenants and represents that Engineer, his/her/its officers, employees, agents, consultants and subcontractors will have no financial interest, direct or indirect, in the purchase or sale of any product, materials or equipment that will be recommended or required for the construction of the project.

ARTICLE 26
INSURANCE

(1) Insurance. Engineer, at Engineer's sole cost, shall purchase and maintain during the entire term while this Contract is in effect professional liability insurance coverage in the minimum amount of One Million Dollars per claim from a company authorized to do insurance business in Texas and otherwise acceptable to BCRUA. Engineer shall also notify BCRUA, within twenty-four (24) hours of receipt, of any notices of expiration, cancellation, non-renewal, or material change in coverage it receives from its insurer.

(2) Subconsultant Insurance. Without limiting any of the other obligations or liabilities of Engineer, Engineer shall require each subconsultant performing work under this Contract to maintain

during the term of this Contract, at the subconsultant's own expense, the same stipulated minimum insurance required in Article 26, Section (1) above, including the required provisions and additional policy conditions as shown below in Article 26, Section (3).

Engineer shall obtain and monitor the certificates of insurance from each subconsultant in order to assure compliance with the insurance requirements. Engineer must retain the certificates of insurance for the duration of this Contract, and shall have the responsibility of enforcing these insurance requirements among its subconsultants. BCRUA shall be entitled, upon request and without expense, to receive copies of these certificates of insurance.

(3) Insurance Policy Endorsements. Each insurance policy shall include the following conditions by endorsement to the policy:

(a) Each policy shall require that thirty (30) days prior to the expiration, cancellation, non-renewal or reduction in limits by endorsement a notice thereof shall be given to BCRUA by certified mail to:

BCRUA General Manager
221 East Main Street
Round Rock, TX 78664

(b) The policy clause "Other Insurance" shall not apply to any insurance coverage currently held by BCRUA, to any such future coverage, or to BCRUA's Self-Insured Retentions of whatever nature.

(4) Cost of Insurance. The cost of all insurance required herein to be secured and maintained by Engineer shall be borne solely by Engineer, with certificates of insurance evidencing such minimum coverage in force to be filed with BCRUA. Such Certificates of Insurance are evidenced as Exhibit E herein entitled "Certificates of Insurance."

ARTICLE 27
COPYRIGHTS

BCRUA shall have the royalty-free, nonexclusive and irrevocable right to reproduce, publish or otherwise use, and to authorize others to use, any reports developed by Engineer for governmental purposes.

ARTICLE 28
SUCCESSORS AND ASSIGNS

This Contract shall be binding upon and inure to the benefit of the parties hereto, their successors, lawful assigns, and legal representatives. Engineer may not assign, sublet or transfer any interest in this Contract, in whole or in part, by operation of law or otherwise, without obtaining the prior written consent of BCRUA.

ARTICLE 29
SEVERABILITY

In the event any one or more of the provisions contained in this Contract shall for any reason be held to be invalid, illegal or unenforceable in any respect, then such invalidity, illegality or unenforceability shall not affect any other provision thereof and this Contract shall be construed as if such invalid, illegal or unenforceable provision had never been contained herein.

ARTICLE 30
PRIOR AGREEMENTS SUPERSEDED

This Contract constitutes the sole agreement of the parties hereto, and supersedes any prior understandings or written or oral contracts between the parties respecting the subject matter defined herein. This Contract may only be amended or supplemented by mutual agreement of the parties hereto in writing.

ARTICLE 31
ENGINEER'S ACCOUNTING RECORDS

Records pertaining to the project, and records of accounts between BCRUA and Engineer, shall be kept on a generally recognized accounting basis and shall be available to BCRUA or its authorized representatives at mutually convenient times**.** The BCRUA reserves the right to review all records it deems relevant which are related to this Contract.

ARTICLE 32
NOTICES

All notices to either party by the other required under this Contract shall be personally delivered or mailed to such party at the following respective addresses:

BCRUA:

Brushy Creek Regional Utility Authority
Attention: BCRUA General Manager
221 East Main Street
Round Rock, TX 78664

and to:

Stephan L. Sheets
BCRUA Attorney
309 East Main Street
Round Rock, TX 78664

Engineer:

Aaron Archer, P.E.
Client Manager
804 Las Cimas Parkway, Suite 150
Austin, TX 78746

ARTICLE 33
GENERAL PROVISIONS

(1) Time is of the Essence. Engineer understands and agrees that time is of the essence and that any failure of Engineer to complete the Engineering Services for each phase of this Contract within the agreed Work Schedule may constitute a material breach of this Contract. Engineer shall be fully responsible for his/her/its delays or for failures to use his/her/its reasonable efforts in accordance with the terms of this Contract and the Engineer's standard of performance as defined herein. Where damage is caused to BCRUA due to Engineer's negligent failure to perform BCRUA may accordingly withhold, to the extent of such damage, Engineer's payments hereunder without waiver of any of BCRUA's additional legal rights or remedies.

(2) Force Majeure. Neither BCRUA nor Engineer shall be deemed in violation of this Contract if prevented from performing any of their obligations hereunder by reasons for which they are not responsible or circumstances beyond their control. However, notice of such impediment or delay in performance must be timely given, and all reasonable efforts undertaken to mitigate its effects.

(3) Enforcement and Venue. This Contract shall be enforceable in Round Rock, Williamson County, Texas, and if legal action is necessary by either party with respect to the enforcement of any or all of the terms or conditions herein, exclusive venue for same shall lie in Williamson County, Texas. This Contract shall be governed by and construed in accordance with the laws and court decisions of the State of Texas.

(4) Standard of Performance. The standard of care for all professional engineering, consulting and related services performed or furnished by Engineer and its employees under this Contract will be the care and skill ordinarily used by members of Engineer's profession practicing under the same or similar circumstances at the same time and in the same locality. Excepting Articles 25 and 34 herein, Engineer makes no warranties, express or implied, under this Contract or otherwise, in connection with the Engineering Services.

(5) Opinion of Probable Cost. Any opinions of probable project cost or probable construction cost provided by Engineer are made on the basis of information available to Engineer and on the basis of Engineer's experience and qualifications and represents its judgment as an experienced and qualified professional engineer. However, since Engineer has no control over the cost of labor, materials, equipment or services furnished by others, or over the contractor(s') methods of determining prices, or over competitive bidding or market conditions, Engineer does not guarantee that proposals, bids or actual project or construction cost will not vary from opinions of probable cost Engineer prepares.

(6) Opinions and Determinations. Where the terms of this Contract provide for action to be based upon opinion, judgment, approval, review, or determination of either party hereto, such terms are not intended to be and shall never be construed as permitting such opinion, judgment, approval, review, or determination to be arbitrary, capricious, or unreasonable.

ARTICLE 34
SIGNATORY WARRANTY

The undersigned signatory for Engineer hereby represents and warrants that the signatory is an officer of the organization for which he/she has executed this Contract and that he/she has full and complete authority to enter into this Contract on behalf of the firm. The above-stated representations and warranties are made for the purpose of inducing BCRUA to enter into this Contract.

IN WITNESS WHEREOF, the BCRUA of Round Rock has caused this Contract to be signed in its corporate name by its duly authorized BCRUA Manager or Mayor, as has Engineer, signing by and through its duly authorized representative(s), thereby binding the parties hereto, their successors, assigns and representatives for the faithful and full performance of the terms and provisions hereof.

BRUSHY CREEK REGIONAL UTILITY AUTHORITY

By: _____
Andrea Navarrette, President

APPROVED AS TO FORM:

_____
Stephan L. Sheets, BCRUA Attorney

ATTEST:

By: _____
Rene Flores, BCRUA Secretary

WALKER PARTNERS/FREESE AND NICHOLS JOINT VENTURE

By: _____
Signature of Principal
Printed Name: _____

LIST OF EXHIBITS ATTACHED

(1) Exhibit A BCRUA Services

(2) Exhibit B Engineering Services

(3) Exhibit C Work Schedule

(4) Exhibit D Fee Schedule

(5) Exhibit E Certificates of Insurance

EXHIBIT A

BCRUA Services

Attached Behind This Page

EXHIBIT A

OWNER SERVICES

In addition to the other responsibilities of OWNER as set forth in this Agreement, the OWNER shall at its expense:

A. Review and comment on all deliverables in a timely manner. OWNER shall provide a single set of consolidated OWNER review comments on all deliverables.

B. Assist the ENGINEER in coordinating with cooperating jurisdictional and environmental permitting agencies as needed and issue payment for required reviews, approvals, permits and mitigation.

C. Issue payment for participation in the Balcones Canyonland Conservation Plan and any other environmental mitigation.

D. Issue payment for land acquisition costs, power service upgrades, and easements.

E. Participate in project meetings, workshops, and conferences as described in the scope of services.

F. OWNER is responsible for posting meetings, notices and other technical materials on the OWNER website. OWNER is also responsible for the public notice of meetings for which public notice is required.

G. Provide ENGINEER in a timely manner with all criteria and full information as to OWNER'S requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility, and expandability, and any budgetary limitations; and furnish copies of all design and construction standards which OWNER shall require to be included in the Drawings and Specifications; and furnish copies of OWNER'S standard forms, conditions, and related documents for ENGINEER to include in the Bidding Documents, when applicable.

H. Furnish to ENGINEER any other available information pertinent to the Project including reports and data relative to previous designs, or investigation at or adjacent to the Site.

I. Provide a location for storage of boring core boxes for the life of the project that is accessible to ENGINEER for photographing and testing. Core boxes shall also be made available for a contractor core show.

J. Following ENGINEER'S assessment of initially-available Project information and data and upon ENGINEER'S request, furnish or otherwise make available in a timely manner such additional Project related information and data as is reasonably required to enable ENGINEER to complete its Basic Services.

K. Give prompt written notice to ENGINEER whenever OWNER observes or otherwise becomes aware of the presence at the Site (OWNER water treatment plant and/or OWNER floating intake facilities) of any Constituent of Concern, or of any other development that affects the scope or time of performance of ENGINEER'S services, or any defect or nonconformance in ENGINEER'S services, the Work, or in the performance of any Contractor.

L. Examine all alternate solutions, studies, reports, sketches, Drawings, Specifications, proposals, and other documents presented by ENGINEER (including obtaining advice of an attorney, insurance counselor, and other advisors or consultants as OWNER deems appropriate with respect to such examination) and render in writing timely decisions pertaining thereto.

M. Provide reviews of all permits that may be necessary for completion of each phase of the Project.

N. Provide, as required for the Project:

1) Accounting, bond and financial advisory, independent cost estimating, and insurance counseling services.
2) Legal services with regard to issues pertaining to the Project as OWNER requires or deems appropriate, Contractor raises, or ENGINEER reasonably requests, including but not limited to the review of Contract Documents supplied by ENGINEER.
3) Such auditing services as OWNER requires to ascertain how or for what purpose Contractor has used the moneys paid
4) Placement and payment for advertisement for Bids in appropriate publications.

O. Advise ENGINEER of the identity and scope of services of any independent consultants employed by OWNER to perform or furnish services in regard to the Project, including, but not limited to, cost estimating, project peer review, value engineering, and constructability review.

P. Provide the services of an independent testing laboratory to perform all inspections, tests, and approvals of samples, materials, and equipment required by the Contract Documents, or to evaluate the performance of materials, equipment, and facilities of OWNER, prior to their incorporation into the Work with appropriate professional interpretation thereof.

Q. Provide ENGINEER with the findings and reports generated by the entities providing services to OWNER pursuant to this paragraph.

EXHIBIT B

ENGINEERING SERVICES

GENERAL

The Phase 2 Project consists of a permanent raw water intake in a deep location on Lake Travis to deliver water by gravity to a new high capacity pumping station located adjacent to the City of Cedar Park Water Treatment Plant (WTP). The pumping station will convey water to the Phase 1 raw water pipeline on Trails End Road. Phase 2 includes multiple key elements that will result in the construction of a Deep Water Intake System with an ultimate capacity of 144.7 million gallons per day (MGD). These elements include an intake assembly, maintenance building, gravity flow tunnel, pump station, transmission tunnel, and off-site improvements at the Cedar Park, Leander and OWNER WTPs. Basic services for Phase 2 include final design, stakeholder coordination, permitting, and public outreach. Phase 2 bidding and construction phase services and design of the Phase 1D Water Treatment Plant (WTP) Expansion[1] shall be authorized by supplemental amendment to this Agreement.

ASSUMPTIONS

ENGINEER'S assumptions apply to all tasks set forth in this Exhibit.

1) *The Phase 2 Project shall be designed and bid as one construction contract. Phase 2 shall not be divided into separate construction contracts. Approximately 470 design drawings are anticipated for the Phase 2 Project.*
2) *Phase 2 shall include design of the project elements described in the Phase 2 Preliminary Engineering Report, including but not limited to:*
    a. *Multi-level screened intake with submerged connections to an intake tunnel.*
    b. *96-inch finished inside diameter intake tunnel connecting the screened intakes to the pump station located 1.7 miles away.*
    c. *On-shore maintenance building and local roadway extension located near the intake on a site previously acquired by OWNER. Maintenance facility will include a groundwater well or wells for chemical feed systems, eyewash stations, and automatic building sprinklers (if required), but not toilets or sanitary sewer service.*
    d. *Pump station with two sets of pumps – one to serve the Cedar Park WTP and another to serve the Owner and Leander WTPs.*
    e. *84-inch finished inside diameter tunneled transmission pipeline connecting the pump station to the existing Phase 1 raw water pipeline along Trails End Road.*
    f. *Improvements at the Cedar Park, Sandy Creek and OWNER WTPs to facilitate water deliveries from the Project. Design shall also include general sizing and locating of the raw water head tanks at the OWNER WTP which shall be included under Phase 1D.*

[1] Phase 1D consists of a WTP expansion from approximately 32.5 million gallons per day (MGD) to 42 MGD.

g. Control and automation for the Phase 2 Project.

3) The design capacity of the Project and capacity allocation to each member city is defined in the Phase 2 Preliminary Engineering Report. Revisions or adjustments to the capacity allocation of a member city may impact the Project scope and schedule.

4) ENGINEER shall prepare the construction contracts as competitive sealed proposals utilizing the City of Cedar Park Division 0 documents (proposal form, agreement general conditions, and supplemental conditions) and CSI MasterFormat specifications (6-digit, 50 division).

5) SCADA integration shall be performed by OWNER's SCADA integrator as a bid allowance. ENGINEER shall develop a control narrative and coordinate programming requirements with the OWNER'S SCADA integrator for the Phase 2 Project.

