

**PROFESSIONAL SERVICES  
SUPPLEMENTAL AGREEMENT # 05  
FOR  
CENTRAL WASTEWATER TREATMENT PLANT EXPANSION**

**STATE OF TEXAS           §  
                                      §  
COUNTY OF TRAVIS     §**

This Supplemental Agreement No.05 \_ to a contract for Professional Services is made by and between the City of Pflugerville, Texas ("City") and Freese and Nichols, Inc. ("Consultant"). City and Consultant may be referred to herein singularly as "Party" or collectively as the "Parties."

WHEREAS, the City and Consultant executed an Agreement for Professional Services ("Agreement") on the 30th day of March, 2017 for the Central Wastewater Treatment Plant project ("Project") in the amount of \$375,806.00; and

WHEREAS, the City and Consultant executed a Supplemental Agreement #01 for Professional Services on the 2 day of March 2018 extending the term, modifying the scope and schedule, and increasing by \$3,442,165 the amount payable under the Agreement for a total of \$3,817,971; and

WHEREAS, the City and Consultant executed a Supplemental Agreement #02 for Professional Services on the 31 day of October 2018 modifying the scope for a \$0 change; and

WHEREAS, the City and Consultant executed a Supplemental Agreement #03 for Professional Services on the 19 day of December 2018 modifying the scope and increasing by \$29,155 the amount payable under the Agreement for a total of \$3,847,126; and

WHEREAS, the City and Consultant executed a Supplemental Agreement #04 for Professional Services on the 24 day of May 2019 modifying the scope and increasing by \$44,485 the amount payable under the Agreement for a total of \$3,891,611; and

WHEREAS, the City and Consultant desire to enter into a Supplemental Agreement #05 for Professional Services for the Project in the amount of \$1,309,800 on the \_\_\_\_ day of \_\_\_\_\_, 2019 to add construction phase and post construction engineering services to the Agreement; and

WHEREAS, it has become necessary to amend the Agreement to modify the provisions for the Term of the Agreement, Scope of Services, Work Schedule, and Compensation; and

WHEREAS, it is necessary for the City to amend its agreements from time to time to comply with changes in state law relating to contracts of municipalities.

NOW, THEREFORE, premises considered, the City and the Consultant agree that said Agreement is amended as follows:

1.

Article II. Term shall be amended by changing the term of the Agreement to terminate on December 31, 2023, with the ratification and incorporation of the remaining terms of the Agreement.

Article III. Scope of Services and Exhibit A, shall be amended as set forth in the attached addendum to Exhibit A.

Article III. Work Schedule and Exhibit B, shall be amended as set forth in the attached addendum to Exhibit B.

Article IV. Compensation to Consultant and Exhibit C (Fee Schedule), shall be amended by increasing/decreasing by \$1,309,800.00 the amount payable under the Agreement for a total of \$5,201,411.00, as shown by the attached Addendum to Exhibit C (Fee Schedule).

2.

Except as amended hereby and as previously amended as indicated above, the terms of the Agreement shall remain unchanged and in full force and effect.

**EXECUTED** and **AGREED** to as of the dates indicated below.

**CITY OF  
PFLUGERVILLE**

**CONSULTANT**

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Signature)

Printed Name: Sereniah Breland

Printed Name: Kendall King, P.E.

Title: City Manager

Title: Vice President

Date: \_\_\_\_\_

Date: October 18, 2019

APPROVED AS TO FORM:

Megan R. Santee  
Charles E. Zech

City Attorney

DENTON NAVARRO ROCHA BERNAL & ZECH, P.C.

**SUPPLEMENTAL AGREEMENT 05**  
**EXHIBIT A - SCOPE OF WORK**  
**Central Wastewater Treatment Plant Expansion/Upgrade to 10.0 MGD**

**Construction/Post Construction Phase Services**

**GENERAL DESCRIPTION OF PROJECT AND SERVICES**

The CITY is planning to expand the wastewater plant from its current permitted capacity of 5.3 MGD to 10.0 MGD (35 MGD peak two-hour flow) to meet the CITY's needs based on historical trends and projected population growth. The CITY previously retained Freese and Nichols, Inc. (FNI) for a Study Phase to evaluate the existing WWTP and develop recommendations for improvements for expansion of the facility. FNI presented its recommendations in a Conceptual Design Report (December 19, 2017) which documented the design basis, alternative analyses, proposed process improvements, Opinion of Probable Construction Costs, and estimated project schedule. FNI recommended that in addition to increasing the plant capacity, that the treatment processes should also be upgraded to provide biological nutrient removal (BNR) of phosphorous to replace the existing chemical phosphorous precipitation process. Upgrading the treatment process to BNR will significantly reduce the quantity of chemical applied and volume of waste sludge produced, thereby reducing energy and sludge disposal costs.

FNI recommended the plant expansion to be implemented in three (3) construction phases and prepared a two (2) stage TPDES Major Permit Amendment application with a Stage 1 capacity of 7.25 MGD, and a Stage 2 capacity of 10 MGD. The CITY retained FNI to design Phase 1 of the expansion and prepare the construction contract documents. The construction contractor will be selected based on Competitive Sealed Proposals.

The Phase 1 construction project will provide a new influent pump station, headworks, biological nutrient removal treatment system, clarifier, filters, UV disinfection system, non-potable water, and chemical feed systems. The construction will include three (3) new electrical buildings, two (2) diesel stand-by generators, improvements to the flood protection berm, general site civil improvements, electrical/communications upgrades, and improvements to site security and surveillance. Phase 1 when completed will bring the capacity of the treatment plant to 7.25 MGD (25.3 MGD peak two-hour flow), matching the TPDES Permit Phase 1.

The Phase 2 construction project will replace the equipment in the existing biological treatment basins and add basin volume and equipment to upgrade the units to achieve biological nutrient removal and rehabilitate the two (2) existing clarifiers. Phase 2 will also construct a new intermittent use effluent pump station which will enable the plant to discharge under high water level conditions in the receiving stream. It is anticipated that construction for Phase 2 will commence shortly after completion of Phase 1.

A future Phase 3 project will be required to complete the expansion to 10 MGD and will involve construction of a new clarifier and expansion or replacement of the solids dewatering process. The timing of Phase 3 will depend on the actual rate of population growth and corresponding increase in flow to the plant.

