

Meeting Date: 3/3/2015

Report Type: Consent

Report ID: 2015-00133

Title: Supplemental Agreements: Shasta Park Reservoir, Groundwater Well, and Booster Pump Station

Location: District 8

Recommendation: Pass a Motion authorizing the City Manager or the City Manager's designee to sign: 1) Supplemental Agreement #2 to City Agreement Number 2012-0654, with Wood Rodgers, for additional design services for an amount not to exceed \$124,982, bringing the total agreement amount to \$755,382; and 2) Supplemental Agreement #3 to City Agreement Number 2012-0790, with West Yost Associates, for additional design services for an amount not to exceed \$76,000, bringing the total agreement amount to \$506,388.

Contact: Dan Sherry, Interim Engineering & Water Resources Manager, (916) 808-1419; Brett Ewart, Senior Engineer (916) 808-1725, Department of Utilities

Presenter: None

Department: Department Of Utilities

Division: Cip Engineering

Dept ID: 14001321

Attachments:

- 1-Description/Analysis
- 2-Background
- 3-Location Map (Shasta Park)
- 4-Supplemental Agreement (Wood Rodgers No 2)
- 5-Supplemental Agreement (West Yost No 3)

City Attorney Review

Approved as to Form
Joe Robinson
2/23/2015 5:34:27 PM

Approvals/Acknowledgements

Department Director or Designee: Mike Malone - 2/12/2015 9:58:56 AM

Description/Analysis:

Issue: The construction of the groundwater well at the Shasta Park Reservoir and Pump Station project (Z14005400) has been completed and found to produce 4 million gallons of water per day (MGD) rather than the expected 2 MGD.

Supplemental agreement #2 to Agreement No. 2012-0654 with Wood Rodgers is needed to account for additional work requested of the consultant during the groundwater construction period, and to modify the design of the groundwater treatment system and the building's structural calculations to allow the facility to pump, treat, and disinfect the higher-than-expected water supply.

To accommodate the changes to the groundwater facility design made by Wood Rodgers and meet revised City standards for electrical design, supplemental agreement #3 to Agreement No. 2012-0790 with West Yost Associates is needed to modify the overall civil and electrical facility design. Additionally, new artistic renderings of the project design will be created to facilitate public outreach.

Policy Considerations: The project is consistent with both City and regional water planning efforts to provide a safe and reliable water supply.

Economic Impacts: None

Environmental Considerations: An Initial Study, Mitigated Negative Declaration, and a Mitigation Reporting Program were prepared for this project in accordance with the California Environmental Quality Act (CEQA). The City Council adopted the Mitigated Negative Declaration and Mitigation Reporting Program on May 22, 2012 (Resolution No. 2012-138). No additional environmental review is required.

Sustainability Considerations: The project has been reviewed for consistency with the goals, policies, and targets of the Sustainability Master Plan and the 2030 General Plan. The project will advance these goals, policies, and targets by ensuring that the City continues to provide a safe, clean, and reliable water supply to its customers.

Committee/Commission Action: None.

Rationale for Recommendation: The aquifer under the Shasta Park Water Facilities has been found to produce 4 MGD of water rather than 2 MGD. To accommodate this change, modifications to the ongoing design of the above ground facilities will be required. These two supplemental agreements will allow the City to increase its groundwater supply portfolio.

Financial Considerations: The supplemental agreement with Wood Rodgers is for the amount not-to-exceed \$124,982. Approval of this agreement will bring the total Wood Rodgers agreement amount to \$755,382.

The supplemental agreement with West Yost Associates (WYA) is for the amount not-to-exceed \$76,000. Approval of this agreement will bring the total WYA agreement amount to \$506,388.

There is sufficient water development fee funding available in the Shasta Park Reservoir and Pump Station project (Z14005400, Fund 6001) for the supplemental agreements with West Yost Associates and Wood Rodgers.

Local Business Enterprise (LBE): The City's existing agreements with Wood Rodgers and West Yost Associates were approved prior to the establishment of LBE participation requirements for professional service agreements.

