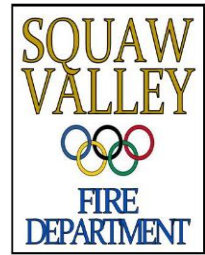




SQUAW VALLEY PUBLIC SERVICE DISTRICT



PlumpJack Squaw Valley Inn New Municipal Well Project Phase 2 - Well House and Equipping

DATE: September 26, 2017
TO: District Board Members
FROM: Dave Hunt, District Engineer
SUBJECT: Professional Services Agreement (PSA) with Farr West Engineering for Engineering Consulting Services for the design of Phase 2 – Well House and Equipping for the PlumpJack Well project.

BACKGROUND: The proposed PlumpJack Squaw Valley Inn Project includes the demolition of existing on-site structures to construct a multi-level hotel, two residential condominium buildings, and an underground parking garage. The proposed project also includes landscaping, Class I bicycle paths along the site's frontages, and pedestrian networks that would connect proposed buildings and on-site recreational amenities. Water, sewer, and drainage improvements would also be included to support the operations of the proposed project. The project Final Environmental Impact Report (FEIR) was approved by the Placer County Planning Commission at their February 23, 2017 meeting.

A new well has been identified as being necessary to provide water supply to the proposed project. The Draft Environmental Impact Report (September 20, 2016) (DEIR) identified two (2) potential well sites on the PlumpJack property. The final well location has been confirmed with a Well Site Approval memorandum from the Division of Drinking Water (September 12, 2017).

DISCUSSION: Renovation of the existing PlumpJack property is expected to start in May 2018. Construction of the project is anticipated to continue through 2019. Pursuant to the District's well development schedule, Phase 1 – Well Drilling and Testing is scheduled to occur in October/November 2017. The District recently entered into a construction contract with No-Cal Pump & Well Drilling to complete Phase 1.

The well development schedule spans over a 3-year period prior to the District accepting dedication. The first year being drilling and testing, the second year equipping the well for production and bringing the well online, and the third year concluding with hydrologic verification of well performance.

District staff is proposing to contract with Farr West Engineering to provide professional engineering services for the design of the Phase 2 improvements. Phase 2 will include installing a submersible pump and pitless adapter in the well, construction of a new well house for treatment and distribution of the well water, construction of a driveway, construction of an access path to the well head for future maintenance and repair, and landscape improvements. Farr West Engineering's scope of work includes providing plans and specifications to support the work described above.

Based on the well development schedule and construction timeframe the estimated overall schedule for drilling and dedicating the new well includes:

- Phase 1 - Drill, develop and test new well – October/November 2017
- Phase 2 – Design well house and equipping improvements – October 2017 – February 2018
- Construct Phase 2 improvements – Late summer 2018
- Bring new well online – October 2018
- Hydrogeologic well performance verification – Fall 2019

ALTERNATIVES:

1. Approval of the proposal from Farr West Engineering for engineering consulting services for the design of Phase 2 – Well House and Equipping improvements the PlumpJack Well project.
2. Do not approve the proposal from Farr West Engineering.

FISCAL/RESOURCE IMPACTS: This project will be funded from the District's Water Capital fund and reimbursed over time through payment of connection fees from new customers.

RECOMMENDATIONS: Staff recommends approval of the proposal from Farr West Engineering for providing engineering consulting services and recommends the General Manager be authorized to execute a Professional Service Agreement with Farr West Engineering in an amount not to exceed \$96,000.

ATTACHMENTS:

- Farr West Engineering – Scope of Work: SVPSD PlumpJack Well (September 19, 2017)

DATE PREPARED: September 20, 2017



September 20, 2017

Dave Hunt, P.E.
District Engineer
Squaw Valley PSD
P.O. Box 2026
Olympic Valley CA 96146

RE: SCOPE OF WORK: SVPSD – PLUMPJACK WELL

Dear Dave,

We are pleased to present you with this scope of work (SOW) for the Squaw Valley PSD (District) Plumpjack Well Project (Project). Farr West Engineering (Farr West) has been working with the District over the past few months with preliminary efforts leading into the Project consisting of coordination with stakeholders and preparing exhibits for the District's use. The District is moving forward with the Project and has requested Farr West to prepare this scope for the detailed design through bidding services.