FNI's scope of work for Phase 1 included preliminary design, final design and bid phase services. The scope of work for this Authorization includes construction and post construction phase engineering services for Phase 1. The CITY retained the services of a third-party Construction Manager (CM) which will provide construction administrative duties and oversee and manage the construction. FNI's construction phase and post construction services will be as described the following sections.

**BASIC SERVICES AND SPECIAL SERVICES:** FNI shall render the following professional services in connection with the Project:

**BASIC SERVICES**

**A. Task A – Construction Phase Services:**

Upon completion of the CSP proposal phase services, FNI will proceed with the performance of construction phase services as described below. FNI is the Engineer of Record for the Design of the Phase 1 Expansion Project and is defined as the "Design Professional" in the contract documents for the Phase 1 Expansion, specifically in Section 00 72 00 "General Conditions" and Section 00 73 00 "Supplementary Conditions." The General Conditions and Supplementary Conditions define the roles and responsibilities the Design Professional (FNI), the CITY (Owner) and the CITY's third-party Construction Manager (CM). In its role as Design Professional, FNI will endeavor to protect CITY in providing these Construction Phase services, however, it is understood that FNI does not guarantee the Contractor's performance, nor will FNI provide supervision of the Contractor's operation and employees. FNI shall not be responsible for the means, methods, techniques, sequences or procedures of construction selected by the Contractor, or any safety precautions and programs relating in any way to the condition of the premises, the work of the Contractor or any Subcontractor. FNI shall not be responsible for the decisions, actions or directions made or given by the Construction Manager, nor for the acts or omissions of any person (except its own employees or agents) at the Project site or otherwise performing any of the work of the Project. The Construction Manager (CM) will have a Resident Project Representative(s) on the Site. FNI's Scope of Work is based on our understanding of the responsibilities and limitations of authority of CM's Resident Project Representative(s) as described in Attachment RPR, which is attached to and made a part of this Agreement.

1. Perform general administrative duties associated with FNI's services including progress monitoring and monthly progress reporting, office administration and invoicing for the scope items identified below. These duties include maintaining routine contact with the CITY and CM to help meet the needs of the CITY in a timely manner and executing the work in accordance with the work plan, budget, and schedule.
2. Meet with CITY and CM: (1) to review the scope of services, (2) to coordinate with CM on communications protocol, shop drawing and other project documentation workflow.
3. Assist CITY and CM in conducting one (1) pre-construction conference with the selected Contractor, review construction schedules prepared by the Contractor pursuant to the requirements of the construction contract, and proposed construction.
4. Utilizing the communication procedures established in the construction contract, review and respond to contractor's submittals in accordance with the requirements of the construction contract documents for the projects, including:
  - a. Requests for information (RFIs) - Interpret the drawings and specifications for CM and Contractor(s). Investigations, analyses, and studies requested by the CM and/or Contractor(s) and approved by CITY, for substitutions of equipment and/or materials or deviations from the drawings and specifications is an additional service. -

- b. Shop drawings and product data per Specification Section 01 33 00.01 “Table of Required Submittals”
  - c. Operation and Maintenance data per Specification Section 01 33 00.01 “Table of Required Submittals”
- 5. Assist CM to monitor the progress of the contractor in sending and processing submittals to see that documentation is being processed in accordance with schedules.
- 6. Make up to twenty-four (24) monthly visits to the construction site in conjunction with the monthly construction progress meetings to attend the monthly construction progress meeting and observe the progress and the quality of work and to attempt to determine in general if the work is proceeding in accordance with the Construction Contract Documents. In this effort FNI will endeavor to protect the CITY against defects and deficiencies in the work of Contractors and will report any observed deficiencies to CM. Visits to the site in excess of the specified number are an additional service.
- 7. Make up to twenty-four (24) additional visits to the site, non-concurrent with the monthly site visits and construction progress meetings, to provide additional technical support to the CITY and CM as may be required for the project.
- 8. Utilizing the procedures established in the Contract Documents for administering constructive changes to the construction contracts, review and process contract modifications and support the CM with negotiations with the contractor on behalf of the CITY to determine the cost and time impacts of these changes. Assist CM with preparation of change order documentation for approved changes for execution by the CITY. Investigations, analyses, studies or design for substitutions of equipment or materials, corrections of defective or deficient work of the contractor or other deviations from the construction contract documents requested by the CM or Contractor and approved by the CITY are an additional service. Substitutions of materials or equipment or design modifications requested by the CITY are an additional service.
- 9. Assist in the coordination, transfer of and acceptance by the Construction Contractor of CITY pre-selected equipment.
- 10. Attend up to three (3) meetings with the PCSI and up to two (2) meetings with the ASP for software programming coordination.
- 11. Accompany CM and CITY’s representative on pre-final review of the Project for conformance with the design concept of the Project and general compliance with the Construction Contract Documents, and assist CM to prepare a list of deficiencies to be corrected by the contractor before determination of substantial completion. Accompany CM and CITY’s representative on final review of the Project for conformance with the design concept of the Project and general compliance with the Construction Contract Documents before recommendation of final payment. More than four (4) total site visits for pre-final and final review of completed work are an additional service.
- 12. Retain services of land surveyor for preparation of easement along north property line of Central WWTP for modified/improved berm. Retain services of land surveyor for preparation of topographic survey of proposed access road alignment from Helios Way to north property line of Central WWTP.

