RANCHO MURIETA COMMUNITY SERVICES DISTRICT

15160 JACKSON ROAD
RANCHO MURIETA, CA. 95683

BOARD WORKSHOP/SPECIAL MEETING
April 26, 2013
District Administration Building
2:00 p.m.

NOTICE IS HEREBY GIVEN that the Board of Directors of the Rancho Murieta Community Services District will hold a Special Meeting on April 26, 2013 at 2:00 p.m., at the Rancho Murieta Community Services District Board Room at 15160 Jackson Road, Rancho Murieta.

Note: *The running times listed on this agenda are only estimates and may be discussed earlier or later than shown. At the discretion of the Board, an item may be moved on the agenda and or taken out of order.*

AGENDA

RUNNING TIME

1. **CALL TO ORDER, ROLL CALL -** Determination of Quorum - President Pasek **(Roll Call)** 2:00

2. **ADOPT AGENDA** (Motion) 2:05

3. **COMMENTS FROM THE PUBLIC** 2:10

The public shall have the opportunity to directly address the Board on any item of interest before or during the Board's consideration of that item. Public comment on items within the jurisdiction of the Board is welcome, subject to reasonable time limitations for each speaker.

If you wish to address the Board at this time, as a courtesy, please state your name and address, and reserve your comments to no more than 3 minutes so that others may be allowed to speak. No action will be taken. (5 min.)

4. **REVIEW/DISCUSSION COSUMNES RIVER LAND, LLC, WATER TREATMENT PLANT EXPANSION PROPOSAL** 2:15

As a courtesy to help focus the workshop dialogue, comments must apply to the agenda item under discussion and will be accepted when the agenda item discussion has been completed by the participants.

a) History of Water Treatment Plant 1 and Lack of Capacity for Long Term Community Progress
b) Why Membranes for Water Treatment Plant and Expandability with this Approach? Why Now?
c) Public Works Contracting Methods/Design Build Limitations/Alternative Contracting Methods
d) Presentation and Discussion of Financing Mechanisms and Water Treatment Plant Expansion Procurement Approaches.
e) Cosumnes River Land, LLC/John Sullivan's Conceptual Approach for Water Treatment Plant 1 and Water Service to Hotel Project.

f) Cosumnes River Land, LLC/John Sullivan's Management Approach - Team Qualifications
g) Cosumnes River Land, LLC/John Sullivan's Contractual Approach, Role of the District, GE Capital Lease
h) The Way Forward – Next Steps and Direction to Staff

5. DIRECTOR COMMENTS/SUGGESTIONS 4:30

6. ADJOURNMENT (Motion) 4:35

"In accordance with California Government Code Section 54957.5, any writing or document that is a public record, relates to an open session agenda item and is distributed less than 72 hours prior to a regular meeting, will be made available for public inspection in the District offices during normal business hours. If, however, the document is not distributed until the regular meeting to which it relates, then the document or writing will be made available to the public at the location of the meeting."

In compliance with the Americans with Disabilities Act, if you are a disabled person and you need a disability-related modification or accommodation to participate in this meeting, please contact the District Office at 916-354-3700 or fax 916-354-2082. Requests must be made as soon as possible and at least two (2) full business days before the start of the meeting.

Note: This agenda is posted pursuant to the provisions of the Government Code commencing at Section 54950. The date of this posting is April 24, 2013. Posting locations are: 1) District Office; 2) Plaza Foods; 3) Rancho Murieta Association; 4) Murieta Village Association.

April 1, 2013

Mr. Edward R. Crouse
General Manager
Rancho Murieta CSD
P.O. Box 1050
Rancho Murieta, CA 95683

Re: Water Treatment Plant Expansion/Upgrade Project

Dear Mr. Crouse:

We understand that the President of your board wants to make sure membranes are still the appropriate treatment process for upgrading and expanding the existing water treatment plant (WTP). HDR still believes that membranes are the best choice for the proposed WTP expansion/upgrade project for the following reasons:

- Membranes provide a positive barrier against pathogens that does not rely on chemical feed.
- The turbidity of the water from Chesbro Reservoir is very low allowing for direct membrane filtration without the need for sedimentation. A conventional process would require sedimentation to receive the full log removal credits for *Giardia* and *Cryptosporidium*.
- If direct filtration were to be utilized, a larger chlorine contact basin would be needed and/or a UV disinfection system would need to be added.
- Membranes can fit into an area one third the size that would be needed for a conventional process.
- Because fewer chemicals are required, a membrane system will generate less residuals than a conventional plant.

Please let me know if you have any questions or require additional information.

Sincerely,

Richard Stratton, P.E.
Senior Project Manager/Vice President
HDR Engineering

HDR Engineering, Inc.

2365 Iron Point Road
Suite 300
Folsom, CA 95630-8709

Phone: (916) 817-4700
Fax: (916) 817-4747
www.hdrinc.com

RANCHO MURIETA

COMMUNITY SERVICES DISTRICT

BOARD WORKSHOP

FRIDAY APRIL 26, 2013

WATER TREATMENT PLANT EXPANSION

COMMUNITY DISCUSSION

TABLE OF CONTENTS

Rancho Murieta Community Services District

Water Treatment Plant Expansion Proposal Questions

1. What is the type of contract do you intend to have with each of your team members? And for the procurement itself with CSD?

As of this moment, RMCSD legal counsel and the Project Sponsors' legal counsel (Cosumnes River Land, LLC/Greg Dyer) have agreed that RMCSD has no specific authority to do a sole source Design Build Contract. The state legislature has enacted Government Code §4525 to specifically allow RMCSD
An alternative that the Project Sponsors have discussed is to hand over the HDR agreement for Design services to CSD, and concurrently select a Construction Manager to perform the work under a CM@Risk contract.
This Construction Management professional services agreement would allow for multiple 'prime' trade contracts to bid for the specific scope(s) of work such as:

- Site work
- Concrete
- Metal fabrication
- Mechanical systems
- Electrical
- Instrumentation, and
- miscellaneous trades packages that would pick up the framing, roofing, insulation and architectural trades. Financing for the District's portion of the project could still be furnished through an operating lease agreement or any another form of financing at the District's choosing.

This hybrid approach allows the District to work with HDR and the Construction Management firm to insure that the successful delivery of the water treatment plant upgrades and expansion at a reasonable cost.

The District would adopt an ordinance and procedures to assure that the District would be compliant with Government Code §4525-4529.5.

NEXT PAGE GOVERNMENT CODE 4525

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DESIGN BUILD AUTHORITY FOR CSD/CA GOVERNMENT AGENCIES

A

GOVERNMENT CODE
SECTION 4525-4529.5

4525. For purposes of this chapter, the following terms have the following meaning:

(a) "Firm" means any individual, firm, partnership, corporation, association, or other legal entity permitted by law to practice the profession of architecture, landscape architecture, engineering, environmental services, land surveying, or construction project management.

(b) "State agency head" means the secretary, administrator, or head of a department, agency, or bureau of the State of California authorized to contract for architectural, landscape architectural, engineering, environmental, land surveying, and construction project management services.

(c) "Local agency head" means the secretary, administrator, or head of a department, agency, or bureau of any city, county, city and county, whether general law or chartered, or any district which is authorized to contract for architectural, landscape architectural, engineering, environmental, land surveying, and construction project management services.

(d) "Architectural, landscape architectural, engineering, environmental, and land surveying services" includes those professional services of an architectural, landscape architectural, engineering, environmental, or land surveying nature as well as incidental services that members of these professions and those in their employ may logically or justifiably perform.

(e) "Construction project management" means those services provided by a licensed architect, registered engineer, or licensed general contractor which meet the requirements of Section 4529.5 for management and supervision of work performed on state construction projects.

(f) "Environmental services" means those services performed in connection with project development and permit processing in order to comply with federal and state environmental laws. "Environmental services" also includes the processing and awarding of claims pursuant to Chapter 6.75 (commencing with Section 25299.10) of Division 20 of the Health and Safety Code.

4526. Notwithstanding any other provision of law, selection by a state or local agency head for professional services of private architectural, landscape architectural, engineering, environmental, land surveying, or construction project management firms shall be on the basis of demonstrated competence and on the professional qualifications necessary for the satisfactory performance of the services required. In order to implement this method of selection, state agency heads contracting for private architectural, landscape architectural, professional engineering, environmental, land surveying, and construction project management services shall adopt by regulation, and local agency heads contracting for private architectural, landscape architectural, professional engineering, environmental, land surveying, and construction project management services may adopt by ordinance, procedures that assure that these services are engaged on the basis of demonstrated competence and

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qualifications for the types of services to be performed and at fair and reasonable prices to the public agencies. Furthermore, these procedures shall assure maximum participation of small business firms, as defined by the Director of General Services pursuant to Section 14837.

In addition, these procedures shall specifically prohibit practices which might result in unlawful activity including, but not limited to, rebates, kickbacks, or other unlawful consideration, and shall specifically prohibit government agency employees from participating in the selection process when those employees have a relationship with a person or business entity seeking a contract under this section which would subject those employees to the prohibition of Section 87100.

4526.5. A state agency head entering into a contract pursuant to this chapter shall, in addition to any other applicable statute or regulation, also follow Section 6106 of the Public Contract Code.

4527. In the procurement of architectural, landscape architectural, engineering, environmental, land surveying, and construction project management services, the state agency head shall encourage firms engaged in the lawful practice of their profession to submit annually a statement of qualifications and performance data.

(a) When the selection is by a state agency head, statewide announcement of all projects requiring architectural, landscape architectural, engineering, environmental, land surveying, or construction project management services shall be made by the agency head through publications of the respective professional societies. The agency head, for each proposed project, shall evaluate current statements of qualifications and performance data on file with the agency, together with those that may be submitted by other firms regarding the proposed project, and shall conduct discussions with no less than three firms regarding anticipated concepts and the relative utility of alternative methods of approach for furnishing the required services and then shall select therefrom, in order of preference, based upon criteria established and published by him or her, no less than three of the firms deemed to be the most highly qualified to provide the services required.

(b) When the selection is by a local agency head, the agency head may undertake the procedures described in subdivision (a). In addition, these procedures shall specifically prohibit practices which might result in unlawful activity including, but not limited to, rebates, kickbacks, or other unlawful consideration, and shall specifically prohibit government agency employees from participating in the selection process when these employees have a relationship with a person or business entity seeking a contract under this section.

4528. (a) When the selection is by a state agency head the following procedures shall apply:

(1) The state agency head shall negotiate a contract with the best qualified firm for architectural, landscape architectural, engineering, environmental, land surveying, and construction project management services at compensation which the state agency head determines is fair and reasonable to the State of California or the political subdivision involved.

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(2) Should the state agency head be unable to negotiate a satisfactory contract with the firm considered to be the most qualified, at a price the agency head determines to be fair and reasonable to the State of California or the political subdivision involved, negotiations with that firm shall be formally terminated. The state agency head shall then undertake negotiations with the second most qualified firm. Failing accord with the second most qualified firm, the state agency head shall terminate negotiations. The state agency head shall then undertake negotiations with the third most qualified firm.

(3) Should the state agency head be unable to negotiate a satisfactory contract with any of the selected firms, the state agency head shall select additional firms in order of their competence and qualification and continue negotiations in accordance with this chapter until an agreement is reached.

(b) When the selection is by a local agency head, the local agency head may undertake the procedures described in subdivision (a).

4529. This chapter shall not apply where the state or local agency head determines that the services needed are more of a technical nature and involve little professional judgment and that requiring bids would be in the public interest.

4529.5. Any individual or firm proposing to provide construction project management services pursuant to this chapter shall provide evidence that the individual or firm and its personnel carrying out onsite responsibilities have expertise and experience in construction project design review and evaluation, construction mobilization and supervision, bid evaluation, project scheduling, cost-benefit analysis, claims review and negotiation, and general management and administration of a construction project.

NOSSAMAN LLP

CALIFORNIA PUBLIC AGENCY DESIGN-BUILD AUTHORITY

Agency	Facilities	Legal Authority	Comments
Local Agencies			
General	All projects	CAL. GOV. CODE §§ 4525 et seq.	The Little Brooks Act requires local agencies to enter into contracts for professional services based on qualifications, but does not prohibit local agencies from considering price in the selection process. As a result, local agencies that are subject to competitive bidding restrictions for construction contracts could comply with the Little Brooks Act by prequalifying design-builders, asking for technical and price proposals, evaluating technical proposals on a pass-fail basis, and selecting the lowest bidder that submitted a responsive technical proposal. Agencies that have adopted this approach also adopted subcontracting policies requiring the design-builder to procure construction subcontracts using a competitive procurement process, in lieu of requiring all subcontractors to be listed in the proposal.
General	Local wastewater and sewer projects (privatization agreement authority)	CAL. GOV. CODE §§ 54250 et seq.; CAL. PUB. UTIL. CODE § 10013 (Local Government Privatization Act of 1985)	Allows use of competitive proposals to privatize wastewater treatment facilities, subject to numerous conditions. Agreements must be entered into through a competitive procedure which shall not be based solely on price.
General	Revenue-generating infrastructure projects	CAL. GOV. CODE §§ 5956 et seq.	Allows design-build for revenue-generating infrastructure projects, with the caveat that operations may have to be included in the package. Cannot be used by any state agency directly or indirectly to design, construct, finance, or operate a state project (including state highways).

Agency	Facilities	Legal Authority	Comments
Charter cities	Depends on charter	Under the "home rule" (*Smith v. City of Riverside*, 34 Cal. App.3d 529 (1973), procurements by charter cities are governed by the City Charter, not state legislation	A number of city charters specifically allow design-build or allow use of a best value or negotiated procurement process.
Cities	Building construction projects costing at least $1,000,000	CAL. PUB. CONT. CODE § 20175.2	Requires City Council approval. Allows best value selection. Does not apply to transportation facilities. Expires January 1, 2016.
Community College Districts	Community College facilities over $2,500,000	CAL. EDU. CODE §§ 81700 et seq.	Requires a best interest determination by the governing board of a community college district before entering into a design-build contract. Expires 2014.
Counties	Buildings and sanitation wastewater treatment facilities costing in excess of $2,500,000	CAL. PUB. CONT. CODE §20133	Allows best value selection for projects costing over $2,500,000. Requires Board of Supervisors approval. Cannot be used for transportation projects. Expires July 1, 2014.
Counties and cities	Public facilities	CAL. GOV. CODE § 65864(c)	Allows counties and cities to enter into development agreements that provide for design and construction of public facilities. It may be possible for a procuring agency to structure transactions that combine design, construction and other professional services through the agency's development agreement authority.
Joint powers agencies	Depends on JPA agreement	CAL. GOV. CODE § 6508	Joint powers agencies are subject to the same restrictions on contracting as a designated member agency.
School districts	Design-build for school facilities over $2,500,000	CAL. EDU. CODE §§ 17250.10 et seq.: § 17406 (lease-leaseback)	Requires a best interest determination by a school district governing board before entering into a design-build contract. Design-build authority expires January 1, 2014.

Agency	Facilities	Legal Authority	Comments
Local Transportation Agencies / Transportation Projects			
County Transportation Commissions	Specialized equipment	CAL. PUB. UTIL. CODE § 130238	Allows negotiated agreements for acquisition of specialized equipment
Exposition Metro Line Construction Authority	Exposition Metro Line light rail project (Los Angeles)	CAL. PUB. UTIL. CODE §§ 132600 et seq.	Contracts are to "be awarded in accordance with state law relating to procurement." Awards shall be based on price or competitive negotiation, or a combination.
Gold Line Construction Authority	Gold Line light rail project (Los Angeles)	CAL. PUB. UTIL. CODE §§ 132400 et seq.	Contracts are to "be awarded in accordance with state law relating to procurement." Awards shall be based on price or competitive negotiation, or a combination.
Los Angeles County Metropolitan Transportation Authority	Rail transit systems that implement advanced rail transit technology and related works of improvements, including passenger loading or intermodal facilities	CAL. PUB. CONT. CODE §§ 20360 et seq.	Allows negotiated procurement. Subject to funding restrictions making it unlikely that this statute can be used.
Los Angeles County Metropolitan Transportation Authority	All or components of (1) transit systems, including, passenger loading or intermodal station facilities, and (2) facilities on real property	CAL. PUB. UTIL. CODE § 130242	Allows an "authority" to procure design-build contracts using a low bid selection process, with a 2/3 vote by the authority's board. This statute can be interpreted to apply to other county transportation authorities as well.
Orange County Toll Roads	Toll roads	CAL. GOV. CODE § 66484.3	The San Joaquin Hills and Foothill/Eastern Transportation Corridor Agencies have built most of their 68-mile network of toll roads through design-build contracts—using a low bid selection process for the first project and best value for subsequent projects, relying on broad procurement authority contained in their enabling legislation.

Agency	Facilities	Legal Authority	Comments
Santa Clara Valley Transportation Authority	Transit center or station, transit park-and-ride lot, bus and light rail maintenance facility, or administrative office building, or the Fremont-South Bay Commuter Rail Project	CAL. PUB. CONT. CODE § 20301.5	Allows the authority to procure design-build contracts using a low bid selection process.
Transit operators	Transit projects	CAL. PUB. CONT. CODE §§ 20209 et seq. CAL. PUB. UTIL. CODE §§ 130238, 130242	Allows design-build for capital maintenance or capacity-enhancing rail project over $25,000,000, and for non-rail transit projects over $2,500,000. Expires January 1, 2015. Cannot be used for highway projects.
Transportation projects (local agencies)	Local streets, roads, bridges, tunnels, or public transit projects; and state highways, bridges, or tunnels	CAL. PUB. CONT. CODE §§ 6800 et seq.	Authorizes local transportation entities to use design-build for up to 5 local street, road, bridge, tunnel or public transit projects. Also authorizes state design-build projects (listed below under Caltrans.) Expires January 1, 2014.
Transportation projects (regional transportation agencies)	Highways, public streets, rail and related facilities	CAL. STS. & HIGH. CODE § 143	Authorizes regional transportation agencies to enter into comprehensive development lease agreements ("CDLAs") with private or public entities to procure design, construction and other development and related services for various types of transportation projects. Expires January 1, 2017.
State Agencies			
General	All projects	CAL. GOV. CODE §§ 4525 et seq.; CAL. PUB. CONT. CODE §§ 10100 et seq.	Little Brooks Act requires state agencies to select professional services contracts by negotiating with the most qualified firm, and the State Contract Act requires competitive bidding for construction contracts. As a result, state agencies cannot use design-build without special authority. Some exemptions exist that would allow design-build for projects under a certain dollar value or in emergencies.

California Public Agency Design-Build Authority

Agency	Facilities	Legal Authority	Comments
California Dept. of Transportation ("Caltrans") and local agencies	Local streets, roads, bridges, tunnels, or public transit projects; and state highways, bridges, or tunnels	CAL. PUB. CONT. CODE §§ 6800 et seq.	Authorizes Caltrans, if approved by the California Transportation Commission, to use design-build for up to 10 state highway, bridge or tunnel projects. Authorizes local transportation entities to use design-build for up to 5 local street, road, bridge, tunnel or public transit projects. Expires January 1, 2014.
Caltrans and regional agencies	Highways, public streets, rail and related facilities	CAL. STS. & HIGH. CODE § 143	Authorizes Caltrans and regional transportation agencies to enter into comprehensive development lease agreements ("CDLAs") with private or public entities to procure design, construction and other development and related services for various types of transportation projects. Expires January 1, 2017.
California State University	All	CAL. PUB. CONT. CODE § 10708	Design-build contractor selected by a competitive bidding process that employs selection criteria in addition to cost. Design work performed under this section shall be prepared and signed by a certified architect. Requires approval by Trustees.
Dept. of General Services	Capitol area improvements	CAL. GOV. CODE § 8169.5(c)(2)	Solicitation documents in at least as much detail as for San Francisco Civic Center; must be submitted to legislature before soliciting bids.
Dept. of General Services	State office facilities and other related buildings and structures	CAL. GOV. CODE §§ 14661, 13332.19	If the legislature approves the use of design-build for a specific project, the Dept. of General Services may contract and procure state office facilities using design-build. Contains provisions regarding the procurement process to be followed; allows best value selection. Requires project approval from Dept. of Finance under § 13332.19.
Dept. of General Services (for Caltrans).	Caltrans office and parking facilities in San Bernardino	CAL. GOV. CODE § 14016	Allows design-build for office and parking facilities and related improvements.
University of California	All	CAL. PUB. CONT. CODE § 10503(b)	Sec. 10503(b) allows best value selection. Requires approval by Regents.

2. By team member, can you supply a funding profile, assuming there will be progress payments (monthly?) and a withhold for completion of their effort?

Monthly progress draws would be the payment method of choice for the contractors with statutory retention withholding. For estimating purposes, you can take the direct costs and do a straight line cumulative cost by dividing the number of construction months into the direct costs.

3. What type/amount of bond will you be providing to guarantee completion of the contract through the acceptance process?

100% performance and payment bonds would be required for the construction contracts per public contract code requirements from the Contractor.

4. Can you supply a sample lease that GE normally works under efforts of this type?
   See: Deferred Questions
5. Can you briefly describe the scope of work for each team member and the major deliverables/products to be supplied to CSD?

See Organizational Chart (Attached) and PPP Models (slides)

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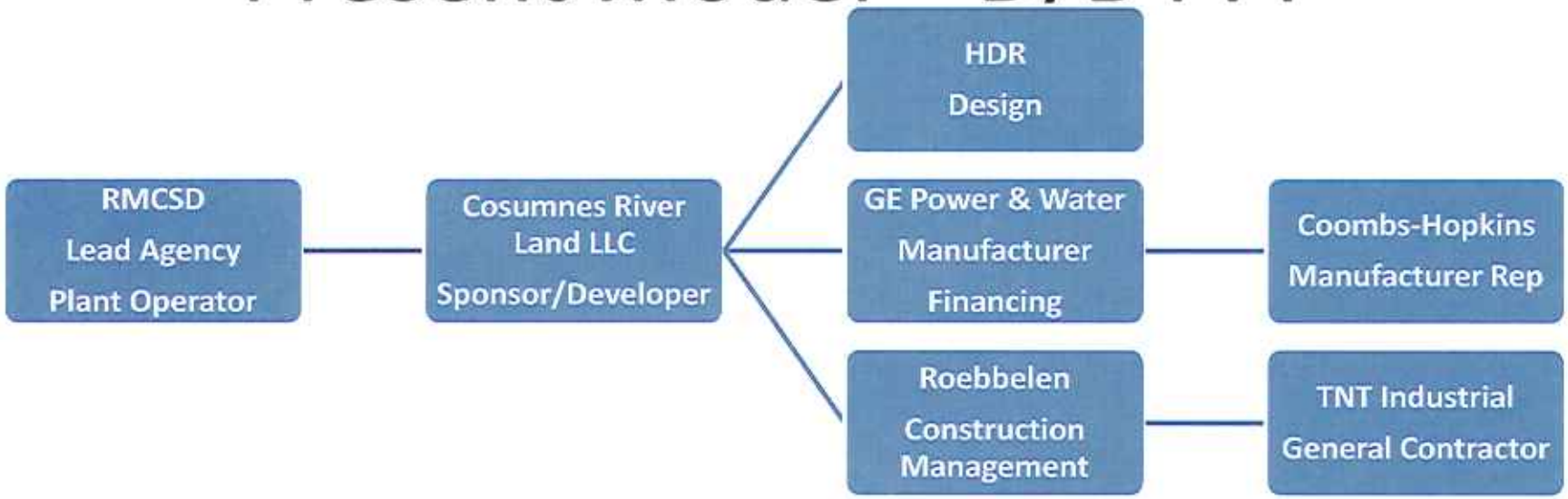
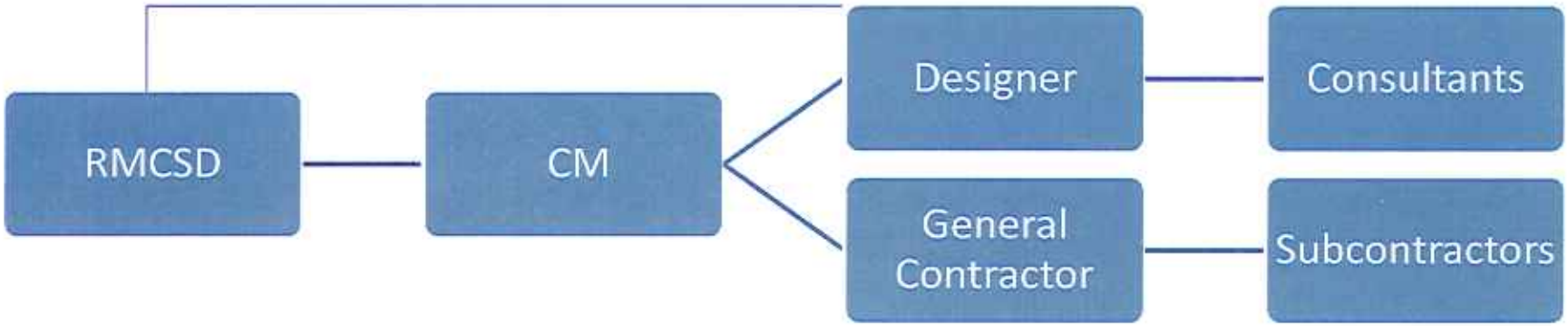
Present Model – D/B PPP



- Cosumnes facilitates design and construction through agreement with District
- Cosumnes tenders Lease to District
- Construction draws paid through letter of credit and Lease financing or Cosumnes guarantee

Agency Construction Management



- Client hires Construction Manager through a RFP process
- CM may lead in the selection/oversight of the design team, but design contract is with the client. Works with design team to optimize the project with respect to cost, phasing, and value engineering.
- Once design is complete, project is put out to public bid
- CM administers the contract for the client
- This is the traditional Hard Bid process

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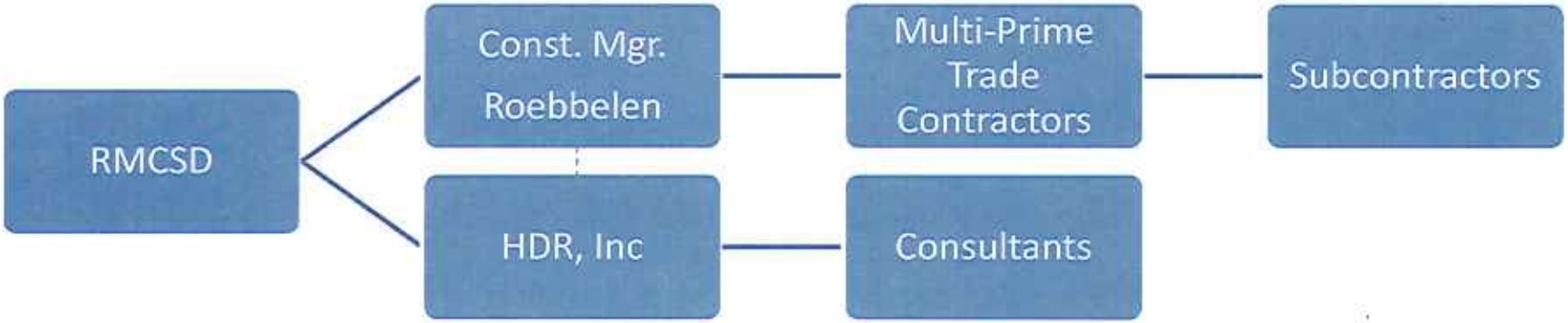
Construction Management @ Risk



- Client hires Construction Manager through a qualification process per Gov't Code §4525
- Client contracts with HDR separately
- CM@R & Design team value engineer project efficiency during preconstruction
- Project is broken down into multiple trade packages for the public bidding process – minimize overlapping fees & use proven team for construction
    - Each trade package is bonded by trade contractor
- CM@R is liable for schedule delays and scope gaps in packages
- Trade Contractor treated as traditional sub-contractor with more contractual liability for coordination with other prime trade contractors.

