

Olivehurst Public Utility District



Agenda Item Staff Report

Meeting Date: 12/06/23

Item description/summary:

Consider presenting Plumas Lake SCADA System Enhancement Presentation to upcoming December Board meeting for approval.

This project focuses on upgrading an existing SCADA system at Plumas Lake Treatment Plant that will be updated to the current industry standard.

The goal of the presentation is as followed:

- 1.) What was previously happening
- 2.) What was discovered
- 3.) What is happening now
- 4.) What the plan is for the future and how that relates to A.) Adept Solutions (security operations) & Jim Carson of Affinity Engineering/Primex (hardware and system Operation).
- 5.) Present cost that it will take to get to item #4 and why it's important (go over security reason, easy use for operator, standard requirements, back-up data, easy analysis and state reporting, all water plants on one system, etc..)

The end goal is to get all plants onto one SCADA system with the hub location at Plumas Lake Treatment Plant.

Fiscal Analysis:

Upfront cost for desired outcome will total \$33,606.79
Monthly service of \$394

Employee Feedback

n/a

Sample Motion:

Move forward to present at Board Meeting in December.

Prepared by: Swarnjit Boyal, Public Work Engineer

DOCUMENT A – PROPOSALS



Olivehurst Public Utilities District

SCADA Improvements for Plumas Lake Site

Simple. Powerful. IT.



Compete. Protect. Grow.

Prepared by:
Geoff Granger
November 28

2023

001860 Version 1



Quote

Overview

OPUD Water Department needs more stable and secure connectivity to the well site at 1074 Algodon Rd, Olivehurst, CA 95961. Key issues:

- External access to the SCADA system is currently available directly from the internet and is not using HTTPS or a VPN to secure communications.
- Aging SonicWALL Router with unknown support and unknown access credentials. Router also appears to only support TLS 1.0 and 1.1 which are unsupported in newer web browsers and are a security risk.
- Internet connectivity via a Verizon LTE 4G Hot Spot which is then connected wireless to a basic TP Link wireless bridge to facilitate connectivity to the SonicWALL router.
- A workstation with access to the SCADA server is still running Windows 7.
- No supported Anti-Virus, EDR, or SIEM on SCADA server or computer.
- No regular maintenance of server and computer for latest security updates.
- No backup occurring of SCADA server. Key risks are loss of SCADA configuration, historical data needed for reporting to the state, and loss of access to manage the SCADA automation items via the Inductive Automation platform.

<https://www.cisa.gov/news-events/cybersecurity-advisories/aa21-042a>

<https://www.cisa.gov/sites/default/files/publications/AA21-287A->

[Ongoing Cyber Threats to U.S. Water and Wastewater Systems.pdf](https://www.cisa.gov/sites/default/files/publications/AA21-287A-Ongoing%20Cyber%20Threats%20to%20U.S.%20Water%20and%20Wastewater%20Systems.pdf)<https://inductiveautomation.com/resources/article/7-scada-security-dos-4-scada-training-donts>

Following is a quote for recommended improvements/upgrades to the Plumas Lake SCADA infrastructure. Design based on discussions that the Plumas Lake site will eventually be the core location of many other OPUD wells that will be centrally managed. This design minimizes the amount of SCADA servers and computers needed across the OPUD water treatment infrastructure. This, in turn, decreases the security footprint by having fewer assets needing to be protected.

The SCADA server and computer at the Plumas Lake site will be added to the Adept Solutions managed services agreement and be associated with assets for the Water Treatment Department. A backup solution will be deployed to ensure the SCADA server and all historical data is properly and securely sent offsite. This will allow for quick restoration in case of a disaster and protect important state required historical reporting data. A security solution will be deployed to meet security and compliance requirements that will also meet cyber security insurance requirements.

Project

Details

PM/Sales

Solution Engineering

Identify goals for your organization. Scope out the solution. Vet the solution and confirm it will work with existing applications and processes. Communication with any vendors that need to be involved.

Project

Details

Project Management

Create a schedule for the tasks, deadlines and resources needed to complete everything on time. Monitoring project from start to end. Ensure project proceeds as planned with ongoing check-ins.

Kick Off Meetings

Internal meeting to go over plan and timeline with team. External meeting with client to confirm timeline and set expectations.

