



Memo

To: Board of Directors
From: Robert McLeod, Board Director Public Services Committee
Date: February 16, 2022
Re: Motion – Authorize SCADA Installation at Cedar Creek Wastewater Plant

Motion

I move to authorize the GM to execute a project agreement in the amount of the **Bid Price of \$115,826.20 to IDX Inc.**, and to include any change orders that increase/decrease the project price not to exceed total project budget of **\$130,000.00** for the installation of the complete (Phases I & II) proposed SCADA system at Cedar Creek Wastewater Treatment Plant (WWTP).

Background

- Supervisory Control and Data Access (SCADA) systems provide the following:
 - Better Control and Operations
 - Saves Operators Time in identifying problems early
 - Provides Operators more time to focus on needed maintenance
 - Lowers operating expenses by allowing treatment equipment to increase and decrease chemical feed systems and power usage based on actual flow rates through the plant.
 - Better Permit Compliance and thus lowers the chance for potential penalties and fines up to \$25K per day per violation.
 - ROI – more efficient operations, reduced overtime and operating expenses, more staff productivity, less chance for fines or penalties.

Supervisory Control and Data Access (SCADA) systems have been used at HSV Lift Stations and our Water Plant and Distribution system for over 8-years. SCADA provides real time information, alarm alerts, and control of our facilities locally and remotely by use of smart phones, tablets, and computers by our operators. SCADA systems potentially allow our staff operators to address problems without physically being on site and to receive real time alerts that may not otherwise be discovered by staff until the next daily inspection occurs. Early detection gives staff more time to correct a problem before it creates a non-compliant event such as an overflow or loss of treatment functions.

National Pollutant Discharge Elimination System (NPDES) permits are issued by states that have obtained EPA approval to issue permits or by EPA Regions in states without such approval. Arkansas has obtained EPA approval to issue permits through the Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ). Both Wastewater Treatment Plants

have NPDES Permit parameters that must always stay in compliance and due to complexity require our operators to have or achieve the highest licensure required. SCADA will further enhance staff's ability to maintain compliant treatment operations in accordance with our permits.

The Need: Wastewater Treatment Plants are complicated living biological reactors that takes special operator skills, education, and licensure to properly care for the biological organisms and to operate and maintain the large mechanical and electrical pumps and treatment facilities. Our WWTPs are manned during the daytime hours but need to be monitored 24 hours a day to alert staff to any malfunction and allow the staff to respond and be proactive in a timely manner. Currently without SCADA, undetected equipment and motor malfunctions can cause a non-compliant discharge due to late discovery by staff or cause extra unproductive time for staff having to focus their efforts on recovering the plant's biology or making repairs that could have been avoided. SCADA is a necessary tool that allows the plant operators to monitor, adjust controls, and fix problems as it happens resulting in more operator and plant efficiencies, better protection of equipment from damages and meeting the goal of having the discharge within the compliant levels of the discharge permit.

For research, staff operators visited the City of Hot Springs Utilities to observe the SCADA system provided by Jack Tyler Engineering, asked questions, and evaluated how well their SCADA functioned in comparison to the IDX SCADA system currently in operation at HSV's Water Treatment Plant.

The Phase I scope of work was limited to the 2021 budget to install the backbone of SCADA system. Bids were received with prices for Phase I of the proposed SCADA installation at Cedar Creek WWTP. IDX at the time of their Bid also provided additional pricing for the remaining Phase II scope of work that has been budgeted for 2022. All bids are shown below:

<u>VENDOR W/ FULL SPECIFICATIONS</u>	<u>NOTES</u>	<u>BID DATE</u>	<u>BID DUE</u>	<u>SUB TOTAL</u>	<u>TAX</u>	<u>TOTAL</u>
ISI	NO BID	6/22/2021	7/14/2021			\$0.00
JACK TYLER	PHASE I	6/22/2021	7/14/2021	\$55,037.12		\$55,037.12
IDX	PHASE I	6/22/2021	7/14/2021	\$49,611.58	\$3,968.93	\$53,580.51
IDX	PHASE II	6/22/2021	7/14/2021	\$57,634.90	\$4,610.79	\$62,245.69
BROWN ENGINEERS	NO BID	6/22/2021	7/14/2021	\$0.00		\$0.00

Based on the Phase I bid prices and existing positive performance experience, staff recommend awarding the project to IDX Inc., which is the same SCADA provider we currently have at the HSV Water Treatment Plant and Water Pumping Stations that have been in service since April 2014 with very few problems.

