



INDIAN RIVER COUNTY, FLORIDA DEPARTMENT OF UTILITY SERVICES

Date: June 25, 2018

To: Jason E. Brown, County Administrator

From: Vincent Burke, P.E., Director of Utility Services

Prepared By: Arjuna Weragoda, P.E., Capital Projects Manager

Subject: Well Deepening at South County Reverse Osmosis (SCRO) Plant

DESCRIPTIONS AND CONDITIONS:

Indian River County Department of Utility Services (IRCDUS) owns and operates seven (7) Floridan supply wells that are the raw water supply and source water for the SCRO water treatment facility located on Oslo Road. These wells, designated S-1 through S-7, are the lifeblood of the treatment facility, and maintaining efficient operation of these well fields is critical to the sustainability of the water system.

On July 12, 2016, the Indian River County Board of County Commissioners (BCC) approved the award of Bid No. 2016031 to All Webbs Enterprises, Inc., to rehabilitate existing wells' S-3, S-4, S-5 and S-6 to restore capacity and reliability of the raw water supply wells to the water treatment plant and to construct a new well S-7, for a total sum amount \$1,477,360.00. During the initial phases of rehabilitation of well S-4, it became apparent that the existing PVC casing was damaged significantly to the extent of not being salvageable. Therefore, the BCC approved Change Order No. 1 in the amount of \$1,051,783.57 for a new well S-4R. This included the demolition of the old well head, abandonment of well S-4, fiber optic interconnectivity upgrades and a new standby generator. During the drilling and construction of the new well S-7 and replacement well S-4R, it was discovered that enhanced well performance and potential for improved water quality can be achieved through deepening of the existing wells. The specific capacity (gpm/ft) of well S-4R was improved 10-fold over the existing and abandoned well S-4 by drilling the new well S-4R deeper by more than 120 ft. This will improve water quality and well performance, which will result in lower operating cost (approximately \$0.028 per 1 Kgal) since pumping energy is less and the membrane feed pressures will be lower.

The county's consultant has recommended (Attachment 1 - letter from Kimley-Horn & Associates (KHA)) utilizing the same contractor to perform this work after review of the submitted proposal. Staff agrees with KHA's recommendation to utilize the current contractor based on the satisfactory results on well S-7 and S-4R timing and pricing, which is consistent with the original bid numbers. The other options available to the county are as follows:

| Option | Cost | Advantage/Disadvantage |
|---|--|---|
| Rehab Only per current contract (S-3, S-5 & S-6) | \$551,379.00 | Marginal increase in pumping rate, specific capacity without any real potential for improved water quality. |
| Deepen wells' S-2, S-3, S-5 & S-6 using the current Contractor | \$551,160.00 | If the results are similar to S-7 & S-4R, then we may be able to obtain a 10-fold increase in pumping rate, specific capacity and water quality. This will result in lower operating cost. |
| Advertise the deepening of wells' S-2, S-3, S-5 and S-6 through a separate procurement process. | Unknown. Most likely given current market conditions and pricing, unit cost will be higher | This will unnecessarily delay the needed work, add additional effort and cost to re-advertise and in doing so, there is no guarantee that prices will be lower. Therefore, staff would not recommend the rebid option |

ANALYSIS:

In order to move forward with the deepening of wells' S-2, S-3, S-5 and S-6, staff has requested KHA to submit a proposal under the Continuing Engineering Services Contract Agreement for Professional Services dated April 17, 2018. KHA's and JLA Geosciences expertise in the field of hydrogeology performance testing is needed during the deepening of each well. The scope is more specifically described in the attached Work Order No. 3. The total negotiated cost for the Floridan Well Deepening and Performance Improvement in Work Order No. 3 is a lump sum amount of \$84,876.00 separated into three (3) tasks.

The contractor, All Webbs Enterprises, Inc., also submitted a price proposal along with Change Order No. 2 for deepening wells' S-2, S-3, S-5 and S-6. Change Order No.2 has been submitted for a total increase in price of \$551,160.00. Therefore, the new total for All Webbs Enterprises, Inc. is \$3,080,303.57.

FUNDING:

Funding for both construction in the amount of \$551,160 and construction engineering inspection/testing in the amount of \$84,876, for a total of \$636,036, is available in the SCRO Rehab wells account within the Utilities Operating Fund. Operating funds are derived from water and sewer sales. It is expected that only \$381,621.60 will be expended by September 30, 2018.

| Description | Account Number | Amount |
|---------------------------|------------------------|--------------|
| SCRO Rehab Wells FY 17/18 | 471-23536-044699-15518 | \$381,621.60 |
| SCRO Rehab Wells FY 18/19 | 471-23536-044699-15518 | \$254,414.40 |

RECOMMENDATION:

Staff recommends approval of the following:

1. Work Order No. 3 authorizing the professional services and requests the Board of County Commissioners (BCC) to authorize the Chairman to execute Work Order No. 3 on their behalf for a lump sum amount of \$84,876.00 to Kimley-Horn and Associates.
2. Change Order No. 2 authorizing the deepening of wells' S-2, S-3, S-5 and S-6 and requests the BCC to authorize the Chairman to execute Change Order No. 2 on their behalf for a sum amount of \$551,160.00 to All Webbs Enterprises, Inc.

ATTACHMENT(s):

1. Letter from Engineer of Record (Kimley-Horn & Associates) (5 Pages)
2. Work Order No. 3 and supporting documents (6 Pages)
3. Change Order No. 2 and supporting documents (2 Pages)