Agenda

Presented by Michael Ayers, Ph.D., P.E.

Principles of Pavement Design
- Goals of pavement design
  - Smooth, stable surface and longevity
- Terminology and basic components
  - Pavement section
  - Asphalt and concrete components
  - Loading
- Consulting guidelines and standards
- Collecting data necessary for design
- Economics and lifecycle analysis

Flexible Pavement Design
- Soil support and subsurface preparation
- Reclamation and recycling
- Mixture content and pavement thickness

Rigid Pavement Design
- Soil support and subsurface preparation
- Mixture content and pavement thickness
- Joint design

Maintenance and Rehabilitation
- Goals
- Distresses
- Preservation techniques
- Rehabilitation practices

Sustainability of Pavements
- Carbon footprint analysis
  - Treatment
  - Fuel
  - Raw materials
  - Traffic delays
- Environment and LEED credits
  - Recycled materials
  - Runoff filtration zones
  - Pervious pavements

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Pavement Design, Construction and Maintenance
Lombard, IL and Online - Wednesday, October 13, 2021

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Learning Objectives

You'll be able to:

Take an in-depth look at both flexible pavement design and rigid pavement design.

Analyze the principles of pavement design.

Explore economics and lifecycle analysis.

Discuss pavement maintenance and rehabilitation.

Learn about other pavement topics including pavement drainage, HMA mix design, and parking lots/low volume roads.

Live, In-Person Seminar and Live Webinar

Pavement Design, Construction and Maintenance

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Understand the goals of pavement design, review terminology and explore consulting guidelines and standards

Analyze soil support and subsurface preparation, mixture content, and more regarding flexible pavement design

Examine joint design, soil support and subsurface preparation, mixture content, and more regarding rigid pavement design

Identify maintenance goals, and consider distresses that may require rehabilitation

Learn about other pavement topics including pavement drainage, HMA mix design, and pavements for parking lots/low volume roads.

Continuing Education Credits

Professional Engineers
6.5 PDHs

Architects
6.5 HSW CE Hours

AIA
6.5 LU|HSW

Landscape Architects
6.5 HSW CE Hours

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International Code Council
.65 CEUs (Sitework)

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Faculty

Michael Ayers, Ph.D., P.E. *President of Global Pavement Consultants, Inc.*
Dr. Ayers is the president of Global Pavement Consultants, Inc. (GPC). GPC conducts business worldwide and concentrates primarily on pavement design, construction, evaluation, full-depth reclamation with cement, rehabilitation and concrete overlays. Dr. Ayers specializes in pavement analysis using the AASHTO Mechanistic-Empirical Pavement Design Procedure, forensic analysis, just-in-time-training prior to project start-up, troubleshooting both during and after construction and development and delivery of pavement and materials-related seminars and short courses.

Dr. Ayers has extensive experience in the design and construction of concrete overlays, concrete roadways, unbound and stabilized base courses including cement-treated bases, lean concrete bases, full-depth reclamation (FDR) utilizing existing asphalt materials and roller-compacted concrete (RCC). He recently completed development of the Aggregates and Portland Cement Concrete training modules for the Federal Highway Administration (FHWA) Highway Materials Engineering course, the design chapter for the new FDR Guidelines and several chapters in the new FHWA Guide for Concrete Pavement Distress Assessments and Solutions. He also serves as an expert witness on a variety of design and materials-related issues focusing on concrete and RCC pavements. He has substantial experience in field investigations and forensic studies and has conducted numerous large-scale investigations using the MIT SCAN B2 for determining embedded steel location and alignment in concrete pavements.

Dr. Ayers has been very active in the industry serving on a variety of National Cooperative Highway Research Program (NCHRP) expert tasks groups, FHWA projects and university-based research programs. He instructs design and construction courses for the University of Wisconsin, Halfmoon Education, FHWA and others. He is currently working on overseas projects in Belarus, Ukraine, and in Moldova, as well as numerous projects across the U.S.

