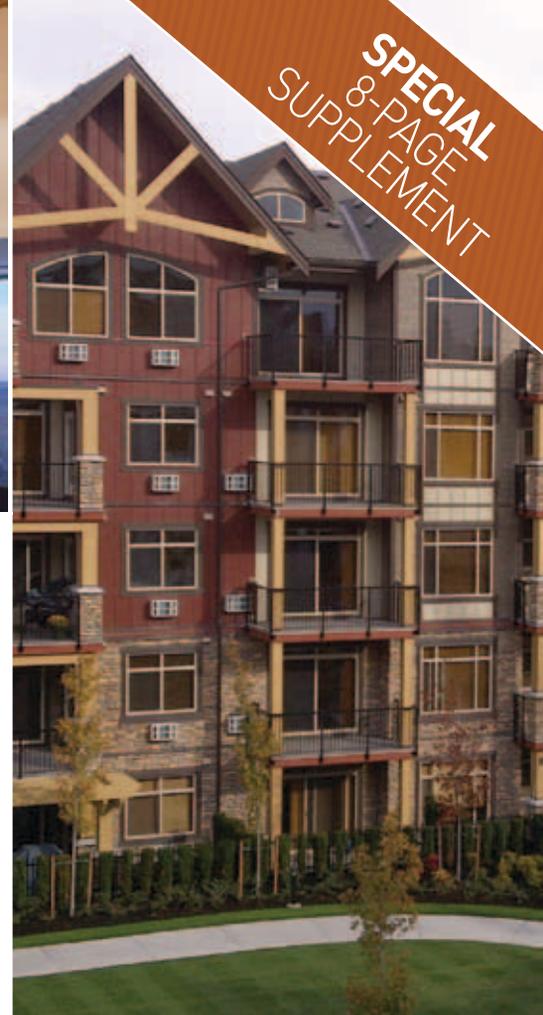


SPECIAL
8-PAGE
SUPPLEMENT



INSPIRING WOOD CHAMPIONS



WHAT'S INSIDE

Message from the National Director	2
Calendar	2
Provincial Innovation	3-7
National Partners	8



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commerciale en bois

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Wood
Council

Conseil
canadien
du bois



BEHIND-THE-SCENES WOOD CHAMPIONS

Wood WORKS! has been a project of the Canadian Wood Council for 15 years. During this time, our team of 30 have forged long-lasting relationships with architects, engineers, builders, suppliers and consumers within the wood industry. These relationships have transpired into the use of wood throughout some incredible projects in Canada. Our third magazine insert displays examples of these buildings which use wood as a primary building material, largely because of the direct and indirect influence of the Wood WORKS! team. With a goal to promote the use of wood and wood products in construction, the Wood WORKS! team acknowledges that the effectiveness of our efforts is heavily dependent upon the relationships we've developed over the years and the contribution of wood-use champions and industry leaders – and for that, we are thankful. American industrialist Henry Ford once said, "Coming together is a beginning, keeping together is progress, working together is success." Wood WORKS! prides itself on working with professionals that appreciate the environmental benefits of wood as a building material, understand the versatility of wood throughout construction applications and remain committed to pushing the boundaries of wood for innovative building design.

A dynamic team that works!

Wood WORKS!'s advocacy for the use of wood in construction is also heavily dependent

upon the technical expertise of the Canadian Wood Council (CWC) in the area of codes and standards. The CWC ensures structural wood products are well represented within the various building codes, and that wood, in general, is not misrepresented. This service provided by Wood WORKS! and CWC has proven effective and complementary throughout the years – as evidenced by some of the buildings within this insert.

As you flip through the colorful pages of this insert and observe the spectacular display of wood buildings, keep in mind that they are the result of behind-the-scenes advocacy work from wood champions. Every completed building serves as an example for the next, and each new project pushes the creative envelope – ensuring that it is relevant for the 'now' but cognisant of the 'then' in the world of wood construction. This forward thinking has contributed to the success of many wood buildings over time and it will continue to drive our desire for groundbreaking buildings that challenge the way we use wood throughout construction.



