



# ENGINEERING AND OPERATIONS COMMITTEE MEETING

Thursday, August 12, 2021  
4:30 p.m.

1. Call meeting to order
2. Public communications to the Committee
3. Additional items arising after posting of agenda
4. Engineering
  - A. RZ System
    - i. PFAS Treatment – Update
    - ii. VanderWerff Well – Update
    - iii. General PFAS – Information Attachment A
    - iv. Vista Panorama Reservoir – Update
    - v. Retail Zone Water Conservation Program Ordinance Attachment B
  - B. WZ System
    - i. 1 MG Reservoir Rehabilitation – Update
    - ii. 6MG Reservoir Geotechnical Evaluation – Update
    - iii. 6MG Reservoir Replacement – No Update
    - iv. OC-70 Meter Issue – Update
    - v. Walnut Turnout/Tustin – No Update
  - C. Sewer System
    - i. ID1 Capacity, Reliability, and Augmentation Project #1
      - Mitigated Negative Declaration Adoption Attachment C
      - Review of contract amendment to Quanta/HDR Handout
    - ii. Sewer Development Permits Attachment D
  - D. Joint
    - i. Site Planning/Administration Building – Update
    - ii. SCADA Replacement –
      - Review of contract award to TESCO Controls, Inc. Attachment E
5. Operations
  - A. RZ System
    - i. System Status Report
    - ii. East & West Well – Pumping Level Information Handout
    - iii. RZ Water Use – Monthly Report– Information Handout
    - iv. Consumer Confidence Report Handout
  - B. WZ System
    - i. System Status Report
    - ii. WZ Water Use – Monthly Report Handout
  - C. Sewer System
    - i. System Status Report
    - ii. System Rehabilitation and Replacement – Update
    - iii. Spill Report – No sewer spills in June or July.
6. Adjournment

**NOTE:** Pursuant to California Governor's Executive Order No. N-29-20, executed March 17, 2020, members of the Board of Directors may elect to attend this Regular Meeting by telephone or video conference due to concerns relative to COVID-19 Coronavirus and avoidance of public gatherings. **THERE WILL BE NO PUBLIC LOCATION TO ATTEND THIS MEETING IN PERSON.** The public may attend either telephonically by calling into, or by videoconference by logging into, the meeting at:

**To Access the Meeting by Computer/Device:**

<https://us02web.zoom.us/j/87488769832?pwd=QmpFUE9FM2poWm1kZ3dWUjd4VzZGZz09> or short link <https://bit.ly/3yv1VSe>

**To Access the meeting by Phone:**

Dial: (669) 900-6833

874 8876 9832 Passcode: 756074

Members of the public may (i) e-mail comments to Sylvia Prado at sprado@eocwd.com up to 30 minutes before the Board meeting; (ii) submit a speaker request via the on-line chat feature at the beginning of the meeting prior to Item 3; or (iii) verbally indicate their desire to comment during the time designated on the agenda, and the comments shall either be heard by or read to the Board, as applicable. Members of the public wishing to attend the meeting that require other reasonable modifications or accommodation to facilitate such attendance should contact Ms. Prado at (714) 538-5815 or the e-mail provided above at least twenty-four (24) hours before the meeting to make such request.

Availability of agenda materials: Agenda exhibits and other writings that are disclosable public records distributed to all or a majority of the members of the East Orange County Water District Operations & Engineering Committee in connection with a matter subject to discussion or consideration at an open meeting of the Operations & Engineering Committee are available for public inspection in the District's office, 185 McPherson Road, Orange, California ("District Office"). If such writings are distributed to members of the Committee less than 72 hours prior to the meeting, they will be available via phone or email request to Ms. Sylvia Prado at (714) 538-5815 or sprado@eocwd.com.

# MEMO

**TO: ENGINEERING AND OPERATIONS COMMITTEE**  
**FROM: GENERAL MANAGER**  
**SUBJECT: PFAS – STATUS REPORT**  
**DATE: AUGUST 12, 2021**

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## BACKGROUND

Staff has not received any customer inquiries or complaints regarding PFAS in the past month.