**B. Task B – Post Construction Phase Services:**

- 1. Revise the construction drawings in accordance with the information furnished by CM and Contractor(s) reflecting changes in the Project made during construction. Five (5) half-size sets of prints of “Record Drawings” and three (3) full size prints shall be provided by FNI to

- CITY. All digital record drawing and model files will be provided to the CITY via electronic submission.
2. FNI will attend up to four (4) facility start-up planning meetings with the CM and Contractor to discuss the facility start-up plan and start-up coordination for individual process units and overall plant process start-up. Meetings in excess of the specified number are an Additional Service.
  3. FNI will be on-site for observation and technical support during start-up of major process units. A total of ten (10) site visits for a Professional Engineer and an EIT are anticipated. Site visits related to start-up in excess of the specified number are an Additional Service.
  4. Participate with CM in end-of-warranty period inspections, scheduled approximately one (1) month prior to completion of the Contractor's warranty period. FNI will assist the CM to compile a letter to the Contractor for each inspection identifying any deficiencies found in workmanship, materials or equipment, and the recommended actions to be taken with a schedule of completion. Four (4) warranty inspections are scheduled as four (4) hour duration each for a professional engineer and an engineer-in-training.
  5. Provide an updated Operations and Maintenance Manual for the Central WWTP to reflect changes in the operation of the plant. The O&M Manual shall be consistent with current TCEQ requirements. The O&M Manual will include all equipment operations of the plant, both existing and new equipment, and related unit process operations. Participate in two (2) quality control review workshops to facilitate quality control, discuss O&M Manual progress, review updated sections of the manual and receive input from the CM and CITY. Prepare three (3) hard copies of the final O&M Manual in print and one (1) copy in PDF format to the CITY.
  6. Provide ongoing operations support during 2 year warranty period. FNI will receive monthly DMR and process control data, monitor plant performance and prepare quarterly operating/trend report; meet quarterly with plant operations staff to discuss equipment and process performance and any operations concerns; support staff with reporting to upper management and/or City Council.

#### **SPECIAL SERVICES**

##### **C. Task C – Special Services**

1. Provide up to three (3) days factory witness testing of instrumentation and controls hardware, and up to two (2) days for software testing.
2. Support CM with evaluation of notices of contractor claims and make recommendations to the CM and CITY on the merit and value of the claim based on information submitted by the contractor or available in project documentation. Support CM to endeavor to negotiate a settlement value with the Contractor on behalf of the CITY if appropriate. Providing these services to review or evaluate construction contractor(s) claim(s), supported by causes not within the control of FNI are an additional service.

**ADDITIONAL SERVICES:** Additional Services to be performed by FNI, if authorized by CITY, which are not included in the above described basic services, are described as follows:

- A. Providing renderings, model, and mock-ups requested by the CITY.
- B. Revising drawings, specifications or other documents when such revisions are 1) not consistent with approvals or instructions previously given by CITY or 2) due to other causes not solely within the control of FNI.
- C. Providing consultation concerning the replacement of any Work damaged by fire or other cause during the construction and providing services as may be required regarding the replacement of

- such Work.
- D. Providing shop, mill, field or laboratory inspection of materials and equipment, other than factory witness testing of I/C hardware as described in Task C. Observe factory tests of equipment at any site remote to the project or observing tests required as a result of equipment failing the initial test.
  - E. Preparing data and reports for assistance to CITY in preparation for hearings before regulatory agencies, courts, arbitration panels or any mediator, giving testimony, personally or by deposition, and preparations therefore before any regulatory agency, court, arbitration panel or mediator.
  - F. Furnishing Special Inspections required under chapter 17 of the International Building Code. These Special Inspections are often continuous, requiring an inspector dedicated to inspection of the individual work item, and they are in addition to General Representation and Resident Representation services noted elsewhere in the contract. These continuous inspection services can be provided by FNI as an Additional Service.
  - G. Assisting CITY in preparing for, or appearing at litigation, mediation, arbitration, dispute review boards, or other legal and/or administrative proceedings in the defense or prosecution of claims disputes with Contractor(s).
  - H. Performing investigations, studies and analyses of substitutions of equipment and/or materials or deviations from the drawings and specifications.
  - I. Assisting CITY in the defense or prosecution of litigation in connection with or in addition to those services contemplated by this Agreement. Such services, if any, shall be furnished by FNI on a fee basis negotiated by the respective parties outside of and in addition to this Agreement.
  - J. Performing investigations, studies, and analysis of work proposed by construction contractors to correct defective work.
  - K. Design, contract modifications, studies or analysis required to comply with local, State, Federal or other regulatory agencies that become effective after the date of this agreement.
  - L. Services required to resolve bid protests or to rebid the projects for any reason.
  - M. Visits to the site more than the number of trips included in Basic Services for periodic site visits, coordination meetings, or contract completion activities.
  - N. Any services required because of default of the contractor(s) or the failure, for any reason, of the contractor(s) to complete the work within the contract time.
  - O. Providing services after the completion of the construction phase not specifically listed in Basic Services.
  - P. Providing basic or additional services on an accelerated time schedule. The scope of this service include cost for overtime wages of employees and consultants, inefficiencies in work sequence and plotting or reproduction costs directly attributable to an accelerated time schedule directed by the CITY.
  - Q. Providing services made necessary because of unforeseen, concealed, or differing site conditions or due to the presence of hazardous substances in any form.
  - R. Providing services to review or evaluate construction contractor(s) claim(s), provided said claims are supported by causes not within the control of FNI.
  - S. Providing value engineering studies or reviews of cost savings proposed by construction contractors after bids have been submitted.
  - T. Preparing statements for invoicing or other documentation for billing other than for the standard invoice for services attached to this professional services agreement.
  - U. Provide follow-up professional services during Contractor's warranty period.
  - V. Providing data, reports or briefings to City Council on the status of the project.



NOTE: RPR services are provided by the Construction Manager. This scope of work for RPR is for illustration of the role of the RPR vs. FNI's General Engineering Representation Services.

### **RESIDENT PROJECT REPRESENTATION BY CONSTRUCTION MANAGER**

- A. The Construction Manager (CM), who is not FNI or FNI's agent or employee, will have a Resident Project Representative on the Site. The duties, responsibilities and the limitations of authority of the Resident Project Representative, and designated assistants, are as follows:
  - 1. Resident Project Representative, who is CM's agent at the site, will act as directed by and under the supervision of CM, and will confer with CM regarding Resident Project Representative's actions. Resident Project Representative's dealings in matters pertaining to the on-site Work shall in general be with CM and Contractor, keeping Owner advised as necessary. Resident Project Representative's dealings with Subcontractors shall only be through or with full knowledge and approval of Contractor. Resident Project Representative shall generally communicate with Owner with the knowledge of and under the direction of CM.
- B. Duties and Responsibilities of Resident Project Representative:
  - 1. Schedules: Review the progress schedule, schedule of Shop Drawing submittals and schedules of values prepared by Contractor and consult with CM and Design Professional concerning acceptability.
  - 2. Conferences and Meetings: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences and other project-related meetings, and prepare and circulate copies of minutes thereof.
  - 3. Liaison:
    - a. Serve as CM's liaison with Contractor, working principally through Contractor's superintendent and assist in understanding the intent of Contract Documents; and assist CM in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-site operations.
    - b. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.
  - 4. Shop Drawings and Samples:
    - a. Record date of receipt of Shop Drawings and Samples.
    - b. Receive Samples which are furnished at the Site by Contractor, and notify CM of availability of Samples for examination.
    - c. Advise CM and Contractor of the commencement of any Work requiring a Shop Drawing or Sample if the submittal has not been approved by Design Professional.

