

**AGREEMENT FOR PROFESSIONAL SERVICES FOR WATER PLANT AND WATER  
RESOURCES ENGINEERING SERVICES RFQ2019070  
WORK ORDER 8**

**Indian River County Department of Utility Services  
South Oslo Road WTP Floridan Well S-1 Replacement**

This Work Order Number \_\_\_ is entered into as of this \_\_\_ day of \_\_\_\_\_, 202\_, pursuant to that certain AGREEMENT FOR PROFESSIONAL SERVICES FOR WATER PLANT AND WATER RESOURCES ENGINEERING SERVICES RFQ2019070 entered into as of this 5<sup>th</sup> day of November, 2019 (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 C (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:**

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

**By:** \_\_\_\_\_

**By:** \_\_\_\_\_

**Peter D. O'Bryan, Chairman**

**Print Name:** Brian Good, P.E.

**Title:** Principal

**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 Number 8**

#### **Indian River County Department of Utility Services**

#### **South Oslo Rd Water Plant**

#### **Floridan Well S-1 Replacement**

### **PROJECT UNDERSTANDING**

During the deepening work planned for the existing well S-1, as part of the on-going water supply study to collect water quality and well performance data, it became apparent that the existing well was failing and taking in too much sand during the deepening process. Work was stopped to video the well and determined that the casing cementing had failed and needed to be abandoned. Replacement of well S-1 with a new well (S-1R) was recommended along with plugging & abandoning the existing one.

The following scope of work is proposed to provide documents and construction oversight for the replacement of well S-1, consisting of preparation of design documents, FDEP and SJRWMD permitting, and bidding phase services, for the replacement of well #S-1 at the South Oslo Road Water Treatment plant.

### **SCOPE OF WORK**

#### **TASK 1 - PREPARATION OF DESIGN DOCUMENTS - WELL**

Consultant will review the existing wellsite for potential siting of a new well to be drilled in the near vicinity of the existing well. Consultant will review the salvageable equipment to be used and new equipment to be designed/specified for the replacement well.

**Property Survey and Topography** – The Consultant will develop a survey for the wellsite to determine extent of IRCU property. The Consultant will also conduct topographic survey of the new site to collect topography, establish horizontal control, and establish a benchmark for design and construction purposes. Consultant will review existing utilities within a 100-ft radius from the existing wellsite, including known underground utilities and existing sanitary hazards. Consultant will walk the site to review landmarks; conflicts with existing structures; setbacks from existing utilities and facilities; and review the sites and adjacent areas for items which may affect permitting of a new well site.

Consultant will prepare design drawings for a new wellhead, similar in design and configuration to the existing wellhead. It is assumed that the pump will be vertical turbine type using flanged or threaded column pipe. The design documents will consist of civil, mechanical, and electrical drawings that will include connection to the existing 12-inch raw watermain, use of the existing electrical service, and a new fiber optic connection to allow direct communication of well with the water plant. It is assumed the radio telemetry will be eliminated as part of this replacement.

It is assumed that approximately 10 - 12 drawings will be prepared, consisting of:

- Cover sheet
- Overall site plan
- Civil details
- Wellsite plan & details
- Wellhead sections
- Mechanical details
- Electrical (single line, panel drawings, fiber optic)

The consultant will prepare technical specifications for construction and drilling of a new supply well.

Consultant will prepare a 90% set of drawings and specifications for IRCU to review, and incorporate comments into the final set of drawings and specifications to be used for a change order request from the current contractor, and submission to FDEP for permitting.

Consultant will design modifications to the existing radio telemetry unit (RTU) at well S-1R to include fiber optic connectivity using Ethernet communication. Remote PLC's will be designed at the well to allow communication via Ethernet over FO. Consultant will design well panel PLC hardware at the well #S-1 and interface with existing system.

## **TASK 2 – RAW WATERMAIN - PREPARE DESIGN DRAWINGS AND SPECIFICATIONS**

CONSULTANT will develop construction plans for a 12-inch or 16-inch raw water main using the latest aerials available in a plan/profile layout, from the proposed wellsite near S-1R WELL to the water plant site using the proposed alignment.

