

2010 City of Durban Beautification



A BEAUTIFUL OPPORTUNITY

The 2010 FIFA World Cup inspired some of the most impressive projects in South Africa in recent years. It also offered the City of Durban the opportunity to implement a beautification project which would positively impact on residents of, and visitors to, this holiday destination.

Long before the World Cup, the eThekweni Municipality had identified key sport and tourist areas for rejuvenation. A process of public engagement had been under way since the year 2000, and stakeholder commitment was such that pressure was brought to bear on the municipality to ensure that the Moses Mabhida Stadium was integrated into the fabric of the city and that a lasting legacy was created in terms of a quality environment for residents and visitors alike. The City Beautification Project was the biggest single investment in the public realm of Durban's inner city – a logistically complex overhaul of ageing and damaged infrastructure, undertaken in record time.

LOCAL EMPOWERMENT

The City Beautification Project also offered an opportunity for the municipality to maximise the labour component and ensure that as much of the benefit as possible flowed back into the local economy. The economic benefit indeed went deeper than the wages paid out during the project – the value of materials purchased and subcontractors empowered during the contract had a

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Community-based Projects category Submitted by the SAICE Durban Branch

KEY PLAYERS

Client eThekweni Municipality

Professional Team eThekweni Municipality Engineering Unit Roads Provision Department, and the Strategic Projects Unit

SSI Engineers and Environmental Consultants (subconsultant)

Main Contractors Devtech Civils, Asphalt Construction

Major Subcontractors and Suppliers Kaycrete, Afristruct, Corobrik

multiplier effect, which has been calculated at between three and four times the labour component.

The labour component of the project peaked at 500 during the final phases of the project, yielding in excess of 600 000 hours. Consideration was given to maximising job creation while implementing an innovative strategy to ensure that a balance was struck between labour intensive construction and the constraints of the project budget. Careful consideration therefore had to be given to such aspects as the choice of construction materials, the labour input into the manufacture of materials, the availability of materials over time, and ease of construction.

ENVIRONMENTAL CONSIDERATIONS

Environmental considerations included the correct choice of materials to ensure durability so close to the sea, traffic calming measures in areas where high volumes of pedestrian and bicycle traffic were expected, and engineered solutions that would be appreciative of historic architecture adjacent to new infrastructure.

BEAUTIFYING THE BEACH FRONT

Problems with the linkage between the beach front and the stadium were solved by the construction of the Isaiah Ntshangase underpass. A new 5,5 m wide by 3,8 m high by 50 m long underpass was constructed adjacent to the existing underpass under the highway. It was necessary to divert the highway traffic to construct the new underpass. Innovative visual connections were created between the two underpasses, and skylights were constructed in the centre median to improve natural lighting and visibility for pedestrian traffic.

Once Walter Gilbert Road had been realigned, the old road was removed to make way for the new brick-paved and landscaped walkway leading directly to the new stadium. The floor of the new underpass had a polished concrete screed and the walls and support columns were lined with polished low-maintenance porcelain tiles. Thirty centimetre angled windows were cored through the support columns to create visual connection between the structures.

Twelve decorative panels were installed on the underpass walls illustrating the indigenous coastal dune plants

around the stadium and beach front promenade. The entrance and exit façade was painted with a high-quality “plastio” coating which provided both decoration and protection.

This phase of the project commenced in March 2009 and was completed twelve months later. The result is a dramatic new face on the City. The R133 million project is testament to the ingenuity and dedication of the entire work force.

- 1 Developing the People Mover, Durban’s new public transport system, formed part of the beautification of the inner city
- 2 Construction of the underpass that would link the Moses Mabhida Stadium and the beach front
- 3 The completed underpass – part of the attractive and functional new face of Durban



The range of work carried out under the City Beautification Project required meticulous planning and financial management, and involved many of the City Engineer's resources, a full-time project manager controlling the financial aspects of the project and technical staff managing the construction aspects. The project began with the implementation of the realignment of Isaiah Ntshangase Road and the R25 million reconstruction of an existing 100 m long tunnel to a wider, shorter and more inviting underpass, opening up the new stadium venue via a landscaped walkway directly to the beach, thereby encouraging cycling, and activating this previously under-utilised section of coast

4 Thirty km of sidewalks were constructed in a variety of styles to beautify and rejuvenate the city



REVITALISING THE INNER CITY

The Beautification Project also covered a wide-scale revitalisation of Durban's ageing inner city, with the aim of increasing pedestrian usage by activating streetscapes and generally contributing to a safer city experience. Thirty kilometres of sidewalks were constructed in a variety of styles ranging from conventional asphalt to modern and attractive paving, utilising conventional materials in an innovative manner.

An exciting part of the project was implementing the engineering infrastructure for the People Mover project. The People Mover is Durban's new public transport system, currently covering two routes within the city, linking the beach front to the CBD as far as the Victoria Street market.

The ten buses comprising the fleet are monitored by CCTV cameras. They have electronic ramps for disabled access, on-board audio-visual material, air-conditioning and easily identifiable bus stops staffed by wardens for passengers' safety. All engineering infrastructure necessary for the operation of this project was designed and installed within the City Beautification Project. A circular route follows the main city thoroughfares, starting and ending at the Dr Pixley KaSeme transfer interchange, and stops close to the City Hall, the Playhouse Theatre, the Tourism Information Centre, the Inkosi Albert Luthuli ICC Complex, the Victoria Street market and Durban's mosque and cathedral. A second route runs along the northern and southern city beaches, starting at the Sun Coast Casino and ending at Ushaka Marine World.

In association with the pedestrian facilities, new and cutting-edge lighting infrastructure was installed in various locations, and in a variety of styles and technologies. LED technology, which evolved during the course of the project, enabled the first LED street lighting in South Africa to be installed. This innovation will significantly enhance the sustainability of public lighting, as it requires less power and has a twenty-fold increased element life expectancy.

The road corridors which were upgraded included Masabalala Yengwa Avenue (NMR Avenue), KE Masinga Road (Old Fort Road), Stalwart Simelane Road (Stanger Street), Florence Nzama Street (Prince Albert Street), Battery Beach Road, Sandile Thusi Road (Brickfield

Road), Somtseu Road, Umgeni Road and Florida Road. Bridge enhancements, including lighting on selected bridges, were carried out on Tollgate Bridge, Argyle Road Bridge, Goble Road Bridge, Stiebel Place / M4 Bridge, Riverside / M4 Bridge, and Athlone Bridge.

The Kings Park pool precinct was refurbished with upgraded parking, lighting and landscaping. Florida Road and Blue Lagoon received similar treatment.

CONCLUSION

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The contract relied on exceptional project management and budgetary controls to bring together the 500 local jobs created, authorities across multiple departments, a vast range of different interventions, and payment certificates topping R25 million in each of its last three months.

The unique nature of the City Beautification Project was that it was a response to the needs of the residents of Durban and the visitors to the city, upon whom so many Durban residents depend for their daily living. The integration of job creation and emerging contractor employment and training on the one hand, and tight financial and time constraints on the other was no mean feat. In the process many challenges were met and problems resolved. As each deadline was dealt with, a realisation developed that further tasks could in fact be added to the list. Excellent financial management, however, resulted in the final account for this project being one quarter of one percent under the allocated budget. In addition, all aspects of the project were completed within the time constraints imposed by FIFA. ■