



WRP-10 Existing Low Pressure Non-Potable Water Connections Improvement Project

Proposal



Prepared By:
KRIEGER & STEWART
Engineering Consultants

November 2024



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November 18, 2024

000-6.129A

Jignesh Ladhawala, Senior Sanitation Engineer
Coachella Valley Water District
Engineering Department
75-515 Hovely Lane East
Palm Desert, CA 92211

Electronic Submittal via PlanetBids

Subject: Engineering Services Proposal for WRP-10 Existing Low Pressure
Non-Potable Water Connections Improvement Project

Dear Mr. Ladhawala:

We appreciate the opportunity to submit our proposal to Coachella Valley Water District (CVWD) to provide engineering services for subject project pursuant to the PlanetBids invitation (Request for Proposals (RFP) and Addendum No. 1). Our proposal is divided into the following sections:

- Section 1.** General Information
- Section 2.** Project Team Qualifications
- Section 3.** Project Understanding and Approach
- Section 4.** Fee Proposal
- Section 5.** Project Schedule

As a result of our experience in providing similar engineering services to numerous other public agencies in Southern California and particularly to CVWD, we have a thorough understanding of CVWD's expectations and requirements regarding design of the **WRP-10 Existing Low Pressure Non-Potable Water Connections Improvement Project**.

Krieger & Stewart, Incorporated (K&S) appreciates the opportunity to submit our proposal to Coachella Valley Water District (CVWD) to provide engineering services for subject project pursuant to the PlanetBids invitation (Request for Proposals (RFP)). Our proposal is outlined as shown in the Table of Contents as requested in the RFP.

We hereby acknowledge receipt of Addendum No. 1 to the Request for Proposals (RFP) as posted on PlanetBids.

As a result of our experience in providing similar engineering services to numerous other public agencies in Southern California and particularly to CVWD, we have a thorough understanding of CVWD's expectations and requirements regarding preliminary and final design for the **WRP-10 Existing Low Pressure Non-Potable Water Connections Improvement Project**.

As demonstrated in our proposal, **K&S is uniquely qualified to lead our team** of consultants to provide engineering services for subject project. Namely, **our project team members are well known to CVWD Engineering, Operations, and Maintenance personnel**, and have comprehensive and detailed knowledge of CVWD's guidelines. **Having recently completed preliminary and final designs for a number of**



Jignesh Ladhawala, Senior Sanitation Engineer
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CVWD projects, including the following pipelines with golf course connections, we will require no time to "get up to speed" on any project component:

- FY 2024-2025 Non-Potable Water Pipeline Connection Projects
- FY 2020-2021 Non-Potable Water Onsite Pipeline Projects
- Low Pressure Non-Potable Water Connection Project
- Emerald Desert RV Resort Non-Potable Water Connection Project
- Marriott Desert Springs Non-Potable Water Connection Project
- Marriott Shadow Ridge Non-Potable Water Connection Project
- Indian Springs Golf Club Non-Potable Water Connection Project
- Desert Falls Country Club Non-Potable Water Connection Project
- Rancho La Quinta Golf Course Connection Project
- Oasis Country Club Non-Potable Water Connection Project
- Palm Desert Resort Non-Potable Water Connection Project
- Woodhaven Country Club Non-Potable Water Connection Project
- Bermuda Dunes Country Club Non-Potable Water Connection Project
- La Quinta Irrigation Distribution Improvement Project
- Madison Club - Avenue 54 Meter Connection Project

K&S has extensive experience providing engineering services for virtually all types of public works and water/wastewater related projects, from the planning stages through construction, including numerous projects for various local public agencies. Specifically, K&S has provided planning, design, and construction engineering services for:

- **Over 4,500,000 linear feet of pipelines** (water and recycled water pipelines, sewers, and force mains), **with diameters up to 72"** and working pressures up to 350 psi, nearly all for public agency clients

Our **key team members have a combined 112 years of experience at Krieger & Stewart**. Our team has a thorough understanding of the Project and its challenges, and is ready to commence providing services immediately. We are available to discuss our proposal and associated fee estimate with you at your convenience; please contact me at the address and telephone number shown hereon or by email at jmacpeek@kriegerandstewart.com.

Sincerely,

KRIEGER & STEWART, INCORPORATED


Joshua P. MacPeck
Vice President

JPM/lge
000-6P129-PRO

Attachment: Proposal



SECTION 1 – GENERAL INFORMATION

KEY PERSONNEL AVAILABILITY AND COMMITMENT TO COACHELLA VALLEY WATER DISTRICT (CVWD)

Krieger & Stewart, Incorporated (K&S) staff, teamed with **Underground Solutions, Inc.** for potholing services and **Lawyers Title** for preliminary title reports, **will provide the District the expertise necessary for a successful project.**

Our key personnel members are available to commence work immediately and will continue diligently through project completion. After assignment of a project, Krieger & Stewart is **100% committed** to meeting the project schedule requirements. In addition, we will adhere to the following:

- If the project falls behind schedule, we will provide details to CVWD's project manager on how we intend to get the project back on schedule.
- Team members will work overtime with no increase in hourly rate, as necessary to expedite our services in a manner that does not expose CVWD to any unnecessary delays. If necessary, we will assign additional personnel to return the project to the original schedule.
- No key personnel will be removed or replaced from the project without prior written consent of CVWD.

RESPONDENT/CONTACT INFORMATION

Legal Name: Krieger & Stewart, Incorporated

Addresses:

Office/Physical: 3602 University Avenue,
Riverside, CA 92501

Mailing: 3890 Orange Street #1509,
Riverside, CA 92502

Telephone: (951) 684-6900

Website: www.kriegerandstewart.com

Contact Person: Joshua P. MacPeck, Vice President

Email: jmacpeek@kriegerandstewart.com





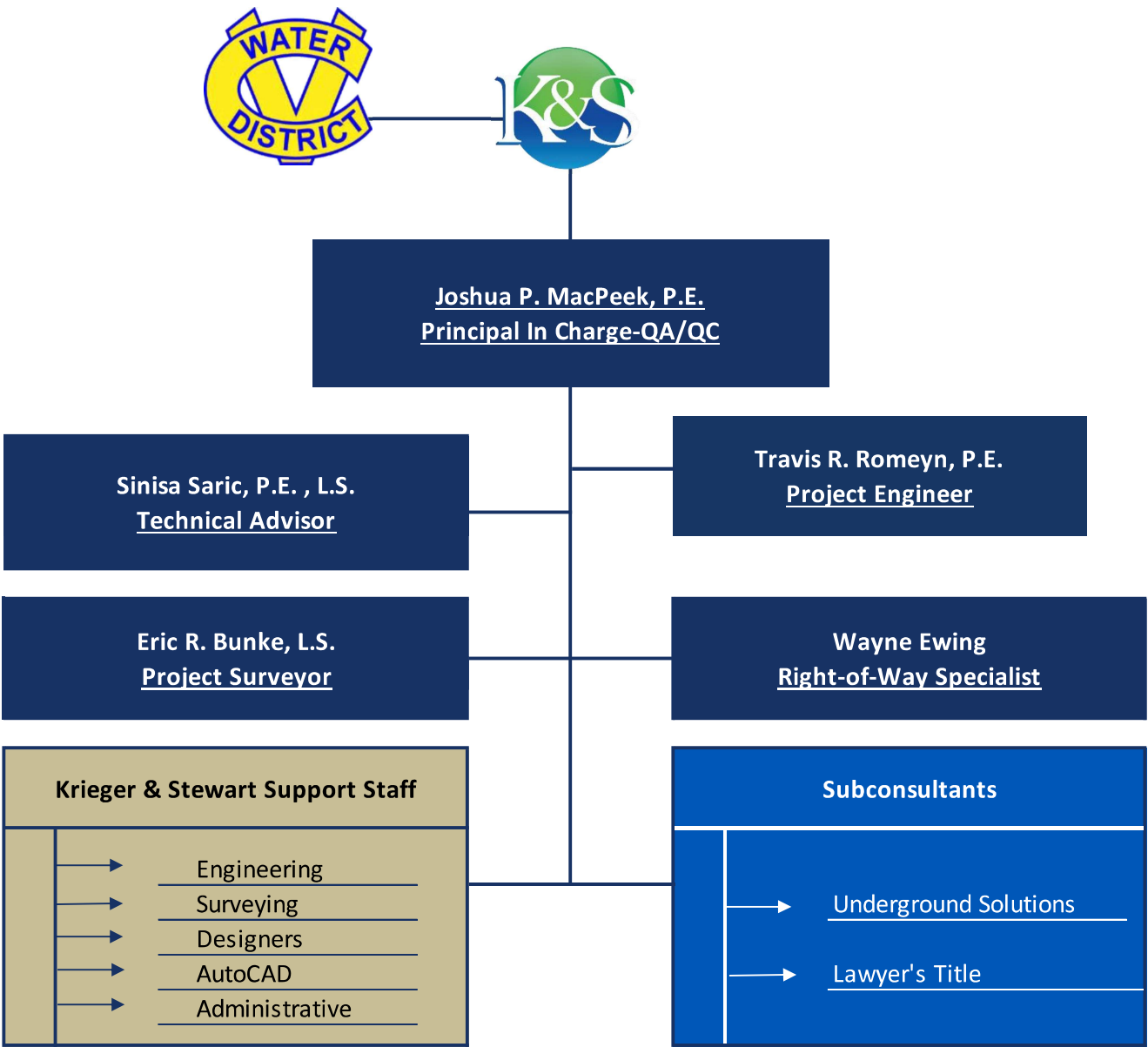
SECTION 2 – PROJECT TEAM QUALIFICATIONS

PROJECT TEAM

The Team section of our proposal presents K&S's relevant experience and project team. Our team consists of **highly qualified** individuals and subconsultants **familiar** with each other and with CVWD standards to **eliminate the learning curve** and **provide** for a **successful project**. Our team members are available to commence work immediately and will continue diligently through project completion.

