

**Client**  
City of Boca Raton

**Scope of Services**  
Preliminary and final design,  
permitting, bidding, and  
construction administration

**Contact**  
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City of Boca Raton  
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**Start Date**  
07/2013

**Completion Date**  
01/2017

**Construction Cost**  
\$1.610 million

**Key MBC Staff**  
Frank A. Brinson, P.E.  
Audra McCafferty, P.E.  
Andrew Barb, E.I.

**Key Features**  
Project included replacement  
of sodium hydroxide bulk  
storage tanks, replacement of  
the sodium hydroxide and  
polymer metering pumps, and  
rehabilitation of the chemical  
storage and feed facility for  
the City's 40 mgd membrane  
softening water treatment  
process.

## Glades Road Water Treatment Plant Replacement of Sodium Hydroxide Tanks and Chemical Systems Improvements Boca Raton, Florida



### Background

The City of Boca Raton owns and operates a 40-million gallon per day (mgd) membrane softening water treatment facility, which includes chemical bulk storage and feed systems for sodium hydroxide, citric acid, color polymer, and antiscalant. The chemical systems were installed in 2005 and have been in service since that time. Several of the major components of the systems have reached their expected service lives and require either replacement or rehabilitation. The City has also elected to make modifications to the chemical systems in order to improve operational flexibility, reliability, and efficiency of the membrane treatment process, and to refurbish two cells in the nanofiltration process pretreatment pressure filter system. The City contracted MBC for professional engineering services for design, permitting, bidding, and construction administration to implement the proposed improvements.

## The Project

MBC's scope of services includes reviewing record documents and drawings, preparing design documents including construction drawings and technical specifications, permitting, bidding services, and construction administration.

The scope of the project includes the following:

- Replacement of two existing 6,000-gallon sodium hydroxide bulk storage tanks.
- Replacement of nine sodium hydroxide and polymer chemical metering pumps and associated piping and accessories.
- Rehabilitation of the chemical bulk storage secondary containment structure and metering pump building.
- Miscellaneous associated sitework, structural, electrical, instrumentation, and controls.
- Rehabilitation of the nanofiltration membrane pretreatment pressure filters.

The contract for construction of the project was awarded to Florida Design Contractors, Inc. Construction was initiated in October 2015, and the project was completed on schedule in September 2016 with less than 3% change orders (not including Owner-requested upgrade changes during construction).