2021 Budget - WIP# 18135-000-PU30: \$50,000.00

2022 Budget - CAPITAL 60 PU30: \$80,000.00

Total Project Budget: \$130,000.00



BOARD AGENDA FACT SHEET
AUTHORIZATION FOR MAJOR EXPENDITURES

PROJECT NAME: Cedar Creek SCADA System

DEPARTMENT: Public Utilities (PU30) **REQUESTED BOARD DATE:** 2/16/2022

REQUESTED ACTION

Board Approval Discussion/Presentation Other (Specify)

PROJECT/CAPITAL SUMMARY

Provide all labor and equipment related to the installation of new SCADA system at Cedar Creek Water Treatment Facility to include the following: SCADA Computer with VTS SCADA HMI Software including remote access and alarming, MCP Control Panel, Screening System Remote Control Panel, Influent/Chemical Remote Control Panel, Control Room MCP Remote Control Panel, Filter Area Remote Control Panel, and Effluent/Trojan Remote Control Panel.

JUSTIFICATION

The SCADA system is an advanced control system that allows supervisory staff to monitor and analyze real time data on the essential operations of our water treatment facilities quickly and accurately. Installation of the SCADA system at our other water treatment facility has proved to be extremely useful in ensuring safe and measurable water quality accurately and within the guidelines of the State of Arkansas. This capital project is included in the 2021-22 approved Board Budgets.

BID INFORMATION

BID (recommended bid in bold)	Base Price	Freight	Sales Tax	Grand Total
IDX, Incl	107,246		8,579.72	\$ 115,826.20
Jack Tyler Engineering	55,037		4,402.97	\$ 59,440.09
ISI	No Bid			No Bid
Brown Engineers	No Bid			No Bid

BUDGET DETAILS

ITEM	COST	BUDGETED	UNBUDGETED	NOTES
SCADA System	\$ 115,826	\$ 130,000	\$ (14,174)	Detail Below
	\$ 115,826	\$ 130,000	\$ (14,174)	\$ -

NOTES

Board approval is requested up to \$130,000 to include any additional change orders that may materially affect total price of project.

Responsible Director Jason Temple, Public Services Director

Project Manager Chris Boutzale, Wastewater Superintendent

RFQ# 18135-000-PU30

WIP# 18135-000-PU30

EXPENSE#

JOB#

PO#

PROJECT NAME

DEPARTMENT

CEDAR CREEK SCADA

PU30

VENDOR W/ FULL SPECIFICATIONS	NOTES	BID DATE	BID DUE	SUB TOTAL	DISCOUNTS	TAX	FREIGHT	TOTAL		LEAD TIME	SELECTION
ISI	NO BID	6/22/2021	7/14/2021					\$0.00			
JACK TYLER	SEE BIDS FOR BREAKDOWN IN PRICING	6/22/2021	7/14/2021	\$55,037.12				\$55,037.12			
IDX	SEE BIDS FOR BREAKDOWN IN PRICING	6/22/2021	7/14/2021	\$107,246.48		\$8,579.72		\$115,826.20			
BROWN ENGINEERS	NO BID	6/22/2021	7/14/2021	\$0.00				\$0.00			
BUDGET AMOUNT	\$50,000										
TRADE IN	AMOUNT	HOURS	MILEAGE								
ORIGINATOR	CHRIS BOUTZALE	JUSTIFICATION OF PROJECT / SERVICE : IDX will be installing SCADA Computer mcp panel and control room. PHASE I the back bone of the system. PHASE 2 is budgetted for 1st qtr of 2022.									
DIRECTOR	JASON TEMPLE										
GENERAL MANAGER	JOHN PAUL										
CONTROLLER	COREENA FETTERHOFF										
RELEASE FOR PO	_____										
DATE:	_____	Estimated Completion Date of Expenditure: _____									



IDX, INC.
1812 Lorene El Dorado, AR 71730
870-862-2051 Phone 870-862-3472 Fax
www.idxinc.com

July 9, 2021

**TO: Hot Springs Village POA
895 Desoto Blvd.
Hot Springs Village, AR 71909
Attn: Chris Boutzale**

**Project: Hot Springs Village Cedar Creek Wastewater Scada Upgrade
IDX Quote #: 2021-193A**

SCOPE OF QUOTATION

THIS PROPOSAL IS GOVERNED BY AND SUBJECT TO ALL THE TERMS AND CONDITIONS PER ATTACHED EXHIBIT "B".

