

## **WEBINAR ON**

# **‘LESSONS LEARNT – MRR2 VIADUCT, KUALA LUMPUR’**

**Saturday | 27 March 2021 | 11.00 a.m. – 1.00 p.m.**

### **SYNOPSIS**

The main viaduct of Package 11 of the MRR2 at Kepong was completed in May 2002. The viaduct consisted of twin concrete 45m precast segmental box girders constructed span by span on 31 T-shaped concrete piers, two concrete portals and two T-shaped abutments. The pier crosshead cracks of width 0.1 to 0.2mm was first detected in Nov. 2002. By August 2003, 20 of the 33 piers are cracked. In May 2004, the main viaduct was closed to heavy vehicles. A crack 6.5mm wide was discovered at Abutment B. The cracks are initially caused by poor detailing and temporary erection loads during erection. Cracks allowed water intake into the concrete creating Delayed Ettringite Formation (DEF) worsening the situation. Strengthening by prestressed carbon fiber reinforced plate (CFRP) tendons was completed by early 2007.

However, in August 2008, three out of 18 CFRP tendons at Pier 28 snapped. The CFRP tendons in all piers had to be replaced by stay cables. This presentation shall describe some detail of the cause, repair and strengthening of the main viaduct.

## **SPEAKER**

### **Y.BHG DATO' Ir. DR. ISMAIL BIN MOHAMED TAIB**

*Former Senior Director*

*of the Civil, Structural and Bridge Engineering Branch of PWD (JKR)*

**Dato' Ir. Dr. Ismail** has more than 35 years experienced in buildings, highway and bridges of the Public Works Department Malaysia (PWD). His last posting was on secondment from 2009 to 2016 as Managing Director of Jambatan Kedua Sdn. Bhd, the concessionaire to the Second Penang Bridge project.

As the managing director, he was responsible for the in-house project management and technical expertise in the planning, design, construction and maintenance of the award winning RM 4.5 billion project. Prior, he was heading the Bridge Unit, Roads Branch and later as the Senior Director of the Civil, Structural and Bridge Engineering Branch of PWD. He has a PhD in Civil Engineering from University of Wales, Swansea and MSc in Structural Engineering from Heriot-Watt University, Edinburgh, UK.

He graduated in 1980 with an Advanced Diploma in Civil Engineering, ITM and has presented more than 30 papers at local and international seminars.



#### **Registration Fees (effective 1<sup>st</sup> August 2020)**

**IEM Members : RM 15.00 | IEM Non Members : RM 70.00**

**CPD Hours : 2.0 CPD Ref No : IEM20/090/T(w)**

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