

CASE STUDY

Reedy Creek Parking Garage

Lake Buena Vista, Florida

History

The Reedy Creek Improvement District was formed in 1967 to administer certain aspects of the economic development and tourism of the Central Florida area. The District is responsible for land use and environmental protections, and provides essential public services for the theme parks, water parks, roadways, waterways, and cities that lay within its boundaries. The goal of the District is to ensure the economic viability of all venues and businesses contained, while never sacrificing the remarkable wildlife and ecological environment of the local area.

Problem

In 2013, Reedy Creek Improvement District began the expansion of its major east-west transportation corridor, Buena Vista Drive, in order to improve traffic flow and to address the need for adjacent public parking, which is being facilitated by the addition of a third 5-story, 3000-space parking structure to complement two similar structures already in existence. Construction of the third parking structure, which began in August, 2017, incorporates steel pipe foundation pilings manufactured by Skyline Steel and is scheduled to be completed in early 2019.

Solution

Skyline Steel provided two different types of pipe piles for this Reedy Creek project. Both spiralweld and ERW (electric resistance welding) pipe piles, which were produced in the United States by Skyline Steel, enabled the project to go ahead as planned on a very tight schedule. Electric resistance welded pipe is manufactured by cold-forming a sheet of steel into a cylindrical shape. Current is then passed between the two



“Due to the varied geology of the region, steel pipe piles proved superior to pre-stressed concrete piles, as they could be stored on-site and spliced to create the longer pile lengths needed for this project”

– Philip Harwell, Vice President of Geotechnical Foundation Systems.

edges of the steel to heat the steel to a point at which the edges are forced together to form a bond without the use of welding filler material, increasing the strength of the pile. This process speeds up production of the pipe piles, which saves both time and money. The ERW pipe allows for an easier weld of splicers because of the uniformity and straight seams.

The engineering team at Skyline Steel worked with the pile driving contractor, Geotechnical Foundations Systems, Inc., to assure the pipe piles selected would meet or exceed the bearing capacities required for the project and that the pipe pile splicers were adequate.

Project Partners

Owner

Reedy Creek Improvement District – Lake Buena Vista, FL

General Contractor

Finrock – Apopka, FL

Piling Contractor

Geotechnical Foundations Systems, Inc. – Apopka, FL

Products

Pipe Piles: 14” OD x .500 ERW/spiralweld pipe – 2,300 tons

Pipe Splicers

Project Time Frame

August 2017 to March 2019