6) The following services are not part of the Project and shall be completed under the Phase 1C Water Treatment Plant Expansion and Phase 2 Land Rights Project executed on April 19, 2017:

a. Easement acquisition services including right-of-entry, real estate appraisals and land plans, and negotiation.

b. Preparing supplemental updates to the Well Mapping, Monitoring, and Mitigation Plan, including updates to the well mapping database, construction of new groundwater monitoring wells, collection of groundwater well level and water quality information, and modeling of groundwater impacts from construction of underground elements.

7) Improvements to the Pedernales Electric Cooperative (PEC) system must be completed to facilitate construction and operation of the Phase 2 Project. Design and construction of certain elements of the PEC improvements including the contractor power supply improvements from Trails End Road to the pump station site and relocation of the existing lake crossing at the pump station site must be completed prior to construction of the Phase 2 Project commencing. These improvements known as "Pre-construction PEC improvements" shall be designed and constructed by others in coordination with the Phase 2 Project. All remaining elements of the required PEC improvements known as "Pre-commissioning PEC improvements" and including the expansion of the Nameless substation and the remaining new build and rebuild overhead distribution improvements shall be designed and constructed by others prior to commissioning of the Phase 2 Project. OWNER is responsible for issuing payments to meet Project schedule requirements.

8) Design of total replacement of existing roadways is not part of the Project. Design of spot repairs to the road caused by construction equipment and deemed not due to ordinary use shall be designed by the ENGINEER as part of this contract. All repairs to the road will be performed by the Contractor.

9) Industry standard "homerun" raceway symbol convention will be used. Point-to-point raceway routing will not be provided.

10) The design will be based on the federal, state, and local codes and standards in effect at the start of the Project. Any changes in these codes may necessitate a change in scope.

11) Draft and final deliverables shall be provided in electronic (PDF) format and 10 printed copies shall be provided to OWNER for review and filing. Drawings shall generally be produced as bound sets of half-size (11 x 17) prints. Five bound sets of full-size prints of final bidding and conformed documents shall be produced.

12) It is assumed that the Phase 2 construction contract will advertise within 12 months of preparation of final bidding documents. Review of the Project for changed conditions regarding permitting and regulatory requirements and design standards and requirements if bidding is delayed by more than 12 months is not included.

13) Preparing for, coordinating with, participating in and responding to structured independent review processes, including cost estimating, project peer review, value engineering, and constructability review requested by OWNER and furnishing services required to revise studies, reports, Drawings, Specifications, or other Bidding Documents as a result of such review processes is not included as part of the Project.

14) Preparing to serve or serving as a consultant or witness for OWNER in any litigation, arbitration, or other dispute resolution process related to the Project is not included.

15) ENGINEER shall not be required to sign any documents, no matter by whom requested, that would result in the ENGINEER having to certify, guarantee, or warrant the existence of conditions whose existence the ENGINEER cannot ascertain. OWNER agrees not to make resolution of any dispute with the ENGINEER or payment of any amount due to the ENGINEER in any way contingent upon the ENGINEER signing any such documents.

16) It is recognized that neither ENGINEER nor the OWNER has control over the cost of labor, materials or equipment; over the Contractor's methods of determining bid prices; or over competitive bidding, market or negotiating conditions. Accordingly, ENGINEER cannot and does not warrant or represent that bids or negotiated prices will not vary from the OWNER'S Project budget or from any opinion of construction cost or evaluation prepared or agreed to by ENGINEER.

BASIC SCOPE OF SERVICES

Task 1.0 - Project Management, Coordination and Meetings

1.1 **Project Administration**.

1.1.1 Project Management Plan (PMP). Develop and document the following plans and procedures to coordinate administration of the contract: team communication, quality management, risk management, health and safety, document control, change management, and cost and schedule control.

1.1.2 Manage and coordinate staff resources, subconsultants, and project planning. Conduct weekly team coordination meetings by teleconference.

1.1.3 Prepare monthly invoices and project progress reports and updates for the OWNER website portal. As a minimum, monthly progress reports shall include a summary description of tasks completed as of the report date, description of activities planned for the next 60 days, financial status of the project, status of schedule for

project, and identification of technical or other issues which may have an impact to the overall project budget and/or schedule.

1.1.4 Provide and maintain a project schedule in MS Project format that is updated and submitted monthly with each invoice.

1.1.5 Facilitate document control and document sharing for electronic filing of documents. Develop and coordinate drawing and graphic standards.

1.2 **Project Meetings**. Participants include staff from OWNER and ENGINEER, as well as key ENGINEER subconsultant staff. ENGINEER shall prepare meeting minutes and submit for review and comment within 10 days of each meeting.

1.2.1 Attend a project kickoff meeting with OWNER.

1.2.2 Attend monthly progress meetings with OWNER for a total of 30 meetings.

1.2.3 Attend up to four meetings with the OWNER'S Board to provide a presentation on the background and status of the Project and provide regular progress and status updates.

Task 1.0 Deliverables

- *Monthly invoices and project progress reports*
- *Project schedule (submitted monthly)*
- *Kickoff meeting agenda and minutes*
- *Monthly progress meeting agendas and minutes (30)*
- *Board presentations (4)*

Task 2.0 - 60 Percent Design Submittal. Prepare drawings and specifications at a 60 percent level of completion showing the scope, extent, and character of the work to be performed by or furnished by the Contractor.

2.1 Prepare construction drawings to a 60 percent level of completion. This level of completion shall generally include the following: cover sheet, sheet index, general notes, abbreviations and symbols, dimensional layout drawings, grading plans, plan and profiles for each tunnel, plan and profile for pump station suction chamber, coordinated building floor plans and sections for each trade, key details, P&IDs, one-line diagrams.

2.2 Prepare specifications to a 60 percent level of completion. This level of completion shall generally include the following: table of contents, front end documents, specifications for work related to major project elements such as tunnels and shafts, and specifications for major equipment.

2.3 Prepare a 60 percent design opinion of probable construction costs (OPCC). Contingency shall be set at approximately 20 percent for total project costs (underground elements may have an additional contingency to account for uncertainties specific to the nature of those elements). The 20 percent contingency is within the recommended contingency range for a Class 2 estimate based on the guidelines set forth by the American Association of Cost Engineers for a design with 30 to 75 percent project definition level.

2.4 Submit 60 percent design documents to OWNER for review. Incorporate OWNER comments into subsequent submittals and provide written responses to review comments.

Task 2.0 Deliverables

- *Phase 2 60 Percent Submittals (Drawings, Specifications, Opinion of Probable Construction Costs)*

Task 3.0 - 90 Percent Design Submittal. Prepare drawings and specifications at a 90 percent level of completion showing the scope, extent, and character of the work to be performed by or furnished by the Contractor.

3.1 Prepare construction drawings to a 90 percent level of completion. This level of completion is a set of bid-ready documents with the exception of minor comments related to final quality control, OWNER review comments, and agency review comments.

3.2 Prepare specifications to a 90 percent level of completion. This level of completion is a set of all contract documents with the exception of minor comments related to final quality control, OWNER review comments, and agency review comments.

3.3 Prepare a 90 percent design OPCC. Contingency shall be set at approximately 15 percent which is within the recommended contingency range for a Class 1 estimate based on the guidelines set forth by the American Association of Cost Engineers for a design with 65 to 100 percent project definition level. Additional contingency may be applied to underground elements as appropriate based on consideration of those specific elements.

3.4 Submit 90 percent design documents to OWNER for review. Incorporate OWNER comments into subsequent submittals and provide written responses to review comments.

Task 3.0 Deliverables

- *Phase 2 90 Percent Submittal (Drawings, Specifications, Opinion of Probable Construction Costs)*

Task 4.0 - Final Bidding Documents. Prepare final drawings and specifications sealed and signed by a Professional Engineer registered in the State of Texas and showing the scope, extent, and character of the work to be performed by or furnished by the Contractor.

4.1 Prepare and furnish final drawings and specifications with incorporated compliance comments and OWNER signatures.

4.2 Prepare an OPCC based on the final documents. Contingency shall be set at approximately 15 percent which is within the recommended contingency range for a Class 1 estimate based on the guidelines set forth by the American Association of Cost Engineers for a design with 65 to 100 percent project definition level. Additional contingency may be applied to underground elements as appropriate based on consideration of those specific elements.

Task 4.0 Deliverables

- *Phase 2 Final Bidding Documents (Drawings and Project Manual)*
- *Phase 2 Final Opinion of Probable Construction Cost*

Task 5.0 - Special Services. Prepare deliverables for the following special services required to facilitate the design of the Project and development of bidding documents**.**

5.1 **Intake and Maintenance Building**

5.1.1 Water Quality Monitoring. Conduct field investigations to retrieve water quality samples at various depths near the intake location to define lake stratification and confirm optimum water withdrawals levels. For the purposes of the scope and fee development, it is assumed that the raw water intake arrangement will include two risers, each with two stacked screens at various elevations. These samples shall be collected at one location. This water quality sampling will provide water quality information to satisfy three needs.

5.1.1.1 The first need is the Texas Commission on Environmental Quality requirements for new intake designs (30 TAC, Chapter 290, §290.41.(e).(1).(F). One sample shall be collected for this item (TCEQ intake support) and the following water quality parameters shall be measured: alkalinity, bromide, coliform (total), *Cryptosporidium* parvum, *Escherichia* coli, Giardia cysts, hardness, organic carbon (total), pH, regulated inorganic compounds, regulated synthetic organic compounds, regulated volatile organic compounds, sulfate, temperature, threshold odor number, temperature, total dissolved solids, turbidity.

5.1.1.2 The second item is raw water characterization for *Cryptosporidium* (30 TAC, Chapter 290, §290.111.(b).(1). The second item shall include twenty-four (24) monthly samples in determine the correct bin classification for *Cryptosporidium*. Samples shall be taken at one (1) location and measured for *Cryptosporidium* and turbidity.

5.1.1.3 The third item is the design of the intake (elevation of screens). This shall consist of quarterly samples for a two (2) year period (up to eight sample events) to gather samples and measure water quality parameters to support the intake and water treatment plant design efforts. These samples shall be taken at one location and up to nine depths. The quarterly sampling will provide information regarding seasonal changes. Water quality parameters that shall be measured for this effort include alkalinity, ammonia (free and total), bromide, dissolved oxygen, hardness, organic carbon (dissolved and total), orthophosphate, oxidation-reduction potential, pH, phosphorus (total), iron, manganese, specific conductance, temperature, total dissolved solids, turbidity, and UV254.

5.1.1.4 A third-party laboratory that is accredited by the Texas Commission on Environmental Quality shall be utilized for the water quality analysis.

5.1.1.5 Prepare a technical memorandum (TM) summarizing the water quality monitoring data. The TM shall also review existing water quality

information collected near the project area by LCRA and an evaluation of options for collection of a sample of raw water prior to treatment for total organic carbon (TOC) sampling. The TM shall also be submitted to TCEQ for approval of a new surface water source per 30 TAC 290.41.(e).(1).(F) as described under Task 6.8.

5.1.2 Zebra Mussel Control Bench-scale Testing Evaluation. Prepare a bench-scale testing protocol and conduct bench-scale testing of Lake Travis water to determine appropriate dosing and capacity requirements for the proposed zebra mussel control chemical treatment systems (sodium permanganate and sodium hypochlorite). Assess the effect of decay and decomposition reactions based on estimated hydraulic detention times to maintain a suitable treatment chemical residual to the three WTPs being served by Phase 2. Up to five (5) doses for sodium hypochlorite and sodium permanganate shall be used. Residual concentrations shall be measured at up to eight (8) time steps (48, 36, 24, 12, 6, 4, 2, 1 hours). The samples associated with this effort shall be taken from near the first intake level. In addition, this sample and test protocol shall be conducted quarterly for one year. A third-party laboratory that is accredited by the Texas Commission on Environmental Quality shall be utilized for the analysis. Prepare a TM summarizing the results of the bench-scale testing evaluation.

5.1.3 Flow Control Devices Evaluation. Evaluate the flow control butterfly valve and actuator recommended in TM 5-1 of the Phase 2 Preliminary Engineering Report to verify suitability for the Project. Consider cost, maintenance, reliability, and constructability. Prepare a TM documenting final recommendations for flow control device and actuator.

5.1.4 Architectural Renderings. Prepare updated architectural renderings of the maintenance building and intake structure in the lake at 60 and 90 percent design milestones.

5.1.5 Roadway Design Improvements. Engineer shall prepare a roadway spot repair design to for repairs to the existing road that are determined to be due to construction and not normal use.

5.2 **Pump Station**

5.2.1 Pressure Transient Analysis. Perform a 60 percent and 90 percent system pressure transient analysis (gravity and pressure systems). The pressure transient analysis shall be developed by identifying differences from the existing 30 percent transient analysis and updating the hydraulic transient analysis computer model. Establish initial hydraulic grade line elevation for the tunnel and pipelines under steady state and static conditions at the pump station for the critical operating scenarios. Perform simulations for the critical operating scenarios including pump power failure, pump startup, and controlled (powered) pump shutdown. Evaluate the simulations and, if necessary, recommend additional surge control measures to

protect the system. Prepare a Pressure Transient Analysis TM documenting transient analyses and recommendations at 60 and 90 percent design.

5.2.2 Computation Fluid Dynamics (CFD) Design Validation. Perform a CFD evaluation of the 60 percent and 90 percent pump station designs. Evaluate up to six pump flow combinations to determine if the results meet the performance criteria used in the physical model study completed during preliminary engineering. If the results for the revised design do not meet the performance criteria, conduct design development tests to improve flow to the pumps. Test up to four pump operating combinations to confirm the design of acceptable modifications. Prepare a TM documenting CFD analyses and recommendations at 60 and 90 percent design.

5.2.3 Pump Selection Analysis. Advance hydraulic evaluations completed during preliminary engineering and consult with pump manufacturers to update pump selections. Prepare a TM documenting the hydraulic analyses and recommended pump selections.

5.2.4 Well Shaft Casing Alignment Analysis. Coordinate with pump suppliers and contractors to define tolerance criteria for well casings based on manufacturer pumping unit designs. Prepare a TM documenting tolerance criteria and pump manufacturer recommendations.

5.2.5 Power Factor Evaluation. Evaluate the type and size of power factor correction required to correct the power factor at the Phase 2 pump station site to meet PEC's power factor requirements. Evaluate options for correcting power factor and opinions of probable construction cost for each alternative. Prepare a TM describing options for correcting power factor and opinions of probable construction costs. Design of a power factor correction capacitor is included.

