

**PROFESSIONAL SERVICES  
SUPPLEMENTAL AGREEMENT # 2  
FOR  
CITY OF PFLUGERVILLE WATER TREATMENT PLANT  
OWNER’S REPRESENTATIVE SERVICES**

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

This Supplemental Agreement No. 2 to a contract for Professional Services is made by and between the City of Pflugerville, Texas ("City") and Garver, LLC ("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 24th day of March, 2020 for the City of Pflugerville Water Treatment Plant (WTP) Owner’s Representative Services project ("Project") in the amount of One Hundred Ninety Nine Thousand, Eight Hundred and Twenty (\$199,820) Dollars and Zero Cents; and

WHEREAS, the City and Consultant executed a Supplemental Agreement #1 for Professional Services for the Project in the amount of Forty Nine Thousand, Nine Hundred and Forty (\$49,940) Dollars and Zero Cents, to add WTP Site Buildout Planning and Cost Estimating Services to the Agreement; and

WHEREAS, the City and Consultant desire to enter into a Supplemental Agreement #2 for Professional Services for the Project in the amount of One Million, Two Hundred Twenty Thousand, Six Hundred Fifty-Seven (\$1,220,657) Dollars and Zero Cents, to add Design Oversight, Project Management and Water Rights Acquisition Support 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:

**I.**

Article II. Term shall be amended by changing the term of the Agreement to terminate on the 31<sup>st</sup> day of May, 2022, 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 A, shall be amended as set forth in the attached Addendum to Exhibit A.

Article IV. Compensation to Consultant and Exhibit B (Fee Schedule), shall be amended by increasing by \$1,220,657 the amount payable under the Agreement for a total of \$1,470,417 as shown by the attached Addendum to Exhibit B (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: Jeff Sober, P.E.

Title: City Manager

Title: Vice President

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

Date: August 11<sup>th</sup>, 2020

APPROVED AS TO FORM:

  
\_\_\_\_\_

Charles E. Zech  
City Attorney

DENTON NAVARRO ROCHA BERNAL & ZECH, P.C.

## **CITY OF PFLUGERVILLE**

### **WATER TREATMENT PLANT OWNER'S REPRESENTATIVE – SUPPLEMENTAL AGREEMENT NO. 2**

#### **ADDENDUM TO EXHIBIT A – SCOPE OF SERVICES**

##### **Background**

The City of Pflugerville retained Garver to provide Owner's Representative (OR) services as the Owner's agent and liaison between the Design Consultants, Construction Contractors, Texas Commission on Environmental Quality (TCEQ), Texas Water Development Board (TWDB), and other stakeholders for the Pflugerville Water Treatment Plant Facility Expansion Project.

This Supplemental Agreement No. 2 is for the design phase of the WTP Expansions project including consultant procurement and acting as the City's OR for preliminary engineering through 100% design and bid phase services.

##### **1. Project Management and Administration**

In its supporting role as OR, Garver will perform the following basic project management and administrative functions to facilitate the delivery and implementation of the Water Treatment Plant Expansion project included in this Scope:

###### **1.1 Project Meetings and Workshops**

Garver will prepare for and attend routine meetings with the Owner, Design Consultant(s), and subconsultants for the WTP Expansion Project, to receive updates, provide feedback, and discuss progress with the project stakeholders. Garver will be prepared to provide progress updates for the project to City Staff on a monthly basis. Preparation of minutes from individual meetings with the Design Consultant will be the responsibility of the Design Consultant. [Assumption: 2 meetings/month; 2 attendees per meeting; 2 hrs/meeting; up to 18 months]

###### **1.2 Schedule Updates**

Garver will create, monitor, and provide updates for the overall WTP Expansion implementation schedule on a monthly basis, and provide to the Owner for review. [Assumption: 16 hrs for initial setup; 4 hrs/month to maintain/update; up to 18 months]

###### **1.3 Budget Updates**

Garver will coordinate with Design Consultant and City staff to update the overall implementation budget. Garver will review Design Consultant's cost estimates and provide Quality Control Review for the cost estimates as they are generated for key design milestones. [Assumption: 16 hrs for initial setup; 4 hrs/month to maintain/update; up to 18 months; 4x milestone cost estimate reviews at 20 hrs/review]

###### **1.4 Project Management Plan**

Garver will develop a Project Management Plan (PMP) and present to the Owner for review and approval. This Plan will be updated as necessary through the duration of this contract to establish a series of protocols to be adhered to by the OR and Design Consultants to ensure successful delivery of the Water Treatment Plant Expansion project.

1.4.1. Quality Assurance (QA) Plan – develop a QA plan to define the quality review process, design management process, and reporting process to the Owner and integrate it with Quality Control plans developed by selected consultants to promote conformance with the water CIP program and individual project objectives.

