



**Local Technical Assistance Program**

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Nonprofit Organization

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**Michigan's  
Local Technical  
Assistance Program**



**East Lansing, MI**

**March 26-27, 2008**

***A State-of-the Practice Manual***

***Practices for Concrete Pavement:***

***Integrated Materials and Construction***

Based on

# Concrete Workshop

## Workshop Location

**Kellogg Hotel & Conference Center**

Michigan State University  
55 South Harrison Road  
East Lansing, MI 48824  
800-875-5090

### General Driving Directions

From I-496 in East Lansing, take Trowbridge Road Exit (East) to Harrison Road; turn left (North) approx. 1 mile.

**Location map available on request**

**Get Answers  
to Your Concrete  
Construction Questions**

What do I need to I know about  
**concrete materials?**

How can I ensure that I am  
getting **good concrete?**

Why should I have more than  
one **mix design?**

How can I **troubleshoot** concrete  
setting problems?

# Concrete Workshop

## Workshop Objective

This workshop is based on the new 350-page book, *Integrated Materials and Construction Practices for Concrete Pavement: A State-of-the-Practice Manual*. This manual is result of a multi-year, FHWA-sponsored effort.

The IMCP manual is a unique resource, designed to advance knowledge about concrete pavement beyond the fundamentals, focusing on the effects concrete materials have on construction practices and service life.

## The workshop will help you:

- Understand concrete pavement properties as several discrete elements that affect, and are affected by, each other.
- Understand the technologies, tests, and best practices to identify materials, concrete properties, and construction practices that optimize concrete performance.
- Understand that actions and decisions taken during each stage of a project effect other stages and how to anticipate those effects.
- Avoid or reduce factors that lead to premature distress.

## Who Should Attend

Design, materials, and construction engineers and technicians. Quality assurance/control personnel, construction supervisors and inspectors, consultants and contractors.

## Cost

The cost of this workshop is being underwritten by the Federal Highway Administration, the Michigan Concrete Paving Association and the National Concrete Pavement Technology Center. However, participants must register in order to attend. Lunch and coffee break refreshments are included. Please let us know if you have any special dietary needs.

## Registration

To register, call the LTAP office at (906) 487-2102. Class size is limited. Please register as early as possible to ensure your participation.

## Lodging

Participants are responsible for their own lodging expenses. A block of rooms has been set aside at the Kellogg Hotel at the rate of \$90.00 per room. To reserve a room at this rate, call the Kellogg Hotel at (800) 875-5090, and mention Michigan Concrete Paving Association.

# Agenda

## First Day Topics

- 8:30 Introduction to the Manual and Workshop
- 8:50 Basics of Concrete Pavement Design
- 9:40 Basics of Concrete Materials (Aggregates, Reinforcement, Curing Compound)
- 10:10 Break
- 10:30 Basics of Materials (Cements, SCMs, Water, Admixtures)
- 11:15 Fresh Concrete Properties
- 12:00 Questions/Review and Evaluations
- 12:15 Lunch
- 1:00 Cement Hydration: The Basics
- 2:00 Cement Hydration: Incompatibilities
- 3:00 Break
- 3:20 Early-Age Cracking
- 4:10 Questions/Review and Evaluations
- 4:30 Close First Day

## Second Day Topics

- 8:00 Hardened Concrete Properties
- 8:45 Mix Design Principles
- 9:30 Break
- 9:50 Construction
- 10:35 QA/QC
- 11:20 Questions and discussions
- 11:40 Lunch
- 12:30 Troubleshooting , Problem-Solving
- 2:00 Questions/Review, Evaluations
- 2:15 Close

## Training Materials Provided

- The IMCP manual
- Brief technical summaries for conducting in-house training.
- An electronic version of the IMCP manual on CD.

# Instructors

## Tom Van Dam, Ph.D. P.E.

Tom is an Associate Professor in the Department of Civil and Environmental Engineering at Michigan Tech University and serves as an instructor for several courses of the National Highway Institute.

## Dale Harrington, P.E.

Dale is a senior project engineer with Snyder and Associates and former director of the PCC Center at Iowa State University.

## Peter Taylor, P.E.

Peter is the Associate Director of the National CP Tech Center at Iowa State University and leads the mix design track of the CP Road Map, a long-term research plan for concrete pavements.

# Sponsors



U.S. Department of Transportation  
Federal Highway Administration



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