Agenda

Geotechnical Considerations
Soil Behavior
USDA/NRCS Soil Regions
When is a Geotechnical Investigation Required?
What Constitutes a Geotechnical Investigation?
Selecting a Geotechnical Engineer
What Does a Geotechnical Engineer Need to Know?
How to Read/Interpret a Geotechnical Report
Soil Remediation/Design Options

Foundations
Engineered Foundations
Foundation Types
What is the Purpose of Piers/Piles?
Foundation Construction
Selecting a Structural Engineer
Engineering Considerations
Pier/Pile Types

Foundation Performance and Evaluation
Guidelines for Evaluation
Performance Standards
Performance Analysis
Modes of Deformation
Mis-applied Standards

Foundation Evaluation Case Studies
Case Study #1: Saved by Original Construction Elevations
Case Study #2: Re-Analyzed with OCE Survey
Case Study #3: As-built Tilt
Case Study #4: Previous Repairs Affect Evaluation

Common Causes of Foundation Movement
Potential Effects of Plumbing Leaks
Information Learned from Plumbing Reports
Site Investigation
Method of Analysis
Soil Behavior
Additional Investigation

Plumbing Leak Case Studies
Case Study #1: Slab-on-Grade Investigation #1
Case Study #2: Slab-on-Grade Investigation #2
Case Study #3: Pier-and-Beam Investigation #1
Case Study #4: Pier-and-Beam Investigation #2
Case Study #5: Previous Elevation Survey #1
Case Study #6: Previous Elevation Survey #2

Forensic Causation Case Studies
Case Study #1: Fill Settlement
Case Study #2: Previous Land Use
Case Study #3: Pre-Existing Vegetation
Case Study #4: Fill Settlement
Case Study #5: Pre-Existing Vegetation
Case Study #6: Negative Drainage
Case Study #7: Vegetation
Case Study #8: Remediated Building Pad
Case Study #9: Dishing

Foundation Remediation
Remediation Guidelines
Structural Remedial Measures for Slab-on-Grade
Structural Remedial Measures for Pier-and-Beam
Remediation Methodology
Non-Structural Remedial Measures

Post-Remediation and Maintenance
Warranties
Floor Elevations
Owner Education
Plumbing Testing
Moisture Maintenance

Remediation Case Studies
Case Study #1: Watering
Case Study #3: Moisture Barrier
Case Study #2: Mechanical Lowering
Case Study #4: Full Underpinning

Additional Levels of Investigation (How to Avoid Becoming a Case Study)

Foundations on Expansive Soils:
Design Considerations, Evaluation, and Remediation
San Antonio, TX - Thursday, June 14, 2018

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Learning Objectives

You'll be able to:

Read and interpret a geotechnical report.

Identify types of engineered foundations, review design considerations and get tips on maintenance.

Discuss guidelines for evaluating foundation performance.

Explore common causes of foundation movement and evaluate remedial measures.

Review case studies and get tips on how to avoid becoming a case study.

Foundations on Expansive Soils:
Design Considerations, Evaluation, and Remediation

San Antonio, TX - Thursday, June 14, 2018



Learn how to read and interpret a geotechnical report

Review types of engineered foundations

Understand performance standards and review guidelines for foundation evaluation

Consider structural and non-structural remedial measures

Participate in forensic causation case studies

Continuing Education Credits

Architects
7.5 HSW CEPHs/CE Hours
7.5 AIA HSW Learning Units

Professional Engineers
7.5 PDHs

Professional Geoscientists
7.5 Continuing Ed. Hours

Contractors
Non-Credit Continuing Ed.

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Faculty

Brian C. Eubanks, M.S.C.E., P.E., D.F.E. is the founder and principal structural engineer of Paragon Structural Engineering, LTD, (PSE) a structural design and forensic investigation firm based in Plano, Texas. Mr. Eubanks leads a technical staff comprised of professional engineers, graduate engineers, project managers, and field technicians in the structural design and forensic investigation of planned and existing structures. Mr. Eubanks' structural design services include analysis and engineering of large, custom single-family residences, multi-family apartment/condominium complexes, light commercial facilities, warehouses and ancillary structures (retaining walls, screen walls, and swimming pools). He also performs construction phase operations of the aforementioned structural systems to verify design compliance. Mr. Eubanks has performed engineering designs for thousands of residential and light commercial structures as well as hundreds of retaining walls, screen walls, and pools. His structural forensic services include investigations concerning soil-structure interactions, performance of structural systems, evaluation of building envelopes, and determination of cause, origin, and extent of peril damage. Soil-structure interaction assessments include claims relating to design, construction, historic/current site effects, and moisture source influences. Structural system assessments include claims relating to current or latent design and construction issues. Building envelope assessments include claims related to roof coverings, veneers, flashing, and weather resistive barriers. Peril assessments include claims relating to hurricane damage, tornado damage, lightning strikes, earthquakes, explosions, fire damage, and vehicle-structure collisions. Mr. Eubanks has performed hundreds of forensic investigations, and he has authored dozens of expert reports for use in mediation, arbitration, and/or litigation. In addition, he has provided expert witness testimony in dozens of mediations, arbitrations, and court cases. Mr. Eubanks is a licensed professional engineer in 10 states and is a board-certified diplomate in forensic engineering by the National Academy of Forensic Engineers. He also serves as a member of the American Society of Civil Engineers Texas Section's Residential Foundation Investigation and Design committee, the Post-Tensioning Institute's Structural (DC-10A) and Construction/Maintenance (DC-10D) subcommittees, and the ASTM International Committees on Concrete Aggregates (C-09), Forensic Engineering (E-58), Soil and Rock (D-18), and Wood (D-07) Committees. Mr. Eubanks aims to educate with regard to soil-structure interaction, the performance and evaluation of structural systems, the evaluation of building envelopes, and the identification of causes and origins of damage to new and existing structures, as well as remedial solutions.

