Masonry Seminar

Wednesday, March 13
Iowa State Fairgrounds

presented by the Masonry Institute of Iowa

Elwell Family Food Center and
William B Knapp
Varied Industries Conference Rooms
Iowa State Fairgrounds
3000 E Grand Ave.
Des Moines, IA 50317

EARN UP TO 6.5 HOURS OF CONTINUING EDUCATION!

Register online at
www.masonryinstituteofiowa.org.

Masonry Institute of Iowa (MII) is a Registered Provider with the AIA Continuing Education System. Participants in all workshops presented by MII earn Learning Unit Credits.

2019 Masonry Institute of Iowa
Masonry Seminar Schedule

PRICING
Registration includes continental breakfast, two breaks, lunch and up to 6.5 hours of learning credits.

Early Bird Pricing - on/before Tuesday, March 5
MII Member - $50 first registration; $40 for additional
Non-member Architects/Engineers - $60 per registration
General Contractors (Morning only)- $20 per registration

Pricing after March 5
MII Member - $60 first registration; $50 for additional
Non-member Architects/Engineers- $75 per registration
General Contractors (Morning only)- $25 per registration

Register ONLINE

www.masonryinstituteofiowa.org

The morning programs are more hands-on and geared towards the construction community as a whole - architects, engineers, mason contractors, project managers and general contractors. The afternoon is classroom learning opportunities with architectural and engineering tracts.

SCHEDULE OF EVENTS

7:15 - 7:45am: Registration and Continental Breakfast at the Elwell Center, Iowa State Fairgrounds (ISF)

7:45 - 8:45am
Bricklaying 101
Speaker: Bricklayers and Allied Craftworkers Local 3
FOR CONTRACTORS, ENGINEERS, ARCHITECTS
Elwell Family Food Center
1 hour LU/HSW

Pick up the trowel and try your hand at laying brick. Learn firsthand how basic masonry materials come together to form durable and safe building components. Instructors will be on hand to assist attendees with a basic introduction on bricklaying and how one brick at a time come together to build real-world masonry systems.

8:45 - 9:45am
Assembly of a Masonry Wall
Speaker: Forrest & Associate, Mason Contractor
Location: Elwell Family Food Center
FOR CONTRACTORS, ENGINEERS, ARCHITECTS
Elwell Family Food Center
1 hour LU/HSW

This presentation provides a refresher on masonry wall assemblies. Wall mock-ups will be used to show attendees a properly designed, and built, masonry wall. Common design elements will be discussed along with what to look for when inspecting a masonry wall on the jobsite. This is a great show and tell session for designers as well as contractors.

Visit www.masonryinstituteofiowa.org for complete speaker bios.

9:45 - 10:00am - BREAK

10:00 - 11:00am
Masonry Case Studies: Challenges & Solutions
Speaker: Donald Harvey Jr, PE
Atkinson-Noland & Associates, Inc.
FOR CONTRACTORS, ENGINEERS, ARCHITECT
Elwell Family Food Center
1 hour LU/HSW

While we all strive for perfect design and execution, the reality of modern construction can bring with it challenges and errors, usually with several contributing factors. This presentation will examine three specific projects where masonry concerns arose. We will examine how the conditions were evaluated, the remedial approach, and what might have been possible to avoid the issues in the first place. We will examine a multifamily residential project with several waterproofing concerns, a church building with aesthetic and other issues, and a stone-clad high-rise structure experiencing cracking and spalling of the veneer after many years of excellent performance.

11:00am - 12:30 pm
Introduction to Thin Veneer Systems
Speaker: Iowa Stone Supply & TCC Materials
F0R CONTRACTORS, ENGINEERS, ARCHITECTS
Elwell Family Food Center
1.5 hour LU/HSW

There are several published thin veneer installation guidelines and this session will feature a Q&A on the Masonry Veneer Manufactured Association (MVMA) guidelines including a mock-up showing recommended system details. This program will discuss common installation failures and recommendations for proper installation as well as a hands-on demonstration on mortar designed for thin veneer systems.