1.4.2. Risk Management Plan – includes identification of potential schedule and budget risks to the projects, and presents mitigation strategies, including processes to manage land

acquisition, environmental concerns, funding agency requirements, and permitting and regulatory requirements.

### 1.5 Document Management

Garver will utilize project management software to track and organize documents and transmittals to the Owner, its Design Consultants, and Contractors for the duration of this contract. This software will allow transmission of information without a requirement for external users to purchase any additional software. Upon completion of each project, Garver will provide the Owner an electronic storage device with digital copies of files from each project (e.g. submittals, RFIs, logs, start-up plans, etc.). [Assumption – utilize a PMIS for up to 18 months; 12 hrs/month]

### 1.6 Subconsultant Management

Garver intends to procure subconsultant services from Elston Johnson and Associates (Funding Assistance) and JH Engineering (Commissioning/Start-up Assistance and operational reviews), to complete the OR scope of services. Scope and fee estimates from each subconsultant are included with Appendix B. Garver will be responsible for managing and coordinating with each of its subconsultants. Subconsultant fees will be invoiced to the Owner at cost.

## 2. Consultant Procurement for WTP Expansion Project

Garver will support the City in procuring a design consultant for the WTP Expansion Project.

### 2.1 Request for Proposal (RFP) Support

Garver will assist the City with defining components to be included in an RFQ for design consultants and provide input on potential criteria and their weight for the basis of selection.

### 2.2 RFP Review and Recommendation

Upon receipt of proposals, Garver will complete a technical review and will attend a review meeting with City staff to discuss the findings. Garver will document the results of the technical review and share with the City upon request. Garver will also attend the meeting that formally awards the design project to assist City Staff in responding to any questions about the selection process and/or project status updates. [Assumption: 1 coordination meeting; 4 attendees; 2 hrs/attendee; 2 attendees at council meeting recognizing selected design consultant.]

## 3. Funding and Regulatory Support

### 3.1 Funding Agency Coordination

Garver will prepare for and attend meetings with City staff funding agencies, such as the Texas Water Development Board (TWDB), to present and perform coordination necessary to facilitate Project execution. This effort will be supported by our subconsultant, Elston Johnson & Associates. [Assumption: 4 meetings; 2 attendees; 2hrs/meeting]. Electronic meeting minutes will be provided to the Owner within 3 days following each meeting.

### 3.2 Regulatory Agency Coordination

Garver will prepare for and attend meetings with City staff and regulatory agencies, such as the Texas Commission on Environmental Quality (TCEQ), to present and perform coordination necessary to facilitate Project execution. [Assumption: 1 meeting every other month for 18 months; 2 attendees; 2hrs/meeting]. Electronic meeting minutes will be provided to the Owner within 3 days following each meeting.

## 4. Water Rights Acquisition Support

### 4.1 Coordination Meetings

Garver will prepare for and attend meetings with City staff including finance and legal staff to present and perform coordination necessary to facilitate the acquisition of short- and long-term water rights for the City of Pflugerville. Garver will also provide coordination support and attend meetings with external stakeholders such as the Lower Colorado River Authority (LCRA), Brazos River Authority (BRA), and the City of Round Rock. [Assumption: 1x 2-hr meeting every month for 12 months]. Electronic meeting minutes will be provided to the Owner within 3 days following each meeting.

## 5. Design Phase Support

Garver will serve as the OR and work directly and routinely with the selected design consultant during the anticipated 12-month design period, tracking progress and compliance, participating in meetings and workshops, and provide in-depth reviews of design milestone documents. A component of these design reviews will be identifying opportunities for value engineering-related efficiencies in design that can be communicated back to the Design Consultant for incorporation in future submittals.

5.1 For design milestones, Garver will perform review of all regulatory submittals; review all specifications and unit sizing calculations and provide discipline-specific review, including design quality and constructability, of Design Consultant's deliverables for each milestone. Discipline reviews will include:

- Building-Mechanical
- Civil
- Electrical/I&C/SCADA
- Operations and Maintenance
- Process & Process-Mechanical
- Structural

Garver's discipline specific teams will provide reviews the Design Consultant's milestone deliverables, with effort matching the anticipated level of detail/amount of new information provided for each submittal. Milestone reviews will include:

### 5.1.1. Preliminary Engineering Report (PER) Milestone – Review components

- a. Compliance with City Objectives/Stated Design Criteria
- b. Compliance with TCEQ requirements for public water supplies
- c. Compliance with potential funding sources
- d. Opinion of probable construction cost (OPCC)

### 5.1.2. 30% Design Review Components

- a. Conceptual drawings
- b. Preliminary process control descriptions
- c. Constructability
- d. Updated OPCC

### 5.1.3. 60% Design Review Components

- a. Design drawings and calculations
- b. Facility Interfaces/Code Compliance
- c. Preliminary specifications and standard details
- d. Final process control descriptions
- e. Constructability
- f. Updated OPCC