The Project has been determined to consist of the Plumpjack Well house design and equipping after the drilling of the well has occurred. The Project is to include the civil, electrical, mechanical, structural, architectural, and controls design of a building of approximately 400 square feet, external well house, portable generator (not included in design), pitless well, well production of 250 gpm, and site work (yard piping and driveway). The District has provided its Well 2R as a reference for a District well house. These parameters are detailed further within the task breakdown designated as follows:

Design Services

- Task 1 – Project Management
- Task 2 – Sub-Consultants
- Task 3 – Detailed Design
- Task 4 – Bidding Assistance

This SOW does not include hydrogeologic services, survey, construction administration, or field inspection services.

DESIGN SERVICES

Task 1 – Project Management

Farr West will routinely review project progress and communicate project status on a regular basis. Communication will be through email and telephone. Project management tasks include, but are not limited to:

- Coordination with the District and consultants.

- Project administration includes monthly invoicing, filing, resource allocation, subconsultant management, and routine communications.
- Team coordination, including conference calls and internal meetings.
- Monitoring changes to the scope, budget, or schedule and developing change management strategies with the District.

Deliverables

The following deliverables will be submitted under this task:

- Project schedule.

Assumptions

- Efforts do not include preparation of regular status reports
- Project-related issues will be identified, communicated, and resolved.

Task 2 – Sub-Consultants

Objective

Provide supplemental support to peripheral technical components to contribute to the overall detailed design of the Project.

Approach

Activities under this task will include the following elements:

SCADA

Activities under this subtask will include the following elements:

- Meetings at the District – assumed at 1 meeting.
- Coordination with Farr West electrical and civil engineers.
- Perform an on-site radio survey to investigate site-to-site communications, and provide an outline with results and recommendations.

Structural & Architectural

Activities under this subtask will include the following elements:

- No meetings anticipated
- Develop preliminary building layout: floor plan, building section and elevations, exterior wall and roof finishes. Building anticipated to be basic two-slope, gable roof.
- Design plans and specifications.
- California Building Code analysis identifying building occupancy group, construction type, and existing and fire sprinkler requirements. Design will be in accordance with 2016 California Building Code.
 - Loading design
 - Structural system design including roof and shear wall.
 - Foundation systems
- Includes Title 24 Compliance.
- Opinion of probable cost.
- Coordination with Farr West.

Assumptions

The following assumptions apply:

- District will provide coordination with Developer for communications and to obtain required materials for design.
- Renderings are not included in this SOW.
- SCADA stamped design plans and specifications are not included in this SOW.
- SCADA integration and equipment will be part of a future scope.

Task 3 – Detailed Design

Objective

Preparation of plans and specifications for bidding purposes, as well as an opinion of probable construction cost for the Project. This task also includes gathering information necessary to complete the design of the Project.

Approach

Engineering and Design

Activities under this subtask will include the following elements:

- One (1) site visit with District and sub-consultants for on-site design kickoff meeting.
- One (1) meeting (at the District's office) are included in this task for a miscellaneous meeting requested by the District. This meeting does not include kickoff or design review meetings.
- Collection of existing utility information efforts are not included in this SOW. It is assumed that the Developer's engineer has collected all utility information within the project limits and has incorporated the information into their CAD design. This CAD design will be collected and utilized by Farr West.
- Collection of Developer materials from the District applicable to design including, but not limited to, CAD files, survey, geotechnical reports, architectural requirements, and landscaping design.
- Review of existing reports and data received to determine design and construction requirements.
- Coordination with the District staff on key design issues, such as specific well design requirements, chemical components, sequence of construction, pavement reconstruction limits, etc.
- Permitting efforts will be performed by the District.
- Mechanical design will be performed by Farr West to include ventilation calculations for exhaust via louvers, floor drains, ceiling heater sizing, hot water heater, tepid water eyewash, and other components similar to Well 2R.
- Electrical Design Components
 - Field visit and review of existing records and documents
 - Preliminary design work; equipment sizing; index of sheets; panel, conduit, and cable schedule; fixture schedule; coordination with equipment suppliers and Controls.
 - Detailed design (load calculations, circuiting, panel schedules, supplier coordination, plans, and specifications, etc.)
 - SCADA engineering and design, development of I/O lists, network diagrams, control descriptions, conduit lists, and instrumentation recommendations.
 - Equipment recommendation specifications
 - Review for compliance with master plan
 - Review of overall project specifications and drawings prior to bid
 - Includes Title 24 Compliance.
- 30% Design Submittal shall include:
 - Basic preliminary elements utilized for District's communications with the Developer.
 - Include basic building layout, location, and yard piping.
- 90% Design Submittal shall include:
 - Submission of 90% Plans, and Specifications, and Opinion of Probable Construction Costs to the District for final review and comment.
 - One (1) 90% design review meeting at Farr West.

- 100% Design Submittal shall include:
 - Finalized Plans, Specifications, and Opinion of Probable Construction Cost submitted to the District for public bid processing.
- Quality assurance and quality control of deliverables to the District.

Deliverables

The following will be delivered under the Detailed Design task:

- Submittal of the 90% set for District review and comment will include individual PDF files of the Plans (11"x17"), Technical Specifications, and Opinion of Probable Construction Cost.
- Submittal of the 100% set used for bidding will include individual PDF files of the Plans (11"x17"), Technical Specifications, and Opinion of Probable Construction Cost.
- AutoCAD files of final design.

Assumptions

The following assumptions apply to the Detailed Design task:

- Farr West assumes a total of four (4) meetings: 1 project design kickoff (at District), 2 design review (1 at Farr West and 1 at District), and 1 miscellaneous (at District).
- The Developer's CAD design will be delivered to Farr West for design efforts. This information will include all existing utility information.
- The District is responsible for obtaining any required off-site right of entries and access into properties.
- Design to include pump room, electrical room, and chemical room. All rooms will be heated with electric heaters for freeze protection and mechanically ventilated for cooling.
- Arc flash is not a part of this SOW.
- Generator design is not included. Assumed portable generator not within structure.
- Building cooling is not included.
- Fire sprinkler design is not included.
- Corrosion protection is not part of this SOW.
- A water hammer analysis is not part of this SOW.
 - Vacuum valves will be included, but surge anticipator, blow off, or surge tanks calculations are not included.
- The District will perform all permitting efforts including, but not limited to:
 - The District will pay all required application and permit fees or deposits.
 - The District will coordinate with permitting entities for project related submittals, approvals, and overall correspondence.
- Geotechnical, survey, hydrogeology, landscape design, and any other design parameter that is not detailed in this Scope is not included.

Task 4 – Bidding Assistance

Objective

Assists the District in the bid solicitation process.

Approach

Activities under this task will include the following elements:

- District provided services:
 - Farr West will advertise the project electronically through its online Bid Room, put notices in local plan rooms, and maintain a plan holder's list.
 - District will provide advertisement in local newspapers, any other mandated advertisement requirements, and be responsible for any associated fees.

- Farr West will assist the District in preparing a pre-bid agenda.
- Attend one (1) pre-bid conference at the District office. Conference to be conducted by District.
- Answer questions from bidders (2 RFIs) and prepare two (2) addenda, as required (shared effort with District).
- District will perform bid opening at its office without Farr West attendance.
- Farr West will prepare a bid tabulation, but no contractor checks nor recommendation for award.

Deliverables

The following deliverables will be submitted under this task:

- RFI and Addenda, as required.
- Bid tabulation

Assumptions

The following assumptions apply:

- District to provide bid solicitation requirements and associated fees
- Two (2) addenda
- Farr West to attend pre-bid conference at the District's office
- Construction Administration and Inspection are not included in this SOW.