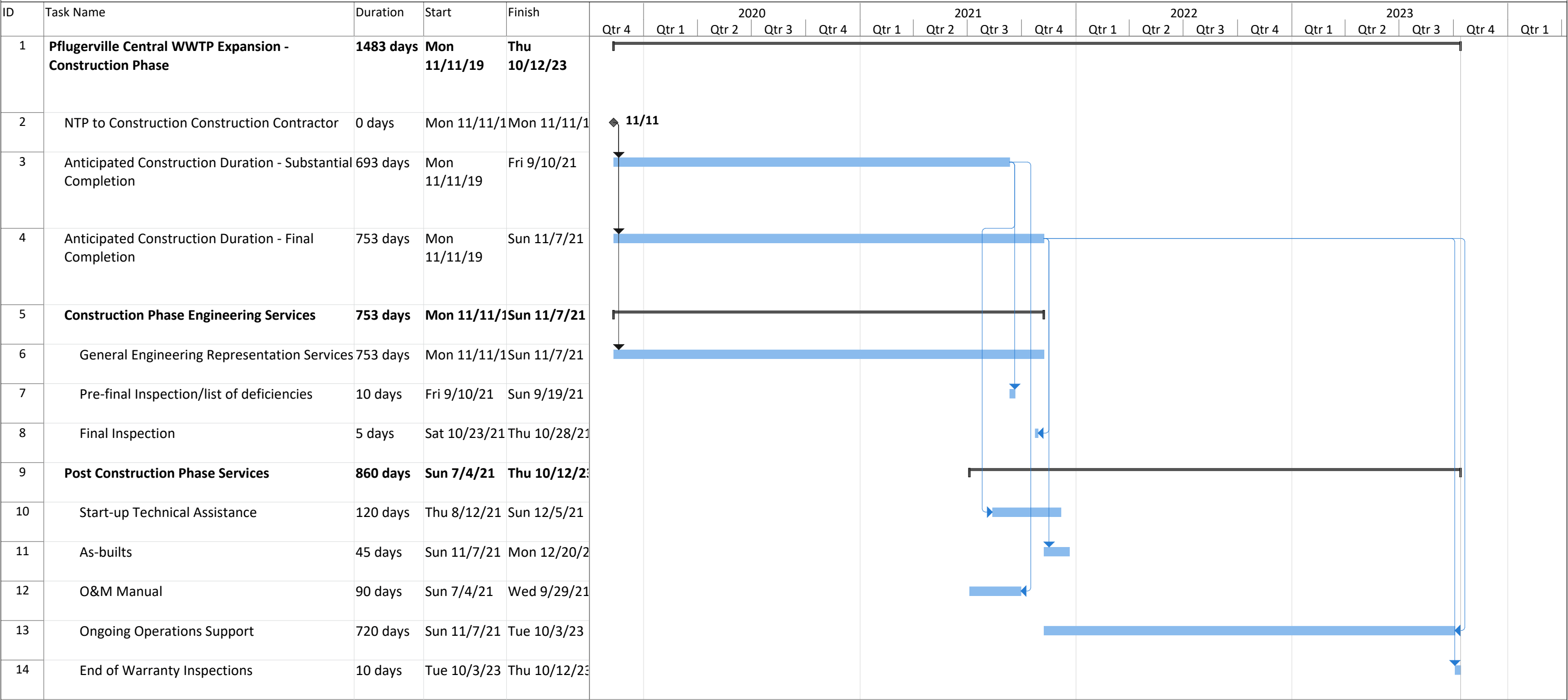


5. Review of Work, Rejection of Defective Work, Inspections and Tests:
  - a. Conduct on-site observations of the Work in progress to determine if the Work is in general proceeding in accordance with the Contract Documents.
  - b. Report to CM whenever Resident Project Representative believes that any Work will not produce a completed Project that conforms generally to the Contract Documents or will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise CM of Work the Resident Project Representative believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.
  - c. Verify that tests, equipment and systems start-up and operating and maintenance training are conducted in the presence of appropriate personnel, and the Contractor maintains adequate records thereof; and observe record and report to CM appropriate details relative to the test procedures and start-ups.
  - d. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Project, record the results of these inspections and report to CM.
6. Interpretation of Contract Documents: Report to CM when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Design Professional.
7. Request for Revisions: Consider and evaluate Contractor's suggestions for revisions to Drawings or Specifications and report with Resident Project Representative's recommendations to CM and Design Professional. Transmit to Contractor in writing decisions as issued by CM.
8. Records:
  - a. Maintain at the job site orderly files for correspondence, reports of job conferences, Shop Drawings and Samples, reproductions of original Contract Documents, including all Work Change Directives, Addenda, Change Orders, Field Orders, Written Amendments, additional Drawings issued subsequent to the execution of the Contract, CM's clarifications and interpretations of the Contract Documents, progress reports, submittals and correspondence received from and delivered to Contractor and other Project related documents.
9. Reports:
  - a. Furnish to CM periodic reports as required of progress of the work and of Contractor's compliance with the progress schedule and schedule of Shop Drawings and Sample submittals.
  - b. Consult with CM in advance of scheduled major tests, inspections or start of important phases of the Work.