5.2.6 Architectural Renderings. Prepare updated architectural renderings of the pump station at 60 and 90 percent design milestones. Provide two views – one from the perspective of the lake and one from Lime Creek Road.

5.2.7 Spoils Disposal Plan. Prepare a plan documenting spoil disposal alternatives for the contractor.

5.3 **Geotechnical and Underground Engineering**

5.3.1 **Geotechnical Investigation**. Coordinate and perform geotechnical investigations. Coordinate boring and testing locations with surveyor and OWNER.

5.3.1.1 Plan and perform a Phase 2 subsurface field and laboratory investigation and testing program. As part of the planning of the investigation, the existing rock core and soil samples from previous phases will be reviewed

5.3.1.1.1 Deep Land Borings for tunnels and shafts. Perform two land borings for tunnels and shafts. One boring shall be a deep boring extending to the tunnel zone. This boring shall be at the pump station and shall be performed to obtain additional subsurface information and detail

logging information at this critical location that includes multiple shafts and an underground chamber. The second boring shall be located at the end of the transmission tunnel and shall be primarily through overburden with a total depth anticipated to be less than 40 feet. This boring shall be used to obtain additional information on overburden soils in the vicinity of the Trails End Shaft, including in-situ testing and water readings isolated in the overburden. Perform in-situ testing for characterizing subsurface conditions including packer/pressure testing in rock, in-situ permeability testing in soils, and install piezometers in all deep land borings.

5.3.1.1.2 Shallow Land Borings.

5.3.1.1.2.1 Perform a total of six shallow borings for shallow foundations, including two pump station site borings and four maintenance building site borings. Shallow borings will extend to depths of up to 20 to 30 feet below grade to characterize materials below the proposed below grade walls and foundations, as well as obtain data for pavement areas, shallow pipeline routes, and other site improvements. Perform conventional soil/rock tests (Atterberg Limits, Sieve Analysis, Unconfined Compression, and Confined (Triaxial) Compression).

5.3.1.1.2.2 Perform shallow pavement borings along existing roadways to obtain pavement cores and soil subgrade samples for evaluation of existing pavement condition for roadways anticipated to be impacted by the construction operations. Pavement borings are expected to be approximately five feet deep.

5.3.1.1.3 Marine Borings. Perform a total of two borings, including one intake structure boring and one transmission tunnel boring. Perform in-situ packer/pressure on all marine borings.

5.3.1.1.4 Laboratory testing for engineering purposes. Perform laboratory testing on select soil and rock samples recovered from the borings to determine classification and engineering properties of the soil and rock strata. Testing shall involve procedures and quality that are consistent with standard engineering practice for the design of tunnels and shafts. Soil tests shall include index classification tests and engineering tests including shear strength and compressibility, as appropriate, for design of the initial support and final liner systems in overburden for the shafts and for the foundations and below grade walls for the pump station and maintenance building. Testing on rock samples shall include classification tests, compressive and tensile strength tests, and index tests for assessing

abrasivity, slake potential, and cutting tool wear for tunneling applications. The testing program shall be based on anticipated tunneling means and methods.

5.3.1.1.5 Soil chemistry testing shall be performed on recovered soil samples for assessing corrosivity potential of the soils.

5.3.1.1.6 Spoils from borings shall be hauled off upon completion of boring activities. Borings shall be grouted upon completion. Additional site restoration activities are not included.

5.3.1.1.7 Recovered rock core shall be photographed and stored in core boxes. OWNER shall identify a storage facility and provide the ENGINEER access to the facility for delivery of core and for review, logging, and photography of the core. Soil samples and pavement cores shall also be stored at this location except for samples taken for testing. Rock cores and soil samples shall also be made available for construction contractors for pre-bid inspections and for design phase outreach workshops.

5.3.1.2 Prepare a Phase 2 Geotechnical Data Report (GDR) that documents the Phase 2 field and laboratory testing program and compiles the data collected. The GDR will be a factual document without interpretations that shall be included with the bid documents. A draft GDR shall be submitted with the 60 percent design submittal. A final GDR shall be submitted with the 90 percent design submittal.

5.3.2 Perform geotechnical and tunneling engineering analyses. Engineering analyses shall be performed for design of the tunnels and shafts, sequencing of the excavation of the pump station underground chamber, and assessment of construction excavation impacts from the underground works for vibration impacts and settlement potential. The results of these analyses shall be documented in calculation packages and/or technical memoranda. Analyses and technical memoranda will include ground characterization and development of soil and rock parameters, design of initial rock support for shafts, cavern, and tunnels; design of final CIP liner for tunnels and cavern, structural checks for final steel liners; conceptual design of SOE for Trails End Shaft and Pump station SOE; groundwater inflow estimates for tunnels and shafts for baselines in GBR; excavation sequencing analysis for cavern; analysis of cavern, shaft, and tunnel interaction; and construction impacts assessments for excavation impacts including settlement potential and vibrations, and other assessments related to the tunnel and underground elements.

5.3.3 Develop construction impact mitigation measures. The results of the engineering analyses shall be used to develop mitigation measures. Mitigation measures may include requirements for instrumentation and monitoring, construction sequencing, temporary construction works or operations, and definition of

thresholds for responses and implementation of mitigation measures. This includes development of the mitigation plan for groundwater impacts.

5.3.4 Geotechnical Engineering Report (GER) for the proposed Pump Station and Maintenance Buildings. A GER or technical memorandum shall be prepared summarizing the investigation and subsurface conditions and presenting geotechnical engineering recommendations for the design of the new buildings and site improvements at those locations. This report shall be for internal team use for developing the design of these elements and will be included as an information-only document with the bid documents.

5.3.5 Geotechnical Baseline Report (GBR). A geotechnical baseline report shall be developed for characterization of the subsurface soil, rock, and groundwater conditions for the construction of the tunnels, underground pump station chamber, and shafts. The GBR will present ground characterizations based on engineering interpretation of the subsurface conditions, anticipated construction means and methods, and consideration of the OWNER's risk management considerations. Coordination with the OWNER shall be performed as part of the development of the geotechnical baselines. A draft GBR shall be prepared and submitted to the OWNER for review. The draft GBR shall be submitted after the 60 percent design submittal and no later than the 90 percent design submittal. The final GBR shall incorporate review comments by the OWNER and shall be submitted with the final bidding documents. The GBR shall be a contract document that shall be signed and sealed by a Professional Engineering registered in the State of Texas.

5.4 **Risk Management Plan**

5.4.1 Risk Management Plan. Update the Risk Management Plan developed during preliminary engineering to establish and maintain a collaborative process for risk identification, risk quantification, risk mitigation, and the monitoring and management of identified risks for the Project. Assign risk management key staff roles and responsibilities. Develop the strategic approach for risk management using a collaborative approach for identification and mitigation with OWNER. The risk register shall track and monitor risks, response efforts, trigger events, and impacts to project costs and schedule and shall be incorporated into the Risk Management Plan. Prepare and submit a Risk Management Plan.

5.4.2 Risk Management Updates. Develop approximately quarterly updates (total of eight) and metrics to continue reporting on the risk management process. Summarize top risks, key updates to risk response actions, and upcoming risk trigger events. The Risk Management Plan and updates to the Plan shall be presented and reviewed at project progress meetings (i.e., no separate Risk Management Workshops are required).

5.5 **Construction Contract Packaging Evaluation.** This scope of services assumes that the Phase 2 Project shall be designed and bid as one construction contract. However, it is acknowledged that the recommended construction contract packaging plan is influenced by

external factors including the bid climate and contractor constraints. Therefore, ENGINEER shall coordinate with qualified contractors and conduct a construction contract packaging evaluation considering cost, schedule, contractor preferences, and construction contract interface risks. Prepare a TM summarizing the evaluation and recommendations.

5.6 **Constructability Reviews**

5.6.1 Engineer Constructability Review. Perform a quality assurance and constructability review of the 90 percent submittal to inspect the design documents for conflicts, ambiguities, or omissions and provide recommendations to improve clarity and constructability. Evaluate construction contract interface risks, the proposed construction scheme and sequence of construction for the recommended design configuration based on the use of current construction techniques.

5.6.2 Contractor Constructability Workshops. Identify qualified contractors to participate in a constructability review of the Project. Separate workshops may be held for different project components (marine, tunnel, pump station).

5.7 **Commissioning and Start-up (C&SU) Plan.** Conduct C&SU workshops with Brushy Creek WTP, Cedar Park WTP, and Sandy Creek WTP staff to determine project impacts, plant constraints, and training requirements for assets installed as part of the Project. Develop plans and procedures to coordinate commissioning and startup for transition from construction to full operation. The C&SU plan shall include requirements for tie-in and shutdowns necessary to complete the work, disinfection, hydro-static testing, filling/draining, temporary shut-downs, equipment commissioning, instrumentation and control checkout (overall plan development), performance testing, water management, O&M training, and decommissioning of the existing floating intakes used by OWNER, City of Cedar Park, and City of Leander. The C&SU plan shall also include a C&SU schedule identifying tasks necessary for transition to full operation and major shutdowns or events that impact the three WTPs.

5.8 **Site Visits.**

5.8.1 Pump Suppliers. Consult with qualified pump suppliers identified during final design of Phase 2 and perform a four day site visit to the manufacturing facility of two qualified pump suppliers.

5.8.2 Southern Nevada Water Authority (SNWA). Coordinate with SNWA to perform a four day site visit to assess the performance of submersible pumps installed for the Lake Mead Intake No. 3 Low Lake Level Pumping Station Project and discuss start-up and commissioning of the Project.

5.9 **Pumping Unit Pre-negotiated Bid.** Support OWNER with implementation of a pre-negotiated bid of pumping units for the Phase 2 Project. Equipment shall be bid and a selection made by OWNER. The bid of the selected pump manufacturer shall be included in the contract as a bid allowance.

5.9.1 Develop Equipment Procurement Solicitation Documents. Develop procurement solicitation documents for the three pumping unit designs included in the Phase 2

pump station (one dedicated Cedar Park pump and two OWNER/Leander pumps). Procurement documents shall include the following.

5.9.1.1 Equipment specification and performance requirements for the pumping units, non-return valve, column pipe, and transition elbow at grade.

5.9.1.2 Selection criteria.

5.9.1.3 Proposal pricing and schedule.

5.9.1.4 Proposer references.

5.9.1.5 Terms and conditions.

5.9.1.6 Schedule for evaluation and award of the contract and time for completion.

5.9.1.7 Submittal procedures.

5.9.1.8 Provide solicitation assistance and address bidder inquiries. Review bids and recommend award.

5.9.2 Evaluate Bids.

5.9.2.1 Assist OWNER extending invitations to bid equipment procurement solicitation.

5.9.2.2 Receive inquiries from bidders during the bidding period and respond as required.

5.9.2.3 Review bids and develop a recommendation for award.

5.9.2.4 Assist OWNER in interpretation of procurement solicitation and develop a bid allowance for the Phase 2 construction contract.

Task 5.0 Deliverables

- *Water Quality Monitoring TM*
- *Zebra Mussel Control Bench-Scale Testing Evaluation TM*
- *Flow Control Devices Evaluation TM*
- *Pressure Transient Analysis Report (60 and 90 Percent)*
- *Pump Selection Analysis TM*
- *CFD Design Validation TM*
- *Well Shaft Casing Alignment Analysis TM*
- *Power Factor Evaluation TM*
- *Architectural Renderings*
- *Spoils Disposal Plan*
- *Phase 2 Geotechnical Data Report*
- *Phase 2 Geotechnical Baseline Report*
- *Risk Management Plan*
- *Constructability review workshop minutes (as required)*

- *Start-up and Commissioning Plan*
- *Site visit meeting minutes (as required)*
- *Equipment procurement solicitation documents (with support by OWNER)*
- *Equipment procurement recommendation for award*

Task 6.0 - Agency and Stakeholder Coordination

6.1 **Village of Volente (Village).**

6.1.1 Meetings.

6.1.1.1 Develop and present two town-hall style presentations to provide project updates to the Village.

6.1.1.2 Meet with OWNER and Village quarterly for a total of 10 meetings to provide project progress updates and coordinate future activities.

6.1.1.3 Attend up to 12 meetings with Village staff, council and/or commissions.

6.1.2 Coordination and communication. Support ongoing OWNER coordination and communication with the Village. Prepare and submit project figures and exhibits for use and display by the Village including a general project layout, an overall project schedule, a detailed schedule of activities included in this scope of services that shall occur in and around the Village, and summary updates of upcoming activities. Coordinate activities within the Village corporate limits with OWNER, the Village, and Village's consultant.

6.1.3 Permitting. Support OWNER in acquiring the following anticipated permits and approvals. It is assumed that platting of the maintenance building site is not required. It is also assumed that endangered species surveys for the maintenance building site will not be conducted, and that surveys completed during development of the Phase 2 Environmental Assessment will be submitted to the Village. Resubmittal of permits and applications is included if resubmittal is required to address minor technical issues.

6.1.3.1 Village of Volente Concept Plan. Prepare draft and final copies of the Concept Plan. Include a general site layout, survey limits, identification of adjacent properties and owners, identification of zoning and proposed use, tree preservation strategies, summary report, and other information listed in the Village ordinance. Review other Village ordinances to assess approval requirements.

6.1.3.2 Zoning change approval.

6.1.3.3 Site plan approval.

6.1.3.4 Non-point source pollution control permit.

6.1.3.5 Site development permit including development of a Pesticide and Fertilization Management Plan.

6.1.3.6 Building permit.

6.1.3.7 Tree removal permit.

6.1.3.8 Certificate of occupancy and compliance.

6.1.3.9 Noise control permit including analysis of construction related noise impacts.

6.1.3.10 Temporary construction impacts approval.

6.1.3.11 Right-of-way construction permit for Bernard Street extension.

6.1.4 Maintenance Building Code Modification Request (CMR). Coordinate with the Village of Volente and Volente Fire Department to seek a CMR for the installation of an automatic sprinkler protection system in the maintenance building within the Village of Volente.

6.1.5 Roadway and Traffic Evaluation.

6.1.5.1 Perform a traffic study to evaluate traffic routes, potential access conflicts, traffic volumes and potential impacts to local traffic during construction from the Volente City corporate along Lime Creek Road to the maintenance building.

6.1.5.2 Conduct an existing pavement condition analysis to evaluate the condition of existing pavement from the Volente corporate limits along Lime Creek Road to the maintenance building and determine possible impacts to the road condition during construction.

6.1.5.3 Conduct a field survey of the undeveloped Bernard Street right-of-way to be extended to provide access to the Maintenance Building site. Surveying shall include staking the right-of-way, topographic surveying, and a tree survey.

