

VILLAGE OF WELLINGTON
UTILITY ENGINEERING SERVICES WORK AUTHORIZATION
VOW WTP TRAIN 8 DESIGN AND PERMITTING

This Work Authorization authorizes Kimley-Horn and Associates, Inc. to perform work set forth herein and is issued pursuant to the Agreement for Consulting Services, between Wellington ("Client" or "Village") and Kimley-Horn and Associates, Inc. ("Consultant" or "Kimley-Horn"), dated February 9, 2016 ("Agreement"). All terms and conditions of said Agreement are hereby incorporated and made part of this Work Authorization.

BACKGROUND

The VOW WTP membrane treatment facilities consist of two separate plants, RO1 (MB1) and RO2 (MB2). RO2 (MB2) is made up of two trains (Train No. 6 and Train No. 7) with capacity for one additional train (Train No. 8). Based on increased potable water demands, the Village has determined that they wish to install Train No. 8 to its full capacity (1.8 MGD). The scope of work includes the design and permitting of the required infrastructure and modifications to the RO2 (MB2) facility for a fully functional Train No. 8 including extension of the membrane piping systems, applicable tie-in piping, membrane train feed motor operated valves (MOV) for Train No. 6, No. 7, and No. 8, and associated electrical and control systems. The authorization will cover the associated design, permitting, and bidding services. Construction stage services are not included as part of this scope of work.

The following is a list of the tasks that will be performed and a description of the scope of work involved for each task.

SCOPE

The services authorized herein include the components, as follows:

Task 1 – Train No. 8 Design, Permitting, and Bidding

- A. Kimley-Horn will prepare construction plans and specifications for Train No. 8 in general conformance with the previously designed and installed Train No. 6 and No. 7. The construction plans and specifications will include three (3) new, modulating membrane train feed MOVs for Train No. 6, No. 7, and No. 8.
- B. Kimley-Horn will prepare an Opinion of Probable Construction Cost (OPC) for the Project when the construction documents are at 90% and 100% complete.
- C. Kimley-Horn will engage and coordinate with an electrical engineering subconsultant to provide design and permitting for Train No. 8 electrical and I&C improvements.
- D. Kimley-Horn will present the plans, specifications, and construction cost opinion to the Village for review at 90% and 100% completion.
- E. Kimley-Horn will prepare and submit the applicable Palm Beach County Health Department (PBCHD) permit application for the project and will assist the Village in responding to Requests for Additional Information through the permitting process.

- F. Kimley-Horn will assist the Village with the contractor procurement process including assistance with response to bidder RFIs, review of the apparent low bidder's proposal, and preparation of a written summary review of the bids.
- G. Based on the previously prepared Water Treatment Plant Re-Rating Report that was submitted by Kimley-horn and approved by PBCHD in 2019, Kimley-Horn will prepare and submit an updated Water Treatment Plant Re-Rating Report as defined in FAC 62-555.528 to obtain a plant rated capacity of 14.1 MGD based on the installation of Train No. 8 and will assist the Village in responding to Requests for Additional Information through the re-rating process.
- H. Based on the previously prepared Water Treatment Plant Capacity Analysis Report that was submitted by Kimley-horn and approved by PBCHD in 2019, Kimley-Horn will prepare and submit an updated Water Treatment Plant Capacity Analysis Report as defined in FAC 62-555.348 to obtain a plant rated capacity of 14.1 MGD based on the installation of Train No. 8 and will assist the Village in responding to Requests for Additional Information through the re-rating process.

ADDITIONAL SERVICES

Any services not specifically provided for in the above scope, as well as any changes in the scope requested by the Village, will be considered additional services to this Work Authorization and will be performed based on subsequent Work Authorizations approved prior to performance of the additional services.

ASSUMPTIONS AND INFORMATION / SERVICES PROVIDED BY THE VILLAGE

Kimley-Horn assumes that all information provided by the Village can be relied upon in the performance of professional services.

ASSUMPTIONS AND CLARIFICATIONS

The fees stated in this Work Authorization are based on the following assumptions and clarifications:

1. Permit application fees will be paid directly by the Village
2. The WTP re-rating to 14.1 MGD is based on the current capacity of the lime softening process (4.7 MGD), re-rating RO1 to 4.0 MGD, and re-rating RO2 to 5.4 MGD. The 2017 WTP R&R construction project includes improvements and modifications to RO1 for 4.0 MGD of capacity and RO2 for 3.6 MGD of capacity.

