

# Port Everglades Garage, Terminal 4

Fort Lauderdale, Florida



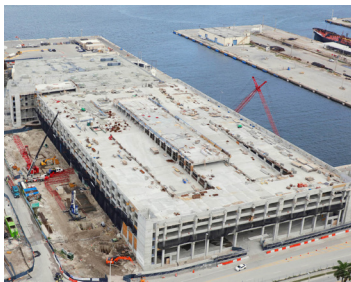
## STORIES BUILT



Photos courtesy Smith Aerial Photos.

Port Everglades is one of South Florida's foremost economic centers, serving as the gateway for both international trade and cruise vacations. To attract and accommodate larger cruise vessels, the seaport needed to expand parking. The Port Everglades Terminal Garage was built to provide an additional 1,800 parking spaces.

Ceco Concrete Construction framed, supplied and installed reinforcing, and poured all foundations, columns, walls and elevated post-tensioned (PT) decks on this project. Foundation work began March 2019.



The beam-and-slab garage has five levels, totaling 1 million square feet of contact area, with 60-foot-long spans. The long spans led structural engineer Ammann & Whitney to design a concrete structural system for PT beams and decks. Ceco used steel beam and table formwork systems to construct the 20-foot

wide bays between beams, 18 x 36-inch beams and 5.5-inch slabs. In total, the team poured 650,000 square feet of deck.

The project had challenging constraints. When the ground floor was complete, the build team was required to open the ground floor to public use while performing the remaining construction above. Additionally, Ceco needed to prepare the garage for future expansion. Sloping columns were required at the perimeter and the bridge to support the pier. These construction details were successfully achieved. Probably the most unique and challenging feature is the pedestrian

bridge support. Using EFCO formwork, Ceco constructed a 13-foot-wide, gear-shaped column capital to support the bridge.

Due to the long PT cable lengths, detailed planning was critical to execute this project to achieve the desired results for GC Stiles Corp./Pirtle Construction JV. The team first performed concrete pours at the elevated decks on the north side of the structure, which allowed them to stress the 180-foot PT beams from both ends. They followed with pours on the south side, which were separated by 3-inch expansion joints. A day after the decks were poured, columns and crash walls were poured.

The build team was led by Ceco Superintendent Abraham Esquivel with Project Managers Paul Gerard, Leonel Vargas and Michael Gilbert. Project Coordinator Nancy Anya supported the team. They came to this project with a plan and executed it, obtaining the temporary certificate of occupancy ahead of schedule and completing the ground floor by Oct. 19, 2019, so it could open to the public.

### FAST STATS

**Project Owner:** Broward County

**General Contractor:** Stiles Corp./Pirtle Construction JV

**Designer/Architect:** Cartaya & Associates

**Structural Engineer:** Ammann & Whitney

**Ceco Scope:** Concrete frame

**Ceco Project Managers:** Paul Gerard, Leonel Vargas, Michael Gilbert

**Ceco Superintendent:** Abraham Esquivel

**Date Completed:** April 2020