Network Improvements

Unifi Cloud Key Setup

Setup, registration, and base configuration of Unifi Dream Machine

Unifi AP Setup

Setup, adoption, and testing of AP(s).

Unifi Onsite

Onsite deployment of Unifi equipment and testing connectivity.

Switch Adjustments

Reset existing Unifi Switch and adopt into Unifi Dream Machine for proper management and configuration.

ISP Change

Working with SucceedNet to deploy WISP internet service to location.

Note: A contract will need to be approved with SucceedNet which includes 1 static public IP. If SucceedNet finds they cannot install onsite due to physical limitations onsite, there will be no charge from SucceedNet.

VPN Setup

Setup VPN connectivity to SCADA system. Deploy to OPUD staff devices and train how to connect.

SCADA Adjustments

SCADA Access Review

Working with PrimeEx to review and improve security design of access to SCADA system. Create proper access roles to SCADA system (Admin, Manager, Reviewer), assign employees to appropriate role, and document process for future users.

Datto Backup Setup

Deploy, configure, and start initial backup of SCADA server.

DR Plan


Create initial DR plan for key Plumas Lake SCADA Information Technology Infrastructure.

MXDR and SIEM

Project

Details	
<p>SIEM Deployment and Configuration Set up and configure the Todyl cloud-first SIEM solution, ensuring proper integration with endpoints, network devices, hardware, and cloud services across the organization's environment. Perform rigorous testing to validate the functionality and efficiency of the SIEM solution. Optimize configurations to minimize false positives and improve overall threat detection accuracy.</p>	
<p>MXDR Deployment and Configuration Integrate the MXDR solution with existing security infrastructure, such as firewalls, SIEM, and endpoint protection systems, to ensure seamless data sharing and collaboration.</p>	
Day 1+ Support	
<p>Day 1 Support Half day engineer on site.</p>	
Quality Control	
<p>Documentation Review and ensure documentation for all network/process changes updated. Document all vendors engaged with during project and how they are related to the SCADA systems at OPUD.</p>	
<p>A <u>-\$1,633.60</u> discount has been applied due to your fully managed agreement with us.</p>	
Subtotal:	\$5,696.40


Hardware

Product	Details	Price	Qty	Total Price
UDMSE	<p data-bbox="349 478 748 512">Dream Machine Special Edition</p>  <p data-bbox="349 926 1096 1350">All-in-one router and security gateway with an integrated PoE switch and network video recorder. The Dream Machine Special Edition (UDM SE) is an enterprise-grade UniFi OS Console capable of helping home and business owners alike seamlessly scale and manage their networks with high-speed, dual-WAN connectivity (10G SFP+ and 2.5GbE RJ45 ports), a Gigabit, PoE switch, and a network video recorder (NVR) with 128 GB of internal storage. Powered by UniFi OS, the UDM SE gives you full control of all your UniFi devices, including access points, Protect cameras, Talk phones, and Access readers. It's also a future-proof console since it will be able to run all upcoming UniFi OS applications. Engineered for end-to-end simplicity, the UDM SE features an integrated Bluetooth radio that streamlines the initial setup and configuration process.</p> <ul data-bbox="418 1381 1070 1734" style="list-style-type: none"> • 3.5+ Gbps routing • Integrated 8-port PoE/PoE+ switch • (1) 10G SFP+, (8) GbE RJ45 LAN ports including (2) PoE+, and (6) PoE • (1) 10G SFP+, (1) 2.5 GbE RJ45 WAN ports • 1.3" touchscreen • 128 GB SSD & 3.5" HDD bay 	\$547.96	1	\$547.96

