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GOVERNING BOARD

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CARLOS QUINTERO
GENERAL MANAGER

WATER QUALITY COMMITTEE

AGENDA

DATE: Wednesday, April 5, 2023 TIME: 5:00 p.m.

Notice: This meeting will be held at the above date, time, and location, and Sweetwater Authority Board members and members of the public may attend in person. Some Sweetwater Authority Board members may attend and participate in the meeting virtually pursuant to the Brown Act (Gov. Code § 54953). As a convenience to the public, the Sweetwater Authority provides a call-in option and internet-based option for members of the public to virtually observe and provide public comments at its meetings. Additional details on in-person and virtual public participation are below. Please note that, in the event of a disruption in the call-in option or internet-based option, the meeting will continue unless otherwise required by law, such as when a Director is attending the meeting virtually pursuant to certain provisions of the Brown Act.

To join via Zoom Webinar from a computer, tablet, or smartphone, click on the link below:
https://zoom.us/j/91458023440

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1-669-900-6833 or 1-253-215-8782
Meeting ID: 914 5802 3440
The Zoom Webinar link and telephone number will be active approximately 15 minutes prior to the meeting start time.

If you are unable to access the meeting using this call-in information, please contact the Assistant Board Secretary at (619) 409-6704 for assistance.

Instructions for Making Public Comments:

Members of the public may address the Board regarding items not appearing on the posted agenda, which are within the subject matter jurisdiction of the Governing Board, and on agenda items. Speakers are asked to state name, address, and topic, and to observe a time limit of three (3) minutes each. Public comment on a single topic is limited to twenty (20) minutes. (Note: Written comments will no longer be read aloud during the meeting.)

Making Public Comment for Those Attending In-Person:

Anyone desiring to address the Governing Board regarding non-agenda items or an item listed on the agenda is asked to fill out a speaker's slip and present it to the Board Chair or the Secretary. Request to Speak forms are available at the Speaker's podium and at www.sweetwater.org/speakerform.

Making Public Comment for Those Not Attending In-Person:

The Chair will inquire if there are any comments from the public regarding non-agenda items and any items listed on the agenda prior to Board discussion. Members of the public may request to speak and make comments as follows:

- Via Zoom Webinar, click on "Raise Hand" button. This will notify the moderator that you wish to speak during Oral Communication or during a specific item on the agenda.

- Via phone, you can raise your hand by pressing *9 to notify the moderator that you wish to speak during the current item.

Any person with a disability who requires a modification or accommodation in order to participate in a meeting should direct such request to the Board Secretary at (619) 409-6703 at least forty-eight (48) hours before the meeting, if possible.

1. CALL MEETING TO ORDER AND ROLL CALL

2. ITEMS TO BE ADDED, WITHDRAWN, OR REORDERED IN THE AGENDA

3. PUBLIC COMMENT

Opportunity for members of the public to address the Committee. (Government Code Section 54954.3).

4. ACTION AGENDA

The following items on the Action Agenda call for discussion and action by the Committee. All items are placed on the Agenda so that the Committee may discuss and take action on the item if the Committee is so inclined, including items listed for information.

Consideration to Award Contract for On-Call SCADA Design Professional Consulting Services

5. DIRECTORS' COMMENTS

Directors' comments are comments by Directors concerning Authority business that may be of interest to the Board. Directors' comments are placed on the Agenda to enable individual Board members to convey information to the Board and the Public. There is no discussion or action taken on comments made by Board members.

6. NEXT MEETING DATE: Wednesday, May 3, 2023 at 5:00 p.m.

7. ADJOURNMENT

This agenda was posted at least seventy-two (72) hours before the meeting in a location freely accessible to the Public on the exterior bulletin board at the main entrance to the Authority's office and it is also posted on the Authority's website at www.sweetwater.org. No action may be taken on any item not appearing on the posted agenda, except as provided by California Government Code Section 54954.2. Any writings or documents provided to a majority of the members of the Sweetwater Authority Governing Board regarding any item on this agenda will be made available for public inspection at the Authority Administration Office, located at 505 Garrett Avenue, Chula Vista, CA 91910, during normal business hours. Upon request, this agenda will be made available in appropriate alternative formats to persons with disabilities, as required by Section 202 of the Americans with Disabilities Act of 1990. Any person with a disability who requires a modification or accommodation in order to participate in a meeting should direct such request to the Board Secretary at (619) 409-6703 at least forty-eight (48) hours before the meeting, if possible.

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BOARD ACTION

TO: Governing Board (Water Quality Committee)

FROM: Carlos Quintero, General Manager
Justin Brazil, Director of Water Quality

DATE: March 30, 2023

SUBJECT: Consideration to Award Contract for On-call SCADA Design Professional Consulting Services

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SUMMARY

At its December 14, 2022 meeting, the Board directed staff to issue a Request for Qualifications (RFQ) for On-call Supervisory Control and Data Acquisition (SCADA) Design Professional Consulting Services (Attachment 1). The RFQ would secure a consultant for a one-year contract period with the option of up to four additional one-year renewals. The Authority regularly utilizes the services of a SCADA Design Consultant (SDC) to provide recommendations, guide the continued evolution of the SCADA system, support infrastructure projects, enforce standards, oversee other consultants working on the SCADA system, assist with budgeting/planning, and provide general support to staff. The SDC also provides a licensed electrical professional engineer (P.E.) for general support in the development of electrical designs, as the Authority does not have an electrical P.E. on staff. The Water Quality and the Engineering and Operations Departments both utilize the SDC, previously Timberline Engineering. Timberline's final contract with the Authority expired in June 2021, and the company Principals have since retired.

Results

The RFQ opened on January 10, 2023, and was advertised on the Authority's website, the Procurement Technical Assistance Center (PTAC) website, and was emailed directly to 30 consulting firms. A mandatory pre-proposal meeting was held on January 25, 2023, with nine consulting firms in attendance.

The RFQ closed on March 7, 2023, at 5:00 PM. The Authority received two statements of qualification (SOQs) in response to the RFQ: Eramosa International Inc. (Eramosa) (Attachment 2) and Rockwell Construction Services (RCS) (Attachment 3).

National City Wells (NCW) Iron and Manganese Removal System Project & RCS

In July 2022, the Board approved SCADA Expense and Capital projects for FY 2022-23, including SDC support for the NCW Iron and Manganese Removal System Project.

When staff brought annual SCADA authorizations to the Board, design was expected to be completed by December 2022. In the absence of having an SDC and to alleviate project delays, staff asked their On-call SCADA Integrator (Enterprise Automation) to propose a subconsultant to perform the work. Enterprise selected RCS, which was included in the annual SCADA authorizations. Should RCS be selected as the Authority's next SDC, staff believes there could be some cost savings in training/orientation as RCS could use the NCW Iron and Manganese Removal System Project to become familiar with the Authority's processes and standards.

Consultant Selection Process (As Stated in the RFQ)

The RFQ states the Governing Board or Committee will evaluate the proposals based on the firms' personnel and organization, experience, and other information included in the proposal, using the established evaluation criteria presented in Table 1 below and Attachment 1. For firms deemed equally qualified, costs may be considered in the selection process. The Governing Board or Committee may select a short list from the proposals received based on proposal evaluation and conduct interviews of the short-listed firms. After the interviews, short-listed firms may be re-evaluated and ranked based on the combined proposal/interview process or solely on the interview process.

Table 1

Category	Maximum Points
Completeness of proposal in addressing requested information • Scored based on the proposer's ability to respond to all requests	10
Consultant's experience and technical competence • Scored based on the responder's overall experience with SCADA design consulting, ability to meet the required qualifications, and technical approach related to the scope of services the consultant is expected to perform	35
Consultant's organization and key personnel • Scored based on the key project team's experience, competence, and demonstrated ability to provide high quality SCADA consulting services	20
Qualifying project experience • Scored based on the quality of projects listed, favoring projects with similar scope, size, and complexity to that described in this RFQ. Preference will additionally be given to projects in water/wastewater sectors.	35

Engineering Billing Rates

To allow for a direct comparison of engineering rates, proposers were asked to submit rates matching the following titles: Project Manager, Principal Engineer, and Senior Designer. Proposers were allowed to leverage other titles to execute the scope of work if described and identified in their SOQ. A summary of hourly engineering billing rates is provided in Table 2 (Eramosa) and Table 3 (RCS) below (Attachments 4 and 5).

Table 2

Eramosa	
Classification	**Hourly Billing Rate**
Project Manager*	$213
Principal Engineer*	$185
Senior Designer*	$140
Principal-In-Charge **	$229
Intermediate Engineer**	$140
Junior Engineer**	$129
Senior System Integrator**	$125
Technician/Drafter**	$100

*Standardized billing rate classifications requested in the RFQ.
**Additional billing rates provided.

Table 3

RCS	
Classification	**Hourly Billing Rate**
Project Manager*	$185
Senior Electrical Engineer**	$252
Senior Controls Engineer**	$252
Principal-In-Charge **	$185
Senior Inspector**	$185

*Standardized billing rate classifications requested in the RFQ.
**Additional billing rates provided. RCS did not provide billing rates for two of the standardized classifications. In staff's opinion, the Senior Electrical Engineer and Senior Controls Engineer are likely equivalent to the Principal Engineer and Senior Designer, respectively, that were requested in the RFQ.

Staff Review of SOQs

Staff reviewed the SOQs and found both consulting firms meet the required qualifications, with RCS and Eramosa scoring 97 and 91 points (out of 100), respectively. RCS is already under contract to perform work on the NCW Iron and Manganese Removal Project, which will provide efficiencies with training and orientation on the Authority's processes/standards. Staff recommends selecting RCS as the Authority's SDC for one year, evaluating its performance during the one-year period, and bringing a recommendation to the Board within one year for potential contract extension.

PAST BOARD ACTIONS

December 14, 2022	The Governing Board directed staff to issue the Request for Qualifications as presented (On-call SCADA Design Professional Consulting Services).
July 13, 2022	Governing Board authorized a scope of work in an amount not to exceed $640,650 to the Authority's on-call SCADA consultant, Enterprise Automation, for the FY 2022-23 SCADA Expense and Capital Projects.
January 22, 2020	The Governing Board authorized an extension of the contract for On-call SCADA Design Services (Timberline Engineering) to June 2021 (or when the last project assigned is complete if different than this date) to allow for completion of work already assigned to the consultant and award a Task Order to Timberline for design and construction-related services on the City's Direct Transfer Facility (DTF) in an amount not to exceed $144,804.
December 10, 2014	The Governing Board approved a contract with Timberline Engineering and Enterprise Automation for a term up to five Years, and in year three of the contract, that staff provide an update to the Board.

FISCAL IMPACT

The FY 2022-23 Water Quality Expense Budget has funds in the amount of $51,000 available for general SDC support and $49,000 for Enterprise Automation to provide orientation and training for a new SDC. Staff did not request authorization to utilize these funds with the other SCADA projects brought to the Board in July 2022 due to not having an on-call SDC under contract. If the Board approves an SDC contract award, staff recommends utilizing a portion of the available funds in the amount of $53,000

($26,500 for Enterprise Automation and $26,500 for the SDC) for training and orientation during FY 2022-23. Approximately one-half of the required training is anticipated to be completed during FY 2022-23, with the remainder occurring in FY 2023-24.

Training provided by Enterprise Automation would entail the following:

- Teach the SDC how the Authority executes projects (design through construction closeout)
- Train the SDC on the Authority's SCADA system, communications network, cyber security protocols, instrumentation, controls, and electrical standards (IC&E), and other relevant specifications
- Familiarize the SDC with the Authority's annual SCADA planning/budgeting activities

Funds in the amount of $40,000 for development of the SDC RFQ were approved as part of the FY 2022-23 authorized scope of work for SCADA in July 2022.

POLICY / STRATEGIC PLAN

Strategic Plan Goal 1: Water Quality (WQ) – Provide high quality water that meets regulatory requirements.

- Objective WQ5: Maintain and improve the Supervisory Control and Data Acquisition (SCADA) system for all treatment and distribution facilities as defined in the SCADA Master Plan
    - 005.00 Develop and issue a Request for Proposals for a new SCADA Design Consultant

ALTERNATIVES

1. Award a contract to Rockwell Construction Services, Valley Center, CA, for one year (or when the last project assigned is complete if different than this date); direct staff to bring a recommendation for contract extension back to the Governing Board within one year based on performance; and authorize funds for training and orientation of Rockwell Construction Services in the amount of $53,000 ($26,500 for Enterprise Automation and $26,500 for the Rockwell Construction Services).

2. Review and evaluate SOQs received in response to the RFQ; direct staff to enter a contract with the highest ranked firm in accordance with its hourly engineering billing rates and make a recommendation for selection to the Governing Board; and authorize funds for training and orientation of the SDC in the amount of $53,000 ($26,500 for Enterprise Automation and $26,500 for the SDC).

3. Review and evaluate proposals received in response to the RFQ, and based on SOQ evaluation, select a short list and conduct interviews of the short-listed firms. After the interviews, re-evaluate and rank the firms based on the combined SOQ evaluation/interview process; direct staff to enter a contract with the highest ranked firm in accordance with its fee proposal and make a recommendation for selection to the Governing Board; and authorize funds for training and orientation of the SDC in the amount of $53,000 ($26,500 for Enterprise Automation and $26,500 for the SDC).

4. Other direction as determined by the Governing Board.

RECOMMENDATION

Staff recommends that the Governing Board award a contract to Rockwell Construction Services, Valley Center, CA, for one year (or when the last project assigned is complete if different than this date); direct staff to bring a recommendation for contract extension back to the Governing Board within one year based on performance; and authorize funds for training and orientation of Rockwell Construction Services in the amount of $53,000 ($26,500 for Enterprise Automation and $26,500 for the Rockwell Construction Services).

ATTACHMENTS

1. RFQ- On-Call SCADA Design Professional Consulting Services
2. Proposal-Eramosa International Inc.
3. Proposal-Rockwell Construction Services
4. Engineering Rates-Eramosa International Inc.
5. Engineering Rates-Rockwell Construction Services
6. Presentation- On-Call SCADA Design Professional Consulting Services Award
7. SCADA Design Consultant RFQ Scoring Rubric

ERAMOSA

SWEETWATER AUTHORITY

SWEETWATER AUTHORITY

Request For Qualifications – On-Call SCADA Design Professional Consulting Services

Main Proposal

Closing: March 7, 2023 at 5:00pm PT

Eramosa International Inc.,

9393 W. 110th St.,
Ste. 500, PMB #5605
Overland Park, KS 66210
Phone: 913.945.1566

Contact: Jeffrey Montano, PE

Jeffrey.Montano@eramosa.com

www.eramosa.com

COVER LETTER

Eramosa International Inc. is pleased to respond to the Sweetwater Authority's Request for Proposal for services of a qualified company to provide On-Call SCADA Design Professional Consultant Services for the Authority's Capital Improvement and Development projects.

Eramosa's staff of over 90 engineers, designers and SCADA experts has been providing electrical and instrumentation and controls design, Owner's Engineer/Advisor/Consultant, professional SCADA assessment, planning, design, and construction support services to municipalities in the water and wastewater industry for over 20 years. Unlike our competition, we also have unique expertise in implementing, programming, and integrating SCADA and PLC systems using all the most common vendors and platforms. This provides additional resources with experience in areas where the "rubber meets the road" which can be focused on specific tasks and activities to avoid known problems or issues.

We can perform all services described in this RFQ, including full, detailed design capabilities for both electrical and I&C projects of any size when a task order is issued.

Our California-based professionals will deliver this contract with support from our corporate office professionals in Overland Park, KS and Guelph, ON.

Yours truly,
ERAMOSA INTERNATIONAL INC.

Jeffrey Montano, PE
Team Lead

Jeffrey.Montano@Eramosa.com
www.eramosa.com

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1.0 REQUIRED QULAIFICATIONS

Eramosa has been delivering projects covering all aspects of SCADA and automation since inception in 1998. Our team will focus their decades of automation and information integration solutions experience during the design, implementation, integration, testing and start-up phases of the project, providing the most comprehensive and the best engineered process control solution to the Authority.

Eramosa International Inc. was incorporated in 2010 as a sister company of Eramosa Engineering Inc., a recognized leader in providing specialized engineering services to the municipal water and wastewater sector across Canada and the United States since 1998, to focus specifically on US clients. Our combined average annual revenues exceed $13M and we continue to target and realize 10-12% annual growth.

Eramosa seamlessly provides professional engineering services to assist our clients in meeting their business requirements through the customized application of appropriate technologies. Our business is driven from our corporate office in Overland Park, KS, drawing from a staff of over 90 professionals in California, Kansas, Calgary, Alberta, and Guelph, London, and Toronto, Ontario.