This SOW is being provided to the District for reference and attachment to the District's master agreement for consulting services. The work shall be billed on a time and materials basis, including travel, not to exceed the amount indicated in Attachment B – Budget. We reserve the right to adjust and transfer task budgets as necessary to accomplish the overall project objective without exceeding the total project budget. Hourly rates and other expenses shall be billed on a time and material basis in accordance with Attachment C. **Note:** The schedule for the Project spans over two calendar years' time. Therefore, rates for work to be performed in 2018 (100% design efforts and later) have a 3% increase to the 2017 rates.

We appreciate the opportunity to present this SOW to the District for the District's Plumpjack Well Project. Please contact us with any further questions.

Sincerely,



Matt Van Dyne, P.E.
Principal Engineer



Greg Lyman, P.E.
Principal Engineer

Enclosure: Attachment A – Anticipated Schedule
 Attachment B – Budget
 Attachment C – 2017 Hourly Rate Schedule
 Attachment D – Sub-Consultant Scopes of Work

ATTACHMENT “A” – SCHEDULE

Squaw Valley PSD Plumpjack Well Project

SCHEDULE

The following is a proposed schedule to be used as a general guideline only:

Award of Scope:	September 2017 Board Meeting
Kickoff Meeting	October 2017
Complete 30% Design for District Review:	October 2017
Receive District Comments:	October 2017
Complete 90% Design for District Review:	November 2017
Receive District Comments:	December 2017
Complete 100% Design:	January 2018
Advertise for bids:	April 2018

ATTACHMENT “B” – BUDGET

Squaw Valley PSD Plumpjack Well Project

BUDGET

The estimated Project budget is as follows:

Task 1	Project Management	\$2,520
Task 2	Sub-Consultants	\$31,895
Task 3	Detailed Design (Civil and Electrical)	\$55,460
Task 4	Bidding Assistance	\$5,937
	TOTAL:	\$95,812

**Squaw Valley PSD
Plumpjack Well
Engineering Fee Estimate**

	Principal Civil Engineer -	Principal Civil Engineer -	Electrical Engineer	Senior Engineer -	Engineer I-	Designer II -	Project Assistant -	Administrator III -	Total Labor		Expenses ^(a)	Subconsultant #1	Subconsultant #3	TOTAL	
TASKS	Rate (\$/hr)	\$140	\$140	\$150	\$130	\$100	\$100	\$70	\$80	Hours	(\$)	(\$)	(\$)	(\$)	(\$)
1.0 Project Management															
Project Coordination and Management			7							7	\$980				\$980
Monthly Reports/Progress Billings			7					7		14	\$1,540				\$1,540
Subtotal			14					7		21	\$2,520				\$2,520
2.0 Subconsultants															
SCADA			6		4					10	\$1,360		\$8,000		\$9,360
Structural & Architectural			6		4					10	\$1,360			\$21,175	\$22,535
Subtotal			12		8					20	\$2,720		\$8,000	\$21,175	\$31,895
3.0 Detail Design															
Civil and Electrical															
Kickoff Meeting			4		4					8	\$1,080	\$66			\$1,146
Miscellaneous Meetings (c)			6		6					12	\$1,620	\$66			\$1,686
Design Review Meeting (d)			10		10					20	\$2,700	\$66			\$2,766
30% Design Drawings		2	12	24	24	18	18			98	\$12,280				\$12,280
90% Design Drawings		4	12	36	36	22	28	4		142	\$17,600				\$17,600
100% Design Drawings		4	8	24	20	14	20	4		94	\$11,907				\$11,907
Technical Specifications, Opinion of Probable Cost		4	8	12	20	12		8		64	\$8,075				\$8,075
Subtotal		14	60	96	120	66	66	16		438	\$55,262	\$198			\$55,460
4.0 Bidding Assistance															
Organize and Conduct Pre-Bid Meeting					4	8				12	\$1,360	\$66			\$1,426
RFI's, Questions During Bidding, Addendum (e)			4		12	12				28	\$3,420				\$3,420
Bid Opening, Tabulation, and Recommendation					2	8				10	\$1,092				\$1,092
Subtotal			4		18	28				50	\$5,871	\$66			\$5,937
TOTAL		14	90	96	146	94	66	16	7	529	\$66,373	\$264	\$8,000	\$21,175	\$95,812