6.2 **Travis County.** Coordinate the following with Travis County for work occurring along Trails End Road and Lime Creek Road. Attend up to six meetings with Travis County.

6.2.1 General Development Permit for the pump station site.

6.2.2 Development Permit Application Notice of Proposed Installation in Travis County ROW including a work plan, erosion and sedimentation control plans, traffic control plans, and documentation of required temporary construction easements.

6.2.3 Roadway and Traffic Evaluation.

6.2.3.1 Perform a traffic study to evaluate traffic routes, potential access conflicts, traffic volumes and potential impacts to local traffic during construction from the intersection of Lime Creek Road and Anderson Mill Road to the pump station site.

6.2.3.2 Conduct an existing pavement condition analysis to evaluate the condition of existing pavement from the intersections of Lime Creek Road and FM 2769 with Anderson Mill Road to the pump station and determine possible impacts to the road condition during construction.

6.2.4 Temporary construction impacts and activities.

6.2.5 Tree protection plan and tree removal requirements for the pump station site and at transmission tunnel riser site (end of Trails End Road).

6.2.6 Use of right-of-way along Trails End Road and Lime Creek Road for water and electrical components of the Project including construction within the 100-year floodplain.

6.3 **Pedernales Electric Cooperative (PEC).** Coordinate power supply requirements with PEC and PEC's consultants for upgrading infrastructure to serve the project facilities at the maintenance building and pump station sites. Coordinate with PEC and PEC's consultants for relocating existing overhead electric utilities at the end of Trails End Road. Prepare and submit an Electric Service Data Form for the Phase 2 Project. Attend up to 12 meetings with PEC and/or PEC's consultants. Provide design of grading and transformer pads at the maintenance building and pump station sites.

6.4 **U.S. Army Corps of Engineers (USACE).** Nationwide Permit (NWP) 12 (Utility Line Activities) and/or LOP-2 have been identified as potentially viable permitting approaches for the Project. Coordinate with USACE to provide information on the timing and schedule of the Phase 2 Project. Prepare and submit a Pre-Construction Notification (PCN) to USACE as required for projects that involve intake structures. Respond to potential "requests for additional information" from USACE during the PCN review process. It is assumed that a public hearing will not be required. It is anticipated that the USACE permit will expire in 2022 and the project schedule may require a re-authorization from USACE if construction is not initiated before the NWP expiration date.

6.5 **City of Austin**. Submit construction site plans for development of the pump station site and an environmental variance requests for impervious cover, construction on slopes, and cut and fill exceeding four feet of depth. Meet with staff and members of the Austin Environmental Board and Planning Commission. Make one presentation at Environmental Board and Planning Commission public hearings to seek approval of the variances. Prepare an Environmental Resource Inventory Report as per City of Austin Environmental Criteria Manual. Submit proposed mitigation measures and water quality best management practices to minimize environmental and water quality impacts. Obtain approval of a site development permit. It is assumed that a building permit is not required. Additional coordination with City of Austin is also required for the Trails End Road site that is within the City of Austin ETJ.

6.6 **Lower Colorado River Authority (LCRA).** Coordinate with LCRA for review and approval of the Phase 2 Project. Support preparation of applications for required permits and approvals. It is anticipated that a Buoy Permit, General Utility Permit, and On-site Sewage Facility Permit will be required. Coordination will also be required for construction within the 100-year floodplain. Written notification and public notice may be required for fill and dredge activities. Coordinate with LCRA's Water Quality Protection and Surface Water Management Departments for review and approval. Attend up to four meetings with LCRA.

6.7 **Balcones Canyonlands Conservation Plan (BCCP) Participation.** Coordinate with BCCP for authorization of the PEC rebuild improvements through Balcones Canyonland Preserve property between Trails End Road and the pump station site.

6.8 **Texas Commission on Environmental Quality (TCEQ**).

6.8.1 Coordinate with TCEQ for permitting review of the project plans and specifications.

6.8.2 Submit the Water Quality Monitoring TM prepared under Task 5.1 for approval of a new surface water source.

6.8.3 Coordinate and attend an on-site evaluation of the proposed raw water intake location with TCEQ staff and furnish a USGS 7.5-minute topographic quadrangle showing the intake location.

6.8.4 Prepare emergency remediation plan for the intake to document procedures if contamination of the lake source water occurs.

6.8.5 Attend up to three meetings with TCEQ.

6.9 **Texas Water Development Board (TWDB).** Support OWNER coordination with TWDB including progress reporting and project reviews. Assistance with to obtaining bidding and construction funding is not included. No meetings with TWDB are assumed.

6.10 **City of Jonestown.** Coordinate with the City of Jonestown to discuss construction activities along Trails End Road. Support preparation of applications for required permits and approvals. Attend up to two meetings with City of Jonestown.

6.11 **Trails End Road Homeowners Association (HOA).** Coordinate with the Trails End Road HOA to discuss construction activities within and adjacent to the Trails End Road HOA Park at the end of Trails End Road including the design of a temporary road realignment to facilitate construction within the right-of-way. Attend up to three meetings with Trails End Road HOA.

6.12 **Texas Department of Licensing and Regulations (TDLR).** Coordinate with TDLR for compliance with American with Disabilities Act (ADA) and submit plans and specifications where required.

6.13 **Jonestown Water Supply Corporation (JWSC).** Coordinate with the JWSC to discuss construction activities along Trails End Road. Attend up to two meetings with JWSC.

Task 6.0 Deliverables

- *Village of Volente town hall presentations (2)*
- *Stakeholder and regulatory permitting agency meeting minutes (as required)*
- *Applications for permits and approvals (as required)*

EXHIBIT C

WORK SCHEDULE

A project work schedule is attached to this Exhibit C as Appendix 1. The assumed work duration is 30 months from notice-to-proceed.

EXHIBIT D

Fee Schedule

Attached Behind This Page

EXHIBIT D

COMPENSATION

Total compensation for Basic Services set forth in Exhibit B is estimated to be $13,621,795. OWNER shall pay ENGINEER for Basic Services set forth in Exhibit B on the basis of Lump Sum as described in Paragraph 1.0 with the exception of Task 5.3.1 – Geotechnical Investigation. OWNER shall pay ENGINEER for Task 5.3.1 – Geotechnical Investigation set forth in Exhibit B on the basis of Standard Hourly Rates as described in Paragraph 2.0. ENGINEER'S labor and fee summaries are attached as Appendix 1.

1.0 OWNER shall pay ENGINEER for Basic Services set forth in Exhibit B with the exception of Task 5.3.1 – Geotechnical Investigation as follows:

A. A Lump Sum amount of $12,518,037 based on the following estimated distribution of compensation:

1.	Task 1.0 – Project Management, Coordination, and Meetings	$1,643,328
2.	Task 2.0 – 60 Percent Design Submittal	$2,916,890
3.	Task 3.0 – 90 Percent Design Submittal	$2,216,994
4.	Task 4.0 – Final Bidding Documents	$1,350,768
5.	Task 5.0 – Special Services	$3,165,612
6.	Task 6.0 – Agency and Stakeholder Coordination	$1,224,445

B. The portion of the Lump Sum amount billed for ENGINEER'S services will be based upon ENGINEER'S estimate of the percentage of the total services actually completed during the billing period for each Task described in Paragraph 1.0.A.

C. ENGINEER shall not exceed the total Lump Sum amount unless approved in writing by the OWNER.

D. The Lump Sum includes compensation for ENGINEER'S services and services of ENGINEER'S Consultants, if any. Appropriate amounts have been incorporated in the Lump Sum to account for labor costs, overhead, profit, expenses, and Consultant charges.

2.0 OWNER shall pay ENGINEER for Basic Services Task 5.3.1 – Geotechnical Investigation set forth in Exhibit B as follows:

E. An amount equal to the cumulative hours charged to the Project by each class of ENGINEER'S personnel times Standard Hourly Rates for each applicable billing class for all

services performed on the Project, plus Reimbursable Expenses and ENGINEER'S Consultants' charges, if any.

F. The Standard Hourly Rates charged by ENGINEER constitute full and complete compensation for ENGINEER'S services, including labor costs, overhead, and profit; the Standard Hourly Rates do not include Reimbursable Expenses or ENGINEER'S Consultants' charges.

G. ENGINEER'S Standard Hourly Rates are attached to this Exhibit D as Appendix 2.

H. The total compensation for services under Paragraph 2.0 is estimated to be $1,103,758.

I. ENGINEER shall not exceed the total estimated compensation amount unless approved in writing by OWNER.

J. The total estimated compensation for ENGINEER'S services included in the breakdown by phases as noted in Paragraph 2.0.D incorporates all labor, overhead, profit, Reimbursable Expenses, and ENGINEER'S Consultant's charges.

K. If it becomes apparent to ENGINEER that the compensation amount for Engineer's services for any individual sub-task identified in Appendix 3 to Exhibit D will be exceeded, ENGINEER shall give OWNER written notice thereof for review of the matter.

L. The amounts billed for ENGINEER'S services under Paragraph 2.0 will be based on the cumulative hours charged to the Project during the billing period by each class of ENGINEER'S employees times Standard Hourly Rates for each applicable billing class, plus Reimbursable Expenses and ENGINEER'S Consultants' charges.

M. The amounts payable to ENGINEER for Reimbursable Expenses will be the Project-related internal expenses actually incurred or allocated by ENGINEER multiplied by a factor of 5%.

3.0 Other Provisions Concerning Payment

N. Whenever ENGINEER is entitled to compensation for the charges of ENGINEER'S Consultants, those charges shall be the amounts billed by ENGINEER'S Consultants to Engineer times a factor of 5%.

Appendix 1 to Exhibit D

Brushy Creek Regional Utility Authority (BCRUA)
Phase 2 Deep Water Intake
10/29/2018
Detailed Cost Breakdown

Project Fee Summary	
Basic Services (Tasks 1.0 - 4.0)	$8,127,980
Extra Services (Tasks 5.0 & 6.0)	$5,493,815
Total Project	$13,621,795