6. What is the role of Cosumnes Land during the life of the contract? Describe by phase of the schedule.

Cosumnes River Land, LLC is the Project Sponsor and John Sullivan is the Executive Sponsor. The Executive Sponsor is responsible to the business for the success of the project. The sponsor has a number of interfaces and responsibilities for the project.

The responsibilities for which the Executive Sponsor is accountable to the CRL board.

The governance activities that take place between the Project Sponsor and the Project Manager are:

- Provide timely decisions
- Clarifies decision making framework
- Clarifies priorities and strategy
- Communicates business issues
- Provides resources
- Engenders trust
- Manages teaming relationships
- Supports the project managers role
- Promotes ethical working environment

In addition to these activities the following activities other activities are necessary between the Project Sponsor and other stakeholders:

Due to the problem solving needs of the role the Executive Sponsor often needs to be able to exert pressure within the organization to overcome resistance to the project.

Since it now appears as though the project is to be constructed with a different delivery method, this is provided for information purposes.

7. Define the effort expected of CSD by phase of contract (is any of this effort included in your estimate of cost)

RMCSD is the lead agency and would undertake the initial study under CEQA to determine if the project is a Negative Declaration or Mitigated Negative Declaration. (CEQA discussion). Additionally, RMCSD is the permitting agency, and will provide its own inspection and testing. District to confirm the 2003 geotechnical work performed by Youngdahl and Assoc. for the WTP 3 and 4 project. These expenses and staff involvement are costs of RMCSD.

8. Provide a definition and quantities of equipment to be supplied under the GE lease.

The list of equipment and materials are shown on the GE presentation.

Under the 15 year lease term, does GE supply replacement modules /equipment if needed under the stated lease payment?

No. Replacements are the responsibility of the District, although they are available from GE

9. Can you provide a graphic depicting the membrane installation as presently planned? How many modules are required to provide the stated 3.2 mgd?

3 separate process trains. 3 cassettes per train. Sufficient room is available for a 4th cassette in each train. 42 total membrane modules in all cassettes for 3.2 mgd.

10. Provide an overview of the routine maintenance required in support of membrane operations and identify the replaceable units within a cassette or module and anticipated replacement frequency. Are there any unique support equipment and/or chemicals required for maintenance?

See GE summary

11. What training do you envision to be required for CSD operations to satisfactorily operate and maintain the system as installed? When /how will this be provided?

Training will be provided by all major equipment suppliers (GE) in addition to TESCO for the controls/SCADA system.

12. Please provide the Board with your complete c.v. (resume), including, but not limited to, copies of undergraduate and if pertinent, graduate school course listings, grades, etc.

See: Deferred Questions

13. Please provide entire work history placing particular focus on any and all jobs in which you served as General Contractor.

See: Deferred Questions

14. List all infrastructure projects referenced in #13 above and provide reference and companies and/or public agencies for which these jobs were completed.

See: Deferred Questions

15. Describe in detail how the proposed expansion would be undertaken while still maintaining the existing water treatment plant capacity without interruption.

The project construction is planned for the low demand period of the year when WTP#2 will be capable of handling the District demand. Typically, demand drops below 2.0 mgd during October through mid-May of normal water years. We expect that schedule will provide sufficient time to Retro-fit, Upgrade and Test before the end of May 2014, provided all long lead time items are ordered on schedule.

16. Have all members of the design-build team participated in the preparation of the items shown in the schedule?

The schedule provided is preliminary and will be adjusted when the 30% design is completed. While each Teaming Partner is aware of the schedule, it will evolve over time as specific trades and materials are scheduled for delivery. It is important to note that the schedule is based on CSD providing approvals and contracts in an accelerated schedule for work to be completed in 2104 starting immediately.

17. Where in the schedule has time been allocated for geotechnical investigation and report?

The geotechnical report was prepared by Youngdahl and Assoc. in 2003. They will only need to review the final design and confirm that their recommendations remain valid.

18. Where in the schedule has sufficient time been allocated for CEQA clearance? Verify time line with reviewing authority.

RMCSD is the lead agency. Since the project is being constructed inside of an existing facility, a ND or Mitigated Negative Declaration is anticipated. This not a growth inducing project, but being built to accommodate approved projects and existing demand.

19. Where in the schedule has time been allocated for building permit processing?

RMCSD is the permitting authority. No Sacramento County building permit is required.

20. Provide a detailed itemized cost breakdown of the estimated total project cost. Also, how does it compare in relation to a competitors comparable membrane facility (DOW, PALL, Aqua-Aerobic, etc.)?

The most comparable membrane would be the Siemens submerged membrane system.

21. Provide qualifications for each member of the design-build team illustrating their background of experience with this type of public works project.

See CV and resume(s) of Teaming Partners

22. How much real money is CR LLC really putting into this deal, i.e. no LOC or guarantees.
See: Deferred Questions

23. Need a project cost summary, for all soft and hard costs and definition of who pays for what.
See: Deferred Questions

24. What is each source of funds paying for, both hard and soft costs?
See: Deferred Questions

25. What are the real terms of the lease back i.e., interest, principal, etc. and what does it fund?
See: Deferred Questions

26. Assuming the life of membranes are 5-10 years, does the leaseback include replacement during the lease period?
The proposal doesn't provide replacements except for the normal 1 year guarantees after project acceptance

27. Is there any depreciation embedded in the membrane life during the lease?
GE is prepared to discuss the useful life of the membranes. See GE presentation

28. Roughly the District will pay more than 4.4 million over the term of the lease. That is far greater than the 3.0 million from CSD on the table.

RMCSD is responsible for replacement capacity of 1.5 mgd for WTP #1. It is impossible to determine how much it would cost to replace this capacity if it was retrofitting the membrane filtration system into WTP#1 and NOT adding the additional capacity for the CFD #1 of 1,500,000 gallons. It is also not possible to determine what the CFD# 1 would need to expend to build the required 1.5 mgd of capacity that it is responsible for on a stand-alone basis, without the retro-fit inside the existing facility.
Both CFD#1 and RMCSD are gaining the advantage of scale by retro-fitting and upgrading and expanding WTP#1 at the same time, into the same retro-fit of WTP #1.
The Project Sponsor has offered to finance roughly half of the cost of the project.

29. Who owns the excess capacity built by R&B?

R&B owns zero capacity. The CFD#1 hasn't constructed any capacity as of April 26th, 2013 even though it was obligated to provide 1,500,000 of capacity as part of CFD #1.
If you are asking about what the excess capacity will be when the proposed project is completed, that will depend upon the reconciliation done by RMCSD.

30. Who owns the 168k gpd in excess of 3.0 mgd?

The Project Sponsor is proposing to construct and finance 168,000 gallons of capacity for its projects which include Gardens I & II.

31. Isn't the 168k built-in regardless of whether it is a DB or DBB?
Capacity can be built from 3 mgd to 5.5mgd depending on the final approved design.

32. What is the value of the excess capacity?
Based on gallons the value of 168,000 gallons would be approximately $400,000.

33. Can the membranes be phased in to reduce the cost to the CSD? Can the developers later install the membranes?
The current plan is for the installation of 3.2 mgd of capacity with the ability to expand to 5.5mgd by upsizing the piping for higher flows projected with expansion.

34. Can later developers have the lease back arrangement too?
Not sure what later developers are asking about.

35. Who is the owner's representative in the DB scenario? Who is the CM and who directs them?
This could be the Construction Manager under the direction of Ed Crouse or Paul Siebensohn. We are proposing Roebbelen Construction Management Services, Inc. (Bob Kjome) as CM.

36. What is the CSD's involvement in design? And during construction?
The intent is to have RMCSD approve the 30% design so that there can be value engineering applied at each step in the final design and construction process.

37. Are outside consultants anticipated during construction?
Testing consultants will most likely be required for concrete strength. Other than Inspection (District), the Retrofit Design Team doesn't anticipate needing outside consultants during construction.

38. How will subs be selected, lowest bid or most qualified?
The anticipated 'prime trades contracts' will include specific scope(s) of work:
And the miscellaneous trades will pick up the framing, roofing, insulation on a most qualified low bid and/or negotiated basis.
Under the CM project delivery scenario, each Multiple Prime Trade Contract will be publically bid by the CM and awarded to the lowest responsible bidder.

39. Who is directing design services?
Richard Stratton from HDR Engineering, in collaboration with CSD and Project Executive.

40. Will there be peer review?
We would anticipate that the District will be satisfied with the Retrofit Design Team. All members of the Team are either living in Rancho Murieta, or have been contractors with RMCSD. Once the 30% design is approved, most is not all value engineering will be complete.

41. Who is really the contractor and what is the arrangement with CSD?

TNT Industrial is our General Engineering Teaming Partner (Contractor)

42. What contractor license is required?

General Engineering Contractor (License) type – A All sub-contractor trades will be licensed by the State of California

43. What if LOC can't be used in full amounts as planned?

The District will need to determine what amount of the Letter of Credit will be drawn, after receiving the Engineers estimate of cost for the project. The full value of the letter of credit is $4.2 million according to the District GM.

44. What is fall back for funding shortfalls?

We recommend that the District allow for a contingency in the overall budget.

45. What happens if work extends beyond contract time? Who pays?

The added expense for not completing the work before the end of May 2014 would be the need to install temporary by-pass filtration capacity. This could cost as much as $40,000 per month. HDR has suggested that the well system could provide some of this capacity.

46. Who pays for temp filters if needed?

District had indicated that they would be responsible for temporary capacity if it were necessary.

47. Can project be built over two seasons?

The District had previously concluded that the project timeline would be 18-24 months. So YES, it could be built over two seasons.

48. Can CSD repurchase membranes and hold them as owner supplied equipment?

We assume that this would be for replacement parts. See GE recommendations on storing cassettes and membranes.

49. What interest rate is being used in the lease calculation?

The imputed interest rate is 4.385%

50. Who will be responsible if the project cost exceeds the $6.6 million? A $600,000 letter of credit covers less than a 10% overrun.

Since it appears as though we will be going down a different path, this is a moot point. The District will need to determine who shares the risk of cost overruns or additional unanticipated upgrades during construction.

51. I question whether the lease qualifies as an operational lease. If it does not meet the requirements of an operational lease, is Cosumnes still willing to lease back to the District?

The intent is that the Lease be an Operating Lease.

52. Who will be responsible for the maintenance and repair of the leased facilities during the lease period? For example, a cassette fails and needs to be replaced before the end of the lease term.

TNT will provide a 1 year construction warranty. Normal maintenance and repair of the facility will be handled by the Water Treatment Plant staff.

53. Is it possible to downsize the number of cassettes (still designing infrastructure to allow add-on of future cassettes to get to the 5.168 mgd when needed by other developers) to accommodate only the District's 1.5 mgd and Cosumnes' needed capacity?

The capacity necessary including the borrowed capacity and peaking capacity that the CFD #1 is responsible for, plus the CSD replacement capacity for WTP #1 of 1,500,000 brings the total to 3.2 mgd. The CFD capacity is the financial responsibility of the Mello Roos/Guarantors and the WFBank letter of credit. Cosumnes is providing 168,000 gallons to be added to the capacity is has previously paid for as part of Improvement District #1 (1986).

Some of the efficiencies of scale will be lost and the project will cost more per gallon, including the District's 60% share if the project were to be downsized to 2.5mgd.

54. It doesn't appear that Cosumnes is paying for any capacity. Is this accurate?

The proposal delivered to the District had 168,000 gallons of additional capacity being paid for by CRL. CRL predecessors have paid $1,306,000 plus interest for treated water, sewer treatment and lift station capacity as part of ID#1.

55. Who is going to track membrane integrity testing and maintenance during term of lease? If not GE, are tools, repair kits and training going to be provided for membrane maintenance?

See GE presentation

56. Tracking software to be provided for membrane integrity maintenance?

See GE presentation

57. Which version of the ZeeWeed 1000 modules are being proposed? Anything less than version 4 should not be accepted.

Version 4

58. Has facility plan and possible temporary facilities been proposed to CDPH for potential permitting? They prefer pilot testing of proposed facilities prior to permitting.

The Design Build team does not believe that temporary facilities are needed.

59. What are the details of the lease?

The proposal was for Cosumnes to lease all of the GE equipment for $22,775 per month plus tax, beginning in May of 2014 and a fixed buy out option of the equipment in May 2029 of $300,000. The imputed interest rate of 4.385%

60. What if membranes have catastrophic failures before lease is up?

Membranes will need to be replaced during the 15 yr. term of the lease. Replacements are operating expenses of the District.

61. What if membranes cannot meet TOC reduction requirements or other water quality needs? Guarantees?

The membrane system will be designed to provide comparable TOC removal to the existing WTPs.

62. Who is going to be the proposed electrical contractor?

The Electrical contractor will be selected after competitive bids have been received.

DEFERRED QUESTIONS:

4. Can you supply a sample lease that GE normally works under efforts of this type?

12. Please provide the Board with your complete c.v. (resume), including, but not limited to, copies of undergraduate and if pertinent, graduate school course listings, grades, etc.

13. Please provide entire work history placing particular focus on any and all jobs in which you served as General Contractor.

14. List all infrastructure projects referenced in #13 above and provide reference and companies and/or public agencies for which these jobs were completed.

22. How much real money is CR LLC really putting into this deal, i.e. no LOC or guarantees.

23. Need a project cost summary, for all soft and hard costs and definition of who pays for what.

24. What is each source of funds paying for, both hard and soft costs?

25. What are the real terms of the lease back i.e., interest, principal, etc. and what does it fund?

GE
Water & Process Technologies

Budget Proposal for

Rancho Murieta CSD WTP Retrofit

Submitted to:
Rancho Murieta CSD WTP Retrofit Design Team

April 18, 2013

Proposal Number: 794287rev01

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Confidential and Proprietary Information

Table of Contents

1 Technical and Engineering Details

1.1 Basis of Design

This proposal is based on retrofitting a ZeeWeed ultrafiltration membrane plant into the existing rectangular clarifier at conventional plant #1. The proposed process uses surface water for a potable water application. Raw water from Lake Chesbro is seasonally pretreated using 1-mm screening and flocculation steps and PAC dosing for taste and odor at a dose of approximately 1 mg/L before being sent to the membrane system, which in turn sends permeate to chlorine disinfection and further distribution by others.

The ultrafiltration membrane system for the Rancho Murieta CSD WTP project is designed to produce an initial net permeate (UF treated water) flow of 3.2 MGD. The system is sized to accommodate a potential future expansion of up to 5.5 MGD net permeate flow through the step addition of cassettes and modules.

Design Conditions

Design Temperature Range	10 – 25 °C
Initial Design Capacity (Net) With All Trains In Service At 10°C	3.2 MGD
Initial Design Capacity (Net) With One Train Out Of Service At 10°C	3.2 MGD
Future Design Capacity (Net) With All Trains In Service At 10°C	5.5 MGD
Future Design Capacity (Net) With One Train Out Of Service At 10°C	5.5 MGD
Recovery (at design capacity)	95 %

Note 1: The membrane filtration system proposed as part of this offer is designed to follow seasonal fluctuations in production output between the summer and winter months.

Note 2: The membrane filtration system proposed as part of this offer is designed to operate under the following Firm Capacity conditions:

- Firm Capacity: One train offline for unscheduled maintenance events in the plant for a maximum continuous interruption of 24 hours. The design is based on the premise that these interruptions do not exceed 24 hours every 30 days. After 24 hours of continuous operation under firm capacity conditions, the plant capacity has to be reduced proportionally to obtain a flux at or below the design flux with all trains in operation.

Note 3: The membrane system proposed as part of this offer is designed to operate under the following hydraulic conditions:

- The flow rate upstream of the membranes can be varied or there is enough equalization volume in the upstream processes to accommodate the interruptions in flow due to the different operating modes of the membrane system (Backwashes, maintenance cleans, integrity tests). The membrane system is therefore not designed to ramp up the other trains that are running while these events occur on one or more trains simultaneously.

Note 4: The recovery objective of the system can be achieved during steady state operation over the course of a 24-hour period and may be affected by repeated standby events. The recovery objective is to be met at the maximum design capacity. Operation under low flow scenarios

increases the proportion of chemical waste over backwash waste, which under certain conditions may impact the ability of the system to meet its recovery objective.

Physical Parameters

The raw water quality from Lake Chesbro as provided in the plant raw water quality table are summarized below:

Parameter	From Specifications or Assumed Note 1	Units	Average	Minimum	Maximum
Alkalinity	Specified	mg/L as $CaCO_3$	42.7	30	48
Total Hardness	Specified	mg/L as $CaCO_3$	40.6	37	43
pH	Specified	-	7.5	7.1	8.3
Temperature	Water Plant Info	°C	-	10	25
Total Organic Carbon (TOC)	Specified	mg/L	3.0	1.8	3.5
Dissolved Organic Carbon (DOC)	Specified	mg/L	2.7	1.4	3.6
Apparent Color	Assumed	TCU	20	10	45
Turbidity	Specified	NTU	2.2	0.5	16.1
Suspended Solids	Assumed	mg/L	5	2.5	7.5
Total Dissolved Solids	Specified	mg/L	65	58	72
Calcium	Specified	mg/L	8.9	8.3	9.4
Magnesium	Specified	mg/L	4.4	4	4.7
Barium	Assumed	mg/L	0.01	BDL	0.02
Strontium	Assumed	mg/L	0.01	BDL	0.02
Dissolved iron	Specified	ug/L	135	95	160
Sulfate	Specified	mg/L	4.1	3.3	6.3
Dissolved aluminum	Specified	mg/L	0.5	0.05	1.4
Dissolved manganese	Specified	mg/L	0.04	0.01	0.08
Total silica (SiO_2)	Assumed	mg/L	0.5	BDL	2
Langelier Saturation Index (LSI)	Assumed	-	Negative	Negative	Negative

Note 1: This column identifies whether the parameters listed in each row are assumed values because they were not supplied to GE during the preparation of this proposal or if the values listed reference the raw water data provided by the plant.

Note 2: The use of any chemicals added to the treatment process (i.e. polymers, flocculants, coagulants, coagulant aids, oxidants, acids, bases etc.) that may come in contact with the ZeeWeed® membranes must be approved by SELLER prior to use as part of this proposal or at a subsequent date later on during plant operation.

Note 3: Screening to 500 microns is requiremed upstream of the membrane system. Only punched holes or woven mesh style screens are acceptable. Wedge wire screens are not acceptable and any temporary unscreened bypass is not allowed. All tanks, clarifiers, settlers, channels, etc. following the screens are to be covered and protected from the outside elements such that no leaves, twigs or any foreign materials can enter the membrane tank.

Note 4: TOC removal is a function of three variables: TOC concentration levels in the water, type of coagulant used, and the pH of the water. Coagulant addition and pH adjustment is typically required to achieve TOC, UV_{254}, and color removal. Removal efficiencies are dependent on optimization of the coagulation-flocculation pretreatment process.

Note 5: Pre-treatment including oxidant addition and pH adjustment may be required for the oxidation of dissolved iron and manganese. The treated water quality is dependent on optimization of the oxidation pre-treatment process.

Note 6: The plant is designed to accommodate recycle streams ahead of the membrane system. Any recycle stream has to be injected upstream of the feed water strainers. The recycle stream(s) that are recycled ahead of the membrane system are to be within the following quality parameters.

Parameter	Maximum Value	95% percentile value
Turbidity (NTU)	<= 10	<= 2
Total Organic Carbon (mg/L)	<= 5	<=2.5
Total Iron (mg/L)	<= 0.2	<= 0.1
Total Manganese (mg/L)	<= 0.10	<= 0.05
Total Aluminum (mg/L)	<= 0.15	<= 0.10
pH	pH +/- 0.3 pH units for minimum solubility of PACl/ACH selected	

Note 1: The clarification or settling system downstream of the membrane system operates without any polymer addition or polymer-blended coagulant. Any changes would have to be communicated to Seller for evaluation and potential impacts on the performance of the membrane system.

Note 2: If pH correction is required, it is assumed not to be done with lime. Seller would need to be consulted if lime is chosen.

Note 3: Dedicated coagulant injection into the recycle flow stream is done to recondition the reject water prior to it being mixed with the raw water.

Note 4: Only the backwash and maintenance clean waste from the membrane system is being recycled.

Note 5: Process deviations to the treatment process initially agreed to are to be reviewed by Seller to confirm their compatibility with the plant's design and their potential positive or negative impacts on the plant performance.

Permeate Water Quality

Parameter	Treated Water
Turbidity (NTU)	≤ 0.1 NTU 95% of the time

Note 1: All guarantees are contingent upon proper maintenance, calibration and service of instruments and other related equipment as per Seller's and original equipment manufacturers instruction.

Microbiological Removal Efficiencies

	Treated Water	
Log Removal Value	≥ 4.0	Log

1.2 Proposed System Configuration

The proposed system configuration has been based on the water quality as shown in Section 1.1.

Parameter	Quantity
Type of Membrane	ZeeWeed® 1000
Module Surface Area (ft^2/m^2)	450/41.8
Number of Trains	3
Number of Cassettes Per Train	3
Number of Cassette Spaces Per Train	4 (one empty for future expansion)
Number of Modules Per Cassette	42
Number of Module Spaces Per Cassette	60
Spare Space (%)	30% spare module space (47.5% including the empty cassette space)
Total Membrane Area Supplied (ft^2/m^2)	194,400/18,058
Maintenance Clean (MC) Protocol	1/day/train
Membrane Integrity Test (MIT) Protocol	1/day/train
Recovery Clean (RC) Protocol	12/year/train sodium hypochlorite followed by citric acid

In this retrofit design, the existing tank of 80' x 16' is large enough to hold the three proposed membrane trains and all related auxiliary equipment. However, please note that the existing tank can only be used for installation of the GE supplied equipment provided that there are no groundwater seepage issues on site. Any groundwater seepage concerns would need to be addressed and resolved by the engineer or contractor prior to retrofitting equipment into this outdoor space.

Given the climate, there is no real need to house all GE supplied equipment indoors, with the exception of the MCC/Control Room, the generator and the operator rooms. These rooms could be built away from the tank being retrofitted with the GE filtration system in an enclosed shelter. To protect the GE supplied equipment installed in the existing tank, a lift roof or building could be constructed using the top of the existing tank as a foundation. Again, all construction and concrete design and work would be by Others.