- (a) Expenses include travel, mileage, per-diem, lodging, reproduction costs, etc.
(b) Obtain record drawings from District (water and sewer), All other utilities are assumed to be within Developers CAD data; All information gathered from record drawings shall be included in design plans
(c) One (1) miscellaneous meeting at District
(d) Assumes attendance at one (1) 50% design review meeting at District, and one (1) misc. progress meeting with District staff at Farr West
(e) Assumes 2 addenda

ATTACHMENT “C” – FARR WEST RATE SCHEDULE

**Squaw Valley PSD
Plumpjack Well Project**

FARR WEST 2017 RATE SCHEDULE



2017 RATE SCHEDULE

Title	Hourly Rate	Title	Hourly Rate
Principal Engineer	\$140	Planner	\$125
Senior Engineer	\$130	Building Inspector II	\$80
Engineer III	\$120	Building Inspector I	\$65
Engineer II	\$110	Designer II	\$100
Engineer I	\$100	Designer I	\$90
Engineer in Training II	\$90	GIS Analyst II	\$125
Engineer in Training I	\$80	GIS Analyst I	\$110
Senior Hydrogeologist	\$140	GIS Specialist	\$90
Hydrogeologist III	\$120	GIS Technician	\$80
Hydrogeologist II	\$100	Water Rights Specialist III	\$150
Hydrogeologist I	\$80	Water Rights Specialist II	\$125
Electrical Engineer	\$150	Water Rights Specialist I	\$100
Environmental Scientist	\$110	Water Rights Technician III	\$90
Construction Inspector III	\$95	Water Rights Technician II	\$80
Construction Inspector II	\$85	Water Rights Technician I	\$70
Construction Inspector I	\$75	Professional Surveyor	\$125
Project Assistant	\$70	Survey Technician II	\$85
Admin III	\$80	Survey Technician I	\$70
Admin II	\$65	1 Man Survey Crew	\$125
Admin I	\$50	2 Man Survey Crew	\$165
Intern	\$45	3 Man Survey Crew	\$240

Other Fees and Charges:

1. All direct project expenses, including subconsultants, will be billed at actual cost plus 15%.
2. Vehicles used for travel to meetings, deliveries, etc. will be charged at the current federal reimbursement rate.
3. A daily rate of \$40 will be charged for field personnel staying overnight to cover meals.
4. An overtime surcharge of 25% will be applied to the hourly rates of non-salaried employees for authorized overtime work.
5. Different survey and construction inspection labor rates will apply on prevailing wage projects. Rates for prevailing wage projects will be provided on a case by case basis.

ATTACHMENT “D” – SUB-CONSULTANTS

Squaw Valley PSD Plumpjack Well Project

SUB-CONSULTANT SCOPES OF WORK

Attached are the following sub-consultant scopes of work:

1. Sierra Controls, LLC
2. Tobey-Wade Consultants

September 19, 2017

Mr. Matt Van Dyne, P.E.
Principal Engineer
FARR WEST ENGINEERING
5510 Longley Lane
Reno, Nevada 89511

**RE: SQUAW VALLEY PSD PLUMPJACK WELL BUILDING
PROPOSAL FOR STRUCTURAL ENGINEERING SERVICES**

Dear Mr. Van Dyne:

It is our pleasure to submit this revised proposal for professional structural engineering services associated with the design of the above-referenced well building. Our scope of services relative to this project is presented below.

Description

It is our understanding that the well building will be similar to the SPSD Well 2R building that was constructed in 2012. According to the Well 2R building plans, the building is a single story masonry structure with a gabled roof system. The exterior wall finishes consist of stone veneer and a non-insulated stucco system. The roof has asphalt shingles as well as snow retention rails and openings for equipment access and a chimney for equipment exhaust.

For the proposed building, we have assumed that pre-manufactured timber trusses will be used for the roof system, although there may be areas of custom framing at the openings. The floor system will be a concrete slab on grade which will have a depressed pit. The foundations will consist of reinforced concrete spread footings. We have also assumed that the exterior finish will be based on an insulated stucco system to meet energy code requirements.