### 5.1.4. 90% Design Review Components

- a. Final plans and specifications
- b. Standard details
- c. Regulatory and environmental compliance
- d. Constructability
- e. Final OPCC

#### 5.1.5. 100% Design Review Components

- a. Front-End documents
- b. Standard/supplemental conditions
- c. Responses to comments from TCEQ and other Permitting Entities

### 5.2 Bidding Phase

Garver will assist the Owner in preparing bid materials and advertising the Project for bids, in accordance with State Statutes for conventional (design-bid-build (DBB)) delivery of the improvements. Garver will assist the Owner by performing the following subtasks:

- 5.2.1. Bid Package Assistance: Work with Design Consultant to prepare bid package and assist Owner in advertisement process. Garver will develop a project schedule and list of materials to be included in the Bid Package.
- 5.2.2. Pre-Bid Meeting: Prepare for and attend a pre-bid meeting with the Owner and Design Consultant.
- 5.2.3. Addenda Coordination: Coordinate addenda and responses to bidders' questions via the Design Consultant during bid advertisement. The Design Consultant will be required to provide all answers to bidder's questions and any clarifications and/or revisions to the design documents (including plans, contract documents, and specifications).
- 5.2.4. Bid Opening Meeting: Attend bid opening conference with the Owner.
- 5.2.5. Award Recommendation: Coordinate with Design Consultant to prepare a Recommendation of Bid Award letter and submit to the Owner for acceptance. This Recommendation will be based on the tabulation of bids and reference checks as performed by the Design Consultant
- 5.2.6. Recommendation to Council: Assist in the preparation of supporting materials for presentation at City Council, as requested by City Staff.

## 6. Evaluation of Design Criteria for WTP Improvements

To accelerate and facilitate the final design of WTP Improvements, multiple phases of water quality sampling and testing and treatability analysis will be performed. These analyses will be performed during the Design Consultant procurement period. As the WTP Improvements will allow for greater flexibility in both chemical and physical treatment, Task 6 will be critical for determining the optimized treatment conditions for the expanded WTP. The results of Task 6 will be delivered to the selected design engineer as the basis for their technical specifications. Coordination meetings for Task 6 are included in the Regulatory Agency Coordination component of Task 3.2.

### 6.1 Coagulant Optimization Bench Testing

In the months prior to selection of the final design consultant, Garver will develop and implement a bench-scale treatability study for enhanced coagulation, pH optimization, and DBP profiling at the WTP to reduce total organic carbon (TOC) and improve sedimentation and plant operations. The existing coagulant (aluminum chlorohydrate, ACH), will be compared with an iron-based coagulant (ferric chloride, or ferric sulfate), poly aluminum chlorine (PACl), and an alum (aluminum sulfate) coagulant. A series of jar tests will be performed to determine the optimum pH and point of diminishing return for the TOC removal for each coagulant using the available raw water.

Jar testing of four coagulants are anticipated to be performed. Each of the jar treated water will be analyzed for turbidity and TOC. The best performing jars will also be tested for formation of THMs and HAAs using simulated disinfection conditions with both chlorination and chloramination.

The optimum coagulant dose and pH will be selected for each alternative coagulant and will be documented within a Technical Memorandum as the recommended coagulation strategy.

#### 6.1.1. Testing Plan & Testing Program

Garver will develop a Testing Plan that outlines sample collection, handling, and testing protocol. The Testing Plan will identify each treatment regime and the required jar testing procedure and analysis of each sample. The Testing Plan will be utilized internally by City Staff for tests the Owner prefers to conduct at the Owner's laboratory with Garver's support and assistance.

Garver will coordinate with Owner for sample collection, and a TCEQ-certified laboratory for testing that may include TOC, pH, THM, and HAA analysis. Laboratory testing costs are not included in fee.

#### 6.1.2. Technical Memorandum

A Technical Memorandum will be developed outlining the result of the water quality analysis and the recommended chemical types and dosages for the WTP. A draft PDF of the Technical Memorandum will be submitted to City Staff for review. Garver will lead a workshop upon delivery of the draft to detail the proposed alternatives to the City. Following the draft deliverable workshop, Garver will submit a final Report with the recommended alternative.

### 6.2 Lamella Plate Settler Pilot Testing

In the months prior to selection of the final design consultant, Garver will coordinate with the Lamella Plate Manufacturer (Xylem Leopold) to carry out a pilot of Texler and stainless steel Lamella Plates for flocculation and sedimentation at the WTP. The pilot is anticipated to be in operation for 60 days with 2 weeks of start-up and 2 weeks of decommissioning.

