



**WoodWorks**  
WOOD PRODUCTS COUNCIL



# Texas Wood Solutions Fair

**NOVEMBER 12, 2014**

**ARLINGTON CONVENTION CENTER**

1200 Ballpark Way  
Arlington, TX 76011

*Earn 6 AIA/CES LUs (HSW) or PDH credits free*



Register at [woodworks.org](http://woodworks.org)

# Texas Wood Solutions Fair Schedule

**Space is limited.  
Register today!**

7:00 am	Registration Check-in – Exhibit Hall Opens				
	ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5
8:00 am – 9:10 am	Detailing for Wood Shrinkage	Forests and Forest Products	Walls that Work: Detailing for Performance	Getting to Yes: Code Alternate Materials and Means and Permit Streamlining	Architectural Alternatives: Post-Frame Building Systems
9:10 am – 9:45 am	Break – Exhibit Expo				
9:45 am – 10:45 am	International Building Code Essentials for Wood Construction	EPDs and HPDs: Opportunities within LEED v.4 and Green Globes	Offset Diaphragms and Shear Walls: <i>Part I</i>	The First Cross Laminated Timber School in the US: A Builder's Perspective	Sustainable Designs: Western Red Cedar
10:45 am – 11:00 am	Break – Exhibit Expo				
11:00 am – Noon	Urban Acoustics	Energy Code Compliance: Wood-Frame Buildings and the IECC	All-Wood and Hybrid Panelized Roof Systems	The Wood Revolution: Inspiring Architecture with Innovative Structural Systems	Meeting Fire Codes with OSB
Noon – 1:20 pm	Lunch • Wood Design Awards				
1:20 pm – 2:20 pm	Detailing for Wood Shrinkage	Forests and Forest Products	Walls that Work: Detailing for Performance	Getting to Yes: Code Alternate Materials and Means and Permit Streamlining	Modern Post-Frame Structural Design Practices: An Introduction
2:20 pm – 2:50 pm	Break – Exhibit Expo				
2:50 pm – 3:50 pm	International Building Code Essentials for Wood Construction	EPDs and HPDs: Opportunities within LEED v.4 and Green Globes	Offset Diaphragms and Shear Walls: <i>Part II</i>	The First Cross Laminated Timber School in the US: A Builder's Perspective	Sustainable Designs: Western Red Cedar
3:50 pm – 4:00 pm	Break				
4:00 pm – 5:00 pm	Urban Acoustics	Energy Code Compliance: Wood-Frame Buildings and the IECC	All-Wood and Hybrid Panelized Roof Systems	The Wood Revolution: Inspiring Architecture with Innovative Structural Systems	Meeting Fire Codes with OSB

# Seminars and Speakers

## ROOM 1

MORNING SESSION 8:00 AM • AFTERNOON SESSION 1:20 PM

### **Detailing for Wood Shrinkage**

*Douglas R. Steimle, PE, Schaefer*

For condominiums, apartments, hotels and dormitories, multi-story wood construction is viewed by many as a way to achieve higher density at lower cost, while reducing the project's carbon footprint. One of the challenges, in designing these taller buildings, is how to calculate and address wood shrinkage, which occurs as the wood dries from its 'green' state to its in-service equilibrium state. This session will examine shrinkage associated with wall and floor design, and demonstrate how to minimize effects of both shrinkage and differential movement with proper detailing. The discussion will include solutions to shrinkage-induced construction issues such as drywall cracking, window frame wracking, and compromised plumbing lines.

MORNING SESSION 9:45 AM • AFTERNOON SESSION 2:50 PM

### **International Building Code Essentials for Wood Construction**

*Michelle Kam-Biron, PE, SE, SECB, M. ASCE, American Wood Council (AWC)*

Based on the new AWC/International Code Council (ICC) publication, *Code Conforming Wood Design (CCWD)*, this presentation takes the mystery out of International Building Code (IBC) parameters for wood in non-residential and multi-residential construction. Topics will include maximum building sizes (participants will receive pre-calculated tables for eight occupancies, with and without frontage and sprinkler increases); alternatives for establishing required fire resistance; special provisions for pedestal buildings; precautionary recommendations for buildings under construction; criteria for finishes, exterior coverings, appendages, and other wood features; and the use of AWC design standards and other publications in relation to the IBC. Participants may download a complimentary copy of the CCWD at [www.awc.org/codes/ccwdindex.html](http://www.awc.org/codes/ccwdindex.html).

MORNING SESSION 11:00 AM • AFTERNOON SESSION 4:00 PM

### **Urban Acoustics**

*Steve Thorburn, PE, LEED AP, CTS-I, CTS-D, Thorburn Associates*

As with any issue of building performance, the acoustics of a mixed-use wood-frame structure can be designed to meet or far exceed minimal requirements. It is the responsibility of the design team to determine acoustical expectations for the project and meet them within the available budget. Through the use of case studies, this fast-paced, interactive session will explore how multi-story wood systems can be used to meet acoustical privacy goals. Discussion will focus on the detailing and construction of units, and how consideration of the construction process can help keep acoustical costs down. With the objective of providing implementable solutions, the session will include construction details and photos showing what has and hasn't worked in actual buildings.