The following PFAS related events and information have been received during the past month:

- The California Office of Environmental Health Hazard Assessment (OEHHA) announced the release of a draft document for public review describing proposed Public Health Goals (PHGs) for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) in drinking water. The proposed PHG of 0.007 parts per trillion (ppt) for PFOA is based on kidney cancer in humans and the proposed PHG of 1 ppt for PFOS is based on liver and pancreatic tumors in laboratory animals. The proposed PHGs are set at a level of risk of one additional cancer case per one million persons exposed over a lifetime. The draft document also presents health-protective drinking water concentrations for noncancer health effects. The proposed noncancer health-protective concentrations are 3 ppt for PFOA, based on increased risk of liver damage in humans and 2 ppt for PFOS, based on increased total cholesterol in humans. The public comment period for the draft document begins July 30, 2021 and ends September 28, 2021. Staff will coordinate with OCWD on the appropriate action.
- OCWD Meetings – Information disseminated at the Special PFAS and Producers meetings included:
  - OCWD PFAS Pilot Program – OCWD has initiated Phase II of the pilot program. Five new alternative sorbents and one Ion Exchange (IX) sorbent from Phase 1 are being tested in Phase II.
  - Public Outreach – The OCWD PFAS Update, previously prepared on a monthly basis, will now be prepared quarterly and the next update is expected in September.
  - PFAS monitoring orders – The District continues quarterly monitoring for PFOA and PFOS in accordance with the current orders.
  - Proposed Legislation:
    - HR 2467 - PFAS Action Act of 2021. This bill establishes requirements and incentives to limit the use of perfluoroalkyl and polyfluoroalkyl substances, commonly referred to as PFAS, and remediate PFAS in the environment. The bill directs the Environmental Protection Agency (EPA) to designate the PFAS perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) as a hazardous substances under CERCLA, thereby requiring remediation of releases of those PFAS into the environment. Within five years, the EPA must determine whether the remaining PFAS should be designated as hazardous substances. The EPA must also determine whether PFAS should be designated as toxic pollutants under the Clean Water Act. If PFAS are designated as toxic, then the EPA must establish

standards to limit discharges of PFAS from industrial sources into waters of the United States. In addition, the EPA must issue a national primary drinking water regulation for PFAS that, at a minimum, includes standards for PFOA and PFOS. The Bill is in Senate Committee.

- HR 3291 - Assistance, Quality, and Affordability Act of 2021. This Bill would amend the Safe Drinking Water Act to provide assistance for States, territories, areas affected by natural disasters, and water systems and schools affected by PFAS or lead, and to require the Environmental Protection Agency to promulgate national primary drinking water regulations for PFAS, microcystin toxin, and 1,4-dioxane, and for other purposes. The Bill is in House Committee.
  - AB 652 - Product safety: juvenile products: chemicals: perfluoroalkyl and polyfluoroalkyl substances. This bill would, on and after July 1, 2023, prohibit a person, including a manufacturer, from selling or distributing in commerce in this state any new, not previously owned, juvenile product, as defined, that contains intentionally added perfluoroalkyl and polyfluoroalkyl substances. The Bill is in Senate Committee.
  - AB 1200 - Plant-based food packaging: cookware: hazardous chemicals. This bill would prohibit PFAS chemicals in food packaging. The Bill is in Senate Committee.
- PFAS Temporary/Permanent Treatment System – CDM Smith submitted the final bid package and OCWD expects to present the project to the OCWD Board for bid approval in August and advertisement in September.
  - Wells – The wells remain off, however, flushing and water quality testing is conducted weekly so that in the event of an emergency they can be turned back on immediately.

## FINANCIAL IMPACT

No direct financial impact is associated with this report.

## RECOMMENDATION

The Committee receive and file this report.