*The fee estimate presented here contains the pilot cost from Xylem-Leopold per the attached proposal.*

6.2.1. Operational Support: During the pilot timeframe, Garver will provide onsite operational and data collection support. The coagulants proposed to be tested in Section 6.1 can each be tested during the plate settler pilot. [Assumption: 1 attendee onsite for 4-hrs a week for 12 weeks].

6.2.2. TCEQ Reporting: Following completion of the pilot testing, Garver will compile and analyze all collected data. Garver will use the results of the pilot testing to develop design criteria for the proposed lamella plate settler flocculation and sedimentation system at the WTP. Garver will document all collected data and proposed design criteria in a Report for submission to TCEQ. Garver will coordinate with TCEQ during the review process and update the Report where necessary. Following approval by TCEQ, Garver will communicate the approved design criteria with the selected final design consultant.

## 7. Payment

For work described in this Amendment to the Scope of Services, the Owner agrees to pay Garver on a lump sum basis in the amount of \$1,200,476 and a cost plus maximum amount of \$20,181 for Non-Labor Expenses. Payment invoices will be submitted to the Owner on a monthly basis, accompanied by a detailed progress report and task summary for the billing period, and payment will be made on a percent-complete basis for the lump sum fee and cost basis for the cost plus maximum fee.

## 8. Schedule

Work shall be completed in accordance with the schedule below. The chosen treatment alternative and additional findings from the Process Alternatives Workshop were presented at the July 28 City Council Work Session.



**ADDENDUM TO EXHIBIT B - FEE SCHEDULE**

**CITY OF PFLUGERVILLE  
WTP OWNER'S REPRESENTATIVE - DESIGN PHASE SERVICES**

**WTP EXPANSION - CONSULTANT PROCUREMENT AND DESIGN/BIDDING SUPPORT**

WORK TASK DESCRIPTION	Assumptions	SMJ,JCC,JLS, RGM,ZKC,CJ D,SHZ	GTS,SSS,SES, HWE,MJW, DNO,BDC	KAM,EMT,ST N	IPT,TAH,JAP, RDT,JCW,JL R,TOH	CDG,SJC, KMK,MLL	KAD,WRS, DJB,YT	SCZ,CAT,CM, TNP,CKA,PBP	LSS		JDG,KJM	LABOR SUBTOTAL BY TASK	FEE SUBTOTAL BY TASK	SUBCONSULTANT FEES		
		E-7	E-6	E-5	E-4	E-3	E-2	E-1	X-2	X-1	P-3			Elston Johnson & Associates	JH Engineering, LLC	Xylem / Leopold
		\$375.00	\$300.00	\$250.00	\$205.00	\$175.00	\$145.00	\$125.00	\$98.00	\$73.00	\$204.00					
<b>1 Project Management and Administration</b>		hr	hr	hr	hr	hr	hr	hr	hr	hr	hr					
1.1 Project Meetings	18 months; 2 meetings/month; 2 attendees		24	24	72	24						144	\$51,103.00			\$ 18,943
1.2 Schedule Updates	P-3 16 hrs initial setup per project + update monthly for 18 months (4hrs/month)				9		44				44	97	\$21,738.00			\$ 4,537
1.3 Budget Updates	P-3 16 hrs initial setup per project + update monthly for 18 months (4hrs/month)				48	40	44				44	176	\$35,530.00			\$ 3,334
1.4 Project Management Plan		12	12	8	16	20		30	4			102	\$30,205.00			\$ 9,183
1.4.1 Quality Assurance Plan		4	4		10	10		30	4	8		70	\$11,226.00			
1.4.2 Risk Management Plan		4	4		10	10		30	4	8		70	\$11,226.00			
1.5 Document Management	Utilize PMIS for 18 months. 12hrs/month				54	54	45			64		217	\$33,317.00			
1.6 Subconsultant Management	8 hrs/month for 18 months				144							144	\$29,520.00			
<b>Labor Subtotal</b>		<b>20</b>	<b>44</b>	<b>32</b>	<b>363</b>	<b>158</b>	<b>133</b>	<b>90</b>	<b>76</b>	<b>16</b>	<b>88</b>	<b>1020</b>	<b>\$223,865.00</b>	<b>\$ -</b>	<b>\$ 35,997</b>	<b>\$ -</b>
<b>Subtotal - Task 1</b>	<b>\$ 223,865</b>															
<b>2 Consultant Procurement</b>																
2.1 RFQ Support		16	16		16							48	\$14,080.00			
2.2 SOQ Review/Comment			4		4							8	\$2,020.00			
<b>Labor Subtotal</b>		<b>16</b>	<b>20</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>56</b>	<b>\$16,100.00</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Subtotal - Task 2</b>	<b>\$ 16,100</b>															
<b>3 Funding and Regulatory Support</b>																
3.1 TWDB Funding Coordination	4 mtgs/2hr each with IPT and GTS		8		8							16	\$17,040.00	\$ 13,000		
3.2 TCEQ Regulatory Coordination	2 hrs bimonthly for IPT and GTS over 18 months		18		18							36	\$9,090.00			
<b>Labor Subtotal</b>		<b>0</b>	<b>26</b>	<b>0</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>52</b>	<b>\$26,130.00</b>	<b>\$ 13,000</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Subtotal - Task 3</b>	<b>\$ 26,130</b>															
<b>4 Water Rights Acquisition Support</b>																
4.1 Coordination Meetings	2 hrs/month for IPT and GTS over 18 months		36		36							72	\$18,180.00			
<b>Labor Subtotal</b>		<b>0</b>	<b>36</b>	<b>0</b>	<b>36</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>72</b>	<b>\$18,180.00</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Subtotal - Task 4</b>	<b>\$ 18,180</b>															
<b>5 Design and Bidding Phase Support</b>																
5.1 Design Phase	5 main deliverables to review by 5 main sub-disciplines; includes review of plans, specifications, design criteria, etc.															
5.1.1 PER Phase																
Process Review		12	18	6	8	10	4	12				70	\$16,870.00			
Electrical/I&C Review		12	18	6	8	10	4	12				70	\$16,870.00			
Structural Review		12	18	6	8	10	4	12				70	\$16,870.00			
Building Mechanical Review		12	18	6	8	10	4	12				70	\$16,870.00			
Civil Review		12	18	6	8	10	4	12				70	\$16,870.00			
5.1.2 30% Design Phase													\$21,160.00		\$ 21,160	
Process Review		24	34	10	16	20	4	20				128	\$31,560.00			
Electrical/I&C Review		24	34	10	16	20	4	20				128	\$31,560.00			
Structural Review		24	34	10	16	20	4	20				128	\$31,560.00			
Mechanical Review		24	34	10	16	20	4	20				128	\$31,560.00			
Civil Review		24	34	10	16	20	4	20				128	\$31,560.00			
5.1.3 60% Design Phase													\$22,961.00		\$ 22,961	
Process Review		36	34	16	24	20	6	22				158	\$39,740.00			
Electrical/I&C Review		36	34	16	24	20	6	22				158	\$39,740.00			
Structural Review		36	34	16	24	20	6	22				158	\$39,740.00			
Mechanical Review		36	34	16	24	20	6	22				158	\$39,740.00			
Civil Review		36	34	16	24	20	6	22				158	\$39,740.00			
5.1.4 90% Design Phase													\$63,015.00		\$ 63,015	
Process Review		24	34	10	16	20	4	16				124	\$31,060.00			
Electrical/I&C Review		24	34	10	16	20	4	16				124	\$31,060.00			
Structural Review		24	34	10	16	20	4	16				124	\$31,060.00			
Mechanical Review		24	34	10	16	20	4	16				124	\$31,060.00			
Civil Review		24	34	10	16	20	4	16				124	\$31,060.00			
5.1.5 100% Design Phase													\$21,160.00		\$ 21,160	