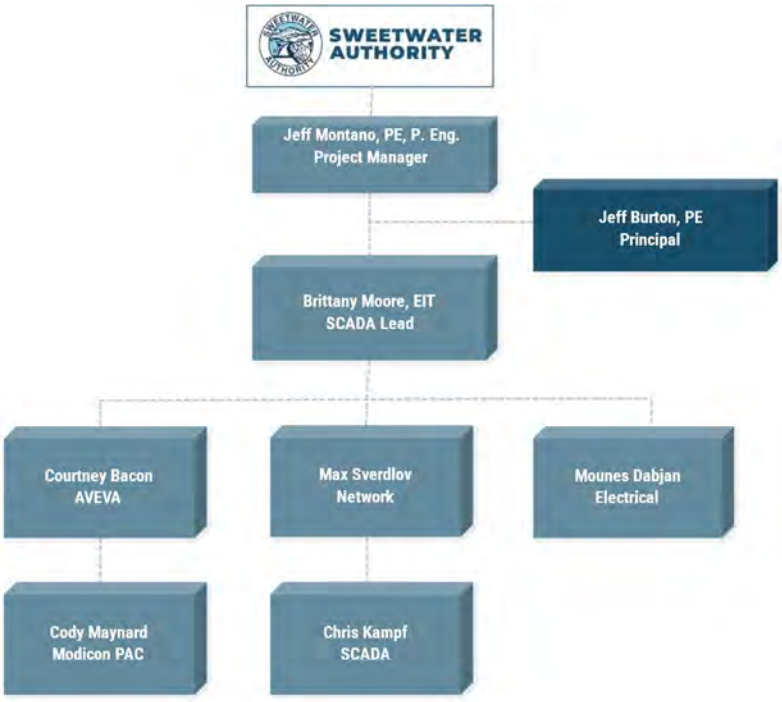
We invite you to visit our website at http://www.eramosa.com for more information about our firm.

Eramosa is assigning Jeffrey Montano to be the Project Manager for this contract and responsible engineer. As responsible engineer Jeffrey holds a PE in several states in the US and a P.Eng in Canada. Jeffrey has been engaged in Automation work all of his 24 plus years as an engineer. Jeffrey's PE in Electrical Engineering and his location in California meets the requirements of the Authority.

The Eramosa team members nor I have any existing or past financial or other relationships with Authority's current or past board members.

2.0 PROJECT TEAM AND QUALIFICATIONS

We have assembled a team of experts and industry leaders in the planning, design, construction, of Electrical, SCADA and Control Systems specifically for the municipal water and wastewater industry.



Key Personnel

- Jeff Burton – Principal
- Jeffrey Montano – Project Manager
- Brittany Moore – Design Team Lead
- Courtney Bacon – AVEVA
- Cody Maynard – Modicon PAC
- Max Sverdlov – Network Design
- Mounes Dabjan - Electrical

Eramosa has selected six key, experienced professionals to execute support this contract, and their career summaries are provided below. In addition, a convenient and easy to understand table has been provided which shows each role, team member, qualifications, availability, years experience, responsibilities, and relevant project experience. We believe this is the most succinct way to present this amount of information within the response page limitations. Full 2-page resumes of the proposed team are in Appendix A.

Principal– Jeff Burton, PE

Jeff Burton is a highly skilled leader with demonstrated accomplishments in engineering project pursuit and execution (including scope, schedule, and budget performance), client management and new client development, and team administrative leadership. As Vice President of Eramosa International, Inc., Jeff has responsibility for all aspects of the Eramosa's U.S. business, including operations and team management, strategic growth, business development, project execution and performance, and **Project Manager– Jeffrey Montano, PE, P.Eng.**

Jeffrey is a senior member of Eramosa providing overall project management and technical leadership on numerous projects. As a licensed Engineer, Jeffrey has extensive experience guiding project delivery on a technical level. His over 20 years' experience spans multiple industries including the Water / Wastewater sector. His process control knowledge as well as understanding of industry accepted practices provides an excellent combination to provide overall co-ordination of the project. Jeffrey will help guide our team through the process as well as to be an overall voice as a subject matter expert through the areas of SCADA design, I&C design, and implementations.

Design Team Lead – Brittany Moore, EIT

Brittany Moore joined Eramosa in 2020 bringing with her more than nine years of experience. Prior to joining Eramosa Brittany was involved in the design of instrumentation and controls and process automation systems for a variety of different industries. She has experience with the design of electrical control panels, instrumentation selection, development of P&IDs and control narratives.

AVEVA Subject Mater Expert – Courtney Bacon

Courtney is a graduate of Lambton College's Instrumentation and Control Engineering Technology program. Since starting with Eramosa in 2018, Courtney has worked on various PLC and HMI platforms, including Allen Bradley SLC and Logix controllers, GE RX3i controllers, and Emerson ControlWave Micro controllers. Courtney has versatile HMI skills and is experienced with Wonderware InTouch, Wonderware System Platform, and Inductive Automation Ignition HMIs. Her previous experience includes working in the Oil and Gas sector as well as in Research and Development.

Modicon PAC Subject Mater Expert – Cody Maynard

Cody joined Eramosa in 2018 with 2 years of prior experience working in various areas of the manufacturing industry since graduating in 2016. His expertise lies in PLC programming, HMI/SCADA application development, system troubleshooting, and system commissioning.

Sr. Electrical Engineer – Mounes Dabjan, P.Eng.

Prior to joining Eramosa in 2017, over the last 25+ years Mounes has gained comprehensive knowledge of designing, upgrading of electrical & control systems for various industrial applications. Since joining Eramosa, he has been involved in the electrical system design for projects related to water and wastewater treatment industry and industrial sector. Mounes has expertise in the areas of conceptual and preliminary design, detailed design, system factory acceptance testing, commissioning, and troubleshooting of electrical and control system.

Network – Max Sverdlov

Mr. Sverdlov is a SCADA and Communications Systems Specialist in the field of water filtration, wastewater treatment, natural gas pipelines and vehicular tunnels. He has technical knowledge and experience programming and configuring GE, AB, Omron and other Programmable Logic Controllers (PLCs). Maxim has a vast understanding of the GE Proficy iFix platform, Rockwell RSView32, FactoryTalk and RSLinx software, as well as experience in server infrastructure design, installation and upgrades utilizing several communication protocols.

3.0 UNDERSTANDING, APPROACH AND METHODOLOGY

As a consulting engineering firm focused on providing electrical engineering, instrumentation and controls, SCADA, IT and Network services, all of which complement each other with continuous advances in technology, Eramosa is committed to providing solutions meeting the needs of our clients.

3.1 Critical Success Factors

There are a number of factors critical to the successful completion of any project. As the specific projects to be undertaken by the successful proponents of this RFQ are not defined or made available, we have summarized the key factors we believe are critical to these projects, regardless of their unique scope or technical requirements.

3.1.1 Scope Definition

A clearly defined scope is an absolute must for any project to be a success from initiation through to closeout. Our project manager and lead electrical engineer (as key point of contact with Authority) will work closely with Authority to define and/or refine the scope of each project issued as a result of the On-Call Electrical Services RFQ. Where there is any lack of detail as to the specific requirements, clarity will be sought to gain a common understanding of the needs of each project.

3.1.2 Schedule Management

Schedule is often a key factor in evaluating where a project was successful or not. Our dedicated project manager will work closely with the project manager from Authority on each individual project to define the initial schedule and will communicate often where there are any adjustments or impacts to the schedule. Close coordination with Authority is required to strike a balance between strict adherence to committed timelines versus any sacrifice in the quality of any deliverables.

3.1.3 QA/QC Procedures

We have identified QA/QC as a unique supporting role on our organization chart intentionally to demonstrate that Eramosa has an internal QA/QC policy and set of procedures to be followed on each project with sign-off along with all deliverables. It is our intention that QA/QC will be performed by individuals not directly involved in any project.

3.1.4 Cost Control

Tied very closely to scope definition, cost control or budget management is expected to be a key factor for both Eramosa and the Authority to successfully complete one or more projects resulting from this RFQ. It is important that projects are executed on budget; however, to do so, the budget baseline must be commensurate with the scope of services to be delivered, and the schedule over which the team has to deliver.

3.2 Communications Plan

While the RFQ does not specifically identifies that one of the electrical engineers from the Core Team will be the key point of contact for Authority throughout the contract, we believe it is important that our project manager also be involved in major communications including where new projects are defined, proposals are to be prepared, or where significant impact to schedule, scope or budget is a risk on any project.

Depending on the scope, size and schedule for each project, we would propose regular virtual meetings with Authority to discuss on-going project management topics including scope, schedule, budget, risk, etc. and also engage in technical reviews and discussions as required. For major design reviews, in-person meetings and workshops would be preferred, provided that local public health restrictions permit such in person attendance. Our team will maintain a record of all meetings and workshops by way of issuing formal minutes. Informal calls may be summarized by email as appropriate.

Where projects involve one or more external stakeholders, a more comprehensive communications management plan may be required to facilitate distribution of information to the required parties in a timely manner and to facilitate feedback from those parties if and where required.

3.3 Core Team Member Substitution

It is our intention to maintain the Core Team for the duration of the agreement; however, should unforeseen circumstances prevent one or more of those team members from being available to support projects issued by the Authority, Eramosa's internal management team will work to identify substitute personnel as required. Every effort will be made to identify substitute personnel with qualifications and/or experience equal to those proposed as part of the Core Team.

Eramosa utilizes SharePoint for project delivery and file storage. It is not anticipated that the substitution of any Core Team member would prevent the continuation of a project, even one which has reached a post-project, closeout, or warranty stage.

3.4 Innovation & Efficiency

Our team includes two (2) dedicated drafting personnel skilled in AutoCAD, Revit, MicroStation. With design projects staggered at different phases over time, typically these two individuals are able to keep up with the drafting workload from all internal design professionals. In situations where the amount of drafting work exceeds our internal capacity, we have outsourced this work with success and did not find that quality suffered. This option also exists for quick turnaround work where interrupting our other projects is not ideal.

As many of our projects are structured with Eramosa acting in a sub consulting role, we have not found a need to have in-house plotting equipment. In cases where large drawing plotting is required, this service is outsourced locally to the responsible office performing the design. With the evolution of the digital transformation, we find that many of our clients prefer digital drawing format; however, should printed copies be required, we can provide as required.

Where specialized services are required on projects that exceed our in-house capabilities, we have successfully worked with many other firms and contractors to provide services including, but not limited to:

- Specialized motor testing
- Soil resistivity testing

These are just a few examples of services that our team has outsourced to fulfil specific needs on projects where our team cannot fully satisfy the requirements.

3.5 Certifications

Below is our AVEVA Systems Integrator certifications:

4.0 QUALIFYING PROJECTS AND REFERENCES

We have selected a few of our projects to show our broad experience to meet the requirements.

Project Title	Duration	Owner / Agency Point of Contact	Size of Project	Scope of Services
SCADA Master Plan, Design Upgrade, Construction Services, Standards (PCN)	**Project Duration: 2013-Present**	**Inland Empire Utilities Agency** **6075 Kimball Ave, Chino, CA 91708** **Travis Sprague, IEUA, Project Manager** **909-994-1992** **tsprague@ieua.org**	**$3,500,000**	**SCADA Master Plan, SCADA Upgrade Design, Construction Services, Standards (Process Control Narratives)** **Jeffrey Montano, PM** **Brittany Moore, EIT** **Max Sverdlov**

This on-going project began with the development of a comprehensive SCADA Master Plan to define and document a roadmap for the implementation of the technology, practices and organization required to meet the Agency's long-term vision for SCADA. The Agency's current state was captured through onsite field investigations, reviewing existing documentation and conducting staff interviews. The Agency's business requirements and vision for SCADA were captured through facilitated stakeholder workshops and by researching and analyzing technology alternatives and best practices required to address the Agency's business requirements. Preliminary recommendations were reviewed to reach consensus on projects and priorities required to achieve the desired state, then project scope statements with budget and implementation plans were developed to bridge the gap between the current state and the desired state. The final SCADA Master Plan report provided a strategic roadmap for the Agency to invest $14.3 million in SCADA upgrades over a 7-year period. Key SCADA upgrade projects identified in the SCADA Master Plan included:

- Developing SCADA standards, guidelines, and specifications
- Developing a SCADA DR/BC plan and lifecycle management plan
- Developing SCADA governance, change management and organization support plans
- Performing an independent SCADA vulnerability assessment to determine the effectiveness of the Agency's current security measures
- Implementing an enterprise-wide, fully integrated and uniform SCADA Supervisory Control level based on the Rockwell FactoryTalk platform
- Upgrading existing PLCs to the ControlLogix or CompactLogix processor
- Decommissioning the Foxboro Supervisory Layer
- Designing an Operational Data Management System (Historical data collection and reporting)

- Implementing an electronic document management system
- Developing a knowledge management plan
- Defining operational performance management KPIs
- Implementing equipment condition-based monitoring
- Automating workflow management
- Implementing electronic O&M manuals

Eramosa has now been contracted by the Agency for design and construction administration of the SCADA System upgrades at RP-1, which is now underway. The project supplies the migration of the existing Invensys Foxboro DCS system to Rockwell Automation PlantPAx based SCADA Enterprise System. Consulting Engineering services provided include system pre-design, control panel design, process control narratives, design review, and services during construction.

Riverside Public Utilities **Owner's Engineer for Water SCADA Technology Upgrade Project – RFP No. 2055**	**Project Duration: 2020-2021**	**Riverside Public Utilities** **3750 University Ave., Third Floor** **Riverside, CA 92501** **Mera Chaney, Project Manager** **951-826-5025** **MChaney@riversideca.gov**	**$43,000**	**SCADA and Automation System Conceptual Design and D-B Specification, Bid and Award Support** **David St. Pierre – Westin Technology Solutions, Principal** **Jeff Burton, PM**

The City of Riverside Public Utilities Department, Water Division, is executing the Water SCADA Security and Reliability Program (Program) to address functional and technological issues caused by aging SCADA network servers, outdated SCADA platform software, and non-standardized HMI programing.

A team of Westin Technology Solutions and Eramosa International, Inc (EII) was selected to provide a comprehensive review of the Design-Build specification document already prepared by others. This specification was used by RPU to solicit proposals for the design, procurement and construction of the new SCADA system. The primary objectives to be delivered by that future Design-Build project include:

- Provide water system monitoring and control under a single application
- Comply with the City's Cyber Security and network requirements
- Autosave Change Management System for PLC & SCADA application

Westin was part of the RPU Consultants Panel and provided general project review and oversight, while the EII team executed the project. Initial review of the existing specification revealed multiple gaps that would need filled to obtain responsive and comprehensive D-B proposals. EII worked with the RPU team to develop a conceptual design that considered network architecture, cybersecurity, PLC and SCADA hardware and software, Operational Technology, standards development and implementation, and integration and construction. This design was then captured in the final Design-Build Specification, which included Business Requirements and Statements of Qualifications, that was issued for bid by RPU. EII continued to support the project by reviewing and evaluating the submitted responses, participating in interviews with short-listed bidders, and coordinating with RPU on the final recommendation of award.

Eramosa's performance received high praise and we were asked to competitively propose on the follow-on project, Owner's Engineer Services for the duration of the D-B upgrade project. We were selected and notice to proceed is pending Board approval.

Goulais Well MCC Upgrades	**Project Duration: 2018-2020**	**Sault Ste. Marie PUC Services, Inc.** **500 Second Line E** **Sault Ste Marie, ON, Canada** **P6B 4K1** **Mitchell Paradis** **705-759-6585** **Mitchell.paradis@ssmpuc.com**	**$114,000**	**Electrical Design, Construction and Start-up Support** **Mounes Dabjan, Lead Engineer**

Eramosa was retained by PUC Services to complete electrical upgrades to the Goulais Well including replacement of the existing motor control centre. The complete electrical upgrades consisted of a new secondary feeder from the existing outdoor transformer to new outdoor main disconnect, manual transfer switch, portable generator connection box and new MCC. During the design phase it was determined that new variable frequency drives would be provided with the new MCC to provide better flow and pressure control of the pumps. The existing pumps were equipped with hydraulically operated flow control valves and due to the decision to utilize VFD's it was determined that minor process mechanical upgrades would be required to complement the electrical upgrades. Construction sequencing was a challenge due to the unique hydraulic properties of the artesian well from which the pumps draw water. During times where water demand is low and no pumps are in operation, the artesian well will flood and continue to discharge water through the site drain chamber. This presented a challenge to complete the individual well pump pipe modifications as at least one pump had to be operational to prevent flooding of the station with the piping open. Upon completion, the legacy electrical infrastructure has been completely replaced, enhanced operational control and flexibility was provided through the use of new VFD's and operations now have the ability to operate the wells during periods of electrical utility failure with a portable generator and manual transfer switch. Construction and commissioning was completed in 2020.

5.0 EXCEPTIONS

Eramosa has not exceptions to the Request for Qualifications.

6.0 ADDENDUMS

Eramosa has verified on the board's bidding web site for any addendums and verified that for this RFQ there are no addendums.

7.0 BILLING RATES AND COSTS

See Appendix B for document that covers Billing Rates and Costs. Per this RFQ Appendix B will be submitted as a separate document using the following file name:

Eramosa Billing Rates and Costs.PDF

Appendix A

Resumes

EDUCATION

B.S.E.E.E., California State University, Sacramento

Iil Project Management Fundamentals

NEC 2014

PROFESSIONAL ASSOCIATIONS

Professional Engineer, California & Oregon

APEGA Alberta P.Eng.

Jeff Montano, PE, P.Eng.

Team Leader/Project Manager

Jeff Montano is a seasoned Engineer with 20+ years experience in condition assessment, planning, design and project management for SCADA, DCS, electrical power, process, I&C, and communications. Jeff has extensive experience in design, construction, system integration, instrumentation & control, process systems, power systems, water, food & beverage, mining & material handling. He has experience in master planning, business systems, integration, configuration and training.

PROJECT EXPERIENCE

Inland Empire Utility Agency, Chino, CA – RP-1 SCADA Migration: Leading the effort to replace Reginal Plant #1 SCADA System, meaning oldest and most modified plant in the fleet with Digester #1 dated 1948. The plant was operating on two SCADA system struggling with obsolescence and support. Eramosa worked with the Agency to apply SCADA standards, upgrade the campus Fiber infrastructure, and address server and control room upgrades. The final solution is a single SCADA software across Agency fleet that reduces lifecycle cost of ownership.