IDX, INC. IS PLEASED TO OFFER THE FOLLOWING ITEMS:

Scada Computer with VTS Scada HMI Software including Remote Access, and Alarming

- Provide Computer w/ 27" Monitor, I-7 Processor, 64GB Ram, 2TB HD Dual HD System.
- Design & Integrate Cedar Creek System application, for VTS Scada HMI Software.
- Add Reporting, capabilities, with export to Microsoft Excel.
- Design and Integrate interface screens, graphical animations, data tags, programming scripts, as required to accommodate new and existing control equipment / devices, to work as complete operational Scada & Control system.
- Design New Cedar Creek WWTP Scada System to seamlessly integrate with the existing Hot Springs Village Water Treatment Plant Scada.
- Add 55" Monitor for display in Lab area.

PRICE: \$22,864.85 USD

MCP Control Panel

- Provide & Install Chase Controls Industrial Controller MCU panel
- 120 VAC Single Phase 30 amp electrical service required and shall include: local 120VAC power receptacle, battery backup, 24VDC 10 amp power supply, CC4001 Industrial Controller.
- ChaseNet wireless Ethernet communications will be established to New Chase Controls RTU panels.
- Lot of Mechanical, Electrical, Installation and Programing included, to update existing MCP controls and install new MCP MCU panel and to integrate into a fully operational system, with existing equipment and new ChaseNet SCADA control system.
- Integrate Power Status, Pump Control, Run / Fail Status, Pump Starts & Runtime, Levels, Flows, Chemical Control / Monitoring, Alarms local & remote, and any additional System Data as required.
- VPN router for remote control, and data acquisition to the ChaseNet Data Network
- Customer supplied WWTP internet connection with STATIC IP is required.

PRICE: \$18,945.75 USD

Screening System Remote Control Panel

- Provide and integrate Chase Controls Remote IO panel, requires 120VAC 20 amp electrical service.
- NEMA 4/12 24X20X12 Enclosure,
- Local 120VAC power receptacle
- Battery backup, 24VDC 10 amp power supply
- ChaseNet Wireless Communication to new MCU, located in WWTP main building.
- RTU Panel will be integrated to monitor and control existing Equipment, including Digital IO Status / Control & Analog Levels, Pressure, Dosing & Flow devices, as required.
- 900 MHz or WIFI Wireless Ethernet Modem, Antenna, helix, and connectors included.
- Lot of Mechanical, Electrical, Installation and Programing included, to install new RTU panel and to integrate into a fully operational system, with existing equipment and new ChaseNet SCADA control system.

PRICE: \$10,983.54 USD

Influent / Chemical Remote Control Panel

- Provide and integrate Chase Controls Remote IO panel, requires 120VAC 20 amp electrical service.
- NEMA 4/12 18X16X10 Enclosure,
- Local 120VAC power receptacle
- Battery backup, 24VDC 10 amp power supply
- ChaseNet Wireless Communication to new MCU, located in WWTP main building.
- RTU Panel will be integrated to monitor and control existing Equipment, including Digital IO Status / Control & Analog Levels, Pressure, Dosing & Flow devices, as required.
- 900 MHz or WIFI Wireless Ethernet Modem, Antenna, helix, and connectors included.
- Lot of Mechanical, Electrical, Installation and Programing included, to install new RTU panel and to integrate into a fully operational system, with existing equipment and new ChaseNet SCADA control system.

