

**WORK ORDER NUMBER 15**

**South Oslo Rd WTP Floridan Well S-7 and S-4 Control System Implementation**

This Work Order Number 15 is entered into as of this 12th day of September, 2017, pursuant to that certain Continuing Contract Agreement for Professional Services, dated November 15, 2011, and that certain Extension and Amendment of Continuing Contract Agreement for Professional Services entered into as of this 4<sup>th</sup> day of November, 2014 (collectively referred to as the "Agreement"), by and between INDIAN RIVER COUNTY, a political subdivision of the State of Florida ("COUNTY") and Kimley-Horn and Associates, Inc. ("Consultant").

The COUNTY has selected the Consultant to perform the professional services set forth on Exhibit A (Scope of Work), attached to this Work Order and made part hereof by this reference. The professional services will be performed by the Consultant for the fee schedule set forth in Exhibit B (Fee Schedule), attached to this Work Order and made a part hereof by this reference. The Consultant will perform the professional services within the timeframe more particularly set forth in Exhibit A (Time Schedule), attached to this Work Order and made a part hereof by this reference all in accordance with the terms and provisions set forth in the Agreement. Pursuant to paragraph 1.4 of the Agreement, nothing contained in any Work Order shall conflict with the terms of the Agreement and the terms of the Agreement shall be deemed to be incorporated in each individual Work Order as if fully set forth herein.

IN WITNESS WHEREOF, the parties hereto have executed this Work Order as of the date first written above.

**CONSULTANT:**  
Kimley-Horn and Associates, Inc.

**BOARD OF COUNTY COMMISSIONERS  
OF INDIAN RIVER COUNTY**

**By:** \_\_\_\_\_  
Brian Good, P.E.  
**Title:** \_\_\_\_\_  
Senior V.P.

**By:** \_\_\_\_\_  
Joseph E. Flescher, Chairman

**BCC Approved Date:** \_\_\_\_\_

**Attest: Jeffrey R. Smith, Clerk of Court and Comptroller**

**By:** \_\_\_\_\_  
Deputy Clerk

**Approved:** \_\_\_\_\_  
Jason E. Brown, County Administrator

**Approved as to form and legal sufficiency:** \_\_\_\_\_  
Dylan T. Reingold, County Attorney

## **EXHIBIT A**

### **WORK ORDER 15**

#### **Indian River County Department of Utility Services South Oslo Rd Water Plant Well S-7 and S-4 Control System Implementation**

### **PROJECT UNDERSTANDING**

Indian River County Utilities (IRCU) awarded construction of the South Oslo Rd water plant well S-7 and the replacement of well S-4 to All Webbs Enterprises, Inc. on July 12, 2016. Currently, completion of well S7 is scheduled for end of October 2017. Each of the new well designs include variable frequency drives (VFD) and fiber optic (FO) communication which is an improvement and more robust and reliable system over the existing radio telemetry (RTU) systems currently in place at all of the existing wells. With VFD's, flow can be varied and controlled via the water plant which is currently not available with the existing wells. With the FO design, additional programming is necessary at both the water plant and wellsites to provide direct communication with the water plant PLC. Integration of control and monitoring of these wells with the other wells is the last element needed to provide full operation of these two wells. Once complete, two of the seven wells will have direct communication with plant and wells 7 and 4.

The following scope consists of modifying the existing plant PLC and HMI to allow monitoring of flow, water level, and pump speed, and control of the pump operation. Coordination and commissioning of the wellsite PLC and VFD communication will also be provided. Consultant will utilize the services of Control Systems Design, Inc. (CSD), to perform the programming and commissioning, who has extensive knowledge of the IRCU water plant SCADA systems.

### **SCOPE OF WORK**

#### **TASK 1 - WELL S-7 AND S-4 PROGRAMMING**

Consultant and CSD will review submittals of new control panel and modifications to well 7, well 4, and the main PLC panel in the control room.

