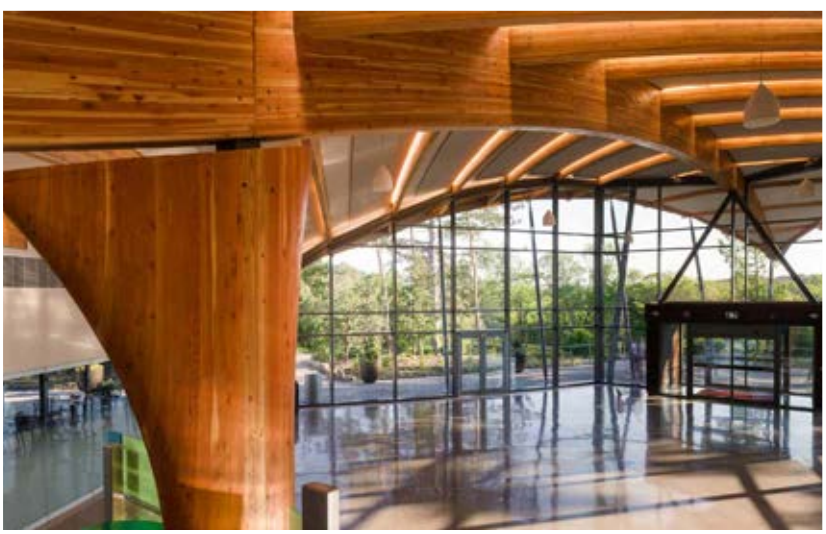
SPECIAL 8-PAGE SUPPLEMENT

ARTS & INTERPRETIVE CENTERS

FALL 2016 – VOLUME 4, ISSUE 2



WHAT'S INSIDE

woodWORKS! Program of the Canadian Wood Council

cecobois Centre d'expertise sur la construction commerciale en bois

Canadian Wood Council / Conseil canadien du bois

MONT-TREMBLANT NATIONAL PARK DISCOVERY CENTRE
PHOTO CREDIT: STÉPHANE BRÜGGER

Wood does work for you... and we have a program to prove it!

The Canadian Wood *WORKS!* program promotes the use of wood and wood products in construction while acknowledging the contribution of wood-use advocates and industry construction leaders. These magazine inserts are an opportunity for the Wood *WORKS!* program to showcase a diverse repertoire of projects throughout Canada that use wood as a structural component. With the expectation of educating and inspiring the design community, each magazine insert features different building themes and provides a glimpse into the reason of why wood was chosen as the preferred construction material.

For our Fall insert we're happy to feature wood projects that are community gathering places – cultural and visitor centers. These projects and our Wood *WORKS!* program have one underlying commonality – the desire to bring people together. Aristotle once said, "Educating the mind without educating the heart is no education at all." Whether you're reading this magazine insert or attending an event hosted by the Wood *WORKS!* program, it is our hope that we're inspiring and educating you about the possibilities of building with wood.

For us, inspiration comes in many different forms and we try to provide our audiences with the opportunity to experience as many as possible. At our events we highlight expertise from local and international speakers who share their experiences with wood construction and speak to the future opportunities for our industry. Our exhibitors feature products and technologies that can assist the design community with realizing their next wood construction project. Our publications, from case studies to the *Wood Design & Building* magazine, feature North American and international examples of wood buildings that are diverse and innovative. And finally, sometimes all you have to do to find inspiration is to look within your own community projects, similar to the ones featured in this insert, to reaffirm wood as a safe, sophisticated and green building option.

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

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@cwc.ca, and share your story.

