

A L B E R T   A .

**WEBB**

A S S O C I A T E S

Proposal to Provide Professional  
Construction Management and Inspection Services

**Huston Creek WWTP Primary Clarifier  
and Dewatering Building Improvements**

Prepared for







Corporate Headquarters  
3788 McCray Street  
Riverside, CA 92506  
T: 951.686.1070

Palm Desert Office  
74967 Sheryl Avenue  
Palm Desert, CA 92260  
T: 951.686.1070

Murrieta Office  
41870 Kalmia Street #160  
Murrieta, CA 92562  
T: 951.686.1070

June 8, 2021

Rick Dever, Operations Manager  
Crestline Sanitation District  
24516 Lake Drive  
Crestline, CA 92325

**RE: Proposal for Construction Management and Inspection Services  
for Huston Creek Wastewater Treatment Plant Primary Clarifier and  
Dewatering Building Improvements**

Dear Mr. Dever:

Enclosed is Albert A. Webb Associates' (WEBB) proposal to provide Construction Management and Inspection Services for the Huston Creek Wastewater Treatment Plant Primary Clarifier and Dewatering Building Improvements project for the Crestline Sanitation District (District). The District needs a trusted and experienced construction manager and inspector to represent the District in the field on this project.

The WEBB Team fully understands the importance of this project contributing to the District's overall goals. WEBB's proposal delves into the success factors of the project by providing the District a clear path to meeting project objectives, illustrates our approach, and lays out a work plan.

### **Success Factors**

In order to be successful on the District's project, WEBB has identified the following success factors needed to be taken into consideration.

- Safety
- Communication
- Maintaining operations at the WWTP
- Construction sequencing and scheduling
- Cost management
- Quality Assurance/Quality Control

WEBB is committed to providing the highest quality assistance possible to the District. We look forward to the opportunity to discuss our qualifications. Should you have any questions, please contact me directly at 951.830.5746.

Sincerely,

A handwritten signature in blue ink, appearing to read "Reed Chilton".

**Reed Chilton, PE, QSD** - Director, Construction Management & Inspection  
Albert A. Webb Associates  
951.830.5746  
reed.chilton@webbassociates.com

# Table of Contents

---

<b>Section 1. Firm Background</b> .....	<b>1</b>
<b>Section 2. Project Understanding &amp; Approach</b> .....	<b>2</b>
<b>Section 3. Key Personnel</b> .....	<b>8</b>
<b>Section 4. Project Experience</b> .....	<b>20</b>
<b>Section 5. Cost Proposal</b> .....	<b>26</b>

# Section 1. Firm Background

---

Albert A. Webb Associates (WEBB), a **Corporation**, has consistently provided civil engineering services to public sector clients throughout California since 1945. This means our clients receive the benefit of a financially stable firm that has withstood many diverse economic times. WEBB is a mid-size consulting firm with offices in Riverside, Palm Desert, and Murrieta to best meet the needs of all of our clients. WEBB has over 150 associates and the in-house expertise to address the needs of cities, water and special districts, counties, regional agencies, and our partner firms within the industry. WEBB offers a broad range of services to meet the objectives of our clients which include project development, planning, design, entitlement, funding, permitting, construction management, and inspection.

---

## Service Departments

- Water Resources
- **Construction Management and Inspection**
- Land Development Engineering
- Traffic and Transportation Engineering
- Planning and Environmental
- Land Survey and Mapping Services
- Landscape Architecture
- Geographic Information Systems

## Owner and Principal Parties

- Matthew Webb, PE, TE, LS - President/CEO
  - Scott Webb - Senior Vice President
  - Steve Webb - Director of Risk Management
  - Brian Knoll, PE - Chief Operations Officer
  - Kevin W.M. Ferguson - Chief Development Officer
  - Todd Smith - Chief Financial Officer
  - Sam Gershon, RCE - Senior Vice President
  - Scott Hildebrandt, PE - Senior Vice President
  - Bruce Davis, PE - Senior Vice President
  - Dilesh Sheth, PE, TE - Senior Vice President
  - Stephanie Standerfer - Vice President
  - Jason Ardery, PE, TE, LLS, CPESC, QSD - Vice President
  - Joseph Caldwell, PE, CPESC, CPSWQ, QSD, QSP, CFM - Director
  - **Reed Chilton, PE, Director, Construction Management & Inspection**
  - Emily Webb, J.D. - Senior Land Use and Entitlement Specialist
- 

## Firm Specifics

**1945**  
Founding Year

**155**  
Number of Employees

**53**  
Professional Licenses



**Corporate Headquarters:**  
3788 McCray Street  
Riverside, CA 92506  
951.686.1070



**Palm Desert Office:**  
74967 Sheryl Avenue  
Palm Desert, CA 92260  
T: 951.686.1070



**Murrieta:**  
41870 Kalmia Street #160  
Murrieta, CA 92562  
951.686.1070



# Section 2. Project Understanding & Approach

---

## Project Understanding

The District is seeking consultant Construction Management and Inspection Services for the Huston Creek Wastewater Treatment Plant (WWTP) Primary Clarifier and Dewatering Building Improvements Project. The services under this contract will include construction management, inspection, geotechnical and materials testing, special inspection, electrical inspection, and labor compliance monitoring during the construction phase of the project. WEBB has assembled a highly qualified team to effectively serve the District on this project. The WEBB Team will act as an extension to District Staff and look out for the District's best interests.

**Reed Chilton, PE, QSD**, will serve as the **Construction Manager**, providing the majority of the day-to-day construction management tasks and coordinating closely with the inspector. **Clinton Cropper** will be the full-time **Inspector** for this project, and **Michael "Tony" Gradillas** and **Phil Lemoine, CET**, will be available for inspection assistance as needed. WEBB has added sub-consultants to supplement the team with geotechnical and materials testing, special inspections, electrical inspections, and labor compliance to meet all requirements of the project specifications.

With constant field presence, experience on similar projects, and detailed knowledge of the contractor's daily workflow, WEBB will ensure the right specialists are on the project when needed to ensure the contractor meets the requirements of the plans and specifications. It is our understanding this project is to be constructed primarily during normal working hours with nightwork during critical tasks such as by-passes and shutdowns.

It is our understanding that Dudek, the Engineer of Record, will be involved for Engineering Support Services during construction. Dudek will perform all submittal review and approval, RFI review and response, review change order requests, prepare design revisions, and prepare final as-built drawings. Dudek will also be involved to review startup and commissioning plans, O&M manuals, and Maintenance of Plant Operations Plans for shutdowns and by-passes.

WEBB will coordinate with District Operations Staff throughout the project to maintain plant operations. The District's systems integrator will be heavily involved during startup and integration of the new equipment and will require minimal support.

WEBB's services will start after the contract is awarded to the contractor. Dudek and the District will cover the bid phase and award of the project.

## Project Description

The District desires to upgrade the Huston Creek WWTP located at 24516 Lake Drive in Crestline. The project consists of the following:

- New dewatering building with new sludge holding tank, new thickened sludge feed pumps, screw presses, screw conveyors, chemical feed systems, odor control system, and appurtenant mechanical, electrical, and controls improvements
- Replacement of thickened sludge transfer pumps in existing dewatering building
- New primary clarifier structure and appurtenant mechanical, electrical, and controls improvements
- New emergency generator
- Replacement of trickling filter recirculation pumps and appurtenant mechanical, electrical, and controls improvements
- Associated site improvements, including grading, retaining walls, drainage, paving, and fencing

The District is obtaining SRF Funding for the project. The engineer's opinion of probable costs is \$9,000,000 and the contract time is 500 calendar days. Our proposal covers the scope of this project for the project duration, and 30 additional days for project closeout. In the event the contractor exceeds the schedule for any reason, we will review the status of the work to determine the need for an adjustment in the budget amount.



## Project Approach

Our goal is to make the project run as smoothly as possible for the District through a well thought out plan managed by our Construction Management Team. Our approach commences with assembling a highly qualified team with the experience, skills, and expertise needed to best manage the District's Huston Creek WWTP Primary Clarifier and Dewatering Building Improvements Project. WEBB is committed to maintaining consistency in personnel assigned to the project.

WEBB uses **Procore Construction Management Software (Procore)** to help manage project documents, assignments, and plans. Procore allows all members of the project team, including the District and the contractor, to have access to all the latest construction documents and communication. Procore automatically tracks and logs document approvals and project issues which allows WEBB to focus on planning and problem-solving rather than filing paperwork.

WEBB will team with Landmark Consulting, SKM, and Labor Compliance Consultants of Southern California (LCCSC) to provide quality assurance in each project discipline.

It is our understanding the review of technical submittals and RFIs will be performed by the Engineer of Record. WEBB will coordinate, track, and log the review process.

Knowledge, experience, and responsiveness are key elements of a strong team needed to exceed the District's goals and expectations. WEBB has a team of professionals that will deliver these key elements to your project. Below is a summary of the responsibilities of each member of the WEBB Team and how we will work together to ensure a successful project.

## The WEBB Team

### **Principal in Charge – Brian Knoll, PE**

Brian will be responsible for contracts and the overall staffing of the project to ensure the right people are on this project. He will be available to assist with major project issues and concerns if needed.

### **Construction Manager – Reed Chilton, PE, QSD**

Reed will provide high-level project oversight and QA/QC for the project, including review of scope, schedule, and budget. He will manage the project team and sub-consultants and assist with resolving project issues.

Reed will be responsible for the full scope of construction management services. He will manage project costs, schedule, and documentation and will communicate regularly with the District. Reed will be involved continuously throughout the project working primarily from the office. He will make frequent site visits and attend progress meetings.