Etienne Lalonde

Etienne Lalonde
National Project Director

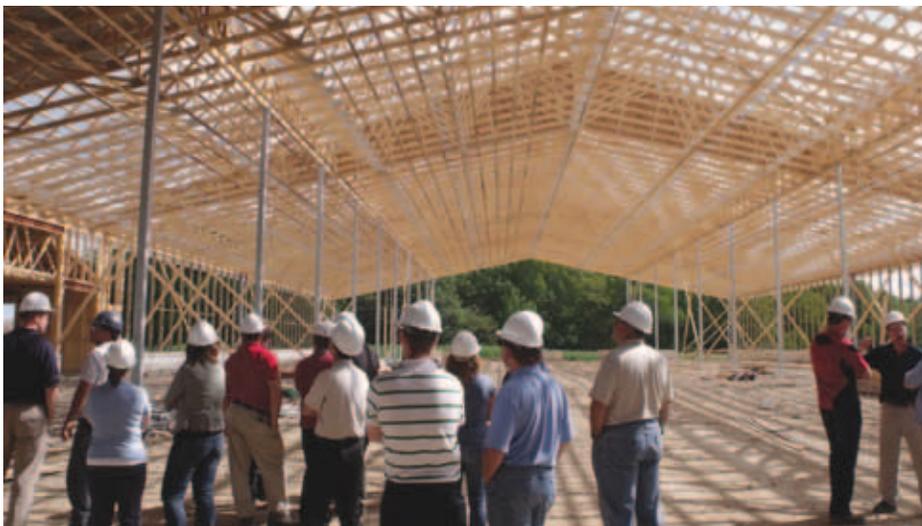


Photo: Sukh Johal/ Wood WORKS! BC

Mark your CALENDARS 2013 EVENTS

APRIL

April 4, 5

Council of Forest Industries
Annual Convention
Prince George, BC
www.cofi.org

JUNE

June 15

Deadline for Prairie Wood
Design Awards Nominations
www.wood-works.org/alberta

OCTOBER

Oct. 16

Wood Solutions Fair
Edmonton, AB
www.wood-works.ca

Oct. 29

Wood Solutions Fair
Vancouver, BC
www.wood-works.ca

NOVEMBER

Nov. 12

Wood Solutions Fair
Toronto, ON
www.wood-works.ca

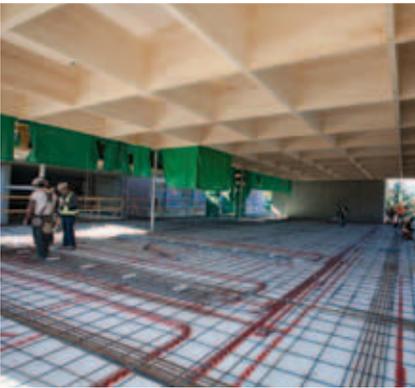
Nov. 27

Prairie Wood Design Awards
Edmonton, AB
www.wood-works.ca



COURTESY - WOOD WORKS! BC/
MCFARLAND MARCEAU ARCHITECTS

BRITISH COLUMBIA



UBCO Fitness and Wellness Centre

"We wanted the building to be a metaphor for aviation and also for the athletes using the building. Wood helped us tell that story."

Larry McFarland, McFarland Marceau Architects

"The idea of cutting airfoil-like shapes out of CLT panels to create a deep but delicate looking grid structure was inspired by my childhood passion for building balsa wood model airplanes. CLT panels lend themselves well to this approach because of the cross lamination, which gives the panels strength in both in-plane directions."

J. Eric Karsh, Structural Engineer,
Equilibrium Consulting Inc. (for UBCO)

"The wood use in this project demonstrates our industry's remarkable technological innovation of wood and excellence in wood design and construction. The result is an architecturally distinct campus building."

Mary Tracey, Executive Director, Wood WORKS! BC

"The wood is just beautiful and is an integral part of what will make this facility welcoming and inviting for all users."

Layne McDougall
Campus Recreation Coordinator, UBCO

A welcoming and inspiring new fitness and recreation centre is in final stages of construction on the UBCO Okanagan campus in Kelowna, B.C. The UBCO Fitness and Wellness Centre will consist of a two-story, 850 m² addition to the existing gymnasium, featuring innovative uses of cross-laminated timber (CLT). The project will display the promising capabilities of this engineered wood product by enabling the construction of a "light" structure, while acknowledging through its design the generosity of key facility donors who have a connection to an Okanagan-area aviation business. The project's architect and structural engineer are firms which have demonstrated their passion for wood in many noteworthy and award-winning B.C. buildings, so wood use was a natural choice – especially given a desire for a building that has aeronautical references

in its structure.

