



Design and Development of the Msikaba and Mtentu River Bridges

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Abstract

The story of the Msikaba and Mtentu River Bridges is a story about the Transkei Region in South Africa. The area's unfenced rural landscape is considered unique and is characterised by steep gorges and rivers that run down to the Wild Coast. The civil engineers of the past avoided the area and the main highway connecting the ports of Durban and East London runs 200 km inland. This is now changing with the South African National Roads Agency's SOC Ltd (SANRAL's) procurement of the new N2 Wild Coast Road that will realign the highway within 30 km of the coast. The project includes two new crossings, one a 580 m span cable-stayed bridge, the other a 1.1 km long viaduct with a 260 m central balanced cantilever span, across the deepest gorges on the route. Their design and procurement is however driven not only by their physical environment but the need to create jobs, business opportunities for small local enterprises and community development projects that will leave a legacy and a long term economic benefit.

Keywords: Cable stayed, balanced cantilever, environment, community development

1 Introduction

The Wild Coast of South Africa is true to its name. Few roads run down to its coast and none along it. Its tribal lands are largely unfenced adding to the beauty of its rolling landscape that is interspersed with steep gorges and rivers that flow down into the Indian Ocean. The area contains many dichotomies with its traditional tribal leaders that coexist with democratically elected local government structures. Its communities are rich in culture and history but are relatively poor and largely supported by government grants and

providers who work in the industrial heartland of Gauteng.

Physically and economically isolated, the development of the area is a strategic goal for the South African government. The new N2 Wild Coast Road (N2WCR) being developed by the South African National Roads Agency's SOC Ltd (SANRAL's) is a key part of this strategy. The Scheme includes some 112 km of new road across greenfields land between Port Edward and Ports St Johns. Once complete, the route will be approximately 85 km shorter than the current route and be up to 3 hours faster, particularly for heavy freight vehicles.