# MEMO

**TO: ENGINEERING AND OPERATIONS COMMITTEE**  
**FROM: GENERAL MANAGER**  
**SUBJECT: RETAIL ZONE WATER CONSERVATION ORDINANCE**  
**DATE: AUGUST 12, 2021**

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## BACKGROUND

In June 2009, the Retail Zone Water Conservation Program Ordinance 2009-01 was adopted due to reductions in water from the State Water Project and other factors. Key features of the ordinance are the Permanent Water Conservation Measures that residents and businesses are required to practice throughout the year. These measures are designed to optimize water-use efficiency even when there is no water supply shortage. The Ordinance and conservation measures following the most recent drought have resulted in an average 30% reduction as compared to the most recent high demand in 2009.

On June 17, 2021, the Board adopted the 2020 Water Shortage Contingency Plan (WSCP) as a stand-alone document to address water shortage contingency planning in the event of extended drought or catastrophic events, shortages greater than 50%, match the State's six standard shortage levels, outline procedures for the Annual Water Supply & Demand Assessment, and quantify demand reduction actions that can be considered under shortage levels.

Staff is proposing and recommending adoption by the Board the revised Retail Zone Water Conservation Program Ordinance 2021-01, to be posted on the District's website, to align it with the State's six standard shortage levels.

## FINANCIAL IMPACT

Fiscal impacts associated with the adoption of the Ordinance are not known at this time. The adoption of the Ordinance as well as water shortages can reduce revenues and require additional costs for water shortage response activities.

## RECOMMENDATION

That the Committee recommend the Board consider the adoption of the Retail Zone Water Conservation Ordinance 2021-01.

# MEMO

**TO: ENGINEERING AND OPERATIONS COMMITTEE**  
**FROM: GENERAL MANAGER**  
**SUBJECT: MITIGATED NEGATIVE DECLARATION FOR THE ID1 CAPACITY, RELIABILITY, AND AUGMENTATION PROJECT NO. 1**  
**DATE: AUGUST 12, 2021**

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## BACKGROUND

On June 18, 2020, The Board awarded a progressive design build agreement with Quanta Electric Power Construction to complete Phase 1 design services for the ID1 Capacity, Reliability, and Augmentation Project No. 1 (Project). The Project involves rehabilitation and upsizing of existing sewer alignments totaling about 7,800 lineal feet through replacement and installation of five sewer segments described as: Browning Avenue Sewer, Clarissa Lane Sewer, Fallen Leaf Sewer, Crawford Canyon Sewer, and 6th Street Sewer.

The Board is being asked to consider the adoption of the Mitigated Negative Declaration (MND) in compliance with the California Environmental Quality Act (CEQA) prior to considering approval to construct the Project.

The Initial Study for the Project was circulated for public comment and was received by the State Clearinghouse on June 4, 2021, and the "Notice of Availability and Intent to Adopt a Mitigated Negative Declaration for the ID1 Capacity Reliability and Augmentation Project No. 1" was also published in the Orange County Register newspaper on June 4, 2021. The Initial Study was sent by certified mail or other method to several entities, including Orange County Supervisor Donald P. Wagner, Air Resources Board, Public Utilities Commission, Santa Ana Regional Water Quality Control Board, City of Orange, City of Tustin, Orange County Public Works, Tustin Unified School District, City of Tustin, Orange County Transportation Authority, Caltrans, Southern California Regional Rail Authority, California Dept. of Health Services, and affected homeowner associations, as well as to the State Clearinghouse.

The 30-day review period for the Initial Study concluded on July 6, 2021. The District received comment letters from the Tustin Unified School District and Orange County Public Works. These comment letters are attached.

The final Initial Study MND Package, including the Mitigation Monitoring and Reporting Program, have been provided and are available on the District's website. The District's environmental consultant, Tom Dodson and Associates, will be present at the Board meeting.

## FINANCIAL IMPACT

Funds have been budgeted in Account #7302120 for the ID1 Capacity, Reliability, and Augmentation Project.