*We believe **our team's** combined **experience** with **similar facilities (pipelines and flow control stations)** and especially our experience providing services for Coachella Valley Water District makes us uniquely qualified, and has allowed us to develop the **specific and thorough understanding and approach** required for successful completion of **this project**.*

As shown below, we have assembled a highly-qualified team of K&S staff members and subconsultants.





RELEVANT TEAM EXPERIENCE

The following table provides a **sampling** of our team's experience with projects having similar components, essential considerations, and/or services. Resumes for these team members are attached at the end of this section.

Project and Relevant Characteristics	Similar Project Components/Challenges					
	Pipeline	Flow Control Stations	Right of Way Documents	Surveying	Detailed Sequence of Work	Utility Interferences / Potholing
<p>Krieger & Stewart designed the following projects within the last five (5) years, most of which included pipelines and flow control stations; therefore, our staff has specific and thorough understanding and knowledge of CVWD's project and makes us uniquely qualified.</p>						
<p>CVWD's FY 2024-2025 Non-Potable Water Pipeline Connection Projects: The project consists of designing approximately 34,000 LF of ductile iron (offsite) and PVC (onsite) pipelines, including 8,942± LF of 12" offsite and onsite pipe and appurtenances; 5,434± LF of 24" offsite pipe and appurtenances; 19,336± LF of 30" offsite pipe and appurtenances; 532± LF of 36" offsite pipe and appurtenances; and associated flow control stations (under design).</p> <p>Key Project Team Members also on this Project: <i>Josh MacPeek (PIC); Sinisa Saric (PM); Eric Bunke (PS), Wayne Ewing (RW)</i></p>	✓	✓	✓	✓		
<p>CVWD's FY 2020-2021 Non-Potable Water Onsite Pipeline Projects: Redesign of eight (8) non-potable water connections to provide non-potable water for irrigation purposes to seven (7) locations. The project consists of 3,350± LF of 12" C909 PVCO pipe, 1,400± LF of 10" C909 PVCO pipe, 7,070± LF of 8" C909 PVCO pipe, 3,270± LF of 6" C909 PVCO pipe, appurtenances; and flow control stations (awaiting construction).</p> <p>Key Project Team Members also on this Project: <i>Josh MacPeek (PIC); Sinisa Saric (PM); Eric Bunke (PS), Wayne Ewing (RW)</i></p>	✓	✓	✓	✓		
<p>CVWD's WRP 10 T-1 Pump Station Replacement and T-2 Pump Station Modifications: High Pressure Zone 13,200 gpm capacity; Low Pressure Zone: 11,500 gpm capacity; 5 MG lined and covered equalization basin; pump structure with two separate wet wells and a splitter box, electrical instrumentation and controls (under construction).</p> <p>Key Project Team Members also on this Project: <i>Josh MacPeek (PM); Sinisa Saric (TA); Eric Bunke (PS), Wayne Ewing (PE)</i></p>	✓			✓	✓	
<p>CVWD's Low Pressure Non-Potable Water Pipeline Improvement Project: Design and construction of 7,000± LF of 36" ductile iron pipeline and appurtenances, including connections to existing system (completed 2022).</p> <p>Key Project Team Members also on this Project: <i>Sinisa Saric (PE); Eric Bunke (PS)</i></p>	✓			✓	✓	

Team Legend: Project Manager (PM); Project Engineer (PE); Project Surveyor (PS), Right-of-Way Specialist (RW), Technical Advisor (TA)





Project and Relevant Characteristics	Similar Project Components/Challenges					
	Pipeline	Flow Control Stations	Right of Way Documents	Surveying	Detailed Sequence of Work	Utility Interferences / Potholing
CVWD's FY 2017-2018 Non-Potable Water (NPW) Pipeline Connection Projects: Design and construction of a total of nine (9) non-potable water connections that will provide non-potable water for irrigation purposes from WRP 10 to four (4) existing golf courses. The project consists of approximately 5,300 LF of 36", 8,700 LF of 24", 5,000 LF of 18", and 6,900 LF of 12" zinc-coated ductile iron pipe (DIP); 7,500 LF of 12" PVC pipe; four (4) flow control stations ; and four (4) lake discharge structures (completed 2023) Key Project Team Members also on this Project: Sinisa Saric (PE); Eric Bunke (PS); Wayne Ewing (RW)	✓	✓	✓	✓	✓	
CVWD's Rancho La Quinta Golf Course Connection Project: Preparation of contract documents, bid phase support, and engineering services during construction; connection of non-potable water connection, flow control station , and lake discharge (completed 2019). Key Project Team Members also on this Project: Sinisa Saric (PE); Eric Bunke (PS)	✓	✓		✓	✓	✓
CVWD's Bermuda Dunes Country Club Non-Potable Water Connection Project: Preparation of contract documents for 10,500± LF of 18" and 12" ductile iron pipelines and appurtenances: connection to existing system, flow control stations , and lake discharge (completed 2020). Key Project Team Members also on this Project: Sinisa Saric (PE); Eric Bunke (PS)	✓	✓		✓	✓	
CVWD's 2018/2019 Non-Potable Water Golf Course Connection Projects: Construction of three non-potable water connections to provide non-potable water for irrigation purposes to three existing golf courses; 5,300± LF of 36" DI pipe, 6,500± LF of 24" DI pipe, 4,775± LF of 18" DI pipe, and 6,000± LF of 12" PVC pipe; three flow control stations . Key Project Team Members also on this Project: Sinisa Saric (PE); Eric Bunke (PS)	✓	✓		✓	✓	
CVWD's 2015 Non-Potable Water Golf Course Connection Projects: Construction of five non-potable water connections to provide non-potable water for irrigation purposes to four existing golf courses; 3,170± LF of 18" PVC pipe and 4,100± LF of 12" PVC pipe; five flow control stations . Key Project Team Members also on this Project: Sinisa Saric (PE); Eric Bunke (PS)	✓	✓		✓	✓	

Team Legend: Project Manager (PM); Project Engineer (PE); Project Surveyor (PS), Right-of-Way Specialist (RW), Technical Advisor (TA)



**COACHELLA VALLEY WATER DISTRICT
WRP-10 EXISTING LOW PRESSURE NON-POTABLE
WATER CONNECTION PROJECT**

**KRIEGER & STEWART, INCORPORATED
STAFF RESUME**

**JOSH P. MACPEEK
PRINCIPAL IN CHARGE**

Years of Experience:	28	Years at Krieger & Stewart:	26
License:	California Registered Civil Engineer No. 62220		
Education:	Bachelor of Science in Civil Engineering, University of Arkansas		
Professional Summary:	<p>MacPeek has considerable experience in the design, construction, and startup of sewer lift stations, booster stations, recycled water, water, and wastewater treatment plants, pipelines, and water storage reservoirs with projects ranging in costs from \$500K to \$55M.</p> <p>MacPeek has considerable experience serving as a Project Manager and Project Engineer in providing design and construction engineering for sewage lift stations, booster stations, water, and wastewater treatment plants for public agencies. MacPeek's typical duties include supervision of staff, performance of hydraulic analyses and modeling, performance of preliminary design (including facility sizing and siting), preparation of final contract documents (including plans and specifications), coordination with clients' staff, quality assurance (including final checking and contract document approval), and managing all aspects of construction engineering services.</p>		

Relevant Project Experience:

1. Coachella Valley Water District's FY 2024-2025 Non-Potable Water Pipeline Connection Projects

The project consists of designing approximately 34,000 LF of ductile iron (offsite) and PVC (onsite) pipelines, including:

- 8,942± LF of 12" offsite and onsite pipe and appurtenances.
- 5,434± LF of 24" offsite pipe and appurtenances.
- 19,336± LF of 30" offsite pipe and appurtenances.
- 532± LF of 36" offsite pipe and appurtenances.
- Associated flow control stations.
- Preparation of legal descriptions and plats for easements.
- Preparation of contract documents and bid phase support.

2. Coachella Valley Water District's Quarry Country Club Non-Potable Water Golf Course Connection

- Design of 3,500 gpm pump station with lake intake screening facility.
- Design of 3,500 LF of PVC pipeline.

