



SPECIAL 8-PAGE SUPPLEMENT

MUNICIPAL BUILDINGS

WINTER 16-17 – VOLUME 4, ISSUE 3



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CITY OF NORTH VANCOUVER CIVIC CENTRE RENOVATION
PHOTO CREDIT: MARTIN TESSLER

Wood Architecture Transcends Buildings

Bing Thom, one of Canada's legendary, celebrated architects and Founding Principal of Bing Thom Architects, sadly passed away in October. Throughout his designs, Bing stayed true to his conviction of building beyond physical structures; knowing that architecture did not end once buildings were completed, but instead that it transcended to the communities and people in which they served.

The theme for this magazine insert is municipal buildings. Similar to the foundation of Bing Thom's practice, these structures serve as gathering places and are uniquely designed to reflect the needs of their various communities. Using wood throughout these projects is an opportunity to showcase Canada's rich heritage with nature as well as ensure that the buildings of today are sustainable for tomorrow.

The Wood WORKS! program in Canada is dedicated to educating the design and build community about the possibilities and benefits of building with wood. Wood is the only renewable building material, is sustainably harvested from locally managed forests and aesthetically magnificent. As the wood industry gains momentum in larger building markets, mid-rise and tall, education will continue to be the grassroots of our efforts through advancements in wood science and research, events such as our Wood Solutions Fairs, and in fighting myths and misinformation with facts.

Dale Carnegie once said, "Today is the tomorrow you worried about yesterday." With the understanding that buildings of today must exist to benefit our tomorrow from an environmental, social and durability perspective – wood and wood products continue to be a construction option that can help the design community meet or exceed these expectations. The Canadian Wood WORKS! program exists to educate people about the possibilities of building with wood. Check out some of the project examples in this insert that were influenced by our program, resulting in beautiful wood buildings that will be enjoyed by many for years to come.

To learn more about the Canadian Wood WORKS! program or to register for an event, please visit: wood-works.ca.

Mark your CALENDARS 2017 EVENTS

January 17

Mid-Rise Design Workshop
Surrey, BC
www.wood-works.ca/bc

February 15

Ottawa Wood Conference
Ottawa, ON
www.wood-works.ca/ontario

February 21

Mid-Rise Costing Workshop
Hamilton, ON
www.wood-works.ca/ontario

February 22

Mid-Rise Costing Workshop
Woodbridge, ON
www.wood-works.ca/ontario

Feb. 28-Mar. 1

Wood Design and Construction
Solutions Conference
Vancouver, BC
www.woodweekbc.com
www.wood-works.ca/bc

March 6

2017 Wood Design Awards in BC
Vancouver, BC
www.woodweekbc.com
www.wood-works.ca/bc

March 28

Tall Wood Symposium
Woodbridge, ON
www.wood-works.ca/ontario

March 29-30

Fire Performance and
Alternative Solutions for
Wood Structures Workshop
Surrey, BC
www.wood-works.ca/bc

Etienne Lalonde
National Director
Wood WORKS!

Interested in attending a Wood WORKS! educational opportunity in your region? Check out the events listed in this insert and get involved with your regional Wood WORKS! today.

This Wood WORKS! magazine insert was created to help inspire design professionals throughout Canada. Do you have a project that features wood as a primary building material? Take advantage of our Wood WORKS! magazine insert and get featured today! Contact Natalie Tarini at ntarini@cwcc.ca, and share your story.



BRITISH COLUMBIA

PHOTO CREDIT: WOOD DESIGN AWARDS IN BC

Courtenay City Hall Renovation

Courtenay, BC

Wood played a starring role in the Courtenay City Hall renovation. With a mandate to use local products as much as possible, Western red cedar and Douglas fir were natural choices. Historically, these were harvested and milled in the Comox Valley, and they remain a favorite option for local building materials. Wood was also chosen for its beauty and popularity with the public. The use of wood helped add a traditional element to the contemporary look of the building. It visually connects City Hall to other public buildings downtown, including

the Courtenay Library and the Comox Valley Art Gallery which both have wood strongly incorporated into their designs. It was noted that as a local government, remaining fiscally responsible is a necessity. Wood is a cost-effective finish for public buildings, and with proper maintenance, it will remain durable and functional for years to come. The use

of wood also helped the project meet environmental considerations, as it is a renewable and sustainable material. The city of Courtenay hopes this project sets an example for the development community on how wood can be incorporated as both a structural and a design element, hopefully guiding and influencing future local development.