Prior to founding GPC in January 2011, Dr. Ayers served as a director for the American Concrete Pavement Association (ACPA), in Rosement, Illinois. He managed the contractor-based education and training program and provided technical services for ACPA as well as contributing to a variety of projects for both the public and private sectors. He has also served as a university professor at Oklahoma State University, a division manager at ERES Consultants and a group leader at Applied Research Associates, Inc.

Seminar/Webinar Information

Hyatt Place Chicago
- Lombard/Oak Brook
2340 South Fountain Square Drive
Lombard, IL 60148
(630) 932-6501

Registration
8:00 - 8:30 am CDT

Lunch (on your own)
12:45 - 1:45 pm CDT

Morning Session
8:30 am - 12:45 pm CDT

Afternoon Session
1:45 - 4:30 pm CDT

Tuition

$289 for individual registration
$239 for three or more registrants from the same company at the same time.

Included with your registration: *PDF Seminar Manual. A printed manual is available for an additional cost upon request. Please call to order.*

How to Register

- Visit us online at www.halfmoonseminars.org
- Mail-in or fax the attached form to 715-835-6066
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This seminar offers 6.5 PDHs to professional engineers and 6.5 HSW continuing education hours to architects in all states. It offers 6.5 HSW continuing education hours to landscape architects licensed in most states. HalfMoon Education is not seeking landscape architect approval in Florida, New Jersey, or North Carolina.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida (Provider No. 0004647), Indiana (License No. CE21700059), Maryland, New Jersey (Approval No. 24GP00000700), and North Carolina (S-0130). HalfMoon Education is deemed an approved continuing education sponsor for New York engineers, architects, and landscape architects via its registration with the American Institute of Architects Continuing Education System (Regulations of the Commissioner §68.14(i)(2), §69.6(i)(2), and §79-1.5(i)(2)). Courses approved by the AIA/CES qualify for Florida architects. Other states do not preapprove continuing education providers or courses.

This course has been approved by the American Institute of Architects Continuing Education System for 6.5 LU|HSW (Sponsor No. J885) and the Landscape Architecture Continuing Education System for 6.5 HSW PDHs. Only full participation is reportable to the AIA/CES and LA CES.

The International Code Council has approved this event for .65 CEUs in the specialty area of Sitework (Preferred Provider No. 1232).

In-person attendance will be monitored, and attendance certificates will be available after the seminar for most individuals who complete the entire event. Attendance certificates not available at the seminar will be mailed to participants within fifteen business days.

Completion certificates will be awarded to participants who complete this event online, respond to all prompts, and earn a passing score (80%) on the quiz that follows the presentation (multiple attempts allowed).

Additional Learning

Land Description Systems
- Tues, Sept 14, 2021|11:00 am - 2:15 pm CDT
- Wed, Sept 15, 2021|11:00 am - 2:15 pm CDT

Retaining Wall Design and Slope Stabilization Techniques
- Wed, Sept 15, 2021|8:30 am - 5:00 pm CDT

Deep Excavations
- Fri, Sept 17, 2021|8:30 am - 4:30 pm CDT

Managing Construction Projects
- Mon, Sept 20, 2021|8:30 am - 4:30 pm CDT

Stormwater Best Management Practices
- Mon, Sept 20, 2021|8:30 am - 5:00 pm CDT

Landscaping for Pollinators
- Thurs, Sept 23, 2021|10:00 am - 12:00 pm CDT

A Roadmap to Ethical Issues in Construction: A Primer for Design Professionals
- Wed, Sept 29, 2021|11:00 am - 1:00 pm CDT

For more information
and other online learning opportunities visit:
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COVID Health Considerations: In accordance with guidance from the Centers for Disease Control and Prevention (CDC), and depending on COVID transmission rates, those who are fully vaccinated may be able to gather indoors without masks. Those not yet fully vaccinated should continue social distancing and wearing facemasks indoors. Please review CDC guidance for recent developments.

Registration

Pavement Design, Construction and Maintenance

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How to Register

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No walk-in registrations will be accepted.
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( ) **Webinar:** I will be attending the presentation live, online

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