Figure 1. Existing Primary Clarifiers



Figure 2. Existing Headworks



### **Inspector – Clinton Cropper**

WEBB's inspector will be the full-time field presence for the project. WEBB's inspector will provide daily inspection reports and he will coordinate with Reed and the District on project status and critical items. He will also coordinate geotechnical and materials testing, special inspections, and electrical inspections as needed.

We have included inspection for 360 working days at 8 hours per day and 200 additional hours for critical shutdowns and tie-ins when either a double-shift or second inspector may be required.

### **Geotechnical and Materials Testing – Landmark**

During construction, Landmark will be scheduled by WEBB for compaction and materials testing and special inspections. Landmark will provide inspection of all grading, fill, compaction, and backfill, material testing, and special inspections per Sheet 41 of 142 of the plans.

The contractor will dictate the pace of construction. The contractor's schedule is not available currently. We have assumed the following and will review our proposed coverage with the District when the schedule is submitted:

- 20 site visits for excavation and compaction of the Primary Clarifier, Dewatering Building, and piping
- 20 site visits for rebar inspection, special inspections, and concrete sampling
- Note: Full-time observation will be performed by the WEBB inspector and Landmark will perform the testing on an as-needed basis

### **Electrical Inspection - SKM**

SKM will meet with the contractor at the beginning of the project to agree upon methods and materials. They will be on site for inspections and field meetings as the electrical components are installed. SKM will ensure the electrical, instrumentation, and control portion of the project is installed correctly and tested appropriately to verify proper functionality per the design. SKM will be involved during startup and testing to assist the District as needed. WEBB will schedule SKM to be on site based on the project schedule.

For this proposal, we have included the following:

- 1 site visit to inspect conduit installation
- 1 site visit for Southern California Edison (SCE) transformer
- 1 site visit to inspect pulling and terminating wire
- 1 site visit for startup and commissioning assistance
- 40 hours for consultation for issues during construction

### **Labor Compliance Monitoring – Labor Compliance Consultants of Southern California (LCCSC)**

Labor Compliance Monitoring will be a requirement of the Labor Compliance Monitoring will be a requirement of the SRF Loan agreement. LCCSC will verify certified payroll for the prime contractor and any sub-contractors and perform periodic on-site interviews to ensure compliance with labor standards and SRF requirements.

For this proposal, we have included the following:

- 1 month prior to construction activities
- 18 months of construction activities
- 2 months post-construction



## Key Project Issues and Challenges

During our site visit and review of the draft plans and specifications, we have identified the following key project issues and challenges and described WEBB's approach to address each item:

### 1. **Safety:**

Safety is always the number one priority for a construction project. This project includes various potential safety hazards such as heavy equipment, working on existing infrastructure, trenching, excavations, shoring, by-passes and shutdowns, electrical work, and tie-ins.

WEBB Approach:

- The WEBB Team will be active in encouraging safe practices. The inspector will attend the contractor's weekly safety meetings and safety will be discussed at each project meeting.
- WEBB will be sure the contractor submits an engineer-designed shoring plan and confirm that it is executed.
- Deep excavations are planned for the Primary Clarifier and Dewatering Building adjacent to existing, operational facilities. The existing clarifier will need to be protected in place with shoring so the new clarifier can be built. The condition of the existing concrete clarifier appears to be poor so special care will be required by the contractor. During construction of the proposed Dewatering Building, trucks will need access to the existing Dewatering Building. WEBB will review the contractor's phasing and sequencing plan and confirm adequate access is available to the District.

### 2. **Communication and Reports:**

The project team will be large, and all parties need to know the status of critical points of the project. Meetings, phone calls, emails, text messages, and field conversations can become cumbersome and ineffective if not handled properly. Current plans, specifications, material submittals, RFI responses, and all other project documentation need to be readily available to the entire project team.

WEBB Approach:

- Unless another software is required by the District, WEBB will use Procore Construction Management Software to process, log, and track all project documentation. WEBB will provide project licenses to the District and contractor for use during the project. The District will have access to view status of all documents throughout the project duration.
- The WEBB construction manager will organize and oversee the Pre-construction Meeting, Progress Meetings, Startup and Commissioning Meetings, and the Post-construction Conference.



Figure 3. Proposed Primary Clarifier adjacent to Existing Primary Clarifier



Figure 4. Proposed Dewatering Building adjacent to Existing Dewatering Building

- Bi-weekly Progress Meetings will be a forum to discuss progress, identify issues, solve problems, schedule inspections, and make assignments. WEBB will distribute meeting minutes to the team with action items, assignments, and clear direction.
- WEBB will submit daily inspection reports to the District with photos and project updates.

### 3. **Construction Sequencing and Scheduling:**

The Huston Creek WWTP needs to maintain full operation throughout construction. Impacts to operations and tie-ins will need to be coordinated in detail with the District Operations Staff. Material submittals and long lead items need to be addressed immediately to avoid costly delays during construction.

WEBB Approach:

- Access on-site during construction will be critical. The project is set up in two phases and it appears construction cannot overlap due to access. WEBB will work with the District to ensure access is available for District Staff and trucks for solids haul-off.
- WEBB will review the contractor's preliminary schedule to minimize resequencing of critical activities. WEBB will require the contractor to submit a Critical Path Method (CPM) Baseline Schedule and monthly updates, including submittal review time, material procurement, and delivery.
- Once a baseline is approved, the contractor will provide a look-ahead schedule for review at the construction progress meetings. These schedules will be used by the WEBB Team to schedule inspections and testing.
- When shutdowns and tie-ins are required, WEBB will review the Contractor's Maintenance of Plant Operations (MOPO) Plan and coordinate closely with the Engineer and District Plant Operations to minimize impacts to the plant.
  - o Critical MOPO/Shutdown requirements:

#### Primary Influent Splitter Box

- Shutdown of the grit effluent channel and influent flow meter is acceptable, but shutdown of the existing screenings and primary clarifiers is not acceptable. By-pass pumping will be required from the grit chamber to the primary clarifiers. No on-site wastewater storage is available.

#### Trickling Filter Recirculation Pumps and Piping

- By-pass pumping will be required to pump from the recirculation wet well to the Existing Primary Effluent Equalization Tank.

#### Thickened Sludge Pumps and Piping Connections

- Two 48-hour shutdowns are allowed per Section 01142-1.08A. Temporary pumps and piping are required for shutdowns exceeding 48-hours.

#### Potable and Non-Potable Water Lines

- Four-hour shutdowns can be allowed.

#### Electrical Power, Communication, Instrumentation, and Controls

- No shutdowns are acceptable. Temporary power and controls shall be provided by the contractor and coordinated with the District with an approved plan.
- WEBB will coordinate early with SCE for the on-site work required for the pad-mounted transformer. Approvals, agreements, fees, and inspections take time and planning so WEBB will be sure this is accounted for on the contractor's schedule and tracked in progress meetings.

### 4. **Cost Management:**

The District expects to stay within their budget for this project. All costs and changes need to be clearly documented for SRF Funding. Changes and extra work can be expected in construction but need to be managed. It is common that unforeseen conditions can arise with underground piping and earthwork.



**WEBB Approach:**

- Our team will track certified payroll requirements and verify that all parties are compliant with labor requirements for SRF Funding.
- WEBB will always keep the District up to date on the project costs. We will create and maintain a Risk Management Log to track actual and potential risks for the project. This will help to identify possible cost impacts to the project ahead of time so they can be managed.
- WEBB will verify the quantities the contractor is claiming to be paid for are complete. We will also verify the contractor is meeting other requirements such as certified payroll, as-builts, and schedule updates prior to recommending approval for contractor payment.
- Bid items are all lump sum. We will require a detailed schedule of values to verify the contractor is billing only for work completed monthly.
- Any extra work and change orders will be reviewed and approved by WEBB and the District prior to starting the work.



*Figure 5. Existing Diversion Box to Emergency Storage Reservoir*

**5. Quality Assurance/Quality Control:**

Constant supervision of the project will be required to ensure the District that all project requirements are being met during construction. The WEBB Team will verify and test for compliance with compaction, concrete testing, and special inspections.

**WEBB Approach:**

- WEBB will summarize the requirements and expectations of the contractor and coordinate the required QA/QC monitoring and testing during the project meetings.
- WEBB has a team of inspectors, technicians, and monitors to confirm that the contractor meets all requirements of the specifications.

**6. Start-up, Testing, and Commissioning:**

The new facility will be tied into the District's wastewater system. The contractor will need to pass all required tests including pre-operational checkout, manufacture certifications, load testing and initial operation, and plant operation testing per Section 016640 of the project specifications.

**WEBB Approach:**

- The WEBB Team will work with the contractor and District Operations Staff to prepare for commissioning. We will review the contractor's commissioning plans together until all parties are satisfied.
- WEBB will make sure the requirements of the specifications are met and that all steps are successfully passed through testing, startup, and integration of the new facilities. WEBB will create a log to track dates and verify that all equipment passes each testing phase.
- WEBB understands the value of training the District Operations Staff for proper use and maintenance of the new facilities. WEBB will help to schedule the contractor-provided training in accordance with Section 17010 requirements in providing video training, hands-on instruction, and follow-up training.



# Section 3. Key Personnel

## Organizational Chart

The following chart provides an overview of key personnel who will be responsible for the District’s project and full resumes are included. Key personnel will be available to the extent proposed for the duration of the project. None of the following key personnel shall be removed or replaced without prior written concurrence of the District.





# Key Personnel Resumes

---



## Reed Chilton, PE, QSD

Director - Construction Management and Inspection

Reed Chilton, PE, QSD, is Director of WEBB's Construction Management and Inspection Department. Reed has worked on a variety of private and public projects and has established a strong foundation in the engineering and construction management profession. His project experience includes sewer lines, drainage facilities, water lines, recycled water lines, wastewater treatment facilities, dry utilities, street improvements, street lighting, traffic signals, and landscaping. Specifically, his involvement with these projects includes preparation of specifications and bid documents, contract management and administration, permitting, submittal and RFI review and coordination, leading meetings, field investigations, project documentation, review and approval of change orders and pay estimates, project close-out, and managing day-to-day needs for owners and contractors. Reed manages and schedules WEBB's Inspection Team.