- c. Draft proposed Written Amendments, Change Orders and Work Change Directives, obtaining backup material from Contractor and recommend to CM Written Amendments, Change Orders, Work Change Directives, and Field Orders.
  - d. Report immediately to CM and Owner the occurrence of any accident.
- 10. Payment Requests: Review Applications for Payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Owner, noting particularly the relationship of the payment requested to the schedule of values, Work completed and materials and equipment at the Site but not incorporated in the Work.
- 11. Completion:
  - a. Before CM issues a Certificate of Substantial Completion, submit to Contractor a list of observed items requiring completion or correction.
  - b. Observe whether Contractor has performed inspections required by laws or regulations, ordinances, codes or order applicable to the Work, including but not limited to those to be performed by public agencies having jurisdiction over the Work.
  - c. Conduct a final inspection in the company of CM, Design Professional, Owner and Contractor and prepare a final list of items to be completed or corrected.
  - d. Observe whether all items on final list have been completed or corrected and make recommendations to CM concerning acceptance.
- C. Limitations of Authority of Resident Project Representative:
  - 1. Shall not authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items), unless authorized by Design Professional.
  - 2. Shall not exceed limitations of CM's authority as set forth in Agreement or the Contract Documents.
  - 3. Shall not undertake any of the responsibilities of Contractor, Subcontractor, Suppliers, or Contractor's superintendent.
  - 4. Shall not advise on, issue directions relative to or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction unless such advice or directions are specifically required by the Contract Documents.
  - 5. Shall not advise on, issue directions regarding or assume control over safety precautions and programs in connection with the Work or any activities or operations of Owner or Contractor.
  - 6. Shall not accept shop drawing or sample submittals from anyone other than the Contractor.

7. Shall not participate in specialized field or laboratory tests or inspections conducted by others, except as specifically authorized by CM.

**EXHIBIT B- Supplemental Agreement #05**  
**City of Pflugerville Central WWTP Expansion to 10 MGD, Phase I**  
Construction Phase/Post Construction Schedule  
(October 2019)



City of Pflugerville Central WWTP Expansion Construction Phase Services 10/2/2019 Detailed Cost Breakdown	Project Fee Summary	
	Basic Services	\$ 1,274,621
	Special Services	\$ 35,179
	Total Project	\$ 1,309,800

Note: Rates shown are for 2019. Due to the total duration exceeding one year, a 4% rate increase is assumed annually. Effort is distributed throughout the project based on task performed.

Note: See attached org chart for team member and description of project roles.

Tasks				Labor										
Phase	Task	Basic or Special	Task Description	Kendall King	Coby Gee	David Jackson	Leonard Ripley	Engineer VI	Engineer IV	CAD Designer II	CAD Technician III	Michael Robertson	Engineer III	Nick Prisco
				Project Director	Project Manager	Treatment Manager	Sr. Process Eng	WW Design Lead	WW Desn Eng	Lead CAD Desn	CAD Technician III	Sr. Struct Eng	Struct Desn Eng	Sr. Mech Eng
				\$240	\$178	\$240	\$240	\$209	\$156	\$153	\$96	\$178	\$137	\$156
A		Basic	Construction Phase Services											
	A1	Basic	Project Management/Reporting/Invoicing (Base on 26 mo duration, NIC warranty period)	26	52									
	A2	Basic	Project Kick-off/CM Coordination Meeting	2	4				4					
	A3	Basic	Pre-construction meeting	2	4				4					
	A4	Basic	Review Contractor Submittals											
	A4.a	Basic	Request for Information, Interpretation of Plans and Specs (26 month duration)	52	104			52	156			40	10	4
	A4.b	Basic	Shop drawings, product data (estimate based on number of submittals in document register)		80			120	240			80	20	6
	A4.c	Basic	O&M Data (estimate based on number of submittals in document register)		20			40	80					2
	A5	Basic	Submittal monitoring and reporting (internal management effort, coord with CM. Contractor monitoring by CM)		20				40					
	A6	Basic	Monthly site visits for Construction Meetings (24 mtgs)(40 mi RT)	72	96			72	96					
	A7	Basic	Site visits - not corresponding with Monthly Construction Meetings (24 mtgs)(40 mi RT)	48	72	8		48	72			24		8
	A8	Basic	Contract Modifications/Change Orders	10	40	8		40	80	40	80	24	12	4
	A9	Basic	Assist with assignment of Pre-selected Equipment	8	4			8	8					
	A10	Basic	Attend meetings (3) with PCSI and (2) with ASP for software programming coordination	8	20		8	20	20					
	A11.a	Basic	Pre-final Review, List of Deficiencies (2 ea. 4 hr. site visits)	8	8			8	8			8		8
	A11.b	Basic	Final Review (2 each 4 hr. site visits)	8	8			8	8			8		8
	A12	Basic	Berm Easement Survey and Proposed Access Road Survey Post Design Phase		4					2				
B		Basic	Post Construction Phase Services											
	B1	Basic	As-builts-(Process/Structural/Civil) (Note: Electrical/SCADA/Technology as-builts included in sub quotes)		8			8	40	120	280	4		4
	B2	Basic	Start-up planning meetings and support of commissioning team (4 meetings)(40 mi RT ATx, 360 RT NTx)	24	60	16	40	80	120					4
	B3	Basic	On site technical support during start-up (10 site visits)	40	40	16	40	80	80					4
	B4	Basic	End of Warranty inspection (2 site visits of 4 hours ea.)	4	8			8	8					8
	B5	Basic	Prepare O&M Manual	8	40	4	20	80	200	20	40			4
	B6	Basic	Operations Support during 2 year warranty period (quarterly meetings, data analysis)	16	60	8	24	32						
C		Special	Special Services											
	C1	Special	PLC Factory Witness Testing		40									
	C2	Special	Claims evaluation/negotiation	8	20			8	8					
Total Count				344	812	60	132	712	1,272	182	400	188	42	64
Subtotal				\$ 87,845	\$ 153,949	\$ 15,534	\$ 34,424	\$ 158,446	\$ 210,141	\$ 29,966	\$ 41,374	\$ 35,029	\$ 6,003	\$ 10,777

