

Credit Information

Stormwater Basins and Underground Systems

This webinar is open to the public and 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 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)). Other states do not preapprove continuing education providers or courses.

The American Institute of Architects Continuing Education System has approved this course for 6.5 LU | HSW (Sponsor No. J885). Only full participation is reportable to the AIA/CES.

The Landscape Architecture Continuing Education System has approved this course for 6.5 HSW PDHs. Only full participation is reportable to the LA CES.

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

The Association of State Floodplain Managers has approved this event for 6.5 CECs for Certified Floodplain Managers. ASFPM approval qualifies this course for Texas floodplain managers.

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).

Structural Forensic Engineering

This webinar is open to the public and offers 7.0 PDHs to professional engineers and 7.0 HSW continuing education hours to architects in all states.

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The American Institute of Architects Continuing Education System has approved this course for 7.0 LU | HSW (Sponsor No. J885). Only full participation is reportable to the AIA/CES.

The International Code Council has approved this event for .7 CEUs in the specialty area of Building (Preferred Provider No. 1232).

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).

Live, Interactive Webinars

- Stormwater Basins and Underground Systems
- Structural Forensic Engineering

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Live, Interactive Webinars

Stormwater Basins and Underground Systems

- Tuesday, December 14, 2021 | 9:00 am - 4:30 pm CST

Structural Forensic Engineering

- Wednesday, December 29, 2021 | 10:00 am - 1:45 pm CST

- Thursday, December 30, 2021 | 10:00 am - 1:45 pm CST

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AIA: 6.5 LU | HSW Landscape Architects: 6.5 HSW CE Hours
LA CES: 6.5 HSW PDHs Floodplain Managers: 6.5 ASFPM CECs
International Code Council: .65 CEUs (Sitework)



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AIA
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Stormwater Basins and Underground Systems

Tuesday, December 14, 2021 | 9:00 am - 4:30 pm CST (incl. a 30-min break)

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Agenda

Stormwater Management System Objectives and Design Considerations

- Regulatory requirements associated with stormwater water quality and quantity
 - Clean Water Act
 - Federal, state and local requirements
- Complying with stormwater regulations
- Preparing a Stormwater Quality Management Plan (SWQMP)
 - Stormwater goals
 - Design considerations

Stormwater Basin/Underground System Design

- Site consideration and assessment
- Selection criteria
 - Site considerations
 - Watershed and topographical considerations
 - Stormwater contents
 - Community and environmental factors

Choosing Basin Types

- Detention basins
 - Stormwater routing, sediment handling, outlet
 - Pre-treatment
 - Maintenance and operations
- Retention ponds
 - Stormwater routing, sediment handling, soils and vegetation
 - Pre-treatment
 - Maintenance and operations
- Forebay infiltration basins
 - Stormwater routing, sediment and chemical handlings, soils and vegetation
 - Pre-treatment
 - Maintenance and operations

Choosing an Underground Storage System

- Detention/infiltration systems
 - Type of storage – chambers, stone, custom design
 - Pre-treatment
 - Stormwater routing, infiltration, sizing, design criteria

Sustainable Best Practices in Stormwater Detention/Retention

- Green infrastructure practices
- Naturalizing detention/retention basins
- Small detention areas vs. large detention area
- Rain gardens
- Underground storage and water reuse options

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Agenda Day One

Designing and Constructing to Prevent Failures

- Building codes - History and relevance
- Design standards
- Contemporary, archaic, and uncommon structural systems
- Hierarchy of authority
- Design engineering vs. forensic engineering

Understanding Causes of Structural Failures

- Lessons learned from historic failures
- Design errors
- Material deficiencies
- Improper usage or modification
- Combination of causes
- Defective construction
- Excessive loading
- Deterioration and degradation

Understanding the Forensic Engineering Process

- Definition of forensic engineering
- Documenting the failure
- Conducting investigation and research
- Test protocols and measurements
- Determining causation and responsibility
- Learning from failure

Agenda Day Two

Understanding the Forensic Engineering Process, Continued

Forensic Examination of Structures

- Investigation of steel structures
- Investigation of wood structures
- Investigation of concrete structures
- Investigation of masonry and building facades
- Investigation of foundation failures
- Load testing and instrumentation

Using Forensic Engineering Information

- Examining the forensic engineering report
- Impact of forensic engineering information on post-failure disputes
- Use of forensic engineering information in mediation, arbitration and litigation
- The forensic engineer as consultant, expert and witness

