

Agenda

Presented by *Bill Simpson, PE*

Retaining Walls: What They Do and How They Do It

Identifying and quantifying forces acting on retaining walls

- Weight of the wall
- Pressure from retained soil
- Pressure on foundation of wall
- Characteristics of soil
- Loads on retained soil
- Impacts of water—liquid and frozen
- Vibration
- Expansion/contraction

Equations and examples

Geosynthetics and Retaining Walls, Embankments and Slopes

Calculations and software

Types of retaining walls

Embankments

Slopes

Materials

Alternatives

Exercise

- Learn to visually identify geosynthetics as to type, method of manufacture, relative strength, relative permeability, and relative cost

Slope Stabilization Techniques

Examining slope failures

Slope stability analysis

Stabilization techniques

- Unloading
- Drainage
- Reinforcement
- Mechanical stabilization

Slope Stabilization Case Histories

Fundamental soil characteristics and slope instability

Engineering mechanics underlying slope instability

Geologic conditions and construction practices

Field observations to distinguish types of instability

Construction practices to improve or restore stability

Retaining Wall/Slope Failures and Fixes

How to prevent a potential problem or failure

How to recognize a potential problem or failure in the field

Typical causes of problems or failures with geotechnical structures

Case studies/examples of failures and repairs

Retaining Wall Design and
Slope Stabilization Techniques
Norfolk, VA - Thursday, February 27, 2020



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Learning Objectives

You'll be able to:

Identify and quantify forces that act on retaining walls.

Explore different types of retaining walls and applications for each.

Identify geosynthetics as to type, method of manufacture, relative strength, permeability and cost.

Analyze slope stability and evaluate slope stabilization techniques, including unloading, reinforcement and mechanical stabilization.

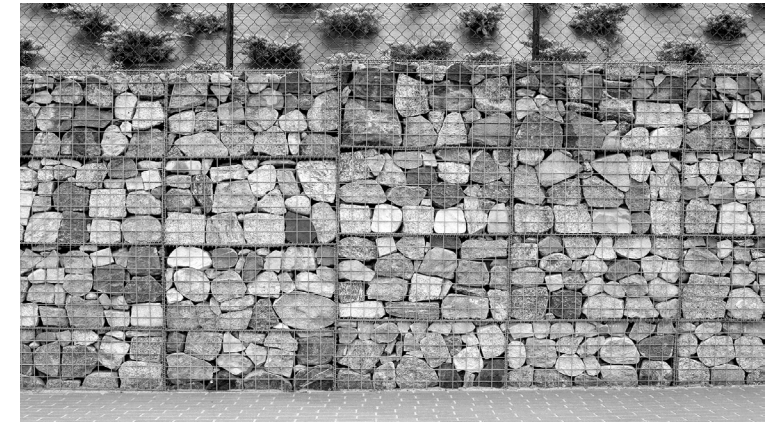
Review case studies of retaining wall and slope failures and repairs.



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Retaining Wall Design and Slope Stabilization Techniques

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Review the forces acting on retaining walls, including pressure from retained soil, and consider the impacts of groundwater

Understand typical causes of failure for slopes and retaining walls and learn to prevent them

Identify geosynthetics as to type, method of manufacture, relative strength, permeability and cost

Get tips on preventing retaining wall/slope failures

Utilize slope stabilization techniques such as unloading and mechanical stabilization

Continuing Education Credits

Professional Engineers

6.5 Continuing Ed. Hours

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6.5 AIA LU|HSW

Landscape Architects

6.5 Continuing Ed. Hours (HSW)

6.5 LA/CES HSW PDHs

Floodplain Managers

6.5 ASFPM CECs

Contractors

Non-Credit Continuing Ed.



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Faculty

Bill Simpson, PE *Engineered Earth Solutions, LLC*

Mr. Simpson is a geotechnical structure design specialist at Engineered Earth Solutions, LLC. He has designed and reviewed shop drawings for construction and repair of earth structures in the public and private sectors in over 30 states, and he consistently works on more than 1,200 projects and 10 million square feet each year. He performs site visits for new project reconnaissance, construction verification, and construction assistance. Mr. Simpson manages, supervises, instructs, and mentors a team of staff engineers to ensure strict deadlines are met for construction schedules while maintaining design and analysis accuracy. He works with owners, site designers, and contractors to provide designs which are not only structurally sufficient but also financially responsible. Mr. Simpson earned his B.S.C.E. and M.S.C.E. degrees from Georgia Institute of Technology.