Background

The 2005 Water Master Plan concluded that a finished water reservoir should be constructed in the southeast portion of Sacramento to help maintain service pressure through peak demand periods, and to provide additional emergency and fire suppression water supply.

The Shasta Park 4MG Reservoir and Pump Station (Project) includes the construction, operation and maintenance of an above-ground 4 million gallon (MG) water storage tank, 4 million gallons per day (MGD) groundwater well, 4 MGD ground water treatment system, and a 15 MGD pump station. The reservoir and buildings will be constructed of reinforced concrete and decorative block. Other site improvements will include a perimeter fence, landscaping, lighting, and security system.

Prior Council Items

On May 22, 2012, City Council approved the purchase of the Project site, a 5.31 acre vacant parcel (APN 117-0182-023), which is located at the terminal end of Imagination Parkway, immediately north of the Shasta Community Park (see Attachment 3). The property purchase price was \$580,000.

In January 2012, a Request for Qualifications was issued for design services for the project, and twelve firms submitted Statements of Qualifications. Two firms were selected by a five-person panel, which included a reviewer independent of the City. The panel selected the firms most qualified to provide engineering design services: 1) Wood Rodgers was selected for design of the groundwater well, and 2) West Yost Associates was selected to evaluate the adequacy of the City's overall facility design.

The Wood Rodgers agreement (2012-0654) was approved July 12, 2012, for an amount not-to-exceed \$301,000. The scope of that design work included the below ground components of the well, such as identifying the proper well depth, determining water quality, and design of the gravel pack and casing. On June 25, 2013 the City Council approved supplemental agreement No. 1 to the Wood Rodgers agreement, to provide for the remaining design of the groundwater well components, which included designing the equipment to pump and treat the drinking water produced groundwater well. Supplemental agreement No. 1 raised the total agreement amount to \$630,400.

Also on July 12, 2012, the City Council authorized the City Manager to enter into an agreement with the Regional Water Authority (RWA) to

provide for administration of the City's \$2,280,762 in grant funding from Proposition 84. A portion of this grant, in the amount of \$988,199, is allocated to help fund the groundwater well design and construction at the Shasta Park Reservoir location. The grant funds will be provided to the City on a reimbursement basis.

On September 5, 2012, the City Manager approved an agreement (2012-0790) with West Yost Associates to provide for a quality control assessment of the City's design, for the amount not-to-exceed \$37,300. On March 5, 2013, the City Council approved supplemental agreement No. 1 to the West Yost Associates agreement, to provide for design of the overall facility (excepting the groundwater design function being performed by Wood Rodgers), rather than the quality control assessment of the City's design. This raised the West Yost Associates agreement from \$37,300 to an amount not-to-exceed \$321,400. Due to internal staffing shortages, City Council approved supplemental agreement No. 2 to the West Yost Associates agreement, to provide for design of the electrical components on November 13, 2013. This raised the West Yost Associates agreement from \$321,400 to an amount not-to-exceed \$430,388.

A second item on November 13, 2013 included award of the construction contract for the new groundwater well by City Council to Hydro Resources West, Inc., for an amount not-to-exceed \$573,411. This project included the drilling of a 1200 ft deep groundwater well, and installation of the well casing and gravel pack. It did not include the pumping, electrical, and treatment facilities, which will be constructed during the next phase of construction. This phase of construction is nearing completion, and the new well will supply 4 MGD to City residents rather than the initial estimate of 2 MGD.

Current Council Items

Item 1: Supplemental agreement No. 2 to the Wood Rodger contract will provide the additional work required to 1) perform additional construction management services of the groundwater well construction during contractor delays, 2) perform cost benefit analysis for the expansion of groundwater production at the site for from 2 MGD to 4 MGD capacity with provision made for a second future well, and 3) to modified the design of the project's chemical feed, water treatment systems, and control building to accommodate the higher-than- anticipated new water supply of 4MGD rather than 2 MGD.