Wood WORKS! BC interacted with key decision-makers early in the concept and design development phases of the project, providing building code interpretation and analysis support to the project developer. Wood WORKS! BC recommended a design-build approach to the developer in order to meet the project's tight budget and as a way to incorporate important key symbolic elements and efficient wood applications. In the end, structural wood solutions were requested by the developer in the Design-Build Request for Proposal. The outcome is a stunning 3-D roof structure of CLT, where very thin panels spanning long distances are fastened together with simple screw connections to form a rigid two-way structural grid, reminiscent of the structure of an aircraft wing.

ARCHITECT
McFarland Marceau
Architects Ltd.

BUILDER
Kindred
Construction Ltd.

STRUCTURAL ENGINEER
Equilibrium
Consulting Inc.

CLT/GLULAM SUPPLIER
Structurlam
Products Ltd.

PHOTO: SARA WADLOW/ASSOCIATED ENGINEERING

ALBERTA

PHOTO & BELOW:
WESTERN ARCHRIB

Hangingsone River Bridge

BY JESSICA GAGNÉ

The Regional Municipality of Wood Buffalo engaged Associated Engineering to design a new pedestrian bridge crossing the Hangingsone River in Fort McMurray, Alberta.

Pedestrian access across the river was previously provided by a walkway attached to the steel truss road bridge on King Street. The bridge was overloaded and the coating system was extensively deteriorated. To resolve the overloading it was proposed to remove the walkway entirely allowing the rating of the bridge to be upgraded without strengthening works and to restore the truss to an aesthetic closer to its original design.

Removing the sidewalk from the existing bridge presented several improvement opportunities. One of these included the ability to provide a separate multi-use river crossing positioned downstream, designed for both pedestrians and cyclists. Further, the improved alignment offers better continuity with the existing trail through the adjacent Lion's Park on one bank, and directly links with a riverside trail next to the Historical Society Heritage Park on the other bank.

For the structure's design, timber was identified during the preliminary design phase, both as a cost-effective option and an appropriate fit with the natural environment of the river, park, and walking trails. The new bridge uses two meter deep glued-laminated timber girders as the main structural

members spanning the river. Timber was also used for the stringers, most of the floor beams and the decking. Yellow cedar from coastal British Columbia was selected for the structural elements as it is durable in an exterior setting without pressure treatment. A stainless steel plate along the top provides additional protection to the girders.

The 42-meter long girders were shipped from Edmonton to the site in one piece, eliminating the need for splices. The design features a half-through girder structural form on a shallow vertical curve, with the main load – carrying members doubling as the parapets. The low profile crossing fits gently into the landscape and minimizes the depth between the top of the deck and the underside of the structure. Minimizing the structural depth was important, as the bridge had to be raised above the existing road bridge to meet current regulatory requirements.

The project provides a cost-effective, sustainable solution for the overloading of the existing road bridge. The Hangingsone River Bridge removes the sidewalk from the bridge, while offering community benefits, an improved user experience, and, at the same time, complementing the natural setting with an aesthetically pleasing timber structure.

Jessica Gagné, M.Eng. P.Eng. MStructE MICE, is a Structural Engineer at Associated Engineering.



ARCHITECT
HFKS

STRUCTURAL ENGINEER
Associated Engineering

CONTRACTOR
Alberco Construction

FABRICATOR
Western Archrib

LANDSCAPE ARCHITECT
EDA Collaborative

PHOTOS: ©RICHARD JOHNSON PHOTOGRAPHY INC.
RICHARDJOHNSON.CA

ONTARIO



Sioux Lookout Meno Ya Win Health Centre

“MenoYaWin” in the Anishinaabe language means health and wellness, signifying the wholeness of one’s physical, emotional, mental and spiritual being. The Meno Ya Win Health Centre in Sioux Lookout, Ontario, is a leader in contemporary healing, delivering a new, holistic healthcare concept that combines traditional First Nations healing practices with the most up-to-date, modern medical facilities.

The 145,000-sq.ft. hospital is the result of a unique partnership created by a four-party agreement between the governments of Canada, Ontario, the Town of Sioux Lookout and the Nishnawbe Aski Nation. The hospital provides services for more than 30,000 people from 32 northern Ontario communities, 28 of which are First Nations communities, in a service area as large as Germany.