PRICE: \$9,757.35 US

Control Room MCP 2 Remote Control Panel

- Provide and integrate Chase Controls Remote IO panel, requires 120VAC 30 amp electrical service.
- NEMA 4/12 30X24X12 Enclosure,
- Local 120VAC power receptacle
- Battery backup, 24VDC 10 amp power supply
- ChaseNet Wireless Communication to new MCU, located in WWTP main building.
- RTU Panel will be integrated to monitor and control existing Equipment, including Digital IO Status / Control & Analog Levels, Pressure, Dosing & Flow devices, as required.
- Clarifier Scrappers, Scum Pumps, Oxidation Ditch Rotors, Aerators, RAS/WAS, Digester Decant,
- 900 MHz or WIFI Wireless Ethernet Modem, Antenna, helix, and connectors included.
- Lot of Mechanical, Electrical, Installation and Programming included, to install new RTU panel and to integrate into a fully operational system, with existing equipment and new ChaseNet SCADA control system.

PRICE: \$16,950.98 USD

Filter Area Remote Control Panel

- Provide and integrate Chase Controls Remote IO panel, requires 120VAC 20 amp electrical service.
- NEMA 4/12 24X20X10 Enclosure,
- Local 120VAC power receptacle
- Battery backup, 24VDC 10 amp power supply
- ChaseNet Wireless Communication to new MCU, located in WWTP main building.
- RTU Panel will be integrated to monitor and control existing Equipment, including Digital IO Status / Control & Analog Levels, Pressure, Dosing & Flow devices, as required.
- 900 MHz or WIFI Wireless Ethernet Modem, Antenna, helix, and connectors included.
- Lot of Mechanical, Electrical, Installation and Programming included, to install new RTU panel and to integrate into a fully operational system, with existing equipment and new ChaseNet SCADA control system.

PRICE: \$13,882.53 USD

Effluent / Trojan Remote Control Panel

- Provide and integrate Chase Controls Remote IO panel, requires 120VAC 20 amp electrical service.
- NEMA 4/12 24X20X12 Enclosure,
- Local 120VAC power receptacle
- Battery backup, 24VDC 10 amp power supply
- ChaseNet Wireless Communication to new MCU, located in WWTP main building.
- RTU Panel will be integrated to monitor and control existing Equipment, including Digital IO Status / Control & Analog Levels, Pressure, Dosing & Flow devices, as required. Local existing PLC, remote control dependent upon Trojan allowing remote control to existing PLC.
- 900 MHz or WIFI Wireless Ethernet Modem, Antenna, helix, and connectors included.
- Lot of Mechanical, Electrical, Installation and Programming included, to install new RTU panel and to integrate into a fully operational system, with existing equipment and new ChaseNet SCADA control system.

PRICE: \$13,861.48 USD

Total Project: \$107,246.48

Sales taxes are not included. Terms of Payment 50% of project due upon receipt of customer order or contract, 40% due net 15 upon shipment or delivery of hardware and software, 10% final payment due net 15 upon project completion.

If you have any questions, please do not hesitate to contact me at the office number above, the following cell phone number 501-622-0506, or email me at johnny.halsey@idxinc.com.
May God bless you all in your endeavors.

Yours truly,

Johnny Halsey

President

EXHIBIT "B"

IDX, INC. - TERMS AND CONDITIONS OF SALE

1. **ACCEPTANCE** - This proposal is submitted to Purchaser subject to the terms and conditions hereinafter set forth. There are no agreements or representations, verbal or otherwise, outside this proposal. Upon the acceptance hereof by Purchaser of this proposal, whether verbal or written, this proposal shall become a binding contract. In the event that purchaser submits its own purchase order in lieu of accepting this proposal in the method described above, (a) none of the terms of such purchase order which differ from or are in addition to the terms hereof, shall become a part of the contract and Seller specifically objects to such different or additional terms, and (b) the submission by Purchaser and the Seller as an unequivocal acceptance to this proposal and the terms, and a contract shall thereupon become effective.
2. **SHIPPING DATE** - The shipping date specified herein is approximate only. Seller recognizes the desirability of making delivery promptly. However, Seller shall not be responsible for any loss or damage resulting from any delay in delivery or failure to deliver the equipment (as used herein "equipment" refers to all equipment materials, accessories and/or parts which Seller proposes to sell hereunder) where such delay or failure is caused by fire, flood, natural causes, labor troubles (including strikes, slowdowns and lockouts), war, Government regulations, riots, civil disorders, interruption of or delay in transportation, power failure, inability to obtain materials and supplies, accidents, acts of God, or any other cause beyond Seller's control.
3. **PACKING** - Prices include packing for domestic truck shipments only.
4. **SHIPMENTS** - All prices are F.O.B. factory except where it is specifically stated that they are freight allowed. Where freight is allowed, the prices are F.O.B. point of shipment with freight prepaid (allowed) to nearest freight station in the United States (except Alaska, Hawaii, Canal Zone and Insular Possessions). The point of origin of shipment, the method of transportation and the routing of shipments are optional with seller. No allowance is made for transportation if Purchaser accepts delivery at factory or warehouse. If the Purchaser specifies on order "shipment collect", it should be clearly understood that there will be no credit allowance made for freight.