Hardware

Product	Details	Price	Qty	Total Price
U6-Pro-US	<p>Ubiquiti Access Point WiFi 6 Pro</p> <p>The Access Point WiFi 6 Pro (U6 Pro) is a high-performance, dual-band WiFi 6 access point ideal for home and office use. The U6 Pro is capable of reaching an aggregate throughput rate up to 5.3 Gbps with its 5 GHz (4x4 MIMO) and 2.4 GHz (2x2 MIMO) bands, which allows it to support over 300 concurrently connected clients while maintaining an even, reliable wireless experience across your entire network. It can also isolate your guest traffic to ensure optimal security and speed. The U6 Pro also operates at full 4x4 MIMO with 160 MHz channels to create high-capacity wireless uplinks and facilitate faster data transfer. It can be set up in minutes and fully managed with the UniFi Network application.</p> <p>Technical Information</p> <p>Wireless LAN Standard: 802.11ax Network Band: Dual Band Frequency Band:</p> <ul style="list-style-type: none"> • 2.40 GHz • 5 GHz <p>Indoor/Outdoor: Indoor Wireless Transmission Speed: 5.30 Gbit/s MIMO Technology: Yes Data Encryption: Yes Encryption Standard:</p> <ul style="list-style-type: none"> • WPA-PSK • WPA-ENT • WPA • WPA2 • WPA3 <p>Ingress Protection (IP) Rating: IP54 Power Consumption: 13 W</p> <p>Interfaces/Ports</p> <p>Ethernet Technology: Gigabit Ethernet Number of Network (RJ-45) Ports: 1 PoE PD Port: Yes Management Port: Yes</p>	\$178.04	1	\$178.04

Hardware

Product	Details	Price	Qty	Total Price
<p>Dell OptiPlex 7010 Micro</p>	<div data-bbox="451 478 581 800" data-label="Image">  </div> <p>Main Specs Processor: Intel Core i5 13th Gen, 1.60 GHz- 4.60GHz Turbo Memory: 16GB DDR Storage: 256GB M.2 SSD OS: Windows 11 Pro</p> <p>Network Wireless LAN: Yes Wireless LAN Standard: IEEE 802.11ax Bluetooth: Yes Ethernet: Yes</p> <p>Interfaces/Ports Total Number of USB Ports: 6 Number of USB 2.0 Ports (Rear): 2 Number of USB 3.2 Gen 1 Ports: 4</p> <p>Physical Characteristics Product Color: Black Form Factor: Micro PC Height: 7.2" Width: 1.4" Depth: 7" Weight (Approximate): 2.95 lb</p> <p>Miscellaneous Package Contents:</p> <ul style="list-style-type: none"> • OptiPlex Micro • Keyboard • Mouse • Power Adapter • Power Cord (US) • Safety/Environment and Regulatory Guide (English/French Multi-language) • Quick Start Guide, OptiPlex Micro 	<p>\$777.91</p>	<p>1</p>	<p>\$777.91</p>

Hardware

Product	Details	Price	Qty	Total Price
	Energy Star: Yes Environmentally Friendly: Yes Environmental Certification: EPEAT Gold Limited Warranty: 3 Years Hardware Service with Onsite Next Business Day			
Dell ProSupport - 3 Year	3 Year Upgrade - Service - 24 x 7 Next Business Day - On-site - Technical - Physical	\$66.92	1	\$66.92
Subtotal:				\$1,570.83

Security Solution

Product	Details	Recurring Price	Qty	Recurring Total
MXDR	Managed Extended Detection and Response (MXDR) <ul style="list-style-type: none"> • Cross-Layer Threat Detection: Our MXDR solution goes beyond traditional EDR by providing cross-layer threat detection across multiple endpoints, networks, and cloud environments. It analyzes data from various sources to detect and correlate threats, providing comprehensive visibility and protection. • Centralized Security Management: Simplify your security operations with our MXDR solution's centralized management console. It offers a unified view of your entire security ecosystem, allowing you to monitor and manage endpoints, networks, cloud environments, and other security tools from a single interface. • Intelligent Threat Response: Enable swift and intelligent threat response with our MXDR solution. It employs advanced analytics and automation to detect, investigate, and respond to threats in real time. Automated response actions and playbooks ensure consistent and efficient incident handling, reducing the time to detect and mitigate threats. • Threat Intelligence Integration: Stay ahead of emerging threats with our MXDR solution's integration with threat intelligence feeds. It continuously updates its knowledge base with the latest threat intelligence, enriching its detection capabilities and ensuring 	\$13.00	2	\$26.00