Most of the communities served by the hospital are accessible only by air or ice roads. As a result, many of the patients arriving at the medical complex come by airplane. The complex is designed in the

shape of a medicine wheel, so patients arriving by air can already see symbols of healing. Doctors, elders and traditional healers contributed to the design and technical requirements of this state-of-the-art hospital. The circle of the medicine wheel provided the project with a powerful compositional focus, with locations for a recently completed hostel for patient families, future clinics, a long-term care facility, hospital expansion and other related buildings all connected by the circular road of the master plan.

On the ground level, the healthcare village relates closely to the earth and resembles more of a northern lodge retreat than an institution. Inside, the use of heavy timber was an important choice. In the public spaces and main gathering areas, wood supports the local forest products industry, provides a warm, welcoming atmosphere, and honors the First Nations tradition of using wood as a building material.

Amazing things can be

achieved through thoughtful collaboration. From the architectural partnership between Murphy Hilgers Architects, now Stantec Architecture, and Douglas Cardinal, to the collaborating doctors and traditional healers, to the unique four-party agreement between the Nishnawbe Aski Nation and the municipal, provincial and federal levels of government, this stunning project is the result of many progressive partnerships.

In the Sioux Lookout Meno Ya Win Health Centre, wood use has been maximized within the confines of a building required to be of non-combustible construction. Wood WORKS! is proud to have been an early collaborative partner in the process, participating in several meetings to provide technical and industry information to facilitate the inclusion of wood in this important, community-centered, healthcare facility.

GENERAL CONTRACTOR
EllisDon Corporation

LANDSCAPE ARCHITECT
Hilderman Thomas Frank Cram

ARCHITECT
Stantec Architecture Ltd.

ASSOCIATE ARCHITECT
Douglas Cardinal Architect Inc.

ENGINEER
Neegan Burnside Ltd.

STRUCTURAL WOOD CONTRACTOR
Bryte Designs/Goodlam

PHOTOS : CECOBOIS

QUÉBEC



Ajout d'un cinquième étage en bois à l'édifice Complan

Une première au pays

L'ajout d'un cinquième étage en bois à l'édifice Complan, situé sur le boulevard Laurier à l'entrée de Québec, a de quoi étonner. Cette réalisation, qui constitue une première au pays, offre une solution novatrice, pratique et économique pour surélever les édifices en zone urbaine dense.

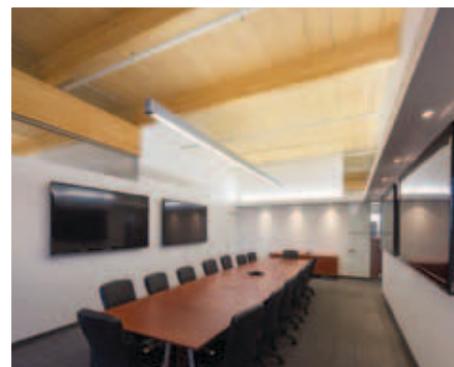
Jamais auparavant n'avait-on superposé un étage en bois d'ingénierie – considéré combustible – à une structure en béton, incombustible, de quatre étages, âgée de plus de 30 ans et non giclée. Comme la Régie du bâtiment du Québec (RBQ) n'autorise normalement pas l'érection d'immeubles de plus de quatre étages avec des éléments porteurs en matériaux combustibles, une solution de rechange a dû être présentée, assurant que les exigences de l'article 3.2.2.50 du Code national du bâtiment concernant l'incombustibilité seraient respectées. Entre autres, le retrait de 1,2 m du rebord limitera la propagation potentielle d'un

feu survenant aux étages inférieurs. Quatre fois plus léger que le béton, le bois s'avérait tout indiqué pour minimiser la charge que représentait l'ajout d'un étage sur la structure existante, comme l'a démontré une analyse préalable de la capacité portante de l'édifice.

Le concept structural utilisé est à la fois simple, efficace et économique : un agencement de poutres et colonnes en bois lamellé-collé NordicLam de dimensions imposantes, disposées en empilement, de façon à limiter le nombre et la complexité des attaches. Ce système a permis de réduire de 25 % le coût de la structure, ce qui s'avérait essentiel dans la mesure où le promoteur ne voulait pas payer plus cher pour le bois que pour une structure en acier.

