



Bataan-Cavite Interlink Bridge – Preliminary Design of the crossing

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Abstract

Bataan-Cavite Interlink Bridge (BCIB) in the Philippines is a proposed 32km sea-crossing which will connect Bataan and Cavite provinces, to unlock opportunity for economic growth and expansion outside Metro Manila. A Feasibility Study was carried out to plan the road link, which will involve two major navigation bridges, long marine viaducts, and interchange connections. This paper outlines the Feasibility Study, the navigation clearance study and the Preliminary Design of the crossing. It highlights how the navigation clearances were assessed and confirmed, and how the bridge options were evaluated in order to come up with an optimum solution.

Keywords: feasibility study, cable stayed bridges, marine viaduct

1 Introduction

A new 32km sea-crossing is proposed to connect the road networks of Bataan and Cavite provinces in the Philippines by crossing the mouth of Manila Bay, to the west of Metro Manila. The Bataan-Cavite Interlink Bridge (BCIB) will reduce the travel time between the two regions from 5 hours down to 45 minutes. The link will unlock the opportunity for expansion outside Metro Manila for economic growth and ease traffic congestion in Metro Manila and the region. The reduced travel time will lead to significant socio-economic benefits.

The new crossing comprises a marine crossing in Manila Bay approximately 26km long, 5km of road/bridges on Bataan and a 1km long road at Cavite to join the local existing road network. The marine part of the crossing will traverse two busy navigation channels with shipping to Manila Port and coastal facilities along the coast of Bataan. To ensure shipping is not restricted by the new bridge, a navigation clearance study was carried for the

two navigation channels along with marine simulations. Two long span cable stayed bridges with main spans of 900m and 400m respectively are proposed.

This paper outlines the project background, the navigation clearance study and the preliminary design of the crossing. It highlights how the navigation clearances were assessed and confirmed, and how bridge options were assessed in order to come up with an optimum solution.

2 Background

The Republic of the Philippines has seen significant population growth, which leads to increased demand for travel on its already extremely congested road network. The Metro Manila region (the Capital) has an under supply of transport facilities, resulting in deteriorating travel times, the severity of which threatens the Philippines economic growth.