Mark your CALENDARS

2016 EVENTS

Sept. 29
Rocky Ridge Recreation Facility Tour and Presentation
Calgary, AB
www.wood-works.ca/alberta

Nov. 4
Timber Pre-Fabrication Construction Workshop
Vancouver, BC
www.wood-works.ca/bc

Nov. 15
Ontario Wood *WORKS!* Wood Design Awards Night
Toronto, ON
www.wood-works.ca/ontario/wda

Nov. 17
Wood Solutions Fair
Toronto, ON
www.wood-works.ca/ontario

Nov. 21
Wood Design & Building Awards Entry Deadline
www.wooddesignawards.com

December
Prairie Wood Solutions Fair
Calgary, AB
www.wood-works.ca/alberta

Dec. 1-2
Timber Connections Design Workshop
Victoria, BC
www.wood-works.ca/bc

2017

Jan. 17
Mid-Rise Design Workshop
Surrey, BC
www.wood-works.ca/bc

Feb. 28 – Mar. 1
Wood Design & Construction Solutions Conference
Vancouver, BC
www.wood-works.ca/bc

Mar. 29-30
Fire Performance and Alternative Solutions for Wood Structures Workshop
Surrey, BC
www.wood-works.ca/bc

First Peoples House, University of Victoria

Victoria, BC

This beautiful, multi-purpose educational facility is located on the University of Victoria Campus and is the only major wood structure centrally located at its heart. The 12,875-sq.ft. facility houses the Indigenous Graduate Student Union, Native Student Union, classrooms, faculty and counselling offices, elders and student lounges, study space, and a ceremonial space. The Ceremonial Hall, the heart of the building, is a sacred space celebrating the use of Western red cedar as the cultural blood of the Coastal Salish people.

The design celebrates First Nations culture through the use of cedar inside and outside the building and is symbolic of the importance of this material to the First Nations of the northwest coast. The architect assisted the university in locating and purchasing First Nations-salvaged Western red cedar a year before construction to ensure adequate preparation time for the material.

The design strategy focuses the experience, whether inside or outside, on the use of cedar as a cladding material inspired from large planks used in the past and the grand post-and-beam structures used by the coastal First Nations. The building is split into three volumes, with a large sloped roof covering the Ceremonial Hall and classrooms, and the lower roof enclosing the administration block. The use of heavy timber structure for the larger volume

represents the Coast Salish longhouse and each enclosed room is defined by this post-and-beam structure. The heavy timber reveals the structural expression at the main entrance canopy and the entrance lobby. The glulam beams from the Ceremonial Hall and classrooms project beyond their enclosure to define the public corridors. Wrapping the outside and inside of the classroom wing and Ceremonial Hall with Western red cedar under the main roof and then connecting all three building volumes with a ribbon of glass clearly defines each programmatic element.

Art is an integral part of First Nations culture and this project incorporates two sets of carved cedar house posts, carved ceremonial doors, and eight carved inset panels in the Ceremonial Hall. Woven cedar panels inspired by the bulrush mats that lined the interior log houses of the past, comprise the upper walls of the Ceremonial Hall.

CLIENT	ARCHITECT	STRUCTURAL ENGINEER	GENERAL CONTRACTOR
University of Victoria	Alfred Waugh Architect	Equilibrium Consulting Inc.	Knappett Projects Inc.

ALBERTA

PHOTO CREDITS: ROB GANZVELD

Philip J. Currie Dinosaur Museum

By George Jacob, President and CEO, Philip J. Currie Dinosaur Museum

Wembley, AB

The $46-million Philip J. Currie Dinosaur Museum in northern Alberta reached historic milestones, clocking an incredible 100,000 visitors in less than 10 months and winning nine awards since its opening in September 2015. It has changed the destination tourism dynamic in Alberta, contributing significantly to the regional economy. It is endorsed by *The Globe and Mail* and Air Canada's *enRoute* magazine, with *Conde Nast Traveler* naming it one of the top 10 museum openings around the world for 2015-16.

Against all odds, this was the fastest museum design-build project in Canadian history. Minimal resources unleashed a powerful story that pivots on a 360-million-year journey from palaeo to petroleum. The narrative resonates with all Albertans who take pride in their heritage – from fossils to fossil fuels.

