



# Engineering Staff College of India

An Autonomous Organ of The Institution of Engineers (India)

Old Bombay Road, Gachi Bowli, Hyderabad – 500 032, India



**CIVIL & TRANSPORTATION ENGINEERING**

CONTINUING PROFESSIONAL DEVELOPMENT PROGRAMME ON

## **Flexible Pavements and Overlays - Design, Construction and Maintenance**

**26 – 29 November, 2019**



(An ISO 9001:2015 Certified, AICTE & CEA Recognized Institution)

**Centre for Promotion of Professional Excellence**

## **INTRODUCTION:**

India has a vast road network playing a pivotal role in the movement of 65% of total freight and 85% of total passenger traffic in the country. With the total length of roads in the country exceeding 3.34 million kilometers, India stands second only to the United States. Traffic on Indian roads is growing at a rate of 10 to 12% per annum. To satisfy the increasing Traffic demand on roads, programmes such as NHDP and PMGSY have been launched. But the initial performance levels of the pavements built so far have not been so encouraging. The condition of most of the roads is deplorable. Potholes, deep enough to damage the vehicles, stretches, washed away by rains and shoulders poorly maintained are often becoming death-traps for motorists. The recent deluge in major cities woke up everyone to recognize the need to upgrade its infrastructure. The quality of our roads cannot meet the needs of an efficient and fast moving transportation system. All this is seen in spite of technology growth. We have not yet fully adopted the new developments in construction and maintenance activities.

Most of Indian roads are flexible pavements, the ones having asphalt-toppings. Flexible pavements have a great advantage that these can be strengthened and improved in stages with the growth of traffic. Another major advantage of these roads is that their surfaces can be milled and recycled. These are less expensive also. To create awareness among the engineers on the benefits of adopting proper design procedures, materials, construction techniques, quality control and maintenance reducing the life-cycle costs, this three day programme on “**Flexible Pavements and Overlays - Design, Construction and Maintenance**” is formulated to fulfill the needs of the agencies who are associated with formulation and developing the road sector in India.

## **OBJECTIVES:**

To provide an awareness on Flexible pavements regarding

- Components of pavement system, transmission of pavement layers to subgrade
- Design procedures under a variety of traffic and environmental conditions
- Drainage considerations in pavement design
- Construction methodologies
- Importance of QA/QC in material selection and construction
- Pavement maintenance techniques
- Various distresses and remedial measures
- Pavement rehabilitation techniques

## **COURSE COVERAGE :**

- Overview & Concepts of Flexible Pavements & Overlays
- Pavement Materials Characterization including Bituminous mixes
- Types of Flexible Pavements
- Design of Flexible Pavements as per IRC:SP:72
- Flexible Pavements Evaluation
- Drainage Design Parameters
- Laboratory Session on Material Testing
- Construction Methods, Identification of Distress & Causative factors – Remedies – QC measures for prevention
- Pavement Maintenance Techniques
- Applications of Geo-synthetics in Flexible Pavements

## **METHODOLOGY:**

This programme will be conducted in an interactive environment providing ample scope for discussions. Emphasis will be given on various design procedures and how use them judiciously to suit our conditions. Each of the participants will be given reading material on all the topics covered during the training process.

## **TARGET PARTICIPANTS:**

This programme is planned especially for all the agencies involved in the design and construction of highways under NHDP, PMGSY and other similar related road development activities. Engineers from

state PWD's working on national/state highway projects and urban streets will be benefited from this programme. Faculty members from technical institutes / Universities, dealing in the areas of Highways & Transportation will get an exposure to the latest developments assisting them in reorienting their curriculum to suit the field requirements. Students who are pursuing their Masters programme in the field of Highway/Transportation Engineering can utilize this opportunity to get an insight into the latest design techniques and their practical applications in the field.

#### **BENEFIT TO THE PARTICIPANTS:**

1. Understand the design procedure under a variety of traffic & environmental conditions
2. Understand the importance of QA/QC in material selection & construction.

#### **RESOURCE PERSONS**

Renowned personalities both from industry as well as educational institutes / universities, who are experts in this field, will be involved in providing the training.

#### **PROGRAMME VENUE & DATES & TIMINGS**

**VENUE:** Engineering Staff College of India (ESCI) Campus, Old Bombay Road, Gachi Bowli, Hyderabad 500032, India.

#### **Dates:**

26 – 29 November, 2019

#### **Timings:**

On the first day Registration will commence at 0900hrs 26<sup>th</sup> November, 2019. On all other days, the programme timings will be from 0945 - 1715 hrs with breaks in between for tea and lunch.

#### **COURSE DIRECTOR**

**Shri P. Muralikrishna**  
Faculty & Head, CTE Division

#### **COURSE ADVISER**

**Shri A.R.K. Murty**  
Adviser, CTE Division

#### **FEES**

**Rs. 20,000/- (Rupees Twenty Thousand Only) (Residential fee)** per participant + GST@18%. Fee includes, course material, course kit and twin-sharing AC accommodation, breakfast, lunch, dinner, tea / coffee and snacks during the actual days of training programme.

#### **Discounts**

- ❖ **Non-Residential Fee-** 10% discount on course fee is allowed for non-residential participants.
- ❖ **Group Discount:** Additional 10% discount for three or more participants, if sponsored by the same organization.

**GST 18%** is to be paid extra over and above the training fee, as training is also brought under the purview of **Service Tax. PAN Card No AAATT3439Q; Service Tax registration No AAATT3439QST008 (under commercial training or coaching services – clause 65(105) (ZZC) of Finance act – 1994).**

**GSTN Number – 36AAATT3439Q1ZV (HSN Number – 999293)**

Programme fee is to be paid in favor of “**IE (I) – Engineering Staff College of India**” in the form of demand draft payable at Hyderabad.

Alternatively the payment may be made by **Electronic Fund Transfer (EFT) to ESCI - SB A/c No. 10007111201 with The SBI, PBB, Rajbhavan Road Branch, Khairatabad, Hyderabad-500004 by NEFT/ RTGS/ IFSC Code No. SBIN 0004159 – MICR No.500002075.** While using EFT method of payment, please ensure to communicate us your company name, our invoice reference and programme title.

#### **REGISTRATION:**

**Online registration shall be available on ESCI website**

To register, manually please send your nominations giving details of name, designation, contact address, email address, mobile no, telephone and fax number of the participant along with the details of mode of payment of fee.  
addressed to:

**Head, Civil & Transportation Engineering Division**

Engineering Staff College of India

Old Bombay Road, Gachi Bowli, Hyderabad - 500 032

Phone: 040- 66304100 (Reception) / Direct : 6630 4115, 4114, 4138

Programme officer : **9866771815**

Email : [cte@escihyd.org](mailto:cte@escihyd.org)

**CERTIFICATE:**

A certificate of participation will be awarded to each participant on conclusion of the programme.

**GENERAL INSTRUCTIONS:**

- ESCI encourages participants to present case studies from their respective organizations.
- For the convenience of outstation participants, ESCI will facilitate pick-up and drop **on payment basis** from Airport / Railway Stations / Bus Stations, if travel plans are received at least 3 days in advance along with mobile number by fax or email. The charges shall be paid by the participant directly to the Cab.
- ESCI provides complimentary accommodation and boarding to the participants one day before commencement (Check-in 1200 h) and one day after conclusion (Check-out 1200 h) of the programme duration. Overstay charges will be applicable as per ESCI rules (subject to availability of accommodation) please feel free to contact programme officer 040-66304115, **9866771815**.
- Well developed Information Centre and Internet facilities are available at free of cost to the participants.