Napa Sanitation District, Napa, CA - SCADA Master Plan: Lead the effort to create a SCADA Master Plan for the Napa Sanitation District. Effort included Assessment, Industry Practices for SCADA, a Gap analysis and an Action Plan to progress the system along with the industry.

San Juan Water District, San Juan, CA – SCADA Master Plan: Lead the effort to create a SCADA Master Plan for the San Juan Water District. Effort included Assessment, Industry Practices for SCADA, a Gap analysis and an Action Plan to progress the system along with the industry.

Eagle River Water and Sanitation District, Vail, CO – SCADA Assessment: Develop Wastewater SCADA assessment and design replacement plan for three plants. Design replacement of Wonderware SCADA system at WWTP with GE's Proficy to match water plants. Design system architecture to enable remote monitoring and control of WW plants.

TransAlta Life Extension Program, Alberta, Canada: Involved in the life extension program which covers 18 generating units over multiple years. Work will include site condition assessments, upgrade evaluation potential, preliminary costing, and scheduling and interfacing with the equipment manufacturer.

Mammoth Lakes, CA – Wastewater Plant Expansion, MCWD: Responsible for design of electrical/I&C design build package and construction services during the installation of the SCADA/Electrical. All the older MCCs were replaced with new gear. A new ATS and Generator were added to provide back-up power to the plant. Coordination with contractors and equipment vendors to integrate new control panels and LAN linked to SCADA computers. Once WWTP control systems were installed the main SCADA system was upgraded from Intouch 8.11 to 9.5 to a new architecture and installed into racks located in Telco closet.

Alameda Flood Control Agency, Alameda, CA – Storm SCADA System: Responsible for configuration and construction services during the installation of the flood control SCADA system. This system has 20 pumping stations, a repeater site and a central control center. These sites are all linked using spread spectrum radios and dial-up modems for back-up to the SCADA computer network. The SCADA computer has remote dial-in access and control of the entire system. Tasks include electrical design packages, RTU programming, radio configuration and system networking.

Santa Lucia Preserve, Carmel, CA - Water SCADA System: Responsible for construction services during the installation of the water SCADA system. This system has over 100 sites including wells, water treatment plants, booster stations and PRVs. These sites are all linked using spread spectrum radios, RS485, and DH+ to a central SCADA computer. The SCADA computer has remote dial-in access and control of the entire system. Tasks include electrical design package, RTU programming, radio configuration and system networking. Development of custom driver to capture flow meter totals.

TID Don Pedro Dam Projects: Don Pedro Dam comprises two water conveyance tunnels and a four-unit hydro power generation powerhouse. The work performed by HDR was part of life extension plans for the facility that began with their power and diversion tunnels. The work established trustworthy clearance and protection points upstream of the powerhouse. Then moved into the powerhouse and related balance of plant equipment. As the program manager he leads a design team and facilitates the process to replace outdated systems, upgrades on the power units and related balance of plant equipment.

NID Chicago Park Upgrade Project: Chicago Park hydro generation project consisted of generator, station service and line protection relay replacement. Electromechanical relays were obsolete and replaced with microprocessor/digital relays and clean-up of the main control switchboard. As PM and lead he managed a design team and facilitated the process to replace outdated relay systems using the spec, procure, design and install sequencing process. Relay settings, start-up planning and testing support were provided that resulted in a clean-up of electrical documentation and improved protection of the unit.

Friant Power Authority, Quinten Luallen Hydroelectric Project: Friant Power Authority embarked on development of a new 7.3MVA Hydroelectric project to capture power from increased discharge flows to the San Joaquin river as part of a river restoration project. This minimum flow unit operates in concert with a bypass valve to maintain river flows and fits into a powerhouse that is 40' X 30'. Construction support and field engineering including design coordination as well as startup and commission activities were provided.

Pacific Gas & Electric, CA – Helms Pump Storage Facility Distributed Control System (DCS) Replacement (1200 MW): Responsible for design of equipment arrangements, power distribution, fiber network, grounding, and interconnections for new Emerson Ovation distributed control system installed in a 1200MW three-unit facility. The system replaced an existing Foxboro distributed control system and was phased in over multiple outage seasons while maintaining unit operations and addressing NERC related considerations. Additions included Enterprise Historian and related NERC consideration. Coordination with corporate IT and security team members were key to address NERC related items.

EDUCATION

Bachelor of Science, Chemical and Biological Engineering

Colorado State University, Colorado, 2011

PREVIOUS EXPERIENCE

Premier Stainless Systems Process Automation Engineer (2018-2020)

Stone Brewing Company Automation Engineer III (2015-2017)

PLCs Plus International Electrical Design Engineer (2014-2015)

Esys The Energy Control Company

System Design Engineer (2011-2014)

CERTIFICATIONS

NCEES Fundamentals of Engineering Exam: Passed (2011)

Professional Certificate of Competency in PLCs and SCADA Systems, Engineering Institute of Technology (2014)

Rockwell Automation Studio (RSLogix 5000) Project Development (2014)

Ignition SCADA/HMI 7.7 Certified, (2015)

Brittany Moore, EIT

Instrumentation and Controls Engineer

Brittany Moore joined Eramosa in 2020 bringing with her more than nine years of experience. Prior to joining Eramosa Brittany was involved in the design of instrumentation and controls and process automation systems for a variety of different industries. She has experience with the design of electrical control panels, instrumentation selection, development of P&IDs and control narratives.

Throughout Brittany's career she has also developed an interest and aptitude for programming and has experience working with Ignition SCADA and Allen Bradley among other PLC/HMI platforms. Brittany's experience and enthusiasm that she brings to her work will be an added value to any project team.

PREVIOUS PROJECT EXPERIENCE

Inland Empire Utility Agency, Chino, CA – RP-1 SCADA Migration - Design Lead to replace Reginal Plant #1 SCADA System, meaning oldest and most modified plant in the fleet with Digester #1 dated 1948. The plant was operating on two SCADA system struggling with obsolescence and support. Eramosa worked with the Agency to apply SCADA standards, upgrade the campus Fiber infrastructure, and address server and control room upgrades. The final solution is a single SCADA software across Agency fleet that reduces lifecycle cost of ownership.

Premier Stainless Systems – Lead the design and development of process automation systems using Allen Bradley Studio 5000, iX Developer, Idec WindLDR, DirectSOFT 6, and C-More software. Provided on-site startup and commissioning services for automated systems installed around the world. Worked with vendors to select instrumentation and assisted the electrical department in design of the associated wiring for automated systems. Provided electrical, mechanical and programming troubleshooting for existing installations both remotely and onsite. Met with potential customers to answer automation questions and provide automation program demos.

Stone Brewing Company – Worked with operators to optimize Ignition SCADA system to increase production and operator ease. Developed Ignition SCADA dashboards for operators, supervisors, and C-level management to display critical plant data. Integrated new PLC projects into existing SCADA system, ensuring visual and control continuity between plant all systems. Developed operating procedures and troubleshooting guides on new and existing equipment throughout the plant. Provided programming support for all existing equipment in the plant, including multiple types of PLCS, HMIs, and instrumentation that

implemented various communication protocols such as Ethernet TCP/IP, Modbus, and DeviceNet.

PLCs Plus International – Prepared scope of services and project estimates for control system implementation. Managed drafting department for control panel design including development of AutoCAD drafting standards. Designed, implemented, and tested the control system for a technology used for the reduction of NOx emissions in boilers.

Esys The Energy Control Company – Worked with clients to write scopes and provide estimates for new projects that met client's needs for steam production. Created P&IDs, PFDs, I/O count sheets, control narratives using AutoCAD and Excel. Designed wiring diagrams and panel layout drawings for control panels, variable frequency drive panels, and 480 VAC distribution panels for outdoor use in accordance with NEC and UL508A requirements. Worked with vendors to ensure instrumentation and equipment met design requirements for corrosive process flows installed in areas classified as Class 1 division 2 explosive locations. Set project schedules, coordinated with panel shop, electricians, welders and customers to ensure multiple project deadlines were met simultaneously. Prepared and submitted close out documentation for clients including instrument specification sheets, maintenance guides, system troubleshooting manuals, and operator quick guides for completed systems.

EDUCATION

Electrical Engineering Technology – Process Control
Conestoga College, 2012
Kitchener, Ontario

CERTIFICATIONS

Certified Technician

PROFESSIONAL ASSOCIATIONS

Ontario Association of Certified Engineering Technicians and Technologists (OACETT)

Chris Kampf, C.Tech.

System Integrator / Technical Master Rockwell SCADA

Chris joined Eramosa in 2013 and brings over 7 years of experience in the Supervisory Control and Data Acquisition (SCADA), instrumentation and control industry grounded by his background in Electrical Engineering Technology. He has been involved in the design, construction, and commissioning of municipal water and wastewater SCADA upgrade projects in large and small municipalities. He has experience in the development, deployment, and commissioning of pump control systems, PLCs, and HMI solutions for SCADA projects.

Chris is a key member of Eramosa's team, and brings with him knowledge of automation systems using various platforms. He also has experience in electrical and PLC/PAC control panel design and site inspection.

PROJECT EXPERIENCE

Sault Ste. Marie PUC – Water System SCADA Upgrades: Eramosa Engineering completed a system wide water SCADA system upgrade for Sault Ste. Marie PUC (SSM PUC). The project included a design phase, which has been completed, and a one-year implementation plan for the PUC's water facilities, which is currently underway, to be completed in October 2018. SSM PUC operates eleven (11) SCADA-connected remote sites consisting of four wells, four booster stations, three water storage facilities, and one water treatment plant. The project included a basic review of the available SCADA technologies, selection of SCADA hardware and software platforms, identification of network requirements, creation of base SCADA standards, process control narrative development, and the complete detailed design for the implementation of the new system wide water SCADA system. During the detailed design phase, the team responsibilities included detailed design of a new SCADA network, cellular communications system, process control narrative development, P&ID development, and PLC control panel design. During the implementation phase, base PLC and HMI/SCADA software standards were developed and are being utilized for development of PLC and HMI programs. A completely new High-Performance HMI system was configured and installed by Eramosa using Ignition SCADA.

Regional Municipality of Niagara – Kent Avenue Booster Station Upgrades: The Region has undertaken a project to upgrade the entire electrical system at the Kent Avenue Booster Station as the existing infrastructure has reached the end of its usable life. As part of the project the existing substation, switchgear and MCC are all being replaced. The existing RPU control panel is also being replaced with a new CompactLogix PLC controller in alignment with the Region's SCADA standards. Several pump discharge valves and reservoir inlet valves are also being replaced.

City of Hamilton - SCADA Master Plan & Standards for Water and Wastewater: Eramosa Engineering completed a system wide SCADA system upgrade for the City of Hamilton. The project is a multi-year program intended to develop a master plan, standards and implementation plan for the City's water and wastewater facilities. The City of Hamilton has approximately 140 remote sites and four (4) treatment facilities. The water treatment and distribution systems operate independently of the Woodward water treatment plant. The project included a review of the available SCADA technologies, identification of network requirements, creation of standards and the complete detailed design for the implementation of the new City wide SCADA system. Eramosa, as the lead consultant, partnered with Westin, XCG and R.E. Poisson Engineering for this project. As a component of the project, the Eramosa team completed an asset inventory data collection and database for the 140 facilities providing the City to jump start their CMMS implementation. The team responsibilities included process control narrative development, P&ID development, electrical and control panel design. PLC and HMI/SCADA software standards were developed and utilized for development of PLC and HMI programs. The project also involved on site supervision and commissioning as upgrades were completed at the facilities.

Regional Municipality of Waterloo – Elmira WWTP NFPA 820 and SCADA Upgrades: As part of the SCADA System pre-design, the Elmira Wastewater Treatment Plant was designated to be upgraded to regional standards. From the previous successes at both the Galt WWTP and Preston WWTP, Eramosa was retained to provide the electrical, instrumentation and control, and SCADA design for the upgrades. The design consisted of replacing the existing plant wide SLC 5/04 PLCs with regional standard Allen-Bradley ControlLogix components. A new fiber optic network to link the various PLCs plant wide, new GE Proficy iFIX SCADA servers and historian, and miscellaneous facility upgrades including new instrumentation and equipment to enhance the process were all added as part of the upgrades. A dedicated Waterloo Region Education and Public Network (WREPNet) wide area network link to connect the plant region wide for centralized reporting and monitoring was also installed. The plant consisted of numerous remote I/O panels and DeviceNet-based VFDs which were replaced and upgraded utilizing hardwired controls to aid the region in support of the system long term and to match current standards. Using Eramosa's proven methodology of process narrative workshops, key stakeholders were brought on board to achieve consensus on the upgrades and how the facility should be automated. As part of the upgrades, the Raw Sewage Pumping Station, headworks, dewatering, and raw sludge pumping buildings and rooms are also undergoing upgrades to include electrical retrofits to comply with NFPA 820 for explosion proof installations within a wastewater treatment plant. Subsequent to design, Eramosa will also provide the software development services for replacing all of the PLCs, integration of the new SCADA system, and development of e.RIS-based reports.

City of Hamilton – Woodward Ave Water Treatment Plant Upgrades: The city completed extensive upgrades to the Woodward Avenue Water Treatment Plant which included a fundamental change in the backwash processes to derive backwash flows from the high lift headers in the high lift building. It also included the decommissioning of the existing backwash tower systems. As part of the RVA design team, Eramosa designed and commissioned the high lift backwash valve control circuits allowing for remote integrated control with the water plant master flow controller PLC, as well as a local interface control panel should local operation be required as a control method of last resort. Given the backwash system is now spread across two separate facilities, Eramosa designed distributed and readily accessible safety shutdown interlocks in each building. Eramosa also created and commissioned new ControlLogix PAC controllers in the high lift building for backwash control as well as the replacement of the existing SLC PLC panels in the filter galleries. PanelView OIT applications developed in FactoryTalk ME were installed at each filter to allow operations to locally observe and control individual backwash processes.

EDUCATION

B.S., Mechanical Engineering, University of Nebraska, 1991
Lincoln, Nebraska

PROFESSIONAL ASSOCIATIONS

Professional Engineer KS #15579
Professional Engineer MO #2020027937
Professional Engineer FL #90208
OSHA 10 Hour Safety Training Certificate

Jeff Burton, PE

Vice President

Jeff Burton is a highly skilled project manager with demonstrated accomplishments in engineering project pursuit and execution (including scope, schedule, and budget performance), client management and new client development, and team administrative leadership. As Vice President of Eramosa International, Inc., Jeff has responsibility for all aspects of the Eramosa Engineering's U.S. business, including operations and team management, strategic growth, business development, project execution and performance, and conformance to quality standards.

PROJECT EXPERIENCE

Imperial Irrigation District (IID), WSA Capital Replacement Plan Update - Eramosa was retained by IID to update their Water System Automation Capital Replacement Plan. The new plan documented the existing SCADA assets (hardware and software), developed a conceptual design to upgrade their antiquated SCADA system, identified suitable replacements and upgrades, and provided an annual, budgetary cash flow over the 20-year program life of the Plan.

Eramosa inspected approximately 20 of the 60 custom sites and several of the 109 sites that were built using a set of standard, turnkey design documents. The assets were categorized by type and function, and the remaining useful life was estimated based on in-service date. The conceptual design was developed collaboratively with IID personnel during multiple workshops and budgetary costs were gathered for all components, including gates, actuators, instrumentation, VFD's, backup generators, and PLC and SCADA hardware and software.

An implementation schedule was developed using identified risk criteria to prioritize and levelize the work. The budgetary costs were then added to this schedule and additional adjustments were made to keep the effort manageable with respect to IID resource availability and annual costs.

EDUCATION

Instrumentation & Control Engineering Technology
Lambton College, 2017
Sarnia, ON

CERTIFICATIONS

Standard First Aid – CPR C – AED (2020)

JHSC Part 1 & 2 (2020)

PREVIOUS EXPERIENCE

Lambton College
Sarnia, ON 2018

Imperial Oil Resources
Cold Lake, AB 2015

Courtney Bacon

Systems Integrator

Courtney is a graduate of Lambton College's Instrumentation and Control Engineering Technology program. Since starting with Eramosa in 2018, Courtney has worked on various PLC and HMI platforms, including Allen Bradley SLC and Logix controllers, GE RX3i controllers, and Emerson ControlWave Micro controllers. Courtney has versatile HMI skills and is experienced with Wonderware InTouch, Wonderware SystemPlatform, and Inductive Automation Ignition HMIs. Her previous experience includes working in the Oil and Gas sector as well as in Research and Development.

PROJECT EXPERIENCE

North Middlesex – West William PS: Eramosa was retain by the Municipality of North Middlesex to complete upgrades to the West William Sewage Pumping Station. The upgrades included replacing the backup pump so that capacity matched the main pump sizing. To complete the design and contract administration Eramosa provided Electrical, Instrument & Controls, and SCADA Engineering. The backup pump received a new 600V VFD including all associated wiring and controls, a new PLC control panel detailed design was completed with Allen Bradley CompactLogix controller. Field integration services included programming and commissioning the PLC, new high performance HMI screens and a new PanelView local OIT. The network was commissioned on a new Cisco IE1000 switch. Eramosa completed all commissioning activities with the contractor. Eramosa was responsible for SCADA Site Acceptance Test activities including I/O checks, system deployment, training and overall project site inspection.

