

# Agenda

Presented by Daniel P. Messmer, P.E., D. GE

Overview of Cut and Fill Slope Operations

- Purposes of cut and fill operations
- Standards and best practices
- Site planning

Rock Cut Design

- Exploration of site geology
- Rock types and properties
- Rock mass properties
- Testing procedures
- Groundwater investigations
- Determining design slope angles
- Handling special conditions and formations
- Creating benches
- Rockfall catchment design
- Handling water
- Blasting and excavation

Soil Cut Design

- Exploration of site soils
- Soil types and properties
- Determining slope angles
- Groundwater investigations
- Handling spoil
- Drainage design

Fill Slope Design

- Determining slope angles
- Fill material needs
- Drainage
- Slope reinforcement

Cut Slope and Fill Slope Repair and Case Studies

- Cut and fill slope repair
- Case studies

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## Cut Slope and Fill Slope Design, Construction and Repair

Live, Interactive Webinar - Friday, April 5, 2024

NON-PROFIT  
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EAU CLAIRE, WI  
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HalfMoon Education Inc.  
PO Box 278  
Altoona, WI 54720-0278



## Learning Objectives

You'll be able to:

- Comply** with standards and best practices for cut slope and fill slope design and construction.
- Identify** rock types and rock mass, and determine design slope angles.
- Create** rock cut slope benches and design rockfall catchment.
- Handle** water and drainage on rock cut and soil cut slopes.
- Identify** fill material needs for fill slopes.
- Handle** cut slope and fill slope repairs.



## HalfMoon Education Live Webinars Cut Slope and Fill Slope Design, Construction and Repair

Live, Interactive Webinar - Friday, April 5, 2024



- Identify** the important purposes of cut and fill operations
- Explore** rock cut design
- Handle** rockfall catchment design

- Manage** spoil from soil cuts
- Learn** how to design drainage solutions
- Get tips on** repairing cut slopes and fill slopes

Continuing Education Credits

- Professional Engineers**  
6.0 PDHs
- Architects**  
6.0 HSW CE Hours  
AIA Pending

- Landscape Architects**  
6.0 HSW CE Hours  
6.0 LA CES HSW PDHs
- International Code Council**  
.6 CEUs (Sitework)



# Webinar Information

|                                               |                                                 |
|-----------------------------------------------|-------------------------------------------------|
| <b>Log into Webinar</b><br>8:30 - 9:00 am CST | <b>Second Session</b><br>11:30 am - 1:30 pm CST |
| <b>First Session</b><br>9:00 - 11:00 am CST   | <b>Break</b><br>1:30 - 2:00 pm CST              |
| <b>Break</b><br>11:00 - 11:30 am CST          | <b>Afternoon Session</b><br>2:00 - 4:00 pm CST  |

**Tuition**  
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# Faculty

**Daniel P. Messmer, P.E., D. GE**  
*Project Manager with The Gateway Engineers, Inc., in Pittsburgh*  
Mr. Messmer has over 30 years of engineering experience in analysis, design, plan/specification development, and project management/personnel supervision for geotechnical, foundation and structural engineering projects in the transportation, industrial, municipal and commercial fields of civil engineering. Throughout his career he has placed an emphasis on quality control and staff training. Mr. Messmer is a member of the American Society of Civil Engineers, the American Concrete Institute, the American Society of Highway Engineers and the Society of American Military Engineers. He earned his B.S. degree in Civil Engineering from the University of Pittsburgh. Mr. Messmer was accepted into the Academy of Geo-Professionals in 2013.

# Credit Information

This webinar is open to the public and is designed to qualify for 6.0 PDHs for professional engineers, 6.0 HSW continuing education hours for licensed architects, and 6.0 HSW continuing education hours for landscape architects in all states that allow this learning method. Please refer to specific state rules to determine eligibility.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida (Provider License No: CEA362), 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 and architects via its registration with the American Institute of Architects Continuing Education System (Regulations of the Commissioner §68.14(i)(2) and §69.6(i)(2)). Other states do not preapprove continuing education providers or courses.

The American Institute of Architects Continuing Education System has approved HalfMoon Education as a sponsor of continuing education (Sponsor No. J885). This course has been submitted for AIA CES approval and is currently pending. Only full participation is reportable to the AIA CES.

The Landscape Architecture Continuing Education System has approved this program for 6.0 HSW PDHs. Only full participation is reportable to the LA CES.

The International Code Council has approved this event for .6 CEUs in the specialty area of Sitework (Preferred Provider No. 1232).

Attendance will be monitored, and attendance certificates will be available after the webinar for those who attend the entire course and score a minimum 80% on the quiz that follows the course (multiple attempts allowed).

**On-Demand Credits**  
The preceding credit information only applies to the live presentation. This course in an on-demand format may not be eligible for the same credits as the live presentation; please consult your licensing board(s) to ensure that a structured, asynchronous learning format is appropriate. The following pre-approvals may be available for the on-demand format upon request:  
6.0 HSW LUs (AIA)

# Additional Learning

**Hot-Mix Asphalt Pavement Design, Maintenance and Rehabilitation**  
- Tuesday, February 27, 2024 | 8:30 am - 4:00 pm CST

**Learn about Remote Pilot Training and Certification**  
- Tuesday, February 27, 2024 | 9:00 am - 1:45 pm CST  
- Wednesday, February 28, 2024 | 9:00 am - 1:45 pm CST

**Planning for Electric Vehicle Charging Infrastructure for Level 2 and DC Fast Charge**  
- Wednesday, February 28, 2024 | 12:00 - 2:00 pm CST

**Fundamentals of Geographic Information Systems (GIS) for Planners, Engineers and Land Surveyors**  
- Thursday, February 29, 2024 | 9:00 am - 4:20 pm CST

**Trails and Greenways Design, Construction, and Management**  
- Thursday, February 29, 2024 | 9:00 am - 4:00 pm CST

**NPDES Stormwater Management Program 2024**  
- Thursday, March 7, 2024 | 8:30 am - 4:30 pm CST

**Tracking the Railroads**  
- Thursday, March 7, 2024 | 11:00 am - 3:30 pm CST

**Federal and State Nutrient Reduction Strategies and Plans**  
- Monday, March 11, 2024 | 9:00 am - 4:30 pm CDT

**Working with Old Deeds and Descriptions**  
- Monday, March 11, 2024 | 12:00 - 3:30 pm CDT

**From 1620 to 2024: Metes and Bounds Land Description Workshop**  
- Friday, March 15, 2024 | 9:00 am - 4:00 pm CDT

**Stormwater Best Management Practices**  
- Friday, March 15, 2024 | 9:00 am - 4:15 pm CDT

**Using RSMeans Data to Create Cost Estimates**  
- Friday, March 15, 2024 | 9:00 am - 4:30 pm CDT

**Sustainable Site Design**  
- Wednesday, March 20, 2024 | 8:30 am - 4:00 pm CDT

**Public Water Systems**  
- Thursday, March 21, 2024 | 9:00 am - 4:30 pm CDT

**The Arborist Short Course: Advanced Tree Knowledge for Better Tree Care**  
- Friday, March 22, 2024 | 9:00 am - 4:30 pm CDT

**Open Channels: Hydraulics, Design and Construction**  
- Monday, March 25, 2024 | 9:00 am - 4:30 pm CDT

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