Consultant will prepare and furnish drawings and standard details on 24"x36" size sheets assumed to be at a scale of 1"=30' for the raw water main plan/profile

drawings. The drawings will be produced in AutoCAD Civil 3D 2018 and will utilize Indian River County standards.

Consultant will submit 90% and 100% complete drawing sets for Owner review.

Consultant will prepare construction drawings for the pipeline consisting of the following:

- Cover sheet
- General Notes
- Key Map
- Plan and Profile sheets for the raw water main (approx. 4 sheets at 1" =30')
- Miscellaneous pipe details (2)
- General Details (2)
- HDD Plan & Profile

It is anticipated that approximately 8 – 10 sheets for the raw water pipeline will be prepared.

### **Topographic Survey**

CONSULTANT will prepare limited use topographic survey of the existing wellsite and the water treatment plant and the RWM corridor and utilize part of the RO plant survey prepared under work order #1. It is assumed all wellsite work will be constructed on Indian River County owned or leased land. The survey scope for the well site consists of the following items:

- Obtain existing elevations within a 120ft x 60ft rectangle south of the existing well S-1.
- Location of the existing above ground improvements along the raw watermain, wellsite, and water plant site.
- IRCU established benchmarks will be used for elevation reference.
- The vertical datum elevations will be referenced to NAVD 88 datum.
- Horizontal datum to be NAD 83/90

The survey scope for the raw watermain pipeline consists of the following items:

- Upland route survey from wellsite to the water plant site – approximate length: 900 LF
- Obtain surface locations of existing improvements within select portions of the RWM corridor
- Topographic survey and data at 100-ft intervals and location of markings for known underground utilities
- The vertical datum elevations will be referenced to NAVD 88 datum.

- Horizontal datum to be NAD 83/90

CONSULTANT will perform a hydraulic analysis to size the RWM and include capacity for potential future additional well. The RWM will be sized for up to 4.0 MGD of raw water capacity.

Consultant will prepare project specifications for the project. Technical specifications for the raw water main, directional bores, telemetry and general electrical provisions will be provided.

CONSULTANT will coordinate and provide up to ten (10) subsurface investigation using soft-dig technique for the HDD and anticipated U/G conflicts.

Consultant will provide four (4) printed hard copies at each review and electronic version in pdf and Word format for review.

Consultant will prepare opinions of probable construction costs for the final version of the pipeline and pump stations projects.

### **TASK 3 - PERMITTING**

Consultant will evaluate the need for permitting a replacement well, including preparation of a letter modification to SJRWMD Permit and an updated location map and Table A (description of wells). No changes to existing permit allocation shall be requested in the letter modification.

The Consultant will prepare and submit an FDEP permit application 62-555.900(1) for the proposed surficial wellhead, and raw watermain improvements for the new well, including a permit application fee paid for by IRCU. The Consultant will submit one permit application for the wellhead work and the raw watermain connection to the existing. The permit application will be submitted when the drawings and specifications are in a condition for permitting agency review. Consultant will respond to up to two requests for additional information (RFI's from DEP).

The permit application fee of \$2,000 for FDEP will be paid for by Indian River County Utilities (IRCU).

The permit application fee for the SFWMD construction permit will be paid by water well contractor.

#### **TASK 4 – BIDDING PHASE**

Consultant will prepare electronic copy of bid documents, including drawings and specifications for IRC purchasing department to be utilized for bidding purposes. Front-end documents will be prepared by Indian River County purchasing.

IRC purchasing department will advertise and administer the procurement of the bidding and respond to potential bidder questions. Consultant will attend a mandatory pre-bid meeting, respond to contractor questions and prepare addendum(s), if required, which will be distributed to all the contract document holders by IRC purchasing department.

Consultant will review bids, provide a summary of comments, and a letter that recommends the most responsive and responsible bidder.

#### **TASK 5 – CONSTRUCTION PHASE SERVICES - FLORIDAN AQUIFER WELL, WELLHEAD #S-1R, RAW WATERMAIN**

Consultant will provide construction phase services for the drilling of well #S-1, wellhead installation, startup and operational testing of the well, and oversight of the raw watermain construction. Final FDEP certification of Well #S-1 and raw watermain will be provided.