Basic and Special Services

Task	Employee	Linder	Archer	Petrasek	Whitis	Jenkins	Christensen	Canady	Finley	Gieske	Smith	Johnson	Ulitz	Nichols	Simpson			Total Hours	Total Labor Effort	Total Expense Effort	Total Sub Effort	Total Effort
	Position	Principal	Project Manager	QA/QC	Pump Station Task Lead	Gravity Pipeline Task Lead	Senior Process	Process Engineer	Process EIT	Process CAD	Senior Civil	Civil EIT	Civil CAD	Admin	RPLS	3 Man Survey Crew	Survey Technician					
1.0	**Project Management, Coordination and Meetings**																					
1.1	Project Administration	120	800	24	100	100	150	150	80	120				80				1,724	$ 441,917	$ 24,402	$ 687,214	$ 1,153,533
1.2	Project Meetings																					
1.2.1	Kickoff Meeting (1)	4	12		4	4	12	8						4				48	$ 12,147	$ 82	$ 21,232	$ 33,461
1.2.2	Monthly Progress Meetings (30)	60	120	4	80	80	120	60	40					40				604	$ 151,241	$ 2,700	$ 260,269	$ 414,210
1.2.3	BCRUA Board Updates (4)	8	60	2			12	24		40				24				170	$ 38,242	$ 795	$ 3,087	$ 42,124
2.0	**60 Percent Design Submittal**																					
2.1	Construction Drawings to 60 Percent Level	8	42	96	128	32	542	330	32	1,506	200	400	592	8				3,916	$ 673,181	$ 793	$ 1,389,235	$ 2,063,209
2.2	Specifications to 60 Percent Level	8	32	80	120	80	120	200	240		40	80		80				1,080	$ 212,337	$ 793	$ 178,587	$ 391,717
2.3	OPCC to 60 Percent Level		16	40	16	16	40	80	80		8	16		8				320	$ 63,782	$ 320	$ 252,837	$ 316,939
2.4	60 Percent Submittal and Comment Recovery	12	8	16	8	8	24	80	80		8	16	24	8				292	$ 51,558	$ 320	$ 93,147	$ 145,025
3.0	**90 Percent Design Submittal**																					
3.1	Construction Drawings to 90 Percent Level	8	50	117	99	18	290	368	362	522	99	202	344	8				2,487	$ 422,582	$ 793	$ 903,211	$ 1,326,586
3.2	Specifications to 90 Percent Level	8	60	80	120	80	320	480	400		40	80		80				1,748	$ 343,156	$ 793	$ 200,329	$ 544,278
3.3	OPCC to 90 Percent Level		12	40	12	12	40	60	40		4	8		4				232	$ 50,278	$ 320	$ 166,551	$ 217,149
3.4	90 Percent Submittal and Comment Recovery	12	8	16	8	8	24	40	40		4	24	16	8				208	$ 38,553	$ 320	$ 90,108	$ 128,981
4.0	**Final Bidding Documents**																					
4.1	Final Drawings and Specifications	8	40	150	240	240	320	480	480	990	40	120	240	80				3,428	$ 634,915	$ 584	$ 546,649	$ 1,182,148
4.2	Final OPCC	2	12	40	8	8	24	40	24		2	8						168	$ 38,030	$ 584	$ 130,006	$ 168,620
5.0	**Special Services**																					
5.1	Intake and Maintenance Building																					
5.1.1	Water Quality Monitoring		8	2														10	$ 2,938	$ 187	$ 215,899	$ 219,024
5.1.2	Zebra Mussel Control Bench-scale Testing Evaluation		4			4								2				10	$ 2,606	$ 160	$ 60,981	$ 63,747
5.1.3	Flow Control Devices Evaluation		4	4										2				10	$ 2,582	$ 53	$ 27,060	$ 29,695
5.1.4	Architectural Renderings of the MB & Intake (60 and 90 Percent)		2															2	$ 590	$ 80	$ 27,660	$ 28,330
5.1.5	Roadway Design Improvements		2															2	$ 590	$ 108	$ 4,080	$ 4,778
5.2	Pump Station																					
5.2.1	Pressure Transient Analysis (60 and 90 Percent)	2	8	12	24		40	60	24					4				174	$ 38,487	$ 53	$ 72,450	$ 110,990
5.2.2	CFD Design Validation (60 and 90 Percent)	2	8	12	24		24		40	40				4				154	$ 29,888	$ 53	$ 65,100	$ 95,041
5.2.3	Pump Selection Analysis	2	16	8	40		80	120	40					4				310	$ 68,228	$ 53	$ -	$ 68,281
5.2.4	Well Shaft Casing Alignment Analysis	2	8	12	24		40	80						4				170	$ 40,583	$ 53	$ 7,140	$ 47,776
5.2.5	Power Factor Evaluation		4	2	8		24											38	$ 9,846	$ 53	$ 31,098	$ 40,997
5.2.6	Architectural Renderings of the Pump Station (60 and 90 Percent)	2	16	2					16	16								52	$ 9,995	$ 53	$ 18,800	$ 28,848
5.2.7	Spoils Disposal Plan	2	4	2	16		40	80	16					4				164	$ 35,655	$ 53	$ 6,867	$ 42,575
5.3	Geotechnical and Underground Engineering																					
5.3.1	Geotechnical Investigation																					
5.3.1.1	Phase 2 Subsurface Investigation	8	40	8	2	8	4	8						8	24	102	70	282	$ 52,392	$ 1,849	$ 892,069	$ 946,310
5.3.1.2	Phase 2 Geotechnical Data Report	4	12	12	12	12								4				56	$ 15,688	$ 53	$ 141,707	$ 157,448
5.3.2	Geotechnical and Tunneling Engineering Analyses	4	24	32	40	40				4				4				148	$ 42,024	$ 53	$ 895,743	$ 937,820
5.3.3	Construction Impact Mitigation Measures	4	16	12	32	32								4				100	$ 28,548	$ 53	$ 104,083	$ 132,684
5.3.4	Geotechnical Engineering Report	4	16	4	8					4				4				40	$ 10,524	$ 53	$ 73,800	$ 84,377
5.3.5	Geotechnical Baseline Report	4	24	16	24	24				4				4				100	$ 28,056	$ 53	$ 124,162	$ 152,271
5.4	Risk Management Planning																					
5.4.1	Risk Management Plan (Initial)	4	16	4	8	8	16	80						4				140	$ 33,182	$ 210	$ 38,053	$ 71,445
5.4.2	Risk Management Updates (8)	4	40	24	8	8	60	100	80					8				332	$ 68,671	$ 368	$ 76,132	$ 145,171
5.5	Construction Contract Packaging Evaluation	2	4	2	4	4	24	24										64	$ 15,593	$ 53	$ 17,189	$ 32,835
5.6	Constructability Reviews																					
5.6.1	Engineer Constructability Review	4	40	160	16	16								16				252	$ 70,532	$ 4,350	$ 162,945	$ 237,827
5.6.2	Contractor Constructability Reviews	4	40	4	24	24	40	80		24				16				256	$ 60,835	$ 2,008	$ 94,878	$ 157,721
5.7	Commissioning and Start-up Plan	2	8	8	16	8	40	80										162	$ 38,983	$ 558	$ 105,244	$ 144,785
5.8	Site Visits																					
5.8.1	Pump Supplier Site Visits (2)	64	80	2	64		64	8						40				322	$ 83,585	$ 25,318	$ 15,330	$ 124,233
5.8.2	SNWA Site Visit (1)	24	50		24		24							4				126	$ 35,033	$ 8,823	$ 8,793	$ 52,649
5.9	Pumping Units Evaluated Bid																					
5.9.1	Develop Procurement Documents	4	8	8	24		80	120						12				256	$ 59,181	$ 53	$ 10,300	$ 69,534
5.9.2	Evaluate Bids	2	4	2	8		40	80						16				152	$ 33,365	$ 53	$ 8,760	$ 42,178
6.0	**Agency and Stakeholder Coordination**																					
6.1	Village of Volente																					
6.1.1	Meetings																					
6.1.1.1	Town-hall Presentations (2)	8	80	4	16	8	16	16	40	40				40				268	$ 56,559	$ 2,790	$ 2,313	$ 61,662
6.1.1.2	Quarterly Meetings (10)	2	40						60	40								142	$ 24,475	$ 380	$ 10,745	$ 35,600
6.1.1.3	Meetings with Village Staff, Council, Commissions (12)	8	80		24	24	40		60	24	50	24	24	24				382	$ 76,915	$ 2,655	$ 51,860	$ 131,430
6.1.2	Coordination and Communication	4	80	4	8	8	24		40	40	16	24	16	8	8			280	$ 56,318	$ 505	$ 23,337	$ 80,160
6.1.3	Permitting																					
6.1.3.1	Concept Plan	2	16	2							80	100	80	4				284	$ 39,426	$ 133	$ -	$ 39,559
6.1.3.2	Zoning Change Approval	2	16	2							60	80	80	4				244	$ 33,331	$ 133	$ -	$ 33,464
6.1.3.3	Site Plan Approval	2	16	2							60	100	80	4				264	$ 35,149	$ 133	$ -	$ 35,282
6.1.3.4	Non-point Source Pollution Control Permit	2	8	2							8	24	24	4				72	$ 9,967	$ 133	$ -	$ 10,100
6.1.3.5	Site Development Permit	2	16	2							60	100	80	4				264	$ 35,149	$ 133	$ -	$ 35,282
6.1.3.6	Building Permit	2	8	2							8	24	8	4				56	$ 8,598	$ 133	$ -	$ 8,731
6.1.3.7	Tree Removal Permit	2	8	2							16	50	64	4				146	$ 17,463	$ 133	$ -	$ 17,596
6.1.3.8	Certificate of Occupancy and Compliance	2	8	2							2	16	8	4				42	$ 6,587	$ 133	$ -	$ 6,720
6.1.3.9	Noise Control Permit	2	12	2							40	80	8	4				148	$ 21,713	$ 133	$ -	$ 21,846
6.1.3.10	Temporary Construction Impacts Approval	2	24	2							24	60	16	4				132	$ 20,697	$ 133	$ -	$ 20,830
6.1.3.11	ROW Construction Permit for Bernard Street Extension	2	16	2							16	80	8	4				128	$ 17,759	$ 133	$ -	$ 17,892
6.1.4	Maintenance Building Code Modification Request	2	8	2										4				16	$ 4,020	$ 133	$ 25,300	$ 29,453
6.1.5	Roadway and Traffic Evaluation																					
6.1.5.1	Traffic Study	1	2															3	$ 885	$ 54	$ 23,667	$ 24,606
6.1.5.2	Pavement Condition Assessment	1	2															3	$ 885	$ 82	$ 18,047	$ 19,014
6.1.5.3	Field Survey of Undeveloped Bernard Street ROW	1	8												24	50	50	133	$ 21,157	$ 453	$ 2,880	$ 24,490
6.2	Travis County																					
6.2.1	General Development Permit Application for Pump Station Site	4	8															12	$ 3,540	$ 25	$ 4,368	$ 7,933
6.2.2	Notice of Proposed Installation in Travis County ROW Permit Application	4	8															12	$ 3,540	$ 25	$ 12,812	$ 16,377
6.2.3	Roadway and Traffic Evaluation																					
6.2.3.1	Traffic Study	2	8															10	$ 2,950	$ 27	$ 23,667	$ 26,644
6.2.3.2	Pavement Condition Assessment	2	8															10	$ 2,950	$ 27	$ 11,759	$ 14,736
6.2.4	Evaluate Temporary Construction Impacts and Activities	2	12				24											38	$ 9,906	$ 40	$ 27,232	$ 37,178
6.2.5	Tree Protection Plan and Assessment for Pump Station Site	2	8	2	4				40									56	$ 8,321	$ 40	$ 4,368	$ 12,729
6.2.6	Use of ROW along TER and Lime Creek Road	2	8	2	4				8									24	$ 5,412	$ 40	$ 10,368	$ 15,820
6.3	Pedernales Electric Cooperative	4	120	8	40		60		80	80				16				408	$ 87,391	$ 590	$ 45,558	$ 133,539
6.4	U.S. Army Corps of Engineers	2	16	2	4			32		8								64	$ 15,215	$ 53	$ 30,446	$ 45,714
6.5	City of Austin	4	40	8	12		40			16	80	150	120	16				486	$ 74,019	$ 608	$ 18,938	$ 93,565
6.6	Lower Colorado River Authority	2	40	4	16	16	16	40										134	$ 35,296	$ 97	$ 10,486	$ 45,879
6.7	Balcones Canyonlands Conservation Plan Participation	2	4	1					24									31	$ 4,241	$ 54	$ -	$ 4,295
6.8	Texas Commission on Environmental Quality	2	4	1			24	60										91	$ 20,668	$ 162	$ 5,720	$ 26,550
6.9	Texas Water Development Board	2	24	4					40									70	$ 12,463	$ 134	$ 6,120	$ 18,717
6.10	City of Jonestown	1	12						16	16								45	$ 7,942	$ 160	$ 8,794	$ 16,896
6.11	Trails End Road Homeowners Association	2	12	2					24	24								64	$ 10,869	$ 188	$ 27,473	$ 38,530
6.12	Texas Department of Licensing and Regulations	1	2															3	$ 885	$ 16	$ 7,320	$ 8,221
6.13	Jonestown Water Supply Corporation	1	4						16									21	$ 2,930	$ 107	$ 4,368	$ 7,405
	Total Basic Services Hours	**502**	**2,564**	**1,124**	**1,521**	**930**	**2,922**	**3,468**	**2,562**	**3,558**	**965**	**1,866**	**1,832**	**752**	**56**	**152**	**120**	**24,894**	**$ 4,885,690**	**$ 89,374**	**$ 8,646,731**	**$ 13,621,795**

Brushy Creek Regional Utility Authority (BCRUA)
Phase 2 Deep Water Intake
10/29/2018
Detailed Cost Breakdown

Task	Expenses	Miles	Meals	Printing	Hotel	Travel	Labs	BIM360/Synch	Other	Other	Other	Other	Other	Other	Other	Other	Other	Total Expenses
	Expense Cost	$ 0.55	$ 1.05	$ 1.05	$ 1.05	$ 1.05	$ 1.05	$ 1.05										
1.0	**Project Management, Coordination and Meetings**																	
1.1	Project Administration	2,500	1,250	1,500				19,180										$ 24,402
1.2	Project Meetings																	
1.2.1	Kickoff Meeting (1)	100		25														$ 82
1.2.2	Monthly Progress Meetings (30)	3,000		1,000														$ 2,700
1.2.3	BCRUA Board Updates (4)	300	500	100														$ 795
2.0	**60 Percent Design Submittal**																	
2.1	Construction Drawings to 60 Percent Level	200	150	500														$ 793
2.2	Specifications to 60 Percent Level	200	150	500														$ 793
2.3	OPCC to 60 Percent Level	200	150	50														$ 320
2.4	60 Percent Submittal and Comment Recovery	200	150	50														$ 320
3.0	**90 Percent Design Submittal**																	
3.1	Construction Drawings to 90 Percent Level	200	150	500														$ 793
3.2	Specifications to 90 Percent Level	200	150	500														$ 793
3.3	OPCC to 90 Percent Level	200	150	50														$ 320
3.4	90 Percent Submittal and Comment Recovery	200	150	50														$ 320
4.0	**Final Bidding Documents**																	
4.1	Final Drawings and Specifications	50	30	500														$ 584
4.2	Final OPCC	50	30	500														$ 584
5.0	**Special Services**																	
5.1	Intake and Maintenance Building																	
5.1.1	Water Quality Monitoring	100	75	50														$ 187
5.1.2	Zebra Mussel Control Bench-scale Testing Evaluation	100	50	50														$ 160
5.1.3	Flow Control Devices Evaluation			50														$ 53
5.1.4	Architectural Renderings of the MB & Intake (60 and 90 Percent)	50		50														$ 80
5.1.5	Roadway Design Improvements	100		50														$ 108
5.2	Pump Station																	
5.2.1	Pressure Transient Analysis (60 and 90 Percent)			50														$ 53
5.2.2	CFD Design Validation (60 and 90 Percent)			50														$ 53
5.2.3	Pump Selection Analysis			50														$ 53
5.2.4	Well Shaft Casing Alignment Analysis			50														$ 53
5.2.5	Power Factor Evaluation			50														$ 53
5.2.6	Architectural Renderings of the Pump Station (60 and 90 Percent)			50														$ 53
5.2.7	Spoils Disposal Plan			50														$ 53
5.3	Geotechnical and Underground Engineering																	
5.3.1	Geotechnical Investigation																	
5.3.1.1	Phase 2 Subsurface Investigation	1,300	1,000	80														$ 1,849
5.3.1.2	Phase 2 Geotechnical Data Report			50														$ 53
5.3.2	Geotechnical and Tunneling Engineering Analyses			50														$ 53
5.3.3	Construction Impact Mitigation Measures			50														$ 53
5.3.4	Geotechnical Engineering Report			50														$ 53
5.3.5	Geotechnical Baseline Report			50														$ 53
5.4	Risk Management Planning																	
5.4.1	Risk Management Plan (Initial)		150	50														$ 210
5.4.2	Risk Management Updates (8)		250	100														$ 368
5.5	Construction Contract Packaging Evaluation			50														$ 53
5.6	Constructability Reviews																	
5.6.1	Engineer Constructability Review	750	750	500	1,000	1,500												$ 4,350
5.6.2	Contractor Constructability Reviews	500	800	250	500	100												$ 2,008
5.7	Commissioning and Start-up Plan	250	300	100														$ 558
5.8	Site Visits																	
5.8.1	Pump Supplier Site Visits (2)	500	4,800	50	9,000	10,000												$ 25,318
5.8.2	SNWA Site Visit (1)	100	1,500	50	4,800	2,000												$ 8,823
5.9	Pumping Units Evaluated Bid																	
5.9.1	Develop Procurement Documents			50														$ 53
5.9.2	Evaluate Bids			50														$ 53
6.0	**Agency and Stakeholder Coordination**																	
6.1	Village of Volente																	
6.1.1	Meetings																	
6.1.1.1	Town-hall Presentations (2)	300	1,500	1,000														$ 2,790
6.1.1.2	Quarterly Meetings (10)	500	50	50														$ 380
6.1.1.3	Meetings with Village Staff, Council, Commissions (12)	1,200	900	1,000														$ 2,655
6.1.2	Coordination and Communication	250	100	250														$ 505
6.1.3	Permitting																	
6.1.3.1	Concept Plan	50		100														$ 133
6.1.3.2	Zoning Change Approval	50		100														$ 133
6.1.3.3	Site Plan Approval	50		100														$ 133
6.1.3.4	Non-point Source Pollution Control Permit	50		100														$ 133
6.1.3.5	Site Development Permit	50		100														$ 133
6.1.3.6	Building Permit	50		100														$ 133
6.1.3.7	Tree Removal Permit	50		100														$ 133
6.1.3.8	Certificate of Occupancy and Compliance	50		100														$ 133
6.1.3.9	Noise Control Permit	50		100														$ 133
6.1.3.10	Temporary Construction Impacts Approval	50		100														$ 133
6.1.3.11	ROW Construction Permit for Bernard Street Extension	50		100														$ 133
6.1.4	Maintenance Building Code Modification Request	50		100														$ 133
6.1.5	Roadway and Traffic Evaluation																	
6.1.5.1	Traffic Study	50		25														$ 54
6.1.5.2	Pavement Condition Assessment	100		25														$ 82
6.1.5.3	Field Survey of Undeveloped Bernard Street ROW	250	250	50														$ 453
6.2	Travis County																	
6.2.1	General Development Permit Application for Pump Station Site	25		10														$ 25
6.2.2	Notice of Proposed Installation in Travis County ROW Permit Application	25		10														$ 25
6.2.3	Roadway and Traffic Evaluation																	
6.2.3.1	Traffic Study			25														$ 27
6.2.3.2	Pavement Condition Assessment			25														$ 27
6.2.4	Evaluate Temporary Construction Impacts and Activities	25		25														$ 40
6.2.5	Tree Protection Plan and Assessment for Pump Station Site	25		25														$ 40
6.2.6	Use of ROW along TER and Lime Creek Road	25		25														$ 40
6.3	Pedernales Electric Cooperative	500	200	100														$ 590
6.4	U.S. Army Corps of Engineers			50														$ 53
6.5	City of Austin	150	200	300														$ 608
6.6	Lower Colorado River Authority	80		50														$ 97
6.7	Balcones Canyonlands Conservation Plan Participation	50		25														$ 54
6.8	Texas Commission on Environmental Quality	150	25	50														$ 162
6.9	Texas Water Development Board	100	25	50														$ 134
6.1	City of Jonestown	100	50	50														$ 160
6.11	Trails End Road Homeowners Association	150	50	50														$ 188
6.12	Texas Department of Licensing and Regulations			15														$ 16
6.13	Jonestown Water Supply Corporation	50	50	25														$ 107
	Total Expenses Effort	**$ 8,830**	**$ 16,889**	**$ 13,141**	**$ 16,065**	**$ 14,280**	**$ -**	**$ 20,139**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 89,374**