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**RECOMMENDATION**

That the Committee recommend the Board:

1. Consider the adoption of the Mitigated Negative Declaration in compliance with California Environmental Quality Act prior to considering approval to construct the ID1 Capacity, Reliability, and Augmentation Project No. 1;
2. Find and certify that the Mitigated Negative Declaration for the ID1 Capacity, Reliability, and Augmentation Project No. 1 has been prepared in accordance with the provisions of the California Environmental Quality Act;
3. Certify that the Board has considered the contents of the Mitigated Negative Declaration and determined that the documentation is accurate and reflects the independent judgement of the District;
4. Certify that the Board of Directors has reviewed and considered that the Mitigated Negative Declaration is in compliance with CEQA Guidelines when reaching its decision to approve the ID1 Capacity, Reliability, and Augmentation Project No. 1, subject to the incorporation of the mitigated measures and mitigation monitoring program as included in the Mitigated Negative Declaration; and
5. Authorize the General Manager to sign the Notice of Determination and Mitigated Negative Declaration for the ID1 Capacity, Reliability, and Augmentation Project No. 1 and file it with the County of Orange.

**June 2021 - Sewer Connection & Wholesale Connection Permits**

Connection Address	Type of Development	Permit No	APN	Date Issued	Regional CFCC (OCSD) Fees	Local Capacity Chage Fees	Inspection Fees	Total Sewer	Wholesale Connection Meter Fees	Water District	Total
18612 Lassen Dr. Santa Ana, CA 92705	SFR Remodel	21-23	395-601-11	6/14/2021	\$ 945.00	\$ -	\$ -	\$ 945.00	\$ -	Tustin	\$ 945.00
11481 Plantero Dr. Santa Ana, CA 92705	Septic Conversion	21-35	502-441-04	6/21/2021	\$ 4,973.00	\$ 2,469.00	\$ 800.00	\$ 8,242.00	\$ -	GSWC	\$ 8,242.00
15771 Red Hill Ave. Tustin, CA 92705	Commercial	21-41	430-231-04	6/24/2021	\$ 6,122.51	\$ -	\$ -	\$ 6,122.51	\$ -	Tustin	\$ 6,122.51
1702 La Loma Dr. Santa Ana, CA 92705	SFR- BDRM	21-44	502-181-19	6/3/2021	\$ -	\$ -	\$ -	\$ -	\$ -	Tustin	\$ -
1782 Sierra Alta Dr. Santa Ana, CA 92705	ADU	21-47	103-512-03	6/16/2021	\$ -	\$ 1,015.25	\$ 800.00	\$ 1,815.25	\$ 925.00	Tustin	\$ 2,740.25
<b>Totals</b>					<b>\$ 12,040.51</b>	<b>\$ 3,484.25</b>	<b>\$ 1,600.00</b>	<b>\$ 17,124.76</b>	<b>\$ 925.00</b>		<b>\$ 18,049.76</b>

**June 2021 - In the Pipeline**

Connection Address	Type of Development	Permit No	APN	Water District	Permit Status
9922 Newport Blvd, Santa Ana, 92705	New Construction - 16 SFRs	21-56 to 21-71	VTM No. 18062	GSWC	Pending customer permit payment
9801 Brier Lane, Santa Ana, 92705	New Construction - 5 SFRs	21-72 to 21-76	503-321-01, 503-321-02	GSWC	Pending customer permit payment
13011-13051 Newport Ave, Tustin, 92780	Commercial (Remediation)	19-69	401-221-25	Tustin	Pending permit payment
10368 Broadview Pl. Santa Ana, CA 92705	SFR	21-15	503-551-15	GSWC	Pending plan revision from customer



**July 2021 - Sewer Connection & Wholesale Connection Permits**

Connection Address	Type of Development	Permit No	APN	Date Issued	Regional CFCC (OCSD) Fees	Local Capacity Chage Fees	Inspection Fees	Total Sewer	Wholesale Connection Meter Fees	Water District	Total
18281 Warren Ave. Tustin, CA 92780	ADU and SFR	21-48	401-122-17	7/20/2021	\$ 1,889.00	\$ -	\$ -	\$ 1,889.00	\$ -	Tustin	\$ 1,889.00
14382 Harp Court, Santa Ana, CA 92705	ADU	21-46	401-201-24	7/29/2021	\$ -	\$ 903.90	\$ -	\$ 903.90	\$ -	Tustin	\$ 903.90
1402 Peacock Hill Dr. Santa Ana, CA 92705	SFR	21-55	503-363-09	7/9/2021	\$ 1,939.00	\$ -	\$ -	\$ 1,939.00	\$ -	GSWC	\$ 1,939.00
12862 Dunas Rd. Santa Ana, CA 92705	SFR	21-81	094-351-02	7/9/2021	\$ -	\$ -	\$ -	\$ -	\$ -	Orange	\$ -
1261 SE. Skyline Dr. Santa Ana, CA 92705	SFR	21-82	502-121-08	7/22/2021	\$ -	\$ -	\$ -	\$ -	\$ 925.00	Tustin	\$ 925.00
<b>Totals</b>					<b>\$ 3,828.00</b>	<b>\$ 903.90</b>	<b>\$ -</b>	<b>\$ 4,731.90</b>	<b>\$ 925.00</b>		<b>\$ 5,656.90</b>

