

**AGREEMENT FOR PROFESSIONAL SERVICES FOR WATER PLANT AND WATER
RESOURCES ENGINEERING SERVICES RFQ 2019070
WORK ORDER 1**

South Oslo Rd Water Treatment Plant Improvements

This Amendment _____ to 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 entered into as of this 5th 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").

1. The COUNTY has selected the Consultant to perform the professional services set forth in existing Work Order Number____ , Effective Date_____.

2. The COUNTY and the Consultant desire to amend this Work Order as set forth on Exhibit A (Scope of Work) attached to this Amendment 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), and within the timeframe more particularly set forth in Exhibit C (Time Schedule), all in accordance with the terms and provisions set forth in the Agreement.

3. From and after the Effective Date of this Amendment, the above-referenced Work Order is amended as set forth in this Amendment. Pursuant to paragraph 1.5 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: _____

, Chairman

Print Name: _____

Title: _____

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

South Oslo Rd Water Treatment Plant Improvements

Amendment No. 1 to Work Order No. 1

PROJECT UNDERSTANDING

Kimley-Horn and Associates, Inc. was authorized under Work Order #1 to provide design, permitting, and bidding phase services on December 17, 2019. Following completion of task 1 of this scope including the preliminary evaluation, the following additional items were determined to be necessary improvements as part of the overall project;

- New high service pumps (HSP) 4 & 5 (2 - 3 dwgs)
- Reverse Osmosis (RO) permeate and concentrate lines (4 dwgs)
- HSP Suction and tank outlet piping (4 dwgs)
- Additional CO₂ storage and feed system (3 dwgs)
- Additional Sulfuric Acid pump skid (1 dwg)
- Additional bulk caustic tank in existing containment (2 dwgs)
- Upgrading of the WTP from 8.57 to 9.0 MGD treatment capacity
- Modification to existing Demineralization Concentrate (DC) disposal permit
- Separation of SCADA & PLC Improvements to standalone project

SCOPE OF SERVICES

Consultant will provide design, permitting, and bidding phase services for the improvements listed herein.

Task 1 – Preliminary Design – No Changes

Task 2 – Prepare Documents – Additional Scope

Consultant will prepare design drawings and specifications for two additional high service pumps, including supply and discharge piping as outlined in the preliminary design report and 60% submittal. The design will consist of two new vertical turbine pumps located outdoors of the existing building due to limited indoor space. The pumps will be designed to match the existing pump performance and include variable frequency drives (VFDs) on each of the pumps. The design will also consist of redundant suction and discharge piping and incorporate dual distribution flow meters as described in the previous scope of services.

Consultant will prepare design drawings for a new dual permeate pipe and replacement concentrate pipeline. The dual permeate pipe will allow phasing of the RO train installation and provide additional hydraulic capacity to the RO system to provide 9.0 MGD. The additional concentrate line is necessary as a replacement to the existing fiberglass reinforced plastic (FRP) pipe concentrate line that is susceptible to failures. Both pipelines will be

constructed of HDPE.

Consultant will prepare drawings to add a second suction header pipe between the ground storage tanks. The existing 14-inch header is undersized at the existing WTP rated capacity and will require an additional parallel pipe to accommodate the high service pump improvements and WTP capacity increase. Consultant will prepare design for additional suction pipe penetration into each of the two (2) ground storage tanks.

Consultant will prepare design drawings and specifications for a new liquid carbon dioxide (CO₂) storage tank and components, consisting of slab, tank, gas feed and vaporizer system and cabinet, and electrical power feed. The new tank will provide redundant and additional supply to the existing carbonic solution pressurized solution feed (PSF) systems. Consultant will design grading improvements adjacent to the existing and proposed bulk CO₂ storage tanks.

Consultant will prepare design drawings and specifications for a 2nd bulk sodium hydroxide tank to be located in an existing containment structure. Additional bulk storage is needed for deliveries of full load of sodium hydroxide and anticipated increase in usage for alkalinity improvements with reduction in Cal-Flo lime slurry usage.