Brushy Creek Regional Utility Authority (BCRUA)
Phase 2 Deep Water Intake
10/29/2018
Detailed Cost Breakdown

Task	Subconsultants	Schnabel	KFA	Jacobs / CH2M	NHC	JHE	University of Idaho	FNI (JV Partner)										Total Sub Effort
1.0	**Project Management, Coordination and Meetings**																	
1.1	Project Administration	60,384	64,500	47,655		13,600		491,768										$ 687,214
1.2	Project Meetings																	
1.2.1	Kickoff Meeting (1)	11,080	2,148					7,342										$ 21,232
1.2.2	Monthly Progress Meetings (30)	48,887	55,935	5,000		2,700		142,120										$ 260,269
1.2.3	BCRUA Board Updates (4)	2,940																$ 3,087
2.0	**60 Percent Design Submittal**																	
2.1	Construction Drawings to 60 Percent Level	181,176	148,610	27,123		9,000		1,005,030										$ 1,389,235
2.2	Specifications to 60 Percent Level	50,348	23,360	6,152				94,734										$ 178,587
2.3	OPCC to 60 Percent Level	25,572	8,940	177,394				30,335										$ 252,837
2.4	60 Percent Submittal and Comment Recovery	22,532	4,960					64,280										$ 93,147
3.0	**90 Percent Design Submittal**																	
3.1	Construction Drawings to 90 Percent Level	124,996	85,425	14,032				667,535										$ 903,211
3.2	Specifications to 90 Percent Level	30,280	15,860	12,006				139,275										$ 200,329
3.3	OPCC to 90 Percent Level	21,332	5,920	103,847				28,897										$ 166,551
3.4	90 Percent Submittal and Comment Recovery	21,352	4,960					62,480										$ 90,108
4.0	**Final Bidding Documents**																	
4.1	Final Drawings and Specifications	52,576	17,560	17,842		9,000		444,822										$ 546,649
4.2	Final OPCC	17,796	3,450	84,263				19,221										$ 130,006
5.0	**Special Services**																	
5.1	Intake and Maintenance Building																	
5.1.1	Water Quality Monitoring							215,899										$ 215,899
5.1.2	Zebra Mussel Control Bench-scale Testing Evaluation							60,981										$ 60,981
5.1.3	Flow Control Devices Evaluation							27,060										$ 27,060
5.1.4	Architectural Renderings of the MB & Intake (60 and 90 Percent)							27,660										$ 27,660
5.1.5	Roadway Design Improvements							4,080										$ 4,080
5.2	Pump Station																	
5.2.1	Pressure Transient Analysis (60 and 90 Percent)				50,000		19,000											$ 72,450
5.2.2	CFD Design Validation (60 and 90 Percent)				62,000													$ 65,100
5.2.3	Pump Selection Analysis																	$ -
5.2.4	Well Shaft Casing Alignment Analysis							7,140										$ 7,140
5.2.5	Power Factor Evaluation							31,098										$ 31,098
5.2.6	Architectural Renderings of the Pump Station (60 and 90 Percent)							18,800										$ 18,800
5.2.7	Spoils Disposal Plan	6,540																$ 6,867
5.3	Geotechnical and Underground Engineering																	
5.3.1	Geotechnical Investigation																	
5.3.1.1	Phase 2 Subsurface Investigation	849,589																$ 892,069
5.3.1.2	Phase 2 Geotechnical Data Report	106,844						29,520										$ 141,707
5.3.2	Geotechnical and Tunneling Engineering Analyses	799,412						56,360										$ 895,743
5.3.3	Construction Impact Mitigation Measures	63,964						36,920										$ 104,083
5.3.4	Geotechnical Engineering Report	35,428						36,600										$ 73,800
5.3.5	Geotechnical Baseline Report	94,440						25,000										$ 124,162
5.4	Risk Management Planning																	
5.4.1	Risk Management Plan (Initial)	14,340	2,320					20,560										$ 38,053
5.4.2	Risk Management Updates (8)	33,478	9,200					31,320										$ 76,132
5.5	Construction Contract Packaging Evaluation	1,932						15,160										$ 17,189
5.6	Constructability Reviews																	
5.6.1	Engineer Constructability Review	29,672	8,828			20,400		101,100										$ 162,945
5.6.2	Contractor Constructability Reviews	32,135	6,280					54,542										$ 94,878
5.7	Commissioning and Start-up Plan					66,973		34,922										$ 105,244
5.8	Site Visits																	
5.8.1	Pump Supplier Site Visits (2)							15,330										$ 15,330
5.8.2	SNWA Site Visit (1)							8,793										$ 8,793
5.9	Pumping Units Evaluated Bid																	
5.9.1	Develop Procurement Documents							10,300										$ 10,300
5.9.2	Evaluate Bids							8,760										$ 8,760
6.0	**Agency and Stakeholder Coordination**																	
6.1	Village of Volente																	
6.1.1	Meetings																	
6.1.1.1	Town-hall Presentations (2)							2,313										$ 2,313
6.1.1.2	Quarterly Meetings (10)							10,745										$ 10,745
6.1.1.3	Meetings with Village Staff, Council, Commissions (12)							51,860										$ 51,860
6.1.2	Coordination and Communication	22,225																$ 23,337
6.1.3	Permitting																	
6.1.3.1	Concept Plan																	$ -
6.1.3.2	Zoning Change Approval																	$ -
6.1.3.3	Site Plan Approval																	$ -
6.1.3.4	Non-point Source Pollution Control Permit																	$ -
6.1.3.5	Site Development Permit																	$ -
6.1.3.6	Building Permit																	$ -
6.1.3.7	Tree Removal Permit																	$ -
6.1.3.8	Certificate of Occupancy and Compliance																	$ -
6.1.3.9	Noise Control Permit																	$ -
6.1.3.10	Temporary Construction Impacts Approval																	$ -
6.1.3.11	ROW Construction Permit for Bernard Street Extension																	$ -
6.1.4	Maintenance Building Code Modification Request							25,300										$ 25,300
6.1.5	Roadway and Traffic Evaluation																	
6.1.5.1	Traffic Study							23,667										$ 23,667
6.1.5.2	Pavement Condition Assessment	5,988						11,759										$ 18,047
6.1.5.3	Field Survey of Undeveloped Bernard Street ROW							2,880										$ 2,880
6.2	Travis County																	
6.2.1	General Development Permit Application for Pump Station Site		4,160															$ 4,368
6.2.2	Notice of Proposed Installation in Travis County ROW Permit Application		7,440					5,000										$ 12,812
6.2.3	Roadway and Traffic Evaluation																	
6.2.3.1	Traffic Study							23,667										$ 23,667
6.2.3.2	Pavement Condition Assessment							11,759										$ 11,759
6.2.4	Evaluate Temporary Construction Impacts and Activities		4,160					22,864										$ 27,232
6.2.5	Tree Protection Plan and Assessment for Pump Station Site		4,160															$ 4,368
6.2.6	Use of ROW along TER and Lime Creek Road		4,160					6,000										$ 10,368
6.3	Pedernales Electric Cooperative		4,188					41,160										$ 45,558
6.4	U.S. Army Corps of Engineers		2,520					27,800										$ 30,446
6.5	City of Austin		4,160					14,570										$ 18,938
6.6	Lower Colorado River Authority		8,348					1,720										$ 10,486
6.7	Balcones Canyonlands Conservation Plan Participation																	$ -
6.8	Texas Commission on Environmental Quality							5,720										$ 5,720
6.9	Texas Water Development Board							6,120										$ 6,120
6.1	City of Jonestown		8,375															$ 8,794
6.11	Trails End Road Homeowners Association		26,164															$ 27,473
6.12	Texas Department of Licensing and Regulations							7,320										$ 7,320
6.13	Jonestown Water Supply Corporation		4,160															$ 4,368
	Total Subconsultants Effort	**$ 2,905,600**	**$ 577,764**	**$ 520,080**	**$ 117,600**	**$ 127,757**	**$ 19,950**	**$ 4,377,968**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 8,646,731**

Appendix 1 to Exhibit D (FNI Breakdown)

Brushy Creek Regional Utility Authority (BCRUA)
Phase 2 Deep Water Intake
10/26/2018
Detailed Cost Breakdown

Project Fee Summary	
Basic Services (Tasks 1.0 - 5.0)	$3,197,838.00
Special Services (Tasks 6.0 & 7.0)	$1,180,127.80
Total Project	$4,377,965.80