Approval of the proposed supplemental agreement No. 2 will authorize performance of these additional facility design services for an amount not

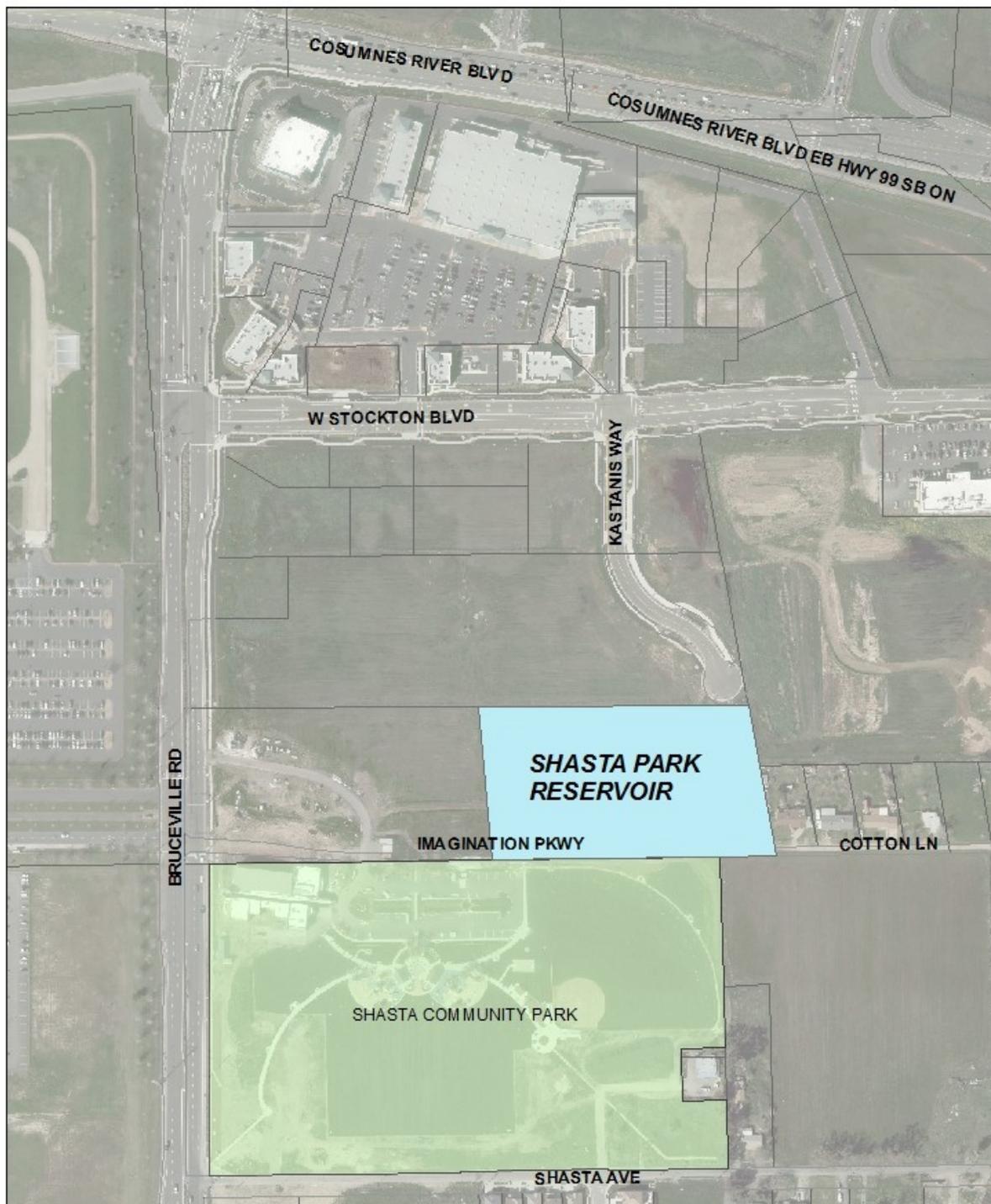
to exceed \$124,982, bringing the total Wood Rodgers agreement amount to \$755,382.