3. Coachella Valley Water District's FY 2020-2021 Onsite Pipeline Projects

- Redesign of eight (8) non-potable water connections to provide non-potable water for irrigation purposes to seven (7) locations.
- 3,350± LF of 12" C909 PVCO pipe and appurtenances.
- 1,400± LF of 10" C909 PVCO pipe and appurtenances.
- 7,070± LF of 8" C909 PVCO pipe and appurtenances.
- 3,270± LF of 6" C909 PVCO pipe and appurtenances.
- Associated flow control stations.
- Preparation of legal descriptions and plats for easements.
- Preparation of contract documents and bid phase support.

4. Coachella Valley Water District's WRP 10 T-1 Pump Station Replacement and T-2 Pump Station Modifications

- Design of new, replacement pump station to supply non-potable water to existing and future customers (primarily golf courses) in two pressure zones (low and high pressure zones) and 5 MG lined and covered equalization basin.
- Pump station includes pump structure with two separate wet wells and splitter box, electrical instrumentation and controls, and low and high pressure system pump banks.
- Low pressure system pump bank capacity of 11,550 gpm, including four vertical turbine pumps.
- High pressure system pump bank capacity of 13,200 gpm, including five vertical turbine pumps.
- Project includes masonry block building to house electrical switchgear, and controls.

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WRP-10 EXISTING LOW PRESSURE NON-POTABLE
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STAFF RESUME**

**JOSH P. MACPEEK
PRINCIPAL IN CHARGE**

Relevant Project Experience (continued):

5. Eastern Municipal Water District's and Elsinore Valley Municipal Water District's County Water Company Consolidation Project

EMWD Facilities

- 8" Barnes Lane Pipeline - 1,800 LF of C-900 PVC Pipe and 8" Waldon Road Pipeline - 2,000 LF of C-900 PVC Pipe
- Barnes Lane Hydropneumatic Pump Station
 - Packaged pump station (skid-mounted) containing two 30 hp "low-flow" pumping units rated at 415 gpm (one duty and one standby) and one 50 hp "high flow" pumping unit rated at 600 gpm; discharge flow meter; pressure relief valve; piping, valves, and fittings; and individual pump starter panels
 - Hydropneumatic system consisting of 15,000 gallon tank, packaged air compressor system, motor control center with sunshade, separate SCE electrical service area, and emergency power including manual transfer switch located in MCC and generator termination panel for connection to portable standby generator
- Appurtenances for existing system, including 31 3/4" water services with meter, backflow, and PRV; 13 fire hydrants; 10 mainline valves (6" gate valves); and 3 water sampling stations

EVMWD Facilities

- 12" Bundy Canyon Pipeline - 4,800 LF of C-900 PVC Pipe
- Bundy East Pump Station
 - Packaged pump station with one 20 hp "jockey" pumping unit rated at 150 gpm and one 40 hp "service" pumping unit rated at 415 gpm; piping, valves, and fittings; and individual VFD panels
 - Distribution switchgear: new 480 volt, 3 phase SCE electrical service to serve existing pump station and Bundy East Pump Station
 - Emergency power, including manual transfer switch located in distribution switchboard and generator termination panel for connection to portable standby generator
- Appurtenances for existing system, including 114 3/4" water services with meter, 26 fire hydrants, and 54 mainline valves (8" gate valves with reducers)

Interagency Metering Facility

6. Coachella Valley Water District's Booster Station No. 05611 Rehabilitation and Upgrade

- Demolition of existing hydropneumatic tank, surge tank, MCC, pumps, and piping valves.
- Design of a new 3,500 gallon hydropneumatic tank and a 1,500 gallon surge tank.
- Booster station pump capacity of 1,700 gpm, including one high flow 1,500 gpm pump and two low flow 200 gpm pumps housed within a masonry block building along with associated electrical switchgear (motor control center) and controls.
- Modifications to existing masonry building, including new concrete roof, new HVAC components, new door, and structural reinforcement of west wall.
- Emergency standby generator.
- Project includes upgraded electrical service.

7. Coachella Valley Water District's Booster Station No. 5513 Improvements

- Design of a new 12,000 gallon hydropneumatic tank, pressure reducing station, and 800 LF of 12" pipeline.
- Booster station pump capacity of 1,600 gpm, including three 300 gpm low flow pumps and one 1,100 gpm high flow pump housed within a masonry block building along with associated electrical switchgear (motor control center) and controls.
- Project includes upgraded electrical service.

**COACHELLA VALLEY WATER DISTRICT
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STAFF RESUME**

**JOSH P. MACPEEK
PRINCIPAL IN CHARGE**

Relevant Project Experience (continued):

8. Eastern Municipal Water District's Well 37 Facility and Discharge Pipeline

- Preparation of Contract Documents for the Well 37 Facility and Discharge Pipeline.
- 20" potable water well, 1,300 feet deep, and 2,200 gpm capacity.
- Equipping of well with a 600 hp vertical turbine pumping unit and VFD.
- Electrical service and switchgear.
- Masonry block building structure.
- Site piping, off-site discharge pipeline, and off-site potable water service line.
- Chlorination facilities.
- Connections to the District's existing facilities.
- Site improvements, and removal of an existing pipeline.

9. Eastern Municipal Water District's Preliminary Design for the Matthews Booster Pumping Station (BPS) and Pipeline Project

Booster Pumping Stations

- Preliminary design of two booster pumping stations (BPSs), including the new Matthews BPS with ultimate pumping capacity of 10,000 gpm and replacement Romoland BPS with ultimate pumping capacity of 12,700 gpm.
- Performance of hydraulic analysis and pumping unit selections for each BPS, including optimizing pumping unit selections for the life of each BPS (initial through ultimate operating conditions) and emergency operating conditions for the Romoland BPS.
- Preparation of alternative site, piping, and building layouts for standalone and combined BPSs.
- Performance of electrical systems (safety) analysis, fire protection assessment, corrosion analysis, and acoustical analysis.
- Preparation of operation and control descriptions for each BPS.
- Preparation of construction work sequence.
- Preparation of construction cost estimates and schedules.

Pipelines

- Preliminary design of 9,900 LF of 30" and 5,200 LF of 24" water pipelines, including alignment study, survey, geotechnical investigation, corrosion analysis, easement acquisition, permit evaluation, and existing utility verification.
- Two bore and jacks with steel casings (370 LF and 250 LF), including one bore and jack across Riverside County Transportation Depart (RCTD) railroad right-of-way and California Transportation Department (Caltrans) Highway 74 right-of-way.

**COACHELLA VALLEY WATER DISTRICT
WRP-10 EXISTING LOW PRESSURE NON-POTABLE
WATER CONNECTION PROJECT**

**KRIEGER & STEWART, INCORPORATED
STAFF RESUME**

**TRAVIS R. ROMEYN
PROJECT ENGINEER**

Years of Experience:	12	Years at Krieger & Stewart:	6
License:	California Registered Civil Engineer No. 84918		
Education:	Master of Science in Civil Engineering with Emphasis on Environmental and Water Resource Engineering, California Polytechnic University, Pomona Bachelor of Science in Civil Engineering, California Polytechnic University, Pomona		
Certifications:	OSHA 30 Certification		
Professional Summary:	Romeyn has considerable experience in construction of water and wastewater projects, with particular emphasis on field safety and estimating. He is also experienced in design of water and sewer pipelines. Romeyn is routinely responsible for construction management and support services, including inspection, safety compliance, change order management and project cost control, environmental remediation, startup services, preliminary design, final design, coordination with clients, quality assurance and control, and plan checking.		

Relevant Project Experience (with Krieger & Stewart):

- Indian Wells Valley Water District's Northwest Transmission Pipeline Replacement (in progress)**
 - Project consists of demolition and removal of approximately 19,400 LF of existing 30" CMLC water pipeline, and construction of replacement 24" PVC water pipeline, including new in-line isolation valves, connecting to existing water pipeline blowoffs and air valves, reconnecting Navy Base interconnection, and restoring finish grading.
- Indian Wells Valley Water District Gateway and Salisbury Booster Station Replacement Project**
 - Project consists of construction of two 50 HP pumping units to one zone, two 25 HP pumping units to a different zone, one spare pump can for future pumping unit with piping and valves to deliver to either zone, masonry building with reinforced concrete roof, below grade piping with flowmeters in below grade vaults, connections to existing offsite transmission pipelines, and new SCE electrical service to replace existing electrical service.
- Coachella Valley Water District's Sky Mountain 2 Reservoir (4605-2) Project**
 - Project consists of construction of one 10.0 MG pre-stressed concrete reservoir, including associated earthwork, pipeline, structural concrete, and site civil construction activities.
- Coachella Valley Water District's Mission Hills 2 Reservoir (4606-2) Project**
 - Project consisted of construction of one 6.5 MG steel reservoir, including associated earthwork, pipeline, concrete ring wall, steel tank, blasting/coating, and civil construction activities.
- Coachella Valley Water District's Verano Reservoir (3570-1) Project (In Progress)**
 - Project consists of construction of one 2.5 MG pre-stressed concrete reservoir, including associated earthwork, pipeline, structural concrete, and site civil construction activities.
- Cabazon Water District's Esperanza Avenue Waterline Improvements, Phase I**
 - Project consists of replacing between 900 LF and 1,450± LF of 4" steel pipeline with 8" C900 PVC pipeline, including excavation, pipeline restraint, backfill and compaction, trench shoring, traffic control, pavement replacement, and pressure testing.
- Riverside County Building & Community Services' Ripley/Mesa Verde Feasibility Study and Potable Water Interconnection Pipeline Project**
 - Project consisted of performing a feasibility study for the connection of the Ripley and Mesa Verde potable water systems versus the construction of a treatment plant in Ripley, including surveying and right-of-way research to determine existing facilities.
 - Pending securing a funding source, the project will also include preparation of construction contract documents for approximately 6 miles of interconnection pipeline and appurtenances.