### REGISTRATIONS

Registered Civil Engineer C 83827 (CA)

### EDUCATION

BS, Civil Engineering  
Brigham Young University  
MS, Civil Engineering  
Brigham Young University

### CERTIFICATIONS/TRAINING

Qualified SWPPP Developer (QSD) C83827

**Construction Manager for the \$25M Project on the City of Imperial Wastewater Treatment Plant.** WEBB performed Construction Management, Inspection, and Engineering Support Services for Imperial's \$25M WWTP Upgrade project. This project includes construction of a new MBR treatment system including MBR Basins, waste-activated sludge pumps, blowers, air compressors, permeate storage tank, and non-potable water pumps. A pre-engineered metal building was installed for the MBRs system which included a monorail bridge crane, office spaces, and lab room. A dewatering system with screw conveyors was also installed inside a pre-engineered metal building. Electrical improvements include a new transformer, main breaker, automatic transfer switch, and Emergency Power Generator. Site improvements include yard piping, paving, and rock installation. The project also includes modifications to existing facilities, shut-downs, and tie-ins to the active wastewater treatment plan.

**Western Riverside County Regional Wastewater Authority's \$55 Million (14 MGD) Plant Expansion Project in Eastvale.** This project includes improvements to the headworks, fine screens, grit chamber, primary clarifiers, bio-reactors, secondary clarifiers, equalization tank, disc filters, chlorine contact basin, digesters, thickeners, centrifuges, and solar drying beds. For the Design Team, Reed was responsible for document management oversight, routing and processing of the hundreds of submittals and RFIs. He was also involved in the change order management, pay estimate reviews, and onsite inspections of the SWPPP.

**Project Manager for the Benedict Reservoir 8, Jurupa Community Services District.** WEBB provided construction management, inspection services, and engineering support for the Benedict Reservoir B project for Jurupa Community Services District. The existing project site includes two tanks. This project includes demolishing one existing tank and installing a new 1.1 MG welded steel reservoir (Benedict B) adjacent to the existing 1.0 MG reservoir (Benedict A).



## Reed Chilton, PE, QSD

Director, Construction Management and Inspection

Exterior coating of both tanks will be performed. Benedict Reservoir B will have a nominal diameter of 91-feet and shell height of 26-feet, including a reinforced concrete ring-wall foundation. This project includes a temporary by-pass to provide service to the 1200 pressure zone during construction, grading on the hillside in rock, site improvements, and re-vegetation.

**Project Manager for the \$3M College Tank Replacement, Golden State Water Company.** For the College Site in Placentia, an existing concrete tank was demolished and replaced with two 0.5 MG welded steel tanks along with a new site storm drain and site improvements. The existing concrete tank remained in service during construction of the new steel tanks and was then removed. A 1,000-LF, 12-inch diameter PVC overflow drain line was constructed in the College Plant access road from the new reservoir to an existing storm drain catch basin. This project also included landscaping to screen the tanks from nearby residents.

This project included coordination with MWD for improvements near their existing facilities, CEQA compliance with environmental mitigation measures, asbestos survey of existing facilities, coordination with nearby residents and working with GSWC operations staff.

**Construction Manager for the \$5.2 million Sky Country Trunk Sewer Project for Jurupa Community Services District.** The project included over 8,000 LF of 8-inch to 18-inch PVC and (PS 115 and SDR 35) and no dig VCP pipe with a construction cost of \$5.5 million as well as Jack and Bore installation of PVC and VCP sewer ranging in size from 8-inch to 18-inch. Performed air pressure testing and vacuum testing of sewer pipe and manholes. Observation of trench excavation, backfill, fill material moisture conditioning, densification, and asphalt paving. Coordinated road closures and traffic detours with city, local residents, and local businesses. Inspected installation of work area traffic control for compliance with approved plans.

**Project Manager for the \$3.6M Golden Tank Replacement, Golden State Water Company.** Golden Tank Project in Yorba Linda included demolition of the existing tank, installation of a new 1.5 MG welded steel tank, and installation of a new pump station. The existing concrete tank was removed prior to construction of the new steel tank. The booster station includes two 30 Hp vertical turbine pumps designed to pump 500 gpm and one 60 Hp vertical turbine pump designed to pump 1000 gpm with associated piping, valves, and appurtenances. The project also includes revisions to the on-site storm drain system, tie-ins to the existing water system, coordination with GSWC operations, removal of existing asbestos pipe, and coordination with the nearby park facilities.

**Construction Manager for the \$5.7 million Rider Distribution Center 3.** Offsite Improvements project for IDI Logistics in the City of Perris. The project was led by the developer of multiple nearby distribution warehouses. The improvements included in the contract were reimbursable by RBBD funds through the City of Perris. The purpose of the project was to widen Rider Street to ultimate width, construct Redlands Avenue including storm drain improvements, and curb and gutter, sidewalk, parkway landscaping, medians, median landscaping, street lighting, and traffic signals. Construction coordination included the on-site builder, off-site underground utilities including EMWD recycled and domestic water, dry utility installation, and SCE transmission pole relocation. Scheduling work between all trades and contractors was critical to meeting aggressive deadlines.

**Construction Manager for the \$8.5 million Madison Street Improvement Project for the City of Indio.** This project consisted of widening Madison Street from Avenue 50 to Avenue 52 from a two-lane road to a four-lane road. This project included grading, over-excavation, asphalt paving, concrete construction, drainage installations, drywells, traffic signal installations, landscaping and irrigation, water relocations and upgrades, traffic control, surveying, conduit installation,



## Reed Chilton, PE, QSD

Director, Construction Management and Inspection

pot-holing, and related work to widen to a four-lane road. Transmission power poles were required to be relocated during the project along with underground improvements for fiberoptic facilities. This project was located along the frontage of the Coachella Festival and Stagecoach concerts. WEBB coordinated with the property owners, City of Indio, City of La Quinta, and concert schedules to provide safe access throughout the project.

**Construction Manager for the \$3.1 million John J. Benoit Detention Center.** Off-site Storm Drain, Street, and Traffic Signal Improvement project for the County of Riverside Economic Development Agency. Storm drain improvements consisted of excavation/grading of retention basin of approximately 18,040 CY, installation of 3,660 LF of RCP ranging in sizes from 18-inch to 48-inch, and construction of 161 LF of curb inlet catch basins. Installation of RCP required multiple water relocations and modifications including vertical offsets ranging in sizes from 1-inch to 2-inch services and 6-inch to 12-inch mainline along with sewer lateral modifications. Coordination with the following agencies was required: Indio Water Authority, Valley Sanitary District, City of Indio Public Works, and Imperial Irrigation District. Reed also coordinated soils testing with local business owners.

**Construction Manager of a \$1.3 million headworks upgrade for the City of Imperial.** Improvements included headworks modifications, installation of fine screens, micro screens, splitter box, piping, shade structure, and electrical modifications.





## Brian Knoll, PE

### Chief Operations Officer

Brian Knoll, PE, is WEBB's Chief Operations Officer. Brian has been responsible for the design and direction of capital improvement projects throughout southern California. Brian's expertise lies in planning, design, and construction oversight of water and wastewater facilities. Brian has been involved in numerous large multi-discipline water and wastewater projects including the City of Riverside's 26 MGD expansion of their water quality control plant, the City of Beaumont's advanced water treatment facility and brineline, the 14 MGD expansion of the Western Riverside Wastewater Treatment Plant, and the 6 MGD expansion of the Calipatria Water Treatment Plant. He has worked extensively with the City of Imperial, Western Municipal Water District, Golden State Water Company, the City of Corona, Crestline Lake Arrowhead Water Agency, Eastern Municipal Water District, the City of Riverside, and WRCRWA. Brian has also worked closely with other engineering partners such as CDM Smith, Black & Veatch, and CH2M Hill. His macro style in water resources leadership coupled with a practical approach, enhances Brian's standing within the firm and the industry.

#### REGISTRATIONS

Registered Civil Engineer C 65690 (CA)  
Registered Civil Engineer C 42407 (AZ)

#### EDUCATION

MS, Civil Engineering  
Brigham Young University  
BS, Civil Engineering  
Brigham Young University

#### AFFILIATIONS

American Water Works Association (AWWA)  
American Society of Civil Engineers (ASCE)  
Water Environment Federation (WEF)  
Inland County Water Association (ICWA)

#### Wastewater Treatment Plant Expansion and Salt Mitigation Project, City of Beaumont - Brian serves as

Principal-in-Charge for the City's project which consists of two major components:

**Waste Water Treatment Plant (WWTP) Expansion and Upgrade - Final Design** - The existing WWTP needs to be expanded and upgraded. The WWTP is currently treating over 75% of its permitted capacity and therefore must begin the expansion process. Per the new Regional Water Quality Control Board's updated Basin Plan, the City must begin reducing TDS being discharged from the plant. The City completed a feasibility study to identify the best way to expand and upgrade the plant. The Plant will be converted to an MBR process followed by RO for TDS reduction. The Plant will also add screening, EQ, sludge dewatering, and drying.

**Brine Line - Final Design** - Brine disposal is an integral part of this project and was a key driver in the selection of this project. Without a safe, reliable, and cost effective way to dispose of the brine, this project cannot move forward and compliance with the Basin Plan would be impossible. The brine pipeline connecting to the Inland Empire Brine Line (IEBL) was determined to be the best option during the feasibility study, due to cost and certainty of operation. The brine line has been sized at 12-inches and will be approximately 23-miles long. The pipeline begins at the City's WWTP and ends near the City of San Bernardino's WWTP on Waterman Avenue.