**July 2021 - In the Pipeline**

Connection Address	Type of Development	Permit No	APN	Water District	Permit Status
9922 Newport Blvd, Santa Ana, 92705	New Construction - 16 SFRs	21-56 to 21-71	VTM No. 18062	GSWC	Pending customer reponse
9801 Brier Lane, Santa Ana, 92705	New Construction - 5 SFRs	21-72 to 21-76	503-321-01, 503-321-02	GSWC	Pending customer reponse
13011-13051 Newport Ave, Tustin, 92780	Commercial (Remediation)	19-69	401-221-25	Tustin	Pending permit payment

# MEMO

**TO: ENGINEERING AND OPERATIONS COMMITTEE**  
**FROM: GENERAL MANAGER**  
**SUBJECT: CONTRACT AWARD FOR SCADA SERVER REPLACEMENT TO TESCO CONTROLS, INC**  
**DATE: AUGUST 12, 2021**

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## BACKGROUND

The District's Supervisory Control and Data Acquisition (SCADA) system was installed by TESCO Controls, Inc. (TESCO) in the year 2000. It has served the District well for 21 years and is now in need of replacement due to obsolete components, lack of replacement parts, and to implement security improvements.

Late last year, staff contracted with West Yost Associates (West Yost), who had evaluated the District's IT system with the AWIA project, to prepare a Preliminary Design Report (PDR) for the SCADA system replacement including specifications and cost estimates. Over the past few years staff has evaluated several vendors for the SCADA upgrades including Scada Integrations/Relevant Solutions, NLS Engineering, CDM Smith, West Yost, and TESCO and two software systems, Wonderware and Ignition.

Staff propose a phased approach to this multi-year project. Phase 1 will replace and upgrade the SCADA servers and software. Phase 2 will replace and upgrade SCADA software and hardware at eight existing reservoir, pump station and PRV sites, and Phase 3 will install controls at existing sites that currently only transfer data. On a parallel path staff will evaluate the use of radio for SCADA communications as a potentially more secure and reliable replacement of the existing phone lines.

Staff recommends implementing Phase 1 of this work utilizing TESCO. TESCO is uniquely qualified to provide services to replace the District's SCADA system having installed it in the year 2000 and they have provided support, on an as needed basis, over the past 21 years. In addition, TESCO has extensive experience with local water/wastewater agencies and comes highly recommended.

Staff is recommending that the District contract with TESCO to upgrade the existing SCADA servers, software, and provide programming in the amount of \$294,760.00 per the attached scope of work.

## FINANCIAL IMPACT

Funds have been budgeted in Account #7202145 for SCADA System Improvements.

## RECOMMENDATION

That the Committee recommend the Board award a contract to TESCO Controls, Inc. in the amount of \$294,760.00 for the SCADA server replacement.

To: East Orange County Water District  
Attn: Jerry Mendzer  
Re: East Orange County Water District  
SCADA Upgrade

Quote Date: 8/5/2021  
Quote No.: 21F158Q02

Dear Jerry:

Thank you for your continued interest in Tesco products, services, and solutions. We are pleased to quote the following scope of work pertaining to the above-referenced project.