Un précédent pour de futurs projets semblables

Les efforts fournis par les équipes de design et de consultants pour répondre



aux exigences de la RBQ dans ce projet unique en son genre en ont valu le coup, et le promoteur s'est montré satisfait du résultat. Les solutions de rechange proposées à la RBQ reliées à l'utilisation du bois dans ce type de construction pourront faciliter la réalisation de futurs projets semblables, de nombreux bâtiments construits à une autre époque pouvant supporter un ou plusieurs étages additionnels, sous réserve d'une étude approfondie assurant qu'ils pourront être conformes à la section 4 du Code 2007.

ENTREPRENEUR GÉNÉRAL
Construction Citadelle inc.

GÉNIE STRUCTURAL
Laplante Saucier
ingénieurs-conseils

GÉNIE MÉCANIQUE
Thermeca

ARCHITECTE
CGBWSTUDIO [Charles-Bernard Gagnon
architecte], Hovington & Gauthier architectes

CONTRÔLE DES AMBIANCES
Immotik et Ventillation CDR

**CODES ET SÉCURITÉ
INCENDIE**
Civelec Consultants inc.

FOURNISSEUR
Nordic bois d'ingénierie

PHOTOS: SUKH JOHAL/WOOD WORKS! BC

A MESSAGE FROM CWC



Mid-rise Building Update

With the exception of British Columbia, the current national and other provincial building codes in Canada do not allow for the use of wood construction in mid-rise (five- and six-story) buildings. In March, 2011, the Canadian Wood Council (CWC) submitted code change requests that would increase the heights and areas of wood buildings allowed by the National Building Code (NBC) in Canada. Over the past year, as a member of a NBC Joint Task Group (JTG), CWC has been working with five NBC Standing Committees involved in developing the formal change proposals that will be submitted for broader formal public review later on this year. The detailed information describing the proposed changes will be made publicly available on the NRC's National Codes website, as part of its annual fall public review of proposed changes to the National Model Construction Codes. An online system is available that allows for all stakeholders and interested parties to submit their comments: (www.nationalcodes.nrc.gc.ca/eng/national_codes_list.shtml).

In studying the original request from the CWC, the JTG created four special Sub Task Groups (STGs) to consider the various issues raised by individual JTG members and other stakeholder groups related to minimum health, fire and structural safety requirements for five- and six-story wood

buildings. The subject areas of concern for the four STGs are:

- Fire safety during construction
- Fire safety and fire protection during use
- Structural design, and
- Building envelope design

CWC continues to actively monitor and participate in the work of these four different STGs, as well as the JTG.

Mid-rise work is rooted in research!

In 2010, the CWC initiated a research project in conjunction with the National Research Council (NRC) and FPInnovations to develop data intended to support CWC's submitted code change request for the 2015 National Building Code that would permit the use of wood construction in mid-rise buildings. Having these national research institutes involved lends further credibility to the work and its findings, which ensures that work by CWC and others regarding mid-rise continues to be backed by facts and scientifically supported by research.

With a growing demand for city densification, mid-rise construction is increasingly of interest to Canadian developers. Support for the mid-rise initiatives, both code- and research-related, will create potential new markets for wood products. Funding for the research component of the work has been provided

by Natural Resources Canada and three provincial governments (Ontario, Québec and British Columbia), and research is being carried out principally in the areas of: fire performance, acoustic performance, and building envelope design - taking into consideration the interaction of all aspects of a building's design.

A consultation group of key industry stakeholders and regulatory bodies was established to provide advice for the research project and to help disseminate the information developed. Members of the consultation group represent provincial regulators, the fire services, fire code consultants, consulting engineers and other interested groups.

For a number of the different aspects being studied, the research results will have direct application to the code change proposals and be considered by the National Building Code committees to support code changes for 2015.

Things are looking up!

The second year of research work is just being completed. A third year will involve some additional testing and analysis, along with the preparation of an overall summary report.

For more information on CWC's work on mid-rise, contact Helen Griffin at hgriffin@cwcc.ca.

NATIONAL PARTNERS

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Natural Resources
Canada

Ressources naturelles
Canada

BSLC

British Columbia Lumber Council

FPI Innovations



StructureCraft



STRUCTURLAM

structurlam.com



western archrib
structural wood systems

Weyerhaeuser



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Edmonton, AB T5J 3M1
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1175, avenue Lavigerie Bureau 200
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G1V 4P1
Télé : 418-650-7193

Ontario

60 Commerce Court,
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Tel: 1-866-886-3574

Atlantic

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