Basic and Special Services

Task	Employee / Position / Tasks ↓ | Current Hourly Bill Rate →	Drew Hardin Senior Adv $255	Rusty Gibson Intake Design Lead $295	James Johnson Intake PM $215	Erin Flanagan MB and RWPS PM $250	James Naylor MP Design Lead $250	Dave Buzan WQ Sampleing Lead $295	Mike Shiflett Geotech $295	Kirk Millican Arch Lead $295	Pete Bartels Structural Lead $215	Michael Brown Transporation Lead $295	Kim Patak Stormwater Lead $250	Nick Prisco HVAC Lead $185	Scott Vaughn Plumbing Lead $215	Jeff Hensley Electrical/Instrumentation Lead $295	Tom Dixon Environmental Lead $215	Richard and Jerry Construction Review $206	Multiple Project QC $295	Multiple CAD III $185	Multiple CAD II $160	Multiple CAD I $135	Multiple Design Eng I $145	Multiple Design Eng II $163	Multiple Design Eng III $185	Multiple Design Eng IV $215	Multiple Admin/Support $120	Mike and Claudio BIM/Visuals $185	Nick Landes QC I $220	Multiple QC 2 EV $250	Andrew Labay WQ Sampling PM $250	Tanner Griffith Construction III $164	Total Hours	Total Labor Effort	Total Expense Effort	Total Sub Effort	Total Effort
1.0	**Project Management, Coordination and Meetings**																																			
1.1	Project Administration	520	60	60	520	60	0	30	60	60	44	0	60	60	80	20	0	64	0	0	0	0	0	0	0	0	32	0	100	60	0	1,890	$ 477,330	$ 14,438	$ -	$ 491,768
1.2	Project Meetings																																			
1.2.1	Kickoff Meeting (1)	4	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	$ 6,470	$ 872	$ -	$ 7,342
1.2.2	Monthly Progress Meetings (30)	120	100	0	100	0	0	0	60	60	0	0	0	0	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	500	$ 133,400	$ 8,720	$ -	$ 142,120
1.2.3	BCRUA Board Updates (4)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ -	$ -
2.0	**60 Percent Design Submittal (Phase 1D and Phase 2)**																																			
2.1	Construction Drawings to 60 Percent Leve	24	124	312	40	54	0	0	32	540	110	14	40	8	40	0	0	56	760	460	135	396	428	738	600	0	60	8	80	0	0	5,059	$ 990,209	$ -	$ 14,821	$ 1,005,030
2.2	Specifications to 60 Percent Level	0	36	40	8	8	0	0	16	24	0	0	4	0	24	0	0	92	42	0	0	0	8	32	8	8	0	0	36	0	0	386	$ 94,734	$ -	$ -	$ 94,734
2.3	OPCC to 60 Percent Level	0	0	24	12	2	0	0	8	24	2	0	2	0	0	0	0	0	8	0	0	0	25	32	8	0	0	0	0	0	0	147	$ 30,335	$ -	$ -	$ 30,335
2.4	60 Percent Submittal and Comment Recovery	12	8	24	40	16	0	0	8	24	4	0	2	0	0	0	0	8	32	0	0	0	10	54	22	0	0	0	24	0	0	288	$ 64,280	$ -	$ -	$ 64,280
3.0	**90 Percent Design Submittal (Phase 1D and Phase 2)**																																			
3.1	Construction Drawings to 90 Percent Level	24	100	208	40	40	0	0	20	250	35	8	24	8	60	0	0	32	404	250	197	240	308	703	263	0	40	8	100	0	0	3,362	$ 652,714	$ -	$ 14,821	$ 667,535
3.2	Specifications to 90 Percent Level	0	36	60	24	24	0	0	16	24	4	0	36	0	24	0	0	92	42	0	0	0	40	77	48	8	0	0	48	0	0	603	$ 139,275	$ -	$ -	$ 139,275
3.3	OPCC to 90 Percent Level	0	0	16	12	2	0	0	9	16	2	0	1	0	0	0	0	0	8	0	0	0	19	34	8	0	0	0	10	0	0	137	$ 28,897	$ -	$ -	$ 28,897
3.4	90 Percent Submittal and Comment Recovery	12	8	24	40	16	0	0	8	24	4	0	2	0	0	0	0	8	30	0	0	0	10	54	20	0	0	0	20	0	0	280	$ 62,480	$ -	$ -	$ 62,480
4.0	**Final Bidding Documents (Phase 1D and Phase 2)**																																			
4.1	Final Drawings and Specifications	30	92	252	60	60	0	0	6	80	14	2	16	8	40	0	0	20	372	71	166	142	179	458	91	8	0	8	82	0	0	2,257	$ 444,822	$ -	$ -	$ 444,822
4.2	Final OPCC	0	2	16	8	2	0	0	0	8	1	0	1	0	5	0	0	0	0	0	0	0	7	30	5	0	0	0	5	0	0	90	$ 19,221	$ -	$ -	$ 19,221
5.0	**Special Services**																																			
5.1	Intake and Maintenance Building																																			
5.1.1	Water Quality Monitoring																																			
5.1.1.1	TCEQ Monitoring for a New Intake	0	0	0	0	8	96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	232	0	8	0	104	0	0	0	96	0	544	$ 101,920	$ 17,556	$ -	$ 119,476
5.1.1.2	TCEQ Cryptosporidium Monitoring	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ -	$ -
5.1.1.3	Intake Design Monitoring	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ -	$ -
5.1.1.4	Third-party Laboratory Testing	0	0	0	8	8	48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	16	0	0	4	0	0	0	40	0	140	$ 33,568	$ 40,891	$ -	$ 74,459
5.1.1.5	Water Quality Monitoring TM	0	0	0	16	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	68	0	0	0	0	4	0	0	0	112	$ 21,964	$ -	$ -	$ 21,964
5.1.2	Zebra Mussel Control Bench-scale Testing Evaluation	8	0	0	40	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	0	0	0	4	0	0	0	282	$ 60,020	$ 961	$ -	$ 60,981
5.1.3	Flow Control Devices Evaluation	8	16	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	124	$ 27,060	$ -	$ -	$ 27,060
5.1.4	Architectural Renderings of the MB & Intake (60 and 90 Percent)	0	4	16	16	0	0	0	0	0	0	0	0	0	0	0	0	0	16	8	0	0	0	0	0	0	80	0	0	0	0	140	$ 27,660	$ -	$ -	$ 27,660
5.1.5	Roadway Design Improvements	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	$ 4,080	$ -	$ -	$ 4,080
5.2	Pump Station																																			
5.2.1	Pressure Transient Analysis (60 and 90 Percent)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ -	$ -
5.2.2	CFD Design Validation (60 and 90 Percent)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ -	$ -
5.2.3	Pump Selection Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ -	$ -
5.2.4	Well Shaft Casing Alignment Analysis	4	4	4	0	0	0	0	0	8	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	28	$ 7,140	$ -	$ -	$ 7,140
5.2.5	Power Factor Evaluation	4	4	4	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	16	0	16	80	0	0	0	0	15	0	0	155	$ 31,098	$ -	$ -	$ 31,098
5.2.6	Architectural Renderings of the Pump Station (60 and 90 Percent)	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0	0	0	0	96	$ 18,800	$ -	$ -	$ 18,800
5.2.7	Spoils Disposal Plan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ -	$ -
5.3	Geotechnical and Underground Engineering																																			
5.3.1	Geotechnical Investigation																																			
5.3.1.1	Phase 2 Subsurface Investigation																																			
5.3.1.2	Phase 2 Geotechnical Data Report	8	8	8	0	0	0	40	0	32	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	112	$ 29,520	$ -	$ -	$ 29,520
5.3.2	Geotechnical and Tunneling Engineering Analyses	8	24	56	0	0	0	80	0	32	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	216	$ 56,360	$ -	$ -	$ 56,360
5.3.3	Construction Impact Mitigation Measures	8	4	4	0	0	0	72	0	32	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	136	$ 36,920	$ -	$ -	$ 36,920
5.3.4	Geotechnical Engineering Report	8	8	8	0	0	0	64	0	32	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	136	$ 36,600	$ -	$ -	$ 36,600
5.3.5	Geotechnical Baseline Report	8	8	8	0	0	0	64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	88	$ 25,000	$ -	$ -	$ 25,000
5.4	Risk Management Planning																																			
5.4.1	Risk Management Plan (Initial)	24	0	8	32	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	80	$ 20,560	$ -	$ -	$ 20,560
5.4.2	Risk Management Updates (8)	32	0	8	48	0	0	0	0	0	0	0	0	0	0	0	0	32	0	0	0	0	0	0	0	0	0	0	0	0	0	120	$ 31,320	$ -	$ -	$ 31,320
5.5	Construction Contract Packaging Evaluation	16	8	0	16	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	56	$ 15,160	$ -	$ -	$ 15,160
5.6	Constructability Reviews																																			
5.6.1	Engineer Constructability Review	20	24	0	40	0	0	0	0	0	0	0	0	0	0	0	280	72	0	0	0	0	0	0	0	0	0	0	0	0	0	436	$ 101,100	$ -	$ -	$ 101,100
5.6.2	Contractor Constructability Reviews	20	48	12	40	0	0	0	0	10	0	0	0	0	10	0	72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	212	$ 51,772	$ 2,770	$ -	$ 54,542
5.7	Commissioning and Start-up Plan	24	24	16	0	0	0	0	0	0	0	0	0	0	0	0	72	8	0	0	0	0	0	0	0	0	0	0	0	0	0	144	$ 33,832	$ 1,090	$ -	$ 34,922
5.8	Site Visits																																			
5.8.1	Pump Supplier Site Visits (2)	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	$ 11,800	$ 3,530	$ -	$ 15,330
5.8.2	SNWA Site Visit (1)	0	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	$ 7,080	$ 1,713	$ -	$ 8,793
5.9	Pumping Units Evaluated Bid																																			
5.9.1	Develop Procurement Documents	8	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	36	$ 10,300	$ -	$ -	$ 10,300
5.9.2	Evaluate Bids	8	16	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32	$ 8,760	$ -	$ -	$ 8,760
6.0	**Agency and Stakeholder Coordination**																																			
6.1	Village of Volente																																			
6.1.1	Meetings																																			
6.1.1.1	Town-hall Presentations (2)	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	$ 2,040	$ 273	$ -	$ 2,313
6.1.1.2	Quarterly Meetings (10)	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	$ 10,200	$ 545	$ -	$ 10,745
6.1.1.3	Meetings with Village Staff, Council, Commissions (12)	48	0	0	0	30	0	0	60	0	24	0	0	0	0	8	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	186	$ 49,680	$ 2,180	$ -	$ 51,860
6.1.2	Coordination and Communication	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ -	$ -
6.1.3	Permitting																																			
6.1.3.1	Concept Plan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ -	$ -
6.1.3.2	Zoning Change Approval	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ -	$ -
6.1.3.3	Site Plan Approval	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ -	$ -
6.1.3.4	Non-point Source Pollution Control Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ -	$ -
6.1.3.5	Site Development Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ -	$ -
6.1.3.6	Building Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ -	$ -
6.1.3.7	Tree Removal Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ -	$ -
6.1.3.8	Certificate of Occupancy and Compliance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ -	$ -
6.1.3.9	Noise Control Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ -	$ -
6.1.3.10	Temporary Construction Impacts Approval	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ -	$ -
6.1.3.11	ROW Construction Permit for Bernard Street Extension	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ -	$ -
6.1.4	Maintenance Building Code Modification Request	0	0	0	24	24	0	0	20	0	0	0	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	108	$ 25,300	$ -	$ -	$ 25,300
6.1.5	Roadway and Traffic Evaluation																																			
6.1.5.1	Traffic Study	8	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	12	0	0	0	44	44	0	0	0	0	0	0	0	8	126	$ 23,394	$ 273	$ -	$ 23,667
6.1.5.2	Pavement Condition Assessment	8	0	0	0	0	0	16	0	0	2	0	0	0	0	0	0	4	0	0	0	8	8	0	0	0	0	0	0	0	4	50	$ 11,650	$ 109	$ -	$ 11,759
6.1.5.3	Field Survey of Undeveloped Bernard Street ROW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	16	$ 2,880	$ -	$ -	$ 2,880
6.2	Travis County																																			
6.2.1	General Development Permit Application for Pump Station Site	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ -	$ -
6.2.2	Notice of Proposed Installation in Travis County ROW Permit Application	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	24	$ 5,000	$ -	$ -	$ 5,000
6.2.3	Roadway and Traffic Evaluation																																			
6.2.3.1	Traffic Study	8	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	12	0	0	0	44	44	0	0	0	0	0	0	0	8	126	$ 23,394	$ 273	$ -	$ 23,667
6.2.3.2	Pavement Condition Assessment	8	0	0	0	0	0	16	0	0	2	0	0	0	0	0	0	4	0	0	0	8	8	0	0	0	0	0	0	0	4	50	$ 11,650	$ 109	$ -	$ 11,759
6.2.4	Evaluate Temporary Construction Impacts and Activities	16	12	12	12	0	0	0	0	0	0	0	0	0	0	0	24	16	0	0	0	0	0	0	0	0	0	0	0	0	0	92	$ 22,864	$ -	$ -	$ 22,864
6.2.5	Tree Protection Plan and Assessment for Pump Station Site	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ -	$ -
6.2.6	Use of ROW along TER and Lime Creek Road	8	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	28	$ 6,000	$ -	$ -	$ 6,000
6.3	Pedernales Electric Cooperative	8	0	0	8	0	0	0	0	0	0	0	0	0	120	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	144	$ 41,160	$ -	$ -	$ 41,160
6.4	U.S. Army Corps of Engineers	0	8	0	0	0	0	0	0	0	0	0	0	0	0	40	0	16	0	0	0	48	0	0	24	0	0	0	0	0	0	136	$ 27,800	$ -	$ -	$ 27,800
6.5	City of Austin	30	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	24	0	0	12	0	0	0	0	0	0	70	$ 14,570	$ -	$ -	$ 14,570
6.6	Lower Colorado River Authority	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	$ 1,720	$ -	$ -	$ 1,720
6.7	Balcones Canyonlands Conservation Plan Participation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ -	$ -
6.8	Texas Commission on Environmental Quality	0	0	8	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	$ 5,720	$ -	$ -	$ 5,720
6.9	Texas Water Development Board	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	24	$ 6,120	$ -	$ -	$ 6,120
6.10	City of Jonestown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ -	$ -
6.11	Trails End Road Homeowners Association	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ -	$ -
6.12	Texas Department of Licensing and Regulations	0	0	0	8	0	0	0	8	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	32	$ 7,320	$ -	$ -	$ 7,320
6.13	Jonestown Water Supply Corporation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ -	$ -
																															0	$ -	$ -	$ -	$ -
	Total Basic Services Hours	**1,184**	**876**	**1,268**	**1,258**	**456**	**144**	**382**	**331**	**1,280**	**268**	**24**	**188**	**84**	**479**	**96**	**448**	**672**	**1,810**	**789**	**514**	**1,210**	**1,238**	**2,492**	**1,133**	**132**	**292**	**32**	**520**	**196**	**24**	**19,820**	**$ 4,252,023**	**$ 96,301**	**$ 29,642**	**$ 4,377,966**

