



THE ASSOCIATION OF CONSULTING ENGINEERS MALAYSIA

WEBINAR ON RAILWAY ALIGNMENT & TRACKWORK DESIGN

16 OCTOBER 2024 (WEDNESDAY) | 10.00 A.M. TO 12.00 NOON

BEM APPROVED CPD: 2 HOURS

OVERVIEW

This webinar will provide a comprehensive insight into the principles and considerations involved in the design and management of railway alignments and trackwork. It is tailored for professionals involved in railway infrastructure development, offering both a foundational understanding and advanced insights into various aspects of track design.

KEY TOPICS

1. Types of Metros:

- ❑ Differentiation between Heavy Rail, Light Rail, Monorail, and High-Speed Railways.
- ❑ Understanding the operational capacities and infrastructure requirements for each type.

2. Track Gauges:

- ❑ Discussion on various railway gauges (narrow, meter, standard, and broad gauge).
- ❑ Analysis of their applications, advantages, and challenges in different terrains and operational contexts.

3. Train Loading Gauge, Kinematic Envelope, and Structure Gauge:

- ❑ Explanation of the loading gauge, kinematic envelope, and structure gauge.
- ❑ Importance of these concepts in ensuring safe and efficient train operations.

4. Cant, Equilibrium Cant, and Cant Deficiency:

- ❑ Detailed exploration of the concept of cant in railway tracks.
- ❑ The significance of equilibrium cant and cant deficiency in ensuring stability and safety during train operations, especially on curves.

5. Permanent Way & Trackwork:

- ❑ Overview of the components of the permanent way, including rails, sleepers, and ballast.
- ❑ Types of rail turnouts and their applications in trackwork design.

6. Railway Stations and Yards:

- ❑ Design considerations for railway stations, including spatial requirements, platform designs, and operational requirements.
- ❑ Functions and types of railway yards, with a focus on maintenance and cargo handling.

7. Track Alignment Design - Ampang LRT Line Extension Project:

- ❑ Case study of the Ampang LRT Line Extension Project.
- ❑ Key design considerations, including station locations, track geometry, and system interfaces.

REGISTRATION FEE

ACEM member firms	RM 30.00 per person
Others	RM 60.00 per person

(E-certificate of attendance will be issued, subject to full attendance.)

Please click link <https://klinksini.my/H7wsV> or scan QR code for online registration.

For further enquiries, please contact the ACEM secretariat at tel. 012-5290031 or e-mail to vivien@acem.com.my.



SCAN TO REGISTER

SPEAKER



Ir. Mathew Philip

B.Eng (Hons) University of Malaya 1983

M.Sc (Highways & Transportation), University Putra Malaysia 2000

Associate Director (Railways) of HSS Engineering Sdn. Bhd.

SUMMARY OF EXPERIENCE

- Ir. Mathew Philip has over 38 years of design, design management & project management experience in MRT, LRT, Monorail, Heavy Rails, Expressways and Highways. He has led teams as Project Director and Project Manager in several mega sized railway and highway projects in Malaysia in the last 41 years.

MEMBERSHIP

- Fellow, Institution of Engineers Malaysia (FIEM).
- Fellow, Chartered Institution of Highways & Transportation, UK (FCIHT).

AREAS OF EXPERTISE

- Engineering Design & Project Management for Railways, Railway Systems-Civil Works Interface.
- Engineering Design & Project Management for Highways, Expressways, Pavements.

SELECTED RAILWAYS AND HIGHWAY EXPERIENCE

- Project Director for the 51km Johor Iskandar Malaysia BRT project in Johor Bahru.
- Project Director for ECRL Detailed Design & Supervision Kota Baru to Dungun.
- Team Leader for the 500km Railway Rehabilitation Project between Mentakab to Tumpat.
- Design Director for the Independent Consultant Engineer for the 51km long Klang Valley MRT1 & MRT2 Line.
- Design Audit Manager for the 120km KVDT2 from Salak to Seremban & Salak to Port Klang.
- Project Manager for the Ampang Line Extension Project between Sri Petaling and Putra Ht. Project Cost. 18km Viaduct, 13 Elevated Stations, 5 Multi-Storey Car Parks, New Depot, Procurement of 50 New LRVs, CBTC Signalling System.
- Project Manager for the Scheme Design of 29km Penang LRT from Island A to Komtar.
- Project Manager for the 100km Electrified Double Tracking between Gemas & Kluang.
- Project Manager for the 33km Freight Railway between Senai & Kempas Baru to the Port of Tanjung Pelepas.
- Principal Railway Design Engineer for the 56km Express Rail Link between Brickfields and KLIA.
- Project Manager for the 545km ECRL in the East Coast between KL and Tumpat.
- Project Manager for the 45km KL-Putrajaya-KLIA Dedicated Highway.
- Head of Highways for the Project Management of the 255km West Coast Expressway Taiping - Banting.