Security Solution

Product	Details	Recurring Price	Qty	Recurring Total
	<p>proactive protection against new and evolving threats.</p> <ul style="list-style-type: none"> • Proactive Hunting and Remediation: Our MXDR solution empowers your security team with proactive threat hunting capabilities. It enables them to conduct in-depth investigations, identify hidden threats, and perform root cause analysis to strengthen your security posture. Automated remediation steps streamline the mitigation process. • Cloud Security Monitoring: Secure your cloud infrastructure with our MXDR solution. It provides visibility into cloud platforms, detecting misconfigurations, unauthorized access, and potential cloud-specific threats. Ensure the security of your cloud assets while maintaining compliance with industry regulations. • Incident Response Collaboration: Facilitate collaboration among your security team with our MXDR solution's incident response capabilities. It allows team members to work together, share insights, and communicate within the platform, enhancing coordination and expediting incident resolution. • 24/7 Managed Security Services: Benefit from round-the-clock monitoring and support with our MXDR solution's managed security services. Our team of experts is dedicated to monitoring, analyzing, and responding to security incidents, ensuring the continuous protection of your environment. <p>With these robust features, our MXDR solution provides comprehensive and proactive threat detection, intelligent response, and efficient management across your entire security landscape, empowering you to defend against sophisticated cyber threats effectively.</p>			

Security Solution

Product	Details	Recurring Price	Qty	Recurring Total
SIEM90	<p>Security Information & Event Management (SIEM)</p> <p>Todyl's cloud-first SIEM aggregates and analyzes logs from the Todyl Security Platforms with a few clicks and ingests from sources across your entire environment, including endpoints, network, hardware, cloud services, and more with over 250 pre-built integrations. Coupled with Todyl's powerful detection and analysis engine that hunts for known and unknown threats, the integrated Case Management plus interactive visuals and dashboards accelerate threat hunting and incident response.</p> <ul style="list-style-type: none"> • Ingest and Analyze Networking & Endpoint Logs • Integrate Office 365, AWS, Azure, Google Cloud, and other cloud sources • Hardware Firewall integrations for Meraki, SonicWall and others • MITRE ATT&CK® framework mapping • Machine learning, behavioral analysis and more <p>90 Day Retention</p>	\$11.50	2	\$23.00
Monthly Subtotal:				\$49.00

Agreement Changes

Product	Details	Recurring Price	Qty	Recurring Total
Managed Server	SCADA Server Management	\$161.00	1	\$161.00
Datto Alto 4	Datto 1TB Alto Backup for SCADA server.	\$149.00	1	\$149.00
Managed Workstation		\$35.00	1	\$35.00
Monthly Subtotal:				\$345.00

SCADA Improvements for Plumas Lake Site



Prepared by:
Adept Solutions
 Geoff Granger
 (530) 751-5100
 Fax 530-313-5447
geoff@adept-solutions.net

Prepared for:
Olivehurst Public Utilities District
 1970 9th Ave
 Olivehurst, CA 95961
 Cindy Van Meter
 (530) 218-5312
cvanmeter@opud.org

Quote Information:
Quote #: 001860
 Version: 1
 Delivery Date: 11/28/2023
 Expiration Date: 11/30/2023

Quote Summary	Amount
Project	\$5,696.40
Hardware	\$1,570.83
Subtotal:	\$7,267.23
Shipping:	\$15.67
Estimated Tax:	\$113.89
Total:	\$7,396.79

Monthly Expenses Summary	Amount
Security Solution	\$49.00
Agreement Changes	\$345.00
Monthly Total:	\$394.00

Terms and Conditions

Agreement Additions

Your company's monthly agreement will increase for newly covered users and/or devices, depending on the agreement. If a product is replacing a user and/or device, the agreement will NOT change. If you have questions about what changes may occur, please reach out to your account manager or email solutions@adept-solutions.net.

Order processing

Orders will be processed for fulfillment within 24 hours of receipt during regular business days. Most items are in stock and ship the same day if ordered before 2:30 pm PST

However, we cannot guarantee that all items will always be in stock due to occasional fluctuations in demand and supply chain timing. Therefore, if you would like confirmation of stock availability prior to ordering, please email solutions@adept-solutions.net. Once your order is processed, you will receive an email regarding your order status. In the rare event that an item is not in stock, back-ordered or discontinued, you will be notified of this via email. To cancel an order if that occurs, please email us with your instructions before the time we indicated it would be shipped. If you request a cancellation of an order after the order has shipped, you will be responsible for all shipping charges even if you refuse the package and do not sign for the delivery.