## Project Background

Tesco Controls, Inc. provided a Supervisory Control and Data Acquisition (SCADA) system for East Orange County Water District (EOCWD) under Tesco job number T-21062. This system runs a Wonderware SCADA application. Due to the concerns of an aging system, the District hired West Yost to evaluate their existing system and create a Preliminary Design Report (PDR). Taking West Yost's recommendations into consideration, EOCWD has requested Tesco Controls Inc. to quote an upgrade/conversion of the existing Wonderware SCADA system. Based on Tesco's conversations with the District, this upgrade covers only a portion of the PDR addressing parts of P1-1 and P1-2. Future phases will cover additional items identified in the PDR. The District has selected Inductive Automation Ignition SCADA package over their current Wonderware system for monitoring and control of their system. The existing sites include OC-70 Pumping Station, Ethelbee Pressure Reducing Valve, Stoller Reservoir, 6 MG Reservoir, 11.5 MG Reservoir, 1 MG Reservoir, Vista Panorama Reservoir, and SCADA/Office/Well.

## Scope of Work

Tesco Controls Inc. will supply and configure all hardware and software required for the new Ignition based SCADA system. The system setup will follow current industry best practices. To begin this project, Tesco will host a workshop with the District to review operational needs, changes, and pain-points of the existing application. The workshop will help Tesco design the new screens and overall architecture of the system to meet the needs and wants of the District. Additional items to be discussed during the workshop will include SCADA standards, application navigation, remote access, data logging, alarms, trends, and reports. The current data logging, alarms, trends, and reports will be replicated into the Ignition SCADA system. There will be an opportunity for refinement of each of these items, which should be identified and discussed during the workshop.

Tesco will supply and configure the required Inductive Automation Ignition licensing for this project. The District has expressed the desire for redundancy and remote access as part of the SCADA upgrade. Tesco will provide two virtualized servers to be configured for redundancy. Both the primary and secondary servers will be located at the District's main office. The District's intent is to have the primary and secondary services in two different physical locations. Tesco's system architecture will take this into account, and the secondary server will be able to be relocated once a location is decided upon.

A third virtualized server will be provided for secure remote access. Industry best practices and NIST guidelines recommend remote access to be configured within a demilitarized zone (DMZ). This DMZ server will be set up and configured behind a firewall for secure remote access. The system architecture will also account for network segmentation and isolation in an effort to follow the DHS and NIST recommendations.

Tesco will provide and utilize VMWare ESXi software for the server virtualization. Each server will be configured as a hypervisor to run the required virtual machines (VMs) on this system. A Tesco SCADA Programming Engineer will perform the configuration of all virtual machines. The virtualization of the system will allow the District to treat virtual machines like data, this allows for regular backups of each VM. VEEAM backup software will be used to take

schedule backups of all VMs and will be stored on the provided Network Attached Storage (NAS) device. This setup will allow the ability to roll-back to previous backups if needed, all in an effort to create additional system resiliency.

Tesco will provide a client computer to be used as a local workstation. New peripherals (monitors, keyboards, etc.) will be provided with this computer. This will allow operators onsite to interact with the SCADA application.

New networking equipment will be provided within this project as well. Cybersecurity is of utmost importance and Tesco will provide and configure the required hardware to protect the District's new system. This will include a new Virtual Private Network (VPN) appliance/firewall for secure remote access to the SCADA application. This will be configured to facilitate secure remote access. Lastly, Tesco will provide a router and switches in an effort to harden the system and follow industry best practices. Tesco will perform the required configuration of these devices.

For remote access to the SCADA application, Tesco will provide two Microsoft Surface Pro tablets. These tablets will be configured for secure access to SCADA through the VPN appliance.

Tesco will design and manufacture a small enclosure to house a new communications gateway. This gateway will manage traffic across the process control network. The gateway will also be used to support the legacy serial modems used for communications to the existing remote sites.

A Tesco SCADA Programming Engineer will perform the application development and configuration required to meet the District's needs. The Engineer will design the look and feel of the application as well as the standards for it by utilizing the information gathered during the workshops. Tesco will also program and redevelop the required alarms, trends, and reports based upon the discussions in the workshop. Once the development of the new application is finalized, the Engineer will perform inhouse testing of the application.