City of Pflugerville

Central WWTP Expansion Construction Phase Services

10/2/2019

Detailed Cost Breakdown

Tasks				Labor										
Phase	Task	Basic or Special	Task Description	Engineer III	Parris Jones	Nathan Light	Scott Vaughan	Engineer III	Mike Shiflett	Engineer III	Garrett Johnston	Engineer III	John New	Marissa Mendoza
				Mech Desn Eng	Sr. Architect	Arch Designer	Sr. Plumbing Desn	Plumb Desn Eng	Sr. Geotech Eng	Geotech Eng	Sr. Stormwater Eng	Stormwater Desn Eng	Sr. Advisor	Accounting/Billing
				\$137	\$240	\$153	\$178	\$137	\$240	\$137	\$178	\$137	\$240	\$148
A		Basic	Construction Phase Services											
	A1	Basic	Project Management/Reporting/Invoicing (Base on 26 mo duration, NIC warranty period)										8	78
	A2	Basic	Project Kick-off/CM Coordination Meeting											
	A3	Basic	Pre-construction meeting											
	A4	Basic	Review Contractor Submittals											
	A4.a	Basic	Request for Information, Interpretation of Plans and Specs (26 month duration)	12	4	12	2	4	2	4	4	12		
	A4.b	Basic	Shop drawings, product data (estimate based on number of submittals in document register)	20	4	20	4	8	2	4	4	8		
	A4.c	Basic	O&M Data (estimate based on number of submittals in document register)	4	2	4								
	A5	Basic	Submittal monitoring and reporting (internal management effort, coord with CM. Contractor monitoring by CM)											
	A6	Basic	Monthly site visits for Construction Meetings (24 mtgs)(40 mi RT)											
	A7	Basic	Site visits - not corresponding with Monthly Construction Meetings (24 mtgs)(40 mi RT)			24					8		24	
	A8	Basic	Contract Modifications/Change Orders	8	4	8	4	8	4	8	4	8		
	A9	Basic	Assist with assignment of Pre-selected Equipment											
	A10	Basic	Attend meetings (3) with PCSI and (2) with ASP for software programming coordination											
	A11.a	Basic	Pre-final Review, List of Deficiencies (2 ea. 4 hr. site visits)		8		8		8		8			
	A11.b	Basic	Final Review (2 each 4 hr. site visits)		8		8							
	A12	Basic	Berm Easement Survey and Proposed Access Road Survey Post Design Phase											2
B		Basic	Post Construction Phase Services											
	B1	Basic	As-builts-(Process/Structural/Civil) (Note: Electrical/SCADA/Technology as-builts included in sub quotes)		4						4			
	B2	Basic	Start-up planning meetings and support of commissioning team (4 meetings)(40 mi RT ATx, 360 RT NTx)	10										
	B3	Basic	On site technical support during start-up (10 site visits)	10										
	B4	Basic	End of Warranty inspection (2 site visits of 4 hours ea.)		8				8		4			
	B5	Basic	Prepare O&M Manual	8		4								
	B6	Basic	Operations Support during 2 year warranty period (quarterly meetings, data analysis)											
C		Special	Special Services											
	C1	Special	PLC Factory Witness Testing											
	C2	Special	Claims evaluation/negotiation										8	
Total Count				72	42	72	26	20	24	16	36	28	40	80
Subtotal				\$ 10,412	\$ 10,961	\$ 11,568	\$ 4,942	\$ 2,866	\$ 6,338	\$ 2,301	\$ 6,882	\$ 4,011	\$ 10,188	\$ 12,472

City of Pflugerville

Central WWTP Expansion Construction Phase Services

10/2/2019

Detailed Cost Breakdown

Tasks					
Phase	Task	Basic or Special	Task Description	Total Hours	Total Labor Effort
A		Basic	Construction Phase Services		\$ -
	A1	Basic	Project Management/Reporting/Invoicing (Base on 26 mo duration, NIC warranty period)	164	\$ 30,545
	A2	Basic	Project Kick-off/CM Coordination Meeting	10	\$ 1,816
	A3	Basic	Pre-construction meeting	10	\$ 1,816
	A4	Basic	Review Contractor Submittals		\$ -
	A4.a	Basic	Request for Information, Interpretation of Plans and Specs (26 month duration)	474	\$ 87,776
	A4.b	Basic	Shop drawings, product data (estimate based on number of submittals in document register)	620	\$ 109,475
	A4.c	Basic	O&M Data (estimate based on number of submittals in document register)	152	\$ 28,064
	A5	Basic	Submittal monitoring and reporting (internal management effort, coord with CM. Contractor monitoring by CM)	60	\$ 10,336
	A6	Basic	Monthly site visits for Construction Meetings (24 mtgs)(40 mi RT)	336	\$ 68,044
	A7	Basic	Site visits - not corresponding with Monthly Construction Meetings (24 mtgs)(40 mi RT)	336	\$ 67,520
	A8	Basic	Contract Modifications/Change Orders	394	\$ 65,316
	A9	Basic	Assist with assignment of Pre-selected Equipment	28	\$ 5,619
	A10	Basic	Attend meetings (3) with PCSI and (2) with ASP for software programming coordination	76	\$ 15,747
	A11.a	Basic	Pre-final Review, List of Deficiencies (2 ea. 4 hr. site visits)	80	\$ 16,899
	A11.b	Basic	Final Review (2 each 4 hr. site visits)	64	\$ 13,282
	A12	Basic	Berm Easement Survey and Proposed Access Road Survey Post Design Phase	8	\$ 1,314
B		Basic	Post Construction Phase Services		\$ -
	B1	Basic	As-builts-(Process/Structural/Civil) (Note: Electrical/SCADA/Technology as-builts included in sub quotes)	472	\$ 62,283
	B2	Basic	Start-up planning meetings and support of commissioning team (4 meetings)(40 mi RT ATx, 360 RT NTx)	354	\$ 72,107
	B3	Basic	On site technical support during start-up (10 site visits)	310	\$ 65,722
	B4	Basic	End of Warranty inspection (2 site visits of 4 hours ea.)	56	\$ 12,990
	B5	Basic	Prepare O&M Manual	428	\$ 77,823
	B6	Basic	Operations Support during 2 year warranty period (quarterly meetings, data analysis)	140	\$ 33,145
C		Special	Special Services		\$ -
	C1	Special	PLC Factory Witness Testing	40	\$ 7,627
	C2	Special	Claims evaluation/negotiation	52	\$ 11,162
Total Count				4,664	
Subtotal					\$ 866,427



City of Pflugerville Central WWTP Expansion Construction Phase Services 10/2/2019 Detailed Cost Breakdown	Project Fee Summary	
	Basic Services	1,274,621
	Special Services	35,179
	Total Project	1,309,800

Note: Meals, Hotel, and Airfare for out-of-town staff required for specialty site visits or witness testing.