1.3 Wastewater generation

In order to achieve a 95% recovery, 5% of the total influent will be wasted by the membrane system in the form of backwashes, maintenance cleans, and recovery cleans. It is assumed that the backwash and neutralized maintenance clean waste will be recycled and sent to the head of the plant. Only the neutralized CIP waste will be sent to the waste treatment system (by Others). Assuming all trains are in operation and the system is operating at its design capacity in either Phase 1 or Phase 2, the following estimated wastewater volumes would apply:

Backwashes

Parameter	Phase 1 (3.2 MGD)	Phase 2 (5.5 MGD)
Volume of Permeate Used Per Backwash	420 gallons	740 gallons
Total Volume of Wastewater Per Backwash Event	4,114 gallons	4,302 gallons
Daily Waste Generated from Backwashes	142,715 gallons	261,906 gallons

Hypochlorite Maintenance Cleans (MC)

Parameter	Phase 1 (3.2 MGD)	Phase 2 (5.5 MGD)
Volume of Permeate Used Per Hypochlorite MC	3,694 gallons	3,563 gallons
Total Volume of Wastewater Per Hypochlorite MC Note 1	8,332 gallons	8,790 gallons
Average Daily Waste Generated from Hypochlorite MCs Note 2	21,425 gallons	22,602 gallons
Frequency of Hypochlorite Maintenance Cleans	6/week/train	6/week/train

Acid Maintenance Cleans (MC)

Parameter	Phase 1 (3.2 MGD)	Phase 2 (5.5 MGD)
Volume of Permeate Used Per Acid MC	3,694 gallons	3,563 gallons
Total Volume of Wastewater Per Acid MC Note 1	8,332 gallons	8,790 gallons
Average Daily Waste Generated from Acid MCs Note 2	3,571 gallons	3,767 gallons
Frequency of Acid Maintenance Cleans	1/week/train	1/week/train

Hypochlorite Recovery Cleans (CIP)

Parameter	Phase 1 (3.2 MGD)	Phase 2 (5.5 MGD)
Volume of Permeate Used Per Hypochlorite CIP	3,694 gallons	3,563 gallons
Total Volume of Wastewater Per Hypochlorite C IP Note 1	8,332 gallons	8,790 gallons
Average Daily Waste Generated from Hypochlorite CIPs Note 2	821 gallons	866 gallons
Frequency of Hypochlorite Recovery Cleans	12/year/train	12/year/train

Acid Recovery Cleans (CIP)

Parameter	Phase 1 (3.2 MGD)	Phase 2 (5.5 MGD)
Volume of Permeate Used Per Acid CIP	3,694 gallons	3,563 gallons
Total Volume of Wastewater Per Acid CIP Note 1	8,332 gallons	8,790 gallons
Average Daily Waste Generated from Acid CIPs Note 2	821 gallons	866 gallons
Frequency of Acid Recovery Cleans	12/year/train	12/year/train

Note 1: During a maintenance or recovery clean, the first step will be to backwash and drain the membrane tank. This waste comprises just under half the total waste volume, and has no added chemicals. From here, permeate water stored in the CIP tank will be mixed with chemical and sent to the membrane tank to allow the membranes to soak. At the end of the clean, this chemical solution will be sent back to the CIP tank, neutralized and then either sent to the head of the plant (for maintenance cleans) or to waste (for recovery cleans).

Note 2: Since maintenance and recovery cleans occur less frequently than a daily basis, the daily waste generated is a calculated average.

Note 3: Waste volumes are estimated and will be adjusted upon a more detailed design of the membrane tanks.

2 System Process Description and Scope

2.1 ZeeWeed® 1000 Ultrafiltration System

ZeeWeed® water treatment is a process technology that produces high quality treated water by filtering water through GE Water & Process Technologies proprietary and patented immersed ZeeWeed® ultrafiltration membranes. ZeeWeed® 1000 Series membrane utilize "Outside-In" flow through a hollow-fiber membrane. The small pore size of the ultrafiltration membrane excludes particulate matter from the treated water.

The membranes operate under a vacuum created within the hollow membrane fibers by a permeate pump. Treated water is drawn through membrane pores and enters the inside of the hollow fibers. Water then flows through the permeate pump to the treated water storage tank (or distribution system). During backwashing, air is introduced at the bottom of the membrane modules to create turbulence along the membrane surface. Rising air bubbles scour and clean the outside of the membrane fibers, maximizing membrane performance.

ZeeWeed® 1000 Membranes can produce consistent, exceptional quality treated water.

With a ZeeWeed® membrane water treatment system, removal of turbidity requires no process chemicals. On water sources where dissolved contaminants are not a concern, raw water may be fed directly to the membrane filters for a single stage treatment process. In a single stage treatment system, there is no need for coagulants as ZeeWeed® membranes effectively replace both the clarifier and granular media filters found in conventional water treatment plants. This results in significantly easier control for plant operators, eliminates the need for coagulants and substantially reduces the plant footprint. Alternatively, the membranes may follow flocculation and settling processes replacing the media filters in a conventional system depending on the treatment objectives. The ZeeWeed® membrane process can consistently produce high quality treated water.

ZENON pioneered the use of immersed, hollow-fiber membranes for water treatment and has over a decade of experience in their design, manufacture and sale to customers worldwide.

2.2 GE Scope of Supply

GE's scope of supply for a ZeeWeed® 1000 Ultrafiltration Water Treatment System, for the Rancho Murieta CSD WTP project is described in the tables below as anything with a box checked "By GE". Major equipment to be supplied by others has been included in the table and marked "By Others"; please note that this list is not exhaustive and is provided for information only. A more comprehensive list of Buyer's Scope of Supply follows in Section 2.3.

The system described is designed to treat an initial net permeate flow of 3.2 MGD, with the ability to expand to 5.5 MGD with the addition of modules and cassettes.

Qty	Description	By GE	By Others
Pretreatment to the Membranes			
2	Strainers with minimum 500 micron mesh openings, using punched holes or woven mesh style screens Note 1		X
1	Feed turbidimeter, complete with required sample valves and isolation valves		X
1	Feed flowmeter		X
Lot	Pretreatment system as required by engineer complete with distribution channel or system and any valving or instrumentation required		X
Lot	Interconnecting piping between any and all equipment upstream of the membrane system and the membrane tanks		X
Lot	Piping for any and all sample or drain lines, if required		X
Positive Displacement Blowers			
2	Membrane air scour blowers (one (1) duty and one (1) on-line stand-by) (VFD's required - by others), supplied loose, complete with required motor and appurtenances	X	
2	Membrane air scour blowers VFDs		X
2	Membrane air scour blower isolation valves	X	
1	Membrane air scour blower flow switches	X	
Lot	Interconnecting piping between blowers and air scour headers		X
ZeeWeed® Membranes and Membrane Tank Appurtenances			
9	Sets of membrane cassette support brackets	X	
378	ZeeWeed® 1000 modules	X	
162	ZeeWeed® 1000 filler modules	X	
9	ZeeWeed® 1000 membrane cassettes comes with permeate and air isolation valves	X	
3	Permeate headers (316L SS) with through-wall connections	X	
3	Air headers (316L SS) with through-wall connections	X	
3	Air header isolation valves	X	
Lot	Fasteners for GE supplied header piping		X
3	Membrane tanks (concrete construction)		X
3	Membrane tank level transmitters with required isolation valves	X	
3	Membrane tank inlet flow control valves	X	
3	Membrane tank drain flow control valves	X	

3	Sets of MIT valves (two (2) valves per set) on MIT line	X	
3	Sets of valves, including silencer, on vacuum line	X	
3	Permeate turbidimeters, complete with required sample valves and isolation valves	X	
Lot	Piping for any and all sample, overflow or drain lines, if required		X
Permeate Pumping System			
3	Permeate Pumps (VFDs required – by others), supplied loose, complete with required motor	X	
3	Permeate pump VFDs		X
3	Permeate suction isolation valves	X	
3	Permeate discharge flow control valves	X	
3	Sets of sample/drain valves surrounding Permeate Pump (two (2) valves per set)	X	
3	Transmembrane pressure transmitters	X	
3	Suction pressure gauges with required isolation valves	X	
3	Discharge pressure gauges with required isolation valves	X	
3	Permeate Pump discharge check valves	X	
3	Permeate flowmeters	X	
Lot	Interconnecting piping from membrane tank to permeate pumps and from permeate pumps to common discharge piping		X
Lot	Common permeate discharge piping to clearwell		X
Lot	Any equipment downstream of permeate discharge piping that may be required for the overall plant operation		X
Lot	Piping for any and all sample or drain lines, if required		X
Backpulse Pumping System			
1	Backpulse Tank (3,000 gallons), supplied loose, complete with associated valves, and level transmitter Tank dimensions: 90" in diameter, 126" in height	X	
1	Backpulse tank level transmitter and isolation valve	X	
1	Backpulse tank drain valve	X	
2	Backpulse Pumps (one (1) duty and one (1) on-line stand-by) (VFDs required – by others), supplied loose, complete with required motor.	X	
2	Backpulse pump VFDs		X
2	Backpulse pump suction isolation hand valves	X	
2	Backpulse pump discharge isolation hand valves	X	
3	Train discharge isolation valves	X	
2	Sets of sample/drain valves surrounding backpulse pump (two (2) valves per set)	X	
1	High pressure switch	X	
2	Backpulse pump suction pressure gauges with required isolation valve	X	
2	Backpulse pump discharge pressure gauges with required isolation valve	X	
2	Backpulse pump discharge check valves	X	
1	Backpulse flowmeter	X	
1	Set of dosing/isolation valves for sodium hypochlorite dosing into Backpulse tank	X	
1	Plant service water isolation valve into Backpulse tank	X	

1	Backpulse tank feed valve	X	
Lot	Interconnecting piping from common permeate header to backwash tank, from backwash tank to backpulse pumps, and from backpulse pumps to membrane tanks		X
Lot	Piping for any and all sample, overflow or drain lines, if required		X
Reject Pumping System			
2	Reject Pumps (one (1) duty and one (1) on-line stand-by), supplied loose, complete with required motor.	X	
2	Reject pump suction isolation hand valves	X	
2	Reject pump discharge isolation hand valves	X	
2	Sets of sample/drain valves surrounding reject pump (two (2) valves per set)	X	
1	High pressure switch	X	
2	Reject pump suction pressure gauges with required isolation valve	X	
2	Reject pump discharge pressure gauges with required isolation valve	X	
2	Reject pump discharge check valves	X	
1	Reject flowmeter	X	
Lot	Interconnecting piping from membrane tanks to reject system, by Others		X
Lot	Piping for any and all sample, overflow or drain lines, if required		X
Lot	Any piping, instrumentation or equipment (e.g., equalization tanks) required for recycling membrane waste flows to the plant headworks		X
Vacuum System			
3	Ejector assemblies, complete with required isolation valves	X	
3	Ejector air supply assemblies, complete with required isolation valves	X	
Lot	Interconnecting piping from train permeate header to ejector assembly, and from compressed air system to air supply assembly		X
Lot	Piping for any and all sample or drain lines, if required		X
Membrane Cleaning/Neutralization System			
1	CIP Tank (7,200 gallons), supplied loose, complete with associated valves, level and temperature transmitters, and water heating system (70 kW) electric immersion heater) with local control panel and starter Tank dimensions: 143" in diameter, 142" in height	X	
1	CIP tank level transmitters and isolation valves	X	
1	CIP tank temperature transmitters	X	
1	CIP tank feed valves	X	
1	CIP tank drain valves	X	
1	CIP tank electric immersion heater	X	
2	CIP Pumps (one (1) duty and one (1) on-line stand-by) (VFDs required – by others), supplied loose, complete with required motor	X	
2	CIP Pump VFDs		X
2	CIP pump suction isolation hand valves	X	
2	CIP pump discharge isolation hand valves	X	

2	Sets of sample/drain valves surrounding CIP Pump (two (2) valves per set)	X	
2	CIP pump suction pressure gauges with required isolation valves	X	
2	CIP pump discharge pressure gauges with required isolation valves	X	
2	CIP Pump discharge check valves	X	
1	CIP flowmeter	X	
1	Sample valves to chlorine and pH analyzers	X	
1	pH analyzers, complete with required isolation valves	X	
1	Chlorine analyzers, complete with required isolation valves	X	
1	Neutralized cleaning solution drain valve	X	
1	Neutralized cleaning solution check valve	X	
1	Cleaning/neutralization solution recirculation valves	X	
Lot	Interconnecting piping from membrane tanks to CIP pumps and back, from common permeate header to CIP tank, from CIP tank to CIP pumps and from CIP system to waste		X
Lot	Any piping, instrumentation or equipment (e.g., equalization tanks) required for sending CIP waste flows to waste treatment system (by Others)		X
Lot	Piping for any and all sample or drain lines, if required		X
Membrane Cleaning/Neutralization Chemical Feed Systems Note 2			
1	Set of sodium hypochlorite dosing, check, and automatic isolation valves for chlorine maintenance and recovery cleans	X	
1	Sodium Hypochlorite Chemical Feed System for Cleans. Includes chemical dosing pumps (one (1) duty and one (1) on-line stand-by), associated isolation valves, calibration column, level switch, and pressure relief valves. System is mounted on a panel. All piping (PVC) on panel is included. Backpressure valve is included, shipped loose.	X	
1	Chemical day tank and secondary containment (as required) with piping Note 2		X
1	Set of citric acid dosing, check, and automatic isolation valves for acid maintenance and recovery cleans	X	
1	Citric Acid Chemical Feed System for Cleans. Includes chemical dosing pumps (one (1) duty and one (1) on-line stand-by), associated isolation valves, calibration column, level switch, and pressure relief valves. System is mounted on a panel. All piping (PVC) on panel is included. Backpressure valve is included, shipped loose.	X	
1	Chemical day tank and secondary containment (as required) with piping Note 2		X
1	Set of sodium hydroxide dosing, check, and automatic isolation valves for neutralization	X	
1	Sodium Hydroxide Feed System for Neutralization. Includes chemical dosing pumps (one (1) duty and one (1) on-line stand-by), associated isolation valves, calibration column, level switch, and pressure relief valves. System is mounted on a panel. All piping (PVC) on panel is included. Backpressure valve is included, shipped loose.	X	
1	Chemical day tank and secondary containment (as required) with piping Note 2		X
1	Set of sodium bisulfite dosing, check, and automatic isolation valves for neutralization	X	
1	Sodium Bisulfite Feed System for Neutralization. Includes chemical dosing pumps (one (1) duty and one (1) on-line stand-by), associated isolation valves, calibration column, level switch, and pressure relief valves. System is mounted on a panel. All	X	

	piping (PVC) on panel is included. Backpressure valve is included, shipped loose.		
1	Chemical day tank and secondary containment (as required) with piping Note 2		X
Lot	Interconnecting piping from chemical feed systems to CIP/backpulse systems		X
Compressed Air System			
2	Air compressors (one (1) duty and one (1) on-line stand-by) and air receiver tanks for pneumatic valve operation and membrane integrity test, supplied loose, complete with pressure gauges, filters, pressure switches, pressure relief valves, isolation valves and local control panel.	X	
2	Refrigerated air driers (one (1) duty and one (1) on-line stand-by), supplied loose, complete with auto-drain and isolation valves.	X	
1	Primary coalescing filter with integral auto-drain, supplied loose, complete with isolation valves	X	
1	Primary coalescing filter by-pass hand valves, supplied loose	X	
1	Set of valves, filters and instruments on main line providing compressed air for MIT, supplied loose. Includes: - check, drain and isolation valves - secondary coalescing filter with integral auto-drain - activated carbon filter with integral manual drain - pressure regulating valve - pressure gauge - pressure relief valve	X	
1	Set of pressure regulating valves on lines providing compressed air for pneumatic valve operation. Supplied loose.	X	
1	Set of pressure switches on lines providing compressed air for pneumatic valve operation. Supplied loose.	X	
Lot	Interconnecting piping between loose shipped components of compressed air system, between compressed air system and pneumatic instruments, and between compressed air system and MIT system on membrane train		X
Lot	Piping for any and all sample or drain lines, if required		X
Electrical and Control Equipment Notes 3 and 4			
1	Allen Bradley ControlLogix PLC CPU located in the Master Control Panel	X	
1	HMI panel – Panel View Plus 1250 – located on the Master Control Panel	X	
1	Master Control Panel (NEMA 12 carbon steel)	X	
3	Remote train panels (NEMA 4X stainless steel)	X	
Miscellaneous			
1	ZeeWeed® 1000 fiber repair station	X	
1	ZeeWeed® 1000 lifting bracket Note 5	X	
1	Set of straub tools (used to disconnect a cassette)	X	
1	Finished water temperature transmitter	X	
Lot	Anchor bolts and supports for equipment and piping		X

General			
	Engineering Services including Trips to Site or the Engineer's Office During the Design Phase of the Project	X	
	Equipment General Arrangement Drawings and P&IDs	X	
	Operation & Maintenance Manuals	X	
	Field Service and Process Start-Up Assistance Note 6	X	
	Operator Training Note 6	X	
	1 Year Mechanical Warranty	X	
	10 Year Membrane Warranty (First two (2) years are Full Replacement Warranty followed by eight (8) Years Pro-Rated Warranty)	X	
	1 Year 24/7 Emergency Telephone Support	X	
	2 Year Remote Monitoring & Diagnostics - Monitor/Warranty Service Note 7	X	
	2 Service Visits During the First 2 Years of Membrane Operation Note 8	X	
	Equipment Delivery Note 10	X	

Note 1: All pretreatment processes after screening must be covered and protected from outside elements such that no leaves, twigs or any foreign material can enter the membrane tank.

Note 2: It is assumed that all chemical day tanks or totes will be by others. GE's chemical feed pump panels may be wall-mounted over the Customer-supplied tank or tote and draw directly from the tank or tote.

Note 3: MCC and VFDs by others.

Note 4: All the membrane system's monitoring, control and alarm logic will reside in the PLC CPU. The ControlLogix PLC racks are equipped with Ethernet modules for communication. Data points defined in the CPU will be communicated over the Ethernet network to provide the Operator monitoring and control functionality at GE's HMI. These points will be available to any device on the Ethernet network, including the plant's SCADA system (by others).

Note 5: In order to remove a cassette from the membrane tank the lifting bracket must be attached to the top of the cassette. The cassette can then be lifted from the membrane tank using a monorail/bridge crane (by others). A cassette weighs a maximum of 6,600 lbs.

Note 6: 53 days over 3 trips have been included for equipment off-loading and installation assistance, commissioning and start-up assistance, membrane installation assistance, operator training, and performance testing.

Note 7: Includes data acquisition computer and software set-up.

Note 8: Each service visit is three (3) days on-site.

Note 9: No spare parts have been included. A recommended spare parts list can be generated by GE's Spare Parts Department and provided to the Customer as a price adder once GE's scope of supply has been finalized.

Note 10: Refer to **Section 3.3** for Freight Terms.

2.3 Buyer's Scope of Supply

All delivery or services not specified in the Seller's Scope of Supply are included in the Buyer's Scope of Supply. For example, in this project the following items are the responsibility of Buyer:

2.3.1 Safety and Environmental

- ❑ First aid, emergency medical response, eyewash & safety showers in the water treatment area. Chemical spill response, security & fire protection systems per local codes.
- ❑ Environmental use and discharge permits for all chemicals at the Buyer's facility either listed in this document or proposed for use at a later date.
- ❑ Any special permits required for Seller's or Buyer's employees to perform work related to the water treatment system at the facility. All site testing, including soil, ground and surface water, and air emissions, etc.
- ❑ Disposal of all solid & liquid waste from Seller's system including waste materials generated during construction, startup and operation.
- ❑ Provide appropriate protection of the environment & local community, the health and safety of all workers and visitors at the site and the security of the facility. Provide safety related equipment & services such as site security, fire systems, lifting equipment and its operation, fall protection, adequate floor grating, ventilation, and safe access to equipment & electrical systems areas.
- ❑ Equipment and trained support personnel for any confined space entry required during equipment installation/startup/commissioning/servicing. For permit-required confined space entry, a qualified rescue team on stand-by and available to respond within 4 minutes of an emergency.
- ❑ The Buyer will identify and inform Seller's personnel of any hazards present in the work place that could impact the delivery of Seller's scope of supply and agrees to work with Seller to remove, monitor, and control the hazards to a practical level.
- ❑ The Buyer will provide training to Seller's personnel on all relevant & standard company operating procedures and practices for performing work on site. Such training programs may include, but are not limited to, general environmental health & safety (EHS), HAZOP, fire protection, drug testing, incident notice, site conduct, standard first aid, chemical receiving, electrical safety, etc. Buyer will provide a certificate of training for Seller's personnel. This program will be fully documented, training materials will be provided, and attendance list will be kept.

2.3.2 Jobsite and Installation Review

- ❑ Review of Seller's supplied equipment drawings and specifications
- ❑ All easements, licenses and permits required by governmental or regulatory authorities in connection with the supply, erection and operation of the system

- ❑ Overall plant design, detail drawings of all termination points where Seller's equipment or materials tie into equipment or materials supplied by others.
- ❑ Stamping, signing or sealing of general drawings as per Federal, State, or local regulations or codes.
- ❑ Design, supply and installation of lifting device, such as a monorail, for cassette removal. Lifting device must be sized for worst case weight of 6,600 lbs for a cassette.
- ❑ All applicable civil design and works, including any building, site preparation, grading, excavations, piping supports, structural steel, foundations and trenches and accessories. For ergonomic design, Seller assumes that the bottom of free-standing equipment will not be elevated (by any combination of leveling devices and housekeeping pads) to more than 150 mm (6 inches) above the floor adjacent to the equipment.
- ❑ All electrical labor and supplies, including fittings, conduit, supports, cable trays, wire and hardware, and air-conditioning of panels as required for installation and ongoing operations
- ❑ All labor and supplies including fittings, conduit, supports, cable trays, wire and hardware, required to appropriately ground / earth the equipment as required for installation and ongoing operations
- ❑ All mechanical labor and supplies, including interconnecting piping, heat tracing (if required), fittings, conduit, pipe supports, structural steel, and hardware as required for installation and ongoing operations
- ❑ All instrumentation and automatic pneumatic valves including but not limited to; air/sample line tubing, fittings, conduit, supports, isolating valves as required for installation and ongoing operations
- ❑ Unloading and transportation of the equipment and materials required for Seller to perform the duties outlined in the Seller's Scope of Supply to the jobsite and/or warehouse
- ❑ Providing a suitable site/shelter for the placement of the proposed equipment, either inside appropriate housing, or outdoors. Note: electrical equipment including the PLC may require air-conditioned rooms to prevent overheating of sensitive electronic equipment depending on climatic conditions
- ❑ Storage of Cassette with UF membranes on site. These must be stored in a sheltered area, protected from freezing, direct sunlight or extreme heat, and sealed as shipped until ready for use. Storage should be in a dark, dry, level area, out of direct sunlight and at a temperature of 5-30°C (39-86°F). It is recommended that the cassette not be stored longer than necessary prior to installation. Coordinate with Seller for appropriate shipment times. Maximum storage duration of a cassette is 12 months from the date of shipment. If these timescales are exceeded Seller can provided instructions to extend the storage period.
- ❑ Bulk chemical storage and tanks, including secondary containment in accordance with local codes

- ❑ The Buyer will receive, off-load, log, and store all chemical and materials in accordance with Manufacturer's recommendation that are shipped to the site.
- ❑ Equipment anchor bolts
- ❑ Supply of telephone/fax/modem access while Seller's staff are on-site
- ❑ Any on-site painting or touch-up painting of equipment supplied.
- ❑ Disposal of Membrane Preservative
- ❑ Variable Frequency Drives (VFD) and Motor Control Centre (MCC)
- ❑ SCADA/DCS to control Seller's supplied equipment. Seller shall supply a functional logic description (control narrative).
- ❑ Configuration of instrument and PLC signals from the water treatment system to the plant PLC or DCS

2.3.3 Start-Up and Commissioning

- ❑ Installation & removal of temporary screens (0.5 mm mesh or punch hole) on all process lines feeding the membrane basins to prevent membrane damage.
- ❑ Flushing and disinfection of all piping and tanks (including process equipment tanks) and verification of removal of all residual debris from construction.
- ❑ Alignments & required materials for rotating equipment
- ❑ MEG testing of all field motor power wiring (as required)
- ❑ Continuity checks for all electrical field wiring per Installation Checklist
- ❑ Hydro-testing of all field installed piping
- ❑ Supply raw materials, oils/lubricants, chemicals and utilities during start-up and operation.
- ❑ Laboratory services, operating and maintenance personnel during equipment checkout, start-up and operation.
- ❑ Electrical & Mechanical support labor for commissioning activities

2.3.4 Facility Management

- ❑ Buyer will provide such warehouse storage space and facilities, as are available at the site, and are reasonably appropriate to store parts, consumables, tools, etc. in accordance with manufacturers' recommendations. Such warehouse storage space will be a segregated area, secured and protected from adverse climate as may reasonably be required. Buyer will be responsible for risk of loss of Seller's parts while in storage at the site. Buyer will maintain Seller's parts stored at the site free and clear of any and all liens of Buyer and Buyer's lenders, bondholders, contractors, and other creditors of any nature.

- The Buyer will afford Seller's personnel free access and egress of the facility for all authorized work.
- The Buyer will provide workshop facilities with standard workshop tools and equipment, as is reasonably appropriate, that are necessary to meet the repair and maintenance requirements of the system. Such equipment includes, but is not limited to, benches, vices, drill press, electric saws, hand tools, power tools, pneumatic tools, etc.
- The Buyer will provide all access structures (scaffolding) and mechanical lifting equipment (cranes, forklifts and scissor lifts)
- The Buyer will provide adequate illumination and emergency lighting for all areas in which the Seller will be executing the scope of supply.
- The Buyer will identify a Buyer project contact person to be available to Seller's personnel to address any issues related to Seller's execution of Seller's scope of work
- The Buyer will be responsible for the equipment for movement of chemical drums, totes, and resins, as is reasonable.
- The Buyer will provide all site utilities such as raw water, potable water and power required for operation of the proposed equipment included in this scope of supply.

3 Commercial Offer

3.1 Pricing

Pricing for the proposed equipment and services as described in this budget proposal:

Budgetary System Price **$ USD**

All pricing is based on the operating conditions and influent analysis detailed in Section 1. The pricing herein is for budgetary purposes only and does not constitute an offer of sale. Once the design and scope of supply is agreed upon by all stakeholders the pricing will be finalized. If the design and scope of supply remains the same as what is currently shown in this document then it is expected that pricing will remain the same. Additional scope and/or changes to the scope may affect pricing.