Once all development and configurations are complete including the SCADA application, hypervisors, firewall, workstation, network switches, router, and gateway, Tesco will ship the new equipment to the District. A Tesco Field Service Engineer and SCADA Programming Engineer will setup and install the new equipment in the District's main office. Once completed, Tesco will perform startup and testing of the new system. Upon successful testing, Tesco will commission the District's new SCADA system and decommission the old system.

After the system is commissioned, Tesco will provide a up to eight (8) hours of training on the new system to available District personnel. O&M manuals will be provided for Tesco supplied equipment.

## Scope of Supply

Item	Qty	Description
1	Lot	<p><b>SCADA Hardware to Include:</b></p> <ul style="list-style-type: none"> <li>▪ Qty. of Three (3): Dell Host Server                             <ul style="list-style-type: none"> <li>▪ Qty. of Two (2) Redundant SCADA Hypervisor</li> <li>▪ DMZ Hypervisor</li> </ul> </li> <li>▪ Dell Workstation Class Computer                             <ul style="list-style-type: none"> <li>▪ Qty. of Two (2): Monitors</li> <li>▪ Keyboard &amp; Mouse</li> </ul> </li> <li>▪ Network Attached Storage                             <ul style="list-style-type: none"> <li>▪ 4-Bay</li> <li>▪ Qty. of Four (4): 4TB Hard Drives</li> </ul> </li> <li>▪ Virtual Private Network (VPN) Appliance</li> <li>▪ Router</li> <li>▪ Qty. of Two (2) - Managed Network Switch</li> <li>▪ Qty. of Two (2) – Uninterruptible Power Supply</li> <li>▪ Qty. of Two (2) – Microsoft Surface Pro Tablet                             <ul style="list-style-type: none"> <li>▪ For Remote Access</li> </ul> </li> <li>▪ Qty. of Two (2) – Grandstream Autodialer Modem                             <ul style="list-style-type: none"> <li>▪ For Voice Call-out Alarm Notification</li> </ul> </li> </ul> <p><b>SCADA Software to Include:</b></p> <ul style="list-style-type: none"> <li>▪ Redundant Inductive Automation Ignition SCADA Software Licenses to Include:                             <ul style="list-style-type: none"> <li>▪ Ignition Platform, OPC UA Server Module, Core Drivers, Alarm Notification Module, Voice Notification Module, Tag Historian, OPC-COM Module, Reporting Module, Symbol Factory, Vision Module</li> </ul> </li> <li>▪ DMZ Inductive Automation Ignition Licensing to Include:                             <ul style="list-style-type: none"> <li>▪ Ignition Platform, Symbol Factory, Vision Module</li> </ul> </li> <li>▪ Microsoft Office Pro</li> <li>▪ MS Server 2019 Licenses as Required for Virtual Machines</li> <li>▪ Veeam</li> <li>▪ VMWare ESXi Essentials</li> <li>▪ McAfee Antivirus</li> </ul>
2	1	<p><b>Communications Gateway Device (RTU-99 Hardware) to Include:</b></p> <ul style="list-style-type: none"> <li>▪ Enclosure</li> <li>▪ Power Supply</li> <li>▪ Tesco L3000 Gateway with Serial and Ethernet Ports                             <ul style="list-style-type: none"> <li>▪ Protocol Aware Device</li> </ul> </li> <li>▪ Network Switch</li> <li>▪ Wires, Din Rails, Labels, Wireways, Circuit Breakers as Required</li> </ul>