Order acceptance policy

Your receipt of an electronic order confirmation does not signify our acceptance of your order, nor does it constitute confirmation of our offer to sell. **Adept Solutions** reserves the right at any time after receipt of your order to accept or decline your order for any reason. We also reserve the right to ship a manufacturer-certified replacement if the manufacturer has upgraded or modified an item.



Phone: 530-751-5100

Email: geoff@adept-solutions.net

Web: www.adept-solutions.net

Out-of-stock items

If for some unforeseen reason an item is no longer available or back-ordered for an extended period of time, you will be notified within 24 hours of order placement. Please email us if you wish to receive stock confirmation prior to ordering.

Product warranties

The customer is responsible for all shipping charges, if any, to the warranty location. This warranty does not cover any loss of business, profits, or other consequential damage, either real or perceived, that may have resulted from any malfunction of the product. Damage from flood, lightning strikes, earthquake, any other acts of nature/God, mishandling, dropping, or infestation are not covered by this warranty. This warranty is also void if the manufacturer determines that the product has been damaged due to insufficient packaging during any return shipment. The manufacturer reserves the right to determine whether alterations have been made, or damages caused, by such facts that would serve to void the terms of this warranty.

Typographical errors

In the event a product is listed incorrectly due to a typographical error, manufacturer data error, product description and/or errors in pricing, Adept Solutions shall have the right to refuse or cancel any such orders whether or not the order has been confirmed and your credit card charged. If your credit card has already been charged for the purchase and your order is cancelled, Adept Solutions shall immediately issue a full credit to your credit card account.

Unforeseen needs

It may be possible that additional adapters or cables may be needed if new monitors are not purchased.

Out of Scope Services

Adept Solutions is responsible to perform only the services described on the Quote. Any additional services discussed or implied that are not defined explicitly by the quote will be considered out of the scope.

Payment Options	Payments	Interval	Amount
One-Time			
Project + Hardware	1	One-Time	\$7,396.79
Recurring			
Monthly	1	Monthly	\$394.00

Summary of Selected Payment Options	Amount
One-Time: Project + Hardware	
Total of Payments	\$7,396.79

Recurring: Monthly	
Total of Recurring Payments	\$394.00

Payment Terms

We reserve the right to cancel orders arising from pricing or other errors.

Upon approval a down payment invoice will be email to the primary billing contact and product will be ordered upon payment.



Phone: 530-751-5100

Email: geoff@adept-solutions.net

Web: www.adept-solutions.net

Adept Solutions

Olivehurst Public Utilities District

Signature: 

Signature: _____

Name: Geoff Granger

Name: Cindy Van Meter

Title: Solutions Engineer & Project Manager

Date: _____

Date: 11/28/2023



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859 Cotting Ct. Ste G
Vacaville, CA 95688

www.primexcontrols.com

Phone 707.449.0341
Fax 707.449.6333

Date: October 13, 2023
To: Bidding Contractors
Attn: Estimator
From: Andy Guck

PRIMEX Quote # 20234028
Regarding: Olivehurst, CA - Plumas Lake MTP Manganese Filters Expansion Project SCADA

This proposal details all materials and services we intend to provide for the above referenced project.
Be sure to reference General Notes following the scope listing.
This proposal expires 30 days after the date noted above.

Scope of Work based on Appendix A.4 Control Strategy & I/O based off P&ID's

Item #	Qty.	Description
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1	Lot	Programming Services <ul style="list-style-type: none"> • SCADA Configuration and Programming • Does not Include PLC/Workstation Hardware • SCADA Programming will be done on existing licenses
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Reference Plumas Lake WTP Manganese Filters Expansion Project Specifications and Plans

General Notes continued on next page...



PRIMEX

ASHLAND, OH | CLEARWATER, FL | DETROIT LAKES, MN | MILFORD, OH | PLYMOUTH, MN | VACAVILLE, CA

859 Cotting Ct. Ste G
Vacaville, CA 95688

www.primexcontrols.com

Phone 707.449.0341
Fax 707.449.6333

Regarding: Olivehurst, CA - Plumas Lake MTP Manganese Filters Expansion Project SCADA

General Notes:

1. The total price for this scope of work is: **\$26,210.00**
2. The total price quoted above **includes** sales tax and freight to the jobsite.
3. Development of engineering submittals for the above Scope of Work will proceed after acceptance of order.
4. If PRIMEX includes interconnection diagrams, they are for the above equipment only. All interconnection diagrams for equipment other than that listed in the above scope of work is by others.
5. If PRIMEX includes loop diagrams, they are for the above equipment only. All loop diagrams for equipment other than that listed in the above scope of work is by others.
6. PRIMEX assumes that there is enough room in the existing cabinets to install the new equipment. PRIMEX will not absorb additional cost if existing space is inadequate.
7. We assume that all systems that require modifications are completely functional. PRIMEX is not responsible for any costs to repair or replace existing controls or devices that are not fully functional prior being modified.
8. We specifically **exclude** the following from our Scope of Work:
 - Installation labor and materials not specifically listed in the scope of work above. These include supports, stanchions, conduit, antenna poles, weatherheads, pipe, wire, cable, fittings, instrument valves, cement pads, pull boxes, terminal boxes, power transformers, and instrumentation sunshades.
 - Flow meter spare spools and flange gaskets
 - Local control panels, unless specifically listed on this scope of work
 - Field instrumentation, unless specifically listed on this scope of work
 - Field conductor terminations and field conductor labels.
 - Motor heaters and motor thermal sensors
 - Power conductors from meter main to motor control center.
 - Independent, third party (NETA) testing, and electrical studies
 - Seismic calculations and structural analysis testing. Shaker table testing.
 - Demolition, Removal, and Disposal of existing equipment
 - Fiber Optic Cable, Cable Installation, Termination, Testing, and Training
 - Liquidated Damages of any kind
 - PLC & OIT Programming
 - PLC, OIT, and SCADA Programming Software/Licenses
 - PLC Hardware
9. PRIMEX's sole obligation shall be the provision of those items specified within the "included" items listed above. The lack of an explicit exclusion does not imply inclusion.
10. Customers may request and receive electronic copy of project design deliverables. This copy is typically delivered in PDF format only, and is delivered only for customer use associated with this project. Electronic copy does not include root software required to view the electronic copy.
11. This proposal includes only the specific deliverables outlined in the scope above. Application software and other intellectual property used to develop these deliverables is not included within the scope of this project.
12. Terms and Conditions of sale: Upon PRIMEX approval of customer credit, PRIMEX will extend 30-day payment terms on invoices for deliverables provided per this scope of work. Deliverables are FOB – PRIMEXVacaville, CA, with freight allowed (unless specifically noted otherwise in this proposal). Customer may accept this proposal by signature hereon, or by separate purchase order. PRIMEX will provide the above scope of work as a supplier only.

Please call or email with any questions.

Sincerely,

Andy Guck

Terms and Conditions

Controlling Provisions: The terms and conditions and supplemental exhibits contained herein (the "Terms and Conditions") shall supersede any provisions, terms, and conditions contained on any purchase order or other written form any direct buyer ("Buyer") may use or provide (whether received by S.J. Electro Systems, Inc. or any of its subsidiaries or affiliates (collectively, "SJE") prior or subsequent to the date hereof), and the rights of the parties shall be governed exclusively by the Terms and Conditions as described herein. SJE sells certain services, products, replacement parts and related software (collectively, the "Goods"). The purchase of the Goods is governed by the Terms and Conditions. Any communication by Buyer to SJE to purchase Goods will be treated by SJE as a request to purchase the Goods. The response, however communicated, will be understood by all parties as an agreement by SJE to sell to Buyer the requested Goods pursuant to the Terms and Conditions. **SJE specifically opposes any terms or conditions that are in addition to or different from the Terms and Conditions, unless specifically agreed to in each instance in writing by SJE.**

Quotations, Acceptance, and Agreements: Any quotation is a good faith estimate. Acceptance of a quotation, whether by a separate purchase order or by other means, shall constitute an acknowledgement and approval of the quotation as written and an acceptance of the Terms and Conditions. Written quotations which have not been finalized by a binding purchase order shall expire on the date specified in the quotation or, in the absence of such specification, thirty (30) calendar days from the date issued. SJE may revise or withdraw a quotation at any time prior to the finalization of a binding purchase order.

Per company policy, a separate written agreement signed by both parties or a purchase order accepted and acknowledged by SJE is required to form any legally binding agreement.