Item 2: Supplemental agreement No. 3 to the West Yost Associates contract will provide for modifications to the overall site electrical design to reflect current City standards, adjustments to the overall site civil layout to accommodate the design changes being made by Wood Rodgers, and revised artistic renderings of the project for public outreach purposes.

Approval of the proposed supplemental agreement no. 3 will authorize performance of these additional facility design services for an amount not to exceed \$76,000, bringing the total West Yost Associates agreement amount to \$506,388.

Final project design is anticipated to be completed in spring 2015, and then the phase 2 construction will be competitively bid. Staff will return to Council at a later date with the results of that process.

**LOCATION MAP
CITY OF SACRAMENTO
SHASTA PARK RESERVOIR-PROPOSED
Z14005400**



SUPPLEMENTAL AGREEMENT

Project Title and Job Number: Shasta Park Reservoir/Z14005400

Date: 2/3/15

Purchase Order #: 0000018807

Supplemental Agreement No.: 2

The City of Sacramento ("City") and Wood Rodgers ("Contractor"), as parties to that certain Professional Services Agreement designated as Agreement Number 2012-0654, including any and all prior supplemental agreements modifying the agreement (the agreement and supplemental agreements are hereafter collectively referred to as the "Agreement"), hereby supplement and modify the Agreement as follows:

1. The scope of Services specified in Exhibit A of the Agreement is amended as follows:

For additional scope of services included in Supplemental Agreement No. 1, see attachment.

2. In consideration of the additional and/or revised services described in section 1, above, the maximum not-to-exceed amount that is specified in Exhibit B of the Agreement for payment of Contractor's fees and expenses, is **increased/decreased** by \$124,982, and the Agreement's maximum not-to-exceed amount is amended as follows:

Agreement's original not-to-exceed amount:	<u>\$301,000</u>
Net change by previous supplemental agreements:	<u>\$329,400</u>
Not-to-exceed amount prior to this supplemental agreement:	<u>\$630,400</u>
Increase/decrease by this supplemental agreement:	<u>\$124,982</u>
New not-to exceed amount including all supplemental agreements:	<u>\$755,382</u>

3. Contractor agrees that the amount of increase or decrease in the not-to-exceed amount specified in section 2, above, shall constitute full compensation for the additional and/or revised services specified in section 1, above, and shall fully compensate Contractor for any and all direct and indirect costs that may be incurred by Contractor in connection with such additional and/or revised services, including costs associated with any changes and/or delays in work schedules or in the performance of other services or work by Contractor.
4. Contractor warrants and represents that the person or persons executing this supplemental agreement on behalf of Contractor has or have been duly authorized by Contractor to sign this supplemental agreement and bind Contractor to the terms hereof.
5. Except as specifically revised herein, all terms and conditions of the Agreement shall remain in full force and effect, and Contractor shall perform all of the services, duties, obligations, and conditions required under the Agreement, as supplemented and modified by this supplemental agreement.

Approval Recommended By:

Approved As To Form By:

 Project Manager
Approved By:

 City Attorney

 Contractor
Approved By:

Attested To By:

 City of Sacramento

 City Clerk



November 4, 2014

Job No. 8064.015

Mr. Brett Ewart, P.E.
City of Sacramento
1395 35th Avenue
Sacramento, CA 95822

Dear Mr. Ewartt:

**Subject: City of Sacramento Shasta Park Production Well and Pump Station
Change Order No. 2 Request**

In the progression of the drilling, construction, testing and above-grade design of the Shasta Park Production Well project, additional tasks were added to our original scope of work. Additional engineering tasks were associated with: higher well capacity, site reconfiguration, facility expansion, treatment alternatives and assessments, and disinfection alternatives assessment. Below are some of the added scope items to memorialize the added work conducted over the past five months.