Tasks				Expenses							
Phase	Task	Basic or Special	Task Description	Miles	Meals	Hotel	B&W (sheet)	Color (sheet)	Lg Format - Bond - B&W (sq. ft.)	Airfare	Total Expense Effort
				\$0.58/each	* 1.15 cost	* 1.15 cost	\$0.10/each	\$0.25/each	\$0.25/each	* 1.15	
A		Basic	Construction Phase Services								\$ -
	A1	Basic	Project Management/Reporting/Invoicing (Base on 26 mo duration, NIC warranty period)								\$ -
	A2	Basic	Project Kick-off/CM Coordination Meeting	40							\$ 23
	A3	Basic	Pre-construction meeting	40							\$ 23
	A4	Basic	Review Contractor Submittals								\$ -
	A4.a	Basic	Request for Information, Interpretation of Plans and Specs (26 month duration)								\$ -
	A4.b	Basic	Shop drawings, product data (estimate based on number of submittals in document register)								\$ -
	A4.c	Basic	O&M Data (estimate based on number of submittals in document register)								\$ -
	A5	Basic	Submittal monitoring and reporting (internal management effort, coord with CM. Contractor monitoring by CM								\$ -
	A6	Basic	Monthly site visits for Construction Meetings (24 mtgs)(40 mi RT)	1,000							\$ 580
	A7	Basic	Site visits - not corresponding with Monthly Construction Meetings (24 mtgs)(40 mi RT)	1,000							\$ 580
	A8	Basic	Contract Modifications/Change Orders								\$ -
	A9	Basic	Assist with assignment of Pre-selected Equipment								\$ -
	A10	Basic	Attend meetings (3) with PCSI and (2) with ASP for software programming coordination								\$ -
	A11.a	Basic	Pre-final Review, List of Deficiencies (2 ea. 4 hr. site visits)	80							\$ 46
	A11.b	Basic	Final Review (2 each 4 hr. site visits)								\$ -
	A12	Basic	Berm Easement Survey and Proposed Access Road Survey Post Design Phase								\$ -
B		Basic	Post Construction Phase Services								\$ -
	B1	Basic	As-builts-(Process/Structural/Civil) (Note: Electrical/SCADA/Technology as-builts included in sub quotes)				2,000		10,000		\$ 2,700
	B2	Basic	Start-up planning meetings and support of commissioning team (4 meetings)(40 mi RT ATx, 360 RT NTx)	1,000	400	600					\$ 1,730
	B3	Basic	On site technical support during start-up (10 site visits)	2,200	1,000	1,500					\$ 4,151
	B4	Basic	End of Warranty inspection (2 site visits of 4 hours ea.)	400	1,000						\$ 1,382
	B5	Basic	Prepare O&M Manual				20,000	1,000			\$ 2,250
	B6	Basic	Operations Support during 2 year warranty period (quarterly meetings, data analysis)	1,000	200	300					\$ 1,155
C		Special	Special Services								\$ -
	C1	Special	PLC Factory Witness Testing		400	600				500	\$ 1,725
	C2	Special	Claims evaluation/negotiation								\$ -
Total Count				6,760	3,000	3,000	22,000	1,000	10,000	500	\$ 16,346
Subtotal				\$ 3,921	\$ 3,450	\$ 3,450	\$ 2,200	\$ 250	\$ 2,500	\$ 575	\$ 16,346

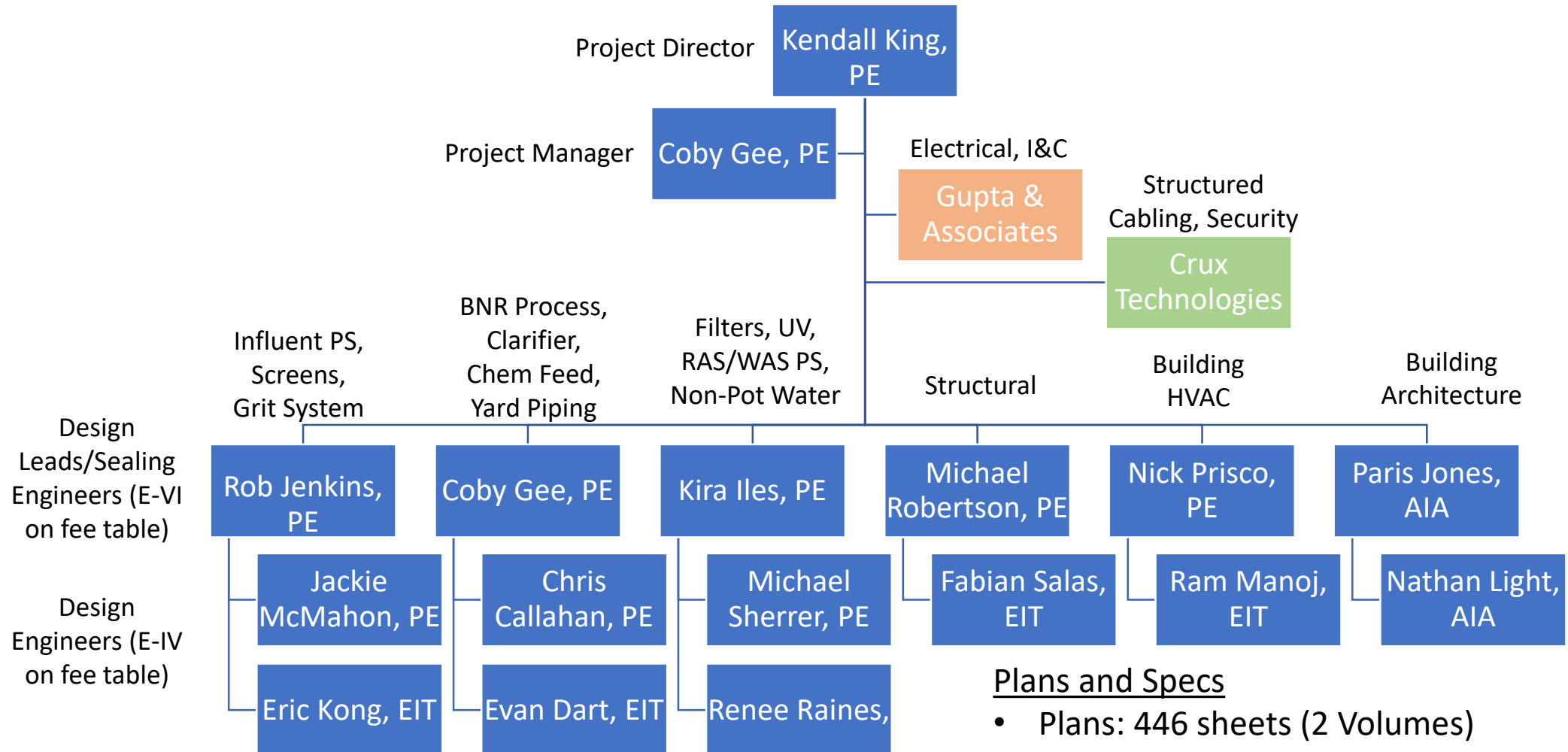
City of Pflugerville Central WWTP Expansion Construction Phase Services 10/2/2019 Detailed Cost Breakdown	Project Fee Summary	
	Basic Services	1,274,621
	Special Services	35,179
	Total Project	1,309,800