Intellectual Property: All devices, patents, designs (including drawings, plans and specifications), software existing or to be developed, estimates, prices, notes, memos, summaries, electronic data and other documents or information prepared or disclosed by SJE shall remain the sole intellectual property of SJE. Following acceptance and final payment, SJE shall grant to Buyer a non-transferable, non-exclusive license for use and sale of the Goods.

Credit Approval: The credit terms granted on each order are subject to SJE's continuing approval of Buyer's credit. SJE may withdraw the extension of credit and require modified payment terms if, in SJE's sole judgment, Buyer's credit or financial standing is impaired such that SJE in good faith deems payment insecure.

Prices and Taxes: All prices are FOB shipping point, unless otherwise stated or referenced in attached exhibits. All prices are subject to any commercially reasonable additions that may be necessary to cover any duties, taxes or charges. All prices are in U.S. Dollars. Prices may be subject to change without notice.

Shipping Policy: Shipping and handling charges cover the transportation of the Goods from SJE's warehouse to Buyer, unless otherwise specified. Standard shipping rates are assessed upon placement of order. SJE uses many methods of shipment including UPS shipping services but reserves the right to substitute carriers without notice. UPS next-day air, UPS second-day air, UPS three-day ground, UPS Express and UPS Expedited are services available to Buyer for expediting orders. Expedited orders will be shipped based on the method Buyer selects. These services may not be available for shipment into all countries.

Shipping weights listed on website are estimates only. The actual shipping weights may vary.

Title, Risk of Loss, Inspection of Equipment: Title and risk of loss to the Goods shall pass to Buyer upon delivery of the Goods to the respective delivery carrier. Buyer shall immediately inspect the Goods upon receipt and any damage must be noted on the delivery carrier's bill of lading at time of receipt. SJE is not liable for any damages caused by shipping. SJE is not liable for any shortages or nonconformance unless notified by Buyer within two (2) business days of Buyer's receipt of the Goods.

Operations/Maintenance Manuals: Installation, maintenance and operation manuals will be furnished to Buyer in the number of copies specified at the time of quotation or order. Additional copies subject to charges as outlined in attached exhibits.

Installation and Use: Buyer will be solely responsible for the proper application, installation and service of the Goods. Installation instructions are supplied by SJE and must be followed.

Payment: Buyer shall pay SJE the full purchase price as set forth in the respective order between SJE and Buyer. Unless otherwise agreed to in writing between SJE and Buyer, freight, storage, insurance, taxes, duties, and any governmental charges relating to the Goods shall be paid by Buyer. If SJE is required to pay any such charges, Buyer shall immediately reimburse SJE upon notice from SJE of same. All payments are due within approved credit terms. Buyer may be charged the lower of 1.5% interest per month or the maximum legal rate on all amounts not received by the due date described therein.

Security Interest: SJE shall retain a security interest in the Goods until the full purchase price has been paid. Buyer's failure to pay any amounts due, including interest, shall give SJE the right to possession and removal of the Goods after providing ten (10) days written notice to Buyer. SJE's taking of such possession shall be without prejudice to any other remedies SJE may have.

Changes, Cancellations, Returns: All changes, cancellations, or returns must have SJE prior written approval and are conditional on compliance with manufacturer's cancellation/return policies and subject to restocking fees and service charges. Authorized returns must be packaged and shipped prepaid to SJE.

Return Policy: SJE will only accept Goods returned within one (1) year from the date of manufacture, un-used, and current production models. Returned Material Authorization ("RMA") numbers must be assigned to any Goods Buyer wishes to return for credit. To obtain an RMA, Buyer must contact SJE's Service Center at 218-847-1317 or toll free at 888-342-5753. Buyer is responsible for payment of return shipping fees unless such returned Goods result from an SJE order processing error. Upon return, SJE shall reimburse Buyer for the return freight resulting from the return of Goods due to such SJE order processing error. In the event of any return in compliance with this paragraph, SJE will provide Buyer credit for the returned Goods and work to reship correct Goods to Buyer. SJE reserves the right to refuse acceptance of returned Goods after inspection.

Notwithstanding the foregoing (and so long as the return is not due to an order processing error of SJE), a restocking fee shall be charged to Buyer for returned Goods as outlined in the attached Exhibits.