Town of Mono – SCADA Upgrade: The Town of Mono water system consists of eight (8) production wells distributed in various facilities, Coles, Island Lake and Cardinal Woods, a water tower and four(4) reservoirs that provide treated water to the Town's distribution system. Under the SCADA upgrade project Eramosa Engineering Inc. was retained by Wallwin Electric to replace the existing SCADA system with new Allen Bradley CompactLogix PLCs and Wonderware InTouch 2017 HMI. The existing SCADA and control and network infrastructure was updated in all four (4) remote sites and new SCADA and historian servers were installed at the Town's head office. As part of the software upgrades, Dream Report software with hot redundancy was installed and configured for reporting. WIN911 hot backup was installed in a hot backup redundancy configuration to provide after hours alarm notification services to operations staff. Existing Allen-Bradley SLC 500 series controllers were replaced with existing programs modified to suit the new hardware. The migration from the old to new control systems at each facility was completed over a number of days in close coordination with operations staff to maintain service to the Town.

Regional Municipality of Muskoka – Lone Pine Process Upgrades: Eramosa Engineering worked under Nielsen-Tran Mechanical to provide SCADA programming and commissioning services for the Lone Pine Sewage & Water Treatment plant upgrade. The upgrade consisted of primarily like for like equipment and instrumentation replacements while maintaining plant operations. Eramosa was responsible for IO checks and confirming proper operation of new equipment and instrumentation within the current controls programming. Under the contract approximately 20 valves, 20 instruments, and 10 pumps were replaced.

St Thomas – Albert Roberts Booster Pumping Station: The city of St. Thomas identified that the Albert Roberts Booster Pumping station hardware was obsolete and becoming increasingly difficult to maintain and was in need of replacement. The 4 FNVR pumps were experiencing significant failures due to their age. When reviewing the pumps for upgrade it was also identified that the controls of these pumps should be moved to VFD control to provide finer flow control. The existing MCC hardware was too outdated to accommodate the VFD upgrade and was then marked for replacement as well. The original AB SLC 500 PLC controlling this plant had been physically installed into the MCC so demolition of the MCC required replacement of the PLC as well. Eramosa was retained by the city to provide new PLC programming, HMI programming and SCADA programming for this site. Since this booster pumping station was the first to be upgraded Eramosa worked with the city to develop new standards. Using FT Logix 5000 v24.00 new standard driver and controls blocks were developed to control the plant. The Rockwell HMI and FT View SCADA applications were both developed to use the new industry standard high performance screen methodology. In addition to the PLC, HMI and SCADA programming Eramosa also developed a full PCN for the site, performed a FAT and coordinated the SAT to be done over multiple visits to accommodate the transition of 1 pump at a time.

Municipality of Strathroy-Caradoc - Albert St PS Upgrade: Eramosa engineering, working with Mclean Taylor, was retained by the Municipality of Strathroy-Caradoc to upgrade the Albert St Pump Station. The scope included AB CompactLogix PLC, AB Panelview 5310 and Proficy iFIX programming for 3 pumps. Eramosa also created a PCN and provided for a FAT of the software and on-site commissioning and testing.

City of London – Secondaries SCADA Upgrade: Eramosa Engineering was retained by the City of London to upgrade all of their current GE code to a common standard and naming conventions. As well the SCADA system was converted from Wonderware to Archestra as each site's PLC code was upgraded. Overall the upgrade covered 2 of the city's wastewater treatment plants and 4 of their water pumping stations. Eramosa assisted the City in SCADA integration using the following software platforms: Proficy Machine Edition 8.0 (GE Rx3i PLCs), Wonderware System Platform 2012 R2, and Wonderware Historian 2012 R2. Eramosa was responsible for planning and implementing the system integration including the commissioning of both PROFIBUS and DeviceNet communication networks utilized by the PLC to monitor and control the process. Services provided by the team included PLC and SCADA programming, and site acceptance testing (SAT).

Municipality of Lambton Shores – Historian Upgrade. The Municipality retained Eramosa to upgrade their existing historian and SCADA system at its four main locations. A new Wonderware 2020 historian was deployed to a central, virtualized EXSI Windows server computer. All existing historian data was converted an imported from their previous version to provide a uninterrupted historical record. The Wonderware InTouch application was upgraded to 2020, installed on new work stations and deployed at their three monitoring sites. A new Win911 Interactive system was installed with the upgrade to provide automated alarm notification to operations.

Municipality of Chatham-Kent – Maintenance: Eramosa Engineering regularly assists the Municipality of Chatham-Kent with their Water and Wastewater SCADA system maintenance. Eramosa works with the Municipality's SCADA group to regularly make updates to the system including technical recommendations for improvement and process stream-lining, removal of obsolete control functionality, addition of new control functionality, correction of field issues and graphical updates to reflect continual facility improvements completed by the Municipality. Typical maintenance includes back-filling historian data after communication issues and troubleshooting processes. The Municipality uses a combination of Allen-Bradley PLCs (such as SLC and Logix Family Controllers) and networked Factory Talk SCADA servers.

EDUCATION

Mechanical Engineering Technologies: Design & Automation
SAIT Polytechnic 2014-2016
Calgary, Alberta, Canada.

PROFESSIONAL ASSOCIATIONS

Technologist in Training (T.T.)
The Association of Science and Engineering Technology Professionals of Alberta (ASET)

Cody Maynard, T.T.

Systems Integrator

Cody joined Eramosa in 2018 with 2 years of prior experience working in various areas of the manufacturing industry since graduating in 2016. His expertise lies in PLC programming, HMI/SCADA application development, system troubleshooting, and system commissioning.

Cody is an extremely outgoing individual who takes pride in building relationships through result driven interactions with clients, building trust through taking on unique solutions designed to fit specialized needs of any system of any scale.

PROJECT EXPERIENCE

City of Campbell River – SCADA System Upgrades: Eramosa was selected by the City of Campbell River to upgrade an aging and slow responding SCADA Host and communication system for their water and wastewater systems. The existing iFIX SCADA system was replaced by Schneider's ClearSCADA, as selected by the client. The existing GE iHistorian was replaced with ClearSCADA's integrated historian and e.RIS. As part of this upgrade, the communication protocol was upgraded from Modbus to DNP3. The project started off with workshops to define the new system architecture, SCADA Standards, Alarm Management Strategy, Testing Plan and Commissioning Plan. Interaction with the City's IT department was initiated early and contributed to a successful implementation. In order for the communication protocol to be upgraded, Eramosa generated DNP3 conversion tables for every remote site, which involved the configuration and fine-tuning of the deadband for communication optimization. One ClearSCADA application was generated for both water and wastewater operations staff, where access is granted based on login credentials. The call-out mechanism changed from local alarm dialers to ClearSCADA's e-mail redirection tool, and therefore allowing additional alarm details to be included in the call out. An in-house FAT was completed with the client present, which proved to be very valuable, from a technical as well as a relationship building perspective. Following the FAT, the commissioning was partially completed ahead of arriving on site, as the DNP3 conversion tables were uploaded by the client and put in service one at a time. Access to the SCADA system from tablets was implemented immediately after the project seamlessly. e.RIS was configured with several reports, but was mainly put in service to quickly extract data when required for regulatory reporting purposes.

City of Red Deer – SCADA Security Maintenance: Eramosa implemented a segregated SCADA (Operational) network with remote access through the DMZ,providing support from Microsoft, McAfee, and GE, through the form of updates and patches, focusing on Cyber Security and preventative maintenance for the Red Deer Water and Wastewater treatment plants. Additionally, providing the customer with a synapse of the tasks completed on a monthly basis

City of Cold Lake – SCADA System Upgrades: City of Cold Lake – SCADA System Upgrades: The City of Cold Lake's SCADA system has connections to the City's water treatment plant, four (4) distribution system facilities, eight (8) waste collection facilities, and two (2) sanitary stations. City selected Eramosa to perform a SCADA system upgrade which included the addition of redundancy and features to improve the operational usage of the SCADA system as a tool and not as a hindrance. The City selected VTSCADA as the future SCADA platform to be used at the City with the existing PLC hardware being maintained. Eramosa was responsible for the development and implementation of the new SCADA system which included the deployment of servers, network hardware, operator workstations and the addition of a tablet to be used by operations while in the field. A virtualized VMware environment with redundant hosts was implemented for the SCADA servers and an additional host was implemented for shared services between the SCADA system. Additional features were added to the SCADA system which included a dedicated Windows Server Active Directory domain controller, Windows Server Updates Services for Microsoft Windows patching, an e.RIS reporting server, workstation and server virus scanning software, and a Network Attached Storage (NAS) device. Alarm notifications through the existing phone line were used and a dedicated backup cellular-based alarm dialer was implemented to notify operations of the conditions where VTSCADA was not able to complete the notification of the alarm to operations. During the SCADA development, a base High-Performance HMI legend and SCADA Graphic Standard were customized to include operational preferences such as pump colours for equipment status indication and tank fill colour for distinguishing between different process liquids.

City of Winnipeg – South End Water Pollution Control Center Upgrade/Expansion Project: Winnipeg – South End Wastewater Pollution Control Center – PLC/SCADA System Upgrades: The South End Water Pollution Control Centre (SEWPCC) is the City of Winnipeg's second largest wastewater treatment center. North America Construction (NAC) was awarded the Contract 4 expansion construction contract. Eramosa, as the Automation subcontractor to NAC was responsible for all PLC/SCADA programming, network equipment configuration, commissioning and startup, while Procon, as a sub-contractor to Eramosa, was responsible for the fabrication and supply of all automation and networking panels. The project includes major upgrades the entire plant to increase capacity, integrate new processes and improve treatment capabilities. All processes at the plant were either replaced with new or upgraded. The existing antiquated ABB Infi90 control system was replaced with a new Schneider control system consisting of Modicon M580 PLCs, Citect SCADA application in a ThinManager environment and CiTect Historian. The PLC's were designed and programmed as hot redundant standby processes for each the eight process areas with distributed remote I/O racks and single standalone processors with distributed remote I/O racks for each of the process area HVAC systems. A redundant plant wide PLC fibre network with remote I/O rings, a SCADA server fibre network and Supervisory fiber network was implemented for the control system communications network. Eramosa was responsible for the PLC and SCADA application development for all process areas, network configuration, start up and commissioning services. Some of the challenges includes keeping facility downtime to a minimum as well as to enable temporary communication between the legacy ABB DCS system and the M580 PLC control system, as the control system is upgraded per process area. New process areas are being commissioned one at a time as construction is completed. The project is expected to be substantially completed in 2021.

EDUCATION

Electrical Engineering
Control Systems, Advanced Diploma
Humber College, 2012
Toronto, Ontario

Cisco Certified Network Associate
Humber College, 2014
Toronto ON

PREVIOUS EXPERIENCE

Real Time Systems,
2016

Hatch Mott MacDonald,
2012-2016

Maxim Sverdlov

Team Leader Network Systems Specialist

Mr. Sverdlov is a SCADA and Communications Systems Specialist in the field of water filtration, wastewater treatment, natural gas pipelines and vehicular tunnels. He has technical knowledge and experience programming and configuring GE, AB, Omron and other Programmable Logic Controllers (PLCs). Maxim has a vast understanding of the GE Proficy iFix platform, Rockwell RSView32, FactoryTalk and RSLinx software, as well as experience in server infrastructure design, installation and upgrades utilizing several communication protocols. Maxim has a vast knowledge and experience working with Cisco network equipment designing implanting and programming equipment utilizing Fiber optic and copper media infrastructure. Maxim also has a considerable knowledge of AC & DC electrical components, schematics and several control panel design standards effectively creating enclosure design utilizing tools such as AutoCAD, MicroStation, Visio and others industry tools.

PROJECT EXPERIENCE

City of Hamilton, WWTP Electrical & Chlorination Upgrades: Eramosa was retained to complete the network design and implementation of the Ethernet network for the new electrical system at the Woodward Avenue Water & Wastewater Treatment Plants. The design package contains in-depth detail drawings, media (fibre and copper) patching schedules, integration of the SCADA-E system with the existing SCADA process network and external connections. The network serves as a primary/ backup communication system for the new electrical building containing multiple feeds from local utility and a pair of backup generations that feed power to the 12 external switchgear installed in various strategic locations across the plants.

Regional Municipality of Waterloo – Rural Sites Network Redundancy: Eramosa Engineering was retained by the Region to assist with remote site network connectivity for rural based water sites. Typically, a fibre optic based connection through WREPNet was installed at each rural water facility. Due to the critical nature of these facilities, a hot standby cellular connection was installed. Eramosa completed the design which included introduction of the Open Shortest Path First (OSPF) protocol on the network to handle the redundancy. Eramosa supported the field installation as well to commission the redundant links.

City of Ottawa, Drinking Water Supply Services, Secondary Network Implementation: Eramosa was retained by the City to provide a secondary network implementation to complement their existing network. Eramosa provided technology selection, design and implementation to upgrade the existing Secondary Network from the older HSPA Cellular communications to a high-speed LTE wireless network technology. Our team was responsible for the field re-configuration of the existing Cisco routers at remote facilities and coordination with the service provider to confirm operate of the new LTE network. A new design was required to implement three new centralized core routers for redundancy and to load-balance connections for the remote facilities. This network serves as a back-up communications system for the City's 37 water production and distribution facilities.

City of Ottawa, Wastewater Services WAN and LAN Standards: The City of Ottawa Wastewater Services Department retained Eramosa to develop a comprehensive set of Local Area Network (LAN) and Wide Area Network (WAN) standards for their SCADA system. The existing network infrastructure at the ROPEC wastewater treatment plant and remote facilities consists of obsolete fibre, networking products and unlicensed radios that are beyond end of life, no longer supported and in need of upgrading to current secure technology. The project involved a review of the existing SCADA communication network at the ROPEC plant and the remote facilities, developing level of service requirements and tech memos for the desired plant LAN network, WAN network and the development of LAN and WAN design and construction standards identifying the network topology, preferred equipment manufacturers and models, installation practices and commissioning requirements. A backup server room was designed and constructed to provide redundancy via a primary/backup server room configuration for critical server and core switching and routing equipment. A detailed design for both the new plant LAN and SCADA WAN utilizing the new standards were completed and implemented under separate construction tenders. The LAN design included a redundant core and distribution layer with 110G and 10 G links respectively. Eramosa is the prime consultant responsible for the design standards, LAN and WAN design, construction services and contract administration as well as configuration and programming of the network gear. The LAN upgrades are currently under construction with an anticipated completion date of summer 2023. The WAN design package is complete and is anticipated be tendered in fall 2022.

Water Treatment, Supply PLC Migration GE 90/30 to RX3i, City of Toronto, ON: PLC Programmer and Designer, part of a team responsible for upgrade of existing GE 90/30 PLC's to a new generation RX3i and migrating standalone PI&D loop controllers to newly installed PLC's. Responsible for programming RX3i's with the new P&ID logic, implementing code on live system while insuring no impact is perceived on the overall plant operations. SAT systems with client to insure chemical and filter operations are as per city requirements. Project involves several water treatment plants with City of Toronto.

Waha Texas to Ojinaga Mexico Natural Gas Pipeline, Energy Transfer Corporation (ETC), Houston TX: Communications Network and Control Designer, responsible for designing, drafting, programming virtual network for proof of concept designing a network spanning over 300 miles length pipelines. Part of team responsible for reviewing P&ID's to develop automation SCADA system in remote desert locations utilizing solar control panels which are to house Flow-Boss PLC's. Design difficulties included the limitations of fiber optic attenuation losses and communications and network hardware limitations.

Electrical Unit Substation Replacements and Rehabilitation Upgrades to the Central Treatment Plant, Middlesex County Utilities Authority, New Jersey: Communications Network Control and Designer, member of team which was responsible for designing network utilizing Cisco equipment and fiber optic backbones, network cabinets containing equipment such as switches, UPS's, KVM's, patch panels and other essential equipment. Switchgear Data Gathering Unit panels (DGU) Designer responsible for designing control panels to be installed within multiple substations to monitor and control switchgear and MCC components utilizing GE iFix SCADA infrastructure utilizing Modbus TCP/IP protocol to communicate to Eaton switchgear PQM's.

EDUCATION

B.Sc , Electrical Power Engineering
Damascus University 1994
Damascus, Syria.

TRAINING

The operation philosophy of combined cycle power plant
Mitsubishi Heavy Industries, 1997

The Operation of Hydraulic Circuits -Whalco Hydraulic System 1997

Computerized Maintenance Management System (CMMS)-2004

Transformer Tap Changer-MR 2005

Power Plant Condition Monitoring System (CMS)-Indra 2006

ETAP 114-Power system engineering, 2015

ETAP 113 Power System Engineering Workshop
ETAP Canada, 2017

Protective Device Coordination, and Arc Flash Risk Assessment and Implementation
Easy-Power LLC-2019

PREVIOUS EXPERIENCE

Faremco Int, 2013-2016

Lead C&T, 2009-2012

Jandar 600 MW CCPP, 2004-2008

Daoud Trading Co, 2000-2003

Jandar 600 MW CCPP, 1995-1999

PROFESSIONAL ASSOCIATIONS

Professional Engineers of Ontario
PEO - P.Eng.

Mounes Dabjan, P.Eng.

Team Leader – Senior Electrical Engineer

Prior to joining Eramosa in 2017, over the last 25+ years Mounes has gained comprehensive knowledge of designing, upgrading of electrical & control systems for various industrial applications. Since joining Eramosa, he has been involved in the electrical system design for projects related to water and wastewater treatment industry and industrial sector. Mounes has expertise in the areas of conceptual and preliminary design, detailed design, system factory acceptance testing, commissioning, and troubleshooting of electrical and control system.

Mounes looks forward to working alongside your team to deliver an integrated solution based on the project requirements.