	Process Review		12	18	6	8	10	4	12					70	\$16,870.00			
	Electrical/I&C Review		12	18	6	8	10	4	12					70	\$16,870.00			
	Structural Review		12	18	6	8	10	4	12					70	\$16,870.00			
	Mechanical Review		12	18	6	8	10	4	12					70	\$16,870.00			
	Civil Review		12	18	6	8	10	4	12					70	\$16,870.00			
<b>5.2</b>	<b>Bidding Phase</b>	Support of bid docs, not production													\$0.00			
5.2.1	Bid Package Assistance		2	4		8	8							22	\$4,990.00			
5.2.2	Prebid Meeting	GTS + IPT		4		4								8	\$2,020.00			
5.2.3	Addenda/Response to Questions		2	6	6	8								22	\$5,690.00			
5.2.4	Bid Opening	GTS + IPT		4		4								8	\$2,020.00			
5.2.5	Award Recommendation		1			2	4							7	\$1,485.00			
5.2.6	Council Meeting	GS+IPT; Doc by MML		4		8	8							20	\$4,240.00			
	<b>Labor Subtotal</b>		<b>545</b>	<b>712</b>	<b>246</b>	<b>394</b>	<b>420</b>	<b>110</b>	<b>410</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2837</b>	<b>\$829,241.00</b>	<b>\$ -</b>	<b>\$ 128,296</b>	<b>\$ -</b>
	<b>Subtotal - Task 5</b>	<b>\$</b>	<b>829,241</b>															
<b>6</b>	<b>Design Criteria Evaluation</b>																	
<b>6.1</b>	<b>Coagulant Testing</b>																	
6.1.1	Testing Plan		8	20			40							68	\$16,000.00			
6.1.2	Technical Memorandum		4	20		8	60							92	\$19,640.00			
<b>6.2</b>	<b>Plate Settler Pilot Program</b>														\$6,800.00		\$	6,800
6.2.1	Operational Support	8 hr/week for 12 weeks		16		16	96							128	\$24,880.00			
6.2.2	TCEQ Report		4	20		8	60							92	\$19,640.00			
	<b>Labor Subtotal</b>		<b>16</b>	<b>76</b>	<b>0</b>	<b>32</b>	<b>256</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>380</b>	<b>\$86,960.00</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 6,800</b>
	<b>Subtotal - Task 6</b>	<b>\$</b>	<b>86,960</b>															

