Register at woodworks.org

Mid-Atlantic Wood Solutions Fair

NOVEMBER 14, 2013
Baltimore Convention Center
One West Pratt Street
Baltimore, MD 21201

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

Register at woodworks.org
## Mid-Atlantic Wood Solutions Fair Schedule

### 7:00 am

**Registration Check-in – Exhibit Hall Opens**

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<th>ROOM 1</th>
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<td>8:00 am - 9:10 am</td>
<td>The Bullitt Center: Meeting the Living Building Challenge</td>
<td>Design Flexibility of Commercial and Institutional Structures</td>
<td>Energy-Efficient Facilities: Building Envelope Design Considerations</td>
<td>Making Sustainability Accessible with Life Cycle Assessment</td>
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### 9:10 am - 9:45 am

**Break – Exhibit Expo**

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### 9:45 am - 10:45 am

**Break – Exhibit Expo**

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<td>Code Conforming Wood Design</td>
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### Noon - 1:20 pm

**Lunch • Wood Design Awards**

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### 1:20 pm - 2:20 pm

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### 3:50 pm - 4:00 pm

**Break**

### 4:00 pm - 5:00 pm

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Photo: University of Washington, Mercer Court, Anikrom Mosan Architects, courtesy W.G. Clark Construction
Seminars and Speakers

ROOM 1
MORNING SESSION 8:00 AM • AFTERNOON SESSION 1:20 PM
The Bullitt Center: Meeting the Living Building Challenge™
Brian Court, AIA, LEED AP, The Miller Hull Partnership, LLC
The Bullitt Center, a six-story heavy timber building recently completed in Seattle, is predicted to be the world’s most energy efficient commercial building. It has been designed to last 250 years and to achieve Living Building Challenge (LBC) certification. A performance-based certification program, the LBC requires buildings to be evaluated after one year of occupancy prior to certification, against criteria that include 100% of energy demands met with on-site renewable energy generation and 100% of water needs met by on-site rainwater collection. In this presentation, Project Architect Brian Court will give a short overview of the LBC, discuss the design strategies for the Bullitt Center, and highlight structural and environmental virtues of the heavy timber structural system such as renewability, contribution to energy efficiency, and light carbon footprint.

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

MORNING SESSION 11:00 AM • AFTERNOON SESSION 4:00 PM
Design is in the Details: Solutions to Common Mid-Rise Design Challenges
Matthew S. Church, PE, Davis & Church, LLC
This session will use recent mid-rise projects to examine a variety of design solutions for multi-story wood construction. Discussion will focus on areas of design and detailing that often challenge designers of Type III and Type V mixed-use projects—such as designing wood and masonry shaft walls, connecting 2-hour rated walls to 1-hour rated floor/ceiling systems, and balcony construction—and offer possible solutions. Opportunities and advantages to using cross laminated timber (CLT) in mid-rise buildings will also be explored.

ROOM 2
MORNING SESSION 8:00 AM • AFTERNOON SESSION 1:20 PM
Design Flexibility of Commercial and Institutional Structures
Brian Woudstra, B.Sc. Eng. StructureCraft Builders
This presentation will focus on the tremendous flexibility wood offers to the new architecture given its free-form design possibilities. Examples will include design-build construction of complex and highly visual structures featuring the prominent use of wood, such as the recently completed VanDusen Botanical Garden Visitor Centre, a “closed cell” panelized free-form timber structure in Vancouver, BC, the Pearl Visitors’ Centre in Qingdao, China, featuring a doubly-curved massive timber roof, and several other innovative projects featuring wood as expressed structure. Discussion will highlight the design-build prefabrication process and its advantages when creating innovative architectural structures.

MORNING SESSION 9:45 AM • AFTERNOON SESSION 2:50 PM
Cross Laminated Timber Technology: Manufacturing, Materials and Specification
Bryan Readling, PE, APA
While cross laminated timber technology originated in Europe as a proprietary system, considerable advances have been made to establish CLT as a material capable of competing with concrete and steel in US non-residential and multi-family construction markets. Among the most notable, a new product standard developed by APA and approved by the American National Standards Association (ANSI/APA PRG 320) lays out the requirements and test methods for CLT certification and quality assurance, and recently approved code changes will see CLT recognized in the 2015 International Building Code (IBC). With an emphasis on manufacturing and specification, this session will provide an overview of current North American CLT production as well as practical information related to its use in North American buildings.

MORNING SESSION 11:00 AM • AFTERNOON SESSION 4:00 PM
High-Rise Timber Office: 40-Story Wood Structural Concept
Nick Bevanda, Arch. AIBC, MRAIC, AIA, NCARB, CEI Architecture
Exploration of new engineered and hybrid technologies is driving the trend toward taller wood buildings, with industry visionaries expecting to see high-rise wood structures within our lifetime. Nowhere is that vision more clear than in a 40-story design recently recognized with an honorable mention in the Office Building of the Future design competition held by the Commercial Real Estate Development Association (NAIOP). In this presentation, CEI Architecture will provide an overview of this unique design within a broader discussion of wood high-rises—including their viability, structural systems, fire protection systems, and design challenges.
Seminars and Speakers (continued)

ROOM 3
MORNING SESSION 8:00 AM • AFTERNOON SESSION 1:20 PM
Energy-Efficient Facilities: Building Envelope Design Considerations
Steve Easley, Steve Easley & Associates Inc.
While new energy codes and green building programs are placing greater emphasis on energy efficiency, many “green buildings” are being criticized because their energy performance has failed to meet expectations. This presentation will focus on cost-effective design recommendations for high performance building enclosures. It will explore why many buildings fail to perform as expected, and provide recommendations on envelope detailing, insulation and air sealing techniques, and information to include in specifications.