**COACHELLA VALLEY WATER DISTRICT
WRP-10 EXISTING LOW PRESSURE NON-POTABLE
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**KRIEGER & STEWART, INCORPORATED
STAFF RESUME**

**TRAVIS R. ROMEYN
PROJECT ENGINEER**

Relevant Project Experience (continued):

8. Western Municipal Water District's Sterling Reservoir and Pump Station

- Project consists of construction of one 110 foot x 38 foot interior space masonry wall pump building; four 700 HP electric drive pumps; one 16" flow control and pressure relief bypass valve; two 625 HP gas drive pumps; receiving space for two additional future 700 HP electric drive pumps; receiving space for one future energy turbine; chemical injection facilities; surge tank; check and flow control valve facilities; flow metering facilities; chemical storage building; electrical power feed facilities; diesel emergency power generator facilities; 1 million gallon pre-stressed concrete tank; and site improvements including fine grading, paving, drainage, landscaping, lighting, cameras, and security fence/gates.

9. Indian Wells Valley Water District's Construction of New Gateway, C-Zone, and College Reservoirs

- Project consists of construction of one 0.55 MG steel reservoir and two 1.0 MG steel reservoirs, including associated earthwork, pipeline, concrete ring wall, steel tank, blasting/coating, and site civil construction activities.

10. Riverside County Building & Community Services' Engineering Assessment for CSA 51 (Lake Tamarisk) Groundwater Treatment Facility

- Project consisted of assessing condition of existing equipment utilized at the CSA 51 (Lake Tamarisk) Groundwater Treatment Facility, including the defluoridation system, chemical storage and dosing equipment, potable water storage reservoir, potable water distribution hydropneumatic booster station, and electrical power and control systems.
- Included recommended facility improvements, priority for implementing the recommended improvements (i.e. from "most urgent" to "not urgent"), and construction cost estimates for County planning and budget allocation.

11. Rancho California Water District's Well Nos. 172, 173, 174, and 175 Equipping Project

- Project consisted of equipping four production wells, including associated pipeline, electrical, mechanical, structural, and chemical dosing facilities.

12. San Bernardino Municipal Water District's Reservoir Seismic Upgrades

- Project consisted of construction of seismic upgrades, coating replacement, and piping improvements for four steel reservoirs.

**COACHELLA VALLEY WATER DISTRICT
WRP-10 EXISTING LOW PRESSURE NON-POTABLE
WATER CONNECTION PROJECT**

**KRIEGER & STEWART, INCORPORATED
STAFF RESUME**

**SINISA SARIC
TECHNICAL ADVISOR**

Years of Experience: 37

Years at Krieger & Stewart: 28

License: California Registered Civil Engineer No. 65367
California Registered Land Surveyor No. 8737

Education: Bachelor of Science in Civil Engineering, University of Sarajevo, Bosnia-Herzegovina

Professional

Summary: Saric has considerable experience in the planning, design, construction, and management of water, recycled water, and wastewater projects.

Saric routinely serves as Project Manager and Project Engineer responsible for providing design, bidding, and construction phase engineering services to public agency clients. Typical duties include supervision of staff, performance of preliminary design (including facility sizing and siting), preparation of final contract documents (including plans and specifications), coordination with clients' staff, quality assurance (including final checking and contract document approval), and managing all aspects of construction engineering services.

Relevant Project Experience:

1. Coachella Valley Water District's FY 2024-2025 Non-Potable Water Pipeline Connection Projects

The project consists of designing approximately 34,000 LF of ductile iron (offsite) and PVC (onsite) pipelines, including:

- 8,942± LF of 12" offsite and onsite pipe and appurtenances.
- 5,434± LF of 24" offsite pipe and appurtenances.
- 19,336± LF of 30" offsite pipe and appurtenances.
- 532± LF of 36" offsite pipe and appurtenances.
- Associated flow control stations.
- Preparation of legal descriptions and plats for easements.
- Preparation of contract documents and bid phase support.

2. Coachella Valley Water District's Low Pressure Non-Potable Water Pipeline Improvement Project

- Preparation of contract documents for 7,000± LF of 30" ductile iron pipeline and appurtenances, including connections to existing system.

3. Coachella Valley Water District's Bermuda Dunes Country Club Non-Potable Water Connection Project

- Preparation of contract documents for 10,500± LF of 18" and 12" ductile iron pipelines and appurtenances.
- Project includes connection to existing system, flow control stations, and lake discharge.

4. Coachella Valley Water District's 2018/2019 Non-Potable Water Golf Course Connection Projects

- Construction of three non-potable water connections to provide non-potable water for irrigation purposes to three existing golf courses.
- 5,300± LF of 36" DI pipe, 6,500± LF of 24" DI pipe, 4,775± LF of 18" DI pipe, and 6,000± LF of 12" PVC pipe.
- Three flow control stations.

5. Coachella Valley Water District's Young's Farmland Non-Potable Water Connection Project

- Design of approximately 1,215 ± LF of 12" PVC pipe and 915± LF of 6" PVC pipe for non-potable water used for irrigation of a nursery.
- Flow control station.

6. Coachella Valley Water District's Rancho La Quinta Golf Course Connection Project

- Preparation of contract documents, bid phase support, and engineering services during construction.
- Connection of non-potable water connection, flow control station, and lake discharge.



**COACHELLA VALLEY WATER DISTRICT
WRP-10 EXISTING LOW PRESSURE NON-POTABLE
WATER CONNECTION PROJECT**

**KRIEGER & STEWART, INCORPORATED
STAFF RESUME**

**SINISA SARIC
TECHNICAL ADVISOR**

Relevant Project Experience (continued):

7. Coachella Valley Water District's FY 2020-2021 Onsite Pipeline Projects

- Redesign of eight (8) non-potable water connections to provide non-potable water for irrigation purposes to seven (7) locations.
- 3,350± LF of 12" C909 PVCO pipe and appurtenances.
- 1,400± LF of 10" C909 PVCO pipe and appurtenances.
- 7,070± LF of 8" C909 PVCO pipe and appurtenances.
- 3,270± LF of 6" C909 PVCO pipe and appurtenances.
- Associated flow control stations.
- Preparation of legal descriptions and plats for easements.
- Preparation of contract documents and bid phase support.

8. Coachella Valley Water District's 2015 Non-Potable Water Golf Course Connection Projects

- Construction of five non-potable water connections to provide non-potable water for irrigation purposes to four existing golf courses.
- 3,170± LF of 18" PVC pipe and 4,100± LF of 12" PVC pipe.
- Five flow control stations.

9. Coachella Valley Water District's 2014 Non-Potable Water Golf Course Connection Projects

- Construction of six non-potable water connections to provide non-potable water for irrigation purposes to four existing golf courses.
- Connections included five pipeline segments to connect three existing golf courses to non-potable water service and one pipeline segment to increase the reliability of existing non-potable water service at another golf course.
- 1,400± LF of 20" PVC pipe, 3,400± LF of 18" PVC pipe, 7,400± LF of 12" PVC pipe, and 900± LF of 10" PVC pipe.
- Five flow control stations.

10. Coachella Valley Water District's La Quinta Irrigation Distribution Improvements

- Preparation of contract documents for pipeline, permitting, and project management (including QA/QC), bid phase support, and engineering services during construction.
- Project includes 11,000± LF of 24" PVC replacement pipeline, 2,600± LF of 18" PVC replacement pipeline, and 5,400± LF of 12" PVC replacement pipeline.
- Requires maintaining continuous irrigation service during construction.

11. Coachella Valley Water District's Mission Hills Pressure Zone Transmission Main (to Reservoir 4606-1)

- Preparation of contract documents for 22,140± LF of 36" ductile iron pipe and appurtenances, bid phase support, and engineering services during construction.
- Pipe jacking of 380± LF and 550± LF of 66" steel casings.
- Preparation of detailed construction sequence.
- Multiple connections to existing water system.

12. Coachella Valley Water District's Sky Mountain Pressure Zone Transmission Main (to Reservoir 4605-1)

- Preparation of contract documents for 13,000± LF of 36" ductile iron pipe and appurtenances, including multiple connections to existing water system, bid phase support, and engineering services during construction.
- Preparation of detailed construction sequence.

13. Coachella Valley Water District's Avenue 59 Drain Replacement and Irrigation Lateral 101.3/Avenue 55 Fillmore Drain Improvement

- Preparation of contract documents, bid phase support, and engineering services during construction.
- Project includes 5,700± LF of 18" HDPE replacement drain pipelines, including manholes and connections to private tile drains, and replacement of irrigation metering facilities.