Ethical Issues in Structural Engineering

- NSPE Code of Ethics for Engineers
- Ethical dilemmas

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Faculty

Stormwater Basins and Underground Systems

B. Scott Southall *Principal at Earthcycle Design*

Mr. Southall, RLA, LEED AP BD+C, ASLA, AICP, is a principal with Earthcycle Design, LLC, a landscape architecture, urban planning and community resilience design firm based in Lexington, Kentucky. He is a professional landscape architect in Kentucky and Ohio, a LEED accredited professional BD+C with the US Green Building Council (USGBC), and a certified planner with the American Planning Association. Mr. Southall has over 25 years of professional experience in planning, design and project management. He has applied his sustainability design experience on a multitude of projects ranging in magnitude and complexity including: urban and site design for institute and community facilities with an emphasis on education and public outreach pertaining to green infrastructure (GI), low impact development (LID) and sustainable sites. Mr. Southall has presented on an assortment of sustainable practices and topics at statewide, regional and national conferences. In 2008, he shared the State of Kentucky Governor's Award for Environmental Leadership. In 2009, he received an Environmental Commission Award from Lexington-Fayette Urban County Government for his environmental outreach and sustainable design efforts in Lexington. Mr. Southall graduated from the University of Kentucky with a bachelor of science degree in Landscape Architecture. He serves as one of 12 Sustainable Champions for American Planning Association (APA), serves on the steering committee of Empower Lexington (a climate action plan to reduce CO2), and serves as treasurer for LFUCG's Environmental Commission. In March 2017, Mr. Southall completed a three-day Climate Reality Leadership Corps training to become a Climate Reality Leader and served as mentor in October 2017. He is a past chapter president and Trustee of Kentucky ASLA, past Board of Directors member for Southeast Stormwater Association (SeSWA), and Market Leadership Advisory Board (MLAB) member for USGBC Kentucky. Mr. Southall is a member of American Society of Landscape Architects and the American Planning Association.

Denise O'Meara, RLA, LEED AP, ASLA *Landscape Architect at Earthcycle Design*

Ms. O'Meara, RLA, LEED AP, ASLA, has extensive project experience in a variety of sectors, including general master planning, strategic planning, parks and recreational design for municipal and state government entities, K-12 and post-secondary educational institution and hospital master planning and site design, nature-based learning and play environments, and sustainable stormwater management. She brought the concept of sustainable building and site design through LEED accreditation early on to her firm. As a teacher and mentor, she has sought to give clients and up-and-coming designers a knowledge base and affinity for designing in a manner responsive to natural systems. Ms. O'Meara has a deep understanding that conservation of green space is a requirement for stormwater management, which is made possible through sustainable planning for livability within our population centers. She has written educational and informative articles and guides about the processes of land protection, and she has researched and put into practice those BMPs and conservation tools which benefit sustainability and resiliency.

Structural Forensic Engineering

James D'Aloisio, P.E., SECB, LEED AP *Principal with Klepper, Hahn & Hyatt in Syracuse*

Mr. D'Aloisio is a principal with Klepper, Hahn & Hyatt, a structural engineering, landscape architecture, and building envelope services firm in East Syracuse, New York. A graduate of Rensselaer Polytechnic Institute, Mr. D'Aloisio is a registered professional engineer in New York and Massachusetts, and he has been certified by the Structural Engineering Certification Board (SECB) since its inception in 2007. He is a member and past president (1997-1998) of the American Society of Civil Engineers (ASCE) Syracuse Section, and a member of the American Institute of Steel Construction (AISC), the American Concrete Institute (ACI), the National Society of Professional Engineers (NSPE), and the Structural Engineers Association of New York State (SEaONY). Mr. D'Aloisio is a member of ASCE/SEI's Frost-Protected Shallow Foundations Committee, the Structural Condition Assessment of Existing Buildings Committee, and the Sustainability Committee, and he is a member of Committee ACI 318-N. He is a trained infrared thermographer. Mr. D'Aloisio received the Order of the Engineer at Syracuse University in 1997. His 30-plus years' experience as a consulting structural engineer has primarily involved the design of new building structures, additions, and modifications, and analyses, assessments, and investigations of structures and facades. Specialties include detailing to minimize structural thermal bridging, the use of alternative structural systems and design approaches that can reduce the CO2 emissions of structures and foundations. Mr. D'Aloisio has been involved in numerous special inspection projects, including developing statements of special inspections, performing inspections, and facilitating discrepancy resolutions. He has also performed over 150 structural forensic investigations, and he has presented over 300 times.