**14 MGD Expansion Project, Western Riverside County Regional Wastewater Authority (WRCRWA), City of Eastvale** - Brian is the Principal Engineer and Project Manager for the 14 MGD expansion of the WRCRWA Plant. The existing plant capacity is 8.0 MGD following the Aeration Upgrade Project. Due to growth in the service area, the plant is nearing its new capacity.



## Brian Knoll, PE

Senior Vice President

The improvements to the plant include new headworks screening, primary clarifiers, post primary flow equalization, secondary clarifier, tertiary filters, chlorine contact basin, sludge thickeners, new centrifuges, conversion of existing aerobic digesters to anaerobic digesters, full plant odor control, and enclosed solar dryers. The project also includes chemical storage and pumping (Ferric chloride, alum, polymer, and sodium hypochlorite). The total construction cost is \$61 million.

**Replacement of Two Lift Station Pumps - Gateway of the Americas, Sewer Lift Station No. 2, Imperial County Department of Public Works (ICDPW)** - Brian served as the Principal-in-Charge for the replacement of two 5-hp submersible sewage pumping units for ICDPW's Lift Station No. 2. Project specifications included the replacements of equipment and pump appurtenances systems, pump guide rail system (to support three pumps), level control system, and all hardware inside the wet well, replacement of motor control center, and electrical wiring.

**Firehouse Sewer Lift Station, Olivenhain Municipal Water District** - Brian served as project manager for the District's project. The existing Firehouse Lift Station was constructed as a below grade packaged lift station within a steel enclosure. The enclosure was failing and also represented a safety hazard for operators due to the small exit. The existing control building was also in disrepair with a leaking roof. This project included the construction of a new dry pit, with improved access, new 750 GPM pumping units, new control building, bridge crane for pump removal, and miscellaneous site improvements. Our work also included preparation of a sewer bypass plan to allow uninterrupted service during construction.

**Claypool Lift Station and Force Main, City of Imperial** - Brian served as a Principal-in-Charge for the replacement of the Claypool Lift Station and new associated force main. The City of Imperial was experiencing reduced pumping capabilities in a damaged portion of force main that required the replacement of an existing pump station and the installation of a new force main. The project included the removal of the existing pump station, installation of two new pumps with controls, and the installation of 3,100 LF of 8-inch diameter PVC force main.

**Sewer Lift Station #12, Lake Arrowhead Community Services District** - Brian served as a Principal-in-Charge for the Sewer Lift Station #12 project for the District. WEBB provide engineering design services associated with the design of additional emergency storage at Sewer Lift Station #12. peak flow there is approximately fifteen minutes of emergency storage in the existing wet well. WEBB designed a new below grade emergency storage vault immediately adjacent to the existing wetwell to expand that capacity to approximately one hour. The proposed vault will is located within the existing access road for Lift Station #12. The vault has an overflow weir to accept sewage flows when the sewage level in the existing wet well exceeds the high water level, a level sensor and alarm intertied to the existing SCADA system, a bottom outlet with slide gate to drain the vault and a sloped bottom to facilitate cleaning.

**Beaumont Feasibility Study and Preliminary Design, City of Beaumont** - Brian served as Project Manager for the WEBB Team that prepared the project feasibility study, which analyzed two different options. The first was the Beaumont option which expands and upgrades treatment at the City's WWTP. For this option three different WWTP configurations were evaluated. In addition, options were explored to dispose of waste brine from the advanced treatment system. The second option was to consolidate treatment with YVWD and deliver all wastewater flow there. For each option detailed cost estimates were developed taking into account capital cost and O&M costs. In the end the City Council selected the Beaumont option. The preliminary design includes the preparation of 20%-30% plans for both the WWTP expansion as well as a 23-mile brine disposal pipeline connecting to the IEBL in San Bernardino.



# Clinton Cropper

## Construction Inspector

### CERTIFICATIONS/TRAINING

American Construction Inspector's Association  
California Department of Health Services, Distribution Operator  
National Association of Corrosion Engineer's Corrosion Technologist  
AWA Certified High Pressure Pipe, Structural Steel Welder  
AWWA Cross Connection Control Certification  
OSHA Safety Training for Construction Industry  
Confined Space Certified  
Soils Competent Person Certified  
Traffic Control Competent Person Trained

Clinton Cropper, a Construction Inspector at WEBB, has 23 years of experience in construction and inspection of projects devoted to water, recycled water, sewer, and public works infrastructure improvements. He has advanced steadily in his career, from maintenance worker, field supervisor and treatment plant operator, to district and construction inspector.

**Grass Valley Waste Water Treatment Plant Expansion Project, Lake Arrowhead Community Services District** - Clinton was the full-time inspector for the expansion of the waste water treatment plant from 2.5 to 3.75 MG. Construction inspection included site grading, formwork, rebar and concrete for primary treatment clarifier, trickling filter, secondary treatment clarifier, final filter systems, as well as all piping, mechanical equipment, electrical conduit, wiring, cabling, transformers, transfer switches, motor control panels, HTMI panels, vault boxes, sumps, wells, channels, flues, chambers, concrete and asphalt roadway rehabilitation, and new roadway construction. The project also included installation of a biofilter, odor control system, flow meter, storage basin, generator, and fuel tank. Expansion work included block work, framing, insulation, ventilation, and roofing on two buildings (electrical control building and chemical treatment building).

**Willow Creek Waste Water Treatment Plant Modification Project, Lake Arrowhead Community Services District** - Clinton inspected the demolition of existing tanks, clarifiers, headworks, piping, electrical waste furnace system. Construction inspection included excavation, grading, and installation of HDPE lined collection/settling ponds, SCADA system, HTMI system, headworks, primary clarification, clarifier rehabilitation, electrical, mechanical systems, and manholes to treat influent waste water inflow. Building modifications including roof structures (wood and metal), CMU block work, interior finishing, upgrade of HVAC system. Clinton also inspected the construction of 2 - 1 million gallon holding ponds and treatment improvements including a biofilter, odor control system, flow meter, storage basin, generator, and fuel tank.

**Well 13, Jurupa Community Services District (JCSD)** - Inspected the demolition of the existing facilities including a 200,000 gallon steel water reservoir, CMU block buildings and removal of various equipment including electrical switchgear, transformers, MCC panels, pumps, motors, flow meters, valving, piping, conduits, concrete pads and structures. Inspected site excavation, compaction, grading, and asphalt paving. Construction inspection included concrete footings, slabs, structures, encasements, well rehabilitation, including brush, bale, and chlorinate the well casing. Clinton also inspected the installation of the new well piping, pump, motor, CMU block buildings for electrical equipment and chemical control systems. Water treatment equipment included new piping, valving, flow meters, valves, and new electrical equipment for the operation of the site. Clinton inspected the installation of the new stand by generator for operation of the site.



## Clinton Cropper

### Construction Inspector

**Lift Station #12 Rehabilitation Project, Infrastructure Engineering, Lake Arrowhead Community Services District (LACSD)** - Clinton inspected the complete rehabilitation of the lift station including installing new force main system, manholes, valving, pumps, venting system, electrical system, CMU block electrical room, SCADA system, HTMI system, transfer switch system, variable frequency drive control and pumping systems, wet well repair and lining, piping, pumps, motors, and controls for the dry well, biofilter, odor control system, flow meter, storage basin, generator, fuel tank, wiring and by-pass system installation, and removal after new system activation.

**Bernina Water Treatment Plant Rehabilitation Project, Lake Arrowhead Community Services District** - Clinton inspected the complete rehabilitation of the water treatment plant including demolition of the existing plant, installation of new mechanical treatment equipment for the biofilter system, odor control system, and process piping. Other inspection included valving, pumps, flow meter, storage basin, electrical system, wiring, transformers, VFD's, transfer switches, HTMI, SCADA control systems, various concrete structures, chlorination treatment system, testing, and system activation.

**Golf Course Road Blending Line Installation Project, Lake Arrowhead Community Services District** - Clinton was the inspector for the installation of 6,500 FT of 6-inch and 8-inch C-900 piping and fittings to connect well water system to treated water system conveyed to water treatment plant. Included all phases of pipeline construction, testing, chlorination and system connections, trenching, backfilling compaction and paving of trenches, and pouring concrete thrust blocks and pads as required.

**Lake Front Sewer Rehabilitation Projects, Lake Arrowhead Community Services District** - Clinton inspected manhole rehabilitation, installation of service laterals, 25,000 LF of "Insituform" waste water lining inside existing pipeline system including televising, cleaning, lining cutting in lateral connections, by-pass pumping system set up, and operation and removal. Inspection also included installation of clay and C-905 HDR 35 piping systems, landscape, and homeowner site remediation and repair, and system commissioning.

**Various Potable Water Well Installation Project, LACSD, LACSD** - Oversee survey staking, site clearing and grubbing, and new well drilling and system installation, including testing, monitoring, and commissioning well systems.

**Mittry Water Tank Construction Project, LACSD** - Demolish existing steel water reservoirs, grade, excavate, install piping, concrete structures, and construct 3.2 MG concrete pre-stressed water tank.

**Various Water Pipeline Installation Projects, Palmdale Water District** - As district inspector, oversaw the installation of various potable water pipeline systems including Steel CMLC, C-900, Ductile Iron and HDPE pipe materials ranging from 4-inch to 54-inch. Systems of various lengths from 200 FT to 25,000 FT for housing tracts, industrial complexes, and custom home development. Treatment plant expansion, well houses, booster stations, clearwells, storage tanks, and mainline replacements. Included plan check review, site review, and all phases of construction and commissioning, working with other utility providers, City, County, and state personnel.

