Learning Objectives

You’ll be able to:

- Define the characteristics of and applications for different types of retaining walls including traditional cantilevered walls, timber walls and gravity walls.
- Identify and quantify the forces that act on retaining walls.
- Discuss the factors that impact slope stability and can lead to slope failure.
- Evaluate crucial slope stabilization techniques including regrading, reinforcement and ground improvement.

Types of Retaining Walls

Traditional cantilevered retaining walls
- Reinforced concrete walls
- Reinforced concrete masonry walls
Soldier pile and lagging walls
Traditional timber walls
Traditional gravity walls
Reinforced soil retaining walls
Anchored retaining walls (tie-backs, soil nailing, etc.)
Temporary retaining walls
Over-steepened reinforced slopes
Gabion walls
Crib walls
Private-sector vs. highway retaining wall systems

Retaining Wall Design

Soil design parameters
Lateral earth pressure
External stability
- Sliding
- Overturning
- Bearing capacity
- Settlement
- Scour
Internal stability
Global stability
Special considerations for tiered retaining walls
Backfill
Groundwater
Service life
Design software

Slope Stabilization

Science of slope stability
Surficial vs. deep seated slope stability
Long term vs. short term stability
Slope stabilization techniques
- Regrading
- Excavation and replacement
- Slope reinforcement/pinning
- Ground improvement
- Toe retaining walls

Continuing Education Credits

Architects & Landscape Architects
7.0 HSW Continuing Ed. Hours
7.0 AIA HSW Learning Units
7.0 LA CES HSW PDHs

Professional Engineers
7.0 PDHs

Floodplain Managers
7.0 ASFPM CECs
Terry McCleary  
McCleary Engineering specializes in geotechnical investigations and recommendations for foundation design, retaining walls, slope stability, embankments, pavement design and rehabilitation, subgrade treatments and other engineering services such as drainage studies. McCleary Engineering is Illinois Department of Transportation (IDOT) prequalified in the general geotechnical services, subsurface explorations, structure geotechnical reports and construction inspection categories.

Mr. McCleary has nearly 19 years of construction and geotechnical engineering experience with IDOT. Six years were spent on the front lines of contract administration in construction as a resident engineer on bridge and roadway projects which included construction layout, material inspection and construction practice inspection. For the last 13 years at IDOT, Mr. McCleary was the District #1 geotechnical engineer, working with hands-on subsurface investigations, analysis, design, and inspection of geotechnical engineering projects, and on-the-spot problem solving. He has served on numerous statewide committees involving abutment design, piling, aggregate subgrades, subgrade stability, pavement under drains and pavement rehabilitation. He served on a nationwide Federal Highway Administration (FHWA) pooled fund study on deep soil mixing technology. In 2009, Mr. McCleary left IDOT to work full time at his company, McCleary Engineering. Mr. McCleary is a licensed professional engineer in the states of Illinois, Indiana, Iowa, Georgia, Oklahoma, and Wisconsin. He is a member of the Deep Foundations Institute, the Pile Driving Contractors Association and the Illinois Association of Highway Engineers.

Here’s what past attendees had to say about the program and presenter Terry McCleary:

“Terry is a good presenter. Great content and photos.” — Landscape Architect

“Extremely smart, engaging.” — Project Manager (Construction)

“Really enjoyed the seminar. Mr. McCleary is a very impressive authority on this subject.” — Structural Engineer

**Seminar Information**

**Sheraton Milwaukee Brookfield Hotel**  
375 South Moorland Road  
Brookfield, WI 53005  
(262) 364-1100

**Tuition**

$279 for individual registration  
$259 for three or more registrations.

Included with your registration:  
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**How to Register**

- Visit us online at www.halfmoonevents.org  
- Mail or fax the attached form to 715-835-6066  
- Call customer service at 715-835-5900

**Cancellation**

Cancel at least 48 hours before the start of the seminar, and receive a full tuition refund, minus a $59 service charge for each registrant. Cancellations within 48 hours will receive a credit toward another seminar or the self-study package. You may also send another person to take your place.

**Continuing Education Credit Information**

This seminar is open to the public and offers 7.0 PDHs to professional engineers and 7.0 HSWs to continuing education hours to architects and landscape architects in most states, including Wisconsin. Educators and courses are not subject to preapproval in Wisconsin.

HalfMoon Education is deemed an approved continuing education sponsor for architects and landscape architects in New York. HalfMoon Education is an approved continuing education sponsor for engineers in Florida, Indiana (License No. CE217005599), Maryland, New Jersey, New York (NYSED No. 35), North Carolina, and North Dakota.

This seminar is approved by the American Institute of Architects for 7.0 HSW Learning Units [Sponsor No. 7885] and the Landscape Architecture Continuing Education System for 7.0 HSW PDHs. Only full attendance can be reported to the AIA/CECs and LA/CEs.

The Association of State Floodplain Managers has approved this course for 7.0 CECs.

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

**Additional Learning**

**Webinar Series**

- **Residential Energy Code**  
  - Introduction to the Residential Energy Code and Mandatory Requirements  
  - Thurs., Dec. 6, 2018, 11:00 AM - 12:30 PM CST  
  - IECC Residential Building Envelope Requirements  
  - Thurs., Dec. 6, 2018, 1:00 - 2:30 PM CST  
  - IECC Residential HVAC Requirements  
  - Fri., Dec. 7, 2018, 8:00 AM - 12:30 PM CST  
  - International Energy Conservation Permit Pathways  
  - Fri., Dec. 7, 2018, 1:00 - 2:30 PM CST

- **Deep Foundations**  
  - Deep Foundation Site Evaluation  
  - Weds., Dec. 12, 2018, 11:00 AM - 12:00 PM CST  
  - Overview of Deep Foundations  
  - Weds., Dec. 12, 2018, 12:30 - 2:00 PM CST  
  - Deep Foundation Pile Design  
  - Thurs., Dec. 13, 2018, 11:00 AM - 12:30 PM CST  
  - Deep Foundation Installation and Testing  
  - Thurs., Dec. 13, 2018, 1:00 - 2:00 PM CST

- **Stormwater Management Systems**  
  - Stormwater Infrastructure Practices  
  - Weds., Dec. 19, 2018, 11:00 AM - 1:15 PM CST  
  - Infiltration Management Techniques  
  - Thurs., Dec. 20, 2018, 11:00 AM - 1:15 PM CST

- **Seismic Design and Construction**  
  - Seismology and Building Codes  
  - Fri., Dec. 21, 2018, 11:00 AM - 1:15 PM CST  
  - Seismic Design of Building Structures  
  - Fri., Dec. 28, 2018, 11:00 AM - 3:30 PM CST

For more information visit: www.halfmoonevents.org/webinars/

**Registration**

**Retaining Wall Design and Slope Stabilization Techniques**

**Brookfield, WI - Tuesday, January 15, 2019**

**How to Register**

- **Online:**  
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- **Phone:**  
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**Complete the entire form. Attach duplicates if necessary.**

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