

Motherwell Passenger Rail a potential boon for Port Elizabeth

Designed by GIBB Engineering and Architecture, the Motherwell Passenger Rail Corridor (MPRC) in the Eastern Cape is one of PRASA's largest rail projects. The MPRC, when constructed will be a major benefit for Port Elizabeth and could lead to other important developments, such as the upgrading of the railway station in the area to include an intermodal hub and retail facilities, according to GIBB Project Manager, Nico Pienaar.

A project of this magnitude has major economic impact and carries multiple benefits, including the generation of economic activity within the region, with knock-on effects potentially creating many employment opportunities and economic impacts.

In 2000, PRASA undertook the basic planning of the Motherwell Passenger Rail Corridor (MPRC) in Port Elizabeth. However, subsequent developments in land use development and rail technology meant that the planning required an update. This was completed by GIBB in 2014, who were then appointed by PRASA, to carry out the design of the proposed MPRC and stations.

Pienaar added, "The base design was completed in November 2015, with preliminary design following in October 2016 and the detail design in July 2018. Once the detail design is approved, the construction tender will be released."

Other major milestones include the acceptance of the final scoping report by the Department of Environmental Affairs in July 2018, and one to follow, is the signing of the MOU between PRASA and the NMBM (Nelson Mandela Metro Municipality).

The MPRC project consists of infrastructure including 14.7 km of ballasted railway track, of which 7.14 km is a double line; 5 rail cross-overs; 13 turnout sets; 2.3 km of concrete railway track structure; and the required bulk earth works and railway design layer works. The project also incorporates ten bridge structures and three railway station buildings, including mechanical and electrical services, precincts, intermodal facilities and retail facilities. It also includes a service road along the railway alignment and a 3m high boundary wall to protect both PRASA assets and public safety by preventing people from crossing the railway lines.

"Integrating all of these various aspects was one of the greatest challenges presented by the project. Allowing for pedestrian movement across the railway corridor was a key consideration. All road rail bridges have therefore been designed to include a 2m wide, barrier protected walkway on each side of the bridge. In addition, each of the three stations include a street-to-street concourse bridge, which will allow people to cross over the bridges and allow controlled access to the station platforms," said Pienaar.

Moreover, the railway stations are designed to allow connectivity between the train services and other transport services. This is a PRASA initiative, intended to support the IPTN (Integrated Public Transport Network) of the NMBM.

The MPRC railway line ties off from the existing Transnet railway line just before Aloes Station and then runs to the left into Motherwell up to the four railway staging lines at the end station, Station 4. This station will be used for the overnight staging of the trains for departure to Port Elizabeth station in the morning.

Rail travel also offers significant time savings due to the avoidance of traffic congestion, and the regular travel schedule of trains. "Travelling by train is more energy efficient than both road and motor vehicle transportation modes. In addition, converting road users to rail users

will lead to a proportional reduction in road accidents, which will have a major economic cost reduction. It will also reduce road-based carbon emissions,” concluded Pienaar.