

# WEBINAR ON INSIGHTS INTO RAILWAY TRACKWORK, YARD ENGINEERING AND A CASE STUDY OF PERLIS INLAND PORT

10 December 2025  
10.00 a.m to 12.00 noon

## Topics

### TRACKWORK, TURNOUTS, POINTS & CROSSINGS

1. Permanent Way
2. Overview of Turnouts – Points & Crossing
3. Types of Turnouts
4. Cross Overs
5. Main Components of Turnouts
6. Frog
7. Size of Turnouts
8. Switches and Stock Rail Joint
9. Evolution of Turnout Designs

### RAILWAY YARDS AND TERMINALS

1. Function of Yards
2. Freight Yard Types
3. Yard Design Requirements
4. Station Yards

### CASE STUDY OF PERLIS INLAND PORT (PIP) SPURLINE & YARD

1. Problem Statement
2. Project Description
3. Scope of Works
4. Freight Forecasts
5. The Need for the PIP
6. PIP Spurline Option Studies
7. Value Engineering
8. Trackwork Design Criteria
9. Challenges

### Registration Fee (inclusive of 8% SST)

|                   |                     |
|-------------------|---------------------|
| ACEM member firms | RM 35.00 per person |
| Others            | RM 65.00 per person |

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

Please click link <https://klikesini.my/KOrU3> or scan QR code for online registration.

For further enquiries, please contact the ACEM secretariat at 012 5290031 or email [vivien@acem.com.my](mailto:vivien@acem.com.my)



## 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 in Institution of Engineers Malaysia (FIEM)
- Fellow in 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 Bharu 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 and MRT2 Line.
- Design Audit Manager for the 120km KVD2 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.
- Project Director for the 200km Feasibility Studies for the Selangor Railway from Seremban to Sabak Bernam.
- Engineering Manager for the 2000km TransBorneo Railway from Kudat to Kuching, Kudat to Sandakan-Lahad Datu-Tawau.