



*Delivering innovative trenchless technology solutions
to rehabilitate the world's diverse infrastructure*

► ECO FRIENDLY LARGE BORE CIPP LEVEE REHABILITATION

Project:

CIPP Structural Repair of 108" Levee Equalization Culvert System

Location:

Lake Okeechobee, FL

Profile:

Lake Okeechobee is the largest lake in the Southeastern United States. Its wetlands serve as Headwaters of the Everglades reaching through the Kissimmee River and stretching south into the Florida Bay. This 730 square mile body of water is a key component of South Florida's water supply and flood control systems.

The Northwest shore of Lake Okeechobee is also home of the Brighton Seminole Indian Reservation where the tribe farms, breeds cattle, and operates recreational businesses and a large casino. The levee protecting these lands became structurally suspect. An inspection by the Army Corps of Engineers showed large perforations throughout the equalization culverts that connect the lake to the tribal land irrigation waterway. Failure mode in galvanized, aluminized, aluminum or bituminous coated culverts consists of corrosion/abrasion cycles where the base metal is first exposed, then perforations manifest themselves, resulting in a partial or full collapse if not repaired. These particular corrugated metal pipes are technically bridges, designed and specified to withstand highway loading and pedestrian traffic. Complicating this situation was the potential effect of a breach in a critical levee designed to hold back floodwaters from Lake Okeechobee during the kinds of heavy rains that Florida is known for. A collapse of these culverts would be catastrophic not only to the Everglade ecosystem but to residents of the surrounding communities.

Environmentally Sensitive Large Bore CIPP Installation

The Army Corps of Engineers contracted with Lanzo Trenchless Technologies for the structural renovation of a twin barrel 108" levee equalization culvert system. A certified industrial dive team was used to carefully inspect and survey the lines prior to the rehabilitation. Utilizing a barge at the mouth of each culvert, Lanzo Trenchless Technologies successfully installed two CIPP liners into the remote pipelines. Each liner weighed over 40,000 pounds. Sluice gate repair and replacements were also part of the project. The location and sheer size of this large bore CIPP installation called for extreme safety precautions to protect our structural rehabilitation team, the environment, and the Seminole community whose lands abutt this critical irrigation lifeline.