Tasks				Subconsultants				Total
Phase	Task	Basic or Special	Task Description	Gupta Assoc Inc. (GAI)	Crux Technologies	Inland Geodetics Survey	Total Sub Effort	Total Effort
A		Basic	Construction Phase Services	286,266	8,050		\$ 338,463	\$ 338,463
	A1	Basic	Project Management/Reporting/Invoicing (Base on 26 mo duration, NIC warranty period)				\$ -	\$ 30,545
	A2	Basic	Project Kick-off/CM Coordination Meeting				\$ -	\$ 1,839
	A3	Basic	Pre-construction meeting				\$ -	\$ 1,839
	A4	Basic	Review Contractor Submittals				\$ -	\$ -
	A4.a	Basic	Request for Information, Interpretation of Plans and Specs (26 month duration)				\$ -	\$ 87,776
	A4.b	Basic	Shop drawings, product data (estimate based on number of submittals in document register)				\$ -	\$ 109,475
	A4.c	Basic	O&M Data (estimate based on number of submittals in document register)				\$ -	\$ 28,064
	A5	Basic	Submittal monitoring and reporting (internal management effort, coord with CM. Contractor monitoring by CM				\$ -	\$ 10,336
	A6	Basic	Monthly site visits for Construction Meetings (24 mtgs)(40 mi RT)				\$ -	\$ 68,624
	A7	Basic	Site visits - not corresponding with Monthly Construction Meetings (24 mtgs)(40 mi RT)				\$ -	\$ 68,100
	A8	Basic	Contract Modifications/Change Orders				\$ -	\$ 65,316
	A9	Basic	Assist with assignment of Pre-selected Equipment				\$ -	\$ 5,619
	A10	Basic	Attend meetings (3) with PCSI and (2) with ASP for software programming coordination				\$ -	\$ 15,747
	A11.a	Basic	Pre-final Review, List of Deficiencies (2 ea. 4 hr. site visits)				\$ -	\$ 16,945
	A11.b	Basic	Final Review (2 each 4 hr. site visits)				\$ -	\$ 13,282
	A12	Basic	Berm Easement Survey and Proposed Access Road Survey Post Design Phase			9,290	\$ 10,684	\$ 11,998
B		Basic	Post Construction Phase Services	51,970	3,000		\$ 63,216	\$ 63,216
	B1	Basic	As-builts-(Process/Structural/Civil) (Note: Electrical/SCADA/Technology as-builts included in sub quotes)				\$ -	\$ 64,983
	B2	Basic	Start-up planning meetings and support of commissioning team (4 meetings)(40 mi RT ATx, 360 RT NTx)				\$ -	\$ 73,837
	B3	Basic	On site technical support during start-up (10 site visits)				\$ -	\$ 69,873
	B4	Basic	End of Warranty inspection (2 site visits of 4 hours ea.)				\$ -	\$ 14,372
	B5	Basic	Prepare O&M Manual				\$ -	\$ 80,073
	B6	Basic	Operations Support during 2 year warranty period (quarterly meetings, data analysis)				\$ -	\$ 34,300
C		Special	Special Services				\$ -	\$ -
	C1	Special	PLC Factory Witness Testing	12,752			\$ 14,665	\$ 24,017
	C2	Special	Claims evaluation/negotiation				\$ -	\$ 11,162
Total Count				\$ 350,988	\$ 11,050	\$ 9,290	\$ 427,027	\$ 1,309,800
Subtotal				\$ 403,636	\$ 12,708	\$ 10,684	\$ 427,027	\$ 1,309,800

# Freese and Nichols' Project Team

## City of Pflugerville, Central WWTP Expansion

### Construction/Post Construction Phase Services



#### Plans and Specs

- Plans: 446 sheets (2 Volumes)
- Specs: 3,000 pages (4 volumes)
- Submittals: Estimated 650+ (see document register)

# Design team members' role during construction

Team Member	Role During Design	Role During Construction
Design Leads (Engineer VI on fee table)	Served as design leaders for major process areas as indicated on the org chart. Design leaders are the responsible professionals that sign/seal the final contract documents (plans and specs).	Oversight/QC of technical review of submittals for the portion of the design each person sealed; interpret P&S and answer questions from contractor or construction manager; support PM to address technical issues during construction. Participate in development of process start-up plan; provide on-site support during start-up. Attend construction meetings and make site visits as required. Oversee development of O&M Manual section for their technical area. Participate in final walk-throughs.
Design Engineers (Engineer IV on fee table)	Design engineers performed calculations, coordinated with equipment manufacturers, developed construction details, prepared equipment and construction specifications under the direction of the design leaders.	Perform technical review of submittals for process equipment they designed; interpret P&S and answer questions; support design lead with technical issues during construction. Participate in start-up plan development, support start-up. Attend meetings and make site visits as required. Prepare O&M Manual for their technical area. May support on-site start-up, final walk-throughs.