3.2 Equipment Shipment and Delivery

Equipment shipment is estimated at 36 to 45 weeks after order acceptance. The Buyer and Seller will arrange a kick off meeting after contract acceptance to develop a firm shipment schedule.

Typical Drawing Submission and Equipment Shipment Schedule

		8-12 weeks	2-3 weeks	26 - 30 weeks		2 weeks
Acceptance of PO						
Submission of Drawings						
Drawings Approval						
Equipment Manufacturing						
Equipment Shipment						
Plant Operations Manuals						

The delivery schedule is presented based on current workload backlogs and production capacity. This estimated delivery schedule assumes no more than 2 weeks for Buyer review of submittal drawings. Any delays in Buyer approvals or requested changes may result in additional charges and/or delay to the schedule.

3.3 Freight

The following freight terms used are as defined by INCOTERMS 2010.

All pricing is CIP designated Rancho Murieta CSD project site. Delivery to the project site is conditional upon provision of access roads of a nature that will permit access by tractor-trailers. Off-loading and positioning of equipment at the job site is not included.

3.4 Bonds

Performance or Payment Bonds are not included in the system price. These bonds can be purchased on request but will be at additional cost.

3.5 Pricing Notes

- All prices quoted are in USD.
- Any applicable sales or value added tax is not included.
- The Buyer will pay all applicable Local, State, or Federal taxes and duties.
- The equipment delivery date, start date, and date of commencement of operations are to be negotiated.
- Commercial Terms and Conditions shall be in accordance with Seller's Standard Terms and Conditions of Sale.

3.6 Conditional Offering

Buyer understands that this proposal has been issued based upon the information provided by Buyer, and currently available to Seller, at the time of proposal issuance. Any changes or discrepancies in site conditions (including but not limited to system influent characteristics, changes in Environmental Health and Safety ("EH&S") conditions, and/or newly discovered EH&S concerns, Buyer's financial standing, Buyer's requirements, or any other relevant change, or discrepancy in, the factual basis upon which this proposal was created, may lead to changes in the offering, including but not limited to changes in pricing, warranties, quoted specifications, or terms and conditions. Seller's offering in this proposal is conditioned upon a full Seller EH&S, and Buyer financial review.

ONE COMPANY | *Many Solutions*℠

Richard G. Stratton, P.E.

Senior Project Manager

Education
M.S., Environmental Engineering, University of Illinois - Urbana, 1981

B.S., Civil Engineering, University of Illinois - Urbana, 1977

Registration
Registered Civil Engineer, California, No. 37261, 1983

Registered Civil Engineer, Oregon, No. 87175, 2013

Registered Civil Engineer, Nevada, No. 12435, 1996

Professional Endeavors
HDR Engineering, Inc., 1995 to Present

Nolte and Associates, 1986 to 1995

Larry Walker Associates, 1984 to 1986

State Water Resources Control Board, 1982 to 1984

University of Illinois, 1980 to 1982

U.S. Peace Corps, 1977 to 1979

Professional Affiliations
American Water Works Association

Water Environment Federation

California Water Environment Association

HDR Tenure
17 Years

Industry Tenure
35 Years

Professional Experience

Mr. Stratton has more than 35 years of water and wastewater engineering experience, which includes master planning, design, and construction of treatment plants, pumping stations, pipelines, storage tanks, wells, and residuals handling systems. He is considered one of HDR's top water treatment plant engineers, and typically involved with HDR's largest and most complex water treatment plant projects nationwide. He also has extensive experience with industrial waste treatment. Project experience includes:

Membranes

Surface Water Treatment Plant Membrane Permeability Study - City of Clovis, California. Conducted a study to determine whether the actual cause(s) of severe membrane permeability loss at the city's surface water treatment plant can be determine. Developed recommendations for the best remedy for the existing membrane modules, process modification to minimize membrane fouling, and optimized operation plan to achieve long-term sustainable membrane operation.

Regional Water Treatment Plant Feasibility Study - Kingsbury General Improvement District, Stateline, Nevada. Project manager for study that investigated the feasibility of building a new regional treatment plant capable of servicing water systems owned by Kingsbury General Improvement District, Douglas County's Zephyr Water Utility District (ZWUD), and possible Edgewood Water Company. Determined the size of the new 8 to 10 mgd plant needed to treat with either microfiltration or ultrafiltration, prepared a phased plan for expansion over 6 mgd, evaluated alternative routes to run the water transmission main from the new building to ZWUD and provided a breakdown of cost of the pipeline installation, estimated the cost to tie into the Round Hill General Improvement District and the extended cost of tying into the Zephyr Cove Resort via Zephyr Knolls, recommended a treatment scheme for compliance with know U.S. Environmental Protection Agency (EPA) and Nevada Division of Environmental Protection (NDEP) requirements, performed a life-cycle cost-benefit analysis of each approved treatment scheme, provided a breakdown the cost of disposal of sludge to sewer for each filter system, developed a matrix outline the treatment options based on the life-cycle cost analysis, developed an engineering cost estimate of implementing the desired treatment scheme, determined how the new installation could fit within the space constraints of a parcel of land located on the east side of the Douglas County Sewer Improvement District's main sewer lift station near Nevada Beach while still using the existing water treatment plant intake suction, and developed a comprehensive schedule to ensure that all water systems involved maintain compliance with the new rules (including sampling protocols, engineering design, and construction efforts).

Watsonville Membrane Water Treatment Plant - City of Watsonville, California. Project manager for alternatives analysis, predesign, and design of improvements to convert to city's existing slow sand filtration plant to a new membrane water treatment plant to protect and enhance the biological resources associated with Corralitos Creek, and simultaneously ensure the long-term reliability of the city's potable water supply from Corralitos Creek.

Surface Water Treatment Plant Membrane Permeability Study - City of Clovis, California. Provided troubleshooting services to assist the city in resolving the membrane permeability loss issue at the surface water treatment plant. The project involved developing an approach for determining the actual cause(s) of the severe membrane

permeability loss, determine additional forensic analysis needed, identify options for membrane pretreatment optimization to minimize its impact to membrane permeability, and evaluate pretreatment optimization alternatives.

Yucaipa Valley Regional Water Filtration Facility - Yucaipa Valley Water District, Yucaipa, California. Project manager for design, bidding assistance, construction engineering, and startup services for the new $37.4 million Yucaipa Valley Regional Water Filtration Facility, a microfiltration facility (with provisions to add nanofiltration equipment) located on a 32-acre site, with an initial capacity of 12 mgd and an ultimate capacity of 36 mgd. The facility includes microfiltration using Pall membranes, nanofiltration and blending facilities, residuals handling facilities, disinfection using sodium hypochlorite, 6 million-gallon (MG) partially-buried prestressed concrete finished water storage tank, 5,000 linear feet (LF) of 4- to 48-inch-diameter finished water pipeline to convey treated water to the city's distribution system, influent flow control, security features, and slope protection for the adjacent flood control channel. Aesthetics and architectural design were key project issues.

Edward C. Little Water Recycling Phase V Expansion - West Basin Municipal Water District, El Segundo, California. Provided design-build services to increase the capacity of barrier water to 12.5 mgd total capacity and increase the capacity of Title 22 water to 40 mgd. Phase IV improvements to the Edward C. Little Water Recycling Facility included upgrades and expansion of the Title 22 treatment system, solids handling system, chemical systems, microfiltration treatment system (includes a new 10.8 mgd microfiltration system), reverse osmosis treatment process, ultraviolet (UV) disinfection treatment system, and site. Title 22 treatment system improvements included demolishing the flocculation basins, constructing a 20 mgd high-rate clarifier, extending the Title 22 treatment train No. 1 conventional gravity filter gallery, adding two chlorine contact basins, and adding two medium voltage variable frequency drives (VFDs) on the Title 22 product water pumps. Solids handling system improvements included adding two mechanical thickening units, constructing a building to house the mechanical thickeners, adding two new 24,000-gallon conditioning tanks, providing a dewatered solids conveyance system/a hopper storage system/odor control system, relocating the dewatering holding equalization basin backwash waste pumps, and installing wall-mounted submersible mixers in each of the equalization basins to better manage, continuously mix, and to mitigate solids accumulation in the equalization basins. Reverse osmosis treatment process improvements included installation of two new reverse osmosis trains, as well as enhancing the existing reverse osmosis trains 4 and 5 to produce an additional 0.47 mgd of reverse osmosis permeate for NRG Power. UV disinfection treatment system improvements included adding one UV train to provide 17.5 mgd of disinfection and advanced oxidation process treatment capacity for the barrier feed water. Site upgrades and modifications included modifying the reverse osmosis clean-in-place equipment, installing a sump for the reverse osmosis system, installing a reverse osmosis waste stream metering vault, enhancing and relocating the sulfuric acid distribution system, providing a building for equipment storage, and providing bulk caustic storage. The project treats water to a level suitable for injection into a potable water aquifer for the purpose of preventing seawater intrusion.

El Segundo Water Recycling Plant Phase IV Expansion Design-Build - West Basin Municipal Water District, El Segundo, California. Project manager for design-build of the El Segundo Water Recycling Plant Phase IV expansion project, which involves: (1) expanding the amount of recycled water being injected in the barrier that protects against saltwater intrusion from 7.5 mgd to 12.5 mgd; (2) constructing new facilities to provide Title 22 treatment; (3) expanding the solids handling system from 30 to 40 mgd; and (4) providing new chemical feed and storage facilities. Barrier water treatment system upgrades include: (1) replacement of the existing lime reverse osmosis (RO) pretreatment system with a microfiltration process train; (2) replacement of the sodium hypochlorite disinfection system with an ultraviolet (UV) irradiation system; and (3) modification and addition of RO product water decarbonators and chemical stabilization; and (4) 5 million-gallon (MG) buried prestressed concrete water storage tank and 30 mgd pumping facilities.

Title 22 treatment system improvements include: (1) barrier treatment lime clarifier conversion to a 10.5 mgd Densadeg solids contact clarifier for backwash water treatment; (2) recarbonation basin conversion to an emergency Title 22 flocculation basin; (3) barrier filter conversion to Title 22 filter; (4) modification of the chlorine contact basins to increase hydraulic residence time and installation of two new product water pumps at the new storage tank; (5) new barrier backwash pumps; and (6) interconnection piping between the diversion pumping station and the converted barrier water filters for backwash supply. Solids handling system expansion improvements include new backwash transfer pumps to convey backwash waste from the equalization basins to the high rate clarifiers, two new high rate clarifiers (4.0 mgd capacity for each), new pumping station to transfer treated backwash water to the Title 22 solids contact clarifier, and additional plates for the two existing plate and frame presses to increase capacity.

Water Filtration Plant Improvements - City of Kennewick, Washington. Provided engineering services for upgrade and expansion of the city's water filtration plant expansion from 7.5 to 15 mgd, which included new submerged, low-pressure membranes installed in existing media filter basins; conversion of the ozone contact basin and first third of sedimentation basins into flocculation basins, addition of plate settler to sedimentation basins, upgrade of waste washwater basin for year-round use, expansion of intake and high-service pumping station to 15 mgd, and disinfection system conversion from chlorine gas to bulk sodium hypochlorite.

Gauntlett/Fitch Membrane Water Treatment Plant - City of Healdsburg, California. Provided quality assurance/quality control for design of the city's new Gauntlett/Fitch Membrane Water Treatment Facility. The membrane water treatment facility utilizes low-pressure membrane treatment, provide treatment of raw water conveyed from the Gauntlett Reservoir, and convey treated water to the nearby Panorama Reservoir for subsequent storage and distribution. The facility is automated to allow for unattended operation, thus requiring periodic site visits by the City's operations and maintenance (O&M) staff. Waste flows from the Panorama Membrane Water Treatment Facility is pumped to a nearby sanitary sewer and conveyed to the city's wastewater treatment plant for treatment. The plant was constructed in two phases. During Phase I, the membrane equipment was prepurchased; the treatment facility was designed to provide a rated capacity of 2.6 mgd, and an ultimate capacity of 4.5 mgd; and the building housing the ultimate 4.5 mgd treatment facility was designed and constructed.

Water Treatment Plant Expansion (Membrane) - Rancho Murieta Community Services District, California. Project manager for preliminary design, CEQA documentation, and final design of $8.7 million in improvements to expand the district's water treatment plant from 3.5 mgd to 7.0 mgd to increase the maximum day capacity. Improvements include: (1) new membrane filtration system in the Plant 1 sedimentation tanks; (2) conversion of existing filter building upper level to accommodate new membrane control and ancillary equipment room; (3) ancillary facilities, including a fine strainer prior to the membrane system, modifications to the Plant 1 sedimentation basins to accommodate new membrane filtration system, conversion of existing filter basin (filter building lower level) and backwash waste basin to chlorine contact basins, and addition of a canopy to cover the membranes and equipment not located in the existing filter building; (4) new booster pumps; (5) solids handling system modifications to prevent discharge to the lake and to accommodate the expanded plant capacity; (6) chlorination system modifications to expand its capacity and bring the system into compliance with current building and fire codes; (7) plant-wide SCADA system; (8) plant power system modifications to accommodate increased loads, which includes a new standby generator; and (9) miscellaneous site piping and paving.

North City Water Reclamation Plant Demineralization Facility - City of San Diego, California. Prepared predesign report for new 4.5 mgd (7 mgd ultimate) demineralization system, which utilizes reverse osmosis (RO) preceded by pretreatment of tertiary effluent using either microfiltration or ultrafiltration. New system replaced the electrodialysis

reversal demineralization system to enhance the marketability of the reclaimed water produced at the North City Water Reclamation Plant. Demineralization facility includes microfiltration feed and tertiary blend bypass pumping station, strainers, microfiltration skid system and CIP system, break tank, RO system, and caustic feed system.

Strawberry Membrane Plant - El Dorado Irrigation District, Strawberry, California. Provided design review and post-construction services for the 100 gpm membrane filtration water treatment plant in Strawberry.

Otay Water Treatment Plant - City of San Diego, Water Department, California. Senior project engineer for evaluation of improvements to optimize the operations and management of the 40 mgd Otay Water Filtration Plant through a competitive process. Facilities evaluated included sedimentation basins, filters, disinfection, and membrane treatment.

Water Treatment

West Hills Water Treatment Plant Expansion - San Benito County Water District, Hollister, California. Provided quality assurance/quality control (QA/QC) and design support for preparation of predesign report for 6 mgd surface water treatment plant expandable to 9 mgd. Unit processes include raw water pumping, Actiflo Carb gravity filters, powdered activated carbon (PAC) addition, drying lagoons, and clearwell storage. Assisted with protocol development and pilot testing of the Actiflo-Carb process.

Cienega Selenium Treatment Facility - Irvine Ranch Water District, Irvine, California. Provided design support for the new Cienega Selenium Treatment Facility, which uses General Electric's (GE's) Advanced Biological Metals Removal (ABMet) technology. The ABMet system is used to reduce total selenium mass loading in Peters Canyon Wash prior to the confluence with San Diego Creek. A portion of the Peters Canyon Wash water is diverted from Peters Canyon Wash through an intake system, and routed through the ABMet system. Treated water returns to the wash just downstream of the intake system. The Cienega Selenium Treatment Facility includes an infiltration gallery, cleanouts, valves and valve boxes, manholes to collect water from Peters Canyon Wash into a common header to flow to the new influent pumping station, a discharge structure, backwash system, equipment building, sewer pipeline, and associated piping. The influent pump station is buried at grade and equipped with two 3 cfs submersible pumps. The backwash system consists of four fiberglass storage tanks (two for backwash and two for spent backwash storage), a backwash pumping station, and a spent backwash pumping station. The equipment building consists of the ABMet bioreactor tanks, piping gallery, and equipment area. The equipment area includes the odor control system, blowers, nutrient feed system, nutrient storage tanks, chemical storage tanks for odor control, electrical/control room, and storage room.

Zephyr Water Utility District (ZWUD) Water Treatment Plant Ozone Generator Replacement - Douglas County, Zephyr Cove, Nevada. Provided quality assurance/quality control (QA/QC) during design of the replacement of two existing 20 pound per day (ppd) ozone generators located at the ZWUD Water Treatment Plant with two 10 ppd ozone generators. The new ozone generators are skid-mounted and stacked vertically, and include programmable logic controllers with touch screen human machine interface (HMI) panels to display the status and alarm information right at the generator. The new PLCs communicate directly with the existing Tesco PLC in CP-1.

Water Treatment Plant Damage Assessment and Design Services - City of Fallon, Nevada. Project manager for a damage assessment and provided remedial design services for the portions of the water treatment plant that were affected by a hydrochloric acid spill. The building structure, electrical wiring and devices, equipment and motors, and piping were inspected for damage, and a condition assessment technical memorandum was prepared summarizing the major systems affected by the spill. Developed a corrective action plan that identified recommendations on how to return the water treatment plant

back to a condition equal to or better than prior to the acid spill. Provided final design services for the repair and restoration of the chemical building.

Water Treatment Plant Interim Operations Plan - City of Fallon, Nevada. Project manger for preparation of an interim operations plan that identifies a reliable means for storing and feeding acid, ferric based coagulant, and sodium hypochlorite until repairs to the damaged systems can be completed.

Water Treatment Plant Forensic Evaluation - City of Fallon, Nevada. Project manager for assessment of the portions of the water treatment plant were affected by a hydrochloric acid spill, which included the hydrochloric acid storage tank and piping, to determine possible causes of the tank/piping failure.

Water Treatment Facility Design for a Demonstration Treatment Plant at Panoche Drainage District for the Central Valley Project - U.S. Bureau of Reclamation, West San Joaquin Division, San Luis Unit, Panoche, California. Project manager for design of a demonstration (pilot) water treatment facility, located in the Panoche Drainage District within the San Luis Unit, to collect cost and performance data required for the final design of several full-scale drainage treatment facilities to be constructed across the San Luis Unit in the future. The design consists of reverse osmosis (RO) desalination, proprietary selenium biotreatment (ABMet), followed by evaporation ponds.

Clearwell Tracer Study - Stockton East Water District, Stockton, California. Performed a tracer study for the existing 10.4 million-gallon (Mgal) clearwell at the Dr. Joe Waidhofer Water Treatment Plant to determine the overall baffling coefficient for the clearwell at the following flow rates: 45 mgd, 52 mgd, and 60 mgd.

Balch Camp Water Treatment Plant Alternatives Study - Pacific Gas & Electric (PG&E), Balch Camp, California. Developed conceptual-level alternatives for repair or replacement of PG&E's Balch Camp water treatment plant, and to ensure compliance with California Department of Public Health regulations and Fresno County health and safety regulations. Alternatives that were evaluated included variations of repairing the existing the equipment, and replacing the existing plant with a new system or individual treatment at each connection. A report was prepared summarizing the alternatives and their pros and cons, cost (construction and operations & maintenance), and timeline.

Crowder Lane Control System Upgrades - California American Water, Roseville, California. Principal-in-Charge for design of improvements to install a control valve and associated SCADA modifications to provide a single control system that modulate the new control valve on the Placer County Water Agency connection. The existing radio telemetry at Crowder Lane intertie was also modified to take signal from the Walerga Tank.

Long-Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) Compliance for Zephyr Water Utility District (ZWUD) Ozone Plant - Douglas County, Minden, Nevada. Assisted the county with identifying the best treatment technology for addressing the LT2ESWTR, and preparing a 10 percent design and cost estimate for the recommended improvements.

Long-Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) Compliance Assistance for Ozone Water Treatment Plant - Kingsbury General Improvement District (KGID), Stateline, Nevada. Provided technical assistance during alternatives analysis to provide direction to KGID on source water monitoring alternatives and identify the most viable treatment alternative for providing the required Cryptosporidium removal. Treatment alternatives that were evaluated included ultraviolet (UV), ozone, and chlorine dioxide disinfection. Also evaluated the cost effectiveness of upgrading the current ozone generators to a modern system.

Begonia Iron Removal Plant Ultraviolet (UV) Upgrades (IP-0540-168) - California American Water, Monterey, California. Project manager for preparation of a basis of design report (BODR) for UV system upgrades at the Begonia Iron Removal Plant. A new

UV disinfection system at Begonia Iron Removal Plant was needed to address needs related to future well replacement, and defer the need to replace uncovered sludge lagoons.

Begonia Iron Removal Plant Caustic System Upgrades and Miscellaneous Infrastructure Upgrades - California American Water, Monterey, California. Project manager for preparation of a basis of design report (BODR) for the caustic system and miscellaneous infrastructure upgrades at Begonia Iron Removal Plant, which included: (1) Installation of approximately 300 linear feet (LF) of 24-inch-diameter pipe for both the primary effluent and bypass piping, and 24-inch butterfly valve to mitigate scaling on bypass valves; (2) Installation of a new dilution control system to prevent future occurrence of scaling - The dilution system will consist of a pre-engineered skid-mounted system that batches more dilute (10 percent strength) caustic soda from the existing bulk tanks, and was integrated to the existing control system and require minimal operator attention; (3) relocation of the isolating valve further away from the chemical addition point so that any scale will have fallen out of solution prior to reaching the valve; (4) filling of abandoned sludge ponds; (5) access road paving; (6) address impact of iron on influent chlorine analyzer; (7) installation of new flow meters on the reclamation pumps; (8) installation of automated controls on the sodium hypochlorite bulk tank and day tank; (9) replacement of the pump motors; (10) elevate motors and instrumentation above flood level in chemical containment areas; and (11) various corrosion protection painting.

Bollman Water Treatment Plant Solids Handling Evaluation - Contra Costa Water District, Concord, California. Project manager for evaluation of on-site solids dewatering alternatives for the Bollman Water Treatment Plant, which included a land application and mechanical dewatering alternatives. The land application alternative included options of using a portion of the Mallard Reservoir to create basins, the Chenery site, the Government Ranch (Foster Wheeler) tank area, the spoils area, and acquiring adjacent land. Issues that were considered included providing adjacent space to address treatment of backwash solids if the use of Mallard Reservoir is discontinued, identifying labor hours to operate and other costs when evaluating options, and identifying odor control requirements. The mechanical dewatering alternatives included options of using screw press, belt press, and centrifuge. Identified the criteria and weighting for the evaluation, determined the ranking of alternatives, and made recommendations for mechanical dewatering demonstration testing.

Surface Water Treatment Facility - City of Lodi, California. Project manager for conceptual design, feasibility evaluation of alternatives, predesign, CEQA environmental documentation, permitting, design, and construction engineering services for a new 11.5 mgd (nominal) surface water treatment plant and its associated facilities, which includes 6-, 8-, 10-, 12-, and 14-inch-diameter water mains; two water storage tanks; and 26 non-treated groundwater wells. Evaluated the feasibility of locating new surface water treatment facilities at five potential sites. Treatment technologies were evaluated based on surface water quality, capital construction costs, expandability, annual operations costs, and life-cycle costs. Capital financing and annual operations financing strategies were also investigated. The predesign report addressed water quality and regulatory considerations, raw water pumping station and pipeline improvements, pretreatment and membrane system improvements, chemical systems and disinfection improvements, residuals handling improvements, site plan, plant hydraulics, blending/corrosion/distribution system improvements, finished water storage and pumping station improvements, finished water transmission main improvements, well modifications, building architecture, HVAC and plumbing improvements, electrical system improvements, instrumentation and control (SCADA) improvements, security considerations, environmental compliance and permitting requirements, project implementation and construction sequencing, and operations and staffing plan. Design assumptions, process recommendations, applicable design criteria, and cost estimates were included. CEQA environmental documentation that were provided included a Notice of Preparation (NOP), technical studies (biological resources, cultural resource study, and noise), environmental impact report (EIR), mitigation monitoring and reporting program (MMRP), and Statement of Findings and Overriding Considerations. A watershed sanitary survey of the Lower Mokelumne River

watershed was also conducted for the proposed surface water treatment facility. The new 11.5 mgd (23 mgd at buildout) surface water treatment facility includes: (1) a raw water pumping station, which include three 50-hp, 5.7 mgd pumps in oversized cans enclosed in a concrete masonry unit (CMU) block building; (2) sedimentation basin followed by automatic strainers for pretreatment; (3) Pall Microza pressure membrane system, with an initial firm capacity of 8 mgd and expandable to 20 mgd; (4) chemical and disinfection systems; (5) residual handling (plate settlers); (6) relocation of an electrical transmission pole; (7) modification of the traffic signalization for the Union Pacific Railroad tracks; (8) storm drain system that include catch basins and connection to an existing stormwater pumping station; (9) 10 mgd (25 mgd buildout) high-service pumping station with end-suction centrifugal pumps and CMU building; (10) 3 million-gallon (MG) prestressed concrete tank; (11) 2,500 linear feet (LF) of 36-inch-diameter water transmission main, and connections to existing distribution system water transmission mains; (12) modifications of 26 groundwater well with permanent chlorination facilities to ensure compliance with state and federal regulations, as well as sodium hypochlorite tanks, chemical feed banks, online chlorine residual analyzer, SCADA system, and well pump programmable logic controller (PLC); (13) operations building and chemical building; and (14) corrosion control.