After finalization of the submittals from all vendors, Consultant and CSD will create modifications for changes to the main processors to accept the additional RIO

panel for each of the wells via the DH+ to ethernet bridge in the main PLC and incorporate these well controls into the existing well/train logic for control of these systems.

Consultant and CSD will implement the changes onsite to the main PLC, load the new PLC and establish communications and verify communications and operability.

Consultant and CSD will modify the SCADA system database to add all new points relative to the new systems, any older or modified systems to establish a complete interface.

Consultant and CSD will Commission all I/O, startup and checkout the system, based on 1 day onsite and follow-up remotely. Consultant and CSD will provide warranty service for one year after startup.

### **SCHEDULE**

In general, consultant will work as expeditiously as possible and concurrent with well contractors schedule.

### **FEE SCHEDULE**

We will provide these services in accordance with our Continuing Services Contract Agreement for Professional Services dated November 15, 2011, with Indian River County, expiring November 16<sup>th</sup>, 2017.

The Consultant will provide professional services for Task 1 on a lump sum fee basis as follows:

<b>Task No.</b>	<b>Task</b>	<b>Task Fee</b>
<b>TASK 1</b>	<b>WELL S-7 AND S-4 PROGRAMMING</b>	<b>\$24,992</b>
	<b>TOTAL</b>	<b>\$24,992</b>

### **ADDITIONAL SERVICES**

The following services are not included in the Scope of Services for this project, but may be required depending on circumstances that may arise during the execution of this project. Additional services include, but may not be limited to the following:

- Revamp or upgrade to other communication systems.
- Redesign of PLC hardware and panel replacements or upgrades based on actual conditions at the time of implementation.

#### **ITEMS FURNISHED BY OWNER**

The following items will be furnished by the Owner and are necessary for completion of the tasks described herein.

- Access to facilities and open discussions with County IS integrator.
- Copies of all drawings depicting the present scada system and network.
- Copies of all scada/County networking present and planned.

	DESCRIPTION	HOURS	LABOR
<b>IRC South Plant Well 7 Addition</b>			
1	Submittal review of new control panel and modifications to well 7 and the main PLC panel in the control room.	4	\$ 600.00
2	After finalization of the submittals from all vendors, create modifications for changes to the main processors to accept the additional RIO panel for each of the wells via the DH+ to ethernet bridge in the main PLC and incorporate these well controls into the existing well/train logic for control of these systems.	20	\$ 2,500.00
3	Implement the changes onsite to the main PLC, load the new PLC and establish communications and verify communications and operability.	15	\$ 1,875.00
4	Modify the scada system database to add all new points relative to the new systems, any older or modified systems to establish a complete interface.	15	\$ 1,875.00
5	Commission all I/O, startup and checkout the entire system, based on 1 day onsite and followup remotely.	16	\$ 2,000.00
6	Provide warranty service for one year after startup	10	\$ 1,250.00
<b>TOTAL</b>		<b>80</b>	<b>\$ 10,100.00</b>
<b>IRC South Plant Well 4 Addition</b>			
1	Submittal review of new control panel and modifications to well 7 and the main PLC panel in the control room.	10	\$ 1,500.00
2	After finalization of the submittals from all vendors, create modifications for changes to the main processors to accept the additional RIO panel for each of the wells via the DH+ to ethernet bridge in the main PLC and incorporate these well controls into the existing well/train logic for control of these systems.	20	\$ 2,500.00
3	Implement the changes onsite to the main PLC, load the new PLC and establish communications and verify communications and operability.	15	\$ 1,875.00
4	Modify the scada system database to add all new points relative to the new systems, any older or modified systems to establish a complete interface.	15	\$ 1,875.00
5	Commission all I/O, startup and checkout the entire system, based on 1 day onsite and followup remotely.	16	\$ 2,000.00
6	Provide warranty service for one year after startup	10	\$ 1,250.00
<b>TOTAL</b>		<b>86</b>	<b>\$ 11,000.00</b>
<b>GRAND TOTAL FOR BOTH SITES</b>		<b>166</b>	<b>\$ 21,100.00</b>

