

**CCNA2018 WORK ORDER 12**

**SOUTH OSLO WATER PLANT  
MEMBRANE REPLACEMENT AND PLANT IMPROVEMENTS**

This Work Order Number 12 is entered into as of this \_\_\_ day of \_\_\_\_\_, 2019, pursuant to that certain Continuing Consulting Engineering Services Agreement for Professional Services entered into as of this 17<sup>th</sup> day of April, 2018 (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:**

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

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

**Brian Good, P.E.**

Print Name: \_\_\_\_\_

*Brian Good*

Title: \_\_\_\_\_

**Principal**

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

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

**Bob Solari, 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 #1**

### **Work Order Number 12**

#### **South Oslo Rd Membrane Treatment Plant Degasifier/Scrubber Blower Replacement**

### **PROJECT UNDERSTANDING**

The existing degasifier blowers at the Oslo Road membrane water treatment plant are experiencing reliability issues with frequent fan blade replacement. The existing blower blades are constructed of coated steel and have experienced corrosion due to coating wear exposing the steel blade tips to the high concentration of hydrogen sulfide in the air stream. The corrosion of the blades has led to vibration issues that have consistently reduced the life of the blower bearings, motor bearings, and blower bases and Indian River County Utilities is interested in replacing the existing blowers with blowers that are equipped with FRP composite blades.

The scope of work consists of review of alternate blower types and manufacturers, preparing drawings and specifications for blower replacement, observation of installation, and witnessing start-up and testing of the new blowers. It is assumed that the blower capacities (air flow and horsepower) will not change. A FDEP permit is not anticipated to be required for the replacement of the blowers since it is considered maintenance and is therefore not included within the scope below.

### **SCOPE OF SERVICES**

The following scope consists of blower replacement and implementation only at the South Oslo Rd water treatment plant, which consists of the following tasks.

#### **Task 1 – Review Blower Types, Collect Information**

Consultant will research other blower manufacturers with non-corrosive blower materials, such as all fiberglass blower materials and request quotes for cost comparisons to other type blowers.

Consultant will collect as-built information on the existing ductwork at Oslo Road membrane water treatment plant that will need to be modified. It is assumed that alternative blower manufacturers will not have matching inlet and outlet blower dimensions to the existing blowers and that modification of the existing FRP ductwork will be required. Consultant will review the blower configuration which will result in minimal ductwork modifications.

Consultant will perform one site visit to collect dimensional data of the existing blower(s) configuration.

## **Task 2 – Prepare Drawings and Specifications for Blower Replacement**

Consultant will prepare drawings, consisting of a new blower configuration, and ductwork drawings that need to be modified. A blower plan, ductwork plan, and elevation of the blower area will be prepared. It is assumed that the basefiles developed under the original project will be used.

Consultant will prepare a sequencing plan to minimize impacts to operations, which will be used for implementation of the work. Photos may be used to depict necessary details. Modifications to the electrical power supply will be limited to conduit/wire replacement from disconnect to the blower motors. It is also assumed that blower motor sizes will not change. It is assumed that the electrical actuated dampers will not be modified. Consultant will prepare technical specifications for the new blowers and ductwork which need to be modified.

Consultant will provide six (6) copies of drawings and specifications to Indian River County Utilities (IRCU) staff for review and for bidding. Consultant will also provide copies in electronic (PDF – portable document format) form.

## **Task 3 – Bidding Phase**

Consultant will prepare electronic copy of document for IRC purchasing department to be utilized and provide assistance during the bidding purposes.

IRC purchasing department will advertise and administer the procurement of the bidding and respond to potential bidder questions. The Consultant will respond to contractor questions, 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 identifies the lowest responsive, responsible bidder.

## **Task 4 – Construction Phase**

Consultant will answer a reasonable number of requests for additional information and clarifications for the construction of this project. Consultant will respond in written format in a timely manner.

Consultant shall review shop drawings and submittals for their conformance with the design documents. Such review and approvals or other action will not extend to means, methods, techniques, equipment choice and usage, sequences, schedules, or procedures of construction or to related safety precautions and programs. It is assumed that up to four (4) submittals will be reviewed. Consultant will provide written comments and respond to IRCU/contractor within a reasonable time. Consultant will strive to complete the reviews within a ten (10) working days.

Consultant will provide on-site observation of blower installation. Assuming one (1) month construction duration for the blower installation, respectively, it is assumed that up

to four (4) half days of observation will be provided by a project engineer or field representative. Such visits and observations by Consultant are not intended to be exhaustive or to extend to every aspect of Contractor's work. Observations are to be limited to spot checking, selective measurement, and similar methods of general observation. Based on information obtained during such visits, Consultant will evaluate whether Contractor's work is generally proceeding in accordance with the Contract Documents, and Consultant will keep IRCU informed of the general progress of the Work.

Consultant will attend the preconstruction meeting.

Consultant will attend and witness a startup and operational testing of the blowers. Consultant will develop a punch-list of incomplete items based on our on-site observations and startup testing. Consultant will issue a written punch-list to Owner and contractor. Consultant will provide one (1) site visit to review follow up work on punchlist items.

Consultant will review contractor furnished operation and maintenance manuals (O&M) as required under the certification of completion. Consultant will review record information provide by contractor.

**TIME SCHEDULE**

Consultant will conduct Task 1 within 2 weeks and Task 2 within 4 – 6 weeks from notice to proceed. Bidding phase is assumed to take up to 4 – 6 weeks.

**FEE SCHEDULE**

We will provide these services in accordance with our extension and amendment of our Continuing Consulting Engineering Services Agreement for Professional Services dated April 17<sup>th</sup>, 2018, 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:

<b>Task No.</b>	<b>Task</b>	<b>Task Fee</b>
Task 1	Review Blower Types, Collect Information	\$ 4,566
Task 2	Prepare Drawings and Specifications for Blower Replacement	\$ 11,175
Task 3	Bidding Phase	\$ 3,912
Task 4	Construction Phase	\$ 10,284
	<b>Total Lump Sum Fee =</b>	<b>\$ 29,937</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:

- Permit application preparation
- Construction phase services beyond what is listed herein
- Record drawing collection and development