PROJECT EXPERIENCE

Region of Halton – Ashgrove Booster Pump Station: Eramosa was retained as a subconsultant to provide electrical, instrumentation & controls (I&C), SCADA, and networking design and contract administration for a new greenfield 22 MLD water booster pump station servicing Zone 6 of Halton Region's Oakville water distribution network. Water for the booster station is drawn from the Zone 4 reservoir that was just previously constructed on the same property as the Ashgrove BPS. Our team was responsible for the coordination and design of a new 800A 600V electrical feed into the property to service the BPS which also accommodated the redistribution powering of the reservoir from the BPS. A new 750KW generator was designed to support both the BPS and reservoir standby power requirements. A new ControlLogix PLC panel and associated SCADA aspects were designed to the Halton Region SCADA standards. The existing fiber optic communication line was re-purposed to service the BPS as the primary connection point were a new network distribution enclosure was installed. A detailed transition plan was required for the installation of the BPS power and subsequent removal of the existing power feed to the reservoir which is being now fed by the BPS MCC. Three (3) +1 Booster pumps on VFD were installed to service Zone 6 which is to operate as a closed pressure system until a new elevated storage/reservoir is constructed for Zone 6. This Project is in the tendering stage.

PUC Services – Sault Ste. Marie, Zone 2 Booster Pumping Station Upgrades: PUC Services Inc. retained Eramosa to complete electrical system upgrades at the Zone 2 Booster Station in Sault Ste. Marie. The existing MCC had been identified for replacement as it had reached the end of its usable life. During the preliminary design phase, it was determined that the construction sequencing required to replace the MCC would make for an ideal time to replace the existing pumps which were also nearing the end of life expectancy. Because 2 of the existing pumps were capable of being operated electrical and from existing dedicated diesel drives, it was also determined that there would be a need for new standby power systems to operate the new pumps during periods of utility failure as it was not recommended to replace the diesel drives with new. Eramosa retained GM BluePlan to provide process mechanical design services for the replacement of the existing pumps. The existing MCC was using across the line starters with hydraulic flow control valves on each pump to limit flows and pressures in the distribution system. The new MCC was equipped with VFD's to provide better automated flow and pressure control from the existing CompactLogix PLC and Ignition SCADA system. A detailed construction sequencing plan was developed during the design stage to allow the existing diesel driven pumps to maintain water supply while the MCC was replaced and commissioned with new standby diesel generator and automatic transfer switch. This allowed the pumps to be replaced in sequence, followed by installation of new isolation valves on each of the north and south headers.

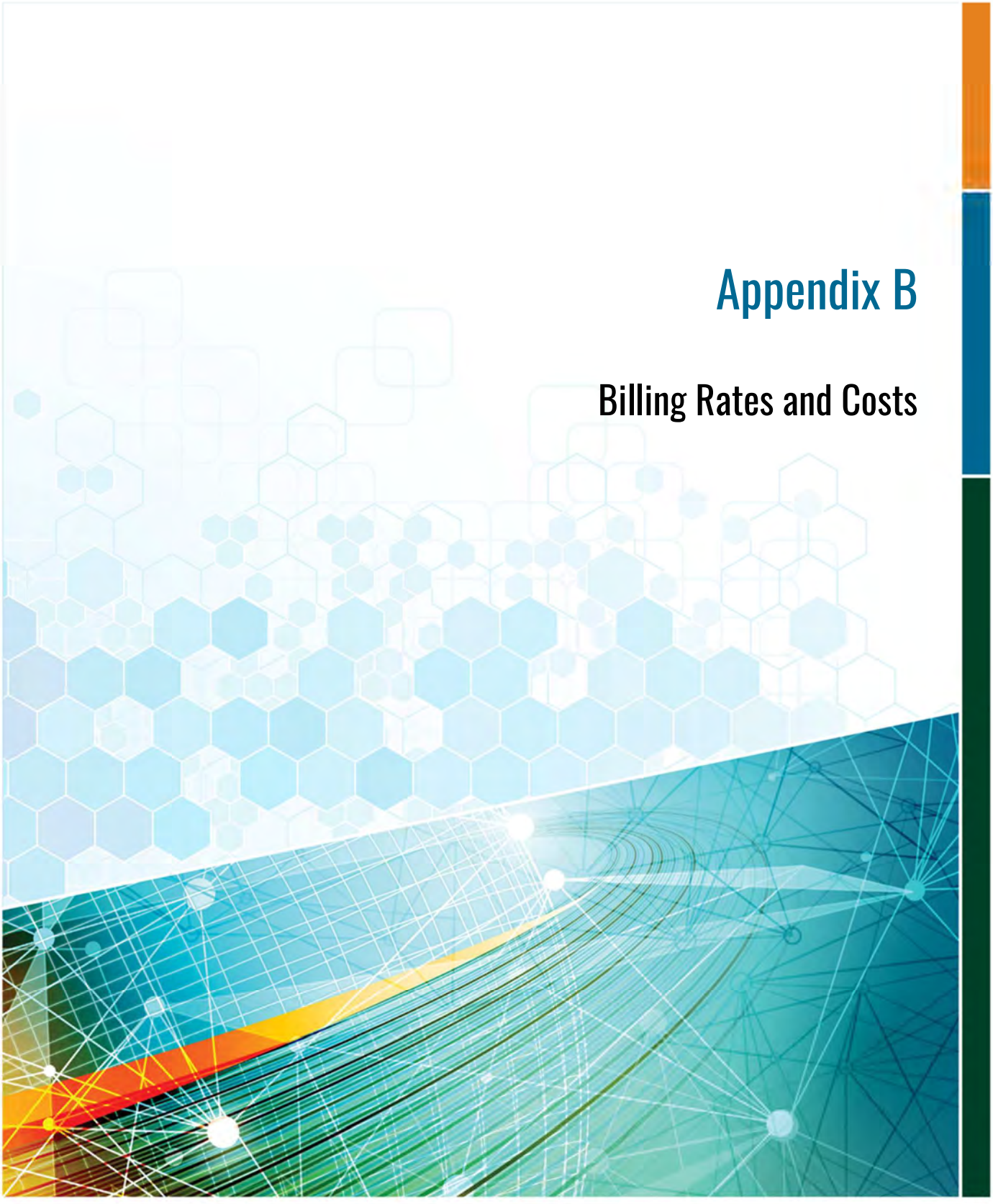
District of Chetwynd – WTP High lift Pump Station Upgrade: Building on the successful upgrade of the District's Water Treatment Plant upgrade, the Eramosa team was engaged by the District of Chetwynd to provide design and contract administration services to upgrade the existing High Lift Pump Station as much of the equipment was at the end of its useful life, additional pumping capacity was projected, and a need to mitigate water pressure transients was identified. The upgrade consisted of a complete replacement of the HLP MCC and its associated three (3) 75 HP high lift pumps. Water hammer transients were mitigated through the installation of VFDs on all three high lift pumps which provide smooth pump start up and shutdown flow profiles. As this plant is the sole source of water for Chetwynd, a well-defined construction and swing over sequence was critical to the project success. As part of this plan the existing MCC would remain operational while a new MCC was installed in a new location allowing for a methodical transfer for pump loads to the new MCC as new pumps were brought online. The project was completed in early 2020.

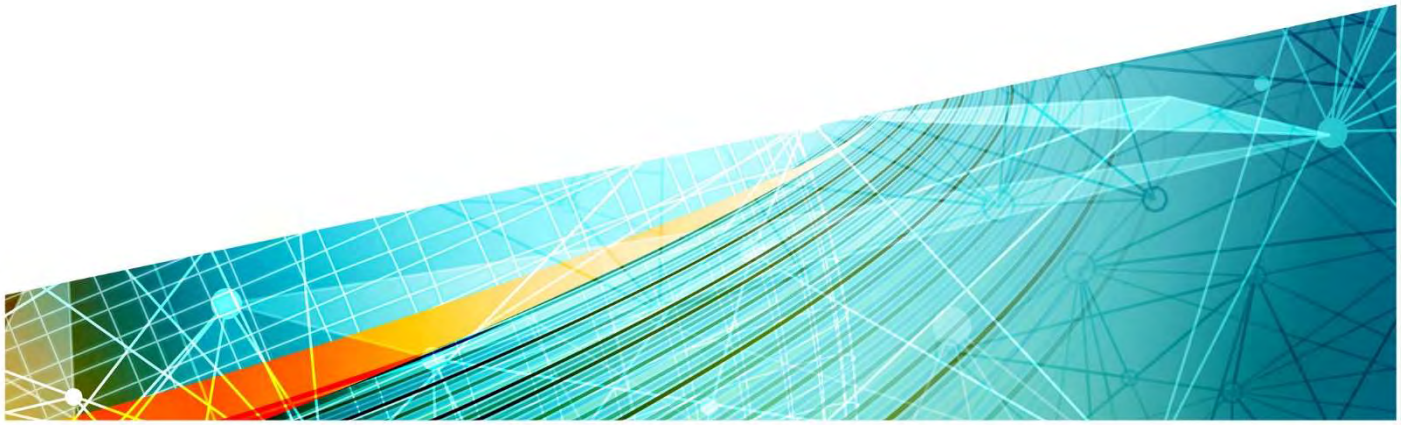
Regional Municipality of Waterloo – Turnbull WTP Short Circuit Analysis, Coordination Study and Arc Flash Study: Eramosa Engineering was retained by the Region of Waterloo to complete and short circuit analysis, coordination, and arc flash study for the Turnbull Water Treatment Plant. To complete the electrical study our team completed site investigations and data collection to allow for system modeling and development of the electrical reports. The short circuit study is used to determine the maximum fault current that all devices including buses, cables and protective devices are subject to during a three-phase bolted fault. The coordination study is used to determine the required settings of the protective devices to ensure the electrical equipment is properly protected and to allow maximum selectivity in the event of a fault. Arc flash is a dangerous condition in which an electric arc causes the release of energy in several forms causes hazards including thermal, pressure, auditory, projectile and inhalation. The analysis determines the flash protection boundary and the personal protective equipment that people within the flash protection boundary are required to use. Eramosa was responsible for the development of the report which included recommendations on protective settings for breakers and fuses, as well as the arc flash hazard rating for each component and the printing of the associated stickers for installation on the equipment. The project was completed in 2020.

Regional Municipality of Waterloo – WTP Chemical System Safety Improvements: The Region of Waterloo completed upgrades to the Mannheim Water Treatment Plant to replace the existing ozone monitors and install additional monitors. These new instruments are providing alarm notifications and were expanded to provide additional control of the HVAC system. In addition, the public address system has been further enhanced to provide a message indicating the location of a potential ozone leak. Eramosa was retained by C3 Water to perform electrical, instrumentation & controls, PLC programing, SCADA integration and interfacing to the public address system for the ozone monitoring system. The project was completed in early 2020.

Appendix B

Billing Rates and Costs





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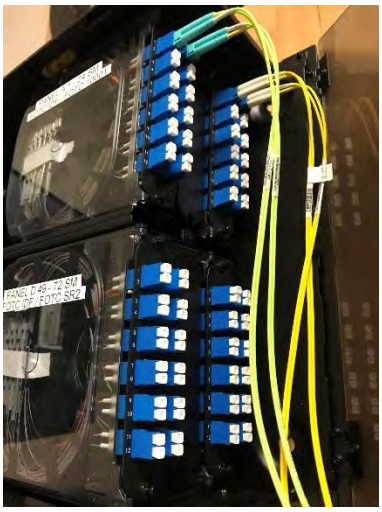
PROPOSAL TO SWEETWATER AUTHORITY FOR

ON-CALL SCADA DESIGN PROFESSIONAL CONSULTING SERVICES



March 7, 2023

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March 7, 2023

Sweetwater Authority
Attention: Justin Brazil
505 Garrett Avenue
Chula Vista, CA 91910

Subject: Proposal for On-Call SCADA Design Professional Consulting Services

Rockwell Construction Services, LLC (RCS) understands that SCADA is important and is a valuable asset to the Authority. Our highly knowledgeable team of driven professionals with expert level experience are ready to provide services to assist with success for all stakeholders. It has been our experience that early project involvement and good communication with the Authority and the Authority's other project consulting and execution groups reduces design and implementation surprises.

RCS was founded in September of 2006. The firm was created to offer electrical, instrumentation & controls (I&C) and SCADA services specializing in the Water/Wastewater industry. These services include SCADA oversight, Design and Bid assistance, project design review and oversight prior to and during construction management, along with system commissioning at the end of a project.

The original founders of the firm, Jim Hudson and Rock Swanson offered over 70 years of combined experience in the industry as electrical contractors. Rock Swanson, the founder of Rockwell Electric Inc., and Jim Hudson the VP/General Manager, brought the unique perspective of an electrical contractor/system integrator to the specialty construction management profession. Shortly after inception, Thomas Klein joined the Company. Mr. Klein brought over 40 years of experience in the Water/Wastewater industry, much of it coming while employed at Rockwell Electric, Inc. as the Engineering Manager. Thomas has extensive expertise in I&C and SCADA systems used in our industry.

Currently the Company is operated by Jim Hudson, President and Thomas Klein, Vice President. Our 35 years of experience as electrical contractors and 16 years as consultants provides us with proficiency that benefits our clients. Through the years, we have focused on providing the highest level of services. Our attention to details and quality has always been recognized as one of the keys to our success. These principles were established many years ago and continue to serve us well to this day.

We strive to identify and correct problems before they happen by working closely with the Owner and the Owner's other project consulting and execution groups, from review of the contract documents prior to bid through final Operations & Maintenance manuals and As-built drawings at the conclusion. By implementing this approach, we minimize negative impact on both the project budget and schedule.

We specialize in constructability review of plans and specifications prior to release for bid and/or after award of bid, Electrical and I&C budget preparation, project schedule review and coordination, submittal review, Electrical, I&C, and SCADA project oversight, and quality assurance, change order evaluation, project testing and commissioning, electrical utility coordination and existing site investigation and evaluation. We provide expertise in the various aspects of SCADA, such as HMI and PLC/RTU products and programming, communications, and networking.

RCS has a proven history of duly managing the Electrical and I&C components of a project as the client's liaison while producing benefits to the project schedule and substantial reduction of risk and cost.

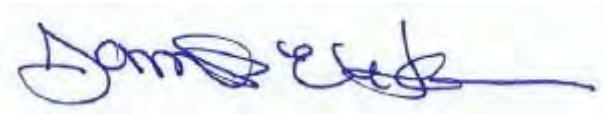
RCS is a Limited Liability Company (LLC). RCS is a qualified Small Local Business Enterprise/Emerging Local Business Enterprise in the City of San Diego. (Certification No. 14RC1321).

Our team is comprised of Water / Wastewater professionals that have provided similar services to various public agencies throughout Southern California and have a thorough understanding of the intent of the services to be provided. Your project manager and point of contact will be Thomas Klein. Thomas has more than 40 years of experience in SCADA, Instrumentation and Controls, & Electrical system design, development and implementation and project/construction management, with projects focused on Water / Wastewater industry. Mr. Klein has been involved in all aspects of SCADA and control system development and implementation. Mark Birdsall will be the Senior Inspector and will assist Thomas to provide Electrical, I&C, and SCADA inspection services. Glen Rozak will be the Senior SCADA & Controls Engineer. Glen will provide expert level knowledge and services related to SCADA and I&C for PLC and HMI hardware and software products, development and integration, and SCADA networking. Craig Barnes will be the Senior Electrical Engineer. Craig will provide expert level knowledge and services related to Electrical Engineering and implementation.

Proposal Sections 1 through 8 contain our Statement of Qualifications information in the order requested. Costs have been provided in a separate PDF document with the file name "RCS Billing Rates and Costs."

This proposal is valid for ninety (90) days.

Regards,



Jim Hudson
ROCKWELL Construction Services, LLC
(760) 715-3082
jim.hudson.@rockwell-cs.com

SECTION 1

IDENTIFICATION OF RESPONDER

Section 1 – Identification of Responder

Legal Name and Address of Consultant	Rockwell Construction Services, LLC 31480 Justin Place Valley Center, CA 92082
Legal Form of Company (partnership, corporation, joint venture, etc.)	Limited Liability Company (LLC)
Number of Years Consultant has been in business	16 Years
Parent Companies	None
Addresses of Office(s) and Number of Employees	Rockwell Construction Services, LLC 31480 Justin Place Valley Center, CA 92082 Number of Employees: 13
Name, Title, Address, Telephone Number, and email of a person to contact concerning the Proposal	Thomas M. Klein Vice President Rockwell Construction Services, LLC 31480 Justin Place Valley Center, CA 92082 (760) 470-1576 thomas.klein@rockwell-cs.com
Subconsultants Legal Name, Address, and Point-of-Contact	Glen V. Rozak, PE SCADA and Controls Engineer Tetra Tech, Inc. 1230 Columbia St., #100 San Diego, CA 92101 (858) 740-0960 glen.rozak@tetratech.com

SECTION 2

FINANCIAL RELATIONSHIP DISCLOSURES

Section 2 – Financial Relationship Disclosures

Financial relationships between Consultant and current members of the Authority's Governing Board and staff	None
Financial relationships between Consultant's proposed sub-consultant (Tetra Tech) and current members of the Authority's Governing Board and staff	None

SECTION 3

REQUIRED QUALIFICATIONS

Section 3 – Required Qualifications

The Consultant's primary business or the primary business of a department within the Consultant's firm shall be in SCADA Design Consulting and engineering services and shall have been in the business of SCADA design consulting and engineering for at least 10 years	RCS has been providing SCADA design consulting and engineering services since 2006 (16 years).
The Consultant shall provide a single Project Manager as the primary point of contact with the Authority. This Project Manager must have at least 5 years (total, with current firm or other employers) of experience in SCADA design consulting and engineering.	Thomas Klein will be the single Project Manager and primary point of contact with the Authority. Recent Employment: • Engineering Manager at Rockwell Electric, Inc. (REI) between 1987-2003 managing I&C and SCADA portions of Water/Wastewater projects. REI services included design and fabrication of UL508 Industrial Control Panels, PLC/HMI software development and implementation, instrumentation, and startup & commissioning services. • SCADA design services at Cybernet Consulting (SCADA Design and CM firm) between 2003-2009. • Rockwell Construction Services between 2009-present.
The Consultant shall have at least 1 State of California licensed Professional Electrical Engineer on staff.	Our proposed team includes two licensed State of California PE's via our subcontractor, Tetra Tech. Glen Rozak is a Controls PE and Craig Barnes is an Electrical PE.
The Consultant shall have experience with performing review of facility construction and systems integration documents as they relate to instrumentation, controls, and SCADA.	All of our team members have the experience required.
The Consultant shall have a place of business located in the United States and within a 24-hour commute of the Authority's Administrative office at 505 Garrett Avenue Chula Vista, CA. The engineering expertise and work must be based in and performed at said offices.	All of our team members are based in San Diego county, except for Craig Barnes who is in Anaheim, CA. Commute time to the Authority's Administrative office should be 1 ½ hours or less, traffic permitting. Craig's commute time should be 2 ½ hours or less, traffic permitting.

