

## 2010 RMMI Lunch n Learn Schedule

### **1/6 /10 Understanding Masonry Materials**

This presentation covers the basics of masonry materials such as brick and concrete masonry units (CMU) including references to ASTM standards and technical notes produced by Brick Industry of America (BIA) and National Concrete Masonry Association (NCMA). This seminar will cover test methods for masonry assemblages. Material behavior is important because most damage in masonry buildings results from designs that do not consider internal stresses resulting from brick expansion, CMU shrinkage and appropriate details. Taught by Dr. Jenny Tanner

### **1/13/10 Insulation Strategies for Masonry Walls**

Architects are putting more and more emphasis on well-insulated walls. The new International Energy Code for Conservation now requires a continuous layer of insulation in the wall assembly. This layer of rigid insulation, typically installed in the air cavity, is very efficient but it can complicate installation of the air barrier and the masonry ties. This seminar will present several workable detail options and will teach you how to build them right. The class will also help you weigh your insulation options...for efficiency, for water repellency, for fire rating and for cost. Taught by Diane Travis, LEED AP

Feb. 3, 11:30 a.m. **"Increasing Moisture Resistance of Masonry Assemblies"**  
at RMMI, 686 Mariposa

With new masonry "sealers" hitting the market all the time, how should a designer specify products to increase the moisture resistance of a masonry assembly? Which products should be specified, if any? We will discuss the types of masonry water repellants available, what the differences are between the products, and what products are appropriate for various applications. We will also discuss the limitations of various products. Other aspects of water repellants such as appearance and maintenance will also be discussed. Taught by Donald Harvey, P.E.

Feb. 10, 11:30 a.m.: **Advanced Masonry Detailing**

For those who want to expand their range of knowledge, this seminar tells you how to build such unusual masonry conditions as masonry corbels, masonry arches, quoined corners, custom-molded brick units and Byzantine brick patterns. This is a strongly aesthetic presentation with tidbits of technical information sandwiched between slides of beautiful award-winning designs. Taught by Diane Travis, LEED AP

March 3, 11:30 a.m. **"New Design Software for Masonry"**

This software will help you:

EXPLORE & COMPARE different design codes (including 2009 IBC & 2008 MSJC), strength and allowable stress designs.

MAKE design decisions using a wealth of graphically displayed information.

DESIGN masonry walls & lintels more accurately and give your clients more economical designs.

REDUCE design time and potential for error.

UNDERSTAND unreinforced & reinforced masonry, shear walls, columns, design of reinforced concrete or masonry lintels, and valuable design fundamentals.

The latest version (Version 5.0) is expected to be released in March 2010 and includes the following changes from Version 4.1:

2008 MSJC Code

2009 IBC Code

Increased Design Shear Provisions for special reinforced shear walls  
Inclusion of axial load in calculation of cracking moment for deflection calculations  
Moment magnifier for strength design of unreinforced masonry walls loaded out of plane  
Limitations on increasing steel area in lintels with small amounts of reinforcing controlled by the 1.3Mcr provision  
User can select the type of shear wall (normal, intermediate, special reinforced) and applicable rmax and special shear provisions are triggered  
Other various changes in values in tables such as modulus of rupture, relationship between f'm and unit strength, etc.

Taught by Russ Brown, Instructor and co-author (with James K. Nelson) of the software.  
Professor Emeritus of Civil Engineering at Clemson University and former chairman of the Flexure and Axial Loads Subcommittee of the Masonry Standards Joint Committee.

March 10, 11:30 a.m. **“Designing Masonry Fire Barriers”**

Webinar \$25

When they have to draw up a fire-rated wall, most architects reach for the Underwriters' Lab Manual. Unfortunately, that approach doesn't work for concrete block because the closest source of UL-tested block is Boise, Idaho. Here in Colorado the easiest way to spec a fire wall is to use the tables listed in the International Building Code. The calculations are simple and you can use any block from any manufacturer to meet the required fire resistance.

Taught by Diane Travis, LEED AP.

April 7, 11:30 a.m. **“Problem Solving for Construction Issues”**

Every construction project has “issues” of one type or another. We will talk about some of the more common problems we run across and discuss strategies for correcting or addressing job site problems. Learn how to deal with cracks (structural and aesthetic), efflorescence, and color variations. Engineers will want to attend to see how to fix walls that are missing reinforcement and grout, and what to do if no movement joints were put into the building.

Taught by Mike Schuller, P.E.

4/14/10 **Diane's Top 10 Worst Details** (and How to Fix Them) (Diane Travis)

This seminar covers the ten worst masonry details Diane has seen over the years. Diane will also tell you how to modify these drawings into weather-tight construction details that can actually be built and will work for decades. It is a lot less painful to learn from somebody else's mistakes than to make your own. Diane calls this one her “maximum paranoia” lecture. Most architects attend cringing and hoping that none of their drawings show up on the screen.