Additional ENGINEERING TRACT
11:15am - 12:15pm
The Hygrothermal, Energy and Long Term Performance Benefits of Masonry Exterior Wall Assemblies
Speaker: Carly Wagner, PE
WDP & Associates Consulting
Varied Industry Conf. Room D
1 hour LU/HSW

Many designers and owners are aware of the thermal mass behavior exhibited by multiwythe masonry walls, referring to their ability to store heat and subsequently release the heat slowly over time acting as a thermal buffer. This performance is due to the masonry's heat capacity. Most designers and owners are not as widely aware of masonry's moisture storage capacity, which offers similar moisture buffering affects. This makes masonry walls more forgiving with respect to minor breeches in the weather resistive barrier. When considered in combination, masonry's heat capacity and moisture storage capacity yield a very tolerant assembly with respect to its potential for condensation and moisture accumulation related issues. This is unlike metal framed wall assemblies, which have virtually no moisture storage capacity and often become riddled with mold growth, corrosion and other moisture accumulation related issues when not properly designed and perfectly constructed. This program will examine the energy and energy code related benefits of modern day masonry wall assemblies (typically CMU with brick veneer) as compared to non-masonry assemblies (typically steel stud with alternative cladding systems). The hygrothermal behavior (simultaneous management of heat and moisture in the vapor form) of the masonry assembly will be compared to non-masonry assemblies. Additional benefits of the masonry assembly versus the non-masonry assembly with respect to life cycle costs and the long term performance directly related to energy management and hygrothermal performance will also be covered.

12:30 - 1:00pm - LUNCH
Varied Industries Conference Room C

1:00 - 2:00pm - ARCHITECTURE TRACT
Flashing & Moisture Control
Speaker: Bob Campbell, AIA
International Masonry Institute
Varied Industry Conf. Room C
1 hour LU/HSW

This course defines best practice for design and construction of moisture management systems for masonry cavity and veneer wall systems. The seminar focuses on flashing systems. Code require-

ments, system components, theory and workmanship are discussed.

1:00 - 2:00pm- ENGINEERING TRACT
Nondestructive Testing of Masonry
Speaker: Donald Harvey Jr., PE
Atkinson-Noland & Associates, Inc.
Varied Industry Conf. Room D
1 hour LU/HSW

Nondestructive evaluation methods are valuable approaches for evaluating conditions of existing masonry construction, and new construction, without causing damage. Masonry strength can also be measured in place, without resorting to destructive sample removal. Methods discussed during this seminar include mortar hardness testing, pulse velocity measurements, surface penetrating radar, infrared thermography, flatjack testing, and in situ shear tests, with special emphasis on applying these methods for diagnosing both historic and modern masonry construction. The programr will also cover the process of planning an investigation following published codes and guidelines.

2:00 - 2:15pm - BREAK

2:15 - 3:15pm - ARCHITECTURE TRACT
Tornado Shelter Design for Architects
Speaker: Bob Campbell, AIA
International Masonry Institute
Varied Industry Conf. Room C
1 hour LU/HSW

Tornado shelter design can be a complicated life-safety design issue. With the 2015 International Building Code (IBC), came new requirements for storm shelters; and additional requirements in the 2018 IBC. Most schools and critical facilities located in the 250-mph wind zone map, must contain a storm shelter meeting the ICC 500 (Standard for the Design and Construction of Storm Shelters) requirements. The FEMA P-361 (Design and Construction Guidance for Community Shelters) will also be addressed in this presentation. This presentation will address some "lessons learned", the new code requirements, and how masonry can be used to provide safe, resilient, cost effective storm shelter design solutions.

2:15 - 3:15pm - ENGINEERING TRACT
Mass Masonry Walls and IECC
Speaker: Carly Wagner, PE
WDP & Associates Consulting
Varied Industry Conf. Room D
1 hour LU/HSW

This program will address energy code compliance options for masonry walls. With respect to new construction, the various compliance paths will be explained, including a review for the mandatory versus prescriptive requirements. The U-factor alternative and continuous insulation requirements will be clarified. Additionally, the seminar will address retrofits of existing mass masonry walls, which require additional considerations with respect to the durability of the existing materials, especially when insulation and air barrier are installed on the interior of the walls. The need to evaluate masonry assemblies of existing buildings prior to modification is more essential than ever to ensure the benefits of changing the thermal and vapor resistance properties are not outweighed by the risks. A new standard, ASTM E 3069, "Standard Guide for Evaluation and Rehabilitation of Mass Masonry Walls for Changes to the Thermal and Moisture Properties of the Wall," addresses these considerations for retrofits. This program will discuss the application of the standard and the need for such guidelines based on the changes to the energy codes and offer resources that will improve the overall energy performance of existing mass masonry walls.

Visit www.masonryinstituteofiowa.org for complete speaker bios.