**Water District Well Rehabilitation Projects, Palmdale Water District** - Clinton inspected rehabilitation projects for various well sites (30) within the District. Many wells were extended deeper into the water aquifer to improve production and reduce sanding and drawdown issues. Also drilled new wells and constructed new well sites with CMU block, wood and steel structures, piping and SACDA, and Chlorination treatment systems.

**Water Reservoir and Pipeline Corrosion Monitoring Project, Palmdale Water District** - Managed water District's corrosion monitoring system for steel reservoirs (30) and distribution and transmission pipelines. Managed record keeping for tank cleaning and corrosion inspection, including condition assessments, Cathodic Protection system design and installation projects by others. Also conducted pipeline corrosion surveys and C.P. design for all transmission pipelines.





## Phillip J. Lemoine, CET

### Construction Inspector

Phillip Lemoine, CET, (Phil) is a Construction Inspector with WEBB's Construction Management and Inspection Department. Phil was instrumental in providing construction management and inspection for improvements of Assessment District Nos. 159 and 161 and CFD 88-4 for the County of Riverside in the Murrieta/Temecula area. His responsibilities included the on-site inspection and construction management of five bridges in Assessment District Nos. 159, 161, and CFD 88-4 for the County of Riverside.

#### EDUCATION

Public Works Construction Inspector  
Certificate, CSLA  
Certificate in Civil Engineering Technology  
T.H. Harns Technical School, Opelousas, LA

#### AFFILIATIONS

International Code Council (ICC)  
American Concrete Institute (ACI)

Phil also provided construction management services for the widening of the Rancho California Road bridge crossing over the I-15 for the City of Temecula. He was also the CFD Contract Manager for various projects within the City of Fontana including Sierra Lakes CFD No. 12 and Shady Trails CFD No. 31. Phil also provided CFD contract management for The Preserve CFD No. 2003-3 for the City of Chino.

**Benedict Reservoir B, Jurupa Community Services District** – Phil inspected Jurupa Community Services District's Benedict Reservoir B project located in Jurupa Valley. This project includes demolishing one existing tank and installing a new 1.1 MG welded steel reservoir (Benedict B) adjacent to the existing 1.0 MG reservoir (Benedict A). Exterior coating of both tanks was performed. Benedict Reservoir B will have a nominal diameter of 91-FT and shell height of 26-FT, including a reinforced concrete ring-wall foundation. This project includes a temporary by-pass to provide service to the 1200 pressure zone during construction, grading on the hillside in rock, site improvements, and re-vegetation.

**Beaumont Avenue Recharge Facility, San Geronio Pass Water Agency**  
Phil was responsible for inspecting mass grading on a 46 acre site, the construction of retention ponds, installation of 5,600 LF of 12-inch to 24-inch PVC waterlines, 730 LF of HDPE storm drain line, the construction of 44 concrete structures, and installation of five meter assemblies.

**River Road Lift Station Expansion Phase 1 Equipping of Cell 2, Jurupa Community Services District (JCSD)** – This project is located at JCSD's existing River Road Sewer Lift Station which pumps raw wastewater to the Western Riverside County Regional Wastewater Authority (WRCRWA) treatment plant through an existing, on-site 22-inch diameter force main. The River Road Lift Station currently has two pumps in Cells 1, 2, and 3 and Cell 2 is currently empty. This project consists of installing two Hidrostral submersible pumping units in Cell 2 with all associated work such as new VFDs and associated electrical work, replacement of level transducer in Cell 2 with Radar Level Transducers, wet well reconfiguration for the submersible pumps and piping, discharge piping and appurtenances, modifications to access hatches, relining of Cell 2 concrete surfaces and structural modifications, and improvements and bracing. The new pumps are Hidrostral H5K-S each with a capacity of 3,300 gpm at 174-FT TDH and equipment with submersible 75 HP electric motors.



## Phillip J. Lemoine

### Construction Inspector

**Sky Country Trunk Improvement Project, Jurupa Community Services District** - The project included over 8,000 LF of 8-inch to 18-inch PVC and (PS 115 and SDR 35) and no dig VCP pipe with a construction cost of \$5.5 million as well as Jack and Bore installation of PVC and VCP sewer ranging in size from 8-inch to 18-inch. Performed air pressure testing and vacuum testing of sewer pipe and manholes. Observation of trench excavation, backfill, fill material moisture conditioning, densification, and asphalt paving. Coordinated road closures and traffic detours with city, local residents, and local businesses. Inspected installation of work area traffic control for compliance with approved plans.

**Romoland MDP Line A Stages 4 and 5, Line 1, Stage 1, Lines A-2 and A-3, Briggs Road Detention Basin Riverside County Flood Control and Water Conservation District** - Phil provided full time inspection services for this \$28 million project. The constructed improvements included the following; 24-inch to 102-inch Reinforced Concrete Pipe (RCP), concrete trapezoidal channels ranging in size from 26-FT to 68-FT in width, Reinforced Concrete Box (RCB) culverts ranging in size from 7-FT x 10-FT single cell to 7.5-FT x 12-FT quadruple cells, a 35 acre detention basin, road construction, utility relocations, access road and fencing, traffic signal modification, and ancillary drainage facilities along the alignment.

**Homeland MDP Line 1 Stage 1 & Juniper Flats Road Detention Basin, Riverside County Flood Control and Water Conservation District** - Phil provided full time inspection services for this \$15 million project. The constructed improvements included the following; 24-inch to 96-inch Reinforced Concrete Pipe (RCP), 24-FT wide concrete trapezoidal channel, Reinforced Concrete Box (RCB) culverts ranging in size from 6-FT x 12-FT single cell to 7-FT x 12-FT double cells, a 20 acre detention basin, road construction, utility relocations, access road and fencing, and ancillary drainage facilities along the alignment.

**Sunnyslope Reservoir, Jurupa Community Services District** - Phil provided inspection services for the 11.8 MG pre-stressed, reinforced concrete reservoir 230-FT in diameter and 42-FT high. The project included site clearing and grading, drainage improvements, site improvements, electrical controls and appurtenances, overflow/drain pipeline, and related work. The design specified high strength concrete for the core walls which included vertical high strength threaded bars post tensioned after the wall obtained its specified compressive strength. The walls were joined to the tank foundation by vertical seismic tendons cast into the foundation footing. The tank roof was of conventional reinforced concrete construction. Upon completion of the walls and roof, the tank was wrapped and post tensioned with three layers of 3/8-inch diameter galvanized wire. The post tensioned wire was covered with a high strength application of shotcrete between each layer for protection.

**Mittry & Brentwood Tank Replacement, Lake Arrowhead Community Services District** - Phil served as the Inspector for the Mittry Concrete Reservoir Project. The project consisted of a 3.2 MG pre-stressed concrete reservoir. The project included civil, mechanical, electrical, and tank details to construct the tank and connect it into the distribution system. The tank was squeezed in between vacation cabins and mature pine trees on LACSD's existing tank site. The concrete tank is the tallest pre-stressed concrete tank constructed to date in the State of California.

**Pyrite Creek/Bain Street Trunk Sewers, Jurupa Community Services District** - Construction consisted of 6,200 LF of 36-inch diameter, 1,600 LF of 30-inch diameter, and 5,400 LF of 24-inch diameter PVC PS 115 pipeline, along with 4,400 LF of 8-inch to 12-inch diameter PVC SDR 26 pipeline. Construction of a portion of the trunk sewer line entailed a five week closure of a major arterial roadway (Limonite Avenue) which required 24/7 construction operations, extensive traffic control plans, and a major traffic management plan to detour the large traffic volumes. Construction included a 500 LF 48-inch diameter jack and bore, groundwater dewatering, sewer bypass operations, relocation of 1,500 LF of 12-inch diameter CML/CMC waterline, and 3,200 LF of 24-inch diameter PVC C-905 sewer force main. The project also entailed acquisition of private party easements, encroachment permits from Riverside County Flood Control, and the City of Jurupa Valley. Construction costs totaled nearly \$12,000,000.





## Michael A. Gradillas

### Construction Inspector

Michael Gradillas is a Construction Inspector with WEBB's Construction Management and Inspection Department. Michael has years of experience with many of the types of civil works projects WEBB handles, having started his career with Lake Arrowhead Community Services District (District) in 1984. His extensive public agency background with projects including water and sewer pipelines enables him to provide WEBB clients with effective, highly detailed management and inspection services.

#### EDUCATION

BA, Sociology  
University of California,  
Santa Barbara

#### CERTIFICATIONS/TRAINING

Public Works Construction Inspection  
and Procedures/UCR  
Competent Person Seminar, AWWA  
Infotox Asbestos Course, EPA  
Workplace Violence Prevention Training,  
LACSD  
CSRMA Construction Safety Training,  
Workplace Answers  
Grease Interceptor Inspector Training  
Working Successfully with Customers,  
Public Sector Excellence  
Underground Utility Locator/Dig Alert

As an inspector for the District, Michael completed water and sewer pipeline projects ranging from 6-inch to 27-inches in diameter. He took on other challenging assignments such as four sewer treatment plant upgrade projects which included tertiary and recycled water treatment elements. He also retrofitted several water tanks and built two 1 million gallon reservoirs, constructed several sewer pump stations and recycled water pump stations, and completed sewer rehab of thousands of feet of pipe also ranging from 6-inch to 27-inch. He also upgraded more than 1,000 manholes.

**Jurupa Community Services District, Jurupa Valley** - Michael has inspected approximately 35 water and sewer improvement projects including residential single-family tracts, high-density residential, commercial, and industrial projects. He is responsible for inspection of multiple projects simultaneously in various stages of construction. Pipe sizes have varied from 1-inch thru 36-inch for water, and 4-inch thru 48-inch for sewer. Inspection includes pipe appurtenances, 1-inch thru 10-inch backflow preventers (installation, painting, and certifying), fire hydrants, blow off valves, air release/air vacuum valves, and pressure regulators of all sizes.