Item	Qty	Description
3	Lot	<p><b>Professional Services:</b></p> <ul style="list-style-type: none"> <li>▪ Project Management</li> <li>▪ Engineering                             <ul style="list-style-type: none"> <li>▪ Engineered shop drawings</li> <li>▪ Equipment schematics</li> <li>▪ System block diagram</li> <li>▪ Engineered submittals</li> <li>▪ Technical data</li> <li>▪ Project records</li> </ul> </li> <li>▪ SCADA Programming                             <ul style="list-style-type: none"> <li>▪ Configuration of servers and workstation</li> <li>▪ Install and configure operating systems and supporting software</li> <li>▪ Build tag database</li> <li>▪ Configure historian database</li> <li>▪ Configure reporting module to generate five (5) automated reports based on the process data currently captured within the SCADA application</li> <li>▪ Configure remote access to SCADA application (2 Surface Pros)</li> <li>▪ Develop SCADA application</li> <li>▪ Develop graphical screens</li> <li>▪ Test, commission, and verify proper functionality of the new SCADA system</li> </ul> </li> <li>▪ Networking/Communications/Telemetry                             <ul style="list-style-type: none"> <li>▪ Configure network switches</li> <li>▪ Configure VPN appliance for secure remote access</li> <li>▪ Provide an appropriate level of separation between SCADA network and process control network</li> </ul> </li> <li>▪ Product Startup Services                             <ul style="list-style-type: none"> <li>▪ Product quality review</li> <li>▪ Verification of product installation</li> <li>▪ Product parameter adjustments</li> <li>▪ Product programming</li> <li>▪ Software upload/download as required</li> <li>▪ Product/equipment reconfiguration as required</li> <li>▪ Product function checks</li> <li>▪ Product startup.</li> </ul> </li> <li>▪ Onsite Training</li> <li>▪ O&amp;M Manuals</li> </ul>
		<b>TOTAL (NOT including sales tax): \$294,760.00</b>

### Project Clarifications

- Unless otherwise indicated by the Scope of Work above, quote is to **furnish only** and does not include any trade labor, trade work, construction work, site improvement, contractor services, or any trade installation services. Any trade labor and/or related trade work shall be performed by others/contractor.
- Unless otherwise indicated by the Scope of Work above, the following is **not** included within this quotation:
  - Conduit, field wire, tubing, or basic trade installation materials (brackets, screws, bolts, j-box, stanchions, pull-box, etc.)
  - Instrumentation mounting components, brackets, stanchions, sunshields, etc.
  - Local control stations and/or field mounted disconnects.
  - Instrumentation, devices, components, or equipment not specifically identified in the above quotation.
  - Fiber optic patch panels, cable, splicing or terminations.

- Networking infrastructure or architecture modifications to existing facilities.
- Any 3<sup>rd</sup> party testing, harmonic testing/analysis, protective device coordination study, short-circuit analysis, or Arc-Flash Risk Assessment (AFRA) services.
- Electrical interconnection diagrams for equipment not furnished by TESCO
- ISA process control loop diagrams.
- Signal loop diagrams for equipment not furnished by TESCO.

## Clauses, Terms and Conditions

- Quote is firm for 30 days unless otherwise stated.
- Intellectual Property and Confidentiality Notice: The scope of work and price quotation shall not be construed as a formal design or recommendations on design for the related project. All content contained within this quotation is the intellectual property under the proprietorship of Tesco Controls, Inc. and is subject to applicable copyright laws. Such intellectual property shall not be duplicated, replicated, copied, or shared without explicit written consent from Tesco Controls, Inc., as it contains confidential information and work product developed exclusively for use by Tesco Controls, Inc.
- Submittals: to be provided approximately **12-16** weeks after receipt of purchase order, written notice of intent, or notice to proceed.
- Delivery: to be scheduled approximately **24-32** weeks minimum after submittal approval.
- Unless otherwise stated above, price does not include any sales tax, use tax, or applicable fees; please apply any taxes and/or fees as appropriate. Please note that all invoices will include sales tax where applicable.
- Tesco price is FOB factory, full freight allowed.
- Tesco warranties against defect in design, workmanship, and materials for a period of one year from date of installation; and does not exceed 18 months from the date of shipment from the factory.
- Tesco carries liability insurance, with full workman's compensation coverage.
- Terms are net 30 days on approved credit accounts.
- Interest will be applied to all past due invoices.
- All merchandise sold is subject to lien laws.
- Final retention to be paid within 10 days after the project notice of completion.

Please feel free to contact us at (916) 395-8800 to discuss any questions or comments you may have regarding this quotation.

Sincerely,

TESCO CONTROLS, INC.



Caleb Ernst  
Technical Sales Estimator  
cernst@tescocontrols.com