

Comprehensive review of pavement evaluation, rehabilitation and construction procedures in practice today...

Evaluation and Rehabilitation of Pavements

**February 22-23, 2007
Las Vegas, Nevada**

Learn How To...

- ▶ **Effectively evaluate your pavements**
- ▶ **Select the best rehabilitation techniques**
- ▶ **Implement pavement rehabilitation best practices**

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**COLLEGE OF ENGINEERING
UNIVERSITY OF WISCONSIN-MADISON**

**Department of Engineering Professional Development
432 North Lake Street · Madison, Wisconsin 53706**

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COLLEGE OF ENGINEERING ■ DEPARTMENT OF ENGINEERING PROFESSIONAL DEVELOPMENT

Evaluation and Rehabilitation of Pavements

**February 22-23, 2007
Las Vegas, Nevada**

A practical course to help you

- **Evaluate pavement condition**
- **Select rehabilitation techniques**
- **Implement best practices for rehabilitation**
- **Adopt the latest pavement technologies**



Evaluation and Rehabilitation of Pavements

February 22–23, 2007

Las Vegas, Nevada

Save time and money!
Inquire about our on-site courses.
Call 800-462-0876 today!

Learn Practical Methods

A wide variety of pavement rehabilitation and construction techniques are used to repair and restore today's pavements. These techniques can provide cost-effective, longer-lasting pavements. Selecting and implementing the best technique for a specific project requires extensive knowledge of these techniques.

This course offers you a comprehensive review of pavement evaluation, rehabilitation and construction procedures in practice today. The course includes practical information on the actual performance of rehabilitation techniques for state and local highways.

In this course you will learn how to

- perform a comprehensive evaluation of existing pavement conditions
- improve your project traffic data collection techniques
- select rehabilitation techniques based on the evaluation data

- specify appropriate asphalt mixes

The course will highlight design and construction information on a variety of materials and procedures, including

- asphalt recycling and reclaiming
- asphalt overlays
- concrete repair
- diamond grinding
- whitetopping

Who Should Attend

Highway and public works engineers, consultants, contractors and managers with responsibility for pavement evaluation and rehabilitation will benefit from this course.

We will cover both asphalt and concrete pavements and medium to heavy traffic volumes. The emphasis will be on providing practical and current information for pavement evaluation and rehabilitation.

Valuable Take-home Materials

Each participant will receive a course notebook with material useful in the implementation of pavement evaluation and rehabilitation.

Earn Continuing Education Credits

By participating in this course, you will earn 14 Professional Development Hours (PDH) or 1.4 Continuing Education Units (CEU).

Experienced Instructors

Michael Ayers PhD is the director of highway pavement technology for the American Concrete Pavement Association (ACPA), Skokie, Illinois. He is the principal instructor and developer of the latest revision of the National Highway Institute course, Construction of Portland Cement Concrete Pavements. Dr. Ayers conducts training courses and seminars nationally and internationally. Prior to joining the ACPA, he served as director of technology transfer at ERES Consultants in Champaign, Illinois. He has been the principal investigator on federal and state-funded highway and pavement research projects. Dr. Ayers was an associate professor of civil engineering at Oklahoma State University prior to joining ERES Consultants. He earned his bachelor's, master's and doctorate degrees from the University of Illinois at Urbana-Champaign.

Benjamin J. Jordan PE is a program director at the University of Wisconsin-Madison, Department of Engineering Professional Development. He has more than 20 years of experience in civil engineering and public works. He worked as a director of public works and city engineer and has experience in design, construction and materials engineering with a state Department of Transportation. He earned a bachelor's degree in civil engineering from the University of Illinois at Urbana-Champaign. He is a licensed professional engineer in Illinois.

Thomas B. Nelson PhD, PE is a professor of civil and environmental engineering at the University of Wisconsin-Platteville. He has nearly 30 years of experience in road design, construction and maintenance. A West Point graduate, he started his career in the U.S. Army Corps of Engineers, then directed an engineering practice in Washington D.C. before earning his PhD at Purdue University. He has taught at the Army Engineer School, Norwich University in Vermont, and the National Highway Institute. Dr. Nelson is active nationally in research and teaching.

Margot Yapp P.E. is vice president with Nichols Consulting Engineers, Chtd., Point Richmond, California. She has taught courses in pavement management, distress identification and pavement rehabilitation techniques and has more than 20 years of experience in pavement engineering.

Evaluation and Rehabilitation of Pavements

February 22–23, 2007

Las Vegas, Nevada

Course Outline

Thursday, February 22

7:30 Registration

Riviera Hotel and Casino
2901 Las Vegas Boulevard South
Las Vegas, Nevada

8:00 Course Introduction

Benjamin J. Jordan PE
Program Director
Department of Engineering
Professional Development
University of Wisconsin–Madison

8:15 Pavement Distresses

- Asphalt pavement distresses
 - Concrete pavement distresses
- Benjamin J. Jordan PE

9:50 Break

10:00 Pavement Evaluation Using a Simple Rating System

- Using pavement evaluation for network level planning
 - A simple but subjective visual rating system – PASER
 - Rating exercise
- Benjamin J. Jordan PE

10:50 Break

11:00 Pavement Evaluation Techniques

- Quantitative visual evaluation
 - Nondestructive testing
 - Destructive testing
 - Ride quality
- Margot Yapp PE