ARCHITECT Martin Hagarty	STRUCTURAL ENGINEER Bates Engineering	GENERAL CONTRACTOR Muchalat Projects Ltd.
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PHOTO CREDIT: DISTRICT OF CHETWYND

Chetwynd Municipal Hall

Chetwynd, BC

The Chetwynd Municipal Hall is a two-story wood-frame structure with cathedral ceilings supported by glulam trusses. Wood was used extensively as the primary structure of the building, with 80 per cent of the 16,996-sq.ft. building being wood. Weight-bearing columns, which are also constructed of wood, support massive glulam beams. The exterior of the building is finished with log features, Hardie plank and faux stone.

The roof casing to support a massive skylight and building identification signage are also constructed of wood. Chetwynd has landscaped the building using several of the wood carvings from its inventory, which were selected through a community competition.

The new municipal hall showcases the beauty and versatility of wood, along with the community's pride in its local wood industry.

ARCHITECT Field Engineering & Associates Ltd.	GENERAL CONTRACTOR Southwest Design & Construction Ltd.
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ALBERTA



PHOTO CREDIT: STEPHAN PASCHE

The Victoria Park and Borden Park Pavilions are two of five projects awarded through an international architectural competition held by the city of Edmonton in 2011. Each design had to respond to requirements user groups identified, such as public washrooms, change rooms, storage areas and warm-up space.

VICTORIA PARK PAVILION

Edmonton, AB

Located in the North Saskatchewan River Valley, close to downtown, the pavilion is strategically positioned at the center of the city's trail network. As such, it serves as an amenity building for local residents, as well as the many different groups who use the trails throughout the year. The park includes a baseball diamond, cricket pitch, children's play area and picnic facilities for summer use, and an outdoor skating rink in the winter.

The single-story building describes a gentle, elongated arc in plan, with large windows facing the park. The primary structure comprises a series of Douglas fir glulam post and beam frames. The secondary structure consists of fluted Douglas fir glulam panels. Two of the frames extend beyond the facade, identifying an intermediate zone between the pavilion and the park. The height of the building was designed to accommodate large maintenance equipment such as a Zamboni and a water truck, but when carried through the building, the additional height gives an unexpected sense of grandeur to the public spaces.

CLIENT

City of Edmonton

ARCHITECT

Rayleen Hill Architecture + Design Inc.

STRUCTURAL ENGINEER

Fast + Epp

GENERAL CONTRACTOR

EllisDon



PHOTO CREDIT: RAYMOND CHOW

BORDEN PARK PAVILION

Edmonton, AB

Located in the neighborhood of Virginia Park, northeast of the city center, Borden Park has a rich history extending back more than a century. Established in 1906, the park was home to Edmonton's first zoo, as well as many other attractions including a swimming pool and a rollercoaster. Inspiration came from the historic bandstand and carousel structures that once graced the park, and from the curving paths characteristic of English landscape design of the Victorian era.

The exterior wall of the pavilion is a load-bearing wall comprising a series of glulam columns arranged in a zigzag pattern around the perimeter of the building. The resulting triangular-shaped wood frame is over clad with sealed, double-glazed units. Although the columns lean at 10 degrees from vertical, they bear on each other at the base and top. The connections are simple and discreet – concealed knife plates secured with a single bolt. A concrete ring beam and faceted glulam eaves beam stabilize the system.

The circular service core is a load bearing wood frame structure whose center is offset from the center of the exterior wall.

The pavilion has a dual character: transparent from the inside, where visitors feel strongly connected to the surrounding park, and mirrored on the outside, where the multiple reflections dissolve the building into the landscape in an ever-changing kaleidoscope of seasonal color. Visible inside the building, the structural wood members, sourced from certified forests, are wire brushed and whitewashed, giving this contemporary pavilion a texture and patina that speak to the historic legacy of Borden Park.

CLIENT

City of Edmonton

ARCHITECT

gh3

STRUCTURAL ENGINEER

Chernenko Engineering Ltd

GENERAL CONTRACTOR

Temple Contracting



ONTARIO

PHOTO CREDITS: TOM ARBAN PHOTOGRAPHY

Upper Thames River Conservation Authority – Watershed Conservation Centre

London, ON

Constructed on a mitigated brownfield site nestled within an urban conservation area, the Upper Thames River Conservation Authority's new Watershed Conservation Centre is a 40,903-sq.ft. multi-purpose building that preserves the existing environment and respects regulated requirements of flood plains, heritage zones and other environmentally sensitive areas.

