

Hard Rock Casino Tunnel

Hollywood, Florida

Over the course of a year, Keller exceeded the client's expectations by consistently completing all aspects of the work ahead of schedule.



The project

The \$1.8 billion expansion of The Seminole Tribe of Florida's Hard Rock Casino includes an iconic, guitar-shaped 36-story hotel tower and resort, and various low-level structures housing resort amenities. The design included the construction of a complex 800-ft long valet tunnel to facilitate smooth traffic flow.

The challenge

A 125-ft long section of the tunnel ran beneath an existing multi-story parking garage with just 16 ft of clearance, requiring an alternate design approach to the traditional sheet pile-driving technique. Additional headroom constraints were created by an existing \$8 million, 200-ft long television screen adjacent to the garage entrance.

The solution

Keller designed and installed approximately 1,350 running ft of internally-braced sheet pile earth retention in open headroom tunnel areas. In the areas with headroom constraints, Keller designed and constructed about 250 running ft of 5 to 10-ft thick, maximum 16-ft deep, H-beam reinforced soilcrete gravity walls. The overall scope of Keller's contract also included vibro compaction and vibro replacement ground improvement performed under several low-rise structures and installation of micropiles in low headroom areas to support new heavy foundations. Keller also installed an auger cast foundation system for the tower structure.

Project facts

Owner(s)

Seminole Tribe of Florida

Keller business unit(s)

Keller

Main contractor(s)

Suffolk-Yates, A Joint Venture, LLC

Engineer(s)

Langan Engineering

Solutions

Support of excavation
Deep foundations

Markets

Institutional
Sports and entertainment

Techniques

CFA (auger cast) / ACIP piles
Sheet piles
Wet soil mixing
Vibro compaction
Vibro stone columns (vibro replacement)

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