Duties have included plan review, attendance at project meetings, submittal reviews, inspection of the water and sewer improvements verifying conformance with District standards, monitoring all required testing, punch list preparation, and final acceptance of the improvements into the District's water and sewer systems.

**870 Pressure Zone Pipeline, Jurupa Community Services District** - This project's spaces consisted of 3,891 LF of 30-inch diameter CML/CMC waterline, 5,323 LF of 24-inch diameter CML/CMC waterline, 3,443 LF of 16-inch diameter CML/CMC waterline, 1,697 LF of 24-inch diameter RCP storm drain, all connections to well sites, pipelines and storm drain facilities, all appurtenances, and all associated paving, trenching, and surface restoration.

**Morongo Band of Mission Indians Wastewater Treatment Plant Headworks Expansion** - This project included the inspection for the demolition and disposal of the existing headworks and the construction of a replacement headworks which included a reinforced concrete inlet channel, equipped Montana flume and slide gates, step screen, washpactor, grit classifier, vortex grit separator, and controller. Additionally, new fibrous reinforced concrete sludge drying beds were installed, as well as a CMU retaining wall, and electrical panels. Total construction cost for this project was \$725,000.



## Michael A. Gradillas

Construction Inspector

### Lake Arrowhead Community Services District -

Full-time inspector of 1 million gallon reservoirs in Lake Arrowhead. Michael inspected the underground piping, foundations, and coordinated special inspections for joint x-ray, painting, and coating from the beginning to end of the project.

Inspector of the retro-fit of multiple small water tanks ranging from 50,000-100,000 gallons in Lake Arrowhead.

Emerald Drive - 1,500-FT of 8-inch clay sewer and 4-inch laterals for 16 lots. Also ran 6-inch steel water pipe and services. Installed hydrants and manholes, etc.

Arrowhead Canyon - 3,500-FT of 8-inch PVC sewer and 3,500-FT of 8-inch PVC water, plus services, hydrants, laterals and manholes, etc. for 35 lots.

Millpond - 7,000-FT of 8-inch SDR 35 sewer pipe and 5,000-FT of 8-inch PVC water pipe for 60 lots and a Clubhouse. Installed services, laterals, hydrants, and manholes, etc.

Eagle Ridge - 7,000-FT of 8-inch SDR 35, plus laterals and manholes. Water by another water company.

- 2,000 FT of 12-inch PVC sewer and 5,000 FT of 15-inch PVC sewer through the Lake Arrowhead Country Club to replace old 8-inch and 12-inch sewer lines. Construct new 48-inch manholes and new 4-inch lateral connections for private homes
- 10,500 FT of 24-inch ductile iron pipe constructed through the national forest connecting two treatment facilities together. Also included the construction of concrete junction boxes
- 2,000 FT of 12-inch PVC Class 200 water pipe and 3,000 FT of 8-inch PVC Class 150 water line to replace existing water line system for Tracts 55 & 58. Installed all services, hydrants, and valves. Project included full pavement overlay of the streets
- 3,000 FT of 8-inch SDR 35 PVC and manholes to replace existing 6-inch sewer line system. Replaced all laterals with new 4-inch sewer connections for Tracts 55 & 58
- 11,000 FT of 24-inch ductile iron Class 250 and 18-inch PVC Class 200 recycled water pipe, from the Grass Valley Treatment Plant to the Lake Arrowhead Country Club. Project included full pavement overlay of the streets
- 5,000 FT of 12-inch ductile iron Class 250 sewer force main on Brentwood Drive
- 7,500 FT of 12-inch PVC Class 200 water line from Cottage Grove Pump Station to Crestline Lake Arrowhead Water Agency tie-in. This allowed LACSD to purchase water from CLAWA during drought conditions
- 2,000 FT of 6 -inch PVC Class 150 water line and 4,000 FT of 8-inch PVC Class 150 water line to replace existing water system for Tracts 6 and 7
- 5,000 FT of 8-inch SDR 35 sewer to replace existing 6-inch sewer in Cedar Glen. Project included manholes and full street overlay
- 2,000 FT of 12-inch sewer, 1,800 FT of 18-inch sewer, 700 FT of 21-inch sewer, 500 FT of 27-inch sewer - relined all sewer and rehabilitated the manholes
- 3,000 FT of 8-inch concrete sewer re-lined with Insituform fiberglass product and manholes coated with elastomeric liner system
- 10,000 FT of 8-inch PVC Class 150 water and 10,000 FT of 6-inch PVC Class 150 water, plus all appurtenances in Deer Lodge Park area of Lake Arrowhead
- Emerald Drive - 1,500 FT of 8-inch clay sewer and 4-inch laterals for 16 lots. Also ran 6-inch steel water pipe and services. Installed hydrants and manholes, etc.



## Section 4. Project Experience

---



### Imperial Wastewater Treatment Plant Upgrade

City of Imperial-Public Works

**Client Contact:**

Jackie Loper  
Director of Community Development

760.355.3336  
jloper@cityofimperial.org

City of Imperial - Public Works  
420 South Imperial Avenue  
Imperial, CA 92251-1637

WEBB performed Construction Management, Inspection, and Engineering Support Services for Imperial's \$25M WWTP Upgrade project. This project includes construction of a new MBR treatment system including MBR Basins, waste-activated sludge pumps, blowers, air compressors, permeate storage tank, and non-potable water pumps. A pre-engineered metal building was installed for the MBR system which included a monorail bridge crane, office spaces, and lab room. A dewatering system with screw conveyors was also installed inside a pre-engineered metal building. Electrical improvements include a new transformer, main breaker, automatic transfer switch, and Emergency Power Generator. Site improvements include yard piping, paving, and rock installation. The project also includes modifications to existing facilities, shut-downs, and tie-ins to the active wastewater treatment plant.





## Regional Lift Station Improvements Jurupa Community Services District

**Client Contact:**  
Eddie Rhee, PE  
Engineering Manager

(951) 685-7434 Ext. 118  
erhee@jcsd.us

Jurupa Community  
Services District  
11201 Harrel Street  
Jurupa Valley, CA 91752-3715

WEBB provided engineering support and inspection services for the Regional Sewer Lift Station, commonly referred to as Plant 1, which is the main pumping station for the eastern half of the Jurupa Community Services District sewer service area to pump wastewater to the City of Riverside Regional Water Quality Control Plant for treatment. The facility is a wet well dry pit design with an ultimate capacity of 4,500 GPM. The District has completed various improvements and modifications since Plant 1 and the associated Regional Force Main was originally constructed in the mid 1970's. WEBB has been involved with nearly all aspects of planning, phasing, design, and construction of the facilities. The District has added 5 MG of emergency storage (equalization ponds and bypass pump station) which allows sewage to be bypassed for maintenance and repairs and inspection of the internal condition of the existing force main. Recent improvements included electrical and SCADA upgrades to improve reliability and site security, new wet well coating, and regional force main replacement. The Regional Force Main Replacement Project included approximately 3.5 miles of 24-inch diameter PVC pipeline through existing developed streets. Planned improvements included VFD and pump replacements to better match existing flow conditions and a final connection to the treatment plant.





## River Road Lift Station

Jurupa Community Services District

**Client Contact:**

Eddie Rhee, PE  
Engineering Manager

(951) 685-7434 Ext. 118  
erhee@jcsd.us

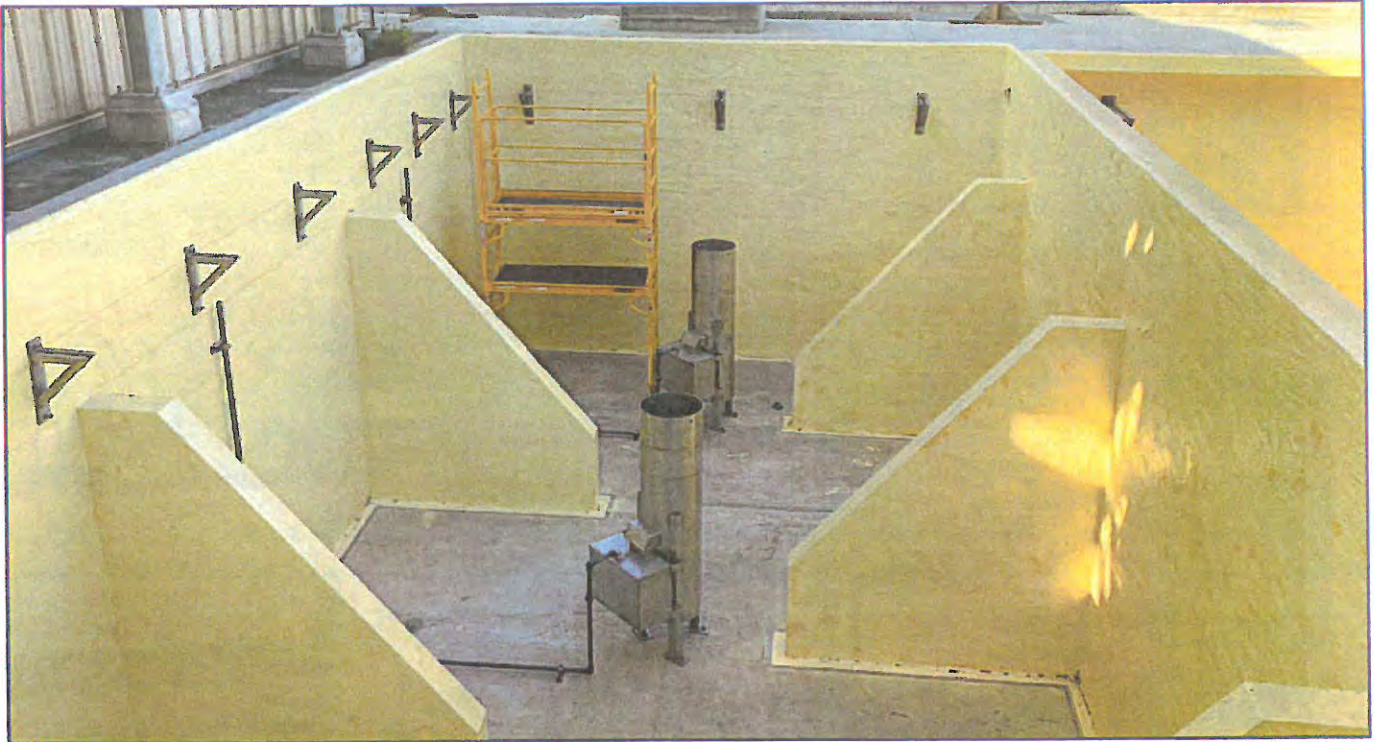
Jurupa Community  
Services District  
11201 Harrel Street  
Jurupa Valley, CA 91752-3715