Consultant will prepare design drawings and specifications for an additional sulfuric acid feed pump skid. This additional skid will be dedicated to feedwater acidification whereas the existing skid will be dedicated to permeate and raw water blend acidification.

Consultant will prepare specifications for motor replacement of two (2) transfer pumps. The replacement motors will be of the same electrical size and will be totally enclosed fan-cooled (TEFC) in lieu of the WP-1 motors currently installed and improve resiliency of the post-treatment system from wind driven rain.

Consultant will prepare process and instrumentation diagrams (P&IDs) for each of the above listed improvements.

Consultant will prepare electrical drawings and specifications, consisting of single line diagrams, network drawings, electrical schematics and details. C&W Engineering will provide the electrical design services.

It is estimated that an additional 16 - 17 drawings will be included and be incorporated into the project set of bid documents. The documents will be prepared and be used in advertising for bids.

Consultant will prepare design drawings, specifications, and opinion of probable construction costs (OPCC) at the 60%, 90%, and bidding phase design intervals for these additional system components.

Specifications will be provided in the 16-division format as defined by the Construction Specifications Institute (CSI).

Task 3 – Permitting – Additional Scope

Modification to the existing concentrate disposal permit, Industrial Wastewater Permit No. FL0037940-009 (Minor), is necessary to accommodate the change in water quality with the increase in RO plant capacity and recovery, as well as address the ADF and MDF stipulations in the current permit.

Consultant will assimilate historical data and prepare a letter requesting a minor modification to the existing permit to include a change in the average daily flow requirement, and demonstrate a negligible impact to overall water quality of the Algal Turf Scrubber (ATS) influent and treated effluent.

Consultant will prepare supporting documents, consisting of drawings, specifications, projections, and calculations supporting the minor letter modification.

Consultant will respond to one round of reasonable requests for additional information from FDEP permitting agency requests for clarification.

Consultant will prepare an Upgrading Evaluation to determine components/processes in need of expansion/replacement to accomplish 9 MGD of treatment capacity. Consultant will identify improvements in Upgrading Evaluation and implement said improvements into the construction plans.

Consultant will prepare permit application package to increase capacity of the WTP from 8.57 to 9 MGD. Application will include the Upgrading Evaluation in addition to the final plans and specifications. It is assumed Indian River County will produce the permit application fee in the amount of **\$12,500** per FAC 62-4.050 (n) 1.a.

Task 4 – Bidding – Additional Scope

Due to failing and antiquated PLC hardware, IRC desires to advance the SCADA system improvements aspect of this project. As such, Consultant will prepare standalone bid documents for SCADA and PLC improvements at Oslo. These documents will be prepared at the 90 and 100% design intervals. Work under this task includes the additional effort associated with developing a standalone set of bid documents for the SCADA/PLC improvement aspect of this project, in addition to the process/piping improvements previously scoped.

It is assumed that the Oslo SCADA/PLC improvements will be combined with the Hobart PLC improvements project. This will provide the County with the ability to standardize panel design with consistent fabricator for both WTPs and will also reduce on overall construction costs through economies of scale.

TIME SCHEDULE

Consultant will include these additional services with the approved Work Order #1 and anticipates an additional 8-12 weeks will be necessary to complete.

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 4 on a lump sum fee basis as follows:

Task No.	Task	Work Order 1	Amendment 1	Updated Total
Task 1	Preliminary Design	\$ 46,224	\$ 0	\$ 46,224
Task 2	Prepare Documents	\$ 491,644	\$ 94,030	\$585,674
Task 3	Permitting	\$ 11,206	\$ 26,028	\$ 37,234
Task 4	Bidding	\$ 19,175	\$ 7,194	\$ 26,369
	Total Lump Sum Fee =	\$ 568,249	\$ 127,252	\$695,501

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:

- Site planning is not included but can be provided after bidding phase.
- Construction phase services not included under this task order, but will be prepared as a separate work authorization
- Permit application fee for uprating of the WTP
- New permit application for DC disposal at Osprey Marsh

DRAFT