Seminar Information

Norris Conference Center
618 NW Loop 410 Ste 207
San Antonio, TX 78216
(210) 738-0040

Registration
8:00 - 8:30 am

Morning Session
8:30 am - 12:15 pm

Lunch (on your own)
12:15 - 1:15 pm

Afternoon Session
1:15 - 5:30 pm

Tuition

$279 for individual registration
$259 for three or more registrations.
Each registration includes a complimentary continental breakfast and printed seminar manual.

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 CD/manual package. You may also send another person to take your place.

Continuing Education Credit Information

This seminar is open to the public and offers 7.5 PDHs to professional engineers and 7.5 HSW continuing education hours (CEPHs) to architects in all states, excluding Florida architects. Educators and courses are not subject to pre-approval in Texas.

The American Institute of Architects has approved this event for 7.5 HSW Learning Units (Sponsor No. J885). Only full attendance can be reported to the AIA/CES.

HalfMoon Education is deemed an approved continuing education sponsor for New York architects. HalfMoon Education is an approved continuing education sponsor for engineers in Florida, Indiana, Maryland, New Jersey (Approval No. 24GP00000700), New York (NYSED Sponsor No. 35), North Carolina, and North Dakota.

This course offers 7.5 continuing education hours to Texas professional geoscientists. Educators and courses are not subject to pre-approval.

This seminar offers a non-credit continuing education opportunity to contractors. It has not been approved by any state contractor licensing entity for continuing education approval.

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

Additional Learning

Webinar Series

National Electrical Code: Onsite Power Generation and Distribution

- **National Electric Code: Onsite Power Generation and Distribution Part 1**
  Weds., June 6, 2018, 11:00 AM - 2:15 PM CDT
- **National Electric Code: Onsite Power Generation and Distribution Part 2**
  Thurs., June 7, 2018, 11:00 AM - 2:15 PM CDT

HVAC Series

- **Heating, Ventilation and Air Conditioning Principles**
  Thurs., June 7, 2018, 11:00 AM - 1:00 PM CDT
- **HVAC System Design Considerations**
  Thurs., June 7, 2018, 1:30 - 2:30 PM CDT
- **Evaluating HVAC Systems and Equipment**
  Fri., June 8, 2018, 11:00 AM - 12:00 PM CDT
- **HVAC System Controls and Techniques**
  Fri., June 8, 2018, 12:30 - 2:30 PM CDT

Introduction to Vibrations

- **Introduction to Vibrations**
  Thurs., June 14, 2018, 11:00 AM - 1:00 PM CDT
- **Eigenvalues, Eigenvectors and Motion**
  Thurs., June 14, 2018, 1:30 - 3:00 PM CDT
- **Analysis and Test Methods**
  Fri., June 15, 2018, 11:00 AM - 12:30 PM CDT
- **Designing for Vibration and Failure Analysis**
  Fri., June 15, 2018, 1:00 - 2:30 PM CDT

Pedestrians and Bicycle Transport Planning

- **Introduction to Current Conditions and Trends in Biking and Walking**
  Thurs., June 21, 2018, 11:00 AM - 12:30 PM CDT
- **Engineering and Infrastructure: Design for Walkability and Bikeability**
  Thurs., June 21, 2018, 1:00 - 2:30 PM CDT
- **Developing a Walking and Biking Plan, Part I**
  Fri., June 22, 2018, 11:00 AM - 12:30 PM CDT
- **Developing a Walking and Biking Plan, Part II**
  Fri., June 22, 2018, 1:00 - 2:30 PM CDT

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

Can't Attend? Order the CD/Manual Package:
An audio recording of this seminar is available for $289 (including shipping). Allow five weeks from the seminar date for delivery. Please refer to specific state licensing rules or certification requirements to determine if this learning method is eligible for continuing education credit.

Registration

Foundations on Expansive Soils: ***Design Considerations, Evaluation, and Remediation***
San Antonio, TX - Thursday, June 14, 2018

How to Register

Online:
www.halfmoonseminars.org

Phone:
715-835-5900

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HalfMoon Education Inc.,
PO Box 278, Altoona, WI
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Complete the entire form. Attach duplicates if necessary.

Registrant Information

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Additional Registrants:

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Tuition

( ) **I will be attending the live seminar.** Single Registrant - **$279.00**. Three or more registrants from the same company registering at the same time - **$259.00** each.

( ) **I am not attending.** Please send me the CD manual package for **$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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