## ROOM 2

MORNING SESSION 8:00 AM • AFTERNOON SESSION 1:20 PM

### **Forests and Forest Products**

*Kathryn Fernholz, Dovetail Partners, Inc.*

This presentation will answer many questions about forests and forest products, such as: Where do our trees and forests grow? How have forests changed over time? What is the relationship between people and forests—now and in the past? How are forests managed—and are they being managed responsibly? Are our forests and forest products sustainable? Why is wood an environmental-friendly choice?

MORNING SESSION 9:45 AM • AFTERNOON SESSION 2:50 PM

### **EPDs and HPDs: Opportunities within LEED v.4 and Green Globes**

*Dr. Jim Bowyer, Dovetail Partners, Inc., Bowyer & Associates, Inc.*

User-friendly product transparency and life cycle assessment (LCA) tools facilitate exploration of design alternatives and lead to environmentally better buildings, while freeing design and engineering teams from adherence to long lists of prescriptive provisions. Two of these tools, Environmental Product Declarations (EPDs) and Health Product Declarations (HPDs), are being used to improve environmental impacts and occupant environment. This presentation will provide an overview of these tools, including what goes into their development, what they reveal, and how to use them effectively. Opportunities for applying EPDs, HPDs and LCA provisions within LEED v.4, Green Globes and other green building standards will also be explored.

MORNING SESSION 11:00 AM • AFTERNOON SESSION 4:00 PM

### **Energy Code Compliance: Wood-Frame Buildings and the IECC**

*Andrew Klein, PE, A S Klein Engineering, PLLC*

This presentation focuses on the challenges of meeting 2012 *International Energy Conservation Code (IECC)* requirements in modern wood-frame buildings, as well as related design considerations. Topics will include the code's scope, content and significant changes since the 2009 edition. Compliance path options will also be discussed in the context of specific building systems and features.

## Seminars and Speakers (continued)

### ROOM 3

MORNING SESSION 8:00 AM • AFTERNOON SESSION 1:20 PM

#### **Walls that Work: Detailing for Performance**

Mary Uher, MS, APA

With wall systems serving so many functions in a building, they can be a challenge to effectively design. As a part of the structural and thermal envelopes, wood-frame walls are vital to building performance. Structural design must be balanced with the need for door and window openings and, at the same time, detailed to limit water and air infiltration. This program focuses on how to maximize wall performance while reducing cost through a combination of new design methods and time-tested details.

MORNING SESSION 9:45 AM (PART I) •

AFTERNOON SESSION 2:50 PM (PART II)

#### **Offset Diaphragms and Shear Walls**

Terry Malone, PE, SE, WoodWorks

Lateral force resisting systems in today's structures are more complex than they were several decades ago, incorporating multiple horizontal and vertical offsets in the diaphragms, multiple irregularities and fewer lateral-resisting elements. This two part presentation will provide a brief review of the method used to analyze these complex structures.

**Part I** (morning): Topics will include code requirements, how to recognize diaphragm irregularities and discontinuities, how shears are distributed through complex diaphragms, the method of analysis used to solve the transfer of forces across areas of discontinuity, and the analysis of flexible wood sheathed or untopped steel decking diaphragms with horizontal offsets.

**Part II** (afternoon): This session will cover how to conduct a preliminary breakdown of a complex diaphragm to better understand the distribution of forces and assure that complete load paths are being established. Examples will be provided illustrating how to analyze in-plane and out-of-plane offset shear walls that are typically created by these diaphragms.

MORNING SESSION 11:00 AM • AFTERNOON SESSION 4:00 PM

#### **All-Wood and Hybrid Panelized Roof Systems**

Peter "Hoppy" Post, Panelized Structures Inc.

Although panelized roof systems are especially popular in industrial building applications on the west coast, they can be used to reduce building costs in retail, commercial and office applications all over the US. Learn why panelized roof systems are so cost-effective, where they're most advantageous, and how to efficiently design and install them. Other topics will include detailing for structural considerations, fire protection, performance, and constructability.

### ROOM 4

MORNING SESSION 8:00 AM • AFTERNOON SESSION 1:20 PM

#### **Getting to Yes: Code Alternate Materials and Means and Permit Streamlining**

Michael F. Malinowski, AIA, Applied Architecture, Inc.

This session will cover principles and strategy for effective navigation of the building permit process when materials or designs don't comfortably fit with conventional code application, as well as the use of permit streamlining for more effective and efficient processing. Alternate Materials and Means Requests (AMMR) can be used for various reasons including: use of innovative products and systems, new design concepts, complex geometries, code conundrums, political problem solving and the resolution of interpretation differences. Project examples will be used to demonstrate how to approach the AMMR process and demystify the concept of an alternate design. Permit streamlining concepts will also be discussed.

