Portland Wood Solutions Fair

OCTOBER 15, 2013
OREGON CONVENTION CENTER
777 NE Martin Luther King Jr. Blvd.
Portland, OR 97232

Earn 6 AIA/CES CEHs or PDH credits free

Register at woodworks.org
<table>
<thead>
<tr>
<th>Time</th>
<th>Room 1</th>
<th>Room 2</th>
<th>Room 3</th>
<th>Room 4</th>
<th>Room 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 am</td>
<td>Registration Check-in – Exhibit Hall Opens</td>
<td>Registration Check-in – Exhibit Hall Opens</td>
<td>Registration Check-in – Exhibit Hall Opens</td>
<td>Registration Check-in – Exhibit Hall Opens</td>
<td>Registration Check-in – Exhibit Hall Opens</td>
</tr>
<tr>
<td>8:00 am - 9:10 am</td>
<td>High-Rise Timber Office: 40-Story Wood Structural Concept</td>
<td>Design Flexibility of Commercial and Institutional Structures</td>
<td>Making a Difference: Incorporating Environmental Information into Your Organization</td>
<td>Overview of Offset Diaphragms and Shear Walls</td>
<td>Laminated Strand Lumber Framing Solutions for Strength, Stiffness and Straightness</td>
</tr>
<tr>
<td>10:45 am - 11:00 am</td>
<td>Break – Exhibit Expo</td>
<td>Break – Exhibit Expo</td>
<td>Break – Exhibit Expo</td>
<td>Break – Exhibit Expo</td>
<td>Break – Exhibit Expo</td>
</tr>
<tr>
<td>10:45 am - Noon</td>
<td>Design is in the Details: Solutions to Common Mid-Rise Design Challenges</td>
<td>Modern Forestry: Growing Sustainable Bio-Materials</td>
<td>Wood and Health in the Built Environment</td>
<td>Code and Standards Development</td>
<td>Sustainable Designs: Western Red Cedar</td>
</tr>
<tr>
<td>Noon - 1:20 pm</td>
<td>Lunch • Wood Design Awards</td>
<td>Lunch • Wood Design Awards</td>
<td>Lunch • Wood Design Awards</td>
<td>Lunch • Wood Design Awards</td>
<td>Lunch • Wood Design Awards</td>
</tr>
<tr>
<td>1:20 pm - 2:20 pm</td>
<td>High-Rise Timber Office: 40-Story Wood Structural Concept</td>
<td>Design Flexibility of Commercial and Institutional Structures</td>
<td>Making a Difference: Incorporating Environmental Information into Your Organization</td>
<td>Overview of Offset Diaphragms and Shear Walls</td>
<td>Understanding Restraint Rod Systems</td>
</tr>
<tr>
<td>2:50 pm - 3:50 pm</td>
<td>Urban Acoustics</td>
<td>Connection Solutions for Wood-Framed Structures</td>
<td>Making Sustainability Accessible with Life Cycle Assessment</td>
<td>Getting to Yes: Code Alternate Materials and Means and Permit Streamlining</td>
<td>Meeting Fire Codes with Oriented Strand Board (OSB)</td>
</tr>
<tr>
<td>3:50 pm - 4:00 pm</td>
<td>Break</td>
<td>Break</td>
<td>Break</td>
<td>Break</td>
<td>Break</td>
</tr>
<tr>
<td>4:00 pm - 5:00 pm</td>
<td>Design is in the Details: Solutions to Common Mid-Rise Design Challenges</td>
<td>Modern Forestry: Growing Sustainable Bio-Materials</td>
<td>Wood and Health in the Built Environment</td>
<td>Code and Standards Development</td>
<td>Heavy Timber in Commercial Construction</td>
</tr>
</tbody>
</table>
ROOM 1

MORNING SESSION 8:00 AM • AFTERNOON SESSION 1:20 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 (NAOIP). 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.

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 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
Michael Marshall, BSc, MA Orgl, 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

Connection Solutions for Wood-Framed Structures
Tom Williamson, PE, ASCE, SEI

This seminar will feature a discussion of common fastener types, how design values are determined for each, and relevant wood connection philosophies. Topics will include the orthotropic nature of wood, commodity and specialty connectors and the use of small diameter fasteners in portal frames and combined shear and uplift systems. Techniques for designing efficient, durable and structurally safe connections will also be discussed, along with tips for minimizing environmental effects on wood connections and what additional resources are available.

MORNING SESSION 11:00 AM • AFTERNOON SESSION 4:00 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.
ROOM 3
MORNING SESSION 8:00 AM • AFTERNOON SESSION 1:20 PM
Making a Difference: Incorporating Environmental Information into Your Organization
Jeff Howe, PhD, Dovetail Partners, Inc.
This presentation will address how design and building professionals and organizations can align with clients on “green” issues in order to maximize the success (profitability) of projects (green or otherwise). An emphasis will be placed on developing the right message at the right time in the process in order to attract and retain clients that are interested in and will pay for environmental benefits and expertise.

