



An overview of urban-bridge construction in Bangkok metropolitan area, Thailand

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Abstract

Nowadays, The Bangkok Metropolitan Area (B.M.A.), Thailand, has proliferation economic and population growth that it was predicted the traffic would increase. Bridge engineering becomes one essential part of an infrastructure that meets the needs able to facilitate and rapidly the itinerary to connect the network of land transportation efficiently and turn into crucial development. The focus of the review is to present the case studies of a bridge construction technology of the urban area, that was built in B.M.A. This paper provides a history of the development of bridge construction projects with emerging technology bridge construction in B.M.A., Thailand, by searching for information and research. It describes the engineering background, design concept, structural form, summarises the significant to use bridge construction of the development that would be a benefit to choose the technology that has been appropriate with a bridge construction project in B.M.A. or other similar areas.

Keywords: Bridge, Design, Bridge construction, Bangkok bridge

1 Introduction

The construction of the bridge in the Bangkok Metropolitan Area (B.M.A.) located in coordinates the centre of Thailand, with fertile land for agriculture and has along with Chao Phraya river basin and long history as the capital of Thailand since the Rattanakosin period for over 230 years. B.M.A. area is a special local government organisation of Thailand was established from Bangkok has been expanded in around the area direction has links close to the neighbouring city in the context of a regional area, connection with the nearby provinces which covered five provinces namely: Nonthaburi, Samutprakarn, Samutsakorn, Nakornpatom, and Pathumthani. Bangkok and its

surrounding provinces are the metropolitan areas of them that covering an area of more than 7000 square kilometres that shown in figure 1. The main river that flows through is the Chao Phraya River. The population there are approximately 10.8 million people (in 2019) which has steadily increased in recent years. Due to the prosperity of the economy, education, and technology of this area have sought to tackle the rising problems of traffic commute times. The government has to find a solution by constructing infrastructure to help alleviate traffic congestion, such as the metropolitan rapid transit, sky train, airport rail link, tunnel underpass, flyover, bridge cross river, etc.