

King Shaka International Airport Entrance

2011 TCA Tilt-Up Achievement Award - Special Projects Division



This project was characterized by the extremely short duration of six weeks and a limited installation window between 8:30 p.m. and 5:00 a.m. for two nights only, as the panels were erected on the roads in and out of King Shaka's Durban Airport.

There was no feasible in-situ concrete solution to this project. Twenty panels in total were required. Therefore, two phases were created to cast and install ten panels during each phase. The casting surface and show face of the panels were created using concrete Tilt-Up formwork. The panels were flat lifted by two cranes, placed onto specialized Tilt-Up concrete cradles cast at the same radii as the underside of the curved panel, onto trailers.

The panels are curved in two planes, have a moment connection into the base foundation and are cantilevered 11.5m. The Tilt-Up technique was cost-effective, offered savings in program duration and a quality unachievable with conventional building techniques.

Photos





Project Specifics

Project Wall Area 7,320 sq ft (680 sq m)

Tallest Panel 39 ft 3 in (11.96 m)

Widest Panel 11 ft 6 in (3.51 m)

Largest Panel 358 sq ft (33.3 sq m)

Heaviest Panel 59,525 lbs (27,000 kg)

Tallest Cantilever Panel 37 ft 8 in (11.50 m)