Here’s what past attendees have to say about the program and speaker Bill Simpson:

“Love seeing the case studies (photos). Helps bring theory to life.” – *Architect*

“He kept us thinking. Relates very well to participants. Very personable.” – *Architect*

“The best seminar - great on theory and application.” – *Civil Engineer*

“Great seminar to understand retaining wall/slope stabilization.” – *Landscape Architect*

Seminar Information

Doubletree by Hilton

1500 North Military Highway
Norfolk, VA 23502
(757) 466-8000

Registration

8:00 - 8:30 am
Morning Session
8:30 am - 12:00 pm

Lunch (On your own)

12:00 - 1:00 pm
Afternoon Session
1:00 - 4:30 pm

Tuition

\$289 for individual registration

\$269 for three or more simultaneous registrations.

Included with your registration:

Complimentary continental breakfast and printed seminar manual.

Receive a reduced tuition rate of \$101 by registering to be our on-site coordinator for the day. For availability and job description, please visit www.halfmoonseminars.org.

How to Register

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

Cancellations: Cancel at least 48 hours before the start of the seminar, and receive a full tuition refund, minus a \$39 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.

Additional Learning

Webinar Series

Foundations in Cold Regions

- **Introduction to Foundations in Cold Regions**
Thurs., Feb. 20, 2020, 11:00 AM - 12:30 PM CST
- **Shallow Foundation Design in Cold Regions**
Thurs., Feb. 20, 2020, 1:00 - 2:30 PM CST
- **Deep Foundation Design in Cold Regions**
Fri., Feb. 21, 2020, 11:00 AM - 12:30 PM CST
- **Foundation Construction in Cold Regions**
Fri., Feb. 21, 2020, 1:00 - 2:00 PM CST

Soil Mechanics and Slope Stability

- **Soil Investigation and Classification**
Tues., Feb. 25, 2020, 11:00 AM - 1:00 PM CST
- **Reviewing Hydraulic and Mechanical Properties of Soils**
Tues., Feb. 25, 2020, 1:30 - 3:00 PM CST
- **Determining and Increasing Bearing Capacity**
Wed., Feb. 26, 2020, 11:00 AM - 1:00 PM CST
- **Determining and Increasing Slope Stability**
Wed., Feb. 26, 2020, 1:30 - 3:00 PM CST

Designing for Climate Resilience

- **Current and Anticipated Climate Effects on Structures and Communities**
Thurs., Feb. 27, 2020, 11:00 AM - 12:30 PM CST
- **Assessing the Impact of Sea Level Rise, Changing Temperature and Changing Weather Patterns**
Thurs., Feb. 27, 2020, 1:00 - 3:00 PM CST
- **Studying the Impact of Extreme Weather Events on Structures and Communities**
Fri., Feb. 28, 2020, 11:00 AM - 12:30 PM CST
- **Adapting Sites, Outdoor Spaces, New Construction and Existing Buildings to Withstand Extreme Weather Events**
Fri., Feb. 28, 2020, 1:00 - 3:00 PM CST

For more information and other online learning opportunities visit: www.halfmoonseminars.org/webinars/

Continuing Education Credit Information

This seminar is open to the public and offers 6.5 continuing education hours to engineers, architects and landscape architects (HSW) in most states, including Virginia. Educators and courses are not subject to preapproval in Virginia.

This event has been approved by the American Institute of Architects Continuing Education System for 6.5 LU|HSW (Sponsor No. J885) and by the Landscape Architecture Continuing Education System for 6.5 HSW PDHs. Full attendance is required for course attendance reporting to AIA/CES and LA/CES. Visit www.halfmoonseminars.org for complete AIA/CES information under this course listing.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida, Indiana (License No. CE21700059), Maryland, New Jersey (Approval No. 24GP00000700), North Carolina, and North Dakota. HalfMoon Education is deemed an approved continuing education sponsor for New York engineers, architects and landscape architects.

The Association of State Floodplain Managers has approved this event for 6.5 CECS.

This course offers a non-credit continuing education opportunity to construction contractors. It has not been preapproved in any state with contractor continuing education requirements.

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.

Can’t Attend? Order the Manual and Audio from the Live Seminar as a Self-Study Package!

Audio recordings of this seminar are available for purchase starting at \$269. See registration panel for more information and please refer to specific state licensing rules or certification requirements to determine if this learning method is eligible for continuing education credit.

Registration

Retaining Wall Design and Slope Stabilization Techniques

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How to Register

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715-835-5900

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Complete the entire form. Attach duplicates if necessary.

Registrant Information

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Additional Registrants:

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Occupation: _____

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Phone: _____

Email address is required for credit card receipt, program changes, and notification of upcoming seminars and products. Your email will not be sold or transferred.

() I need special accommodations. Please contact me.

Tuition

() **I will be attending the live seminar.** Single Registrant - **\$289.00**. Three or more registrants from the same company registering at the same time - **\$269.00** each.

() **I am not attending.** Please send me the self-study package:

Downloadable MP3 Audio/PDF Manual for **\$269.00**.

CD/Manual Package for **\$289.00**. USB/Manual Package **\$289.00**.

(S&H included. Please allow five weeks from seminar date for delivery)

Checks: Make payable to HalfMoon Education Inc.

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