Hours 597 914 278 871 834 243 500 76 16 88 4417

SUBTOTAL - GARVER LABOR: Current rates \$1,016,383  
SUBTOTAL - SUBCONSULTANT LABOR: \$184,093

**DIRECT NON-LABOR EXPENSES**

Document Printing/Reproduction/Assembly \$ 4,340.00  
Postage/Freight/Courier \$ 390.00  
Office Supplies/Equipment \$ 300.00  
Computer Modeling/Software Use \$ -  
Travel Costs (Flights + Mileage) \$ 13,630.00

SUBTOTAL - DIRECT NON-LABOR EXPENSES: \$18,660

SUBCONSULTANT EXPENSES JH Engineering, LLC \$1,521

TOTAL FEE: \$1,220,657



**ATTACHMENT B**

**City of Pflugerville  
Water Treatment Plant and Pumping Facilities Owner's Representative  
Level of Effort Estimate - Labor Cost**

Item/Description	Principal Engineer / Commissioning & Startup SME	Engineering & Construction Inspection Coordinator	Senior Commissioning Specialist IV (Instrumentation & Controls)	Process / Commissioning Engineer II	Commissioning Specialist IV (Electrical)	Total Labor Hours	Subtotal / Task
	Jeff Haasch, PE, PMP	Kirkland Fordham	Watt Durden	Olivia Beck, PE	Matt Hladik		
<b>Billable Hourly Rate</b>	<b>\$ 232.30</b>	<b>\$ 136.65</b>	<b>\$ 198.14</b>	<b>\$ 150.31</b>	<b>\$ 164.25</b>		
<b>Task 1 - Project Management and Administration</b>							
1.1 Project Coordination Meetings	48	12	12	12	12	96	\$ 18,943
1.2 Project Management Plan	4	-	-	24	-	28	\$ 4,537
1.3 Quality Assurance Plan	4	-	-	16	-	20	\$ 3,334
1.4 Risk Management Plan	24	-	-	24	-	48	\$ 9,183
<b>Task 1 Sub-Total</b>	<b>80</b>	<b>12</b>	<b>12</b>	<b>76</b>	<b>12</b>	<b>192</b>	<b>\$ 35,996</b>
<b>Task 2 - Design Phase Services</b>							
2.1 Design Deliverable Review							
Historical Project Information Review (BODR, PER, etc.)	24	24	24	24	24	120	\$ 21,160
60% Constructability Review	40	40	16	16	16	128	\$ 22,961
90% Constructability Review	40	40	16	16	16	128	\$ 22,961
90% Functionality / Operability Review	40	-	60	60	60	220	\$ 40,054
100% Design Review	24	24	24	24	24	120	\$ 21,160
<b>Task 2 Sub-Total</b>	<b>168</b>	<b>128</b>	<b>140</b>	<b>140</b>	<b>140</b>	<b>716</b>	<b>\$ 128,296</b>
<b>Total Hours</b>	<b>248</b>	<b>140</b>	<b>152</b>	<b>216</b>	<b>152</b>	<b>908</b>	

<b>Billable Labor</b>	<b>\$ 164,292</b>
<b>Reimbursible Expenses (5%)</b>	<b>\$ 1,521</b>
<b>Total</b>	<b>\$ 165,813</b>



City of Pflugerville  
Water Treatment Plant and Pumping Facilities Owner's Representative  
Other Direct Costs

Travel Expenses and Other Direct Costs (ODCs) Assumptions:

**Mileage Reimbursement** \$0.575 per mile  
Distance (Lincoln to Pflugerville) 90 miles

**Per Diem Rates**

Hotel (GSA Rate) \$0.00 per day  
Meals (GSA Rate/full days) \$0.00 per day  
Meals (GSA Rate/travel days) \$0.00 per day

Task	# of Travelers	Cost/Trip				# of Trips	ODC Subtotal
		Mileage	Meals	Hotel	Total		
Task 1 - Project Management and Administration	1	\$ 52	\$ -	\$ -	\$ 52	12	\$ 621
			\$ -	\$ -	\$ -		\$ -
			\$ -	\$ -	\$ -		\$ -
Reprographics services (design deliverable hard copies) Assume 2 sets / design deliverable, \$150/set.							\$ 900
<b>Total</b>							<b>\$ 1,521</b>