The design of this LEED Platinum building responds to Fanshawe Park Lake to the north, which is defined as the "entry point" for an urban river and flood control system that is part of a larger regional environmental corridor. Consistent with the philosophy and mandate of the client, considerable effort was made to achieve a sustainable building that was responsive to all environmental considerations.

The curved, strategically glazed building is surrounded by the panoramic views of the watershed area and is oriented to reap the benefits of daylighting and natural ventilation. The design of the centre encourages social interaction and establishes strong connections between interior and exterior spaces. A contemporary design and the use of natural materials, including concrete, stone, glass, and engineered wood products, further enhances the building's

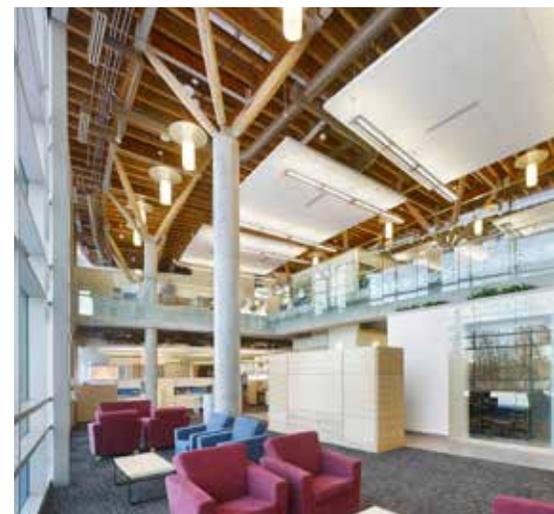
connection to the environment.

Materials were carefully chosen; several considerations influenced their selection including local availability, sustainable manufacture, and low or no VOC. Wood is predominant, not only in the roof structure, but also throughout the building in the form of finishes that enhance and contrast with the other natural materials that were used. The design invites guests to explore the building as an extension of the natural environment. The corridors are like pathways that reinforce a connection to the surrounding environment and the extensive network of hiking and biking trails.

Within the building, there are permanent office and administrative areas, but there are also more flexible spaces that have been dedicated to education, nature interpretation and community use. The architecture has a simple honesty that expresses the use of and connection between material types which are left exposed to encourage investigation of the design and construction techniques.

Although the building is designed to achieve the rigorous standards of a post-disaster facility, all interior spaces, even

the underground wet lab and flood control rooms, have corridor-facing glazing that provides transparency from inside the building to the outside environment. This design parameter to have the building "turn out" to the environment has proved very successful and truly connects the building's interior spaces. The result is a beautiful building that is intimately connected with the environment it was built to help protect.



ARCHITECT

Randy Wilson Architect Inc.

STRUCTURAL ENGINEER

Hastings & Aziz Ltd

GENERAL CONTRACTOR

Graceview Enterprises

QUEBEC



PHOTO CREDITS: STEPHANE GROLEAU

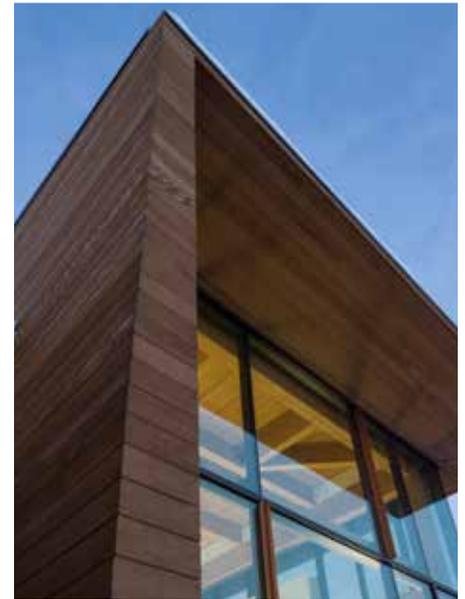
Saint-Éphrem Multipurpose Center

Saint-Éphrem-de-Beauce, QC

Located in the heart of the community of Saint-Éphrem, the multipurpose center catches the eye thanks to its fully glassed-in entrance hall which reveals a beautiful wooden structure. The glulam structure of the hall and adjoining vestibule, as well as the red cedar roof, capture the attention of passersby from the street. The balance of the building is also constructed of wood but with a more conventional light frame structure. This marriage of building systems allowed the municipality to bring to life a project that combines both beauty and efficiency, at a low cost.