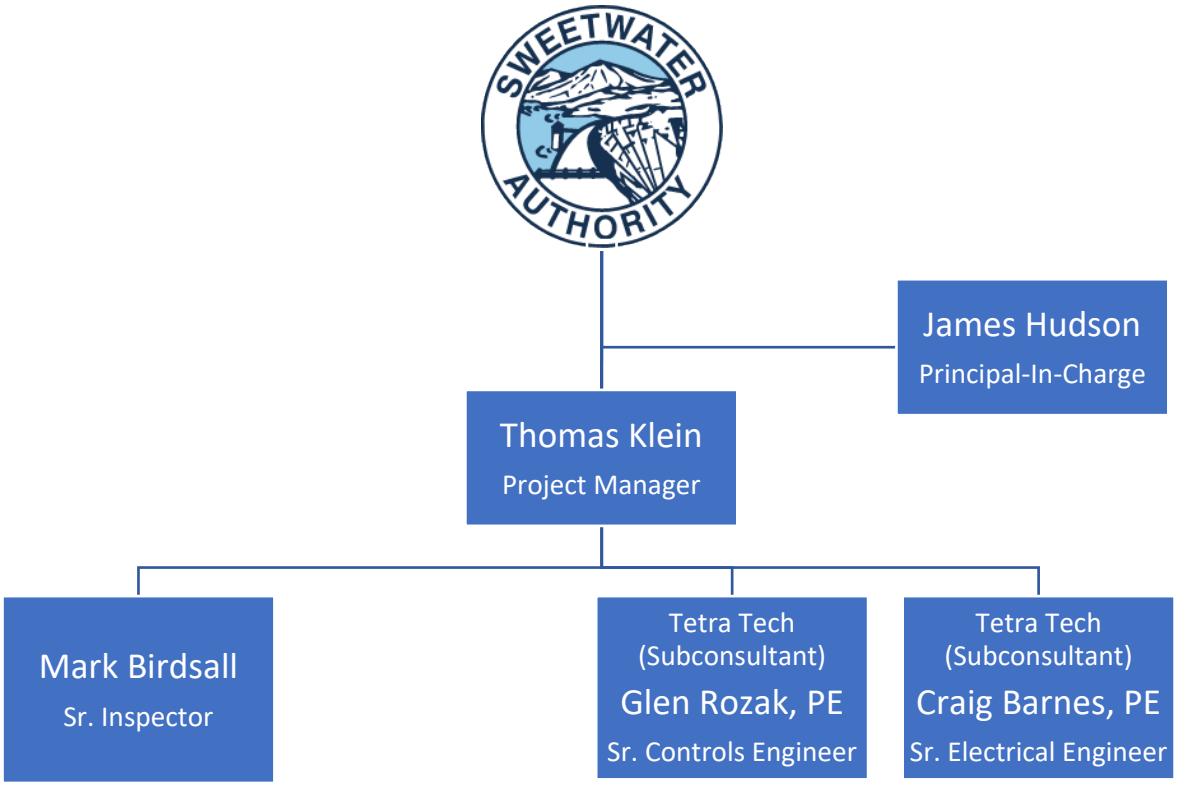
SECTION 4

ORGANIZATION AND KEY PERSONNEL

Section 4 – Organization and Key Personnel

Rockwell Construction Services is proud to offer a team comprised of Water / Wastewater professionals that have provided similar services to various public agencies throughout Southern California. The team we have identified in the organizational chart below is the team that will provide services. Team resumes have been provided in the Appendix.

Organizational Chart



Key RCS Personnel

James Hudson – Principal-In-Charge (Valley Center, CA)

James has more than 40 years of experience regarding projects primarily focused on the Water/ Wastewater industry. Jim co-founded Rockwell Construction Services in September 2006 to provide design oversight, construction management and inspection services in the Water / Wastewater industry.

Role: James will be the Principal-In-Charge for consulting services.

Thomas Klein – Project Manager (Valley Center, CA)

Thomas has more than 40 years of experience in SCADA, Instrumentation and Controls, & Electrical system design, development and implementation and project/construction management. Projects primarily focused on Water / Wastewater industry. Mr. Klein has been involved in all aspects of SCADA and control system development including planning, design, construction management, and field assistance including startup & commissioning, punch list resolution and final project acceptance, as well as post-acceptance support. Mr. Klein's experience includes over 30 years in the electrical, controls and systems integration industry and over 20 years in the I&C and SCADA design consulting field.

In 2009, Mr. Klein joined the RCS team as a principal. Mr. Klein's duties at RCS are design assistance, existing site investigation and evaluation, "constructability" review of facility design plans and specifications prior to release for bid and/or after award of bid, Electrical and I&C budget preparation, submittal review, change order evaluation, project schedule review and coordination, Electrical and I&C project inspection and quality assurance, and testing and startup & commissioning services. Mr. Klein also provides expertise in PLC's/RTU's, HMI's, communications and networking, and SCADA.

Role: Thomas will be the Project Manager and point-of-contact for services coordination with the Authority. Thomas will work in cooperation with the Authority and the Authorities consulting and project execution groups to provide and/or coordinate the On-Call SCADA Design Professional Consulting Services.

Mark Birdsall – Senior Inspector (Valley Center, CA)

Mark Birdsall has more than 23 years of Electrical experience. Primarily focused on the Water/ Wastewater industry. From 1984 to 1990 Mr. Birdsall served as an Electronic Technician in the U.S. Navy.

Mr. Birdsall joined the IBEW Apprenticeship in 2004, where he was assigned to various Electrical Contractors in San Diego County. In 2007, he was assigned to Neal Electric, where he would go on to become a Foreman in the Industrial Department.

In 2012, Mr. Birdsall began working for the Sweetwater Authority as an Instrumentation and Control Technician. Mr. Birdsall has been involved in the Design Review, Inspection and Start-Up of many electrical projects completed for the Authority.

In 2017 Mr. Birdsall joined Rockwell Construction Services as a Construction Manager / Inspector.

Role: Mark will be the Senior Inspector and will assist Thomas to provide Electrical, I&C, and SCADA inspection services.

Key Tetra Tech Personnel (Subconsultant)

Glen Rozak – Senior Controls Engineer (San Diego, CA)

Glen has 28 years of experience as a lead SCADA and Control Engineer and has worked on numerous water distribution, wastewater treatment facilities including LA Dept. of Water & Power, City of San Diego, Olivenhain Municipal Water District and Valley Water. He's responsible for the support system design, integration, commissioning, and documentation. Mr. Rozak is knowledgeable in large scale SCADA and PLC-based control and automation systems for water, wastewater utilities, and marine-offshore and pipelines. He has in-depth knowledge and has adept skills with reusable software and hardware building block design for industrial control systems; OOP and component-based programming techniques; roadmap development, complex retrofit, migration and upgrade projects; and end-user surveys and detailed requirements specification.

Role: Glen will be the Senior SCADA & Controls Engineer. Glen will provide expert level knowledge and services related to SCADA and I&C for PLC and HMI hardware and software products, development and integration, and SCADA networking.

Craig Barnes – Senior Electrical Engineer (San Diego, CA)

Craig has more than 32 years of experience in Engineering management, technical leadership, quality control and design. 5kV power system & distribution experience, prime, standby, emergency generators, VFD & switchgear Instrumentation and Controls for Water & Waste-Water Utilities.

Role: Craig will be the Senior Electrical Engineer. Craig will provide expert level knowledge and services related to Electrical Engineering and implementation.

SECTION 5

TECHNICAL APPROACH

Section 5 – Technical Approach

Rockwell Construction Services has a good understanding of the challenges that will most likely be faced while providing On-Call SCADA Design Professional Consulting Services. Our highly knowledgeable team of driven professionals with expert level experience are ready to provide services to assist with success for all stakeholders. It has been our experience that early project involvement and good communication with the Authority and the Authority's other project consulting and execution groups reduces design and implementation surprises. We understand that SCADA is an important asset to the Authority and look forward to providing SCADA consulting services.

There are three major Scope of Work Categories, which are General, Design and Bidding Phases of Projects, and Construction Phases of projects.

General

1. Provide SCADA System program management, planning, and oversight of the Authority's SCADA Integrator's work.
    a. RCS has a good working relationship with Enterprise Automation (EA), the Authority's current SCADA Integrator (SI). We have worked together on various projects, such as multiple projects for the City of Huntington Beach and Encina Wastewater Authority. We are also a subconsultant to EA for the Authority's Iron and Manganese Removal System (FeMn) Implementation.

2. Develop and maintain IC&E Design Standards and support the Authority's Systems Integrator in the development and maintenance of SCADA Standards.
    a. It is very important to develop and maintain SCADA and IC&E Standards. RCS has reviewed the current Standards in detail and will maintain and assist in coordinating the SCADA Standards with the SI.

3. Act as an extension of Authority staff in identifying projects and commercial risks, making critical design decisions, and enforcing the Authority's standard practices and design requirements.
    a. RCS has a team of experts to provide analysis, advice and support regarding risks and critical design decisions. RCS will also assist in enforcing standards as identified in the IC&E standards document.

4. For infrastructure projects, review work performed by the Facility Design Consultant, SCADA Integrator, and Contractor as it applies to the SCADA System.
    a. Iron and Manganese Removal System (FeMn) Implementation
        i. RCS has a subcontract to provide services to EA for these services.
    b. Central Wheeler Implementation
        i. RCS has experience with implementation of controls for a potable water storage tank. RCS will coordinate the IC&E standards with the Facility Design Consultant for construction document development and will assist in coordinating the design as it applies to SCADA via kickoff standards review meeting, and review of PDR and 30/60/90/100% design submittals.

5. Provide a licensed electrical professional engineer (P.E.) for review and general support in the development of electrical designs.
    a. Craig Barnes will provide Electrical P.E. services for electrical review and general support expertise as-needed.
    b. Glen Rozak will provide Controls P.E. services for SCADA and Controls review and general support expertise as-needed.

Design and Bidding Phases of the Projects

1. Provide guidance to the Authority, in collaboration with the SI, on how a project's goals, means, and methods will affect the SCADA System.
    a. RCS will work with the Authority and SI to assist with an analysis of PLC, networking, and HMI requirements for new construction and/or modified existing facility construction. We will assist with identifying requirement for new PLC's, new remote I/O, adjustments to existing IOC's, SCADA communication network connectivity, and HMI adjustments and possible new HMI features.

2. Participate with the Authority, Facility Design Consultant, and SCADA Integrator in workshops to develop control strategies.
    a. RCS will participate in workshops to assist with control strategy development, while maintaining SCADA and IC&E standards.

3. Review and comment on Facility Design Consultant and SI design submittals.
    a. RCS will review and provide comments on design submittals, including as-requested reviews of the Facility Design Consultant's PDR and 30/60/90/100% design submittals as related to SCADA and IC&E.

4. Provide general technical support that may be require by the Authority and Facility Design Consultant during Design and Bidding phases of the project.
    a. RCS will provide as-needed technical support during the Design and Bidding phases. We promote open communication with the Facility Design Consultant during the design phase in a manner acceptable to the Authority. We will respond to pre-bid questions as-needed and will be available to participate in pre-bid meeting(s) and assist in responding to SCADA related pre-bid questions.

Construction Phases of the Projects

1. Provide general technical support that may be required by the Authority, Facility Design Consultant, and Contractor during the Construction Phase of projects such as documentation and program reviews related to SCADA.
    a. RCS will provide as-needed technical support during the Construction phase. We have the ability to review programs that are provided via backups to identify that the SCADA standards are upheld.

2. Review Contractor submittals applicable to SCADA in parallel with the SI and Facility Design Consultant.
    a. RCS will review received submittals applicable to SCADA to identify any discrepancies related to required products, I/O lists, shop drawings, control schematics, interface to project equipment and devices/instruments, and SCADA network connectivity of PLC's, vendor panels, and intelligent devices (virtual I/O).

3. Provide interim construction inspections to review SCADA-related work performed by Contractor when requested by the Authority.
    a. RCS has a qualified and experienced team of inspectors to assure that the SCADA infrastructure meets the design requirements.

4. Review SCADA-related submittal including specifications, O&M manuals and as-built documentation prepared by the SCADA Integrator.
    a. RCS has a good working relationship with EA, the current SI. RCS will review the integration documents to assist in assuring that the provided deliverables are high quality and abide by the SCADA standards.

5. Participate in SCADA integration workshops, factory acceptance tests, start-up activities, and site acceptance tests.
    a. RCS will participate in SCADA integration workshops, factory acceptance tests (FAT), start-up activities, and site acceptance tests as requested by the Authority. We will assist in assuring that the FAT equipment and software being tested meets the project requirements and will provide a list of any deficiencies. We pride ourselves in our ability to coordinate and witness startup activities to identify deficiencies and possible resolution alternatives.

SECTION 6

QUALIFYING PROJECTS AND REFERENCES

Section 6 – Qualifying Projects and References

RCS has been fortunate to provide our services on a multitude of Water / Wastewater infrastructure projects for Cities and Districts throughout Southern California. The projects, both large and small, include Water & Recycled Water distribution and storage (pump stations, reservoirs, flow control, pressure reducing stations), Water Treatment facilities, Wastewater Treatment facilities, and Sewer Lift Stations.

The following projects demonstrate RCS's similar Water / Wastewater experience.

SCADA Master Plan and Design

City of Carlsbad / Carlsbad Municipal Water District (Carlsbad, CA)

This project consisted of providing technical guidance services to the City of Carlsbad / Carlsbad Municipal Water District related to their SCADA Master Planning and Design efforts. Involvement includes participating in the SCADA design firm selection process, participating in Districts SCADA Manager selection process, project scoping assistance, and providing review and feedback during master planning and design efforts. As part of the design assistance, RCS prepared site report and existing I/O signal lists for 51 water/recycled water distribution sites and 11 wastewater collection sites. The existing I/O lists were completed by gathering existing PLC Panel as-built documentation, preparing draft I/O list from gathered documentation, conducting site visits to field verify I/O and preparing a final site and I/O list report. The design utilizes Allen-Bradley PLC's and Inductive Automation HMI.

Date Initiated and Completed: February 2017 – Current (ongoing)
Owner Reference: Stephanie Harrison, (760) 603-7310, stephanie.harrison@carlsbadca.gov
Role of Key Personnel: James Hudson (P.I.C.), Thomas Klein (P.M., SCADA Consultant)

PLC Replacement Project

Olivenhain Municipal Water District (Encinitas, CA)

This project consists of providing design assistance to Tetra Tech IBRA-RMAC, as a subconsultant, to allow for planned migration of 45 Legacy A-B SLC PLC's to be upgraded to latest version of ControlLogix and CompactLogix PLC's system architecture and associated HMI modifications. As part of the design assistance to Tetra Tech, RCS prepared site report and existing I/O signal lists for 45 PLC Panels related to a water treatment plant, a wastewater treatment plant, water distribution sites, and sewer lift stations. The existing I/O lists were completed by gathering existing PLC Panel as-built documentation & PLC programs, preparing draft I/O list from gathered documentation/programs, conducting site visits to field verify I/O and preparing a final site and I/O list report. The design utilizes Allen-Bradley PLC's and Inductive Automation HMI.

Date Initiated and Completed: September 2022 – Current (ongoing)
Owner Reference: Erik Harp, (760) 632-4202, eharp@olivenhain.com
Role of Key Personnel: Glen Rozak (Design Project P.M. – Tetra Tech), Thomas Klein (RCS P.M., field investigation, design assistance)

Emergency Storage Project

Valley Center Municipal Water District (Valley Center, CA)

This project consisted of providing technical guidance services to the Valley Center Municipal Water District for their ESP project design. Involvement included design/coordination assistance regarding SCADA, Instrumentation & Controls, control strategies, P&ID's, electrical, and I/O signals with the District and the facility design consultant. Design coordination included participation in site visits, meetings, design workshops, review of the 30/60/90/100/final design documents, and participation in the Construction Management firm selection process. RCS will be providing Electrical, I&C, and SCADA Construction Management services to the District during the construction phase. As an effort to increase water reliability and redundancy throughout the San Diego County, the San Diego County Water Authority initiated the Emergency and Carryover Storage Program. The Valley Center ESP project will allow the Valley Center MWD to convey ESP water from its southern turnouts to its VC3 service area and to the Yuima MWD. The project consists of modifications to (2) existing pump stations, construction of (2) new flow control facilities, and installation of underground waterlines and appurtenances. The design utilizes Allen-Bradley PLC's and Inductive Automation HMI.