MORNING SESSION 9:45 AM • AFTERNOON SESSION 2:50 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 11:00 AM • AFTERNOON SESSION 4:00 PM
Wood and Health in the Built Environment
David Fell, PhD, FPInnovations
Recent studies, along with evidence emerging from Europe and Asia, suggest that the use of wood indoors lowers stress reactivity of the sympathetic nervous system—which is associated with lower blood pressure, lower heart-rate, lower psychological stress, lower susceptibility to illness, and a better ability to focus attention. This is relevant both in the context of evidence-based design, which considers the effects of building design on occupants (among other things), and biophilic design, which considers the general affinity humans have for nature and addresses it through design elements and materials. This presentation will provide an overview of the evidence and mechanisms through which wood can affect human health, and its increasing use in educational, office and other environments.

ROOM 4
MORNING SESSION 8:00 AM • AFTERNOON SESSION 1:20 PM
Overview of Offset Diaphragms and Shear Walls
Terry Malone, PE, SE, WoodWorks
Lateral force resisting systems in today’s structures are much 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 presentation will provide a brief overview of the method used to analyze these complex structures. Topics will include code requirements, how to recognize diaphragm irregularities and discontinuities, how shears are distributed through complex diaphragms, how to solve the transfer of forces across areas of discontinuity, and how to create a single line of lateral force resistance across multiple offset shear walls.

MORNING SESSION 9:45 AM • AFTERNOON SESSION 2:50 PM
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 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. Successful project examples will be used to demonstrate how to approach the AMMR process and demystify the concept of an alternate design. In addition, the landscape of permit streamlining concepts will be outlined, with a focus on streamlining approaches that can 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 and Standards Development
Michelle Kam-Biron, PE, SE, American Wood Council
This course will provide a brief overview of code and standards development to give context to current building code allowances and design procedures as well as future code pursuits. Topics will include recent International Code Council (ICC) and American Wood Council efforts related to code advancement, and the latest changes to the International Building Code (IBC), National Design Specification® (NDS®) for Wood Construction and Special Design Provisions for Wind and Seismic (SDPWS).
ROUNDS AND SPEAKERS (continued)

ROOM 5

MORNING SESSION 8:00 AM
Laminated Strand Lumber Framing Solutions for Strength, Stiffness and Straightness
Larry Oenning, 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
Fire-Retardant-Treated Wood and the International Building Code
Dave Bueche, PhD, Hoover Treated Wood Products
This presentation takes an in-depth look at fire-retardant-treated wood (FRTW) focusing on: FRTW characteristics, properties and performance in a fire; preparation, treatment, inspection and labeling; fire tests, standards and building code requirements; how and where FRTW is used; and the impact of FRTW on construction and insurance costs.

MORNING SESSION 11:00 AM
Sustainable Designs: Western Red Cedar
Paul Mackie, 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
Understanding Restraint Rod Systems
Alicia Eikenberry, PE, Simpson Strong-Tie
This is a technical presentation intended primarily for structural engineers and designers interested in rod system design. Two types of restraint rod systems will be reviewed: one designed to resist shear wall overturning and the other to resist wind uplift. Topics will include design practices, testing, and the use of AC391 Acceptance Criteria for designing continuous rod tie-down runs and continuous rod tie-down systems used to resist wind uplift.

AFTERNOON SESSION 2:50 PM
Meeting Fire Codes with Oriented Strand Board (OSB)
Bob Palardy, LP Building Products
This presentation will provide an overview of fire-rated cementitious coated 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 4:00
Heavy Timber in Commercial Construction
Mack Magee, FraserWood Industries
Timber framing, an ancient tradition revived in North America in the 1970s, has been contributing to the sustainability of buildings since before sustainability was in vogue. Timber framing makes use of the only truly renewable structural building material—one that sequesters significant amounts of carbon and may contribute to a neutral or even negative carbon footprint. This presentation will cover why and how to integrate a timber-frame solution into your next commercial project, enabling you to reduce its environmental impacts while delivering warm, expressive structure. Topics will include material choices, joinery decisions, finishes, embellishments, code compliance and getting started in design, as well as commercial project examples.

Photos: (cover) University of Washington West Campus Student Housing - Phase I, Mahlum Architects, photo Benjamin Benschneider; (inset) New Genesis Apartments, Killefer Flammang Architects, photo KC Kim, GB Construction; (address panel) multi-story building, VanDorpe Chou Associates
Who Should Attend?
With a full day of seminars and a trade exposition, the Portland 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 CEHs (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.

WoodWorks is an approved AIA provider.

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.

WoodWorks is an approved AIA provider.