**Budget Proposal for City of Pflugerville Funding Analysis and Assistance  
Owner’s Representative Services for the  
Water Treatment Plant Expansion and Pumping Facilities**

**Date of Proposal:** July 7, 2020

**Scope of Work:**

Funding Applications and Coordination

EJA will oversee the completion of the funding application(s) for the selected funding program(s). The funding application process requires significant coordination with funding agencies. The assumption is ongoing coordination with the selected funding agencies will be required over the duration of the projects from construction to closeout. EJA will coordinate with Garver to provide the Owner’s staff support in addressing any follow up actions from the funding agencies. The coordination also assumes participation in the project management meetings to coordinate project related milestones with funding related milestones.

Pricing

Table 1 displays pricing for the funding assistance project. Fees are based on estimated time required to complete the funding application process at a rate of \$125/hr.

Table 1

<b><u>Funding Assistance Fees:</u></b>	<u>Amount Not to Exceed</u>
Project Fee for Funding Eligibility and Needs assessments meetings and related activities with Garver and Owner staff. Coordination Meetings for the project through TWDB application approval. Estimated Hours: <b>24 hours</b>	\$3,000.00
Project Fee for Funding Application and Processing tasks. Includes oversight of application development and submission. Attendance at coordination meetings with funding agency staff. Estimated Hours: <b>80 hours</b>	\$10,000.00
<b>Project Total</b>	<b>\$13,000.00</b>

**Xylem Inc.**  
**227 S. Division St**  
**Zelienople, PA 16063**  
**(724) 452-6300**  
**www.xyleminc.com**

### **Leopold Texler Lamella Clarifier**

Leopold's Texler Lamella Demo Clarifier is a full treatment pilot system designed to test our clarification process and is based on a 45-foot trailer. The pilot includes all the necessary process equipment, pumps, valves, instruments, and ancillary equipment to function as a stand-alone unit.

It is configured with two different plate cells arranged in a 55° angle. Cell 1 is equipped with market standard stainless steel sheets and Cell 2 is equipped with our unique geomembrane sheets.



**Figure 1 Panoramic view of the plate settler pilot**

A typical Plate Settling pilot runs 3-8 weeks, which includes 2 days for setup and 2 days for tear down.

A field process engineer can be present via live video (e.g. FT, zoom etc. ) for the duration of the study. This engineer is responsible for optimizing the process, gathering the process data and provides recommendations to the client or client's engineer along with Leopold's Research and Development Team. The pilot will include a control panel and a display for instrumentation (Table 1) with a cellular network, for Leopold and Garver to monitor, record and adjust the system as needed in coordination with the plant engineer.

After the study is completed, a full pilot report can be submitted. The report includes recommendations for design (i.e. loading rate, optimum chemical dosage, and flocculation times) to achieve the established water quality effluent goals along with a full compliment of graphs displaying process performance collected under various operational conditions.



**Table 1 Control panel instrument list**

<i>Line</i>	<i>Instrument</i>	<i>Location</i>	<i>Type</i>
1	Influent Turbidity	On Floc Tank	Hach 1720E
2	Influent pH	On Floc Tank	Hach PD1P1
3	Corrected pH	On Floc Tank	Hach PD1P1
4	Effluent Turbidity 1	On Clarifier Tank	Hach 1720E
5	Effluent Turbidity 2	On Clarifier Tank	Hach 1720E
6	Display for Instrumentation	On Floc Tank/Clarifier Tank	SC100

**Process Design**

Process Flow - Min/ Max	up to 63 gpm
Loading Rate - Min/ Max	0.2 to 0.6-gpm/ft <sup>2</sup>
Flocculation Times - Min/ Max	45 minutes
Flocculation Stages	2

**Pilot Plant Connections:**

All Feed, Waste and effluent trailer connections are 3” Cam Lock Type. Leopold supplies 200 feet of 3” Cam Lock terminated hoses in 25-foot sections for routing to customer connections.  
 Drain / hose line for instrumentation

**Electrical connections**

Leopold provides 100 feet of 4-wire outdoor grade electric cable with a receptacle on one end to connect to the trailer-mounted plug. An approved electrician must terminate the other end at the site’s power source.

Power requirements: 100 amp - 480V, Three-Phase, 60 HZ

**Physical Layout**

Trailer footprint Ft – In/ M:	6’ wide x 45’ long x 9’ 1/4” high
Minimum Clearance all sides	5 foot
Estimated Trailer Weight lbs. / kg:	40,000 (18,200) empty, 65,000 (29,500) full
Equipment pad:	Level concrete or asphalt

Data: City engineering firm to share all pilot data with Xylem Inc.