Task	Expenses	Miles	Meals	Printing	Hotel	Travel	Labs	BIM 360	Equip/Supplies	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Total Exp Effort
	Expense Cost	$ 0.545	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.00	
1.0	**Project Management, Coordination and Meetings**																																
1.1	Project Administration	0	0		0	0	0	13750	0																								$ 14,438
1.2	Project Meetings																																$ -
1.2.1	Kickoff Meeting (1)	1,600	0		0	0	0	0	0																								$ 872
1.2.2	Monthly Progress Meetings (30)	16,000	0		0	0	0	0	0																								$ 8,720
1.2.3	BCRUA Board Updates (4)	0	0		0	0	0	0	0																								$ -
2.0	**60 Percent Design Submittal (Phase 1D and Phase 2)**																																$ -
2.1	Construction Drawings to 60 Percent Leve	0	0		0	0	0	0	0																								$ -
2.2	Specifications to 60 Percent Level	0	0		0	0	0	0	0																								$ -
2.3	OPCC to 60 Percent Level	0	0		0	0	0	0	0																								$ -
2.4	60 Percent Submittal and Comment Recovery	0	0		0	0	0	0	0																								$ -
3.0	**90 Percent Design Submittal (Phase 1D and Phase 2)**																																$ -
3.1	Construction Drawings to 90 Percent Level	0	0		0	0	0	0	0																								$ -
3.2	Specifications to 90 Percent Level	0	0		0	0	0	0	0																								$ -
3.3	OPCC to 90 Percent Level	0	0		0	0	0	0	0																								$ -
3.4	90 Percent Submittal and Comment Recovery	0	0		0	0	0	0	0																								$ -
4.0	**Final Bidding Documents (Phase 1D and Phase 2)**																																$ -
4.1	Final Drawings and Specifications	0	0		0	0	0	0	0																								$ -
4.2	Final OPCC	0	0		0	0	0	0	0																								$ -
5.0	**Special Services**																																$ -
5.1	Intake and Maintenance Building																																$ -
5.1.1	Water Quality Monitoring																																$ -
5.1.1.1	TCEQ Monitoring for a New Intake	4,200	840		0	0	0	0	13700																								$ 17,556
5.1.1.2	TCEQ Cryptosporidium Monitoring	0	0		0	0	0	0	0																								$ -
5.1.1.3	Intake Design Monitoring	0	0		0	0	0	0	0																								$ -
5.1.1.4	Third-party Laboratory Testing	0	0		0	0	38,944	0	0																								$ 40,891
5.1.1.5	Water Quality Monitoring TM	0	0		0	0	0	0	0																								$ -
5.1.2	Zebra Mussel Control Bench-scale Testing Evaluation	800	0		0	0	0	0	500																								$ 961
5.1.3	Flow Control Devices Evaluation	0	0		0	0	0	0	0																								$ -
5.1.4	Architectural Renderings of the MB & Intake (60 and 90 Percent)	0	0		0	0	0	0	0																								$ -
5.1.5	Roadway Design Improvements	0	0		0	0	0	0	0																								$ -
5.2	Pump Station																																$ -
5.2.1	Pressure Transient Analysis (60 and 90 Percent)	0	0		0	0	0	0	0																								$ -
5.2.2	CFD Design Validation (60 and 90 Percent)	0	0		0	0	0	0	0																								$ -
5.2.3	Pump Selection Analysis	0	0		0	0	0	0	0																								$ -
5.2.4	Well Shaft Casing Alignment Analysis	0	0		0	0	0	0	0																								$ -
5.2.5	Power Factor Evaluation	0	0		0	0	0	0	0																								$ -
5.2.6	Architectural Renderings of the Pump Station (60 and 90 Percent)	0	0		0	0	0	0	0																								$ -
5.2.7	Spoils Disposal Plan	0	0		0	0	0	0	0																								$ -
5.3	Geotechnical and Underground Engineering																																$ -
5.3.1	Geotechnical Investigation																																$ -
5.3.1.1	Phase 2 Subsurface Investigation																																$ -
5.3.1.2	Phase 2 Geotechnical Data Report	0	0		0	0	0	0	0																								$ -
5.3.2	Geotechnical and Tunneling Engineering Analyses	0	0		0	0	0	0	0																								$ -
5.3.3	Construction Impact Mitigation Measures	0	0		0	0	0	0	0																								$ -
5.3.4	Geotechnical Engineering Report	0	0		0	0	0	0	0																								$ -
5.3.5	Geotechnical Baseline Report	0	0		0	0	0	0	0																								$ -
5.4	Risk Management Planning																																$ -
5.4.1	Risk Management Plan (Initial)	0	0		0	0	0	0	0																								$ -
5.4.2	Risk Management Updates (8)	0	0		0	0	0	0	0																								$ -
5.5	Construction Contract Packaging Evaluation	0	0		0	0	0	0	0																								$ -
5.6	Constructability Reviews																																$ -
5.6.1	Engineer Constructability Review	0	0		0	0	0	0	0																								$ -
5.6.2	Contractor Constructability Reviews	2,000	0		1,600	0	0	0	0																								$ 2,770
5.7	Commissioning and Start-up Plan	2,000	0		0	0	0	0	0																								$ 1,090
5.8	Site Visits																																$ -
5.8.1	Pump Supplier Site Visits (2)	120	250		1,250	1,800	0	0	0																								$ 3,530
5.8.2	SNWA Site Visit (1)	60	100		600	900	0	0	0																								$ 1,713
5.9	Pumping Units Evaluated Bid																																$ -
5.9.1	Develop Procurement Documents	0	0		0	0	0	0	0																								$ -
5.9.2	Evaluate Bids	0	0		0	0	0	0	0																								$ -
6.0	**Agency and Stakeholder Coordination**																																$ -
6.1	Village of Volente																																$ -
6.1.1	Meetings																																$ -
6.1.1.1	Town-hall Presentations (2)	500	0		0	0	0	0	0																								$ 273
6.1.1.2	Quarterly Meetings (10)	1,000	0		0	0	0	0	0																								$ 545
6.1.1.3	Meetings with Village Staff, Council, Commissions (12)	4,000	0		0	0	0	0	0																								$ 2,180
6.1.2	Coordination and Communication	0	0		0	0	0	0	0																								$ -
6.1.3	Permitting																																$ -
6.1.3.1	Concept Plan	0	0		0	0	0	0	0																								$ -
6.1.3.2	Zoning Change Approval	0	0		0	0	0	0	0																								$ -
6.1.3.3	Site Plan Approval	0	0		0	0	0	0	0																								$ -
6.1.3.4	Non-point Source Pollution Control Permit	0	0		0	0	0	0	0																								$ -
6.1.3.5	Site Development Permit	0	0		0	0	0	0	0																								$ -
6.1.3.6	Building Permit	0	0		0	0	0	0	0																								$ -
6.1.3.7	Tree Removal Permit	0	0		0	0	0	0	0																								$ -
6.1.3.8	Certificate of Occupancy and Compliance	0	0		0	0	0	0	0																								$ -
6.1.3.9	Noise Control Permit	0	0		0	0	0	0	0																								$ -
6.1.3.10	Temporary Construction Impacts Approval	0	0		0	0	0	0	0																								$ -
6.1.3.11	ROW Construction Permit for Bernard Street Extension	0	0		0	0	0	0	0																								$ -
6.1.4	Maintenance Building Code Modification Request	0	0		0	0	0	0	0																								$ -
6.1.5	Roadway and Traffic Evaluation																																$ -
6.1.5.1	Traffic Study	500	0		0	0	0	0	0																								$ 273
6.1.5.2	Pavement Condition Assessment	200	0		0	0	0	0	0																								$ 109
6.1.5.3	Field Survey of Undeveloped Bernard Street ROW	0	0		0	0	0	0	0																								$ -
6.2	Travis County																																$ -
6.2.1	General Development Permit Application for Pump Station Site	0	0		0	0	0	0	0																								$ -
6.2.2	Notice of Proposed Installation in Travis County ROW Permit Application	0	0		0	0	0	0	0																								$ -
6.2.3	Roadway and Traffic Evaluation																																$ -
6.2.3.1	Traffic Study	500	0		0	0	0	0	0																								$ 273
6.2.3.2	Pavement Condition Assessment	200	0		0	0	0	0	0																								$ 109
6.2.4	Evaluate Temporary Construction Impacts and Activities	0	0		0	0	0	0	0																								$ -
6.2.5	Tree Protection Plan and Assessment for Pump Station Site	0	0		0	0	0	0	0																								$ -
6.2.6	Use of ROW along TER and Lime Creek Road	0	0		0	0	0	0	0																								$ -
6.3	Pedernales Electric Cooperative	0	0		0	0	0	0	0																								$ -
6.4	U.S. Army Corps of Engineers	0	0		0	0	0	0	0																								$ -
6.5	City of Austin	0	0		0	0	0	0	0																								$ -
6.6	Lower Colorado River Authority	0	0		0	0	0	0	0																								$ -
6.7	Balcones Canyonlands Conservation Plan Participation	0	0		0	0	0	0	0																								$ -
6.8	Texas Commission on Environmental Quality	0	0		0	0	0	0	0																								$ -
6.9	Texas Water Development Board	0	0		0	0	0	0	0																								$ -
6.1	City of Jonestown	0	0		0	0	0	0	0																								$ -
6.11	Trails End Road Homeowners Association	0	0		0	0	0	0	0																								$ -
6.12	Texas Department of Licensing and Regulations	0	0		0	0	0	0	0																								$ -
6.13	Jonestown Water Supply Corporation	0	0		0	0	0	0	0																								$ -
	Total Expenses Effort	**$ 18,356**	**$ 1,250**	**$ -**	**$ 3,623**	**$ 2,835**	**$ 40,891**	**$ 14,438**	**$ 14,910**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 96,301**

Task	Subconsultants	Intera	Total Sub Effort
1.0	**Project Management, Coordination and Meetings**		
1.1	Project Administration		$ -
1.2	Project Meetings		
1.2.1	Kickoff Meeting (1)		$ -
1.2.2	Monthly Progress Meetings (30)		$ -
1.2.3	BCRUA Board Updates (4)		$ -
2.0	**60 Percent Design Submittal (Phase 1D and Phase 2)**		
2.1	Construction Drawings to 60 Percent Leve	14,115	$ 14,821
2.2	Specifications to 60 Percent Level		$ -
2.3	OPCC to 60 Percent Level		$ -
2.4	60 Percent Submittal and Comment Recovery		$ -
3.0	**90 Percent Design Submittal (Phase 1D and Phase 2)**		
3.1	Construction Drawings to 90 Percent Level	14,115	$ 14,821
3.2	Specifications to 90 Percent Level		$ -
3.3	OPCC to 90 Percent Level		$ -
3.4	90 Percent Submittal and Comment Recovery		$ -
4.0	**Final Bidding Documents (Phase 1D and Phase 2)**		
4.1	Final Drawings and Specifications		$ -
4.2	Final OPCC		$ -
5.0	**Special Services**		
5.1	Intake and Maintenance Building		
5.1.1	Water Quality Monitoring		
5.1.1.1	TCEQ Monitoring for a New Intake		$ -
5.1.1.2	TCEQ Cryptosporidium Monitoring		$ -
5.1.1.3	Intake Design Monitoring		$ -
5.1.1.4	Third-party Laboratory Testing		$ -
5.1.1.5	Water Quality Monitoring TM		$ -
5.1.2	Zebra Mussel Control Bench-scale Testing Evaluation		$ -
5.1.3	Flow Control Devices Evaluation		$ -
5.1.4	Architectural Renderings of the MB & Intake (60 and 90 Percent)		$ -
5.1.5	Roadway Design Improvements		$ -
5.2	Pump Station		
5.2.1	Pressure Transient Analysis (60 and 90 Percent)		$ -
5.2.2	CFD Design Validation (60 and 90 Percent)		$ -
5.2.3	Pump Selection Analysis		$ -
5.2.4	Well Shaft Casing Alignment Analysis		$ -
5.2.5	Power Factor Evaluation		$ -
5.2.6	Architectural Renderings of the Pump Station (60 and 90 Percent)		$ -
5.2.7	Spoils Disposal Plan		$ -
5.3	Geotechnical and Underground Engineering		
5.3.1	Geotechnical Investigation		
5.3.1.1	Phase 2 Subsurface Investigation		
5.3.1.2	Phase 2 Geotechnical Data Report		$ -
5.3.2	Geotechnical and Tunneling Engineering Analyses		$ -
5.3.3	Construction Impact Mitigation Measures		$ -
5.3.4	Geotechnical Engineering Report		$ -
5.3.5	Geotechnical Baseline Report		$ -
5.4	Risk Management Planning		
5.4.1	Risk Management Plan (Initial)		$ -
5.4.2	Risk Management Updates (8)		$ -
5.5	Construction Contract Packaging Evaluation		$ -
5.6	Constructability Reviews		
5.6.1	Engineer Constructability Review		$ -
5.6.2	Contractor Constructability Reviews		$ -
5.7	Commissioning and Start-up Plan		$ -
5.8	Site Visits		
5.8.1	Pump Supplier Site Visits (2)		$ -
5.8.2	SNWA Site Visit (1)		$ -
5.9	Pumping Units Evaluated Bid		
5.9.1	Develop Procurement Documents		$ -
5.9.2	Evaluate Bids		$ -
6.0	**Agency and Stakeholder Coordination**		
6.1	Village of Volente		
6.1.1	Meetings		
6.1.1.1	Town-hall Presentations (2)		$ -
6.1.1.2	Quarterly Meetings (10)		$ -
6.1.1.3	Meetings with Village Staff, Council, Commissions (12)		$ -
6.1.2	Coordination and Communication		$ -
6.1.3	Permitting		
6.1.3.1	Concept Plan		$ -
6.1.3.2	Zoning Change Approval		$ -
6.1.3.3	Site Plan Approval		$ -
6.1.3.4	Non-point Source Pollution Control Permit		$ -
6.1.3.5	Site Development Permit		$ -
6.1.3.6	Building Permit		$ -
6.1.3.7	Tree Removal Permit		$ -
6.1.3.8	Certificate of Occupancy and Compliance		$ -
6.1.3.9	Noise Control Permit		$ -
6.1.3.10	Temporary Construction Impacts Approval		$ -
6.1.3.11	ROW Construction Permit for Bernard Street Extension		$ -
6.1.4	Maintenance Building Code Modification Request		$ -
6.1.5	Roadway and Traffic Evaluation		
6.1.5.1	Traffic Study		$ -
6.1.5.2	Pavement Condition Assessment		$ -
6.1.5.3	Field Survey of Undeveloped Bernard Street ROW		$ -
6.2	Travis County		
6.2.1	General Development Permit Application for Pump Station Site		$ -
6.2.2	Notice of Proposed Installation in Travis County ROW Permit Application		$ -
6.2.3	Roadway and Traffic Evaluation		
6.2.3.1	Traffic Study		$ -
6.2.3.2	Pavement Condition Assessment		$ -
6.2.4	Evaluate Temporary Construction Impacts and Activities		$ -
6.2.5	Tree Protection Plan and Assessment for Pump Station Site		$ -
6.2.6	Use of ROW along TER and Lime Creek Road		$ -
6.3	Pedernales Electric Cooperative		$ -
6.4	U.S. Army Corps of Engineers		$ -
6.5	City of Austin		$ -
6.6	Lower Colorado River Authority		$ -
6.7	Balcones Canyonlands Conservation Plan Participation		$ -
6.8	Texas Commission on Environmental Quality		$ -
6.9	Texas Water Development Board		$ -
6.1	City of Jonestown		$ -
6.11	Trails End Road Homeowners Association		$ -
6.12	Texas Department of Licensing and Regulations		$ -
6.13	Jonestown Water Supply Corporation		$ -
			$ -
	Total Subconsultants Effor	$ 29,642	$ 29,642

Appendix 2 to Exhibit D
Standard Hourly Rates Schedule

Standard Hourly Rates are subject to annual review and adjustment. Hourly rates for services in effect on the date of the Agreement are:

Manager III	$275-295/hour
Manager II	$260-275/hour
Manager I	$250-275/hour
Senior Engineer III	$260-295/hour
Senior Engineer II	$225-260/hour
Senior Engineer I	$200-225/hour
Senior Environmental	$200-225/hour
Environmental II	$150-200/hour
Environmental I	$100-150/hour
Survey Manager	$200-220/hour
Project Engineer III	$160-200/hour
Project Engineer II	$130-160/hour
Project Engineer I	$110-130/hour
Senior Project Surveyor	$130-150/hour
Project Surveyor III	$110-130/hour
Project Surveyor II	$95-110/hour
Project Surveyor I	$85-95/hour
Professional III	$100-110/hour
Professional II	$90-100/hour
Professional I	$80-90/hour
Technician III	$150-190/hour
Technician II	$120-150/hour
Technician I	$80-120/hour
Support Staff III	$100-130/hour
Support Staff II	$85-105/hour
Support Staff I	$65-85/hour
4-Man Crew	$175-185/hour
3-Man Crew	$160-175/hour
2-Man Crew	$135-160/hour
1-Man Crew	$115-135/hour

Appendix 3 to Exhibit D

Brushy Creek Regional Utility Authority (BCRUA)
Phase 2 Deep Water Intake
Task 5.3.1 - Geotechnical Investigation
Detailed Cost Breakout

Task	Firm		**Total**
	WP/FNI JV	Schnabel	
Existing Data and Rock Core Review	$3,976	$69,520	**$73,496**
Land Borings	$41,522	$309,613	**$351,134**
Marine Borings	$42,746	$371,397	**$414,142**
Lab Testing	$8,478	$99,060	**$107,538**
Geotechnical Data Report	$50,603	$106,844	**$157,447**
Totals	$147,325	$956,433	**$1,103,758**

EXHIBIT E

Certificates of Insurance

Attached Behind This Page