14. Coachella Valley Water District's Irrigation Lateral 123.45-6.0 Replacement Project

- Preparation of contract documents for 11,000± LF of PVC pipe and appurtenances.
- Replacement of eight irrigation services with propeller meters and manually operated valves.
- Involved preparation of detailed construction sequence.
- Requires maintaining continuous irrigation service during construction.



**COACHELLA VALLEY WATER DISTRICT
WRP-10 EXISTING LOW PRESSURE NON-POTABLE
WATER CONNECTION PROJECT**

**KRIEGER & STEWART, INCORPORATED
STAFF RESUME**

**SINISA SARIC
TECHNICAL ADVISOR**

Relevant Project Experience (continued):

15. Coachella Valley Water District's Thermal Mutual Water Company Consolidation Project

- Preparation of contract documents for 2,400± LF of 8" ductile iron pipeline and appurtenances.
- Involved destruction of private water wells and abandonment of private waterlines.

16. City of Colton's 24" Transmission Pipeline

- Preparation of contract documents, bid phase support, construction management, and inspection.
- Project includes 18,000± LF of 24" ductile iron pipe and appurtenances, including multiple connections to existing system.
- Obtaining multiple encroachment permits/licenses (City, Caltrans, Union Pacific Railroad, and Burlington Northern Santa Fe).
- Preparation of detailed construction sequence.

17. City of Colton's Wells 27, 28, 29, 30, and 31

- Preliminary design, final design, and construction engineering services for five municipal potable water supply wells in Colton, California, ranging from 16" to 20" in diameter, 400 to 800 feet deep, and 1,000 to 3,000 gpm capacities.
- Each of the five projects included preparation of contract documents and construction management (including contract administration, construction engineering, submittals review, construction inspection, field testing, and final well casing/screen and gravel pack design).

18. East Valley Water District's Water Main Seismic Retrofit

- Preparation of contract documents for replacement of 34,500 LF of existing seismically vulnerable distribution waterlines with 8", 12", and 16" ductile iron pipe, including re-connection of all existing customers to new waterlines.

**19. Rancho California Water District's El Calamar and Via Escalon 24" Potable Water Pipeline Project
[Project No. D2007]**

- Preparation of contract documents for 4,350 LF of 24" CML&C pipe, fittings, and appurtenances.
- Encroachment permit from De Luz Community Services District.
- Traffic control plans for De Luz Community Services District.
- Preparation of detailed construction sequence.

20. Rancho California Water District's County Center Drive Potable Water Pipeline Replacement [Project No. D1956]

- Preparation of contract documents for 2,104± LF of 20" polyvinyl chloride pipe, fittings, and appurtenances.
- Preparation of a Technical Memorandum evaluating alternative alignments and pipe materials.
- Preparation of detailed construction sequence.
- Traffic control plans for City of Temecula.
- Encroachment permit from City of Temecula.

21. Rancho California Water District's Well No. 240 Discharge Pipeline Repairs/Relocation [Project No. D2151]

- 830± LF of 16" CML&C pipeline and appurtenances.
- Abandoning existing 16" waterline.
- Preparation of traffic control plans for approval by City of Temecula.
- Encroachment permit from City of Temecula.

22. Riverside County Office of Economic Development's Ripley/Mesa Verde Potable Water Interconnection Pipeline Project

- Contract Documents for 31,000± LF of 12" PVC pipeline and associated appurtenances (valves and air valves).
- On-site improvements to both water systems.
- Multiple encroachment permits (County, Caltrans).

23. Eastern Municipal Water District's Menifee Road 24" Pipeline

- 5,200± LF of 24" CML&C pipeline and appurtenances.
- Connection to existing booster station piping.
- Preparation of traffic control plans for approval by City of Menifee and Riverside County Transportation Department.



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STAFF RESUME**

**ERIC R. BUNKE
SENIOR SURVEY MANAGER**

Years of Experience:	39	Years at Krieger & Stewart:	22
License:	Licensed Land Surveyor, California No. 8974		
Certification:	Confined Space Entry, Certificate No. 2406901		
Education:	Undergraduate Studies in Physics, University of California, Riverside Undergraduate Studies in Mechanical Engineering, California Polytechnic University, San Luis Obispo Hydrology Course, University Extension, University of California, Riverside		
Professional Summary:	Eric R. Bunke has significant experience in both office and field aspects of surveying, including control surveys, topographic mapping, boundary determination and retracement, ALTA surveys, and construction staking using both conventional survey equipment and GPS. Bunke is experienced in the preparation of corner records, records of survey, ALTA surveys, and legal descriptions and plats. Bunke is currently Krieger & Stewart's Survey Manager and oversees field operations and preparation, scheduling, survey analysis, and quality control. Bunke also oversees all mapping and filing/recording of maps, and the preparation of all legal descriptions and plats. Bunke is proficient in AutoCAD Civil3D, Trimble Business Center, and StarNet software applications.		

Relevant Project Experience:

1. Various Coachella Valley Water District Infrastructure Facilities and Pipeline Projects

Survey Manager/Party Chief in charge of field and office survey services including property data research and deed review, survey control and survey data analysis for aerial, ground topographic and as-built mapping, boundary, centerline and right-of-way determination, and compilation of design base maps as required, for the following projects:

- FY 2024-2025 Non-Potable Water Pipeline Connection Projects
- Low Pressure Non-Potable Water Pipeline Improvement Project
- WRP-10 T-1 Pump Station Replacement Project
- Water Reclamation Plant Nos. 4, 7, and 10 Chemical System Safety Upgrades
- L-4 Pump Station and Check Structure Replacement Project
- The Quarry Country Club Non-Potable Water Connection Project
- FY 2020-2021 Onsite Pipeline Projects
- FY 2018/2019 Non-Potable Water Golf Course Connection Projects
- New Wells (Mecca, Middleton, La Quinta, Valley, Sky Mountain, Date Palm, Mission Hills)
- Chromium 6 Water Treatment Facility Topographic Mapping for Hazen & Sawyer
- Irrigation Lateral 120.8 and L-4 Pump Station Project
- Bermuda Dunes Country Club Non-Potable Water Connection Project
- Booster Station 5513, Thunderbird Road
- Reservoir 4602-2, Via Las Palmas
- Avenue 62 Drain Replacement Project
- Booster Station 05611, Vintage Drive
- Woodhaven Country Club Non-Potable Water Connection Projects
- Palm Desert Country Club Non-Potable Water Connection Projects
- Oasis Country Club Non-Potable Water Connection Projects
- Galindo Mobile Home Park Water System Consolidation Project
- Rancho La Quinta Golf Course Non-Potable Water Connection Project
- Avenue 59 Pipeline Replacement and Irrigation Lateral 101-3 Drain Improvements
- Thermal Mutual Water Company Consolidation Project
- Marriott Shadow Ridge Non-Potable Water Connection Project
- Marriott Desert Springs Non-Potable Water Connection Project



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**ERIC R. BUNKE
SENIOR SURVEY MANAGER**

Relevant Project Experience (continued):

2. Coachella Valley Water District Survey Projects

Survey Manager/ Party Chief in charge of field and office survey services including property data research and deed and Title review, survey control and survey data analysis for boundary and Right-of-Way determination, and the preparation of exhibits, legal descriptions and plats, preparation and filing of Corner Records and Records of Survey as required, for the following projects:

- BIA Desert Cove Easement Renewal -Easement Location Maps
- Whitewater River Storm Water Channel Encroachment Identification
- Well Site 5620 Boundary Monuments and Corner Record
- Whitewater River Storm Water Channel Desert Cove Flood Easement Exhibit B Plat Preparation
- La Quinta Record of Survey Reservoir Site 6631

3. Eastern Municipal Water District Infrastructure Facilities and Pipeline Projects

Survey Manager/Party Chief in charge of field and office survey services including property data research and deed review, survey control and survey data analysis for aerial, ground topographic and as-built mapping, boundary, centerline and right-of-way determination, and compilation of design base maps as required, for the following projects:

- French Valley Recycled Water Distribution Pipeline Project, included construction staking
- Well 37 Pumping Plant, San Jacinto, included Record of Survey and Easement preparation.
- Dunlap Drive Replacement Pipeline Design Base map and Construction Staking
- Pettit Regulated Pressure Zone Pipeline Project, Moreno Valley
- Pat Road Booster Station Project
- Warm Springs Lift Station Project, Diaz Road
- Lake Skinner Lift Station Replacement Project
- De Anza Lift Station Force Main Project, included construction staking

4. Various Yucaipa Valley Water District Infrastructure Facilities and Pipeline Projects

Survey Manager/Party Chief in charge of field and office survey services including property data research and deed review, survey control and survey data analysis for aerial, ground topographic and as-built mapping, boundary, centerline and right-of-way determination, and compilation of design base maps as required, for the following projects:

- Well 28 Lot Line Adjustment and Record of Survey
- Lincoln Drive Pipeline Project
- Crestview Dr., Crestview Ct., and Sutter Ave. pipeline Project
- Reedywoods Lane Pipeline Project
- Cella Lane Pipeline Project
- Peachtree Circle Pipeline Project
- Date Ave. Pipeline Project
- Wildwood Canyon Road Sewer Replacement Project
- Avenue D Sewer Project
- Calimesa Golf Course Sewer Replacement

5. Rancho California Water District

Survey Manager/Party Chief in charge of field and office survey services including property data research and deed review, survey control and survey data analysis for aerial, ground topographic and as-built mapping, boundary, centerline and right-of-way determination, and compilation of design base maps as required, for the following projects:

- Flow EQ Basin Liner Replacement, included construction staking
- Recycled Water Storage Pond Relining Project
- Redhawk Reclaimed Water Pump Station Project
- County Center Drive Water Replacement Project



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**KRIEGER & STEWART, INCORPORATED
STAFF RESUME**

**M. WAYNE EWING
RIGHT-OF-WAY SPECIALIST**

Years of Experience: 60

Years at Krieger & Stewart: 30

Education: Advertising Art, Mathematics, Architecture, Drafting, Design Graphics, Riverside City College
Engineering Aid, Surveyor, United States Navy, Class "A" School

Professional Summary: M. Wayne Ewing has extensive experience in preparation of construction drawings, legal descriptions and plats for acquisition of easements, and right-of-way, including review and assessment of existing record documents. Ewing has prepared street improvement plans and grading plans. Ewing has also prepared and processed City and County project applications for various private and public works projects.

