

Client
City of Pompano Beach
MBC Subconsultant to Prime

Scope of Services
Design, bidding, construction
administration, and start-up

Contact
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Start Date
11/2007

Completion Date
08/2009

Construction Cost
\$1.1 million

Key MBC Staff
Frank A. Brinson, P.E.

Key Features
Project included replacement
of all membrane pressure
vessels, modifications to
membrane unit piping to
improve efficiency and
reliability, and modifications to
the membrane cleaning
system.

10.0 mgd Nanofiltration Membrane Pressure Vessel Replacement Pompano Beach, Florida



Background

In 2002, the City of Pompano Beach installed a new 10 million gallon per day (mgd) capacity nanofiltration membrane treatment plant. An assessment by the City in 2007 indicated that the membrane pressure vessels required replacement. In addition, the City desired to make piping modifications to the individual membrane units and membrane cleaning system to improve flexibility, efficiency, and safety of the cleaning system arrangement and membrane cleaning operations.

The City authorized the project team including McCafferty Brinson Consulting, LLC (MBC) to provide services for establishing design and performance criteria for the new pressure vessels and cleaning system improvements, preparation of bidding documents, bidding services, and engineering services during construction. MBC was tasked with assistance with all of the above components of the scope of work.

The Project

The scope of the construction contract included the following:



- Replacement of 260 membrane pressure vessels for the City's five (5) 2.0 mgd capacity nanofiltration units.
- Removal and replacement of membrane elements.
- Modifications to existing stainless steel and PVC piping on the membrane units to improve the efficiency, flexibility, and safety of the membrane cleaning operations.
- Shop fabrications of new stainless steel pipe sections.
- Modification to the existing clean-in-place system.
- Functional testing and start-up of the systems upon completion.

The Contract was awarded, and the Notice to Proceed was issued to the Contractor on November 20, 2008. The project reached Substantial Completion in August 2009, three months ahead of schedule with no change orders.