The Consultant's site visits will be for the purpose of endeavoring to provide the Owner a greater degree of confidence that the completed work of its contractors will generally conform to the construction documents. The Consultant neither guarantees the performance of contractors, nor assumes responsibility for any contractor's failure to perform its work in accordance with the contract documents. Work that the Consultant believes does not comply with the contract documents will be brought to the attention of Indian River County Utilities and the contractor. The Consultant shall have no responsibility for any contractor's means, methods, techniques, equipment choice and usage, sequence, schedule, safety programs, or safety practices, nor shall the Consultant have any authority or responsibility to stop or direct the work of any contractor.

Consultant will provide construction phase services including hydrogeological services, performance testing of each well, and preparation of a well completion report for well #S-1 Floridan Aquifer well. Consultant will utilize subconsultant services of JLA Geosciences, Inc. for the Hydrogeologic Consulting Services (JLA).

Consultant will provide hydrogeological support and observation services during Upper Floridan Aquifer well #S-1 construction including surface casing installation, pilot hole drilling, geophysical logging, casing installation, grouting casing in place

for each lift of cement, completion interval drilling and associated testing, preliminary well development, acid treatment, pump development and testing. Consultant will also provide well performance testing, including water level measurements, specific capacity analysis, and basic water quality testing (conductivity, chlorides, silt density indices~SDI's and sand testing). Consultant will provide up to 220 hours of on-site hydrogeological services (JLA) for well #S-1.

Consultant will review drilling, geologic and geophysical data and provide recommendations for casing setting depths and completion intervals. Consultant will review completion interval drilling and testing data and recommend if acid treatment is necessary, review acid treatment and testing plans. Consultant will review pump test results and provide recommendations for permanent pump setting depth and recommended in service pumping rate.

Consultant will coordinate water quality testing, which includes clearance water quality in accordance with FDEP regulations and additional water quality for membrane projections.

Consultant will provide contract document interpretation, shop drawing and pay request review and change order requests. These construction phase services assume the well location, and formation water disposal determined above will not change during construction. Shop drawing submittal will be reviewed for conformance with the intent of the contract documents. Shop drawing will be submitted directly to the Consultant. The Consultant will review the submittal and return copies to the contractor and Indian River County Utilities.

KHA will prepare a well completion report for well #S-1, including a summary of the lithologic logs, field logs, hydrologic and water quality data, and preparation of figures, data, lithologic logs, and appropriate attachments.

The well completion report and data will be used for future well clearance when the wells are placed into service. Up to six (6) final copies of the report will be furnished to Owner.

The installation of the well pump, column piping, and electrical service for operation of the well #S-1 is assumed to be included under the well driller contract.

Consultant will prepare and submit a FDEP certification of construction completion and request for clearance to place well #S-1 into operation (FDEP Form 62-555.900(9)). Record drawing information will be provided by the contractors and included with the certification package.

## **SCHEDULE**

In general, the following schedule is anticipated and run concurrently with the current work order schedule and contractor schedule.

TASK 1 - Prepare Design Docs - WELL	4 - 6 weeks from Notice to Proceed (NTP)
TASK 2 - Prepare Design Docs - RWM	4 - 8 weeks from Notice to Proceed (NTP)
TASK 3 - Permitting	4 - 6 weeks after Task 1 & 2
TASK 4 - Bidding	2 - 6 week after documents prepared
TASK 5 - Construction Phase	8 - 10 months after Notice of Award to Contractor

## **FEE SCHEDULE**

We will provide these services in accordance with our Agreement for Professional Services for Water Plant and Water Resources Engineering Services – RFQ 2019070, dated November 5, 2019, by and between INDIAN RIVER COUNTY, a political subdivision of the State of Florida (“COUNTY”) and Kimley-Horn and Associates, Inc., (“Consultant”).

