Agenda

Presented by Jarrod C. Burns, M.S., P.E.

Designing and Constructing to Prevent Failures
- Importance of standards and codes
- Design professional duties and the design process
- Legal and economic impacts of failures
- Purpose of forensic engineering

Understanding Causes of Structural Failures
- Lessons learned from historic failures
- Design errors
- Defective construction
- Material deficiencies
- Excessive loadings
- Deterioration and degradation

Understanding the Forensic Engineering Process
- Documenting the failure
- Conducting investigation and research
- Test protocols and tests
- Determining causation and responsibility
- Learning from failure

Forensic Examination of Structures
- Investigation of steel structures
- Investigation of wood structures
- Investigation of concrete structures
- Investigation of masonry and building facades
- Load testing and instrumentation of existing structures

Using Forensic Engineering Information
- Examining the forensic engineering report
- Impact of forensic engineering information on post-failure disputes
- Use of forensic engineering information in mediation, arbitration and litigation
- The forensic engineer as consultant, expert and witness

Ethical Issues in Structural Engineering
- Design responsibilities that are exclusively duties for engineers
- Practicing only in areas of competence
- Adopting new materials/techniques: due diligence
- Duty to disclose potential problems

Learning Objectives

You’ll be able to:

- Explain the importance of building codes and code compliance.
- Consider the legal, economic and public health impacts of construction failures.
- Describe common causes of structural failures, including design errors, material deficiencies, defective construction, and excessive loadings.
- Explore forensic examination processes for steel, wood, concrete and masonry structures.
- Use forensic engineering information to learn from past engineering and design failures.
- Discuss ethical issues, such as the need to practice only in areas of competence and the duty to disclose potential problems during design and construction.

Structural Forensic Engineering

Austin, TX - Tuesday, March 24, 2020

Understanding the causes of structural failures
Explore the forensic engineering process
Examine forensic engineering reports
Discuss the impact of forensic engineering information on post-failure disputes

Continuing Education Credits

- Professional Engineers: 7.0 PDHs
- Architects: 7.0 HSW CEPHs/CE Hours, 7.0 AIA LU|HSW
- Contractors: Non-Credit Continuing Ed.

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Jarrod C. Burns, M.S., P.E.

Mr. Burns is the founding principal of BSC Forensic Services, LLC, and he practices as a structural forensic investigator, holding professional engineer licensure in 25 states and counting. He has a unique background including education, business development, technology development, engineering design, forensic engineering, and teaching. Since 2011, BSC has grown to a nationally-recognized firm under Mr. Burns’ leadership with experts licensed throughout the United States in fields such as structural, civil, mechanical, electrical, mold, industrial hygiene, drones, as well as fire and explosion. Mr. Burns is the author of two patents pending pertaining to forensic investigations, and he has testified in multiple trials, depositions, arbitrations, and/or mediations.

Mr. Burns’ forensic experience includes structural design, failure analysis, construction defect, premises safety/injury (including trips and slips), water losses, wind assessments, hail assessments, flooring assessments, foundation performance evaluations (including movement attributed to plumbing leaks), building envelops, air and water penetration (spray testing), and much more. Mr. Burns and BSC staff under his responsible charge perform inspections on commercial, residential, industrial, and government facilities as well as automotive, mechanical, electrical, and plumbing systems routinely. His experience has also included work as a structural engineer on nationwide projects, as a project manager for a civil engineering firm in Houston and Dallas, Texas, and as an adjunct instructor in the Civil Engineering Department at the University of Houston. Mr. Burns holds a B.S. degree in Civil Engineering from the University of Arkansas and an M.S. degree in Civil Engineering from the University of Texas at Arlington, and he is a past-president of Tau Beta Pi, AR-Alpha.

### Seminar Information

**Hilton Garden Inn Downtown**

500 North Interstate 35  
Austin, TX 78701  
(512) 480-8181

**Tuition**

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

*Included with your registration:* Complimentary continental breakfast and printed seminar manual

**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  
11:15 - 5:00 pm

### Continuing Education Credit Information

This seminar is open to the public. It offers 7.0 PDHs to professional engineers in all states. Educators and courses are not subject to preapproval in Texas.

This course offers 7.0 HSW continuing education hours to architects in all states, including 7.0 CEHs to Texas architects. Educators and courses are not subject to preapproval in Texas. The American Institute of Architects Continuing Education System has approved this course for 7.0 LU|HSW (Sponsor No. 3785). Visit www.halfmoonevents.org for complete AIA information under this course listing. Only full attendance is reportable to the AIA/CES. HalfMoon Education is an approved continuing education sponsor for New York engineers and architects. This course offers a non-credit continuing education opportunity to construction contractors. It has not been approved by any state contractor licensing entity.

### 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**
  - Fri., Feb. 28, 2020, 11:00 AM - 12:30 PM CST
- **Bearing Capacity**
  - Wed., Feb. 26, 2020, 11:00 AM - 12:30 PM CST
- **Determine and Increasing Slope Stability**
  - Wed., Feb. 26, 2020, 1:30 - 5:00 PM CST

### Webinar Series

- **Ethical Issues for Engineers**
  - • Complying with Rules of Professional Conduct  
  - Feb. 14, 2020, 12:00 - 1:00 PM CST
- **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  
  - Feb. 21, 2020, 11:00 AM - 12:30 PM CST
  - • Foundation Construction in Cold and Extremes  
  - 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 - 7:00 PM CST
  - • Reviewing Hydraulic and Mechanical Properties of Soils  
  - Tues., Feb. 25, 2020, 1:30 - 5:00 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 - 5:00 PM CST

### Additional Learning

- **Adapting Sites, Outdoor Spaces, New Construction and Other Online Learning Opportunities:**
  - Fri., Feb. 14, 2020, 12:00 - 1:00 PM CST
  - Fri., Feb. 21, 2020, 11:00 AM - 12:30 PM CST
  - Thurs., Feb. 20, 2020, 11:00 AM - 12:00 PM CST
  - Wed., Feb. 26, 2020, 1:30 - 5:00 PM CST
  - Tues., Feb. 25, 2020, 1:30 - 3:00 PM CST

### How to Register

- **Visit us online at www.halfmoonevents.org**
- **Mail-in or fax the attached form to 715-835-6066**
- **Phone:** 715-835-5900
- **Fax:** 715-835-6066
- **Email:** 715-835-5900

### 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 - $279.00 each
- I am not attending. Please send me the self-study package:
  - Downloadable MP3 Audio/PDF Manual for $279.00
  - CD/Manual Package for $299.00
  - USB/Manual Package $299.00
  - (S&H included. Please allow five weeks from seminar date for delivery)

### Checks

Checks are payable to HalfMoon Education Inc.

### Credit Card

- **Maincard:** Mastercard, Visa, American Express, or Discover
- **Expiration Date:**
- **CVV2 Code:**

### Additional Registrants:

- **Name:**
- **Occupation:**
- **Phone:**
- **Address:**
- **City:**
- **State:**
- **Zip:**

- **Company/Firm:**
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### Registration

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