Lateral stability for the structure will be provided by the roof diaphragm working in conjunction with the exterior shear walls. The masonry walls will be anchored to the roof diaphragm to resist out-of-plane lateral forces.

Scope of Services

Farr West Engineering (FWE) has asked Tobey-Wade Consulting/Lumos to provide structural/architectural design services and to prepare construction documents which can be used for bid solicitation and permitting.

Our services are more specifically described as follows:

1. Our first task will be to work with FWE to develop a floor plan, sections and building elevations showing the overall dimensioning, interior layout, door/louver locations and exterior wall and roof finishes. These drawings can be submitted to the owner for their review and approval. Upon receipt of the owner's approval, the drawings can be used as backgrounds by other consultants for their work.

A code analysis will be prepared to identify the building's occupancy group and construction type as well as the exiting and fire sprinkler requirements. The results of the code analysis will be shown on the floor plan drawing.

2. Once the schematic design has been approved, a structural design analysis will be conducted. The design analysis will be in accordance with the requirements of the 2016 California Building Code and will address:
 - The primary structural systems including the roof, floor slab, and walls will be designed for gravity loads, including uniform and drifting snow loads. The snow retention system will be specified.
 - The primary structural systems including the roof diaphragm and shear walls will be designed for lateral wind and seismic forces. The exterior walls will be designed for out-of-plane lateral wind and seismic forces.
 - The foundation system will be designed for the loads imposed by the building superstructure. A generator pad as well as equipment pads will be detailed. The floor slab, pits and sumps will be designed to accommodate drainage.
 - Upon completion of the building analysis, structural drawings describing the results of our design will be prepared. The drawings will include floor and foundation plans, roof layout and roof framing plans, exterior wall elevations and sections, foundation details, roof framing details and miscellaneous details. It is anticipated that up to 14 drawings will be prepared.
3. Tobey-Wade will provide technical specifications addressing the structural materials, roofing, insulation, doors and building finishes.
4. We will attend a design kick-off meeting with FWC as well as periodic design team coordination meetings.
5. An engineer from Tobey-Wade Consulting will seal the drawings and design analysis for submittal to the governing jurisdiction. Any structural plan review comments which might be issued by the building department will be addressed. The "Issued for Construction" drawings will be provided to Farr West Engineering in AutoCAD format.
6. Special Inspection and Energy Compliance forms will be prepared for submittal to the governing jurisdiction.
7. Upon completion of the design, an opinion of probable construction cost for the structural and architectural systems will be prepared.
8. We will be available to assist in the preparation of addenda during the bidding phase.

FARR WEST ENGINEERING

Mr. Matt Van Dyne, P.E.

Page 3 of 3

Compensation

Our services will be performed for a fee of \$19,250. Should this proposal be acceptable, please issue an agreement for our services. The work can be scheduled upon receipt of your authorization.

Assumptions

In preparation of this proposal, the following assumptions have been made:

- Energy compliance verification will be based on an approved energy analysis software with input from the mechanical engineer.

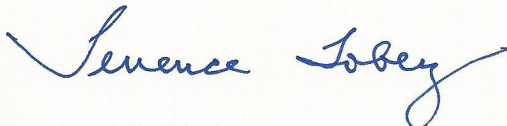
Additional Services

The following services have not been specifically included in our scope of services. However, if added to our scope, they can be provided on a Time and Expense or other negotiated basis:

- a. Design of site structures such as retaining walls, screen walls, box culverts and light standard foundations.
- b. Meetings at the owner's offices or onsite.
- c. Construction services such as review of submittals and field visits to review the construction.

Tobey-Wade Consulting appreciates the opportunity to provide this proposal and we look forward to working with you. Please feel free to call me should you have any questions relating to this proposal.

Sincerely,
TOBEY-WADE CONSULTING



TERRENCE TOBEY, P.E., S.E.
Principal Structural Engineer
California Structural Engineer SE 3323