

Professional Services

Moses Mabhida Commuter Rail Station, Durban



Train stations are typically transient in character and can be overlooked as simply a means of reaching a destination. Historically, public transport in South Africa has been neglected. So, when Arup Interchange Design conceived its plans for the new Moses Mabhida commuter rail station, it embraced them as an opportunity to inject dignity into the nation's public transport network. The station has a dual role as a hub for sports visitors and a destination point for commuters travelling into the city. This function is also helping to catalyse economic and social regeneration in the city.

As well as providing a new transportation node, the station offers a contemporary space that expresses the excitement of public transport's emerging aspirations for South Africa. Arup's approach was to consider how architecture affects the communities around transport nodes.

Moses Mabhida station was treated as a catalyst for development, clearly demonstrating how public transport can unlock opportunities for communities around transport nodes. The station was designed to be an integral feature of Durban's urban environment and an expression of the liberating role that public transport continues to play in a new, democratic South Africa.

The design was created to give the station its own personality while providing a robust feed-in point for the stadium. It was equally important not to lose the station in the shadow of the stadium. With this in mind, the Arup team set out to merge the influence of craft and tradition with the scale and energy that defines the assertive confidence and aspirations of public transport infrastructure and transport architecture in South Africa.

The design integrates architectural vision, civic identity and urban context with the rigorous requirements of passenger flows and operational demands. Within this integrated approach, the key design factors were: ease of movement; ease of access; and legibility designed to maximise security for commuters and staff.

The station's configuration is based on a simple, pragmatic two-level arrangement. Like a ship at berth, Moses Mabhida Station is completely freestanding, tethered to its surroundings by a central pedestrian bridge, which connects and defines the station accommodation and the way it operates.

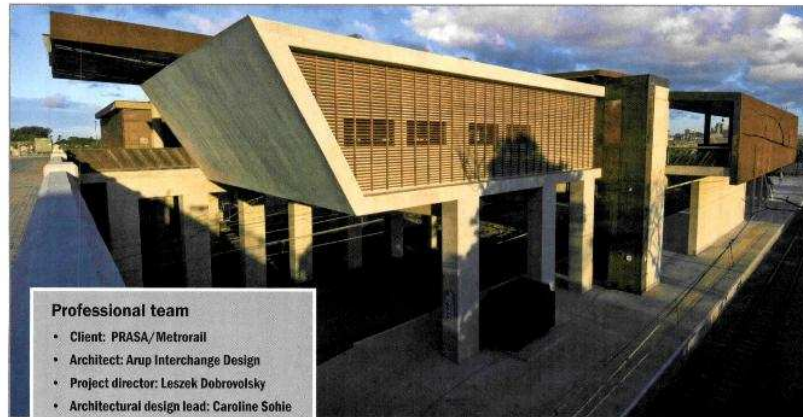
The main station deck comprises two concrete shells engineered to 'float' over the rails, helping to minimise the structure's visual impact. Timber features extensively, helping to balance the strength of the design by softening and en-

hancing its form. A bridge over the railway lines separates the station building from the immediate pathways, reducing the scale of the building for pedestrians.

The building's entrance and visitor reception facilities – such as ticketing facilities, turnstiles and concourse access – are located at high level. The high-level concourse provides all staff and security facilities and leads to the low-level platforms via stairs and lifts.

Technical equipment such as public announcement systems and electronic displays as well as signage, advertising and furniture are fully integrated into the station design. Spatial lines embedded in the floor lead passengers through the station and run throughout the structural fabric to form a woven patterning that wraps around the concourse ceiling. The weaving concept was inspired by the basket weaving skills that lie at the heart of Kwazulu-Natal craft culture. This simple device harnesses sunlight to create a spatial dynamic with diverse visual perspectives.

The bold geometry of shifting and colliding planes is a direct reference to the neighbouring industrial port of Durban. The station responds with a hard, strong feel that still avoids being hostile to its users or the environment.



Professional team

- Client: PRASA/Metrorail
- Architect: Arup Interchange Design
- Project director: Leszek Dobrowsky
- Architectural design lead: Caroline Sohie
- Architectural team: Elaine Lamb, Ray Hari
- Structural engineer: ILISO Consulting
- Project manager: ARCUS GIBB
- Mechanical and electrical engineer: ARCUS GIBB
- Quantity surveyor: LDM
- Contractor: Grinaker-LTA