



UNITED STATES

Wekiva Parkway Orlando, FL



Owner

Central Florida Expressway

Engineer

Central Florida Expressway

General contractor

Superior Construction Company

Dates of work

January 2018 December 2018

Description

The Wekiva Parkway project is a cooperative effort between the Florida Department of Transportation, the Central Florida Expressway (CFX) and the Florida Turnpike Enterprise. The roadway would connect to SR 417, completing the beltway around Central Florida, while helping to protect the natural resources surrounding the Wekiva River.

This estimated \$1.6 billion project features \$500 million of non-toll road improvements, including widening seven miles of SR 46 in Lake and Seminole Counties and building a 10-mile, multi-use trail along portions of the parkway in East Lake and Seminole Counties.

Given the project's proximity to the Wekiva River, settlement was predicted along a new embankment by Lake Markham Road, unless ground improvement was provided.

Ground conditions

The soil profile revealed the site is underlain by up to 70 ft of interbedded layers of silty sands and peat and muck underlain by silty sands and weathered limestone. Wick drains were proposed to expedite consolidation of the compressible peat and muck prior to new construction of Wekiva Parkway from east of Osprey Hammock Trail to Orange Blvd.

Solution

The wick drain system was installed based on the following considerations: Working surface elevation of approximately 41 ft; wick drains installed in a five-ft square spacing; A-3 wick drain soil cover layer. The successful installation of wick drains mitigated settlement and provided a suitable bearing under the embankment.

All work was completed in one continuous phase with the installation of 2,300 wick drains spanning 108,372 LF. All quality control testing met or exceeded the specified requirements.

Main figures

Wick drains

2,300 EA.