Yuba City Water Treatment Plant Expansion to 85 mgd - City of Yuba City, California. Project manager for predesign, design, bidding, grant funding assistance, environmental documentation, permitting assistance, construction engineering, operations and maintenance (O&M) manuals, and testing and startup assistance for the $36 million expansion of the 24 mgd water treatment plant to 48 mgd. Improvements included: (1) 30 mgd (85 mgd buildout) low-lift pumping station near Feather River to meet the demands of the water treatment plant expansion, along with new switchboard, transformer, and larger standby generator; (2) two new 48 mgd fish screen facilities (screens are designed to limit maximum approach velocity perpendicular to the screen to 0.2 ft/s); (3) 42- and 54-inch-diameter raw water pipelines - one of the pipelines crosses through a levee; (4) four new membranes to increase the hydraulic capacity of the plant to 48 mgd; (5) new 42-inch-diameter treated water pipelines; (6) treated water piping modifications to the existing clearwell to achieve chlorine contact time (CT) after filtration; (7) new 4 million-gallon (MG) buried prestressed concrete clearwell; (8) new 18 mgd high-service pumping station (with allowable future expansion to 48 mgd by addition of extra pumps); (9) chemical feed system and chlorine disinfection modifications; (10) backwash water disposal; and (11) electrical and control system upgrades. The innovative approach of using an aluminum roof for the 4 million-gallon clearwell resulted in a savings of more than $500,000 for the city. Alternative disinfection methods were investigated, which included chlorine, hypochlorite, chlorine dioxide, ultraviolet (UV) light irridation, chloramines, and ozone. Selected disinfectant is chlorine gas with a dry media scrubber to protect the public. The project also included an electrical coordination study for current and future conditions, space planning study for operations building, vulnerability and security review, and permitting assistance with the Department of Fish & Game, U.S. Army Corps of Engineers, California Department of Water Resources, and Levee District.

Bryte Bend Water Treatment Plant Expansion to 58 mgd - City of West Sacramento, California. Project manager for predesign, environmental documentation, permitting assistance, design, bidding, and construction administration services to expand the Bryte Bend Water Treatment Plant from 24 mgd to 58 mgd, which draws water from the Sacramento River. Improvements included 36-inch-diameter water main to provide increased capacity to the Southport area, new fish screens, installation of five 12 mgd vertical turbine pumps (with a sixth pump waiting in standby), installation of a parallel 42-inch-diameter raw water pipeline from the intake across the river levee and the Union Pacific Railroad to the plant, ACTIFLO raw water clarification system, conventional gravity filtration system including conversion of existing traveling bridge filters, two 4 million gallon (MG) prestressed concrete clearwell tanks to replace existing 1.2 MG tanks, low lift pumping station to fill clearwells above the water level of the existing reservoirs, chemical storage and feed system, disinfection system modifications, conversion of the

sedimentation basins to washwater recovery basins, new washwater recovery pumping station, operations building/lab modifications, new administration building, and electrical and plant control system improvements.

Foothill Water Treatment Plant Expansion to 60 mgd - Placer County Water Agency, Auburn, California. Project manager for master plan, predesign, environmental impacts report (EIR) preparation, design, and construction engineering services to expand the Foothill Water Treatment Plant capacity from 15 mgd to 60 mgd. Preliminary investigations included identification of cost-effective improvement alternatives to improve settled water quality, and a pilot project. Following the initial predesign workshops and investigations, prepared designs for a variety of improvements, including grit removal/screening, ACTIFLO, new gravity filters, chemical feed facilities, solids handling, filter-to-waste features to the original facility, and a completely new plant-wide SCADA system design that includes new PLCs, instrumentation, and a supervisory control station to automate the entire facility and minimize operating costs. New residuals handling facilities were also designed to effectively process waste streams and dry sludge on site through the use of a series of improved washwater recovery basins, sludge lagoons, and sand drying beds. Designed two 20-mgd ACTIFLO treatment units, optimization of the existing filters to increase the maximum filtration rate to 10 gpm/sf, and four new filters was constructed adjacent to the plant filters designed to operate at 10 gpm/sf. Modifications were made to three pumping stations, including 5 mgd washwater recovery pumping station, 3 mgd decant pump station, and 14 mgd backwash pumping station. Also designed gunnite-lined ponds.

Fast-Track Water Treatment Plant Improvements - City of Yuba City, California. Managed fast-track design and provided construction engineering services for improvements to the water treatment plant. Developed innovative approach that deferred construction of new gravity filters and piping, resulting in a total savings of more than $2 million. Improvements included increasing the reliable filtration capacity to 24 mgd by upgrading the plant electrical system; upgrading existing filters by replacing the media and underdrains, adding air scour, replacing piping, and adding filter-to-waste; upgrading the sedimentation basins with new baffles and cross collection; new polymer feed pumping; and updating the watershed sanitary survey. Design and construction was completed in nine months, and contract incentives and penalties were used to assure the contractor successfully met the fast-track schedule.

Water Treatment Plant Improvements and Fluoridation System - City of Yuba City, California. Project manager for design of improvement to enhance the water treatment plant reliability to bring the plant into compliance with Surface Water Treatment Rule (SWTR) CT requirements and the chlorine feed system into compliance with current safety and fire codes. Project includes installation of fluoridation facilities for a city-wide fluoridation system; piping modifications to increase available contact time; chlorine disinfection system improvements; improvements to the high service pumping system to provide a firm capacity of 26 mgd, and modifications to allow servicing of the pump discharge manifold; and construction of a 30-inch-diameter water transmission main to provide a redundant system for conveying water from the water treatment plant to the water distribution system.

New 30 mgd Surface Water Treatment Plant - City of Fresno, California. Designed process and treated water facilities for the new 30 mgd surface water treatment plant. Process facilities designed include flashmix ACTIFLO, and filter backwash handling. Treated water facilities included a 1 million-gallon (MG) cast-in-place concrete clearwell, 30 mgd high service pumping station, distribution system piping, and off-site pressure sustaining valve stations.

Platte West Water Production Facility - City of Omaha, Nebraska. Provided technical input for design of the new 100 mgd Platte West Water Production Facility, which include a wellfield, raw water main, treatment plant, and finished water main.

Cerrillos Filtration Plant – Lake Cerrillos, Puerto Rico. Assisted with design of a 10 mgd surface water treatment Actiflo facility.

Anacortes Water Treatment Plant Improvements and Expansion to 42 mgd - City of Anacortes, Washington. Provided technical input during preliminary design and designed upgrades to the water treatment plant to improve treatment performance and ensure compliance with increasingly stringent drinking water regulatory requirements, improve water treatment reliability/redundancy to provide for uninterrupted operations and consistently meet water demands, increase plant capacity to 42 mgd, and improve electrical reliability. Improvements included new Actiflo facilities for pretreatment, new gravity filters, finished water storage, chlorine contact tanks, and pumping, and power supply and distribution. Provided quality assurance/quality control (QA/QC) of the Actiflo and filter design.

Phase II Water Treatment Plant Expansion - City of Blair, Nebraska. Provided quality assurance/quality control (QA/QC) for feasibility study and design of the Phase II water treatment plant expansion from 7 to 14 mgd. Improvements include filters to double the plant's filtration capacity, raw water intake pumping, raw water transmission main, chemical mixing, and presedimentation basin modifications.

South Water Treatment Plant - City of Albert Lea, Minnesota. The South Water Treatment Plant was experiencing a number of deficiencies, which included an inadequate aeration system, high hydraulic loading rates to the existing filters, large filter media, small clearwell volume, leaking filters, and an energy inefficient building. Evaluated the feasibility of expanding the treatment facility, modifying the existing backwash tank, and constructing a new treatment building. Provided technical input for the design of the new treatment facility.

Weatherford Water Treatment Plant - City of Weatherford, Texas. Project engineer during construction for the 8 mgd water treatment plant, including raw water intake package treatment, piping, building, vertical turbine booster pumping station, and chemical feed systems.

Diatomaceous Earth Water Treatment Plant - City of Vacaville, California. Project manager/engineer for design and construction of improvements to the 12 mgd diatomaceous earth water treatment plant. Improvements designed included drum screen; new diatomaceous earth filtration, piping, valves, and controls; filter-to-waste piping; chemical feed systems; drying beds; baffled clearwell; and vertical turbine booster pumping station. In addition, provided support during construction and gained approval of the 1.5 gpm/sf filtration rate.

12 mgd Water Treatment Plant - Lakeborough Development, Stanislaus County, California. Served as project engineer for siting study, planning, and predesign of the 12 mgd water treatment plant, which utilizes conventional treatment technology, along with two-stage ozonation and activated carbon treatment for controlling trihalomethane formation. The plant treats water originating from the Sacramento-San Joaquin Delta to serve the new town of Lakeborough. Project also included design of a vertical turbine booster pumping station.

Presidio Water Treatment Plant - San Francisco Public Utility Commission, San Francisco, California. Project engineer for evaluation and predesign of improvements to a 2 mgd water treatment plant at the Presidio. Key issues included preserving historic structures and meeting the Surface Water Treatment Rule (SWTR).

Don Edmondo Water Treatment Plant - Glenbrook Water Cooperative, Glenbrook, Nevada. Lead designer of the 3 mgd water treatment plant, including raw water intake pipeline, caisson ozone contactors, pure oxygen ozone system, vertical turbine booster pumps, hypochlorite disinfection system, and new building.

Edgewood Water Treatment Plant - Edgewood Water Company, Edgewood, Nevada. Lead designer of 3.5 mgd water treatment plant, including 6,100 linear feet (LF) of 14-

inch-diameter water main, a new building, compressed air ozone system, hypochlorite disinfection system, and 2 million-gallon (MG) clearwell.

Decoto Fluoride Feed Facility - City of Hayward, California. Project manager for design of complete renovation of the 6 mgd Decoto fluoride feed facility. Facilities include 2,500-gallon hydrofluosilicic storage tank, buried secondary containment tank, piping, metering pumps, and building improvements.

Testing, Tracer Studies, and Pilot Studies

Enhanced Coagulation Testing - Rancho Murieta Community Services District, California. Assisted in testing coagulant doses required to achieve TOC removal by enhanced coagulation, and establish the required dosages to achieve TOC reduction as mandated by the Stage 1-Disinfectants/Disinfection By-Products Rule.

Tracer Study - City of West Sacramento, California. Project manager for development of tracer study protocol for the Bryte Bend Water Treatment Plant.

Filter Pilot Study at Foothill Water Treatment Plant - Placer County Water Agency, Auburn, California. Project manager for pilot study evaluation of filter bed designs for a 12 mgd module at the Foothill Water Treatment Plant. Also completed a second pilot study at Bowman water treatment plant that evaluated new ACTIFLO process for high rate clarification.

Filter Pilot Test at Yuba City Water Treatment Plant - City of Yuba City, California. Performed California Department of Health Services (DHS) filter pilot test at the water treatment plant. Pilot tests were conducted using HDR's pilot filter plant and monitoring equipment. The testing evaluated two media configuration for operation of 7 gpm/sf. Testing parameter included particle counts, turbidity, loss of head, and flow rate.

Deep Bed Filtration Pilot Study at Greeley Water Treatment Plant - City of Greeley, Colorado. Assisted with the pilot study for deep bed filtration at the water treatment plant.

Water - Other

Clementia Reservoir Domestic Water Supply Permit Amendment - Rancho Murieta Community Services District, Rancho Murieta, California. Assisted the district with the initial stages of preparing an Application for a Domestic Water Supply Permit Amendment on Clementia Reservoir. The permit needed to be amendment to eliminate body contact recreation at Clementia Reservoir in drought years when the use of water from the reservoir will be required for domestic supply.

Papers

Stratton, R. & Reighley, D., "Getting More out of Existing Facilities Using ACTIFLO and High-Rate Filtration," American Water Works Association spring conference (June 14, 2000).

Stratton, R., "Groundwater Impacts from Land Application of Food Processing Wastewater," *Proceedings*, Sixth International Symposium on Agricultural and Food Processing Wastes (December 1990).

Stratton, R., "Deepwell Injection of High Salinity Food Processing Wastewater," *Proceedings,* CWPCA Industrial and Hazardous Waste Conference (February 1991).

Presentations - Water

"Rancho Murieta Community Services District - Membrane Retrofit Provides Many Benefits for Expanding a Small System Conventional Treatment Plant," California-Nevada Section American Water Works Association conference, Burlingame, CA (April 2006).

"Drinking from a Crystal Creek – Bringing High Quality Surface Water to the Yucaipa Valley," California-Nevada Section American Water Works Association conference, Burlingame, CA (April 2006).

"West Basin Water Recycling Plant PHASE IV Expansion Adds MF, RO and UV Systems to Produce Sea Water Intrusion Barrier Water," American Water Works Association conference, San Francisco, CA (June 2005).

"High-Rate Treatment Processes for Two Northern California Water Treatment Plants," California Nevada Section American Water Works Association (AWWA) spring 2004 conference, Las Vegas, NV (April 14, 2004).

"Bryte Bend Water Treatment Plant Expansion Tour," presented at the Sacramento Area Water Works Association meeting, Sacramento, CA (November 14, 2003).

"Pilot Testing Membranes to Achieve Surface Water Treatment Rule Compliance for the City of Healdsburg," presented at the American Water Works Association spring conference, Anaheim, CA (June 18, 2003).

"Getting More out of Existing Facilities Using ACTIFLO and High-Rate Filtration," presented at the American Water Works Association spring conference, Denver, CO (June 14, 2000).

"Sedimentation Basin and Filter Improvements Achieve 50% Capacity Increase at the Yuba City Water Treatment Plant," presented at the 1999 American Water Works Association Conference, San Diego, California (October 29, 1999).

"Pilot Testing and Design for a 60 mgd Ballasted Flocculation/ Clarification Process," presented at the 1999 Arizona Water and Pollution Control Association Annual Conference, Arizona (May 6, 1999).

"Kingsbury General Improvement District ", poster presentation for American Water Works Association summer conference (August 1997).

"Ozone Disinfection Allows Nevada Water Systems to Meet Surface Water Treatment Rule," presented at American Water Works Association spring section conference, San Jose, CA (April 10, 1997).

"Microfiltration Water Treatment for Two Small Systems in Northern California," presented at the American Water Works Association Membrane Technology Conference, New Orleans, LA (March 1997).

"Patterson Gateway Microfiltration Water Treatment Plant," presented at American Water Works Association fall conference (October 1996).

"City of Vacaville Water Treatment Plant Improvements to Achieve Compliance with the Surface Water Treatment Rule," poster presentation for American Water Works Association California-Nevada Section spring conference (1994).

Awards

City of Stockton, Delta Water Supply Intake Project, ASCE Project of Year Award, 2012

HDR Pathfinder Team Award - City of Bozeman Membrane WTP, 2012

Yucaipa Valley Water District, Yucaipa Valley Regional Water Filtration Facility Project, American Council of Engineering Companies (ACEC) California, Engineering Excellence Award, Merit Award, 2010

California American Water, Walnut Grove and Isleton Arsenic Treatment Systems Project, American Public Works Association (APWA), Sacramento Chapter, Project of the Year Award, Large Agency, Environment Category, 2008

City of Yuba City, Water Treatment Plant Expansion Project, American Public Works Association (APWA), Sacramento Chapter, Project of the Year Award, Large Agency, Environment Category, 2008

HDR Pathfinder Team Award – IRWD Michelson Water Reclamation Plant, 2008

City of West Sacramento, Bryte Bend Water Treatment Plant Expansion Project, American Council of Engineering Companies (ACEC) California, Engineering Excellence Award, Honor Award, 2006

City of West Sacramento, Bryte Bend Water Treatment Plant Expansion Project, American Public Works Association (APWA), Sacramento Chapter, Project of the Year Award, Large Agency, Environment Category, 2005

HDR Pathfinder Team Award – EPA Disinfection Manual, 1997

HDR Pathfinder Local Award for Creativity, 1997

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ROBERT KJOME

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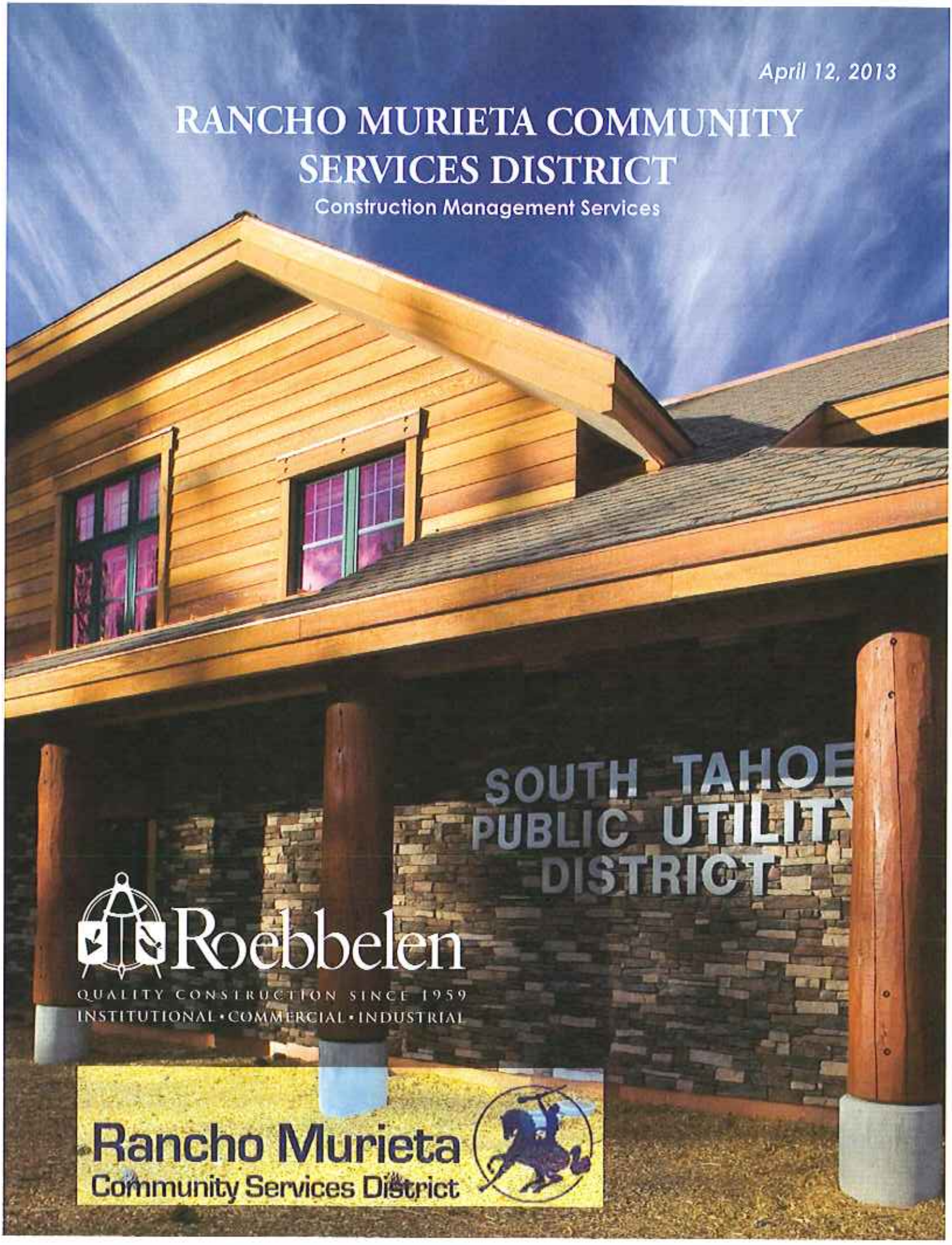
April 12, 2013

RANCHO MURIETA COMMUNITY SERVICES DISTRICT

Construction Management Services



CONSTRUCTION MANAGEMENT FIRM HISTORY

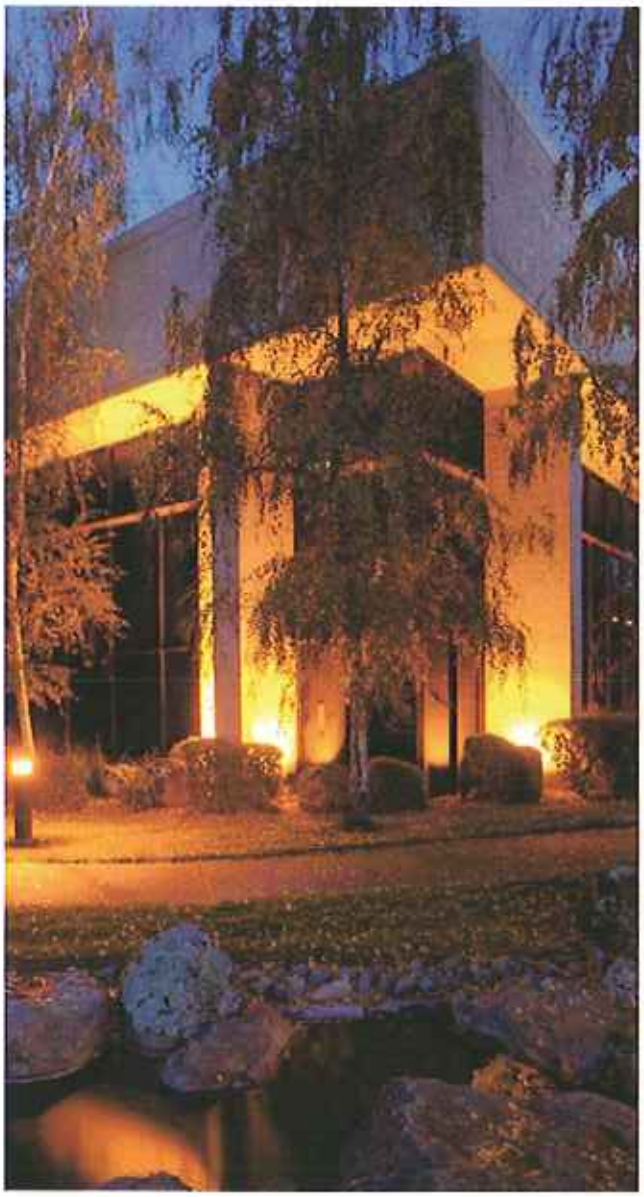
Roebbelen Construction Management Services, Inc.
1241 Hawks Flight Court
El Dorado Hills, CA 95762
(916) 939-4000 | (916) 939-4027 FAX

Business/Licenses

Date Firm Established:	1997
Type of Business:	Corporation
Contractor License:	808764
License Classification:	A, B, C-8, and C-13
License Certifications:	HAZ, ASB, and HIC

Owners

Kenneth Wenham, President
Robert Kjome, Executive Vice President
Robert McLean, Executive Vice President
Frank Lindsay, Vice President



Summary

Roebbelen was founded by Hans Roebbelen in 1959 in Sacramento, California. Reorganized and incorporated in 1997, Roebbelen is an award-winning construction corporation dedicated to satisfying the needs and requirements of every client. Roebbelen specializes in the construction of institutional, commercial and industrial projects. Roebbelen is headquartered in El Dorado Hills, California.

Roebbelen Contracting, Inc. is parent company to Roebbelen Construction Management Services, Inc. and Roebbelen Management, Inc. Both of these companies are wholly owned subsidiaries of Roebbelen Contracting, Inc.

Services Offered

Roebbelen specializes in public works projects and provides construction management, lease-leaseback, design-build, general contracting, and value analysis services to our clients. We are dedicated to delivering the very best construction development services in value and service on every project we build.

Company Experience

Roebbelen brings over 50 years of local experience to this integrated construction approach. We work diligently drawing on our experiences to raise the quality, speed and value of each project we undertake. Roebbelen has completed over 330 education contracts over the past five years alone. Approximately 75% of Roebbelen work is classified under educational/ public works projects.

PHILOSOPHY

Specializing in public works and institutional construction has given us the opportunity to work with many diverse teams throughout California. We fully understand the oversight processes of construction and the varying interests of different parties. Because of this, we can embrace input from everyone involved and use it to make the project experience an enjoyable one. We will utilize our experience gained from school districts, fire districts, and South Lake Tahoe Public Utility District to help Rancho Murrieta Community Services District successfully complete your project. With over 100 projects completed within a 75 mile radius of your District, we have built positive working relationships with the region's community.

Our Project Manager Joel Gallion has several water treatment/wastewater projects completed and will lead the efforts on this project.

