



"The professional team, including structural engineer, Aurecon, spent up to six months preparing to construct this cast in-situ "liquid-stone" façade

Sol Plaatje University gets finishing touches

The new Sol Plaatje University library and resource centre in Kimberley is poised for completion in September 2017 and in so doing will reinforce main contractor Murray & Dickson Construction Group's standing as a specialist contractor associated with complex building projects.

This will be the second structure that the building division of this leading South African construction group has completed on behalf of the institution of higher learning. The division's sound work on the main administration block earlier led to it also being entrusted with delivering the central showpiece of the development node in the larger Kimberley central business district.

"By becoming involved at an early stage of the design phase of the façade we were able to share critical insights on shuttering, staging technology and construction sequencing," says Renell Samuel, Murray & Dickson Construction Group's building construction director. "The building division also helped optimise the programme and align costs to the client's budget."

Joining Murray & Dickson Construction Group on this project was specialist supplier, Uni-Span, as well as Kimberley-based emerging contractor, OIK, which was tasked with the extensive and challenging steel fixing and shuttering activities.

OIK also worked alongside its mentor, Murray & Dickson Construction, to construct the two striking internal in-situ concrete A-frames that required an intricate construction sequence, starting with building of the large temporary support columns. Ultimately, the A-frames were jacked upwards by 400 ton jacks to remove temporary shim plates, and then deflated to allow the A-frame to span free, followed by demolition of the two temporary concrete columns. Tolerances were achieved within a few millimetres of the engineer's design on this aspect of the work programme.

Samuel is especially proud of the extensive skills and training undertaken under his watch on this construction site, considering the critical shortage of specialist building skills in the region.

"We also outperformed in other important areas, such as Black Economic Empowerment; as well as spending on local sub-contractors and labour, especially youth and women," he says.

Project design

This striking structure is immediately recognisable by its concrete façade which blends seamlessly with the roof of the structure and appears to be floating 2,4 metres off the ground.

This three-dimensional concrete envelope is functionally, structurally and technically separated from the inner core of the building. The void created between the external envelope and floor plates along the perimeter of the building acts as a thermal duvet between the non-insulated external shell and its habitable building, while facilitating all vertical movement, houses the services and allows natural light to all floors.



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