At the Purchaser's request, shipment may be made by air, railroad express, rail and/or water freight, in lieu of truck. In such case, any additional expense incurred will be billed to the Purchaser. If shipment is accepted by the Purchaser at one destination and re-forwarded to him, the re-forwarding is at the Purchaser's expense.

5. **PRICES** - Unless otherwise specified by Seller, prices set forth herein are firm, provided within thirty (30) days after the date hereof, this proposal becomes a binding contract as hereinabove provided, and provided further that Purchaser furnishes Seller with all necessary drawings duly approved by the Purchaser within thirty (30) days after submission of drawings to the Purchaser by Seller. Where shipment is requested by Purchaser beyond the normal shipment schedule, or in the event that shipment is deferred at the request of the Purchaser or by reason of Government action, Purchaser agrees to pay at Seller's option a delayed delivery storage fee at the rate of 2% of the equipment price per month beyond the normal shipping date.
6. **TAXES** - Prices specified herein do not include any federal, state or municipal sales, use, excise or other taxes. Therefore, in addition to the prices specified herein, the amount of any such sales, use, excise or other taxes applicable to the sale of the equipment shall be paid by Purchaser or in lieu thereof Purchaser shall furnish Seller with tax exception certificates acceptable to said taxing authorities.
7. **PAYMENTS - PAYMENTS** - Terms of payment are 50% of project due upon receipt of customer order or contract, 40% due net 15 upon shipment of hardware and software, 10% final payment due net 15 upon project. All past due amounts are subject to a service charge at the maximum legal rate allowed by the State of Arkansas. If Purchaser's financial condition does not justify continuance of production or shipment on the terms of payment

EXHIBIT "B" - PAGE 2
IDX, INC. - TERMS AND CONDITIONS OF SALE

7. **PAYMENTS CONTINUED** - specified herein, Purchaser will, upon request by Seller, furnish further assurance of ability to make payments. Seller may also refuse to make shipment except upon payment of cash fully or partially in advance. Prorate payments shall become due and payable as partial shipments are made hereunder. In the event delay in making any partial shipment is caused by Purchaser, payment for such shipment shall be due on the date Seller notifies Purchaser that Seller is prepared to make such shipment.

Purchaser shall be responsible for the payment of all costs and expenses of collection of all payments due seller, including reasonable attorney's fees, whether or not a lawsuit is actually filed. In the event it should become necessary to file legal action for collection or interpretation of the terms of this agreement, Purchaser and Seller hereby agree that the jurisdiction and venue of any such action are proper in the courts of Union County, State of Arkansas.

8. **TITLE** - The title to equipment specified herein, and to any and all additions and accessories thereto and substitutions therefore, shall remain with seller until the purchase price thereof is paid in full.
9. **CANCELLATION** - When this proposal becomes a binding contract as herein above provided, the Purchaser may cancel the same at any time prior to shipment, but only upon payments to seller of reasonable cancellation charges, which shall include expenses already incurred, the cost to seller of canceling it and Seller's anticipated profit, or 25% of purchase price of product.
10. **WARRANTY** - The original manufacturer warranty will apply on all new equipment and parts purchased from Seller. New equipment manufactured by Seller is warranty to be free from defects in material and workmanship under normal use and service for a period of one (1) year from the date of shipment; seller's obligation under this warranty being limited to repairing or replacing at it's option any part found to its satisfaction to be so defective provided that such part is, upon request, returned to Seller's factory from which it was shipped, transportation prepaid. This warranty does not cover parts damaged by decomposition from chemical action or wear caused by abrasive materials, nor does it cover damage resulting from misuse, accident, neglect, or from improper operation, maintenance, installation, modification or adjustment. This warranty does not cover parts repaired outside seller's factory without prior written approval. Seller makes no warranty as to starting equipment, electrical apparatus or other material not of its manufacture, since the same are usually covered by warranties of the respective manufacturers thereof.