LEGAL ENTITY

PREVIOUS PROJECT EXPERIENCE

Customer Service Facility/Wastewater Lab
South Lake Tahoe Public Utility District

Jones Fork Hydroelectric Plant
Sacramento Municipal Utility District

E.A. Fairbairn Water Treatment Plan
City of Sacramento

Chevron Water Reclamation Project
East Bay Municipal Utility District

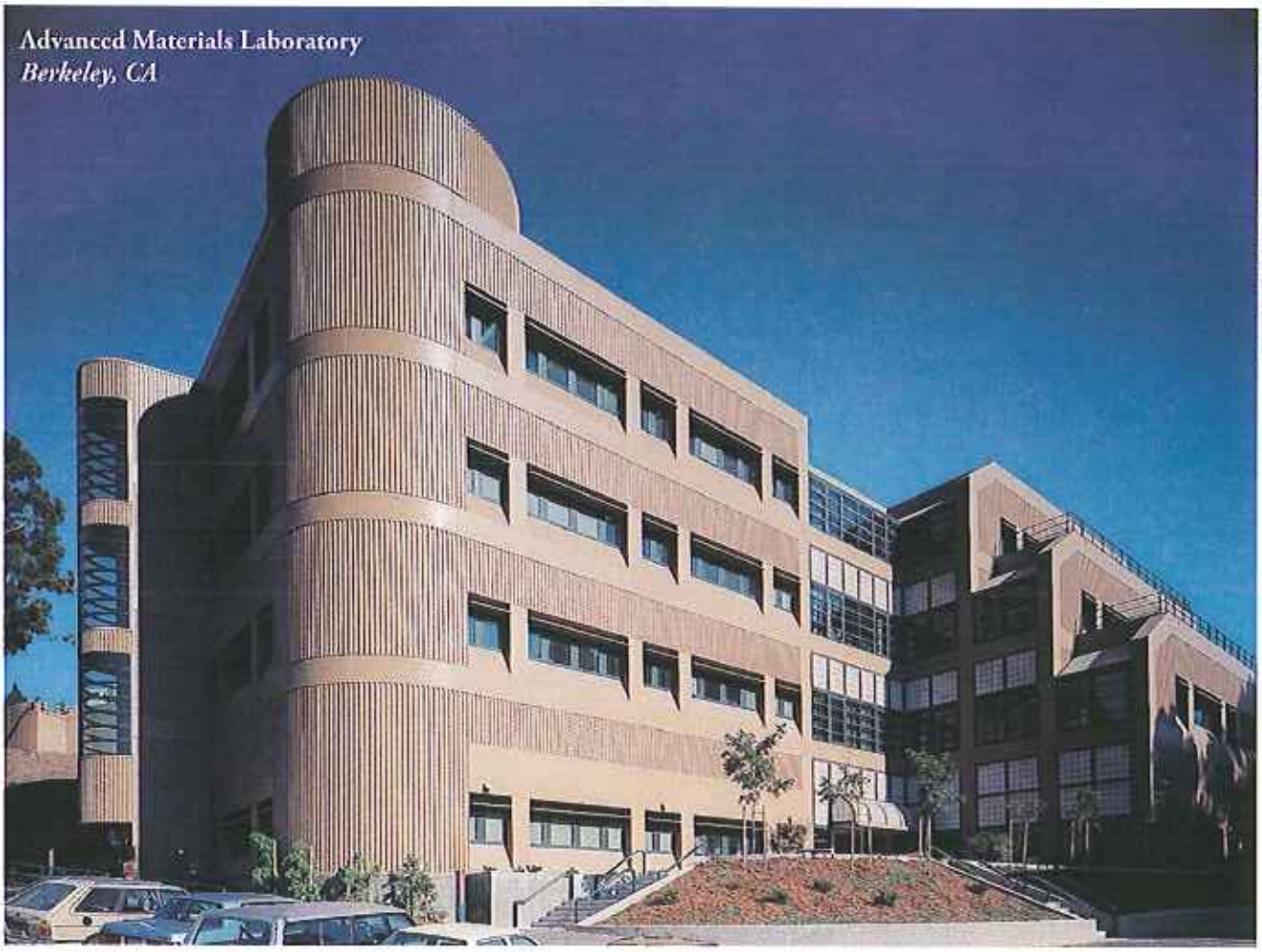
Advanced Materials Laboratory, Lawrence Berkeley Lab
University of California, Berkeley
Plant Engineering Department

Laboratory Expansion, Oakland
East Bay Municipal Utility District

PAST CLIENTS

- Alameda Unified School District
- County of Amador
- Dry Creek Joint Elementary School District
- El Dorado Hills Community Services District
- El Dorado Union High School District
- Folsom Cordova Unified School District
- Lodi Unified School District
- Roseville City School District
- Roseville Joint Unified High School District
- Sacramento Metropolitan Fire District
- San Ramon Valley Unified School District
- Sequoia Union High School District

EXPERIENCE



SOUTH TAHOE PUD CUSTOMER SERVICE FACILITY | TAHOE, CA

Features:

- 35,000 sf
- Office Space
- Conference Room
- Wastewater Lab
- Lab Casework
- High End Wood Finishes
- Active Watewater Treatment Plan with Regulations and Safety Concerns Always Being Monitored

Owner:

South Tahoe Public Utility District
1275 Meadow Crest Drive
South Lake Tahoe, CA 96150

Contact: Jim Hoggatt, Chief Engineer, (530) 523-6206

Project Site:

1275 Meadow Crest Drive
South Lake Tahoe, CA 96150

Architect:

Smith Design Group
120 Country Club Drive, Suite 17
Incline Village, NV 89451

Contact: Peggy Colombo
(775) 831-7158

Contract Information:

Delivery Method:	Design-Bid-Build
Construction Type:	New Construction/Addition
Construction Value:	$10,800,000
Completion Date:	January 2007

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JONES FORK HYDROELECTRIC | UNION VALLEY, CA

Features:

- 5-Story Concrete Power House (Mainly Under Water)
- 125 ft gate shaft
- 1,800 ft of tunnel, 96 inches in diameter for pipe installation
- 8,800 Lineal Feet of Penstock Pipe
- 10,400 kW Turbine
- 11,495 kW Generator

Owner:

Sacrament Municipal Utility District
6201 S Street
Sacramento, CA 95817

Architect:

Dryfuss & Blackford Architects
3540 Folsom Boulevard
Sacramento, CA 95816

Contact: Virgil Hancock
(916) 453-1234

Contract Information:

Delivery Method:	Design-Bid-Build
Construction Type:	New Construction
Construction Value:	$21,000,000
Completion:	Summer 1983

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ROBERT J. KJOME, EXECUTIVE VICE PRESIDENT

Mr. Kjome joined the Roebbelen in 1992 and has been a successful member of the Estimating team for over 18 years. In 1999, Mr. Kjome was appointed Vice President of Roebbelen Contracting, Inc. overseeing and securing continuity between the Preconstruction and Estimating Departments. Mr. Kjome is extremely experienced in construction contractual issues and has a wealth of knowledge regarding alternative delivery method agreements. In 2010, Mr. Kjome was appointed to Executive Vice President overseeing the entire contracting operations for the company.

ESTIMATING EXPERIENCE

Mr. Kjome has been estimating construction projects since 1990. His estimating experience is supported by a solid foundation of project management experience in the field where he started his career on an 80,000 SF Science Library at UC Santa Cruz, then went to a 200,000 SF Business Complex and CSU, Northridge. Since then, public works bidding has been his main focus and he was promoted several times until reaching his current role. During this time, the company has averaged from 50 to 100 large scale bids per years with the total value of bids in 2011 reaching $998 million.

CONSTRUCTION MANAGEMENT EXPERIENCE

Mr. Kjome is experienced in taking a project from concept to completion using various construction management delivery methods. He has directed his team through Agency CM, CM at Risk, and Multiple Prime CM projects. Choosing the correct method for each project is a key to a successful project and Mr. Kjome will ensure that the staff at Roebbelen is provided with the resources to maximize value to our customers.

LEASE-LEASEBACK EXPERIENCE

Lease-leaseback became the prevalent delivery method for K-12 construction during starting in 2006 and continuing through today. Roebbelen has been a leader in this delivery method. Mr. Kjome has taken the lessons learned from his CM experience and the negotiated GMP experience on private projects to create projects that bring the best possible team to each project. Mr. Kjome is adept at having the operations team integrated into preconstruction activities to set the project up to succeed. Using a collaborative approach, the guaranteed maximum price that results in one change order on the project, a deductive change order, that returns unused contingencies to the client. Mr. Kjome has directed over 100 lease-leaseback projects totalling over $500 million dollars.

Team Member since 1992
Industry Experience - 20 Years

EDUCATION
California State University, Sacramento, Masters of Business Administration

California State University, Sacramento, Bachelor of Science in Construction Management

AFFILIATIONS
Director of the Sacramento Builders Exchange

Former Director of the Rancho Murieta Community Services District

Former CSUS Construction Management Education Foundation Board Member

Former St. John Vianney Building Committee Member

Builders Fore Kids Charity Golf Tournament Board Member

REFERENCES
Matt Washburn, Facilities Director
Folsom Cordova Unified School District
(916) 294-9000 x103350

Wallace Browe, President
Capital Program Management
(916) 553-4400

Roebbelen
QUALITY CONSTRUCTION SINCE 1959
INSTITUTIONAL • COMMERCIAL • INDUSTRIAL

JOEL GALLION, PROJECT MANAGER

Mr. Gallion has recently joined the Roebbelen organization and brings over 17 years of estimating and project management experience on a mixture of design-build and hard bid projects. As a Project Manager, Mr. Gallion oversaw the successful completion of Sacramento Regional Wastewater Treatment Plan expansion projects. Listed below are his notable projects:

Team Member Since 2011
Industry Experience - 17 Years

EDUCATION

Bachelor of Science in Construction Management, California State University, Sacramento

PROJECT EXPERIENCE

Sacramento Regional Wastewater Treatment Plant - Facilities Expansion | Elk Grove, CA*

Natomas East Levee Pump Station | Sacramento, CA*

Stockton Wastewater Treatment Plant | Stockton, CA*

Sacramento Regional Wastewater Treatment Plan - Bar Screen Replacement | Elk Grove, CA*

Sacramento Metro Fire Station No. 29 | Sacramento, CA*

West Sacramento Fire Station No. 41 | West Sacramento, CA*

West Sacramento Fire Station No. 45 | West Sacramento, CA

El Dorado Hills Fire Station No. 87 | El Dorado Hills, CA*

Foothill High School Stadium | Sacramento, CA*

Regional Transit, Cordova Town Center | Rancho Cordova, CA*

Elk Grove High School Modernization | Elk Grove, CA*

McClellan Field Health & Safety Project | McClellan, CA*

Sacramento International Airport Terminal A | Sacramento, CA*

Monterey Jet Center | Monterey, CA*

RECENT ESTIMATING EXPERIENCE

West Valley-Mission Community College District | Santa Clara, CA
Mission College Main Building Replacement Phase 1

County of Shasta | Redding, CA
New Juvenile Rehabilitation Facility

County of Stanislaus | Modesto, CA
Juvenile Commitment Center

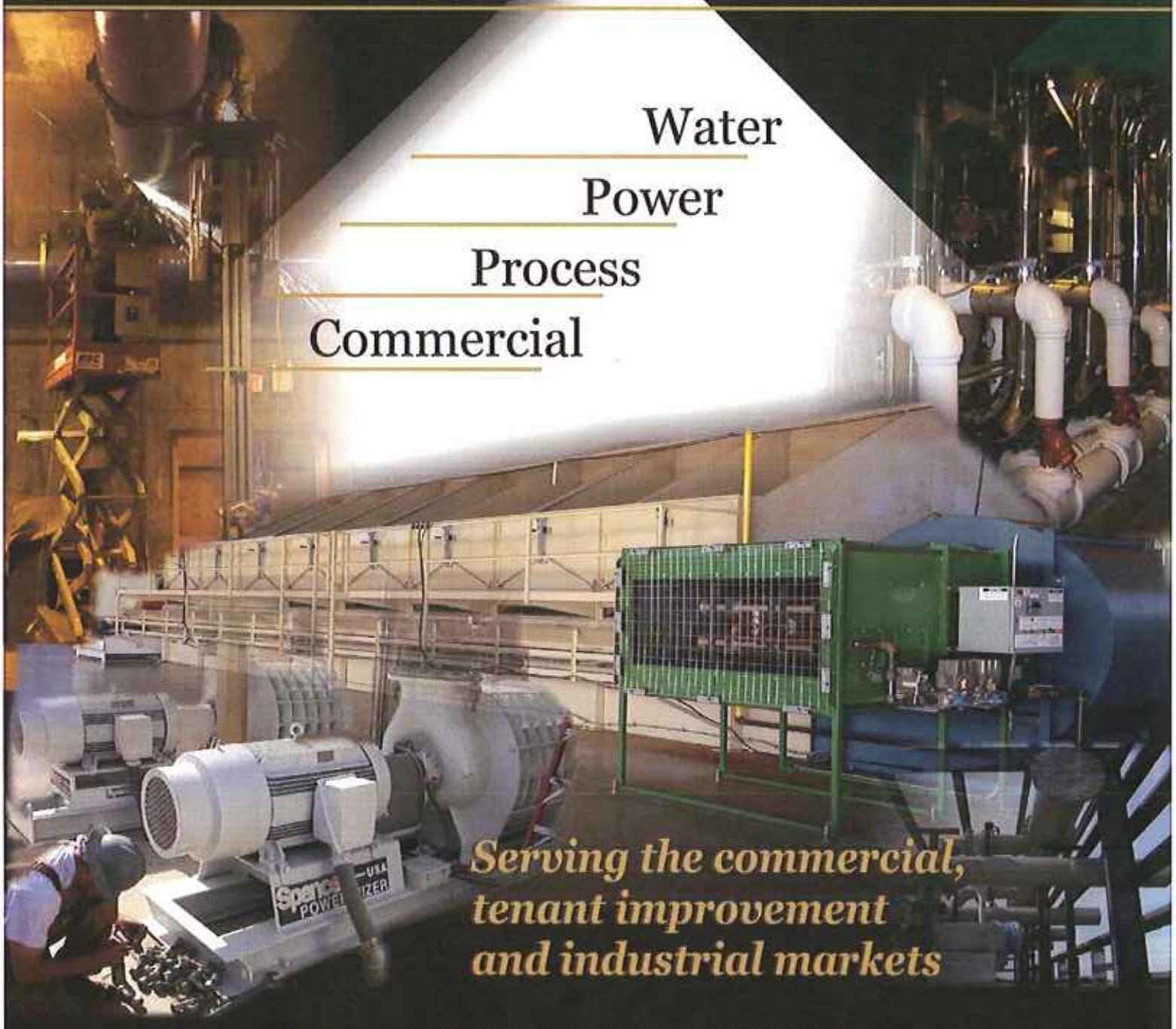
California Department of Corrections and Rehabilitation
Medical Facility Enhanced Outpatient Program Treatment and Office Space | Vacaville, CA

** Prior to joining Roebbelen, Mr. Gallion was instrumental in the successful completion of these projects*

TNT INDUSTRIAL
RANDY TWIST, PRESIDENT
JOSH TWIST

TNT
INDUSTRIAL CONTRACTORS INC
COMMERCIAL • TENANT IMPROVEMENTS

GENERAL CONTRACTING



Water

Power

Process

Commercial

Serving the commercial, tenant improvement and industrial markets

TNT INDUSTRIAL CONTRACTORS INC.

3600 51st Avenue, Sacramento, CA 95823
634 Ryland Street, Reno NV 89502
Business: (916) 395-8400 | Fax: (916) 395-8429
tntindustrial.com | Facebook.com/TNT Industrial TNT

NATIVE AMERICAN
Owned and Operated

CA Contractors Lic. No 622974
NV Contractors Lic. No 0072754

General Contracting

- Water
- Power
- Process
- Commercial

Process Projects

- Piping
- Conveyance

Facility Maintenance

- Site Improvements
- 24-Hour, On Call Emergency Service

Tenant Improvements

- Turn Key Construction
- Fast-Paced
- Building Renovations

916.395.8400

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Our Story .... Commitment

TNT Industrial Contractors, Inc. values strong business relationships, and our goal is to work with you and add you to our ever-growing family of clients that lead our industry. We have built our 20-year experience on the quality of our work and the priorities of our clients. Your professional reputation is as important to us as it is to you. We appreciate this opportunity to share with you our many facets of general construction services.

TNT specializes in turn key projects including; commercial, tenant improvements, and the industrial markets. We self-perform mechanical, heavy industrial and commercial projects in the power generation, food and beverage processing, high technology, computer, waste water/water treatment, chemical, and aerospace industries as well as the commercial building markets.

TNT can manage every aspect of your project:new construction, design/Build, site improvements, tenant improvements, metal buildings, facility maintenance, miscellaneous fabrication, installation and repair of process piping, tanks, plumbing, boilers, conveyors, packaging, HVAC, and specialized processing equipment. We also offer 24-hour, on-call, and emergency services.

Our highly qualified management and field superintendent staff have an impressive history in the general, commercial, and industrial construction industries. We have specialized experience in the major commercial campuses, industrial plants, food processing facilities, water and waste water facilities, power plants and wineries in the Sacramento, Stockton, Fresno, and Bay Area regions.

TNT Industrial Contractors, Inc. maintains superior qualified employees on our regular payroll: local carpenters - experienced in all areas of commercial construction including, specialty doors, door hardware, and all types of commercial tenant improvements; pipefitters - ASME certified for code boiler, pressure vessel, and power piping work, qualified to weld all types of metal and plastic pipe; sheet metal workers, millwrights - experienced in conveyor and production line fabrication, platform fabrication and installation, and repair.

We are fully insured, bonded and licensed, and have earned meritorious accreditations for our excellence in quality and professionalism.

Please take a few minutes to browse through our company portfolio, and after we have had an opportunity to sit and discuss any future projects, we are confident you will add TNT Industrial Contractors, Inc. to your list of qualified bidders and maintenance suppliers.

I will contact you this week to set up a meeting, or if you prefer to meet sooner, please call me on my personal number, 916-354-8400.

Thank you for taking the time to consider our company and I look forward to meeting you.

Sincerely,

Randy Twist, president
TNT Industrial Contractors, Inc.
A California Corporation

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- Piping
- Conveyance

Process Projects

TNT Industrial Contractors, Inc. provides design, installation, and service for process piping systems, process skid fabrication, and mechanical equipment installation services in California and Nevada.

TNT has the expertise to support the highly specialized mechanical structural steel needs of commercial and industrial customers, from precision machinery installation, to complex conveying and material handling systems.

TNT serves the power generation, industrial manufacturing, microelectronics, petrochemicals, biopharmaceuticals, commercial services, food and beverage industries, health care, power generation, pulp and paper, chemical, manufacturing, refinery and petrochemical industries.

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TNT - ASME and National Board Certified

TNT Industrial Contractors, Inc. is certified to build, repair, and alter pressure vessels and repair and alter boilers per ASME Section VIII, and NBIC pressure vessel codes. We are also certified to fabricate and install pressure piping per ASME B31.1 and B31.3 piping codes. All of our welding is done to ASME Section IX.

Our ASME and National Board Certifications are as follows:

"R" Stamp to Perform Alterations and Repairs to Power Boilers and Pressure Vessels.

"S" Stamp to Fabricate and Assemble Boilers, Boiler Components and Pressure Piping.

We have weld procedures for the following materials:
Carbon Steel, Stainless Steel, Chrome Moly P-11/P-22/P-91, Nickel 200/201, Monel 400 & R-405, Hastelloy (all alloys), Nicofer 6025HT, Inconel (all alloys), Carpenter 20, 20Mo6, HR120, SM2035, Haynes Alloy 20, AL6X, AL6XN, JS700, Incoloy (all alloys), VDM 1925, 25-6Mo, Zirconium.

ASME CERTIFIED

S R

Parts

Parts for High Pressure Steam and High Temperature Hot Water Boilers

Parts for Low Pressure Steam and Hot Water Boilers

Repairs

Repairs and or Alterations to High Pressure Boilers

Repairs and or Alterations to Low Pressure Boilers

Repairs and or Alterations to Pressure Vessels

Piping

Process Piping for General Building Service

Code Required Certified Piping for High Pressure Boilers

Full Certification details can be found on our website: tntindustrial.com

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INDUSTRIAL CONTRACTORS INC.
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COMMITTED TO CUSTOMER EXCELLENCE

We provide the highest quality workmanship to all our clients

- Aerojet General
- Beringer Wine Estates
- Blue Diamond Growers
- California American Water Company
- California Highway Patrol
- California State University Sacramento
- Campbell Soup Supply Company
- CB Richard Ellis
- Charles Krug Winery
- Clo Du Bois Winery
- Coca Cola
- Core Logic
- Defense Micro Electronics Activity
- Delta Dental
- General Dynamics
- General Mills
- Golden State Water Company
- High Technologies Packaging
- Jones Land LaSalle
- Kings River Conservation District
- Montevina Winery
- Nalco Chemical
- National Park Service
- Northrop Grumman Corporation
- Point West Corporate Plaza
- Proctor & Gamble Mfg. Co.
- Raytheon Technical Services Company
- Siemens Power Corporation
- SMUD Co-Generation Plants
- Tsakopoulos Investments
- U.C. Davis Medical Center
- U.S. Air Force-Beal Air Force Base
- U.S. Army Corps of Engineers
- Vision Service Plan (VSP)

Recently Completed Blue Diamond Growers Project...

Blue Diamond Growers Almond Dryer - TNT designed, shop fabricated, and field erected two each complete turnkey fully automated almond dryers, including eight conveyors, three bucket elevators, and four each thirty horsepower fans with six million BTU natural gas burners with modulating valves, a dump pit and a reversible infeed conveyor.

Each unit is capable of drying approximately one half a million pounds of almonds a day. TNT performed all mechanical aspects of this project for two each almond dryers. This project was completed in sixty work days.

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Main Office 3600 51st Avenue, Sacramento, CA 95823
2757 16th Street, San Francisco CA 94103
916-395-8400, fax 916-395-8429

Water/Waste Water Treatment Plant Project Experience

Contra Costa Water District - Bollman Water Treatment Plant Sulfuric Acid System and Metering Vault Upgrades
This project involved a complete replacement of the existing Sulufuric Acid System with new metering pumps, alloy 20 pipe, fittings and appurtenances. A new concrete stairway and vault was poured in place as well as new stainless steel handrail. The electrical and control system was upgraded as well. This project generated approximately seven hundred fifty thousand dollars in revenue. Date of completion 05/2013

Owner Representative: Mr. Dan Jones P.E. – 925-688-8341

Sacramento Regional Waste Water Treatment Plant – DAFT3 Rehabilitation Project
The project consisted of replacing skimmer supports, splice plates, weld repairs as well as modifications to the existing Aluminum hatches. We hydro blasted and performed coating repairs to the rail supports, float arm and tank walls. TNT installed new anodes as well. This project generated approximately eighty six thousand five hundred fifty two dollars in revenue. Date of completion 05/02/2012

Owner Representative: Mr. Guillermo Robles, 916-875-9217

Selma, Kingsburg, Fowler Sanitation District – Head works Bar screen Upgrade
This project consisted of the replacement of the existing bar screens with two new Duperon flex rake bar screens and cross conveyor. The concrete channels were repaired; a new Aluminum stairway was built as well as a platform and hand rail. All electrical work was included. This project generated approximately one hundred thirty eight thousand nine hundred thirty three dollars and was completed in February of 2012.

