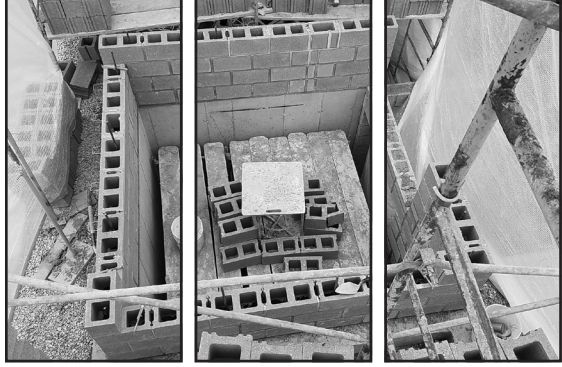


Department of Engineering Professional Development

432 North Lake Street Madison, Wisconsin 53706

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Structural Masonry Design: Advanced Methods for Cost-Competitive Design

May 21 – 22, 2018 ■ Madison, Wisconsin



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Learn to implement cost-competitive masonry designs using advanced masonry analysis techniques and design tools.





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Attending Benefits

This course focuses on advanced masonry analysis techniques and design methods along with the current design tools available to efficiently implement cost-competitive masonry designs. You will also learn detailing and construction methods to assure that your design is constructed successfully in the field. Selection of masonry materials for cost-effective design will also be discussed.

Learning Objectives

- Review masonry materials and elements
- Discuss masonry design codes, Strength Design (SD) procedures and Allowable Stress Design (ASD) procedures
- Complete simple design calculation manually or using spreadsheets
- Learn about advanced masonry analysis techniques including finite element analysis
- Learn how computer tools can be applied to more complex masonry designs
- Design masonry connections and bracing

Who should take this course?

Engineers, architects, construction managers, and contractors with structural design experience who want to learn masonry design methods or take their existing masonry design skills to the next level.

Earn Continuing Education Credit

By participating in this course, you will earn 15 Professional Development Hours (PDH) or 1.5 Continuing Education Units (CEU).

Instructor Information

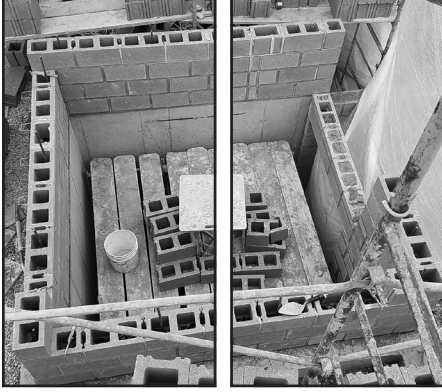
Samuel M Rubenzer, PE, SE, is the founder of FORSE Consulting in Eau Claire, Wisconsin. He has 20 years of experience in structural engineering. He has worked as a structural engineer for design firms in Minnesota and Wisconsin, designing a wide variety of structures including masonry buildings. Sam also spent five years at RAM International and Bentley Systems providing software training to structural engineers. At FORSE Consulting he assists other structural engineers with designs on a variety of projects and building types. Sam has also served as a structural engineering consultant to Structural Masonry Coalitions in several states since 2010.

Sam has expertise in a variety of structural design software packages. He has spoken at structural engineering conferences on the use of design software, including structural masonry analysis and design software. Sam has a MBA from Marquette University and a bachelor's degree in Civil Engineering from the University of Minnesota. He is a licensed structural engineer (SE) in Illinois and a professional engineer in many Midwestern states.

Scott Walkowicz, PE is the owner of Walkowicz Consulting Engineers, Lansing, Michigan. He consults with engineers, architects, contractors and owners on behalf of the Michigan Masonry Coalition, the Indiana/Kentucky Structural Masonry Coalition and the New Jersey Structural Masonry Coalition. He designs specialty structures and conducts structural investigations of existing structures. He holds B.S. and M.S. degrees in Civil/Structural Engineering from Clemson University as well as a B.S. degree in Architecture from Lawrence Technological University.

Scott is a Past President of The Masonry Society (TMS) and is a member of several committees for the TMS 402/602 *Building Code Requirements and Specification for Masonry Structures* where he participates in revisions to the structural masonry code. He has analyzed and designed buildings across the U.S. and internationally, including designs with unique and creative uses of structural masonry.