Force Majeure: SJE shall not be liable or responsible to Buyer, nor be deemed to have defaulted under or breached any agreement with Buyer, for any failure or delay in fulfilling or performing any term of any agreement with Buyer, when and to the extent such failure or delay is caused by or results (directly or indirectly) from acts beyond SJE's reasonable control, including, without limitation: (a) acts of God; (b) flood, fire, earthquake or explosion; (c) war, invasion, hostilities (whether war is declared or not), terrorist threats or acts, riot or other civil unrest; (d) government order or law; (e) actions, embargoes or blockades in effect on or after the date of any subject agreement between SJE and Buyer; (f) action by any governmental authority; (g) national or regional emergency; (h) strikes, labor stoppages or slowdowns or other industrial services; or (i) any other cause beyond the reasonable control of SJE.

Indemnification and Default: In addition to all other amounts due hereunder, Buyer shall reimburse SJE in full for all collection costs or charges, including reasonable attorney fees, which SJE may incur in the collection of any past due amounts from Buyer, including applicable interest on overdue accounts. If Buyer is in default under this or any other agreement with SJE, SJE may defer performance hereunder until such default is resolved. SJE shall have no obligation to provide factory startup assistance or factory training (when requested) until all invoices (including retentions) for equipment have been paid in full. Furthermore, SJE shall have no liability to Buyer to the extent Buyer damages, or any damages are suffered by, or claims are made against Buyer as a result of Buyer's negligence, willful misconduct, misrepresentation of any Goods, or failure to utilize the Goods properly.

Warranty and Liability: During the warranty period, Buyer's exclusive remedy will be either repair or replacement, at the sole discretion of SJE and subject to the Terms and Conditions of any component which proves to be defective due to defective materials or workmanship of SJE.

SJE DISCLAIMS ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE, AND SJE SHALL NOT, IN ANY MATTER, BE LIABLE FOR ANY SPECIAL, INDIRECT, PUNITIVE, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING LIQUIDATED DAMAGES, OR PENALTIES THAT RESULT FROM A BREACH OF CONTRACT, BREACH OF WARRANTY (EXPRESS OR IMPLIED), STRICT

LIABILITY, PRODUCT LIABILITY OR OTHERWISE. IN NO EVENT SHALL SJE'S LIABILITY TO BUYER OR ANY OTHER PARTY EXCEED THE LESSER OF (i) THE COST OF REMEDIATING ANY DEFECT OR DEFICIENCY IN THE PERFORMANCE OF SJE HEREUNDER OR (ii) THE PURCHASE PRICE OF THE GOODS IN RESPECT OF WHICH THE CLAIM IS MADE.

ANY ELECTRICAL WIRING AND SERVICING OF THE GOODS MUST BE PERFORMED BY A LICENSED ELECTRICIAN. WARRANTY CLAIMS FOR GOODS WHICH WERE AT ANY TIME WIRED OR SERVICED BY ANYONE OTHER THAN A LICENSED ELECTRICIAN SHALL NOT BE HONORED IN WHOLE OR PART BY SJE.

Furthermore, this warranty shall not apply to: (a) damage due to any weather-related or other conditions beyond the control of SJE; (b) defects or malfunctions resulting from the Goods not installed, operated, or maintained in accordance with instructions provided, applicable local codes, ordinances, or accepted trade practices; (c) failures resulting from abuse, misuse, accident, or negligence; or (d) Goods repaired and/or modified without prior written authorization from SJE.

Some states do not allow limitations on implied warranty duration, as such, this limitation may not apply to Buyer. Some states do not allow the exclusion or limitation of incidental or consequential damages, as such, these limitations or exclusions may not apply to Buyer. The above-described warranty gives Buyer specific legal rights, and Buyer may also have other rights which vary from state to state.

TO OBTAIN WARRANTY SERVICE: Buyer shall assume all responsibility and expense for removal, reinstallation, and freight associated with any warranty service. Any Goods to be repaired or replaced under this warranty must be returned to SJE, or such place as designated by SJE. Buyer can contact SJE Service Center at 218-847-1317 or toll free at 888-342-5753 for an RMA on any Goods being submitted for a warranty claim.

Applicable Law and Forum: Any disputes between Buyer and SJE shall be venued in Becker County District Court in the State of Minnesota. Buyer agrees to submit to such jurisdiction and agrees that the dispute shall be governed by and construed in accordance with the laws of the State of Minnesota without giving effect to any choice or conflict of law provision or rule.