**Price**

Transportation 2 ways Zelenople /Pflugerville TX	\$10,000
Discount 50%	-\$5,000
Start-up & Commissioning assist	\$1,800
<b>Total</b>	<b>\$6,800</b>

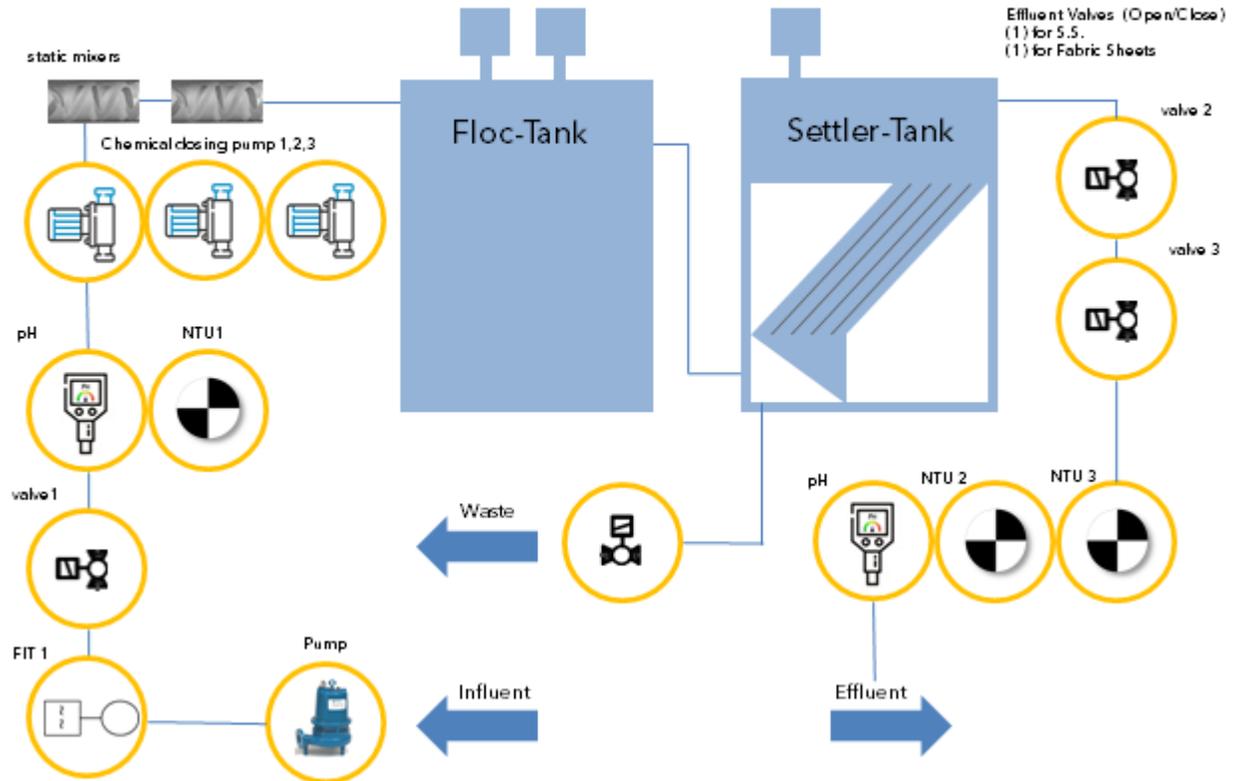


Payable within 30 days after delivery on site

Duration: up to 12 weeks on site

Additional flights and weekly calls and process support are included in the price.

Data: City engineering firm to share all pilot data with Xylem Inc.



Electric Ashai 3" PVC EDPM Ball Valves



Tsurumi Pump Model 80PSF23.7



Floc Mixers :

Floc Tank - (4) Lightning SPXFlow  
Model Number - X6Q100  
1 HP 230/460 V 3 Phase

Settler Tank - (1) Lightning SPXFlow Model  
Number - X6Q100  
1 HP 230/460 V 3 Phase



Hach 1720E Turbidity meter



Hach pH Probe - DPD1P1



Static mixer for chemical injection, 3" line



Masterflex Chemical Dosing Pump

**Equipment:**

Floc Tank	(4) Lightning SPXFlow, Model Number – X6Q100, 230/460 V 3 Phase, 1 HP
Settler Tank	(1) Lightning SPX Flow Model Number – X6Q100, 230/460 V 3 Phase, 1 HP
Controler	(1)
Turbidity meter	(3) Hach 1720E
PH Probe	(2) Hach DPD1P1
Static mixer for chemical injection,	(2) 3" line
Ball Valves	(4) Electric Ashai 3" PVC EDPM
Pump	(1) Tsurumi Pump Model 80PSF23.7 460 V 6.5 AMP 3 PH 60 HZ

**Figure 3 Front view of the plate settler pilot**

