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NORTH LEE COUNTY WATER TREATMENT PLANT WINS DBIA AWARD
As Design Engineer, Carollo Engineers Helped to Successfully Expand Plant’s Capacity

Sarasota, FL. – The North Lee Country Water Treatment Plant (WTP) Project recently won the 2012 Florida Section Design-Build Institute of America (DBIA) Project of the Year Award - Water/Wastewater Category. Lee County Utilities (LCU) spearheaded the project alongside the design/build team of Mitchell & Stark Construction, Carollo Engineers, and Harn R/O Systems. The project expanded the plant’s capacity to 10 mgd permeate—allowing for more efficient performance and improved water quality.

Operating since October of 2006 out of Fort Myers, The North Lee County WTP treats brackish water using reverse osmosis. However, the plant staff ran into operational obstacles and reliability issues that reduced the plant’s capacity to produce a reliable flow of water. Unable to meet the plant’s name plate capacity of 5 mgd permeate, the plant needed to be expanded to 10 mgd permeate in just under 18 months. LCU was up to the challenge and, in 2009, they began work to rehabilitate the North Lee County WTP and address the plant’s and community’s needs.

In order to meet the aggressive deadline, LCU decided to move forward with a progressive design-build method that would help control costs and save valuable time. To ensure the highest quality design-build team, LCU utilized a qualifications-based selection process, rather than the typical low-bid process, which can lead to unsatisfactory performance from inexperienced contractors.

LCU implemented a Performance Guarantee element for the design-build team, which the County viewed as a critical element for complicated water plant construction as opposed to simple roadway or building construction. With this in effect, the team was required to meet construction deadlines and the plant had to meet specific performance criteria to ensure long-term reliable operation. A performance test was required to demonstrate the guaranteed conditions to meet substantial and final completion milestones.

The design development led to a Guaranteed Maximum Price (GMP) to build the project. As the design engineer, Carollo worked alongside Lee County and the design-build contractor Mitchell and Stark (and their subcontractors) to design the facility over a five month period leading to a GMP proposal. Carollo brought value-added contributions to the plant’s design, including the use of energy recovery and sulfuric acid elimination, which when the savings are all combined could reduce the plant’s operating cost by up to $500,000 per year. Carollo also created a hydraulic model that was used as a basis for the performance guarantee. At the project’s completion, Carollo’s hydraulic calculations closely matched the final operation of the plant. Throughout construction, Carollo provided engineering services which included additional and final design engineering, approval of the project submittals, responding to contractor questions and administering the performance test to demonstrate that performance guarantee conditions were met.
“The acknowledgement by the Florida Section DBIA is a tremendous testament to the entire team who worked tirelessly to ensure the successful rehabilitation and expansion of the North Lee County Water Treatment Plant,” said Tom Seacord, Associate Vice-President, Carollo Engineers, Inc. “With a project heavily focused on guaranteeing the highest-quality results, providing value through design, and meeting aggressive deadlines, we were able to successfully meet or exceed all of the design and construction challenges. Using the North Lee County WTP, LCU was able to maintain production in their system at critical times while our project was under construction, including when the County’s Olga treatment plant was unavailable for use.”

The Florida Section DBIA works to promote the value of design-build project delivery and teaches the effective integration of design and construction services to ensure success for owners and design and construction practitioners. To learn more about the Florida Section DBIA or the award for Water/Wastewater projects, visit http://www.fldbia.org/.

About Carollo Engineers
For more than 75 years, Carollo Engineers has provided a full range of innovative planning, design and construction management services to meet the water and wastewater needs of municipalities, public agencies, private developers and industrial firms. To learn more about how Carollo is Working Wonders With Water”, call (800)523-5826 or visit www.carollo.com.

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