Relevant Project Experience:

1. **Coachella Valley Water District's FY 2024-2025 Non-Potable Water Pipeline Connection Projects**
Preparation of base mapping, legal descriptions, and plats.
2. **Coachella Valley Water District's FY 2020-2021 Onsite Pipeline Projects**
Preparation of base mapping, legal descriptions, and plats.
3. **Coachella Valley Water District's BIA-Desert Cove Flood Easement Renewal**
Preparation of legal descriptions and mapping.
4. **Coachella Valley Water District's 2014 and 2015 Non-Potable Water Golf Course Connection Projects**
Preparation of base mapping, legal descriptions, and plats.
5. **Coachella Valley Water District's Booster Station 05611 Rehabilitation and Upgrade**
Preparation of base mapping, legal description, and plat.
6. **Coachella Valley Water District's Right-of-Way Land Surveying Services**
Preparation and review of legal descriptions, plats, and LAFCO and right-of-way documents.
7. **Coachella Valley Water District's Highway 86 Booster Station Lot Line Adjustment**
Preparation of applications, legal descriptions, deeds, and exhibits for submittal to Riverside County.
8. **Coachella Valley Water District's Miscellaneous Survey Review Services**
Review of record maps, legal descriptions, plats, and agreements.
9. **Coachella Valley Water District's Bermuda Dunes Country Club Non-Potable Water Connection Project**
Preparation of legal descriptions and plats for temporary construction and non-potable water easements.
10. **Coachella Valley Water District's La Quinta Irrigation Distribution Improvements**
Preparation of legal descriptions and plats for pipeline easement quitclaims.
11. **Coachella Valley Water District's Thermal Mutual Water Company Consolidation Project**
Preparation of legal description and plat for road acceptance.
12. **Coachella Valley Water District's Emerald Desert RV Resort Non-Potable Water Connection Project**
Preparation of legal descriptions and plats for temporary construction and non-potable water easements.
13. **Coachella Valley Water District's Oasis Country Club Non-Potable Water Connection Project**
Preparation of legal descriptions and plats for temporary construction easements.
14. **Coachella Valley Water District's Palm Desert Resort Non-Potable Water Connection Project**
Preparation of legal descriptions and plats for temporary construction easements.
15. **Coachella Valley Water District's Woodhaven Country Club Non-Potable Water Connection Project**
Preparation of legal descriptions and plats for temporary construction and non-potable water easements.
16. **Coachella Valley Water District's L-4 Pump Station and Check Structure at Milepost 120.8 Replacement Project**
Preparation of grading plan for pump station.



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STAFF RESUME**

**M. WAYNE EWING
RIGHT-OF-WAY SPECIALIST**

Relevant Project Experience (continued):

- 17. Coachella Valley Water District's Booster Station No. 05513 Improvements**
Preparation of grading plan for booster station.
- 18. Eastern Municipal Water District's Wine Country Infrastructure Sewer Project (45,000 LF of Sewer and Force Main)**
Preparation of base mapping and legal descriptions, plats, and records of survey.
- 19. Eastern Municipal Water District's Phase 1 IRRP Well Pumping Facilities and Recharge Pipeline (4,000 LF of Water Pipelines and Building, Road, and Site Improvements)**
Preparation of legal descriptions, plats, and records of survey.
- 20. Eastern Municipal Water District's IRRP Recharge Pond (35-Acre Recharge Pond Site with Lateral Pipelines)**
Preparation of legal descriptions, plats, and records of survey.
- 21. Eastern Municipal Water District's Western Way Pump Station**
Preparation of record of survey and grading plan for pump station facilities.
- 22. Riverside County Redevelopment Agency's Mission Boulevard Revitalization Project, Phases 3, 4, and 5**
Preparation of street improvement plans and legal descriptions and plats for right-of-way acquisitions.
- 23. Riverside County Redevelopment Agency's El Cerrito Road Improvement Project**
Preparation of street improvement plans and legal descriptions and plats for right-of-way acquisitions.
- 24. Riverside County Economic Development Agency's Thermal Water and Sewer System Improvements**
Preparation of legal descriptions and plats for right-of-way and easement acquisitions.
- 25. Riverside County Transportation Department's Temescal Canyon Road Widening**
Preparation of street improvement plans and coordination with Riverside County Department of Transportation's Traffic Division.
- 26. Riverside County Transportation Department's Krameria Avenue Sidewalk Project**
Preparation of base plats for right-of-way acquisition, street improvement plans, and coordination with Riverside County Department of Transportation's Traffic Division.
- 27. Riverside County Transportation Department's El Cerrito Road and Temescal Canyon Road Traffic Signal and Road Improvements Project**
Preparation of street improvement plans and coordination with Riverside County Department of Transportation's Traffic Division.
- 28. San Bernardino Valley Municipal Water District's Enhanced Recharge in the Santa Ana River Basin Spreading Basin Project**
Responsible for property ownership research and preparation of legal descriptions and plats for easements and
- 29. Rancho California Water District's Recycled Water Storage Pond Improvements Project**
Preparation of legal descriptions and plats and pond related grading plans.
- 30. Chiriaco Summit Water District's Water System Improvement Project**
Preparation of grading plan for reservoir and pump station.
- 31. Yucaipa Valley Water District's 5th Street, Cal Mesa Boulevard, and Cherry Valley Boulevard 24" Recycled Water Pipeline**
Preparation of legal descriptions and plats for waterline easements.





SECTION 3 – PROJECT UNDERSTANDING AND APPROACH

GENERAL

This ***Project Understanding and Approach*** section of our proposal details Krieger & Stewart, Incorporated's (K&S's) approach to the project components and services required for successful design of Coachella Valley Water District's (CVWD's) WRP-10 Existing Low Pressure Non-Potable Water Connections Improvement Project, and is organized as follows:

- Project Understanding
- Project Management Approach
- Quality Control and Quality Assurance Program
- Quality of Services and Cost Control
- Why Krieger & Stewart
- Scope of Services

PROJECT UNDERSTANDING

➤ Background

CVWD acts as the administrator of its Recycled Water Program under the Water Quality Order Number WQ 2016-0068-DDW for the Water Reclamation Plant No. 10 (WRP-10). The WRP-10 NPW System consists of two separate pressure zones: 1) Low Pressure System, and 2) High Pressure System. CVWD is currently expanding the NPW service area and connecting more NPW customers to both Low and High Pressure NPW systems. The Low Pressure System expansion requires installing new Flow Control and Pressure Sustaining valves (RFCV) on the eight existing service connections

➤ General Project Description

Design services are required to incorporate flow control stations on the WRP 10 non-potable water system at each of the following eight (8) existing connection locations that do not have flow control:

- Silver Sands (two connections, one connection is a direct connection and does not require a flow control station)
- Palm Desert High School
- The Golf Center at First Tee
- Portola Country Club
- Marriott Desert Springs South
- Palm Desert Greens Country Club
- Desert Willows Golf Resort
- Casa Blanca HOA

➤ Project Purpose and Benefits

The construction of flow control stations at the existing connections above will provide the following purpose and benefits:

- Will restrict the water supply to the above existing connections (NPW customers) so that all NPW customers can obtain their required non-potable water supply
- Will protect the NPW system during surge events
- Will allow the T-1 and T-2 pumping units to safely operate

PROJECT MANAGEMENT APPROACH

K&S will abide by the following **project management principles** in our approach to managing the Project:

➤ Frequent Communication/Vigorous Support to Staff

- K&S **emphasizes regular/ scheduled meetings** with staff to ensure project progresses in a systematic manner **without surprises**.
- K&S's **project team members are available to meet** at CVWD's office or at the project site (even with short notice).
- K&S is **committed to responding in a timely manner** to all voicemails and emails from clients.
- K&S recognizes the need to support **client staff in fulfilling their responsibilities**, and therefore prepares and delivers complete materials in a timely manner as requested.