MORNING SESSION 9:45 AM • AFTERNOON SESSION 2:50 PM

#### **The First Cross Laminated Timber School in the US: A Builder's Perspective**

Charles Judd, Blue Heron Timber Works

The Pendleton County School District in West Virginia is the first in the United States to build a new school in cross laminated timber (CLT). With panels for the 40,000-square-foot facility installed in less than three months by a crew of five carpenters and a crane operator, CLT represents a new world of opportunity for the growing district. In this presentation, the CLT erector for the project will discuss the advantages and challenges of using this new material in the context of structure, building envelope and exposed wood aesthetic. He'll also share insights into the planning process, equipment and labor, and how CLT construction differs from typical methods.

MORNING SESSION 11:00 AM • AFTERNOON SESSION 4:00 PM

#### **The Wood Revolution: Inspiring Architecture with Innovative Structural Systems**

Scott Lockyear, PE, WoodWorks

There is a quiet revolution going on in Europe, Canada and now the US—one that will likely change the way architects here view structural wood building systems. As a structural building component, wood offers many environmental benefits, including the ability to maximize carbon storage and minimize carbon dioxide emissions associated with the design, construction and operation of buildings. Architects are using "massive timber" design principles and techniques to take advantage of wood's carbon benefits, driving positive change through the power of wood design. Using case study examples of innovative projects, this presentation will connect structure with architecture by showcasing a variety of exposed wood structural solutions.

## Seminars and Speakers (continued)

### ROOM 5

#### MORNING SESSION 8:00 AM

##### **Architectural Alternatives: Post-Frame Building Systems**

*Dr. Harvey Manbeck, PE, National Frame Building Association*

Architecturally, post-frame buildings can resemble any other building, so much so that it's increasingly difficult to identify a post-frame structure. This presentation will provide an overview of post-frame construction and its benefits, such as cost effectiveness, energy efficiency, durability and sustainability. Topics will include structural features that make post-frame systems unique, two basic design approaches, and design resources. More than 20 project examples will be showcased to illustrate key performance characteristics and architectural alternatives.

#### MORNING SESSION 9:45 AM • AFTERNOON SESSION 2:50 PM

##### **Sustainable Designs: Western Red Cedar**

*Paul Mackie, Western Red Cedar Lumber Association*

This presentation will include some information basic to lumber and forest products while it features the nature of the western red cedar lumber, the benefits unique to these products, and how they are appropriate for incorporation in any sustainable design. The presentation will also touch on information about western red cedar lumber grades, installation and finishing. Forest certification will be discussed, and reasons why using western red cedar affords your clients the best environmental and sustainable products for their design requirements.

#### MORNING SESSION 11:00 AM • AFTERNOON SESSION 4:00 PM

##### **Meeting Fire Codes with OSB**

*Bob Palardy, LP Building Products*

This presentation will provide an overview of fire-rated cementitious coated oriented strand board (OSB) sheathing for wall and roof sheathing applications. Topics will include its structural and performance properties and contribution to enhancing the sustainable built environment.

#### AFTERNOON SESSION 1:20 PM

##### **Modern Post-Frame Structural Design Practices: An Introduction**

*Dr. Harvey Manbeck, PE, National Frame Building Association*

This session is intended for architects and designers who want to understand basic structural design methods for an engineered post-frame building system. Without delving into engineering details or calculation procedures, it covers components of the post-frame building system, as well as key structural design concepts. Two approaches are highlighted in particular: one for post-frame systems without diaphragm action, the other for post-frame systems with diaphragm action. Procedures for designing isolated pier foundations for post-frame buildings are also discussed, as are technical resources available to design professionals.

### Who Should Attend?

With a full day of seminars and a trade exposition, the Texas Wood Solutions Fair will pack an informational punch for architects, engineers, developers, code officials and anyone else interested in wood's exciting design possibilities. Register today if you'd like access to wood design experts for one-on-one support, informative seminars, technical information from manufacturers, engineering consultants and industry associations, and exhibits featuring a wide range of structural and finishing products.

### How to Register

To register, visit [woodworks.org](http://woodworks.org) and look under "Education" on the home page. As part of the registration process, you will be asked to choose which seminar you plan to attend in each time slot. Once your request has been processed, you will receive an email confirmation that your registration is complete. To help make your choices, speaker bios are available on the website.

### Cost

There is no cost to attend and complimentary lunch will be provided.

### Education Credits

Attendees can earn up to 6 AIA/CES LUs (HSW) or PDH credits (one per attended seminar). Visit [woodworks.org](http://woodworks.org) for details and learning objectives. AIA/CES forms and professional development certificates will be available on site.

### More Information

Visit [woodworks.org](http://woodworks.org)



WoodWorks is an approved AIA provider.



## WoodWorks

### Free design and engineering support for non-residential and multi-family wood buildings

For project assistance, email [help@woodworks.org](mailto:help@woodworks.org). For resources such as CAD/REVIT details, span tables, design examples and more, visit [woodworks.org](http://woodworks.org).

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