The Consultant will provide professional services for Task 1 through Task 5 on a lump sum fee basis as follows:

<b>Task No.</b>	<b>Task</b>	<b>Task Fee</b>
<b>TASK 1</b>	<b>PREPARE DESIGN DOCUMENTS - WELL</b>	<b>\$ 42,141</b>
<b>TASK 2</b>	<b>RAW WATERMAIN - PREPARE DESIGN DRAWINGS AND SPECIFICATIONS</b>	<b>\$ 48,922</b>
<b>TASK 3</b>	<b>PERMITTING</b>	<b>\$ 8,388</b>
<b>TASK 4</b>	<b>BIDDING</b>	<b>\$ 8,543</b>
<b>TASK 5</b>	<b>CONSTRUCTION PHASE, OBSERVATIONS</b>	<b>\$114,517</b>
	<b>TOTAL</b>	<b>\$222,511</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:

- Preparation of wellfield operating plans
- Water Use Permitting beyond what is listed herein
- PLC design for future communication and upgrades of existing SCADA system

### **ITEMS FURNISHED BY OWNER**

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

- Permit application fee

**EXHIBIT B**  
**ESTIMATE FOR ENGINEERING SERVICES**

PROJECT: IRCU Floridan Well S-1R Replacement						SHEET 1 OF 1			
CLIENT: Indian River County Utilities						FILE NO.			
ESTIMATOR: MDM						DATE: 12/03/21			
DESCRIPTION:		DIRECT LABOR (MAN-HOURS)						Dir Exp (4.6%)	LINE TOTAL
		PRINC	SEN PROF	REG JL/FH	DES/ P2 (JPF)	CLK	EXP SUB		
NO.	TASK								
<b>1 PREPARE DESIGN DOCS</b>									
	Review Well #S-1 & siting		4		2	2		\$60 1,362	
	Prepare drawings & specs		4	20	88	6		\$631 14,347	
	100% review set		4	8	12	6	\$200	\$181 4,317	
	Zentz Survey		2	4			\$1,500	\$48 2,598	
	C&W		2	4			\$12,000	\$48 13,098	
	JLA		2	4		2	\$5,120	\$57 6,419	
								<b>\$42,141</b>	
<b>2 PREPARE DESIGN DOCS - RWM</b>									
	Evaluate proposed RWM, hydraulic analysis		2	8		12		\$129 2,931	
	Prepare exhibit of RWM pipe route		4			8		\$77 1,745	
	Prepare drawings for 90% submittal		4	8	90	12		\$584 13,286	
	90% Design meeting (1- meeting, planned)		2	4				\$48 1,098	
	Detail sheets (3)/Cover/Key Map/Notes		4	4	20	4		\$183 4,167	
	Prepare final drawings		4	4	52	12		\$373 8,485	
	Final Review Meeting (1- meeting planned)		4	6	8			\$121 2,761	
	Opinion of probable construction cost		2		12	4		\$96 2,190	
	Technical Specification Preparation		2	6		24		\$168 3,822	
	SOFTDIGS (10@ \$250/sample)			8	8	12	\$2,500	\$147 5,839	
	SURVEY (wellsite & RWM)		2	4			\$1,500	\$48 2,598	
								<b>\$48,922</b>	
<b>3 PERMITTING</b>									
	SJRWMD		4			4		\$188 1,472	
	FDEP permit app & RAI		8		10	12		\$184 4,186	
	JLA						\$2,730	2,730	
								<b>\$8,388</b>	
<b>4 BIDDING</b>									
	Coordination with contractor		2	10		8		\$125 2,843	
	Review change order		2	8		6		\$88 2,314	
	JLA						\$1,886	1,886	
	C&W						\$1,500	1,500	
								<b>\$8,543</b>	
<b>5 CONSTRUCTION PHASE</b>									
	Coordination/Observation - well		18		100	20	\$4,493	\$758 21,721	
	Coordination/Observation - RWM		12		80	20		\$599 13,619	
	Shop Dwgs		10		30	12		\$301 6,853	
	Meetings 8		12		24	24		\$346 7,870	
	JLA onsite Drill #S-1		4		4	4	\$40,358	\$78 42,140	
	JLA Well Completion Report						\$5,430	\$66 5,496	
	Startup & Operational testing (wellhead, FO)		10	4	8	30		\$302 6,872	
	C&W						\$6,000	6,000	
	Final FDEP Release		6	4		20		\$76 3,946	
								<b>\$114,517</b>	
	TOTAL HOURS		136	118	548	264	\$85,217	\$6,110 <b>222,511</b>	
	LABOR (\$/HOUR)	235	225	150	105	96			
	SUBTOTAL		\$30,600	\$17,700	\$57,540	\$25,344		\$131,184	