Pat Conway, AIA, is Wisconsin Director and National Education Director for the International Masonry Institute. Pat is a registered architect in Wisconsin with expertise in masonry plan and specification review, designing and detailing durable masonry walls, air barriers, movement joints, rainscreen walls, troubleshooting, adhered veneers and high performing wall systems. He earned a bachelor's degree in Architecture from the University of Minnesota – Twin Cities.



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Course Outline

Day 1

Introduction

Benjamin J. Jordan PE, Program Director
University of Wisconsin – Madison
Madison, Wisconsin

Structural Masonry – Overview and History

Pat Conway, Wisconsin Director
International Masonry Institute
Mt. Horeb, Wisconsin

System Selection – Where Masonry Fits In

Sam Rubenzer, Founder
FORSE Consulting
Eau Claire, Wisconsin

Basics of Structural Masonry Design

- Materials
- Assemblies

Scott Walkowicz, Principal

Walkowicz Consulting Engineers, LLC
Lansing, Michigan

Definition of Masonry Elements

- Walls, pilasters, beams, columns
- Lintels for masonry walls
- Movement joints – how, why, where
- Masonry shear wall design

Sam Rubenzer

Masonry Codes & Standards

- Overview of codes
- Strength Design (SD) procedures
- Allowable Stress Design (ASD) procedures

Scott Walkowicz

Design Examples by Hand or Simple Spreadsheet

- Typical examples of each design element
- Common design errors and misconceptions

Sam Rubenzer and Scott Walkowicz

Tools for Masonry Analysis and Design

- Analysis and design with Finite Element Analysis software

Sam Rubenzer

Day 2

Software Review for Structural Masonry Design

- Examples on how to use software
- Component design tools
- Finite Element Analysis design tools

Design examples with software

- Examples that stretch perceived limits including multi-story and slender wall examples

Sam Rubenzer

Connection to Masonry Walls

- Connection details
- Design examples

Sam Rubenzer

Bracing of Masonry Walls

- Bracing details
- Design examples

Scott Walkowicz

Structural Masonry Design that Supports Architecture

- Examples of potential solutions to support architectural design

Scott Walkowicz

Masonry Notes and Details

- Cost studies
- Real project examples

Sam Rubenzer and Scott Walkowicz

Panel Discussion: Perspectives on Masonry Design from Owner, Architect, CM/GC and Mason Contractor

Schedule

Registration and course will be held at:

The Pyle Center
702 Langdon Street
Madison, WI

Day 1

7:30 a.m. to 8:00 a.m. Registration
8:00 a.m. to 5:00 p.m. Class

Day 2

8:00 a.m. to 5:00 p.m. Class

Midmorning and midafternoon refreshment breaks and noon lunch will be provided all three days.



Have Questions?

Call toll free 800-462-0876 and ask for

Program Director: Benjamin J. Jordan

bjordan@wisc.edu, 608-265-4478

Program Support: Theresa Rodger

theresa.rodger@wisc.edu, 608-262-5361

or email custserv@epd.wisc.edu

General Information

Fee Covers Notebook, course materials, break refreshments, lunches, and certificate

Cancellation If you cannot attend please notify us at least seven days prior to the course start, and we will refund your fee. Cancellations received after that date and no-shows are subject to a \$150 administrative fee. You may enroll a substitute at any time before the course starts.

Location This course will be held at the Pyle Center, 702 Langdon Street, Madison, WI.

Accommodations

Graduate Madison

(rates starting at \$139/night)

800-589-6285 or 608-257-4391

Group code: 1805205STRU

Room requests after 4/15/2018 will be subject to availability.

Madison Concourse Hotel and Governor's Club

(rates starting at \$136/night)

800-356-8293 or 608-257-6000

Group code: 678536

Room requests after 4/27/2018 will be subject to availability.

Enroll Today!

Internet:

epd.wisc.edu/RA01568

Phone:

800-462-0876 or 608-262-1299 (TDD 265-2370)

Fax:

800-442-4214 or 608-265-3448

Mail to:

The Pyle Center, Attn: Engineering Registration

702 Langdon Street

Madison, Wisconsin 53706

Course Information

To enroll, or for complete course schedule, instructor biographies, cancellation policies, discounts and other information, visit epd.wisc.edu/RA01568.

Please enroll me in

- Structural Masonry Design: Advanced Methods for Cost-Competitive Design Course #T234**

May 21 – 22, 2018 in Madison, Wisconsin

Fee \$995

- I cannot attend at this time, please send me brochures on future courses.

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