Well-Related Activities

1. During the pilot borehole drilling, the Contractors' drilling rig experienced a catastrophic failure, which required the drilling rig to be removed from the project site. Significant delays in the project schedule resulted and a different drilling rig was mobilized by the Contractor. The Contractor changed out all crews from Texas and supervisory personnel from Colorado. This required additional pre-construction meetings and clarification of the scope of work and construction methods as no one on the crew had local drilling experience. The delays required additional on-site inspection and coordination with the Contractor while the new drilling rig was prepared and mobilized to the project site.
2. Following well construction, well development and testing indicated a void in the gravel envelope of the well structure. Voids cause uncontrolled sand production, which is grounds for rejection of the well under the contract requirements. In addition, the discharge required temporary confinement to allow solids to settle prior to discharging to the storm drain. The procedures to successfully consolidate the voids required an additional seven days of project coordination and oversight. Additional coordination with the Contractor was necessary to modify the well development plan and provide additional oversight to ensure the well satisfied the performance requirements of the contract.
3. After the well became acceptable with regard to sand production, it was apparent that the Shasta Park Well has a yield that could support a capacity significantly higher than the

design capacity of 1,500 gallons per minute (gpm). Wood Rodgers designed a plan to develop the deep well up to 5,000 gpm (with a recommended design capacity of 2,800 gpm) and provided project coordination and oversight.

4. The City of Sacramento approved the work plan to have the Contractor destroy the onsite shallow monitoring well. Wood Rodgers provided design, permitting assistance, oversight, and project coordination during the well destruction. This work included witnessing excavation eight feet below ground surface, the pumping of neat cement grout from the bottom of the well to ground surface, removing the upper eight feet of well casing, and backfilling of the excavation. Wood Rodgers also coordinated with the Sacramento County Environmental Health Department for project acceptance and completion.
5. Following well construction, the Contractor made accidental contact with the onsite deep monitoring well surface completion with heavy equipment. The contact required an additional work plan to be prepared and subsequent coordination with the Contractor and County to approve the surface completion repairs. Wood Rodgers provided onsite inspection during well repairs to ensure the Contractor's activities satisfied the well permit and County code. Additional coordination was required with the County and Contractor during the required repairs.
6. To determine if methane removal would be needed, Wood Rodgers retained Roadrunner Drilling and Pump Company of Woodland, California, to install a test pump to allow for capacity-specific and time-series sampling. Wood Rodgers obtained numerous samples for spilt analysis and provided the results of this methane testing in our Shasta Park Well Summary Report, dated October 22, 2014. This effort had \$19,150 of outside services for pumping equipment and water quality sampling.

Sub-Total for Additional Well-Related Services

Labor	\$13,832
<u>Outside Services</u>	<u>\$19,150</u>
Total	\$32,982

Engineering Pump Station Design-Related Activities

1. Increased groundwater capacity – an analysis was undertaken to evaluate the impact of increasing the facilities' capability to pump a build-out capacity of 5,000 gpm (2,800 gpm for the deep well and 2,200 gpm for the future intermediate well). This review looked at the sizing of the Well Pump and Motor, Aeration Facility, Filtration and Control/Chemical Building, and there was also an evaluation to determine if a production well in the intermediate aquifer(s) would require methane treatment. A site visit was conducted to collect a lab sample and to complete a visual inspection of the gas bubbles.
2. Provision for a minimum of four day storage of chlorine – with the larger overall groundwater pumping capacity and the previous design for 150 lb cylinders, concern was expressed by the City regarding a holiday weekend and having to send staff to the facility to change out cylinders due to less than four days of coverage. Wood Rodgers analyzed

five 150 lb cylinders daisy-chained, using one ton cylinders and designing a sodium hypochlorite system to ensure City staff would not be required to visit the site over a holiday weekend.

3. Change in Disinfection Storage – the decision to use one ton chlorine cylinders required evaluation of sprinklering the facility along with looking at secondary containment options, including using a Chlortainer and/or a Scrubber System with Heating Ventilation and Air Conditioning provisions. Code requirements were reviewed to evaluate the full impact of using the larger storage onsite.
4. Chlortainer Containment – review of the secondary containment included a site visit to the City of Benicia for a tour of their Chlortainer System. The research on the units was followed by another resizing of the Control/Chemical Building and evaluation of and site issues with the resizing related to chemical delivery or traffic into and out of the site.
5. Modified Design – design changes included: chlorine supply from one ton cylinders, layout of building to accommodate two one ton cylinders contained in chlortainers, fire sprinkler system, rotating filters, provisions for future methane treatment by aeration, upsizing of piping, upsizing of well pump and motor, stubbing appropriately for future, fluoride storage for four days to include a larger tank size and provisions for more dry storage.