WEBB provided construction management and inspection services and was responsible for the preliminary engineering and final design of this 19,000 GPM (27.3 MGD) ultimate capacity sewer lift station, utilizing 75 HP and 150 HP VFD vertical turbine solids handling pumping units. In addition, WEBB also developed an implementation plan to provide uninterrupted service during construction and startup of the lift station facilities. Once construction began, our team was responsible for coordination, on-site inspection services, and overall construction management. The 55-FT deep wet well is a special design with a three-compartment cast-in-place reinforced concrete structure self-cleaning wet well to better match flows at both interim and ultimate condition. The design also included a separate 35-FT deep diversion structure with sluice gates directing flow to each wet well compartment, connection to the plant headworks, grinder/comminutor, and the standby emergency generator. This project included:

**Project Highlights**

- 60-inch diameter jacked and bore casing for 42-inch HDPE influent pipeline
- 35-FT deep pre-cast manhole with sluice gate for emergency shutoff
- 35-FT deep diversion structure to direct flows to any of the three wet well cells
- SCADA operated 4-FT x 4-FT sluice gates in diversion structure
- Hydraulically operated channel grinder
- Four sequentially operated, 75 HP VFD controlled vertical turbine solids handling pumps for initial capacity of 8,200 GPM; planned capacity increases up to 19,000 GPM and 650 KW standby generator
- 20-FT x 60-FT x 60-FT deep cast-in-place wet well divided into three cells, each with two pumps in self-cleaning sumps
- 20-inch diameter HDPE sewer force main to the WRCRWA Treatment Plant with provisions for a future parallel 30-inch SFM
- Provisions for future odor control equipment





## Sludge Storage Project Water Reclamation Facility #1

City of Corona Department of Water and Power

**Client Contact:**  
Thomas Moody  
General Manager

951.279.3660  
tom.moody@coronaca.gov

City of Corona Department of  
Water and Power  
755 Public Safety Way  
Corona, CA 92880-2005

The City of Corona's Water Reclamation Facility #1 needs additional sludge storage capacity in order to efficiently and effectively operate. This project converts an abandoned chlorine contact chamber into a dual compartment sludge storage tank. The dual tank allows the plant staff to separate primary sludge from waste activated sludge in order to optimize digestion and dewatering. In addition to the storage tanks, a new sludge screening and pumping facility is being constructed to improve sludge quality as well as increase operational flexibility. This project is being implemented into the existing solids handling system and must be coordinated with on-going operations to ensure continuous treatment is maintained. Once the new facilities are constructed and properly commissioned, the existing sludge storage tank and ancillary equipment will be demolished to provide space for future plant improvements.

### **Project Highlights**

- Operating Facility
- Thickening
- Sludge Storage Tank
- Sludge Screening and Pumping Facility
- Implemented into existing Solids Handling System
- Dewatering Facility





## **WRCRWA Wastewater Treatment Plant - 14 MGD Expansion**

### **Western Riverside County Regional Wastewater Authority**

**Client Contact:**  
Tom Moody  
General Manager

951. 279.3660  
tom.moody@coronaca.gov

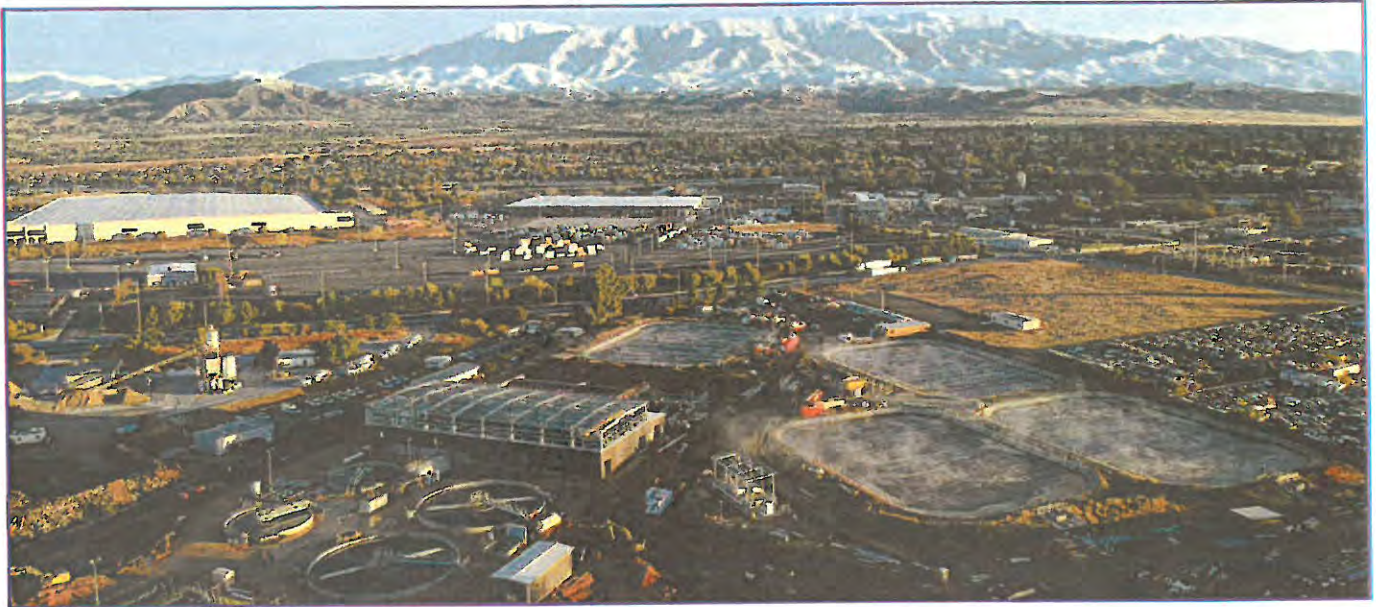
City of Corona Water & Power  
755 Corporation Yard Way  
Eastvale, CA 92880-2005

The existing Western Riverside County Regional Wastewater Authority (WRCRWA) Treatment Plant (Plant) was originally placed in operation in March 1998 and was constructed as a design build project. The design capacity is 8.0 million gallons per day (MGD). The service area associated with this treatment facility has continued to grow over the past few years and several of the member agencies associated with the WRCRWA require additional wastewater capacity. As such, WEBB designed the 14 MGD plant expansion. The expansion project included evaluating alternatives to provide additional flow and biological capacity while reducing the overall cost of treatment. WEBB's design includes primary, secondary, and tertiary treatment along with disinfection and solids handling. Working with the member agencies, cost effective alternatives are being selected and refined to make this project affordable to build while reducing the cost of treatment. The project also includes chemical storage and pumping.

#### **Project Highlights**

- Expanded to 14 MGD
- Operating Facility
- Headwork Screening
- Biological Treatment
- Anaerobic Digestion
- Tertiary Filtration
- Sludge Dewatering and Drying
- Recycled Water Storage and Pumping
- Odor Control





## Beaumont Treatment Plant Expansion and Salt Mitigation City of Beaumont

### Client Contact:

Kristine Day  
Assistant City Manager

951.769.8520  
kday@beaumontca.gov

City of Beaumont  
550 East 6th Street  
Beaumont, CA 92223-2253

### WWTP Expansion and Upgrade

The existing WWTP needs to be expanded and upgraded. The WWTP is currently treating over 75% of its permitted capacity and therefore must begin the expansion process. Per the new Regional Water Quality Control Board's updated Basin Plan, the City must begin reducing TDS being discharged from the plant. The WEBB Team completed a feasibility study to identify the best way to expand and upgrade the plant. The WWTP upgrades include additional headworks screening, flow equalization, grit removal, fine screens, MBR, reverse osmosis, biosolids dewatering, and drying.

### Brine Line - Final Design

Brine disposal is an integral part of this project and was a key driver in the selection of this project. Without a safe, reliable, and cost effective way to dispose of the brine, this project cannot move forward and compliance with the Basin Plan would be impossible. The brine pipeline connecting to the Inland Empire Brine Line (IEBL) was determined to be the best option during the feasibility study, due to cost and certainty of operation. The brine line has been sized at 12-inches and will be approximately 23-miles long. The pipeline begins at the City's WWTP and ends near the City of San Bernardino's WWTP on Waterman Avenue. WEBB is also leading the permitting of this facility with Riverside County, San Bernardino County, City of Redlands, City of Loma Linda, and City of San Bernardino.