➤ Detailed Meeting Documents

K&S prepares **detailed meeting agendas and minutes** throughout the course of the project, which include:

- Attendees
- Discussion Items
- Action Items
- Follow-up to Action Items
- Reminders
- Schedule

➤ Systematic Document Control Structure and Comprehensive Project Records

- K&S implements and follows a **systematic document control structure** for each project in order to ensure all project **documentation is easy to locate** and recoverable at all times; documentation is readily available to provide to clients and other pertinent agencies.





- K&S maintains **comprehensive project records** throughout all phases of a project we are involved with, including correspondence, calculation/design notebooks, costs, submittal and RFI tracking logs, compliance records, etc.

➤ **Maximize Use of In-House Staff**

K&S provides all **services utilizing in-house staff**, except for specialized services (aerial photogrammetry, geotechnical investigations, surge analyses, etc.).

QUALITY CONTROL AND QUALITY ASSURANCE PROGRAM

We will ensure that our project management services abide by the above principles and methods, and meet our rigorous quality standards by employing the following **quality control and quality assurance** measures:

➤ **Comprehensive Project Oversight/Coordination**

- K&S will provide **oversight and coordination of all project components** to ensure project moves forward in a systematic, logical fashion and to minimize surprises.
- K&S will maintain **close coordination with other members of the project team**.

➤ **Hands-On Participation by Principals and Project Managers Provide:**

- Proficient engineering professionals with extensive environmental, design, and construction engineering experience.
- Review all aspects of project progress in detail.
- Attend progress meetings.
- Represent client's best interests at all times.
- Provide leadership.
- Practice pride of ownership approach to ensure lasting, quality project.

➤ **Peer Review**

- Primary project components will be the subject of an intensive peer review by one of our internal Design Review Committees.
- Committees are ad hoc committees made up of registered civil engineers who have experience and expertise regarding specific project elements.
- Committee members will not be members of the project team, allowing them to provide a fresh perspective during their review.
- Each component will be reviewed periodically as it is developed.

- Scheduled reviews will occur prior to submittal of the preliminary and final versions of the contract documents.
- Unscheduled reviews will occur as the documents are being prepared and supplemental services are being performed.

QUALITY OF SERVICES AND COST CONTROL

With regard to design and construction engineering services, we believe the **percentage of contract change orders**, particularly related to plan omissions/corrections, is an **indication of the quality of the engineering services provided**. Our excellent record in this regard can be attributed, in part, to our rigorous quality control procedures, which include the following:

- During the preparation of contract documents (construction drawings and specifications), **senior members** of K&S's project team **carefully review** all existing facility drawings.
- We field review project sites to ensure construction drawings correctly represent actual field conditions, **expose all interfering utilities**, and send copies of drawings to all utility companies for review and comments.
- We subject all contract documents to **peer review** by an **internal design review** committee made up of our **most experienced registered civil engineers**.

By strictly adhering to these practices, **the firm's project teams are able to hold contract change orders to extremely low levels**. We apply these or similar practices to all of the services we provide.

WHY KRIEGER & STEWART

➤ **Expert Knowledge of Coachella Valley Water District's (CVWD's) Operations, Staff, Standards, Plan Requirements, Preferences, and Treatment Plant Facilities**

- K&S has performed **planning and design engineering services** for CVWD for about **45** years, including numerous recent pipeline projects, providing us with an unmatched familiarity with CVWD's standards, plan requirements, preferences, and water distribution system, as shown in the **experience table in Section 2** of our proposal.





- Our recent and continuous work experience with **CVWD's Operations and Engineering Staff**, which result in:
 - **No "on the job training" required**
 - **Established rapport with CVWD staff**
 - **Familiarity** with the **various jurisdictional agencies** (local, state, federal) necessary for successful permitting and project implementation.
 - K&S staff **considers, coordinates, and incorporates concerns and requirements from both Engineering and Operations Departments** in project design.
- K&S provides **consistent presence of senior, local staff** through all stages of project implementation, from planning through construction and startup.

ESSENTIAL CONSIDERATIONS

Based on our understandings of the Project, we have identified a number of essential considerations that we will consider regarding the various aspects of the Project, as set forth in the **Challenges and Approach** sections presented below for the water connection improvements.

ESSENTIAL CONSIDERATIONS	
CHALLENGES	APPROACH
Alignments in Golf Courses	Alignments of onsite pipelines need to be selected in close coordination with golf course and HOA representatives to minimize damage to turf and paved area, avoid tee areas, preserve vegetation, and minimize visual impacts to the residents and guests, while delivering non-potable water supply to the discharge location selected by each Country Club.
Locating CVWD Meter Vaults	Typically, CVWD owns and operates pipelines and appurtenances to the end of meter vault. Therefore, if placement of a CVWD meter vault is not possible within public right-of-way, we will locate said meter vault near the right-of-way inside the customer's property. The rest of the onsite pipeline will be within a temporary construction easement.



SCOPE OF SERVICES

Based on the RFP requirements, our understanding of the project described herein, and scopes of services we have provided to the District for other NPW projects, we have organized our Scope of Services into the following detailed tasks. Please note that we have reorganized the order of a few tasks listed in the RFP based on the general order they will be performed.

- Task 1 - Project Management
- Task 2 - Records Search
- Task 3 - Design Survey
- Task 4 - Base Construction Drawings
- Task 5 - Utility Verification (Potholing)
- Task 6 - Preliminary Design Report
- Task 7 - Preliminary Design Workshop
- Task 8 - Permanent and Temporary Construction Easement Documents
- Task 9 - 75% Contract Documents
- Task 10 - 100% Final Contract Documents
- Task 11 - Bidding Assistance

Engineering services proposed for completing the above tasks are described in the following subsections:

TASK 1 – PROJECT MANAGEMENT

We will provide all project management required for the project, including participating in conference calls with the District and affected non-potable water customers, providing project updates (via email and/or telephone) to the District, providing coordination with our subconsultants and the District, and providing quality assurance and quality control for the project.

TASK 2 – RECORDS SEARCH

Our records search will consist of obtaining copies of all Assessor's maps, records of survey, tract maps, parcel maps, and available utility information which pertain to the project. Utility information will include information from the Gas Company, Southern California Edison, telephone companies, cable television companies, and other affected utilities for the flow control station sites.

TASK 3 – DESIGN SURVEY

Ground based topographic surveys will be performed at each individual proposed flow-control station location (site) and will be performed using a combination of GPS RTK and conventional survey procedures. Site surveys

will locate existing topographic features and improvements (e.g. curbs, sidewalks, walls etc.) and the ground surface within 25 feet of the site. Sufficient centerline control will be recovered to locate the right-of-way and/or boundary lines in proximity to each site.

Horizontal control will be based on the California State Plane Coordinate System NAD83 (2011) (EPOCH: 2010.0000) and will be rotated to a local basis of bearings specific to each site.

Vertical control will be based on the North American Vertical Datum of 1929 (NGVD29) per CVWD standards unless directed otherwise and will reference local city and/or county survey benchmark data.

A base map for design will be prepared based on the field topographic surveys and will include 1-foot contours, site improvements and above ground utility appurtenances. Individual base maps will include property data (i.e APN, address and record map references) and will reference horizontal and vertical site control.

TASK 4 – BASE CONSTRUCTION DRAWINGS

Once we receive the utility information from our records search, we will prepare base construction drawings. On the base construction drawings, we will identify a location for each flow control valve. We will also identify the proposed pothole locations for potholing (see Task 5. below).

TASK 5 – UTILITY VERIFICATION (POTHOLING)

Based on our review of utility records, and with the District's concurrence, we will request that Underground Service Alert (USA) locate and mark facilities along the proposed alignment at all areas to be potholed.

We will arrange and conduct a field meeting with all affected utilities and review utilities to be located and marked. After the utilities are marked, we will field review the locations of the flow control stations to ensure that there are no conflicts with the proposed locations for the improvements and to review existing connections to see if there are any existing facilities (i.e. belowgrade vaults) that can be reused. We will provide advanced notification of our anticipated field walk so that CVWD staff and the non-potable water customers can participate, if desired. Our potholing subconsultant (Underground Solutions, Inc.) will obtain the encroachment permit for





potholing work, including required traffic control plans. We will survey all exposed utilities during potholing or survey potholing markers following the excavation of utilities. We will arrange with Underground Solutions, Inc. to excavate and expose utilities and we have assumed 18 potholes will be required.

TASK 6 – PRELIMINARY DESIGN REPORT

We will size each of the flow control stations and will prepare a preliminary site layout and mechanical layout for each flow control station. For the existing connections that have telemetry and electrical, we will design flow control stations that are similar to the flow control stations for the non-potable water pipelines project. For the existing connections, we will design flow control stations that do not require telemetry or electrical (hydraulically operated Cla-Val with battery powered flow meter). We will also identify connections where existing vaults can be utilized. We will present the results of preliminary design along with the preliminary layouts in a preliminary design report (PDR).

TASK 7 – PRELIMINARY DESIGN WORKSHOP

After the draft PDR is complete, we will submit an electronic copy (pdf) of same for CVWD staff review. Following the review period, we will conduct a design workshop with CVWD staff to review the PDR findings and obtain CVWD comments regarding same.

For our proposal, we have assumed that, at the conclusion of the design workshop, there will be agreement between CVWD and Krieger & Stewart regarding each of the items in the draft PDR, and there will be clear direction from CVWD regarding preparation of the construction drawings and specifications.