Sub-Total for Additional Well Pump Station and Treatment-Related Services

Labor	\$20,115
Outside Services	\$15,835
Completed Services	\$35,950
<u>Design Services to Complete to 100%</u>	<u>\$56,050</u>
Total	\$92,000

Wood Rodgers is requesting a contract change order in the amount of \$124,982 to cover the additional work outlined above. We would be pleased to provide additional information supporting the additional work performed to date as well as items outside of our original scope of work.

Sincerely,



Lawrence H. Ernst, PG, CEG, CHG
Principal Hydrogeologist

Project Title and Job Number: Shasta Park Reservoir/Z14005400

Date: 02/03/2015

Purchase Order #: 0000018957

Supplemental Agreement No.: 3

The City of Sacramento ("City") and West Yost Associates ("Contractor"), as parties to that certain Professional Services Agreement designated as Agreement Number 2012-0790, including any and all prior supplemental agreements modifying the agreement (the agreement and supplemental agreements are hereafter collectively referred to as the "Agreement"), hereby supplement and modify the Agreement as follows:

1. The scope of Services specified in Exhibit A of the Agreement is amended as follows:

Contractor shall perform the additional services set forth in the Scope of Services attached hereto and incorporated herein by this reference.

2. In consideration of the additional and/or revised services described in section 1, above, the maximum not-to-exceed amount that is specified in Exhibit B of the Agreement for payment of Contractor's fees and expenses, is **increased** by \$76,000, and the Agreement's maximum not-to-exceed amount is amended as follows:

Agreement's original not-to-exceed amount:	<u>\$37,300</u>
Net change by previous supplemental agreements:	<u>\$383,388</u>
Not-to-exceed amount prior to this supplemental agreement:	<u>\$430,388</u>
Increase/decrease by this supplemental agreement:	<u>\$76,000</u>
New not-to exceed amount including all supplemental agreements:	<u>\$506,388</u>

3. Contractor agrees that the amount of increase or decrease in the not-to-exceed amount specified in section 2, above, shall constitute full compensation for the additional and/or revised services specified in section 1, above, and shall fully compensate Contractor for any and all direct and indirect costs that may be incurred by Contractor in connection with such additional and/or revised services, including costs associated with any changes and/or delays in work schedules or in the performance of other services or work by Contractor.
4. Contractor warrants and represents that the person or persons executing this supplemental agreement on behalf of Contractor has or have been duly authorized by Contractor to sign this supplemental agreement and bind Contractor to the terms hereof.
5. Except as specifically revised herein, all terms and conditions of the Agreement shall remain in full force and effect, and Contractor shall perform all of the services, duties, obligations, and conditions required under the Agreement, as supplemented and modified by this supplemental agreement.

Approval Recommended By:

Approved As To Form By:

Project Manager
Approved By:

City Attorney

Contractor
Approved By:

Attested To By:

City of Sacramento

City Clerk

SCOPE OF SERVICES

SHASTA PARK WATER FACILITIES

AMENDMENT NO 3

West Yost Associates (West Yost) will provide the following additional services to the City of Sacramento (City) for the Shasta Park Water Facilities Project (Project) final design. These services include electrical and instrumentation design services for the Project and additional design services for revising the site layout and associated mechanical details to accommodate the addition of well head treatment facilities related to providing additional well production capacity. A description of these services is presented below.

ADDITIOANL LANDSCAPE AND ELECTRICAL DESIGN SERVICES

ATEEM will provide additional design service, not included in the original scope work, which include: network equipment; revised site plan; new factory test specifications; room temperature sensors; new training specifications; wiring diagrams for the chlorine detector panel, gate, and security system. ATEEM will provide additional electrical (E-Series) drawings and process (P-Series) drawings for the water reservoir and booster pump station. ATEEM will coordinate with work by others for production of the process drawings for the water wells and associated water treatment facilities. See attached proposal by ATEEM Electrical Engineering dated February 03, 2015.