### Project Highlights

- Existing operating facility, structures, and piping
- Evaluate existing facilities and prepare facility master plan
- Upgrade/expand headworks, biological treatment, and UV disinfection
- Add grit removal, washing system, sludge drying facility, and foul air odor control system
- Replace secondary clarifiers and tertiary filtration with MBR treatment
- Replace existing dewatering centrifuges with new units
- CEQA and Funding assistance



# Section 5. Cost Proposal



## Huston Creek WWTP Primary Clarifier and Dewatering Building Crestline Sanitation District

Item	Description	Principal II	Construction Manager	Project Coordinator	Inspector II	Total Hours	Subtotal - Labor	Sub-consultant Budget	Expenses	Total/task <sup>1</sup>
	Billout Rate	\$ 273	\$ 252	\$ 104	\$ 135					
<b>Task 1 - Construction Management</b>		<b>28</b>	<b>310</b>	<b>580</b>		<b>1418</b>	<b>\$ 272,084</b>	<b>\$ 56,350</b>	<b>\$ 5,000</b>	<b>\$ 333,600</b>
1.1	Project Management	8	80	40		128	\$ 26,504	\$ -	\$ -	\$ 26,500
1.2	Meetings and follow up (75 meetings)	8	200	80		288	\$ 60,904	\$ -	\$ -	\$ 60,900
1.3	Progress Reporting (18 Monthly Reports)		40	20		60	\$ 12,160	\$ -	\$ -	\$ 12,200
1.4	Submittal Coordination (200 submittals)		50	150		200	\$ 28,200	\$ -	\$ -	\$ 28,200
1.5	Requests for Information (100 RFIs)		60	100		160	\$ 25,520	\$ -	\$ -	\$ 25,500
1.6	Change Order Requests (30 change order requests)	4	80	30		114	\$ 24,372	\$ -	\$ -	\$ 24,400
1.7	Design Clarifications	4	60	20		84	\$ 18,292	\$ -	\$ -	\$ 18,300
1.8	Progress Payments (18 monthly payments)		40	40		80	\$ 14,240	\$ -	\$ -	\$ 14,200
1.9	Testing, Startup, and Commissioning	4	100	40		144	\$ 30,452	\$ -	\$ -	\$ 30,500
1.10	Punchlist and Final Walk		40	20		60	\$ 12,160	\$ -	\$ -	\$ 12,200
1.11	Record Drawings		40	20		60	\$ 12,160	\$ -	\$ -	\$ 12,200
1.12	Operations and Maintenance Manuals		20	20		40	\$ 7,120	\$ -	\$ -	\$ 7,100
1.13	Labor Compliance Monitoring						\$ -	\$ 56,350	\$ -	\$ 56,400
1.14	CM Expenses						\$ -	\$ -	\$ 5,000	\$ 5,000
<b>Task 2 - Inspection</b>			<b>80</b>	<b>140</b>	<b>3100</b>	<b>3320</b>	<b>\$ 453,220</b>	<b>\$ 80,500</b>	<b>\$ 20,000</b>	<b>\$ 553,700</b>
2.1	Construction Inspection				3100	3100	\$ 418,500	\$ -	\$ 20,000	\$ 438,500
2.2	Inspection Support		40	100		140	\$ 20,480	\$ -	\$ -	\$ 20,500
2.3	Electrical Inspection (SKM)						\$ -	\$ 23,000	\$ -	\$ 23,000
2.4	Geotechnical Observation and Testing (Landmark)						\$ -	\$ 57,500	\$ -	\$ 57,500
2.5	Subconsultant Management		40	40		80	\$ 14,240	\$ -	\$ -	\$ 14,200
<b>Total</b>		<b>28</b>	<b>890</b>	<b>720</b>	<b>3100</b>	<b>4738</b>	<b>\$ 725,304</b>	<b>\$ 136,850</b>	<b>\$ 25,000</b>	<b>\$ 887,300</b>

1. Rounded to the nearest \$100.







CLINTON R. CROPPER  
1992 Mill Creek Ln. S.W.  
Bogue Chitto, MS. 39629  
Work Cell: 661-361-4471  
Email: [cropper.clinton@yahoo.com](mailto:cropper.clinton@yahoo.com)

November 2013 to Present

Applus-Velosi

11801 S. Sam Houston Parkway W.

Houston, TX. 77031

Title : Mechanical Inspector

Project Budgets: 150,000 to 10 Million

Duties: Coordinate and conduct various inspection disciplines from project assessment to execution, in-process inspections, hydrostatic, N.D.E., corrosion control, coatings, F.A.T., Final, load out and shipping processes. Includes various types of equipment for environmental, oil and gas, steam generation, electrical, mechanical, water, waste-water and various other types of processes. Typical inspection duties would include start up via document and drawings and specs review to complete fabrication process. May include the mechanical as well as electrical installation and operation of equipment, power generation, electrical transformer processes and equipment, electronic control systems, mechanical pumping, flushing, phasing, etc. Perform spot inspections progress inspections as well as resident inspection duties.

July 2009 to October 2013

Aerotek Engineering / Environmental

9353 Fairway View Pl.

Rancho Cucamonga, CA.

Title: Contract Construction Inspector

Project Budgets: 6 Million to 100 Million

Duties: Coordinate with staff and Army Corps of Engineering for the construction of a state of the art, multi- phase potable water treatment plant at Fort Irwin, CA. as well as installation of 70,000' of various diameter pipeline systems for the community. Also including the drilling and construction of new water wells, with the rehabilitation of existing wells,



installation of advanced chlorination systems for various wells and booster pump stations, existing and new construction, including storm drain systems and culverts and catch basins, and pipelines of various diameters and pipe materials such as steel, ductile iron, PVC, HDPE, copper, etc.

#### Additional Aerotek Client projects:

Coordinate with Lake Arrowhead Community Services District engineering staff in reviewing plans, specs. and submittals for various projects from pipeline system installations to pump houses, wastewater structures and facilities, Clarifiers, tricking filters, lift stations, booster stations, Steel and concrete water tanks, including concrete pre-stressed (DYK Design) water tanks, wet / dry wells, clarifiers, filtration systems, electrical controls, panels, switch gear and all instrumentation, coordinated and monitored all phases of construction and commissioning of plants and systems. Included preparation and installation of all structures, storm drain catch basins, overflow basins and v-ditches and culverts, from grading and excavating to backfill, compaction and paving. Followed the paperwork system from beginning of projects to the end with final acceptance reports, certifications and documentation.

Mar. 2007 to June 2009  
C.S.I. Services, Inc.  
P.O. Box 801357  
Santa Clarita, CA. 91380

Title: Coatings Inspector                      Project Budgets: 20,000 to 4 Million  
Duties: Coordinate with owners/ agencies in scheduling and conducting coatings inspection projects involving metal and concrete structures. Agencies and owners of water, wastewater, oil and gas facilities such as offshore structures, refineries, cogeneration plants, compressor stations, pipelines, tanks. Also include bridges, towers, channels, etc. Includes review of specifications, submittals, manufacture's specs, permits, blueprints, contract documents as well as coating assessments and failure analysis.



Aug. 2004 to Mar. 2007  
Schiff Associates  
431 W. Baseline Rd.  
Claremont, CA. 91711

Title: Project Manager                      Project Budgets: 50,000 to 4 Million  
Duties: Coordinate and oversee various types of corrosion control projects such as, corrosion assessment testing for potable steel water reservoirs, pipelines, bridges, decking, communication towers, building foundations; coatings assessments. Performed soil testing, field pipe-to-soil potential surveys for pipelines, tested and inspected corrosion control devices after installation to determine conformance with plans and specifications as well as submittals.

Jan. 1990 to Mar. 2004  
Palmdale Water District  
2029 E. Ave. Q  
Palmdale, CA. 93550

Title: Construction Inspector              Project Budgets: 100,000 to 22 Million  
Duties: Inspection of construction projects approved by the District. Reviewed plans and specifications for each project, conducted preconstruction meetings with contractors, city, county and state personnel regarding the project's impact on such agencies. Inspected all phases of work from surveying to grading to materials selection to installation, backfilling, compacting, testing, setting forms, installing and tying off rebar, pouring concrete, paving, etc. Included: pipeline repairs and complete pipelines / fittings installations, testing and commissioning, constructing buildings, drainage channels, tanks, treatment plant facilities, clarifiers, basins, pumping plants, booster stations, etc. Inspection of construction of steel reservoirs.  
Spent about 1,500 hours doing plan-check, specification and submittal review as well as City, County and State regulations research and coordination.

**Certifications:** AWWA Cross Connection Control, Cal. Dept. Health Water Distribution Operator, past AWS certified Structural steel and high pressure pipe welder, Hazmat certified, SSPC C-1 and C-2 certifications, NACE



Certified Corrosion Technologist, NACE Protective Coatings and Linings Course, Past ACIA(American Construction Inspector's Association) member.

**Education:** Graduated- Channel Islands High School – Oxnard, CA., Completed Water Treatment Program at California University, Sacramento in Feb. 2002. Completed and passed several corrosion control courses at NACE International. Completed Confined Space, Soils competent person courses, Traffic Control courses as well as Inspection and Water Distribution courses.

**Welding Jobs:** Allis Chalmers, Bucyrus Erie, U.S.A. Petroleum, Union Oil, Chevron, Palmdale Water District

Various pipeline projects:

Water – inspect the installation of steel CMLC pipelines for transmission systems and distribution systems, from 4 inch to 72 inch diameter.

Inspect the installation of Ductile Iron pipelines from 6 inch to 48 inch systems from a few hundred feet to 25,000 feet per project.

Inspect the installation of PVC C-900, C-905 pipelines from 4 inch to 36 inch.

Inspect the installation of “Orangeberg”, H.D.P.E., A.C. pipelines

Wastewater – Inspect the installation of P.E., SDR 26, 35, Poly pipe VCP, etc. for wastewater lines.

Storm Drain – inspect the installation of RCP, CMP, cast in place storm drain pipe of various diameters up to 72 inch. Some projects were onsite and some offsite, including the installation of and the forming and pouring of various structures including drain boxes, catch basins, V-ditches, canals

**References available upon request**