Success at Fulton Awards, South Africa

14 June 2017

SMEC South Africa took home two awards at the Fulton Awards which took place in Drakensberg on 3 June 2017. Held every two years by the Concrete Society of Southern Africa, the Fulton Awards celebrate excellence and innovation in the design and use of concrete within the built environment.

Mount Edgecombe Interchange was named the overall winner in the Infrastructure Category, submitted by SMEC South Africa as Principal Agent for the client, South African National Roads Agency (SOC) Ltd (SANRAL).

“This project showcases the use of concrete in civil engineering infrastructure in that it encompasses nine new road bridges, one new pedestrian bridge, nine mechanically stabilised earth walls, and three soil nail retaining walls. It featured three simultaneous incremental launches with a combined deck length that exceeds 1.5 km, the longest incrementally launched viaduct in the southern hemisphere, and three incremental launches being constructed simultaneously. This is a South African first. It was constructed under difficult conditions, having to deal with maintaining the requirements of the heavy existing traffic demands within a congested site”, according to the judges’ citation.

As a result of the vast scope, the wide variety of engineering disciplines and different construction elements, a total of 41 concrete mixes were designed for this project as well as three different grout mixes and two different sprayed concrete (shotcrete) mixes.

South Africa’s largest interchange with its wide use of finishes, techniques and elements is a deserved winner of the Fulton Award in the Infrastructure Category.

Pacaltsdorp Pedestrian Bridge was awarded a Commendation for Innovation in Concrete. This multi-span arch structure supporting a stress ribbon deck with the shallow arches flowing across the highway and the stress ribbon across the arch is both unique and innovative. This design created an aesthetically pleasing, self-anchored structural system that is semi-integral with the practical advantage of no expansion joints. Conventional formwork was used for the deck with the soffit following simple circular curves.

“The fact that this bridge is thought to be a world first for a concrete self-anchored, arch supported, stress-ribbon bridge and showcases how functional concrete structures can be a positive addition to the local environment, makes it worthy of a commendation in this category”, concluded the judges.

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