Acting as both City Hall and cultural, community and commercial complex, the two-floor, 27,986-sq.ft. Saint-Éphrem multipurpose center is divided into several volumes of varying heights. It houses the Town Council chamber and the municipal offices, the municipal library, a pharmacy, a few non-profit organizations, as well as a large multipurpose room, which can be divided into two separate sections and can accommodate up to 600 people.

Initially, the municipality advocated for a building built entirely of glulam components, both for glulam's aesthetic qualities and in order to contribute to the largely forestry-based local economy. However, the estimated cost of this design was beyond the initial budget, so much so that the municipality finally decided to concentrate the glulam elements in the front section of the building, namely in the entrance hall and vestibule, and to use a traditional light wood frame for the remainder of the structure. The decision to pair these two wooden structural systems allowed the town to respect the limits of its budget while also retaining the warm character of a heavy timber frame – a design that had originally charmed the town's representatives. Although the glulam portion represents less than 10 per cent of the building's area, its location at the front focal point of the building lends the center a distinct cachet, while the use of light wood framing for the rest of the building translated into significant



savings, and, according to the project's engineer, proved even less expensive than a steel structure.

Moreover, the engineer reveals that the pairing of these two wood structural systems was easily accomplished and that some on-site adjustments that were required were more easily carried out with the wooden components than they would have been with metal components.

CLIENT

Municipality of
Saint-Éphrem-de-Beauce

ARCHITECT

Les architectes Odette Roy
and Isabelle Jacques

STRUCTURAL ENGINEER

Génivar (now WSP
Canada Inc.)

GENERAL CONTRACTOR

Scierie Bernard

TIMBER SUPPLIERS

Freneco ltée, Nordic Structures,
Goodfellow, Poutrelles modernes
and Portes Baillargeon



PHOTO CREDITS: ARCHIBALD & FRASER ARCHITECTS

St. Mary's Administration Centre

Sherbrooke, NS

The Municipality of the District of St. Mary's, which was incorporated in 1879, serves a small, mostly rural population on Nova Scotia's eastern shore. In 2011, the Council decided to replace its small and inadequate administration center. The vision was to construct a new facility which would be affordable to operate long-term as well as environmentally responsible, healthy and comfortable.

The new 5,600-sq.ft. center, which overlooks the historical St. Mary's River, opened in 2013 and achieved Four Green Globes Certification (equivalent to LEED Gold). The wood frame design contributed to this certification.

"The Municipality of the District of St. Mary's is very proud of our new Green Globes-certified administration building," says David Clark, Warden, Municipality of the District of St. Mary's. "The funding for this building was a result of the hard work and co-operation of the Federation of Canadian Municipalities and both our federal and provincial governments. Allowing us to access the Gas Tax Funds was critical for St. Mary's Municipality to move forward with this project by providing 100 per cent of the capital funding. As well as providing administration offices and Council Chambers, the building is designed to serve the community.

– Infrastructure Canada's website



The design and the construction of the center was very much a regional project. Local materials and labor were utilized as much as possible. The building is a wood framed one-story, fully barrier-free accessible, with a small mechanical loft in the roof space. The 2 x 6 wood framing and pre-engineered wood truss roof allowed for cost-effective design and facilitated familiar methods of construction in rural Nova Scotia. The exterior clapboard siding and asphalt shingle roof emulate the building stock of the rural constituency the center serves.

The features of the center which contribute to its sustainability and efficiency are:

- ground source heat exchanger
- highly insulated envelope
- triple glazed windows
- local materials
- daylight and occupancy sensors
- LED lights
- passive ventilation features
- water conservation features
- local and natural vegetation used in landscaping

ARCHITECT:
Archibald &
Fraser Architects

STRUCTURAL ENGINEER
SNC Lavalin (formerly CJ
MacLellan & Associates)

GENERAL CONTRACTOR
Tate Construction Ltd.

NATIONAL PARTNERS

Canadian Wood Council
Conseil canadien du bois



Natural Resources Canada
Ressources naturelles Canada



STRUCTURLAM
Intelligence In Wood

BSLC
British Structural Lumber Council

CertainTeed
SAINT-GOBAIN



StructureCraft



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structural wood systems



LP
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guardian Structures



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