During development of the Project the City contracted with Callander Associates to prepare renderings of the proposed facility. Since completion of the originally rendering the project has change to include backwash tank, well head treatment facilities, large control building to accommodate the chemical feed system, and configuration of the water storage reservoir. Consequently, City staff has requested that the renderings be updated. Callander Associates is now under contract with West Yost to provide landscape design for the Project; therefore, we are requested additional budget to update the Project renderings.

ADDITIOANL DESIGN RELATED TO INCREASED WELL CAPACITY

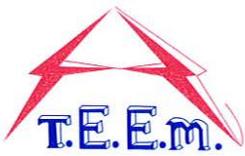
West Yost will revise the site layout and associated grading and mechanical plans to accommodate the increased control building size and additional filter. We will include an additional submittal at the 95 percent for City review. We will attend two meetings. One meeting to coordinate the revisions related to the additional well capacity, and one meeting to review the 95 percent review comments.

COMPENSATION

The table below provides the estimated level of effort for additional engineering services for the City of Sacramento Shasta Park Water Facility. The compensation limit for services performed under this amendment shall not exceed \$76,100.

Project Task	Fee Estimate, \$
Electrical & Instrumentation	63,400
Site Layout Plans	12,700
Total Fee Estimate	76,100

West Yost Associates PROJECT: Shasta Park Water Reservoir & Pump Station	PE/PS/PG I \$199	AE/AS/AG II \$169	SCADD \$120	ADM III \$99	Labor			Sub. ATEEM	Sub. CLA	Costs		
					Hours	Fee	Technology & Admin 6%			Sub. w/ markup 10%	Other Direct	Total Costs
Task 1	Additional Landscape and Electrical Service											
1.01 Electrical & Instrumentation Design	12				12	\$ 2,388	\$ 143	\$ 53,900		\$ 59,290		\$ 61,821
1.02 Landscape - Renderings	2				2	\$ 398	\$ 24		\$ 1,000	\$ 1,100		\$ 1,522
Subtotal, Task 1 (hours)	14	0	0	0	14							
Subtotal, Task 1 (\$)	\$ 2,786					\$ 2,786	\$ 167	\$ 53,900	\$ 1,000	\$ 60,390		\$ 63,343
Task 2	Additional Design Related to Increased Well Capacity											
2.01 Coordination	12				12	\$ 2,388	\$ 143					\$ 2,531
2.02 Revised Site Plan, Grading, & Mechanical	8	24	10	4	46	\$ 7,244	\$ 435					\$ 7,679
2.03 Meetings	12				12	\$ 2,388	\$ 143					\$ 2,531
Subtotal, Task 2 (hours)	32	24	10	4	70							
Subtotal, Task 2 (\$)	\$ 6,368	\$ 4,056	\$ 1,200	\$ 396		\$ 12,020	\$ 721					\$ 12,741
TOTAL (hours)	46	24	10	4	84							
TOTAL (\$)	\$ 9,154	\$ 4,056	\$ 1,200	\$ 396		\$ 14,806	\$ 888	\$ 53,900	\$ 1,000	\$ 60,390		\$ 76,084



February 3, 2015

Mr. Jeff Wanlass, P.E.
West Yost Associates
2020 Research Park Drive, Suite 100
Davis, CA 95618
E-mail: jwanlass@westyost.com

Location: City of Sacramento
Subject: Electrical Design Quotation & Scope of Work - Additional
Project: Shasta Park Water Facilities

We are pleased to submit this proposal for additional electrical design services for the City of Sacramento Shasta Park Water Facilities. The additional effort includes network equipment rack, Meadowview site plan, new Factory Test Specification, room temperature sensor, new training specification, wiring diagram for chlorine detector panel, gate diagrams, security diagrams, future camera pole/panel details, chemical pump control panel diagrams, separate security inputs & group together and revising site plan for future third filter.