In the event, notwithstanding the terms of this agreement, it is determined by a court of competent jurisdiction that an express warranty has been given by Seller to Purchaser with respect to performance characteristics of said equipment, Seller's liability for breach of the same shall be limited to accepting return of such equipment F.O.B. plant of manufacture, refunding any amount paid thereon by Purchaser (less depreciation at the rate of 15% per year if Purchaser has used equipment for more than thirty (30) days) and canceling any balance still owing on equipment.

11. **COMPLIANCE WITH LAWS** - Purchaser shall be solely responsible for securing any necessary permits under and for compliance with all safety, health and sanitation laws, ordinances and regulations in connection with the installation and operation of the equipment. Purchaser agrees to provide Seller, upon request, with evidence of the securing of any such permits and of compliance with any such laws, ordinances and regulations, although Seller may rely exclusively on Purchaser's representations, hereby made, that it shall secure permits and comply with such laws, ordinances and regulations.
12. **INDEMNIFICATION** - It is understood that Seller has relief upon data furnished by and on behalf of Purchaser with respect to the safety aspects of the equipment, and that is Purchaser's responsibility to assure that the equipment will, when installed and put in use, be in compliance with safety requirements fixed by law and otherwise legally adequate to safeguard against injuries or damage to person or property. Purchaser hereby agrees to defend, indemnify and hold harmless Seller, its agents and employees against any and all losses, costs,

EXHIBIT "B" - PAGE 3
IDX, INC. - TERMS AND CONDITIONS OF SALE

damages claims, liabilities or expenses, including but not limited to reasonable attorney's fees, arising out of or resulting from any injury or damage to any person or property caused by the inadequacy of safety features, devices or characteristics in the equipment or in the installation, use or operation of the same, except claims for repair or replacement of defective parts as provided in Paragraph 10 hereof.

13. **RISK OF LOSS** - The risk of loss of or damage to the equipment is on Purchaser from and after delivery to Purchaser or to carrier from shipment to Purchaser.
14. **DISCLAIMER OF CONSEQUENTIAL DAMAGES, LIQUIDATED DAMAGES OR PENALTIES** - SELLER SHALL NOT BE LIABLE FOR CONSEQUENTIAL DAMAGES, LIQUIDATED DAMAGES OR PENALTIES WHETHER OR NOT CAUSED BY SELLER'S NEGLIGENCE. "CONSEQUENTIAL DAMAGES" FOR THE PURPOSE OF THIS AGREEMENT SHALL INCLUDE, BUT NOT BE LIMITED TO, LOSS OF USE, INCOME OR PROFIT, OR LOSS OR DAMAGE TO PROPERTY (INCLUDING, BUT WITHOUT LIMITATION, PRODUCTS MANUFACTURED, PROCESSED OR TRANSPORTED BY THE USE OF THE EQUIPMENT) OCCASIONED BY OR ARISING OUT OF THE OPERATION, USE, INSTALLATION, REPAIR OR REPLACEMENT OF THE EQUIPMENT OR OTHERWISE.
15. **GENERAL** -
- (a) No modification hereof shall be binding upon Seller unless such modification is in writing signed by a duly authorized representative of Seller.
 - (b) If any part hereof is contrary to, prohibited by, or deemed invalid under applicable laws or regulations, such provision shall be inapplicable and deemed omitted to the extent so contrary, prohibited or invalid, but the remainder hereof shall not be invalidated thereby and shall be given effect so far as possible.
 - (c) The waiver of the breach of any obligation to be performed by either party hereunder shall not constitute a waiver of any other like or difference breach.
 - (d) The entire understanding between the parties hereto is as set forth herein and any promises, representations, warranties or guarantees not herein contained shall have no force and effect unless in writing, signed by Seller and Purchaser.

ACCEPTED

BY: _____ DATE: _____

PO# (If
Applicable) _____

—

Please sign and fax or mail all pages to information on letterhead of page 1. Also sign and return credit application if you do not have an account with IDX Inc.