Owner Representative: Ms.Veronica Cazares, PE – 559-897-6500

Sacramento Regional Waste Water Treatment Plant – DAFT 2 Rehabilitation Project
The project consisted of repairing the baffle walls, repairing the tension rods and the beach baffle, and repairing the dissolution manifold tank. We hydro blasted and performed coating repairs to the rail supports and float arm. TNT installed new anodes as well. This project generated approximately seventy three thousand dollars in revenue. Date of completion 12/15/2010

Owner Representative: Mr. Guillermo Robles, 916-875-9217

Selma, Kingsburg, Fowler Sanitation District – SKF WWTP Aeration Improvements Project. *Removed approximately 3,000 cubic yards of sludge from basin, removed existing fine bubble diffuser system and replaced with a new "Sanitaire Fine Bubble Diffuser" system, installed 6 new "Neuros Turbo" blowers, and all associated 24 inch stainless steel piping, valves and fittings. The 24 inch piping was fabricated in TNT's shop. TNT installed three new metal buildings and associated structural concrete work, all electrical and controls. This project generated approximately two million two hundred thousand dollars in revenue. Date of Completion: 8/12/2010*

Owner Representative: Ms.Veronica Cazares, PE – 559-897-6500

California American Water Well Rehabilitation Project – *This project consisted of upgrading various potable water well sites in the Sacramento Area. The scope of work involved new pipe, hydropneumatic tanks, flowmeters, chemical feed systems, the installation of new concrete and electrical and control work.*

California American Water – Mr. Kevin Kelley – 916-568-4213

Donner Summit Public Utility District – Soda Springs Wastewater Treatment Plant Expansion *– This project consisted of modifying existing clarifiers, installing a new sweeper drive assembly, motor drive and gear box. Installing new weirs, pumps, piping, controls, mechanical mixers, installation of several anaerobic filters, a silo, underground piping, handrail, platforms, structural concrete, electrical, and controls. This project was a turn- key project for TNT. This project generated approximately one million one hundred thousand dollars in revenue.*

Donner Summit PUD Contact – Mr. Jim King –530- 426-9144

Sacramento Regional Waste Water Treatment Plant Sample Outfall Upgrades Project *- Complete upgrade of Outfall sampling system before the treated effluent is discharged into the Sacramento River. Including all pipe, fittings, valves, new pump station, electrical and controls as well as a new concrete wall. This project generated approximately eight hundred and forty one thousand dollars in revenue.*

Owner Representative: Jeremy Boyce - 916-875-9184

City of Galt Launder Cover Project *– This project consisted of procuring and installing launder covers on two digesters for odor control at the City of Galt's waste water treatment plant on Twin Cities Road. This project generated approximately seventy five thousand dollars in revenue.*

City of Galt Representative- Mr. Gary DeJesus – 209-366-7260

City of Orange Cove Waste Water Treatment Plant Expansion – *This project is located in the City of Orange Cove in Fresno County California and consisted of expanding the city's waste water treatment facility. This expansion included a new head-works structure, new cast in place clarifiers, approximately 1200 cubic yards of concrete structure, cast in place concrete sludge drying beds, related clarifier mechanical equipment, all piping above and below grade, a block building, electrical and controls. This was a turn-key project for TNT. This project generated approximately six million dollars in revenue.*

City of Orange Cove Contact – IOR, Kennedy / Jenks – Glen Matlock – 559-626-2007, fax – 559-626-2006

Hawthorne Army Depot – Surface Water Treatment Plant Design Build - U.S. Army Corps of Engineers – Contract #W91238-05-R-0015 *- This project was located in Hawthorne, Nevada. The project consisted of a design build surface water treatment plant capable of treating up to 2.5 MGD for elevated coliform and arsenic levels. The design consists of a typical absorption-clarifier pretreatment, U.S. filter treatment, and chlorine disinfection. This project included excavation of settling ponds, the project site pad and underground utilities, a cast in place clarifier incorporated into the metal building foundation, with the clarifier located directly under the building, a separate chemical treatment building, all HVAC, Electrical, and Controls. TNT installed high voltage overhead electricity to the site. We entered into a formal agreement with Stantec Engineering to perform the design for the project. This project generated approximately two million five hundred twenty five thousand dollars in revenue.*

U.S A.C.E. Contact – Ms. Michelle Stratton – 916-557-7641, fax 916-557-7862

County of Sacramento – Corrective Action Program – *This project consisted of the installation of monitoring wells, all associated piping, electrical, controls, and structural concrete to monitor the flow of water and contaminants at the County of Sacramento's Regional Wastewater Treatment facility. This project generated approximately five hundred twenty eight thousand dollars in revenue.*

County of Sacramento representative – Ms. Francis Hedrick – 916-875-5693

SKF Sludge Dewatering System – Selma, Kingsburg, Fowler County Sanitation District – *This project is located in Kingsburg California and consists of installing a Centrifuge Dewatering system including all building erection, structural concrete, electrical, controls and piping systems to complete the project. This was a turn-key project for TNT. This project generated approximately one million one hundred thousand dollars in revenue.*

Selma-Kingsburg-Fowler County Sanitation District contact - Ms. Veronica Cazares – 559-896-4420, fax – 559-897-1985

City of Colfax, CA – Water Treatment Plant - Effluent Disinfection Facilities - *Installed a chlorine injection system at the Colfax Wastewater Treatment facility including all required below grade and above ground piping, concrete chlorination structure, wood frame building to house chlorination equipment, electrical and controls. This project generated approximately four hundred twenty two thousand dollars in revenue.*

City of Colfax representative – Mr. Dave Woodward – 530-346-2313, fax-530-346-6214

***City of West Sacramento – Digester Gas Booster System** – Installed six hundred lineal feet of underground stainless steel digester gas piping from digester to new gas compressor and generator skid, including concrete modifications. Provided all required electrical and controls for a complete system.*

Owners representative – Gregory Harris - 925-672-6599

***Storm Water Treatment Facility / Agrium** – Installed storm water pollution control system to contain runoff on client's site. This site isfertilizer manufacturing facility. Work included site grading, structural concrete, equipment setting, pump station, and package treatment plant installation. All required piping, electrical and controls. This project generated approximately five hundred thirty five thousand dollars in revenue. This was a turn-key project for TNT.*

Agrium contact – Mr. Steve Lint – 916-375-6133, fax 916-375-6109

***Lake Kaweah Spillway Enlargement Recreation Area Contract 4- #W91238-04-C-0002 – U.S. Army Corps of Engineers –** This project is located in the Sierra Foothills east of Visalia California. The project consists of relocating the recreation facilities, including all buildings, water treatment facilities, waste treatment facilities, utility piping, electrical, communications, boat ramps and roadways to accommodate an increase in the lake capacity. This project generated over two million two hundred thousand dollars in revenue. This was a turn- key project for TNT.*

U.S A.C.E. Contact – Ms. Michelle Stratton – 916-557-7641, fax 916-557-7862

***Northrop Grumman – Marine Services Test Facility - #16195 –** Our contract was to provide design and construction services to provide required steam piping, utility piping, and ASME designed 108" steam exhaust system, structural steel requirements, structural access platforms, painting, pipe lagging, electrical, and controls to accommodate the testing of a steam turbine for one of the U.S Navy's nuclear powered vessels. This project generated approximately seven hundred and fifty thousand dollars in revenue.*

Northrop Grumman contact – Mr. Gary Goldstein -408-735-3552, fax 408-735-4553

Pine Flat Reservoir – Turbine Bypass Project, #DACW05-01-C-0042 – U.S. Army Corps of Engineers. *This project was located in Fresno County, CA. The project consisted of fabricating and installing 48" and 66"piping from three main pin stocks to the Kings River to divert cold water into the river upstream of the Hydro Electric plant's water discharge. This project included all excavation required for pipe supports and retaining walls, placing approximately 1,200 cubic yards of structural concrete, providing and installing all large bore piping and valves, and providing the electrical and controls to complete the project. This project totaled over four million four hundred thousand dollars in revenue.* ***The USACE stated "this was the most complex project the corps had undertaken in the past 25 years".*** *This project was dedicated by the Governor of California.*

U.S. A.C.E. Contact – Ms. Judy Soutier– 916-557-7397, fax – 916-557-7848
Kings River Conservation District – Jack Sinor – 559-237-5569, fax 559-237-5560-(Cost Sharer)

Site "D" Levee Repairs – Sacramento River #DACW05-02-C0020 – U.S. Army Corps of Engineers, Sacramento District *– This project consisted of constructing approximately three thousand five hundred lineal feet of dry side levee toe drain. Including all earth moving, geotextile fabric, and rock placement. This project generated approximately six hundred seventy seven thousand dollars in revenue.*

Army Corps representative – Mr. John Sisley – 916-649-0133, fax – 916-649-0135

Beale AFB – Drinking Well Water Repairs – #DACA05-00-Q-0035 - US ACE — *Re-pipe Beale AFB Drinking Water Wells and re-grade sites and place cobble stones as required. This project was completed in September of 2000 with an approximate value of ninety eight thousand dollars.*

Contact – Jennifer Larsen – 530-788-9743

Operations Manager - TNT Industrial Contractors Inc.

JOSH TWIST

Summary of Experience:

Mr. Josh Twist is a third generation team member of TNT Industrial Contractors Incorporated. Mr. Twist has been with the company since 2000, and brings over 12 years of experience supervising various commercial and industrial projects in all aspects of the food & beverage processing industry, water, waste water, power, compressed natural gas, and pharmaceutical industries. His intimate knowledge of the day to day operations of the company and his formal education contribute to the successes of our most technical projects.

Education

2002–2006 University of California Davis, Davis, CA
B.S. in Civil Engineering
Dean's List
2001-2002 University of San Francisco, San Francisco, CA
General Education

Past projects and Responsibilities of Mr. Josh Twist include:

2009 – Larkfield Water Treatment Plant Upgrades – Santa Rosa, CA
2010 – Cal American Water – Upgrade Potable Water Well Sites
2010 –SKF CSD Aeration Improvements Project – Replaced entire diffuser system, blowers, piping, electrical and SCADA.
2012 – Orange Cove Water Treatment Plant Filter Upgrade
2012 – SKF CSD Barscreen Upgrades
2012/2013 – Contra Costa Water District Bollman WTP Sulfuric Acid and Metering Vault Project
2012/2013 – SKF CSD Headworks and Effluent Pump Station Upgrades

References –

1) Veronica Cazares, P.E. – SKF Sanitation District, Kingsburg, CA – 559-897-6500
2) Ramzi Salameh – Mechanical Engineer – Sacramento Regional Wastewater Treatment Plant – 916-875-9150, cell – 916-300-3435
3) Kevin Kelley – Engineer - California American Water – 916-568-4213

Professional Affiliations/Certifications:

St. Paul Traveler's Construction Risk Control Fleet Safety
OSHA 10 hour safety training course
Hoke Gyrolok Fitting Installation Workshop
Qualified TNT Industrial's ASME "S" Stamp and National Board "R" stamps required for alterations and repairs of power piping and pressure vessels (Calculations and Drawings).

Company Profile

TESCO Controls, Inc., established in 1972, is an advanced control systems integrator specializing in the water and wastewater industries. TESCO is a full service system integrator, fully capable of providing many essential services:

- System planning
- Analysis
- Design
- Manufacturing
- Implementation
- Installation coordination
- Training
- Field service
- Technical support
- Custom programming
- Testing and startup
- Communication Studies

Additionally, we provide complete, comprehensive support and maintenance packages.

Our unique position in the utilities engineering industry has dictated that we become experts in many different engineering disciplines, such as:

- Electrical engineering
- Control system engineering
- Local power distribution
- Pump motor control
- PLC Research & Development
- Telemetry communications
- SCADA software research and development
- SCADA system design and construction management
- Security / Surveillance

TESCO is an original equipment manufacturer (OEM) for most major equipment suppliers, allowing TESCO to integrate and support the complement of hardware and software deployed in your control system.

TESCO has supplied control & SCADA systems for the past 30 years. Virtually every one of our installations have been in the water and wastewater industry, confirming our commitment to the industry and building our strength of experience and expertise. Focusing on the business of water collection and distribution has also allowed us to be innovative in our products and procedures.

TESCO's SCADA systems consist of multiple programmable controllers communicating with a central site over telephone lines, dedicated cable, fiber optics, Ethernet, or radio links.

Our responsibilities have included system design and engineering, system fabrication and installation supervision, Project Management, documentation preparation, software configuration, field testing, calibration, start-up, operator instruction and personnel training.

TESCO became an Employee-Owned company in 2004, making every employee an owner and giving them a real financial stake in the performance of the company and the quality of the products and services. This has resulted in the development of a team-oriented culture of ownership, which has allowed us to exceed over $40 million in sales each year, over the last several years. TESCO currently has over 210 dedicated employee-owners, some of whom have been with the company since its inception. In fact, the majority of our employee-owners have been employed by TESCO for over 10 years.

While we've always done business in Southern California, in 2007 we expanded our operations by creating a sales and service office in Temecula, which allows us to serve our Southern California customer's needs quickly and efficiently. This is a full-service satellite location that is home to a Communications manager, Professional Services Manager, SCADA Engineer, Electrical Engineer—PE, four Field Service Technicians and sales representation– all focused on our Southern California customers and their unique needs.

At a glance

Established 1972

210 Employee-owners

2 Offices in California

124,000 Sq Ft manufacturing plant

Over 40,000 successful projects

Over 200 installed SCADA systems

In compliance with the *Business and Professions Code* and the *Rules and Regulations* outlined by the *Contractors State License Board*, TESCO Controls, Inc. is a licensed electrical contractor in the State of California, C-10 license # 458072. The company carries liability insurance of $3.0 million, bonding capacity of $6 Million single with $20 Million aggregate limit with full workman's compensation coverage.

TESCO Controls, Inc. has an extensive support program to provide the resources, extended system coverage, maintenance services, telephonic support, technical expertise and 24-hour emergency services needed to support the customer during the warranty period of this project.

Certifications

SCADA HMI Applications

- Rockwell Software
  - FactoryTalk SE, RSView SE & RSView 32
- Invensys Wonderware System Integrator/ Partner
  - SI Product Certifications
    - System Platform / ArchestrA / Industrial Application Server
    - InTouch
    - SCADAlarm
    - ActiveFactory
  - Product Expertise
    - Terminal Services
    - Historian (IndustrialSQL)
    - InBatch, InTrack & InControl
- Control Microsystems Integration partner (ClearSCADA)
- Lookout
- FactoryLink
- Matrikon Certified OPC Systems Integrator (OPCSI)
- GE / Intellution iFix
- Citect

Control Systems

- Allen-Bradley/Rockwell Automation—System Integrator
- Schneider—Integration Partner (Gold)
  - Modicon (Modsoft, Concept, UNITY)
  - Citect (Silver & Gold Integrator)
- Cognex Vision Systems

Radio Communications

- Microwave Data Systems (MDS)
- Certified Design/Support Professional
  - Networking Products
  - Narrowband Products

Security / Surveillance Systems

- Pelco Endura System Architecture

Contractor's State Licensing

- C-10 Electrical—California State Contractor's License

Systems Integration

- Control System Integrators Association (CSIA)

Field Service

- ISA Certified Technicians

Underwriter's Laboratory

- UL-508A

Registered Professional Engineer

- Control Systems
- Electrical Engineering
- Mechanical Engineering

Project Management

- Project Management Professional (PMP)

Networking

- Fibertron / Fiber Optics
- Cellular Solutions Provider
- Other Expertise
  - Satellite Telemetry
  - 3rd Party Network Devices
    - DeviceNet & ControlNet

Sacramento River Water Intake Structure, A Tesco Controls project.

Company Profile

Financial References

Commercial References for TESCO Controls, Inc.

Union Bank of California
770 L. Street, Suite 1400
Sacramento, CA 95814

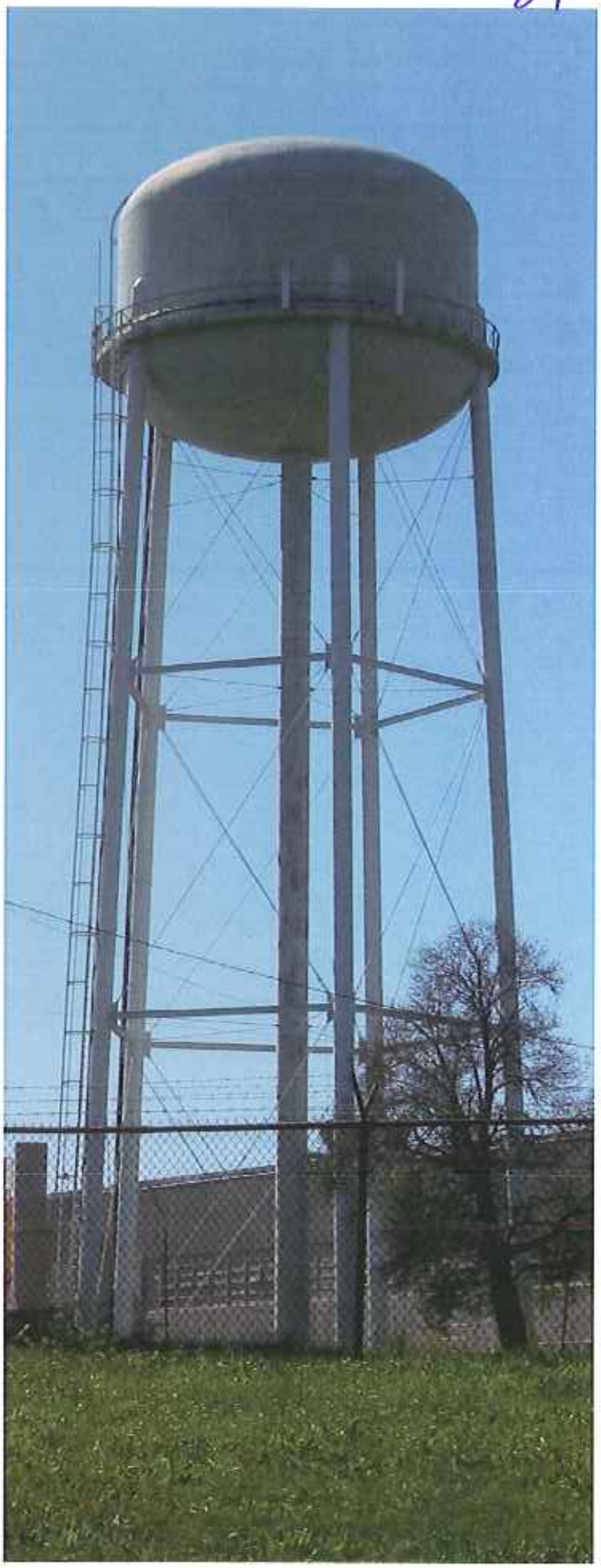
Contact: Chris Nele
(916) 321-6722

Interwest Insurance Services, Inc.
3636 American River Dr., 2nd Floor
Sacramento, CA 95864

Contact: Renee Ramsey
(916) 488-3100

Financial Capacity

The company carries liability insurance of $3.0 million, bonding capacity of $6 Million single with $20 Million aggregate limit with full workman's compensation coverage.



Tesco Controls, Inc.

Corporate Headquarters
8440 Florin Road
Sacramento, CA 95828-2506
Phone: 916.395.8800

Southern California Office
42015 Remington Avenue, Ste. 102
Temecula, CA 92590
Phone: 951.308.6450

Salinas Office
1315-B Dayton Street
Salinas, CA 93901

www.tescocontrols.com

Points of Contact

Andy Brown, CEO
abrown@tescontrols.com

Lyn Masterson, COO
lmasterson@tescocontrols.com

Jerry Horst, National Sales Manager
jhorst@tescocontrols.com

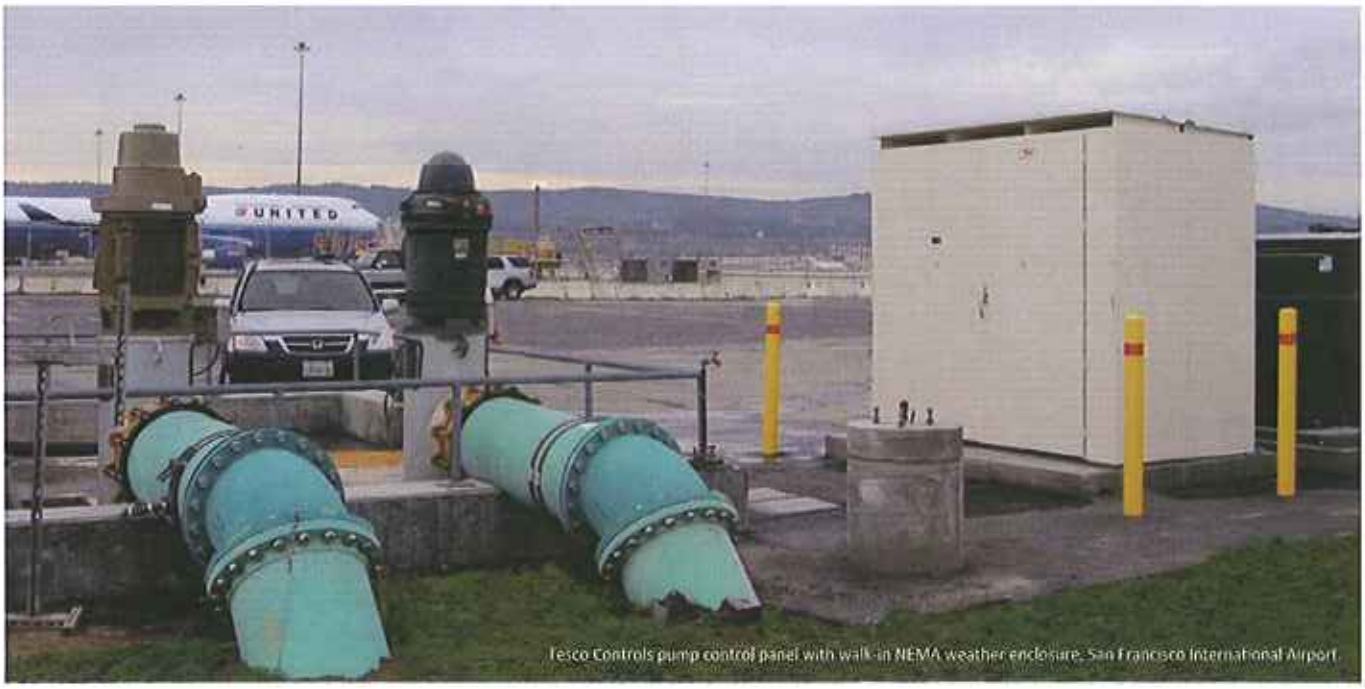
Shain Thomas, Estimating Manager
sthomas@tescocontrols.com

David Kubel, Director of Engineering
dkubel@tescocontrols.com

Keith Webb, SCADA System Applications Manager
kwebb@tescontrols.com

Ben Salt, Sr. Network & Communications Engineer
bsalt@tescocontrols.com

Steven Blevins, PLC Programming Manager
sblevins@tescocontrols.com



Tesco Controls pump control panel with walk-in NEMA weather enclosure, San Francisco International Airport

Professional Services

Engineering Services

TESCO employs a diversified staff of qualified electrical, communication and control system engineers. TESCO engineers are uniquely specialized in fields related to industrial electrical, communication and control systems and are capable of providing all the services necessary to design, implement and support systems from inception to operation.

TESCO's professional services and capabilities include:

Project Management

- Provide Project Schedule (Timelines) with Projected Milestones
- Manage Contractual Obligations
- Oversee Entire Project to ensure deadlines are met
- Perform Site Visits throughout the Project

Electrical Engineering Services

- Power System Studies and Harmonic Analysis
- Variable Frequency Drive & Motor Control Systems
- Power Distribution and Energy Management

Instrumentation and Control System Engineering

- Instrumentation and Control Panels
- Programmable Controls (PLC's, RTU, HMI)
- P&ID and Loop Drawings
- Process Control

Computers & Communication System Engineering

- Radio System Engineering, Path Studies and FCC Licensing
- Digital Communication System Coordination (ADN, ISDN, T1, FRAME RELAY)
- Satellite, Cable
- Fiber Optic Systems
- Computer Networking (Intranet, WAN, LAN)
- Computer Hardware and Software

Software Engineering

- Control System Procedures
- SCADA and HMI software
- Custom Software Development
- System Configuration (Database, Reporting, Graphics)
- Systems Programming (UNIX and Current Windows Operating Systems)

Systems Engineering

- System Design
- Project Engineering and Management
- System Coordination and Interconnection
- Start-up and Testing Coordination

Field Engineering

- Power System Analysis and Testing
- Communications Testing
- Harmonic Analysis and Testing
- System Tuning and Commissioning
- Preventative Maintenance

Systems Programming

TESCO employs a staff of software engineers and system programmers experienced in the development, programming and configuration of PLC/RTU based control systems for Water and Wastewater collection, distribution, treatment, remediation and industrial applications. TESCO's programmers hold certifications in a range of systems application and development environments.

TESCO has been involved with manufacturing, programming and implementing programmable controls for 30 years and has over 100 years of combined programming experience of PLC's, RTU's, and SCADA. TESCO's programmers are experienced and certified in a broad range of programming fields and applications.

Computer Control Systems (SCADA, HMI, OIU, GUI)

TESCO's systems programmers are certified in the application, programming and configuration of several SCADA and HMI software packages.

- Wonderware (InTouch, AppServer/ArchestrA/System Platform)
- US DATA (FactoryLink)
- Allen Bradley (Control View, RSVIEW, Panel View)
- ClearSCADA
- Intellution (FIX DMACS/32, iFIX)
- Citect

Programmable Controllers (PLC's, RTU's)

TESCO (LIQ III, LIQ IV, Liquitronic 5, L2000 and the L1000G), Allen Bradley (SLC 5/0X, PLC 5/XX and ControlLogix/CompactLogix/MicroLogix series), Modicon (984, Compact and QUANTUM series), TI, SIEMENS, BRISTOL BABCOCK, Motorola, GE FANUC, TOSHIBA, OPTO 22, CONTROL MICROSYSTEMS, SCADAPack and Sixnet.

Networking

TESCO programmers are experienced in programming and configuring a variety of network applications utilizing several types of topologies.

LAN operating systems on UNIX, NOVELL, Current Windows Operating Systems employing Ethernet standard topologies and TCP/IP with remote system access. Integral and multiple Wide Area Network (WAN) and LAN topologies for distributed city and area systems.

Database

- Database logging to a host of standard database system formats
- Data redundancy and recovery
- Report Generation

Manufacturing Services

TESCO Controls, Inc is a fully equipped manufacturing center capable of fabricating, assembling, wiring and testing all electrical and control systems equipment for project implementation. Our expertise in this arena lends perfectly to designing and engineering PLC Control Panels and associated control wiring logic requirements of this project. TESCO Controls, Inc. an authorized Underwriters Laboratory (UL) manufacturer of Electrical Power and Industrial Control Systems. TESCO systems are manufactured in accordance with UL, IEEE, NEMA, IEC, and NEC requirements. All assemblies adhere to strict manufacturing guidelines and quality control procedures. All phases of the manufacturing life cycle under-go an established quality control procedure to ensure the highest quality system. TESCO Controls is also CSIA certified as a system integrator -(www.controlsys.org).

TESCO's manufacturing capabilities include:

Custom Enclosures (Painted Galvanized Steel, 316SS, 304SS, Aluminum, Anodized Aluminum)

TESCO can provide custom enclosures manufactured in accordance with NEMA standards in variety of styles and configurations. TESCO's enclosures and paint process meet State of California Department of Transportation (CalTrans) strict traffic enclosure test requirements for vandalism, glare, and salt spray duration testing.

Electronic Assemblies (Programmable Controllers, Instrumentation, Communications)

TESCO manufactures a variety of electronic assemblies (PLC, RTU, Communications, Instrumentation, etc.) designed to withstand harsh industrial environment. All electronic systems undergo temperature testing to 200 degree F.

Custom Motor Control Systems

TESCO can provide a variety of motor control systems. TESCO's MCC's can be fabricated to incorporate standard MCC structures in conjunction with Variable Frequency Drive systems utilizing a variety of bypass control schemes that employ contactors or solid state products (RVSS).

Custom and Standard Power Distribution Systems

TESCO is UL authorized to provide manufacture distribution switchgear to 4000 A. All TESCO's distribution and service pedestals are designed in accordance with or per utility system requirements. TESCO can provide a variety of switchgear configurations employing Auto-Transfer Switches, power monitoring and control, and feeder distribution.

Custom and Standard Pump Station Power Distribution and Control Enclosures

TESCO provides a variety of standardized pump control packages for storm water, sewage lift, well pump, and booster stations. All pump stations can be supplied in low profile metered or unmetered enclosures systems.

Electrical, Hydraulic and Pneumatic Instrumentation Control Panels

TESCO manufactures and OEM's a variety of electrical, hydraulic, and pneumatic instrumentation and control panels.

specialized training. Our instructors create project specific training courses for each individual project based upon the furnished equipment for the project and the specific contract requirements.

