terrasol

setec

Transport and infrastructure
Road

Hong-Kong - Zhuhai - Macao bridge

Assistance for the design of the foundations of three viaducts

2012 - 2014

HONG KONG

Client

BOUYGUES TP

Highlights

Study of 3 elementary viaducts

Seismic environment

The Project

The Hong-Kong - Zhuhai - Macao connection will boost trade between the Macao and Hong-Kong special administrative regions and Guangdong province in the Pearl River delta zone.

This six-lane dual-carriageway road link, with a total length of 42 km, comprising viaduct sections as well as a tunnel section between two artificial islands, will link the former Portuguese and British trading posts in 45 minutes, compared with four hours at present by sea.

Key features

- Definition of the geotechnical models of the viaducts
- Definition of the static and dynamic soil/structure interaction parameters of the support foundations

Our Services

As part of its construction contract for the 9.4 km of viaduct in the territorial waters of the Hong-Kong SAR, the BOUYGUES/CHINA HARBOUR consortium contracted TERRASOL for assistance with the design of the foundations of three of the component viaducts located in the airport ship channel.

In a potentially-faulted near-shore geotechnical context, composed of sub-consolidated marine deposits overlaying weakly-compacted fine alluvia, coarse alluvia, and a granitic substratum showing a fringe of very advanced alteration, the TERRASOL mission consisted in defining the geotechnical models of the viaducts, and the static and dynamic soil/structure interaction parameters of the support foundations, as the structure is being built in a seismic environment.

This mission was conducted in conformity with the geotechnical codes in effect in Hong-Kong.

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