

## ICCP for Steel Frame Structure Lake Wales, Florida



*Bok Tower Sanctuary*



*Ebonex anode installation*

**Structure:** Historic Bok Tower at Bok Sanctuary

**Location:** Lake Wales, Florida, USA

**Engineer:** Matco Associates

**Client:** Historic Bok Tower

**Architect:** Renker Eich Parks Architects

**Contractor:** Concept Enterprises

### Project Description:

The Historic Bok Tower was developed as the focal point of the Bok Sanctuary, the result of Edward W. Bok's vision to create a place of "beauty, serenity and peace". The Tower houses a 60 bell carillon to create a sound that reminded Mr. Bok of his native Holland. Completed in 1929, the bell tower is a masonry-encased steel frame construction with an exterior cladding of marble and coquina, the same material that was used to build the famous Castillo de San Marcos in St. Augustine. Over the years moisture intrusion caused corrosion of the steel beam. The corrosion process caused rust to build up, eventually damaging the exterior stone.

In August of 2006, Vector Corrosion Technologies, supported by C-Probe Technologies and Sika Corporation, was contracted to supply and install an impressed current cathodic protection system to provide lasting protection to the embedded steel beams. The installed system consisted of Ebonex 10/200 discrete anodes with C-Probe's Achilles ICP and Achilles interactive Management Server (AiMS) providing the power, control and monitoring.

In order to provide complete protection of the steel beam, a total of 880 Ebonex anodes were staggered above and below the beams at varying depths. The anodes above the beam were installed to a depth of 10 in. and the anodes below the beams were installed to a depth of 13 in. The anodes were grouted using Ebofix mortar in ½ in. diameter holes. The Achilles network system will allow the system to be monitored and controlled remotely.

The system was successfully installed over a two month period with no disruption to the daily carillon concerts.

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