Vice President
Nichols Consulting Engineers,
Chtd.
Point Richmond, California

12:00 Lunch

1:00 Deflection Testing

- Deflection testing theory
- Testing equipment
- Project level pavement evaluation
- Load transfer evaluation and void detection

Margot Yapp PE

2:40 Using Evaluation Data to Determine Effective Techniques

- Evaluation systems
- Data interpretation
- Life cycle costs
- Deterioration curves
- Selection of rehabilitation techniques based on evaluation data

Margot Yapp PE

3:40 Break

3:50 Traffic Analysis

- Critical data
 - Data collection techniques
 - Project application
- Thomas B. Nelson PhD, PE
Professor of Civil and
Environmental Engineering
University of Wisconsin–Platteville

4:45 Adjourn Day 1

Friday, February 23

8:00 Choosing Appropriate Asphalt Materials

- Asphalt binders
- Aggregates
- Superpave mixes
- Open-graded friction course
- Stone-matrix asphalt
- Polymer-modified mixes
- Rubberized asphalt

Thomas B. Nelson PhD, PE

9:00 Concrete Pavement Restoration and Rehabilitation Strategies

Michael Ayers PhD
Director of Highway Pavement
Technology
American Concrete Pavement
Association
Skokie, Illinois

9:45 Break

10:00 Concrete Pavement Rehabilitation Techniques

- Full depth repair
 - sawing and removal
 - dowel details and preparation
 - quality control
 - Partial depth repair
 - Dowel bar retrofit techniques
 - Diamond grinding
- Michael Ayers PhD

12:00 Lunch

1:00 Asphalt Rehabilitation Techniques

- Cold in-place recycling
 - Hot in-place recycling
 - Reclaiming
 - Milling
- Thomas B. Nelson PhD, PE

2:00 Asphalt Overlays

- Thin overlays
 - Structural overlays
- Thomas B. Nelson PhD, PE

3:15 Break

3:30 Concrete Overlays

- Whitetopping
 - conventional
 - ultra-thin
 - Unbonded overlays
- Michael Ayers PhD

4:45 Final Adjournment

Earn Professional Development Hours (PDH) at These Upcoming Courses

For information about the following courses or to receive brochures on them, please call 800-462-0876, e-mail custserv@epd.engr.wisc.edu, or check our Web site at <http://epd.engr.wisc.edu>.

Improving Public Works Construction Inspection Skills

January 8–9, 2007, Madison, WI
Course #H639

February 12–13, 2007, Orlando, FL
Course #H640

March 5–6, 2007, Allentown, PA
Course #H641

Maintaining Asphalt Pavements

January 10–11, 2007, Madison, WI
Course #H625

February 14–15, 2007, Orlando, FL
Course #H810

March 7–8, 2007, Allentown, PA
Course #H973

Four Easy Ways to Enroll

Contact Us

Call toll free **800-462-0876** and ask for

Program Director: Benjamin J. Jordan PE
jordan@epd.engr.wisc.edu

Program Associate: Edie Vitale
Or e-mail custserv@epd.engr.wisc.edu

General Information

Fee Covers Notebook, course materials, break refreshments, lunches and certificate.

Cancellation If you cannot attend, please notify us by February 14, and we will refund your fee. Cancellations received after this date and no-shows are subject to a \$150 administrative fee. You may enroll a substitute at any time before the course starts.

Location Riviera Hotel and Casino, 2901 Las Vegas Boulevard South, Las Vegas, Nevada. If you must be contacted during the course, phone messages may be left for you at 702-794-9412.

Accommodations We have reserved a block of rooms (\$119 single plus energy surcharge not to exceed \$3.85 per night) for course participants at the Riviera Hotel and Casino. To reserve a room, call 800-634-6753 or 702-794-9412 by February 2 and indicate that you will be attending this course under group code UWMAFE7. Room requests made later than February 2 will be subject to availability. A deposit equal to the room rate for one night is charged at time of booking. This deposit is refundable if the reservation is canceled 48 hours prior to scheduled arrival. Room block rates are not available for Friday or Saturday night stays.

Course Changes We reserve the right to alter the course schedule and substitute speakers when necessary.

On-site Courses Save Time & Money

Engineering Professional Development can offer many of our courses:

- At a location of your choice in North America
- At your convenience
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To inquire about courses that we can bring to your site, including optimal group size and costs, call 800-462-0876 and ask for Corporate Education Director Carl Vieth (608-263-7424 direct). Or see <http://epd.engr.wisc.edu/onsite>



Phone:
800-462-0876 or
608-262-1299 (TDD 265-2370)



Internet:
<http://epd.engr.wisc.edu/J093>

Mail to:

Engineering Registration, The Pyle Center
702 Langdon Street, Dept. 106
Madison, Wisconsin 53706



Fax:

800-442-4214 or 608-265-3448



Course Information

- Please enroll me in **Evaluation and Rehabilitation of Pavements**
Course #J093 February 22-23, 2007 in Las Vegas, NV Fee: \$795
- I cannot attend at this time. Please send me brochures on related courses.

Personal Information (Please print clearly.)

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Title _____

Company _____

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City/State/Zip _____

Phone (____) _____ Fax (____) _____

E-mail _____

Additional Enrollees

Name _____

Title _____

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Title _____

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