Date Initiated and Completed: Design – June 2020 – January 2023, Construction – Not yet commenced
Owner Reference: Nick Lyuber, (760) 753-4556, nlyuber@vcmwd.org
Role of Key Personnel: James Hudson (P.I.C.), Thomas Klein (I&C and SCADA Consultant)

Standard MCC Design

City of Huntington Beach (Huntington Beach, CA)

The project included investigating and developing a Standard MCC design to be used by the City to retrofit existing duplex lift stations and to provide a duplex pump MCC for new facility projects. Involvement included coordination of a signal list with the standard PLC Panel Design (PLC Panel design performed by Enterprise Automation), investigating existing duplex pump panels, discussion of City preferences, and development and delivery of plans and specifications for the Standard MCC Design. RCS has participated in the Factory Testing of the Standard MCC and Standard PLC Panels for multiple projects. RCS continues to provide modifications to the standard design, as coordinated with the City, and provides site-specific documents to the facility design consultants for integration into project bid documents. The PLC Panel design (by EA) utilizes Modicon PLC's.

RCS has also provided electrical and I&C Construction Management, inspection, startup and closeout services to the City of Huntington Beach for the following projects (with additional projects underway):

- Sewer Pump Stations 24, 26 and 28
- Warner Ave. Gravity SLS
- Trinidad SLS
- Edgewater SLS
- Parkside SLS
- Edwards Reservoir
- Well-1A
- Slater Stormwater PS
- Saybrook SLS
- Slater SLS

Date Initiated and Completed: MCC Design – May 2014 – ongoing support
Owner Reference: Andrew Ferrigno, (714) 475-8414, aferrigno@surfcity-hb.org
Role of Key Personnel: James Hudson (P.I.C.), Thomas Klein (Motor Control Consultant and Standard PLC Panel coordination with Enterprise Automation)

Water and Sewer Major SCADA Upgrades and Advanced Plant Automation

City of Oceanside (Oceanside, CA)

This project consisted of SCADA and automation upgrades at the Weese Water Filtration Plant, Mission Bay Groundwater Purification Facility, San Luis Rey Wastewater Treatment Plant, and 77 remote water and sewer facilities. Involvement included installation inspection services, startup planning and schedule coordination, controls clarifications, local network communications integration coordination, participation if Factory Acceptance Testing, SCADA coordination, and startup & commissioning services. The design utilizes Modicon PLC's and Wonderware HMI.

Date Initiated and Completed: December 2015 – March 2018
Owner's Representative Reference: Chuck Reuck (Ardurra), (760) 212-8185
Role of Key Personnel: James Hudson (P.I.C.), Thomas Klein (P.M. for Construction Management Services)

SECTION 7

EXCEPTIONS TO THE RFQ

Section 7 – Exceptions to the RFQ

Rockwell Construction Services does not take any exceptions to the RFQ or associated Authority's Professional Services Agreement (RFQ Attachment A).

SECTION 8

ADDENDUM ACKNOWLEDGEMENT

Section 8 – Addendum Acknowledgement

Addendums released for this solicitation:	None
Addendum Acknowledgement:	N/A

APPENDIX

RESUMES

Resume

James E. Hudson
Rockwell Construction Services, LLC
President
Senior Construction Services and Project Manager
jim.hudson@rockwell-cs.com

EDUCATION / REGISTRATION / LICENSES

Palomar College: Misc. General Education, Fire Hydraulics, Electrical Code, Accubid Electrical Estimating, Advanced training certificate

Infrared Training Center: Thermography Level 2 certified

State of California: C-10 Electrical Contractor License

EXPERIENCE SUMMARY

Over 40 years' experience regarding projects primarily focused on the Water/ Wastewater industry. From 1975 to 1978 Mr. Hudson served as an electrical apprentice working predominately in the greenhouse industry with focus on automation and control. In 1978 he became the first employee of Rockwell Electric, Inc. of Escondido, CA. and became the Vice President and Field Operations Manager a short time later. Jim was instrumental in building Rockwell Electric, Inc. into a large organization servicing the Water/Wastewater industry. The company provided both electrical contracting capability as well as process control and system integration services for the water/wastewater construction and service industry.

Mr. Hudson left Rockwell Electric, Inc. in 1983 and was employed by Alyeska Pipeline Service Company as an Electrical, Instrumentation and Controls Inspector on the Alaska Pipeline. He returned to San Diego in 1984 and founded North Coast Electric. North Coast Electric also concentrated solely in the Water/Wastewater industry.

Jim returned to Rockwell Electric, Inc. in 1991 and resumed his position as Vice President/Field Operations Manager. He left in 2001 and became employed by Rock Electric, Inc. as the Vice President. Rock Electric also became involved with Water/Wastewater projects at this time and executed many successful projects.

In September of 2006, Jim co-founded Rockwell Construction Services and began providing design oversight, construction management and inspection services in the Water/Wastewater industry.

Specific (Partial) Experience:

The list of projects below is a sample of various Water/Wastewater Projects where RCS has provided Electrical, Instrumentation & Control, SCADA Oversight Construction Management, Construction E/I&C Oversight, and Startup Services over the course of the last 5 years.

- Olivenhain Municipal Water District – David C. McCollom Water Treatment Plant LT2 Upgrades (Olivenhain, CA)
- Goleta Sanitary District – Wastewater Treatment Plant Upgrade (Goleta, CA).
- City of Oceanside – Water and Sewer Major SCADA Upgrades and Advanced Plant Automation (Corona, CA).
- County of San Diego/Standard Pacific Homes – Harmony Grove Pump Station and Wastewater Treatment Plant (City of Escondido)
- City of Corona – Ion Exchange Treatment Plant, Mangular Blending Facility (Corona, CA).
- City of Corona – Water Reclamation Facility No. 2 (WRF2) Tertiary Filtration, WRF2 Headworks Upgrades (Corona, CA).
- City of Carlsbad – CMWD Water Recycling Facility Phase 3 Expansion Project, SCADA Replacement Master Plan and Design (Carlsbad, CA).
- City of San Diego – Clearwell Improvements, Tierrasanta Pump Station.
- Numerous Elsinore Valley Municipal Water District Water / Wastewater Projects.
- As-needed contracts with City of San Diego, City of Corona, Elsinore Valley Municipal Water District, City of Huntington Beach, Valley Center Municipal Water District.

Resume

Thomas M. Klein, Principal
Rockwell Construction Services, LLC
Vice President
Senior Design & Construction Services and Project Manager
thomas.klein@rockwell-cs.com

EDUCATION / REGISTRATION / LICENSES

University of Wisconsin Parkside: Electrical Engineering, Applied Computer Science

San Diego State University: Project Management Professional Certification

University of California San Diego: Advanced Networking, Digital Logic

Palomar College San Marcos, CA: Business Management

EXPERIENCE SUMMARY

Over 40 years of experience in SCADA, Instrumentation and Controls, & Electrical system design, development and implementation and project/construction management. Projects primarily focused on Water / Wastewater industry. Mr. Klein has been involved in all aspects of SCADA and control system development including planning, design, construction management, and field assistance including startup & commissioning, punch list resolution and final project acceptance, as well as post-acceptance support. Mr. Klein's experience includes over 30 years in the electrical, controls and systems integration industry and over 20 years in the I&C and SCADA design consulting field.

In 2009, Mr. Klein joined the Rockwell Construction Services, LLC (RCS) team as a principal. Mr. Klein's duties at RCS are design assistance, existing site investigation and evaluation, "constructability" review of facility design plans and specifications prior to release for bid and/or after award of bid, Electrical and I&C budget preparation, submittal review, change order evaluation, project schedule review and coordination, Electrical and I&C project inspection and quality assurance, and testing and startup & commissioning services. Mr. Klein also provides expertise in PLC's/RTU's, HMI's, communications and networking, and SCADA.

Areas of Expertise

- SCADA System Design
- SCADA, I&C, and Electrical inspection
- Startup and Commissioning Services
- Project Management
- Construction Management
- Networking and Radio Communications, including serial and Ethernet over a variety of communications media
- Project Cost/Budget Estimation
- Change Order Pricing Review and Negotiations
- Electrical Systems and Motor Controls
- Control Panel and Control Logic Design and Implementation
- Field Instrumentation Measurement and Analytical Equipment
- Water/Wastewater Industry Processes and Control
- Client Training
- Project Closeout Services

Specific (Partial) Experience:

Mr. Klein has been involved in a variety of roles with a multitude of SCADA, process monitoring and control systems in the water and wastewater industries in the past 40 years. Following is a partial list of RCS projects Mr. Klein has been involved in.

- City of Carlsbad – SCADA Master Plan and Design (Carlsbad, CA). This project consisted of providing technical guidance services to the Carlsbad Municipal Water District related to their SCADA Master Planning and Design efforts. Involvement includes participating in the SCADA design firm selection process, project scoping assistance, and providing review and feedback during master planning and design efforts. As part of the design assistance, RCS prepared site report and existing I/O signal lists for 51 water/recycled water distribution sites and 11 wastewater collection sites. The existing I/O lists were completed by gathering existing PLC Panel as-built documentation, preparing draft I/O list from gathered documentation, conducting site visits to field verify I/O and preparing a final site and I/O list report. The design utilizes Allen-Bradley PLC's and Inductive Automation HMI.

- Olivenhain Municipal Water District – PLC Replacement Project (Encinitas, CA). This project consists of providing design assistance to Tetra Tech IBRA-RMAC to allow for planned migration of 45 Legacy A-B SLC PLC's to be upgraded to latest version of ControlLogix and CompactLogix PLC's system architecture and associated HMI modifications. As part of the design assistance, RCS prepared site report and existing I/O signal lists for 45 PLC Panels related to a water treatment plant, a wastewater treatment plant, water distribution sites, and sewer lift stations. The existing I/O lists were completed by gathering existing PLC Panel as-built documentation & PLC programs, preparing draft I/O list from gathered documentation/programs, conducting site visits to field verify I/O and preparing a final site and I/O list report. The design utilizes Allen-Bradley PLC's and Inductive Automation HMI.

- Valley Center Municipal Water District – Emergency Storage Project (ESP) (Valley Center, CA). This project consisted of providing technical guidance services to the Valley Center Municipal Water District for their ESP project design. Involvement included design/coordination assistance regarding SCADA, Instrumentation & Controls, control strategies, P&ID's, electrical, and I/O signals with the District and design engineer. Design coordination included participation in site visits, meetings, design workshops, review of the 30/60/90/100/final design documents, and participation in the Construction Management firm selection process. As an effort to increase water reliability and redundancy throughout the San Diego County, the San Diego County Water Authority initiated the Emergency and Carryover Storage Program. The Valley Center ESP project will allow the Valley Center MWD to convey ESP water from its southern turnouts to its VC3 service area and to the Yuima MWD. The project consists of modifications to (2) existing pump stations, construction of (2) new flow control facilities, and installation of underground waterlines and appurtenances. The design utilizes Allen-Bradley PLC's and Inductive Automation HMI.

- City of Huntington Beach – Standard MCC Design (Huntington Beach, CA). The project included investigating and developing a Standard MCC design to be used by the City to retrofit existing duplex lift stations and to provide a duplex pump MCC for new projects. Involvement included coordination of a signal list with the standard RTU Design (RTU design performed by Enterprise Automation), investigating existing duplex pump panels, discussion of City preferences, and development and delivery of plans and specifications for the Standard MCC Design. The RTU design utilizes Modicon PLC's.

- City of Oceanside – Water and Sewer Major SCADA Upgrades and Advanced Plant Automation (Oceanside, CA). This project consisted of SCADA and automation upgrades at the Weese Water Filtration Plant, Mission Bay Groundwater Purification Facility, San Luis Rey Wastewater Treatment Plant, and 77 remote water and sewer facilities. Involvement included installation inspection services, startup planning and schedule coordination, controls clarifications, local network communications integration coordination, SCADA coordination, and startup & commissioning services. The design utilizes Modicon PLC's and Wonderware HMI.

- City of Corona – Ion Exchange Treatment Plant (Corona, CA). This project consisted of a new water treatment plant building, including cartridge filters, perchlorate removal system, nitrate removal system, brine system, air compressors, and ammonia and sodium hypochlorite injection system. Involvement included SCADA coordination, local network communications integration coordination, development of loop drawings, development of system startup and closeout plan, schedule coordination, controls clarifications, and startup & commissioning services. The facility utilizes Allen Bradley PLC's and iFix HMI.

- Olivenhain Municipal Water District – David C. McCollom Water Treatment Plant LT2 Upgrades (San Diego, CA). Performed construction management and engineering services on this major upgrade project. The $16 million project upgrades the facility to comply with the EPA's Long Term 2 (LT2) Enhanced Surface Water Treatment Rule. The project includes a new energy recovery facility including two new energy recovery turbines, new raw water eq. tanks, modifications to 13 membranes, new raw water eq. tanks, modifications to Clean in Place facilities, new backwash eq. basin and pump station, new strainers and new chemical feed systems. Involvement with the instrumentation and controls design, submittal reviews, startup & commissioning services, as-built reviews and punchlist development/resolution. Project completed in 2013. The facility utilizes Allen-Bradley PLC's and Inductive Automation Ignition HMI.

- Orange County Sanitation District – Sludge Dewatering and Odor Control at Plant 1 (Fountain Valley, CA). Provided services to WM Lyles Company for pre-commissioning and commissioning tasks as the commissioning coordinator. The project consisted of the construction of the Sludge Dewatering and Odor Control at Plant No. 1, including but not limited to a new Thickening and Dewatering Centrifuge Facility, modifications to the Solids Storage and Loading Facility, new Odor Control Facility, and modifications to existing Bleach Facility.

Memberships

- The International Society of Automation (ISA)

Resume

Mark Birdsall
Rockwell Construction Services, LLC
Senior Construction Manager and Electrical and I&C Inspection
mark.birdsall@rockwell-cs.com

EDUCATION / REGISTRATION / LICENSES

Ex: U.S. Navy: Basic Electricity and Electronics, Advanced Electronic Troubleshooting and Repair

San Diego Electrical Training Center: Completion of five-year Electrical Apprenticeship Program for the International Brotherhood of Electrical Workers (IBEW)

State of California Certified Electrician

EXPERIENCE SUMMARY

Over 23 years of Electrical experience. Primarily focused on the Water/ Wastewater industry. From 1984 to 1990 Mr. Birdsall served as an Electronic Technician in the U.S. Navy.

Mr. Birdsall joined the IBEW Apprenticeship in 2004, where he was assigned to various Electrical Contractors in San Diego County. In 2007, he was assigned to Neal Electric, where he would go on to become a Foreman in the Industrial Department.

In 2012, Mr. Birdsall began working for the Sweetwater Authority as an Instrumentation and Control Technician. Mr. Birdsall has been involved in the Design Review, Inspection and Start-Up of many electrical projects completed for the Authority.

In 2017 Mr. Birdsall joined Rockwell Construction Services as a Construction Manager / Inspector.

Specific (Partial) Experience:

The list of projects below is a sample of various Water/Wastewater Projects that Mr. Birdsall has been involved with over the last 15 years. Many of these Projects are new Construction while maintaining operability of an existing Facility.

- San Diego County – County wide SCADA Upgrade
- Sweetwater Authority – MCC-B Replacement (Spring Valley, CA)
- SRRRA – Santa Rosa WRF Rehabilitation Project
- City of Carlsbad - Multiple Water and Wastewater Facilities
- San Diego County – Rancho San Diego Sewage Lift Station
- City of Huntington Beach – Multiple Water and Wastewater Facilities
- San Diego County Water Authority – Twin Oaks Valley Water Treatment Plant (San Marcos, CA)
- City of San Diego – Beneficial Use Digester Gas (BUDG) (San Diego, CA)

Glen Rozak, PE

Project Manager/ SCADA and Control Engineer

Mr. Rozak is a lead SCADA and Control Engineer, having worked on numerous water distribution, wastewater treatment facilities including LA Dept. of Water & Power, City of San Diego, Olivenhain Municipal Water District and Valley Water. He's responsible for the support system design, integration, commissioning, and documentation. Mr. Rozak is knowledgeable in large scale SCADA and PLC-based control and automation systems for water, wastewater utilities, and marine-offshore and pipelines. He has in-depth knowledge and has adept skills with reusable software and hardware building block design for industrial control systems; OOP and component-based programming techniques; roadmap development, complex retrofit, migration and upgrade projects; and end-user surveys and detailed requirements specification.

Education:
MBA, San Diego State University, San Diego CA, 2010

BSc, Electrical Engineering, University of Alberta, Edmonton, 1992

Registrations/Certifications:
Registered Professional Engineer, CA, No. 7554

Registered Professional Engineer, Alberta, Canada, No. 54359

Office Location:
San Diego, CA

Total Years of Experience:
28

Years with Tetra Tech:
1

EXPERIENCE

City of San Diego – Public Utilities Department, Lead I&C Engineer. Provides ongoing engineering services, including support and maintenance for all of the Public Utilities Department's Raw Water, Distribution and Water Treatment facilities, including DYNAC SCADA, Wonderware HMI, Modicon M580 and Quantum PLC infrastructure.

Olivenhain Municipal Water District – Engineer of Record, A-B SLC PLC Upgrade Project. Developed comprehensive engineering design and bid packages for migration of 45 Legacy A-B SLC for upgrade to latest version of Control and CompactLogix PLC's system architecture. Provided oversite for development of detailed Field Site Survey Report, prepared by Sub-Contractor – Rockwell Constructions Services (RCS). Prepared final design deliverables, including Preliminary Design Report and Migration Strategy, Detailed Drawings and Specifications for Bid Package.

