

South Oslo Rd Water Plant Floridan Well S-4 Replacement


This Work Order Number 11 is entered into as of this ___ day of _____, 201_, 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 4th 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: 
David R. Bardt, P.E.
Title: Principal

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 Number 11

Indian River County Department of Utility Services

South Oslo Rd Water Plant

Floridan Well S-4 Replacement

PROJECT UNDERSTANDING

During the initial phases of rehabilitation of well S-4 at the Oslo Road water treatment plant, it became apparent that the existing PVC casing was damaged significantly to the extent of not being salvageable and having the ability to be placed back into service. The existing casing is cracked in several locations and is currently a sanitary hazard. A summary report was prepared which outlined the extent of damage and recommends replacement with a new well with plug & abandonment of the existing one. It is recommended to request a change order from the contractor currently on-site in order to defray mobilization costs.

The following scope of work is proposed to provide documents and construction oversight for the replacement of well S-4, consisting of preparation of design documents, FDEP and SJRWMD permitting, and coordination with the existing on-site well driller & contractor, and construction phase services for rehabilitation for the replacement of well #S-4 at the South Oslo Road Water Treatment plant.

SCOPE OF WORK

TASK 1 - PREPARATION OF DESIGN DOCUMENTS

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-4 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-4 and interface with existing system.

TASK 2 - 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 3 – COORDINATION OF CHANGE ORDER

Consultant will assemble design documents and coordinate with contractor preparation of a change order to construct the replacement well S-4.

Consultant will provide up to four (4) copies of drawings and technical specifications for use by Indian River County (IRC) and contractor.

Consultant will respond to contractor questions, and provide written responses for IRC to process for the work prepared by KHA.

Consultant will review change order proposal from contractor and provide review summary and recommendation to IRCU. Detailed negotiation with contractor is not included.

TASK 4 – CONSTRUCTION PHASE SERVICES - FLORIDAN AQUIFER WELL & WELLHEAD #S-4

Consultant will provide construction phase services for the drilling of well #S-4, wellhead installation, and startup and operational testing of the well. Final FDEP certification of Well #S-4 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-4 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-4 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-4.

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-4, 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.

It is anticipated that the additional construction phase for the addition of well S-4 will extend the original schedule by three (3) months.

The installation of the well pump, column piping, and electrical service for operation of the well #S-4 is assumed to be included under the drilling and rehabilitation phase. Consultant will attend additional progress meetings, up to two (2) additional onsite progress meetings to discuss progress, review construction related issues, and provide coordination where needed.

Consultant will prepare and submit a FDEP certification of construction completion and request for clearance to place well #S-4 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	2 - 3 weeks from Notice to Proceed (NTP)
Task 2 Permitting	4 - 6 weeks after Task 1
Task 3 Coordination	2 week after documents prepared
Task 4 Construction Phase	6 - 8 months after Notice of Award to Contractor

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.

The Consultant will provide professional services for Task 1 through Task 4 on a lump sum fee basis as follows:

Task No.	Task	Task Fee
TASK 1	PREPARE DESIGN DOCUMENTS	\$ 45,122
TASK 2	PERMITTING	\$ 7,077
TASK 3	COORDINATION	\$ 5,157
TASK 4	CONSTRUCTION PHASE, OBSERVATIONS	\$ 78,207
	TOTAL	\$135,563

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:

- Bidding phase services
- Preparation of wellfield operating plans
- 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-4 Replacement						SHEET 1 OF 1			
CLIENT: Indian River County Utilities						FILE NO.			
ESTIMATOR: MDM						DATE: 12/11/16			
DESCRIPTION: Floridan Well S-4 Replacement Design, permitting, Construction phase									
DIRECT LABOR (MAN-HOURS)									
	PRINC	SEN PROF	REG PROF JL/FH	DES/ P2 (JPF)	CLK	EXP SUB	Dir Exp (4.6%)	LINE TOTAL	
NO.	TASK								
1 PREPARE DESIGN DOCS									
		4		2	2		\$60	1,362	
	Review Well #S-4 & siting						\$631	14,347	
	Prepare drawings & specs	4	20	88	6			4,117	
	100% review set	4	8	12	6		\$181		
	Zentz Survey		2	4		\$1,500	\$48	2,598	
	C&W		2	4		\$14,400	\$48	15,498	
	JLA		2	4	2	\$5,900	\$57	7,200	
								\$45,122	
2 PERMITTING									
	SJRWMD		4		4		\$188	1,472	
	FDEP permit app & RAI		6	10	12		\$163	3,715	
	JLA					\$1,800		1,890	
								\$7,077	
3 Change Order Coordination									
	Coordination with contractor		2	10	8		\$125	2,843	
	Review change order		2	8	6		\$88	2,314	
	C&W								
								\$5,157	
4 CONSTRUCTION PHASE									
	Coordination/Observation		8	30	60	\$2,900	\$493	14,103	
	Shop Dwgs		8	7	18		\$196	4,459	
	Meetings 8		12	24	24		\$346	7,870	
	JLA onsite Drill #S-4		8	8	4	\$26,500	\$139	30,988	
	JLA Well Completion Report					\$3,400	\$66	3,636	
	Startup & Operational testing (wellhead, FO)		10	8	30		\$275	6,245	
	C&W					\$7,200		7,560	
	Final FDEP Release		6		20		\$76	3,346	
								\$78,207	
	TOTAL HOURS		84	58	189	202	\$63,600	\$3,181	135,563
	LABOR (\$/HOUR)	235	225	150	105	96			\$135,563
	SUBTOTAL		\$18,900	\$8,700	\$19,845	\$19,392	\$66,837		