Course syllabuses are produced prior to class commencement for review and approval of the Engineer and Owner. Typical classes include both operator and maintenance training. The individual topics of interest vary by project and range from general system familiarity to in-depth specific component troubleshooting and characteristics.

The training will provide Owner Personnel in-depth systems knowledge of configuration, troubleshooting, diagnostics, calibration, operations, and maintenance. Students can be individually tested on the material covered, and evaluations of their progress rendered to the owner.

Topics to be covered – PLC system theory, communications, and architecture, PLC functional operation, portable programmer commands and hands-on programming, diagnostics, troubleshooting, and maintenance, and the use and implementation of applications programs, control sequences, and control loops.

TESCO Controls, Inc. is a fully equipped manufacturing center capable of fabricating, assembling, wiring and testing all electrical and control systems equipment for project implementation and support. TESCO systems are manufactured in accordance with UL, IEEE, NEMA, IEC, NEC and CSIA requirements. All assemblies adhere to strict manufacturing guidelines and quality control procedures.

TESCO's manufacturing capabilities include, but not limited to, the following:

- Custom Enclosures (painted galvanized steel, 316SS, 304SS, Aluminum, Anodized Aluminum),
- Electronic Assemblies (Programmable Controllers, Instrumentation, Communications),
- Custom Motor Control Systems,
- Custom and Standard Power Distribution Systems,
- Custom and Standard Pump Station Power Distribution and Control Enclosures,
- Electrical, Hydraulic and Pneumatic Instrumentation Control Panels

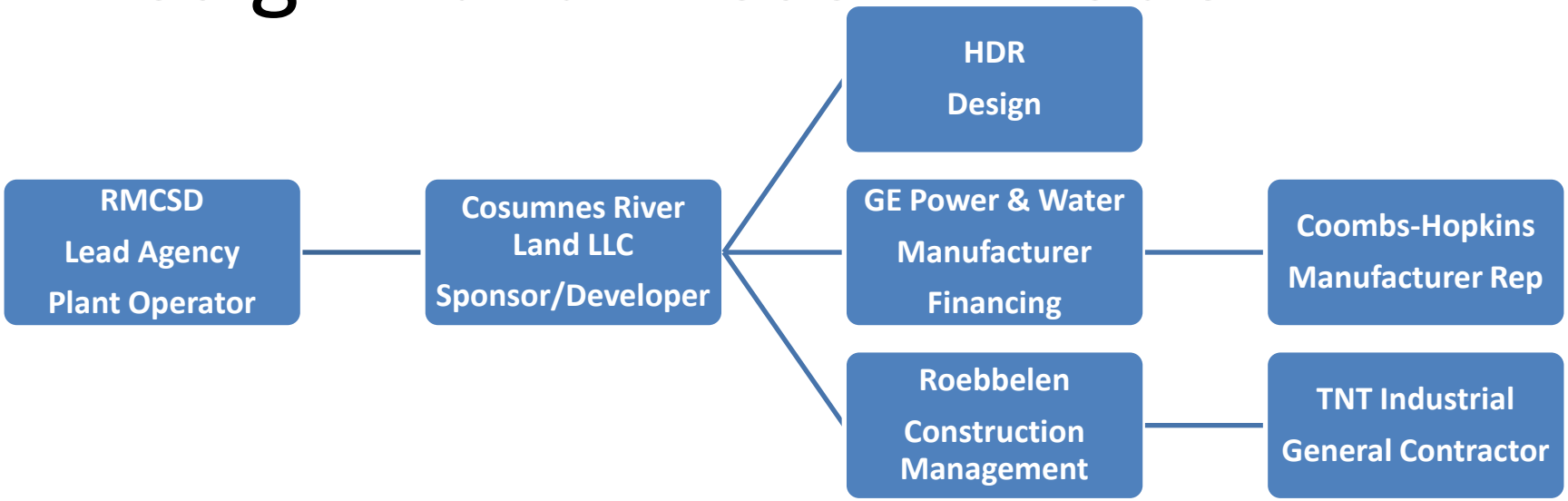
Warranty Policy

TESCO provided equipment is warranted against defect in design, workmanship and materials for a period of 1 year from the date of installation, unless otherwise specified.

Warranty Note: All of the consumable supply items, such as floppy disks, print cartridges and tapes, and all other hardware components not listed in project specifications are non-covered items. TESCO Controls, Inc. shall not be obligated to provide services or repair damage caused by fire, explosion, vandalism, theft, act of God, misuse or abuse of equipment, nor will TESCO Controls, Inc. be liable for damage caused by unsupervised relocation or repair or modification to equipment not previously authorized by TESCO Controls, Inc.

The warranty expressly excludes any damage from an external source such as lightning, physical abuse or the opening of a sealed unit. It is the customer's responsibility to perform normal maintenance on all equipment. TESCO Controls cannot be held responsible for installation problems by others, if found to be defective or in error as well as failures of our equipment caused by the failing of other components in the system. See the Maintenance Agreements listed above for additional system coverage's.

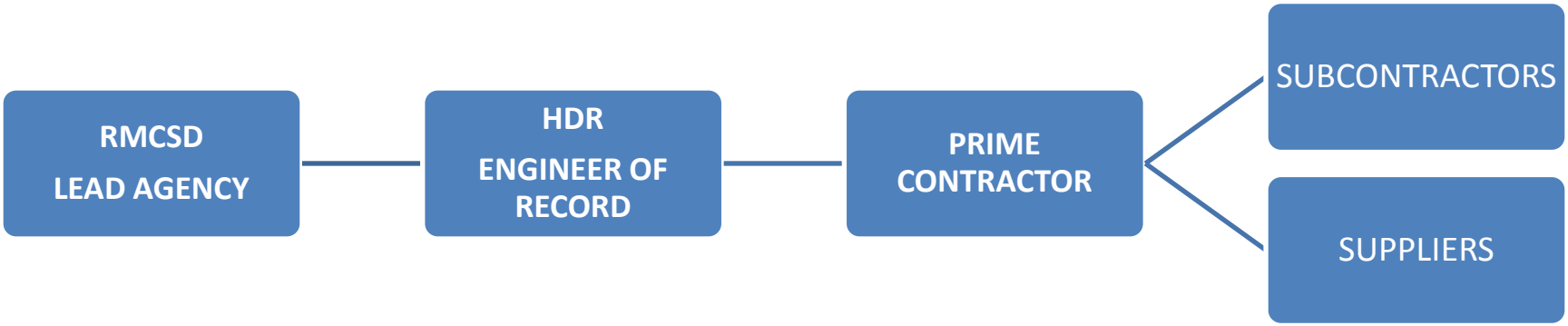
Design Build Present Model - PPP



- Cosumnes facilitates design and construction through Design Build agreement with District
- Cosumnes tenders GE Lease to District
- Construction draws paid through letter of credit and Lease financing or Cosumnes guarantee

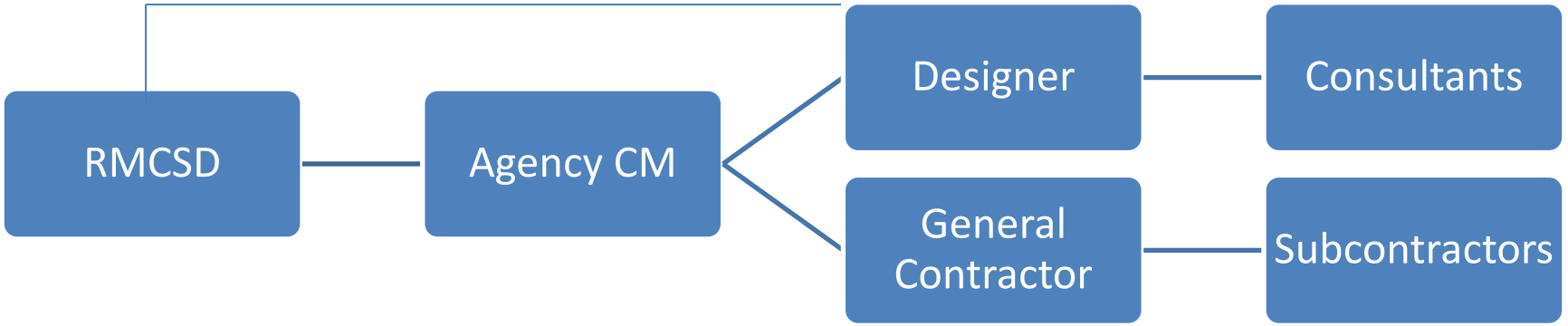
Design Bid Build

Traditional Pubic Agency Method



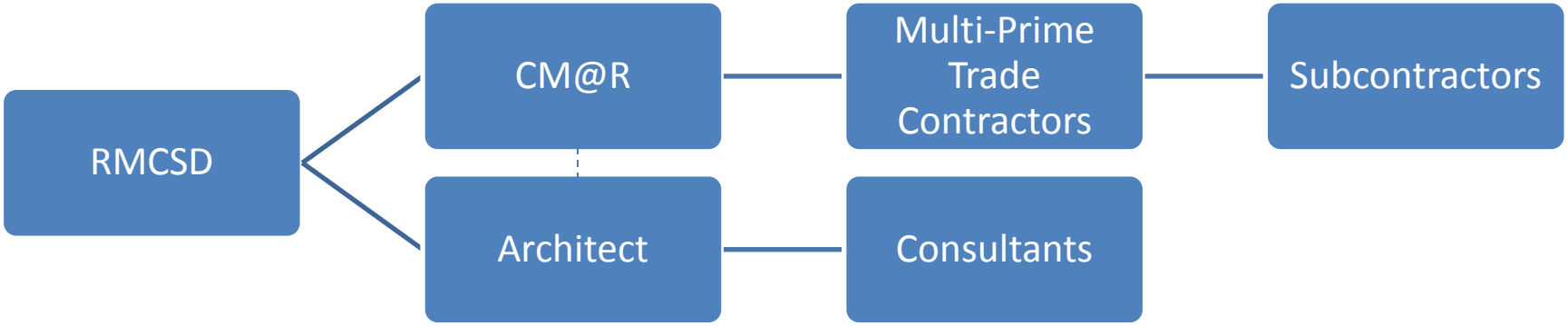
- Traditional procurement method in serial sequence
- Takes time and shifts some risk to contractor
  - Agency still has Errors & Omission/Force Majeure risk
- Agency oversight and control absolute – More time by CSD will be required for PM role
- Governed by Govt. Code for contracting and prevailing wage

Agency Construction Management



- Client hires Construction Manager through a RFP process
- CM may lead in the selection/oversight of the design team, but design contract is with the client. Works with design team to optimize the project with respect to cost, phasing, and value engineering.
- Once design is complete, project is put out to public bid
- CM administers the contract for the client
- This is the traditional CM Hard Bid process

Construction Management @ Risk



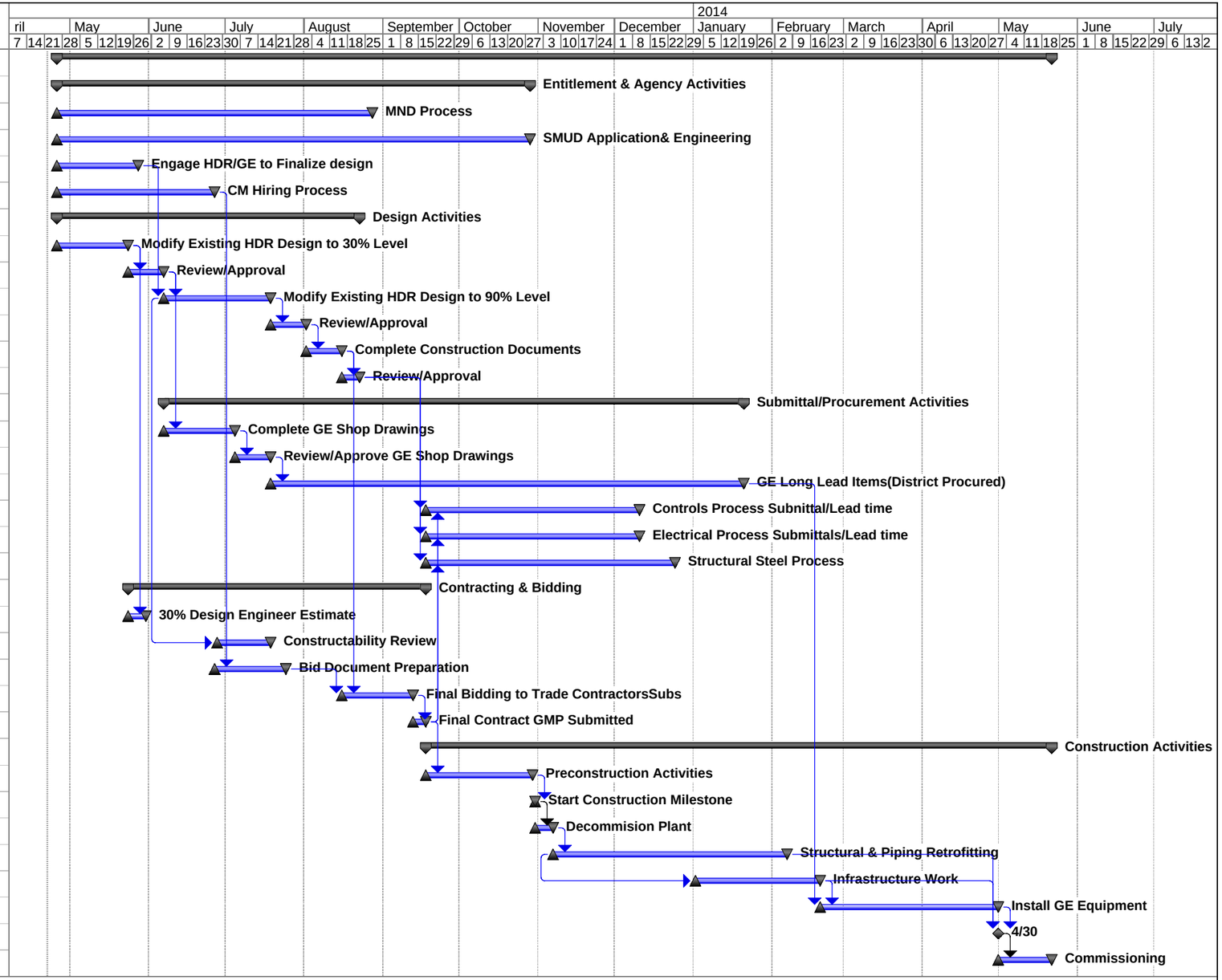
- Client hires Construction Manager through a RFP process
- Client contracts with the design team separately
- CM@R & Design team maximize project during preconstruction
- Project is broken down into multiple trade packages for the public bidding process – minimize overlapping fees & use proven team for construction
    - Each trade package is bonded by trade contractor
- CM@R is liable for schedule delays and scope gaps in packages
- Trade Contractor treated as traditional sub-contractor with more contractual liability for coordination with other prime trade contractors.

Other Delivery Methods

- Public-Private Partnerships
  - Design/Build/Finance/Sell Back
  - Design/Build/Finance
  - Design/Build/Operate/Maintain
  - Several Types of these agreements
  - Revenue based for financing agreements

  (City of Elk Grove Aquatic Complex is Design/Build/Finance/Operate Maintain on a 15 year lease)

ID	Task Name	Duration	Start	Finish	Predecessors
1	**RMCSD WTP Expansion Project**	**279 days**	**Fri 4/26/13**	**Wed 5/21/14**	
2	**Entitlement & Agency Activities**	**132 days**	**Fri 4/26/13**	**Mon 10/28/13**	
3	MND Process	88 days	Fri 4/26/13	Tue 8/27/13	
4	SMUD Application& Engineering	132 days	Fri 4/26/13	Mon 10/28/13	
5	Engage HDR/GE to Finalize design	22 days	Fri 4/26/13	Mon 5/27/13	
6	CM Hiring Process	44 days	Fri 4/26/13	Wed 6/26/13	
7	**Design Activities**	**85 days**	**Fri 4/26/13**	**Thu 8/22/13**	
8	Modify Existing HDR Design to 30% Leve	20 days	Fri 4/26/13	Thu 5/23/13	
9	Review/Approval	10 days	Fri 5/24/13	Thu 6/6/13	8
10	Modify Existing HDR Design to 90% Leve	30 days	Fri 6/7/13	Thu 7/18/13	5,9
11	Review/Approval	10 days	Fri 7/19/13	Thu 8/1/13	10
12	Complete Construction Documents	10 days	Fri 8/2/13	Thu 8/15/13	11
13	Review/Approval	5 days	Fri 8/16/13	Thu 8/22/13	12
14	**Submittal/Procurement Activities**	**162 days**	**Fri 6/7/13**	**Mon 1/20/14**	
15	Complete GE Shop Drawings	20 days	Fri 6/7/13	Thu 7/4/13	9
16	Review/Approve GE Shop Drawings	10 days	Fri 7/5/13	Thu 7/18/13	15
17	GE Long Lead Items(District Procured)	132 days	Fri 7/19/13	Mon 1/20/14	16
18	Controls Process Subnittal/Lead time	60 days	Wed 9/18/13	Tue 12/10/13	13,26
19	Electrical Process Submittals/Lead time	60 days	Wed 9/18/13	Tue 12/10/13	13,26
20	Structural Steel Process	70 days	Wed 9/18/13	Tue 12/24/13	13,26
21	**Contracting & Bidding**	**83 days**	**Fri 5/24/13**	**Tue 9/17/13**	
22	30% Design Engineer Estimate	5 days	Fri 5/24/13	Thu 5/30/13	8
23	Constructability Review	15 days	Fri 6/28/13	Thu 7/18/13	10SS+15 days
24	Bid Document Preparation	20 days	Thu 6/27/13	Wed 7/24/13	6
25	Final Bidding to Trade ContractorsSubs	20 days	Fri 8/16/13	Thu 9/12/13	12,24
26	Final Contract GMP Submitted	3 days	Fri 9/13/13	Tue 9/17/13	25
27	**Construction Activities**	**176 days**	**Wed 9/18/13**	**Wed 5/21/14**	
28	Preconstruction Activities	30 days	Wed 9/18/13	Tue 10/29/13	26
29	Start Construction Milestone	0 days	Thu 10/31/13	Thu 10/31/13	28
30	Decommision Plant	5 days	Thu 10/31/13	Wed 11/6/13	29
31	Structural & Piping Retrofitting	66 days	Thu 11/7/13	Thu 2/6/14	30
32	Infrastructure Work	35 days	Thu 1/2/14	Wed 2/19/14	31SS+40 days
33	Install GE Equipment	50 days	Thu 2/20/14	Wed 4/30/14	17,32
34	Process Trains Complete for Testing	0 days	Wed 4/30/14	Wed 4/30/14	33,31,32
35	Commissioning	15 days	Thu 5/1/14	Wed 5/21/14	34



Project: RMCSD WTP Expansion Draf
Date: Mon 4/22/13

Task | Progress | Summary | External Tasks | Deadline
Split | Milestone | Project Summary | External Milestone

LAW OFFICES OF
JONES & DYER
A PROFESSIONAL CORPORATION
1800 J STREET
SACRAMENTO, CA 95811

(916) 552-5959

(916) 442-5959 (FAX)

April 23, 2013

Gerald Pasek, President, Board of Directors
Ed Crouse, Manager
Rancho Murieta Community Services District
P.O. Box 1050
Rancho Murieta, CA 95683

Jonathan P. Hobbs
Kronick, Moskovitz, Tiedemann & Girard
400 Capitol Mall, 27th Floor
Sacramento, CA 95814

RE: Rancho Murieta Community Services District

Dear Mr. Pasek, Mr. Crouse and Mr. Hobbs:

As you know, our firm represents Cosumnes River Land which owns the commercially zoned property known as the Gardens adjacent the Jackson Highway. For many months, Cosumnes River Land (CRL) has worked with the District in attempt to develop this property. Although the ultimate goal is to develop all of the property, CRL has an interim goal of building a hotel and extended stay facility. After discussions with all of you, CRL respectfully requests that the Rancho Murieta Community Services District Board take the following board action at its May 2013 meeting:

1. In order to allow the development of a hotel and extended stay facility, CRL requests that the Rancho Murieta Community Services District Board make a determination that sufficient water capacity is currently available to serve the hotel (parcel A) and extended stay units (parcel 7) of Murieta Gardens I & II.

2. Pursuant to the direction that CRL was given prior to the April improvements committee meeting, in exchange for will-serve letters for the proposed 83 room hotel and 24 extended stay units, CRL would provide up to $175,000 to pay HDR Engineering to redesign the retrofit, expansion and upgrade of Water Treatment Plant No. 1 to 3.2 million gallons per day of capacity which brings the total District capacity to 5.2 million gallons per day.

CRL requests that the Board approve such an agreement and direct staff to issue modified conditions of approval to the Sacramento County Planning Department with will-serve letters of the hotel and extended stay portions of Gardens I.

In addition to the requested Board action, CRL requests a meeting to resolve payment of all other RMCSD fees. CRL requests that two Board members be present at this meeting along with Mr. Crouse and Mr. Hobbs.

We are using the commercial EDU standard of 750 gallons per day. Under this scenario, CRL has calculated that the hotel and extended stay project will require 19 EDUs. We have provided information from a comparable 86 room hotel in Lincoln, California for your review.

If you have any questions or comments, please do not hesitate to contact me or John Sullivan with Cosumnes River Land.

Very truly yours,

GREGORY F. DYER
gdyer@jonesdyer.com

GFD/djg
Enclosure

Hotel/Extended Stay Calculations

Hotel

83 rooms × 72.7gpd/room [1] = 6035gpd – ***Total Hotel***

6035gpd/750gpd (1 EDU) = 8.0 EDU

Swimming Pool

(Hotel) = 1.0 EDU

Restaurant/Bar

2250 gpd = 3.0 EDU

Extended Stay

24 condos × 169gpd/condo[2] = 4056gpd – ***Total Extended Stay***

4056gpd/750gpd (1 EDU) = 5.4 or 6.0 EDU

Swimming Pool

(Extended Stay) = 1.0 EDU

TOTAL =19.0 ED

2004 USEAGE AT 82% OCCUPANCY Holiday Inn Express Lincoln.

TOTAL INCLUDING LANDSCAPING SPRINKLERED

CUSTOMER NUMBER	CUSTOMER NAME	READ DATE	CONSUMPTION IN CUBIC FEET	CONSUMPTION IN GALLONS	86 ROOM USEAGE CUBIC FEET	86 ROOM USEAGE GALLONS
304017	HOLIDAY INN EXPRESS	12/16/2004	22300	166804	27397.14	204930.63
304017	HOLIDAY INN EXPRESS	11/18/2004	43100	322388	52951.43	396076.69
304017	HOLIDAY INN EXPRESS	10/14/2004	53300	398684	65482.86	489811.77
304017	HOLIDAY INN EXPRESS	9/16/2004	53100	397188	65237.14	487973.83
304017	HOLIDAY INN EXPRESS	8/16/2004	60300	451044	74082.86	554139.77
304017	HOLIDAY INN EXPRESS	7/13/2004	73110	546862.8	89820.86	671860.01
304017	HOLIDAY INN EXPRESS	6/16/2004	27190	203381.2	33404.86	249868.33
304017	HOLIDAY INN EXPRESS	5/5/2004	40900	305932	50248.57	375859.31
304017	HOLIDAY INN EXPRESS	4/16/2004	33723	252248.04	41431.11	309904.73
304017	HOLIDAY INN EXPRESS	3/3/2004	27307	204256.36	33548.60	250943.53
304017	HOLIDAY INN EXPRESS	2/13/2004	20566	153833.68	25266.80	188995.66
304017	HOLIDAY INN EXPRESS	1/22/2004	22204	166085.92	27279.20	204048.42
		TOTALS	**477100**	**3568708**	**586151.43**	**4384412.69**

ESTIMATED USAGE WITHOUT LANDSCAPING NO SPRINKLER SYSTEM FOR IRRIGATION - DRIP

CUSTOMER NUMBER	CUSTOMER NAME	READ DATE	CONSUMPTION IN CUBIC FEET	CONSUMPTION IN GALLONS	86 ROOM USEAGE CUBIC FEET	86 ROOM USEAGE GALLONS
304017	HOLIDAY INN EXPRESS	12/16/2004	14272	106754.56	17534.17	131155.60
304017	HOLIDAY INN EXPRESS	11/18/2004	27584	206328.32	33888.91	253489.08
304017	HOLIDAY INN EXPRESS	10/14/2004	34112	255157.76	41909.03	313479.53
304017	HOLIDAY INN EXPRESS	9/16/2004	33984	254200.32	41751.77	312303.25
304017	HOLIDAY INN EXPRESS	8/16/2004	38592	288668.16	47413.03	354649.45
304017	HOLIDAY INN EXPRESS	7/13/2004	46790.4	349992.192	57485.35	429990.41
304017	HOLIDAY INN EXPRESS	6/16/2004	17401.6	130163.968	21379.11	159915.73
304017	HOLIDAY INN EXPRESS	5/5/2004	26176	195796.48	32159.09	240549.96
304017	HOLIDAY INN EXPRESS	4/16/2004	21582.72	161438.7456	26515.91	198339.03
304017	HOLIDAY INN EXPRESS	3/3/2004	17476.48	130724.0704	21471.10	160603.86
304017	HOLIDAY INN EXPRESS	2/13/2004	13162.24	98453.5552	16170.75	120957.22
304017	HOLIDAY INN EXPRESS	1/22/2004	14210.56	106294.9888	17458.69	130590.99
		TOTALS	**305344**	**2283973.12**	**375136.91**	**2806024.12**

72. gpd/room