

Agenda

Presented by Edward Fronapfel MSCE, PE, CBIE, CFCC, Fellow NAFE

Science of Structures and Soils

- Typical loads on shallow foundations
- Typical loads on slabs
- Soil mechanics and effects on structures
 - Soil properties
 - Bearing capacity
 - Soil settlement
 - Effects of water, frost and freeze/thaw cycle

Foundation Features, Materials and Functionality

- Design and construction of shallow foundations
- Design and construction of slab foundations
- Design and construction of basements and retaining walls
- Design and construction of specialty features: walk-outs, partially-exposed foundations

Evaluating Foundation/Retaining Wall/Slab Damage

- Inspecting, monitoring and assessing damage
 - Settlement
 - Frost heave
 - Expansive soils
 - Shrinkage
 - Subsurface erosion
 - Subsidence
 - Cracking
 - Utility failures
 - Poor drainage

Stabilizing and Repairing Foundations/Retaining Walls/Slabs

- Piers, piles
- Soil tiebacks
- Carbon fibers
- Soldier beams
- Crack repair
- Secant-tangent walls
- Underpinning
- Reconstruction

Case Studies

- Developing stabilization and/or repair strategies for real-life problems
- Registrants are welcome to bring their own foundation problems for discussion

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Foundation and Retaining Wall Damage and Repair

Live, Interactive Webinar - Friday, March 22, 2024

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Altoona, WI 54720-0278



Learning Objectives

You'll be able to:

Understand soil mechanics and effects on structures.

Discuss design and construction of shallow foundations, slab foundations, basements, retaining walls, and specialty features.

Inspect, monitor and assess damage from causes including settlement, frost heave, and poor drainage.

Apply techniques for stabilizing and repairing foundations, retaining walls and slabs.

Explore case studies of actual foundation problems, and bring your own foundation problems for discussion.



HalfMoon Education Live Webinars

Foundation and Retaining Wall Damage and Repair: Science, Materials, and Techniques

Live, Interactive Webinar - Friday, March 22, 2024



Review soil mechanics and the impact of water and frost on foundations

Explore the design and construction of slabs and shallow foundations

Evaluate damage caused by expansive soils, shrinkage, utility failures, settlement and poor drainage

Stabilize and repair foundations and slabs using piers, piles, carbon fibers, crack repair and underpinning

Participate in a discussion of foundation damage case studies

Continuing Education Credits

Professional Engineers
6.5 PDHs

Architects
6.5 HSW CE Hours
6.5 AIA LU | HSW

Landscape Architects
6.5 HSW CE Hours
6.5 LA CES HSW PDHs

International Code Council
.65 CEUs (Building)



Webinar Information

Log into Webinar 8:30 - 9:00 am CDT	Break 12:15 - 12:45 pm CDT
Morning Session 9:00 am - 12:15 pm CDT	Afternoon Session 12:45 - 4:30 pm CDT

Tuition
\$319 for individual registration.
\$289 for two or more registrants from the same company at the same time.
Included with your registration: PDF seminar manual.

How to Register

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Faculty

Edward Fronapfel MSCE, PE, CBIE, CFCC, Fellow NAFE
Chief Executive Officer, SBSA, LLC, A Charles Taylor Company

Mr. Fronapfel is the CEO and founder of SBSA which is now owned by Charles Taylor. The firm provides consulting regarding the construction, design, and quality assurance associated with new and existing structures. Mr. Fronapfel's expertise includes geo-hydrology, hydrology, development, civil engineering, structural engineering, building envelope, commissioning, and the interdisciplinary-required practices in the behavior of foundations, substructures, superstructures, and building envelopes in the as-built environment.

Mr. Fronapfel provides consulting to designers, builders, developers, attorneys, and real estate professionals. For over 30 years, his work has included ground-up construction and post-construction evaluation of thousands of structures across the United States. Mr. Fronapfel is licensed in 39 states and Puerto Rico. The firm includes architects, engineers, construction managers, constructors, and reserve study specialists to allow the firm to provide the majority of consulting from in-house staff.

Mr. Fronapfel has been a distinguished lecturer for ASHRAE, is an adjunct professor at the University of Denver, Burns School, and a lecturer for the College of Contract Management, U.K. He also is a speaker for a number of organizations including EEBA, DOE, AIA, HBA, ICC-Colorado, and others.

Mr. Fronapfel's experience includes providing more than 700 depositions, hundreds of arbitrations, and more than 110 trial testimonies.

The materials provided herein are based on SBSA's and Mr. Fronapfel's experience in the observation, evaluation, analysis, and reconstruction of properties that have experienced undesired serviceability and performance results.

Additional Learning

- Deep Dive into Constructed Stormwater Wetlands**
- Thursday, February 22, 2024 | 10:00 am - 12:00 pm CST
- Designing and Building for Coastal Resiliency**
- Thursday, February 22, 2024 | 8:30 am - 4:00 pm CST
- Introduction to Surface Spreading Managed Aquifer Recharge**
- Friday, February 23, 2024 | 10:00 am - 1:00 pm CST
- Pruniversity: The Short Course on Pruning and Training Trees**
- Friday, February 23, 2024 | 9:00 am - 4:30 pm CST
- Slope Stabilization and Landslide Prevention**
- Friday, February 23, 2024 | 9:00 am - 4:30 pm CST
- Storm Sewer, Sanitary Sewer, and Natural Gas Systems Design for Non-Plumbing Professionals**
- Friday, February 23, 2024 | 10:00 am - 1:30 pm CST

Credit Information

This webinar is open to the public and is designed to qualify for 6.5 PDHs for professional engineers, 6.5 HSW continuing education hours for licensed architects, and 6.5 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 this course for 6.5 HSW LUs (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 Building (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:
6.5 HSW LUs (AIA), 6.5 HSW PDHs (LA CES)

- Focus on Volatile Organic Compounds (VOCs)**
- Monday, February 26, 2024 | 2:00 - 4:00 pm CST
 - Hot-Mix Asphalt Pavement Design, Maintenance and Rehabilitation**
- Tuesday, February 27, 2024 | 8:30 am - 4:00 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
 - Dam Design, Construction, and Maintenance**
- Thursday, February 29, 2024 | 9:00 am - 4:30 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 - 4:00 pm CST
- For more information and other online learning opportunities visit:
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