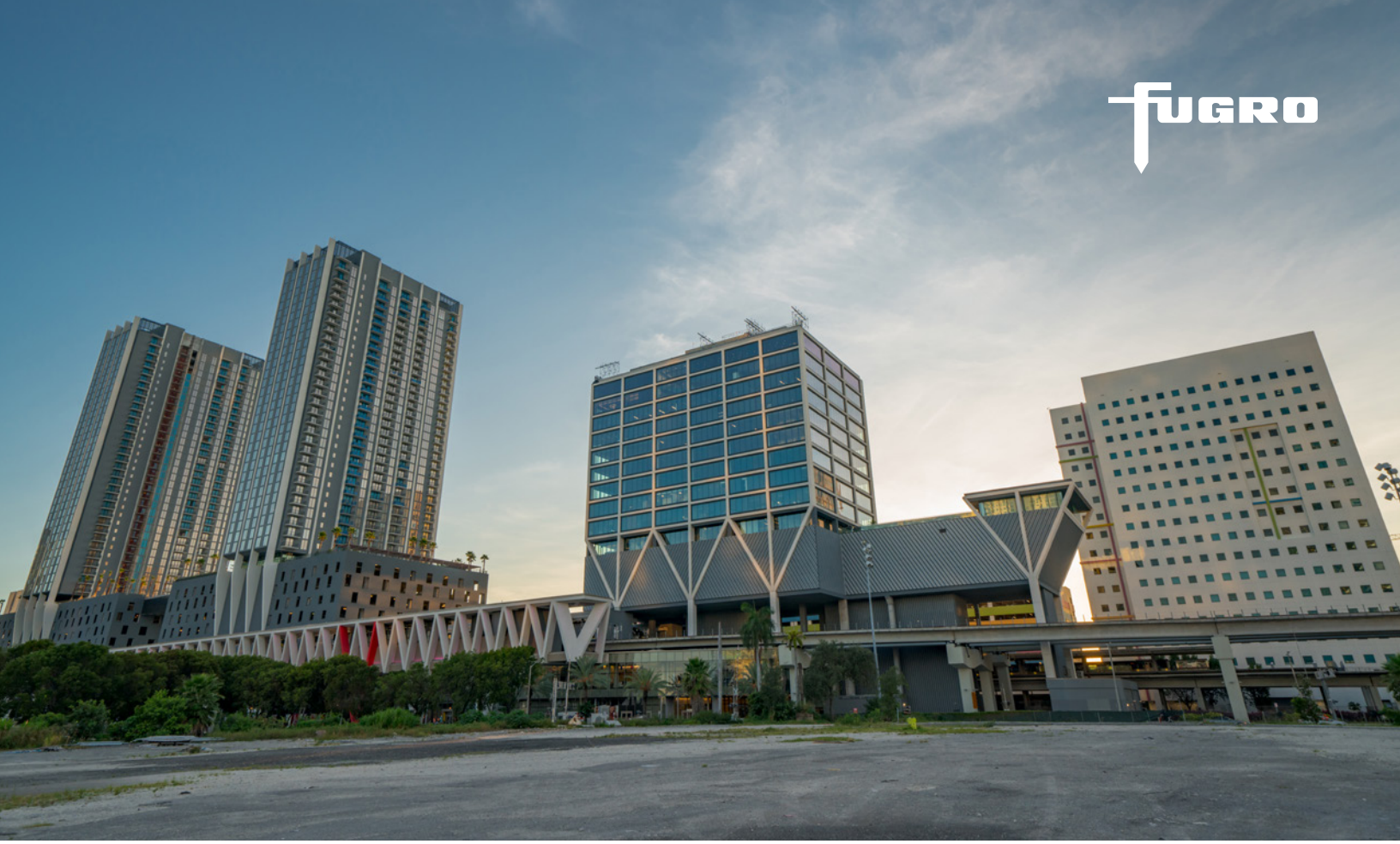


MIAMICENTRAL STATION

MIAMI, FLORIDA, USA

All Aboard Florida is building a massive all-inclusive ground transportation hub that combines several modes of transportation into one sleek package known as MiamiCentral. The new two-story station, located in the heart of downtown Miami, is designed as a "one-stop shop" for riders of Tri-Rail, Amtrak, Metrobus and Metrorail, and will also include a Metromover for transportation to the Miami airport.

Initially developed as part of Brightline, Virgin MiamCentral is the southern station of a planned 235 miles express passenger rail service to provide expedient, affordable travel between Miami and Orlando. The station's elevated five-track train platform does not interrupt surface street traffic. The station design creates retail space for high-end shops and restaurants below the elevated tracks and plans three residential and office towers to 51 stories above it. The 11-acre landmark project encompasses three million square feet.

The iconic multimodal hub follows history set by early 20th century railroad magnate Henry Flagler, who placed the original downtown Miami train station at the same site over 100 years ago. The line uses another Henry Flagler engineering innovation – the existing Florida East Coast Railway corridor between Miami and Cocoa.

The station design required over 1,600 piles ranging in depth from 60 to 115 feet. Fugro Loadtest performed O-Cell® testing on six dedicated test piles for pile design

PROJECT INFORMATION

- Owner: All Aboard Florida - Stations LLC
- Client: HJ Foundation
- Engineer: Skidmore, Owings and Merrill
- Completion date:Early 2017
- Project Cost: $3 billion
- Maximum Load: 3,267kips

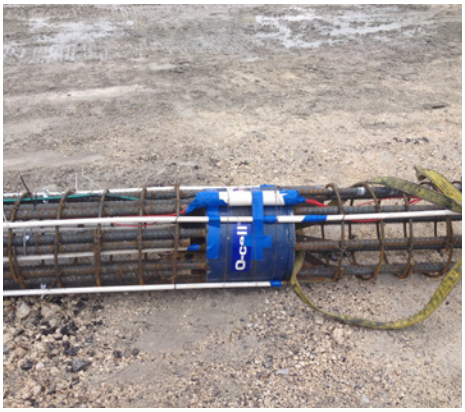
SERVICES PROVIDED

- Six single Level O-Cell® load tests and reports

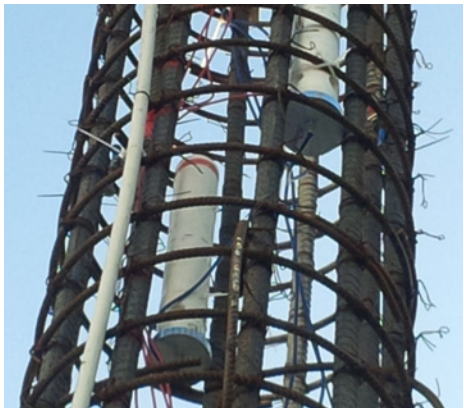
optimization. HJ Foundation constructed four 24-inch diameter test piles and two 30-inch diameter test piles with the continuous flight auger method. Site subsurface conditions consisted of limestone layers, fill and loose to medium dense sand.

A single 16-inch O-Cell was used in each of the 24-inch piles and a single 20-inch O-Cell was used in the 30-inch piles. The reinforcing cages, containing the O-Cell assembly and instrumentation, were inserted into wet grout immediately after pile construction.

For the testing the O-Cell supplied loading in nominal increments. The maximum bi-directional load was recorded at 3,267 kips, with a 20-inch O-Cell. Fugro Loadtest's program measured actual foundation performance and capacity resistance distribution giving the foundation design engineer information to optimize the foundation for the most efficient and cost-effective design possible.



O-Cell



Stress sensors on cage

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