

GAUTRAIN HIGH SPEED TRAIN SYSTEM

Throughout Gauteng, South Africa

PROJECT TYPE: Elevated viaducts

CLIENT:
Bombela Concession Company

VALUE:
R16 Billion

CONSULTANTS:
Bombela Concession Company

PROJECT DURATION:
54 Months

DATE OF PROJECT:
September 2006

PROJECT DESCRIPTION:

The Gautrain viaducts comprise multiple span precast prestressed segmental concrete box girder decks with hollow box section piers of reinforced concrete and spread footings or piled foundations.

The typical span of centre line of pier to centre line of pier is 44 meters, but the actual span varied from viaduct to viaduct and was constrained by both the agreed alignment for the project and acceptable curvature for the construction equipment. Piers varied in height between 6, 5 meters and 23,8 meters and spread footings were in general 6,5 by 6,5 by 1,5 meter deep.

The variation in horizontal alignment was also accommodated by modifying cantilever lengths and "kinking" the deck alignment at the piers. The vertical alignment was accommodated similarly by kinking the alignment at the piers and having a variable depth ballast to smooth out the curves.