5/5/2010 **Masonry Testing for Quality Assurance**

This seminar is a shortened version of RMMI's 4-hour training program for masonry test lab technicians. The content is customized for engineers and architects, to make sure they understand what masonry tests are required by the IBC and MSJC codes. Contractors may also be interested in attending to see how test lab technicians are supposed to be running masonry tests on the job site, and see the many ways test can go wrong. Wear your field clothes if you want to take part in making mortar, grout, and prism samples!

Taught by Mike Schuller or Shan Wo

5/12/10 **Residential Insulation, The Good, the Bad and the Ugly.**

In this seminar you learn about the current trends for walls, ceilings and floors in residential construction. We will explore various types of insulation based upon my experience. You will also learn from actual case studies.

Taught by John Kurowski

6/2/10 **“Whats New with Mortar and Grout”**

Just when you thought you knew all about mortar and grout, industry comes up with some new products that you should know about. We'll look at specialized mortars for cold weather construction, increased bond and grouts that won't hang up in congested cells. We will also look at how to properly specify mortar and grout and take a quick look at a new ASTM standard for specifying mortar for the repair of historic masonry.

Taught by Dave Woodham, P.E

#### 6/9/10 **Regionalism**

Taught by Diane Travis, LEED AP

#### 7/7/10 11:30 a.m. **How to make your masonry project run smoothly**

RMMI had some excellent panel discussions in 2009 to listen to concerns and comments by structural engineers and general contractors, and their thoughts on what the industry can do to help masonry projects go better. We'll recap the panel discussions and point out some of the important things engineers need to include in design documents to avoid some common project pitfalls.

Taught by Mike Schuller

#### 7/14/10 11:30 a.m. **Preview of the First International Green Construction Code**

Shahnaz has been involved with the development of this new "green" building code as the Chair of Service Life Plan Work Group. She will give you a preview of the main concepts in this code. IGCC is expected to be published in 2012, and may be adopted by various jurisdictions as the building code.

Panel discussion led by Shahnaz Jaffari, LEED AP

#### 8/4/10 11:30 a.m. **Specifying Masonry Get what You Want!**

Design Professionals spend a lot of time getting it right, why cut corners at Specification time? Specification is intended to establish Quality of Products and Execution of Building a Project. Many times Guide Specifications are used to expedite a necessary task, but a well executed of specification is the first step.

Understanding Reference Standards; Materials; Codes; Testing and Inspections; Material Selection; and Installation processes Is the Second step.

The third step is Enforcement. Come review this process to a better Masonry Project.

Taught by Ed Glock

#### 8/11/10 11:30 a.m. **Using Mock-ups to Establish Quality of Masonry project.**

The best way to establish a Quality Control program is to spend time designing a mock-up that not only shows off colors but relations ships of one material to another.

Samples can help with selection of material, but a mock-up can help with the "3-D" relationship not even visible in computer drawings.

Techniques of Workmanship of placing Units; Reinforcing; Grouting, Flashing; Anchor and Ties Caulking/Sealants; Cleaning and Water Resistant Coatings can be observed. Owner has an opportunity to "buy in" avoiding costly delays and arguments at Close-out/Commissioning. Come review this process to a better Masonry Project.

Taught by Ed Glock

#### 9/1/10 11:30 a.m. **Designing Load Bearing Masonry Walls**

TBA

#### 9/8/10 **Hands-on Building with Brick and Block**

TBA

10/06/10 **Masonry Litigation and How to Avoid It** (Dave Transue)

TBA

**10/13/10 Case Studies of Masonry Green Building**

This seminar will summarize the research results on case studies of green buildings that have used beautiful brick, block and stone products. Green attributes of masonry will be discussed from the point of view of architects who have designed these buildings. We will also look at a deeper vision in choosing green building materials.

**11/3/10 Designing Modifications to Existing Buildings**

Many engineers get involved in building renovations, adding new floors, new structural elements (with new loads!) or designing supports for new openings in existing walls. Learn about different strategies for strengthening existing masonry and some of the best techniques for supporting masonry above new door and window openings. Case studies will be included showing how historic masonry can be reinforced or post-tensioned to take new loads.

Taught by Mike Schuller

**11/10/10 Diagnosing Masonry Failure**

The class will help you evaluate masonry flaws and will teach you what is needed to repair and maintain a masonry building. The advice is applicable to any masonry building...your house, your school or your hospital. Most of the techniques are simple and require only rudimentary tools. Masonry buildings are designed to last a long time but you need to be able to spot and repair small problems before they become big ones.

Taught by Diane Travis

**12/1/10 Understanding Efflorescence**

What is that white powder on your building? How did it get there, what does it mean, and how do you get rid of it? Attend this seminar to learn about new building bloom, lime run, and all types of efflorescence staining. We will talk about cleaning efflorescence and what the designer and contractor can do to minimize the potential for efflorescence in masonry construction.

Taught by Mike Schuller

**12/8/10 Insulation Strategies for Masonry Walls**

Architects are putting more and more emphasis on well-insulated walls. The new International Energy Code for Conservation now requires a continuous layer of insulation in the wall assembly. This layer of rigid insulation, typically installed in the air cavity, is very efficient but it can complicate installation of the air barrier and the masonry ties.

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