ROOM 4
MORNING SESSION 8:00 AM • AFTERNOON SESSION 1:20 PM
Making Sustainability Accessible with Life Cycle Assessment
Frances Yang, LEED AP, SE, Arup
Do nutrition labels help you make healthier decisions? Can we trust the claims on food packaging without them? Now building designers have similar resources—in the form of life cycle assessment (LCA) and environmental product declarations (EPDs). By providing a quantitative basis from which to compare the environmental impacts of alternate designs, LCA and EPDs remove the guesswork from material selection. They separate fact from ‘greenwashing’ and allow designers to make informed decisions about the materials they choose.

MORNING SESSION 9:45 AM • AFTERNOON SESSION 2:50 PM
Modern Forestry: Growing Sustainable Bio-Materials
Kathryn Fernholz, Dovetail Partners Inc.
This presentation will address land management techniques associated with agriculture (organic and non-organic) and forestry, including natural forest management as well as plantation forestry. These systems are used to grow bio-based materials such as wood products, agricultural foods and fibers, and the raw materials for bio-energy. The presentation will compare and contrast common forestry and agricultural practices and include discussion of the diverse challenges and benefits associated with each system.

MORNING SESSION 11:00 AM • AFTERNOON SESSION 4:00 PM
Building Envelope Design and Moisture Performance
Sam Glass, PhD, USDA Forest Products Laboratory
Moisture management and durability are key elements of building envelope design but are often not well understood. This presentation will help design and building professionals understand how the building envelope responds to environmental conditions, with emphasis on heat, air, and moisture control. The talk will highlight wood-moisture relations, focusing on key physical properties and concepts. Strategies will be presented for evaluating building envelope design in terms of performance strengths and vulnerabilities, with examples from wood-frame construction as well as cross laminated timber construction.

ROOM 5
MORNING SESSION 8:00 AM
Laminated Strand Lumber: Framing Solutions for Strength, Stiffness and Straightness
Steve Zapcic, LP Building Products
This session provides an overview of laminated strand lumber (LSL), including the manufacturing process, sustainability benefits, ease of installation, and design and performance criteria. Examples of completed projects will be used to demonstrate LSL’s design flexibility and cost effectiveness for commercial and multi-family construction.

MORNING SESSION 9:45 AM
Getting to Yes: Code Alternate Materials and Means and Permit Streamlining
Michael 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 fit with conventional code application, as well as the use of permit streamlining. Alternate Materials and Means Requests (AMMR) can be used for various reasons including: use of innovative products and systems, new design concepts, and complex geometries. Successful project examples will be used to demonstrate how to approach the AMMR process. In addition, the landscape of permit streamlining concepts will be outlined, with a focus on how to engage design professionals on the ‘public’ side of the counter in a project’s ultimate success.

MORNING SESSION 11:00 AM • AFTERNOON SESSION 4:00 PM
Code Conforming Wood Design
Michelle Kam-Biron, PE, SE, American Wood Council (AWC)
This presentation is based on a new series of publications by AWC and ICC, titled Code Conforming Wood Design (CCWD), which summarizes allowable wood use in buildings in accordance with the 2012 IBC. The series features a comprehensive overview of the design flexibilities permitted for wood in commercial construction, as well as eight documents specific to different use groups. Intended to complement the code (but not replace it), the series should help designers and building officials better understand how wood can be used in various applications. Participants can download a complimentary copy at www.awc.org/codes/ccwdindex.html.
MORNING SESSION 11:00 AM

**Sustainable Designs: Western Red Cedar**
*Steve From, Western Red Cedar Lumber Association*

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

AFTERNOON SESSION 1:20 PM

**Treated Wood and Design**
*Eddy Longshore, Western Wood Preservers Institute*

This course offers practical advice for specifying the chemical alternatives used to protect wood’s durability. Topics will include determining appropriate treatment based on the American Wood Protection Association Use Category Standards and ICC-ES Report Evaluations, labeling required under the IBC and best management practices for sensitive or aquatic environments. Considerations for treated wood in multi-residential and commercial structures, fasteners and connectors, safe handling and environmental protection will also be discussed.

AFTERNOON SESSION 2:50 PM

**Introduction to Structural Design of Post-Frame Building Systems**
*Dr. Harvey Manbeck, PE, National Frame Building Association*

This program begins with a brief description of post-frame building systems and their structural design. Presented from a conceptual standpoint as opposed to an equation and computational standpoint, two design methods are addressed: one for post-frame systems without diaphragm action, the other for post-frame systems with diaphragm action. The presentation will show how the computer program, DAFI, determines the proportion of design lateral loads carried to ground by the individual post frames and the proportion carried to ground by the roof diaphragm and shear walls. It then shows how the isolated post foundations are designed to resist lateral and uplift forces.

AFTERNOON SESSION 4:00 PM

**Structural Wood-to-Wood Fasteners**
*Mark Guthrie, FastenMaster*

This presentation will provide an overview of the fastening and connection requirements for wood structural members to resist the loads imposed in wood-frame construction. Topics will include how connections are affected by wood properties, moisture content, loading direction and dowel bearing strength. The recent development of structural wood screws and their use in various applications will also be discussed. Participants will learn procedures for determining the imposed loads and selection of appropriate fasteners, as well as code requirements for specific wood-frame construction structural connections.

Who Should Attend?
With a full day of seminars and a trade exposition, the Mid-Atlantic 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 and look under “Events” 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 LU’s (HSW) or PDH credits (one per attended seminar). Visit woodworks.org for details and learning objectives. AIA/CES forms and professional development certificates will be available on site.

More Information
Visit woodworks.org

WoodWorks
Free design and engineering support for non-residential and multi-family wood buildings
For project support, email help@woodworks.org. For resources such as CAD/REVIT details, span tables, design examples and more, visit woodworks.org.