LA Dept of Water and Power – Licensed Professional Engineer, A-B ControlLogix, FactoryTalk View and iFix Standards Development. Facilitated quicker development, easier troubleshooting and more efficient maintenance. Tasks included philosophy development and requirements specification, control systems standards planning and documentation, software architecture and design, PLC-based hardware design, custom PLC function-block development and test, custom HMI object development and test, on-site commissioning and start-up support, and conducting class-based training sessions for department personnel.

Santa Clara Valley Water District - Licensed Professional Engineer, Rinconada Water Treatment Plant. Oversight and management of plant-wide GE iFix HMI and Modicon Unity Quantum modernization, reliability improvement and critical tie-in to existing raw water treatment processes, including review and commenting to Engineer of Record and Plant Controls System Integrator submittals, detailed planning for turn-key switch-over between old/new raw water treatment processes, SCADA and PLC code review, testing and verification, raw water influent, ozone contractor, floc/sed basin and wash-water recovery process control, and dosage control (Nonionic Poly, Liquid Alum, Cationic Polymer, OCL) and Contact Time Calculations.

Whiting Petroleum Corporation – Licensed Professional Engineer, SCADA Standardization. Retained by Whiting Petroleum Corporation to develop the following SCADA and Controls deliverables: strategic SCADA roadmap development for remote monitoring of well-sites in the Bakken Oil Field, alarm management and control philosophy development, harmonization of Centralized SCADA and PLC field-based standards, Wonderware/Systems Platform ArchestrA templates and standards development, and A-B ControlLogix Systems Standards and Migration Plan for Legacy Modicon M340's & Twido PLC's.

LA Dept of Water and Power – Technical Lead and Project Manager, SCADA/PLC - Project Manager and Technical Lead responsibilities included developing, testing, simulation and modeling for a SCADA/PLC-based coordinated control and monitoring system, with sequencing of 60 pressure and flow regulating valve sites - distributed across 22 miles of mainline and pond fill facilities in the remote Owens Valley of Eastern California. Utilizing cloud-based testing and collaboration approach, enabled teams of engineers and operators to verify SCADA system implementation prior to system installation and upgrade, saving several man-months of on-site troubleshooting during start-up.

L-3 Communications – Chief Engineer, Large Scale Automation. Chief Engineer responsible for A-B, GE and WAGO based vessel control and automation system design, programming and development, including: dynamic positioning, thruster control systems, vessel management, power management and generator control systems comprising distributed systems upwards of 10,000+ I/O points each.

L-3 Communications – Project Engineer, Control System Design. Power management control system software development for a 40MW - 11 kV power plant. Algorithms included: Automatic Blackout Recovery, Load Sharing, Load Shedding, Power Limiting, Generator and High Voltage Circuit Breaker Control. Responsible for control system survey reports, upgrade and design packages, including: bill of materials, system interconnects, wiring diagrams, cable specifications, I/O points list, block diagrams, control narratives, commissioning and de-commissioning documents. Preparing Reliability Studies - incident investigation and FMEA (Failure Modes & Effects Analysis) evaluations for redundancy of all mission critical systems. Decision support, safety and process hazard analysis, including FMEA Gap Analysis and HAZID/HAZOP.

TransCanada Pipelines – Licensed Professional Engineer, Control System Design. Functional design specification, development, programming and migration to a new SCADA automation package. The system was designed to monitor and control TransCanada's natural gas transmission pipeline consisting of 50+ Compressor, 1,000+ Metering, 2,000+ Valve and 200+ Offline Sales sites. PLC v. DCS Evaluation, Selection & Development, TransCanada Pipelines, Licensed Professional Engineer**.** Technology platform evaluation and selection. Replacement of existing Allen-Bradley PLC-Based Control System with Foxboro DCS. Senior engineer responsible for development of uniform environment and standard control system for all compressor station control and automation systems

Craig Barnes, PE
Sr. Electrical Engineer

Mr. Barnes has over 32 years of experience in Engineering management, technical leadership, quality control and design. 5kV power system & distribution experience, prime, standby, emergency generators, VFD & switchgear Instrumentation and Controls for Water & Waste-Water Utilities

Education:
San Diego State University, San Diego CA – 1989,
Bachelor of Science Electrical Engineering Post graduate studies in electrical engineering,

Registration/Certifications:
Board for Professional Engineers, Land Surveyors and Geologists (E#14708)

Licensed Professional Engineer (P.E.) – California, USA

Office Location:
San Diego, CA

Total Years of Experience:
32

Years with Tetra Tech:
1

EXPERIENCE

Nansemond Treatment Plant Advanced Nutrient Reduction Improvements Phase II, Norfolk, VA. Senior Electrical Engineer. This Design Build project provided design of modifications to existing electrical and control systems and new water treatment and pumping stations. Design for multiple 4800V and 480V services and interfaced with Utility to provide new 4800V services. Designed power and telecommunications to each facility. Mr. Barnes also designed temporary power and telecommunication services to maintain services to buildings during construction of facilities. Project consists of new Main Switchgear Building, Effluent, NRCY and RAS Pump Stations, Solids and Scum Handling Building, Equalization Basins, Influent Distribution Box, Aeration tanks, Odor Control Building, Plant Drain Stations, Clarifiers, and modifications to Blowers, Solids Handling, Dewatering, Carbon Feed Buildings. Mr. Barnes provided a new redundant 4800V distribution system and new fiber systems to all new and existing buildings.

Owens Lake Phase 1 North Infrastructure Reliability Improvement Project Phases 11-14, Los Angeles Dept. of Water and Power (LADWP). Owens Lake, CA. Senior Electrical Engineer. This design consists of 18 Pump Stations/ Valve Stations in the North area of the lakebed. Mr. Barnes designed 4.8kV power distribution, 480V power distribution, control panels, and instrumentation of automated SCADA system with multiple Allen Bradley PLCs and PanelView and GE iFix HMIs, fiber optics, 900MHz and 2.4GHz radio communication systems. Performed QA/QC inspection during electrical installation, software development, startup & commissioning. Coordinated with architectural & design engineering firms. Supported operations & maintenance of instrumentation & controls systems.

Los Angeles Department of Water & Power, Water Engineering & Technical Services. Electrical & Controls System Engineering Supervisor: Led a group of twelve engineers, consultants, technicians & designers to provide technical leadership & ensure timely delivery of controls & automation projects. Recommended, developed, and maintained electrical standards for the water system infrastructure. Provided leadership, training and mentoring to water system electrical engineers. Led SCADA software standards program initiative to include 50+ PLC instructions and HMI objects. Standards program entailed tag naming convention, PLC, HMI standards and the adoption of object-oriented programming techniques. Interface with consultants and contractors to ensure they adhere to departments electrical design and SCADA system software standards. Worked with departments management team to coordinate, schedule and plan for successful delivery of assigned projects. Led on-site startup and commissioning teams for multiple projects to perform inspection of electrical installation, instrumentation, and controls equipment to ensure the quality of delivered projects

Los Angeles Department of Water & Power, Stone Canyon Water Quality Improvement Project. Electrical Engineer: The design consisted of a Water Treatment Station for Chlorine, Fluoride, Ammonia, Zinc Orthophosphate, injection vaults, 20 regulating valve control vaults, weir monitoring vault, 1 MG diversion structure, lift-stations, 2 Pumping Stations and Microfiltration Plant. Task included:

- Design coordination with multiple architectural & design engineering firms
- Submittal review, construction coordination, start-up & commissioning
- Design automated SCADA system with multiple Allen Bradley PLCs and Panelview and GE iFix HMIs
- Multiple 480V switchgears, 480V/277V and 120V distribution systems and standby generators
- Design of comprehensive redundant network consisting of Fiber optics, 2.4Ghz and 900Mhz radios.
- Developed specifications for instruments & industrial data networks

Los Angeles Department of Water & Power, Owens Lake Dust Mitigation Project Phase 1 thru 10. Electrical Engineer: This design consisted of 100 square miles of dry lakebed that now has hundreds of pump stations, valve stations, and several air monitors station. This project has over 10,000 I/O, 100 PLCs with over 30,000 total iFIX HMI tags. Tasks Included:

- Task oversite, design & installation of 4.8kV power distribution, 480V power distribution, control panels, and instrumentation of automated SCADA system with multiple Allen Bradley PLCs and PanelView and GE iFix HMIs, 2.4 GHz and 900Mz radio communication systems
- QA/QC inspection during electrical installation, software development, startup & commissioning
- Design coordination with multiple architectural & design engineering firms
- Support operations & maintenance of instrumentation & controls systems

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RATE TABLE

This project will use the rate table shown below. This covers SWA fiscal year 2023 (July 1 2023 to June 30 2024). Eramosa reserves the right to request an annual escalation of up to 3.0% for the duration of this contract.

Category	Hourly Rates (US$)
Project Manager	$213.00
Principal Engineer	$185.00
Senior Designer	$140.00

In addition to the prescribed team member titles above, it may be necessary to use other professionals in these services, depending on the individual scope of work or task order. The below table includes those possible additional titles and associated rates, subject to the above period and escalation terms.

Category	Hourly Rates (US$)
Executive/Principal-in-Charge	$229.00
Intermediate Engineer	$140.00
Junior Engineer	$129.00
Senior System Integrator	$125.00
Technician/Drafter	$100.00

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Sweetwater Authority

On-Call SCADA Design
Professional Consulting Services

RATE SCHEDULE

Title	Hourly Billing Rate
Principal-In-Charge	$185/hr
Project Manager	$185/hr
Senior Inspector	$185/hr
Senior Controls Engineer (Tetra Tech)	$252/hr
Senior Electrical Engineer (Tetra Tech)	$252/hr

1. All effort expended in an 8-hour day will be billed at the standard rate listed above.

2. Overtime work above 8 hours per day and up to 12-hours per day will be charged at 1 ½ times of the standard rate listed above.

3. Overtime work above 12-hours per day and Sundays will be charged at 2 times of the standard rate listed above.

4. Overnight per diem expenses are $200 per night.

5. Any project that is over a 100 mi (round trip) from San Marcos, CA will be billed based on a 4-hour minimum related to field activities.

6. RCS drive time not included in the 4-hour minimum above, will be billed at the standard rate listed above for drive one-way.

7. The above RCS rates are all inclusive and include overhead. No vehicle mileage expense for RCS.

8. Tetra Tech Hourly Billing Rates listed above do not include expenses. Vehicle mileage for Glen Rozak is based in San Diego. Vehicle mileage for Craig Barnes is based in Anaheim.

9. Should any miscellaneous out of pocket expenses be incurred, the cost will be passed through without mark-up. Project materials will be billed at cost plus 15% mark-up. Billing will be monthly, Net 30 days.

10. Rates are valid through the 1st year of the Agreement. Rates are subject to change annually and/or upon agreement renewal. Annual rates increase not to exceed local Consumer Price Index (CPI).

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ATTACHMENT 6

April 5, 2023

Consideration to Award Contract for On-Call SCADA Design Professional Consulting Services

Justin Brazil, Director of Water Quality

Background

- The On-Call SCADA Design Consultant (SDC) provides services that are important for the maintenance/evolution of the SCADA system
- The SDC provides a licensed electrical professional engineer
- The previous SDC contract (Timberline Engineering) expired in June 2021

Request for Qualifications (RFQ)

On-Call SCADA Design Professional Consulting Services

- 1 year contract, 4 renewal options
- Example scope of work provided in the RFQ
  - General Support Tasks (SCADA Related)
  - Design and Bidding Phases of Projects (SCADA Related)
  - Construction Phases of Projects (SCADA Related)
- Tasks assigned on a case by case basis (On-Call)

Outreach

- Procurement Technical Assistance Centers (PTAC) website
- Ebidboard.com
- Authority's website
- Directly emailed to 30 consulting firms

RFQ Results-Statements of Qualifications (SOQs)

- RFQ opened January 10, 2023
- Mandatory preproposal meeting held January 25, 2023 (9 attendees)
- RFQ closed March 7, 2023
- Two SOQs were received in response to the RFQ
    - Eramosa International Inc. (Eramosa)
    - Rockwell Construction Services (RCS)

Consultant Selection Process (As Stated in the RFQ)

Evaluation Criteria

Category	Maximum Points
Completeness of proposal in addressing requested information • Scored based on the proposer's ability to respond to all requests	10
Consultant's experience and technical competence • Scored based on the responder's overall experience with SCADA design consulting, ability to meet the required qualifications, and technical approach related to the scope of services the consultant is expected to perform	35
Consultant's organization and key personnel • Scored based on the key project team's experience, competence, and demonstrated ability to provide high quality SCADA consulting services	20
Qualifying project experience • Scored based on the quality of projects listed, favoring projects with similar scope, size, and complexity to that described in this RFQ. Preference will additionally be given to projects in water/wastewater sectors.	35

- The Governing Board or Committee will evaluate the proposals based on established criteria
- The Governing Board or Committee may choose to select a short list and conduct interviews of the short-listed firms
- For firms that are deemed to be equally qualified, costs may be considered in the selection process.

RFQ-Engineering Billing Rates

Eramosa	
Classification	Hourly Billing Rate
Project Manager*	$213
Principal Engineer*	$185
Senior Designer*	$140
Principal-In-Charge **	$229
Intermediate Engineer**	$140
Junior Engineer**	$129
Senior System Integrator**	$125
Technician/Drafter**	$100

RCS	
Classification	Hourly Billing Rate
Project Manager*	$185
Senior Electrical Engineer**	$252
Senior Controls Engineer**	$252
Principal-In-Charge **	$185
Senior Inspector**	$185

*Standardized billing rate classifications requested in the RFQ.

**Additional billing rates provided. RCS did not provide billing rates for two of the standardized classifications. In staff's opinion, the Senior Electrical Engineer and Senior Controls Engineer are likely equivalent to the Principal Engineer and Senior Designer, respectively, that were requested in the RFQ.

Staffs Review of Proposals

- Staff reviewed the SOQs and found that both of them to meet the required qualifications
- RCS scored 97/100 points and Eramosa scored 91/100 points
- RCS is already under contract to perform work on the NCW Iron and Manganese Removal Project which will provide efficiencies with training and orientation on the Authority's processes/standards.

Fiscal Impact

- The FY 2022-23 Expense Budget includes $51,000 for general SDC support and $49,000 for Enterprise Automation to provide orientation/training for a new SDC

- If the Board approves a SDC contract award, staff would like authorization to utilize a portion of the available funds in the amount of $53,000 ($26,500 for Enterprise Automation & $26,500 for the SDC) for training and orientation during FY 2022-23. It is anticipated that approximately one-half of the required training will be completed during FY 2022-23 with the remainder occurring in FY 2023-24

- SCADA scope of work authorizations included $40,000 for development of the RFQ

Fiscal Impact/Training

Training provided by Enterprise Automation would entail the following:

- Teach the SDC with how the Authority executes projects (design through construction closeout)
- Train the SDC on the Authority's SCADA system, communications network, cyber security protocols, instrumentation, controls, and electrical standards (IC&E), and other relevant specifications
- Familiarize the SDC with the Authority's annual SCADA planning/budgeting activities

Alternatives

1. Award a contract to Rockwell Construction Services, Valley Center, CA for one year (or when the last project assigned is complete if different than this date). Direct staff to bring a recommendation for contract extension back to the Governing Board within one year based on performance. Authorize funds for training and orientation of Rockwell Construction Services in the amount of $53,000 ($26,500 for Enterprise Automation & $26,500 for the Rockwell Construction Services).

2. Review and evaluate SOQs received in response to the RFQ, direct staff to enter a contract with the highest ranked firm in accordance with their hourly engineering billing rates and make a recommendation for selection to the Governing Board. Authorize funds for training and orientation of the SDC in the amount of $53,000 ($26,500 for Enterprise Automation & $26,500 for the SDC).

Alternatives

3. Review and evaluate proposals received in response to the RFQ. Based on SOQ evaluation, select a short list and conduct interviews of the short-listed firms. After the interviews, re-evaluate and rank the firms based on the combined SOQ evaluation/interview process, direct staff to enter a contract with the highest ranked firm in accordance with their fee proposal and make a recommendation for selection to the Governing Board. Authorize funds for training and orientation of the SDC in the amount of $53,000 ($26,500 for Enterprise Automation & $26,500 for the SDC).

4. Other direction as determined by the Governing Board.

Recommendation

Award a contract to Rockwell Construction Services, Valley Center, CA for one year (or when the last project assigned is complete if different than this date). Direct staff to bring a recommendation for contract extension back to the Governing Board within one year based on performance. Authorize funds for training and orientation of Rockwell Construction Services in the amount of $53,000 ($26,500 for Enterprise Automation & $26,500 for the Rockwell Construction Services).

Questions?

Ranking Criteria		Completeness of proposal in addressing requested information	Consultant's experience and technical competence	Consultant's organization and key personnel	Qualifying project experience	Total Score
		Scored based on the proposer's ability to respond to all requests in Section D	*Scored based on the responder's overall experience with SCADA design consulting, ability to meet the required qualifications, and technical approach related to the scope of services the consultant is expected to perform*	*Scored based on the key project team's experience, competence, and demonstrated ability to provide high quality SCADA consulting services*	*Scored based on the quality of projects listed, favoring projects with similar scope, size, and complexity to that described in this RFQ. Preference will additionally be given to projects in water/wastewater sectors.*	
Score		**10**	**35**	**20**	**35**	**100**
Eramosa						
	Total					
RCS						
	Total					

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