The following is a summary of *A T.E.E.M.* electrical and instrumentation design services for the project:

1. The attached spreadsheet contains the list of additional drawings to be prepared:
 - a. Electrical (E-Series) drawings (6 Total)
 - b. Process (P-Series) drawings (1 Total)

All drawings will be produced with AutoCAD computer aided drafting.

2. The modifications required revising 12 entire drawings.
3. One (1) project meeting to discuss comments.

A T.E.E.M. not-to-exceed Design Services proposed fees are listed on the attached spreadsheet.

Note: The following are not included as part of this scope of work:

1. "Construction Services" such as submittal review, startup/testing, construction inspection, etc.
2. Engineering and P&ID drawings for the filter system.
3. PLC programming or SCADA graphics configuration are not included.

4. Security will be limited to door intrusion switches, motion sensor lights and conduits/panels for future camera system.

All prices include overhead, profit, insurance, and travel expenses for site visits to the jobsite. Currently *A T.E.E.M.* has \$2,000,000 general liability and \$2,000,000 professional liability insurance in force.

A T.E.E.M. is dedicated to meet your needs by providing specialized design, consultant and management services. Please give us a call if you have any questions or require further information.

Sincerely,

Sharon M. Kimizuka, P.E.
A T.E.E.M. Electrical Engineer

**A T.E.E.M. Electrical Engineering
2/3/2015**

Type of Service: Electrical Design Services - Additional
 Customer Name: West Yost Associates
 Location: City of Sacramento
 Project Name: Shasta Park Water Facilities

Project No.: _____ Work Order No.: _____ Task No.: _____

Field Eng = FE Office Eng = OE Technical = TA

Hourly Rate: \$170 \$150 \$110

Task	Description	FE	OE	TA	
Electrical Design Services					
1	E & I Drawings	0	220	120	= 46,200
2	Division 16 Specifications	0	32	14	= 6,340
3	Attend Project Meeting	8	0	0	= 1,360
		8	252	134	\$53,900

Total not to exceed cost: \$53,900

Notes: This Proposal does not include Construction Services, P&ID design for the filter system, PLC programming
PLC programming or SCADA graphic configuration. Security will be limited to door intrusion switches, motion sensor lights
and conduits/boxes for future camera system.

 Signature : Sharon M. Kimizuka, P.E. Date _____

Approval

 Signature Date _____
 CHARGE NO.:

A T.E.E.M.
ELECTRICAL & INSTRUMENTATION DRAWING LIST - REVISED
CITY OF SACRAMENTO
SHASTA PARK WATER FACILITIES

DRAWING	DESCRIPTION
E9	NETWORK EQUIPMENT RACK - ELEVATION & INTERCONNECTION DIAGRAM
E18	METHANE SUMP 2 PUMP ELEMENTARY DIAGRAM
E26	CAMERA POLE & PANEL INSTALLATION DETAIL
E28	CHEMICAL PUMP PANEL WIRING DIAGRAM
E29	CHLORINE RESIDUAL MONITOR PANEL WIRING DIAGRAM 1
E31 *	ELECTRICAL OVERALL SITE PLAN
E33 *	WELL & FILTER AREA ELECTRICAL PLAN
E40A *	CONTROL BUILDING ELECTRICAL REFLECTIVE PLAN
E40B *	CONTROL BUILDING ELECTRICAL BASE PLAN
E40C *	CONTROL BUILDING ELECTRICAL POWER PLAN
E40D *	CONTROL BUILDING ELECTRICAL HVAC PLAN
E51 *	PLC DIGITAL INPUT DIAGRAM 1
E52 *	PLC DIGITAL INPUT DIAGRAM 2
E53 *	PLC DIGITAL INPUT DIAGRAM 3
E54 *	PLC DIGITAL INPUT DIAGRAM 4
E55 *	PLC DIGITAL INPUT DIAGRAM 5
E56 *	PLC DIGITAL INPUT DIAGRAM 6
	PLC DIGITAL INPUT DIAGRAM 7
P11	SECURITY & GATE CONTROL SYSTEM BLOCK DIAGRAM
*	REVISE ENTIRE SHEET