SCHEDULE

The work set forth in the Scope shall be completed within the schedule outlined in **Table 1** based upon receipt of a Purchase Order, exclusive of delays beyond the control of the Kimley-Horn.

Table 1
Schedule

	Time to Complete (Calendar Days)	Cumulative Time to Complete (Calendar Days)
90% Plans, Specifications, OPC	30	30
VOW Review	5	35
Submit Updated Re-Rating Report to PBCHD	10	45
Submit Updated Capacity Analysis Report to PBCHD	10	45
Submit Permit Application to PBCHD	10	45
*Bid Plans, Specifications, OPC	45	45
Bid Phase Assistance	30	75
**Submit Final Re-Rating/Capacity Analysis/Permit Application to PBCHD	15	90

* The schedule is based upon the VOW returning review comments within 5 calendar days after receipt. The 100% Submittal only includes the construction documents and does not include bidding or construction services in the timeline.

** The schedule is based upon PBCHD returning all review comments for the entire permit application within 30 calendar days after receiving the permit application submittal. The schedule is also based on receiving only one (1) request for additional information from PBCHD.

COMPENSATION

Kimley-Horn will perform the services described in the Scope of Services on a lump sum basis for \$57,325.

Accepted by:

Village of Wellington

Kimley-Horn and Associates, Inc.

A handwritten signature in blue ink, appearing to read 'KS', is positioned above a horizontal line.

Anne Gerwig, Mayor

Kevin Schanen, P.E., Sr. Vice
President

Date: _____

Date: 4/19/2020

Kimley-Horn
1920 Wekiva Way
Suite 200
West Palm Beach, Fl. 33411

April 17, 2020

Attention: Mr. Matt Tebow, P.E.

Subject: Wellington WTP RO2 Train No.8 Addition Electrical and Instrumentation Design Services.
J. H. Ham Engineering, Inc Proposal No. P47043KH-1.

Dear Mr. Tebow:

The following is the revised drawing list and scope of services I envision we will provide for the electrical and instrumentation portions of the scope of work for the Village of Wellington WTP RO2 Train No. 8 Addition Project. The Project Scope of Work shall include adding Train No. 8 in the RO2 Building, interconnecting the discharge headers of HPP No. 6 to HPP No. 8 to make it a common header tied to modulating motor operated pressure control valves at each RO Control Block and integrating all of the new Train No. 8 and the new Train No. 6 to Train No. 8 common HPP header pressure control valves instrumentation, motor operated control valves and instrumentation power and controls into PLC-RO2, UPSRO2 and the existing Motor Operated Valves Power and Control Panel PCPMOVRO2 and the new Motor Operated Valves Power and Control Panel PCPMOVRO2A in the RO2 MCC Switchgear and MCC Room. The drawing list and scope of services excludes the Construction Management Services for the Pre-Con meeting, all construction inspections, the substantial completion inspections and punch list trips which will be details in a separate Proposal No. P47043-C.

Drawings

1. RO2 Train No. 8 Power, Control and Instrumentation Plan.
2. RO2 Switchgear and MCC Room Plan with PLCRO2 Panel, Motor Operate Valve Power and Control Panel PCPMOVRO2, Motor Operated Valves Power and Control Panel PCPMOVRO2A and UPSRO2
3. RO2 Train No. 8 and the HPP No. 6 to HPP No. 8 Common Discharge Header Motor Operated Valves Power and Control Schematic Diagrams.
4. Modifications for Motor Operated Valve Power and Control Panel PCPMOVRO2
5. Panel Layout, Terminal Blocks Layout and Bill of Materials for a New Motor Operated Valves Power and Control Panel PCPMOVRO2A for the Three (3) Control Block No. 6 to No. 8 Pressure Control Valves Tied to the HPP No. 6 to No. 8 Common Discharge Header and Space for at Least Three (3) More MOV's
6. Power Control and instrumentation Conduit and Cable Schedule.
7. Modifications to PLCRO2 I/O Panel Detail and Layout and Bill of Materials Drawing for Analog and Digital PLC I/O Additions and Control Additions Required for the Addition of RO2 Train No. 8 and the Three (3)

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Control Block No. 6 to No. 8 Pressure Control Valves Tied to the HPP No. 6 to No. 8 Common Discharge Header.