Based on the conclusions reached at the design workshop, we will finalize the PDR, and provide an electronic copy (pdf) to CVWD.

TASK 8 – PERMANENT AND TEMPORARY CONSTRUCTION EASEMENT DOCUMENTS

We will obtain easement(s) from property owner(s). We will prepare eight (8) temporary construction easement legal descriptions and plats, eight (8) permanent construction easement legal descriptions and plats, including obtaining eight (8) Preliminary Title Reports

with Schedule B documents. We will review the documents and provide recommendations regarding same prior to obtaining a Proforma. CVWD will be responsible for obtaining the title insurance policy and costs for same.

TASK 9 – PREPARATION OF 75% CONTRACT DOCUMENTS

The Specifications will be prepared by Krieger & Stewart in the District's latest standard format. The Specifications will include District front end documents (e.g. Notice Inviting Bids, Bid Forms, Contract, and General Conditions), Special Conditions, Technical Conditions, and Standard Drawings. Krieger & Stewart will prepare the bid sheets and special conditions.

Once the 75% Contract Documents are complete, we will submit an electronic copy to the District for review and comment. We anticipate that the District will provide Krieger & Stewart with one (1) set of comments on the 75% complete Contract Documents within one (1) week of submitting.

The 75% design level submittal will be accompanied by an Engineer's Construction Cost Estimate.

TASK 10 – PREPARATION OF 100% FINAL CONTRACT DOCUMENTS

Based upon comments received from District staff regarding the 75% Construction Drawings and Specifications and comments received from jurisdictional agencies, we will prepare the 100% complete Construction Drawings and Specifications. In addition, we will prepare the final construction cost estimate for all proposed work.

Once the final construction drawings and specifications are complete, we will provide District staff with a signed and stamped digital copy (PDF) of the final Contract Documents with District staff's digital signatures, and final Engineer's Construction Cost Estimate.

TASK 11 – BIDDING ASSISTANCE

If there is a bidding period, we will attend the pre-bid meeting, answer questions about or provide clarifications of the Contract Documents, and assist in the preparation of up to two (2) addenda, all as requested by District staff.



SECTION 4 – FEE PROPOSAL

FEE

As shown on **Table 4-1** included herein, our estimated fee to provide the services outlined in **Section 3**, Project Understanding and Approach, is \$261,000 as follows:

Our engineering services fee estimate is based on the Hourly Rate Sheet in our Biennial General Engineering Services Contract for 2024-2025.

Our estimated fee is subject to negotiation based on clarification or revision of the Scope of Services.

Our fee estimate is based on the following understandings and assumptions:

1. The District will provide all required coordination with non-potable water customers to obtain any approvals necessary from the customers.
2. The District will provide all negotiations with the property owners(s) for easement acquisition.
3. The flow control stations will be designed based on the flow rates set forth in Krieger & Stewart's November 2018 Preliminary Design for the WRP 10 T-1 Pump Station Replacement.

TABLE 4-1
COACHELLA VALLEY WATER DISTRICT
DESIGN ENGINEERING SERVICES FOR WRP-10 EXISTING LOW PRESSURE
NON-POTABLE WATER CONNECTIONS IMPROVEMENT PROJECT

ESTIMATED FEES FOR DESIGN ENGINEERING SERVICES

TASK / COMPONENT	PRINCIPAL IN CHARGE / PROJECT MANAGER ⁽¹⁾		PROJECT ENGINEER/ SURVEYOR ⁽²⁾		SUPPORT ENGINEER ⁽³⁾		2-MAN SURVEY CREW ⁽⁴⁾		CADD SERVICES ⁽⁵⁾		SUPPORT SERVICES ⁽⁶⁾		OUTSIDE SERVICES	TOTAL
	HOURS	\$	HOURS	\$	HOURS	\$	HOURS	\$	HOURS	\$	HOURS	\$	\$	\$
1. PROJECT MANAGEMENT	24	6,744												6,744
2. RECORDS SEARCH					16	3,504					16	2,128		5,632
3. DESIGN SURVEY			20	4,680	24	5,256	40	12,520			8	1,064		23,520
4. BASE CONSTRUCTION DRAWINGS	8	2,248			20	4,380			56	10,080				16,708
5. UTILITY VERIFICATION	8	2,248			8	1,752							27,000 ⁽⁸⁾	31,000
6. PRELIMINARY DESIGN REPORT	20	5,620			40	8,760			40	7,200	16	2,128		23,708
7. PRELIMINARY DESIGN WORKSHOP	8	2,248									4	532		2,780
8. PERMANENT AND TEMPORARY CONSTRUCTION EASEMENT DOCUMENTS	8	2,248	24	5,616	40	8,760			96	17,280	32	4,256	6,900 ⁽⁹⁾	45,060
9. 75% CONTRACT DOCUMENTS	40	11,240	100	23,400					100	18,000	20	2,660		55,300
10. 100% FINAL CONTRACT DOCUMENTS	20	5,620	88	20,592					48	8,640	12	1,596		36,448
11. BIDDING ASSISTANCE	9	2,529	16	3,744					8	1,440	16	2,128		9,841
Subtotal:	145	40,745	248	58,032	148	32,412	40	12,520	348	62,640	124	16,492	33,900	256,741
													REIMBURSABLES @ 2%*:	4,457
													TOTAL DESIGN ENGINEERING SERVICES (ROUNDED):	\$261,000
<div> <div> Billing Rates (Biennial General Engineering Services 2024-2025) </div> <div> (1) Principal Engineer @ \$281 /Hr (2) Senior Engineer/Surveyor I @ \$234 /Hr (3) Associate Engineer II @ \$219 /Hr (4) 2-Man Survey Crew @ \$313 /Hr (5) CAD Operator III @ \$180 /Hr (6) Staff Technician III @ \$133 /Hr </div> <div> Outside Services (7) Underground Solutions, Inc. (8) Lawyers Title </div> <div> * Reimbursables are 2% of K&S Fees (Excluding Subconsultant Fees/Outside Services) </div> </div>														



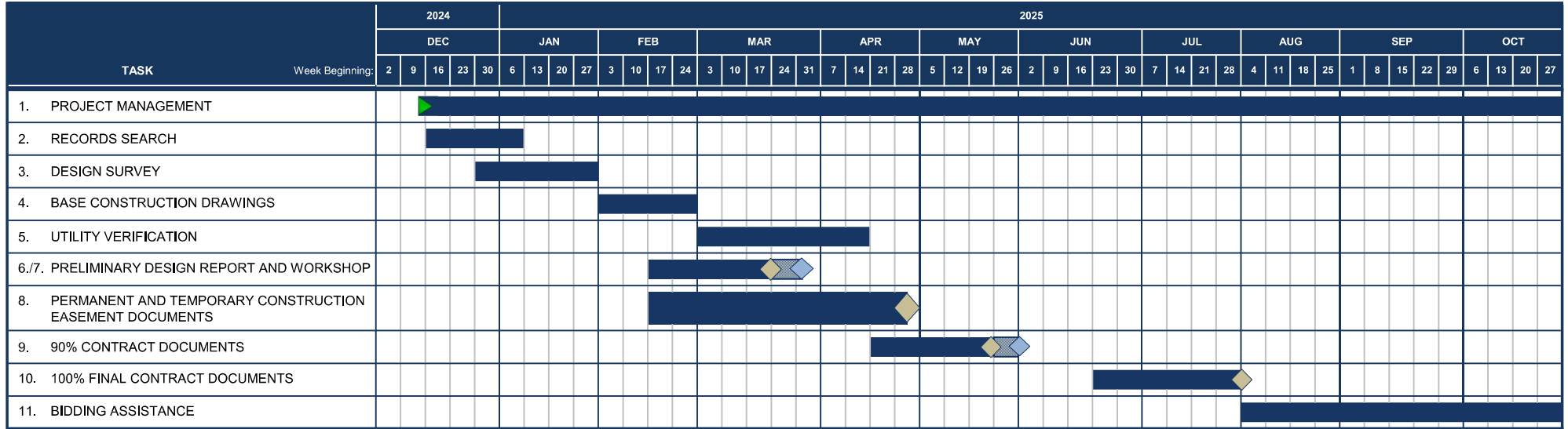
SECTION 5 – PROJECT SCHEDULE

SCHEDULE

Our proposed project schedule for design services, organized by elements of service, is set forth in **Table 5-1**.

As shown in **Table 5-1**, Krieger & Stewart will submit the final Construction Drawings and Specifications within eight (8) months (or 33 weeks) after receipt of Notice to Proceed (NTP) from CVWD (by July 31, 2025 based on receiving NTP on December 13, 2024).

**TABLE 5-1
COACHELLA VALLEY WATER DISTRICT
WRP-10 EXISTING LOW PRESSURE NON-POTABLE
WATER COMMENTIONS IMPROVEMENT PROJECT
ESTIMATED PROJECT SCHEDULE**



- NOTES:**
- PROJECT SERVICES
 - DISTRICT REVIEW
 - KICKOFF/PRE-DESIGN MEETING
 - DELIVERABLE
 - REVIEW MEETING





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