8. Modifications to PLCRO2 I/O Panel Bill of Materials Drawing for Analog and Digital PLC I/O Additions and Control Additions Required for the Addition of RO2 Train No. 8 and the Three (3) Control Block No. 6 to No. 8 Pressure Control Valves Tied to the HPP No. 6 to No. 8 Common Discharge Header.
9. Modifications to PLCRO2 I/O Panel Terminal Block Details, Layout and Markings for Analog and Digital PLC I/O and Control Additions Required for the Addition of RO2 Train No. 8 and the Three (3) Control Block No. 6 to No. 8 Pressure Control Valves Tied to the HPP No. 6 to No. 8 Common Discharge Header . Three (3) Drawings.
10. Modifications to PLC I/O Schematics for all digital inputs, digital outputs, analog inputs and analog outputs required for the Addition of RO2 Train No. 8 and the Three (3) Control Block No. 6 to No. 8 Pressure Control Valves Tied to the HPP No. 6 to No. 8 Common Discharge Header. These drawings will show all field devices, interposing relays, terminal blocks, PLC module termination points and wire numbers for every input and output module affected by the Addition of RO2 Train No. 8 the Three (3) Control Block No. 6 to No. 8 Pressure Control Valves Tied to the HPP No. 6 to No. 8 Common Discharge Header. Four (4) Drawings.
11. Instrumentation Loop Diagrams with Interconnections from the Field to PLCRO2 Panel and PCPMOVRO2 Panel for all Instruments and Motor Operated Valves added for the Addition of RO2 Train No. 8 and the Three (3) Control Block No. 6 to No. 8 Pressure Control Valves Tied to the HPP No. 6 to No. 8 Common Discharge Header. Four (4) Drawings.

Our Construction Drawings Package will include a full set of Electrical, Instrumentation and Controls Materials and Construction Specifications and a complete Scope of Work.

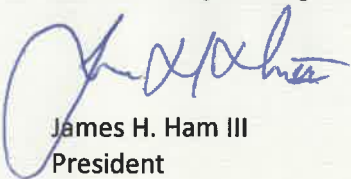
We have included a pre-bid meeting, answering RFI's from the bidders and evaluation of the Electrical and Instrumentation bids.

We will provide Professional Liability Insurance for the Electrical, Instrumentation and Controls portion of the Project.

The Proposal Total for the above Scope of Work is \$22,000.00 for the Design Services only.

We would like to thank you for the opportunity of presenting this Proposal and we look forward to working with you and the Kimley-Horn Team on the Wellington WTP RO2 Train No. 8 Addition Project.

Very truly yours,
J. H. Ham Engineering, Inc.



James H. Ham III
President

ESTIMATE FOR ENGINEERING SERVICES

PROJECT:	Village of Wellington Train 8 Design and Permitting				SHEET 1 of 1		
CLIENT:	Wellington				FILE NO.		
ESTIMATOR:	Matt Tebow/John Potts				DATE:	04/18/20	
DESCRIPTION: See Scope of Services	DIRECT LABOR (MAN-HOURS)						
						SUB	EXP
	Principal	PM	Engineer (EI)	Admin			LINE
							TOTAL
	JP/MM	MT	AG	TC			
Task 1 - Design, Permitting , Bidding							
Train 8 Installation	4.0	10.0	40.0				\$6,990
Feed, Permeate, Concentrate, and Cleaning Piping Installation/Modifications	4.0	10.0	25.0				\$5,340
New Train No. 6, No. 7, and No. 8 Membrane Feed Valves (Modulating MOVs)	2.0	8.0	15.0				\$3,440
Ancillary Component Installation/Modifications	4.0	10.0	20.0				\$4,790
Specifications	4.0	15.0	5.0	10.0			\$4,765
Electrical/I&C	3.0	8.0	5.0			\$22,000	\$24,575
Permitting - PBCHD	3.0	8.0		5.0			\$2,425
Bidding	3.0	5.0		5.0			\$1,930
Updated Re-Rating Report (FAC 62-555.528)	2.0	5.0		3.0			\$1,535
Updated Capacity Analysis Report (FAC 62-555.348)	2.0	5.0		3.0			\$1,535
	31	84	110	26			
	\$235	\$165	\$110	\$80		1.00	
	\$7,285	\$13,860	\$12,100	\$2,080		\$22,000	\$57,325