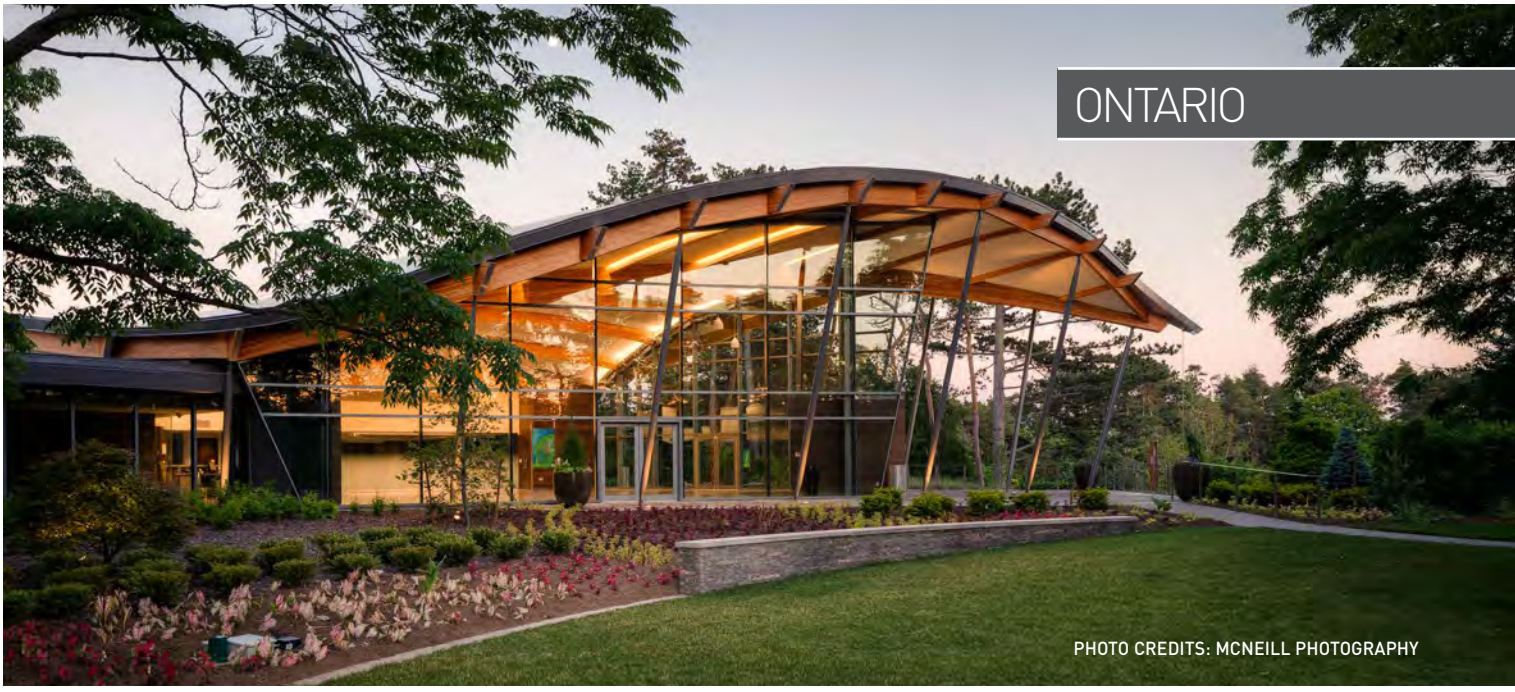
One of the key elements that sets the museum apart is its architecture and extensive use of lumber. The building hinges on a series of trapezoid retaining walls that support giant timber trusses akin to an articulated skeleton of a dinosaur. The building descends two levels emulating a bone-bed dig site that awaits exploration.

The timber trusses soar upward in a cathedral-like contemporary space, letting in ample sunlight and culminating in multi-point nodes. Each node is an innovative work of art, engineering and design. Carefully calibrated by structural engineers Fast + Epp, the nodes are comprised of glulam wafers that support an asymmetrical zinc roof resembling the open fields of nearby Grand Prairie that stretch to the wide horizons under vibrant Alberta skies. The use of wood extends beyond the trusses onto the exhibit elements, benches, reception desk, gift shop and other areas, lending warmth and a sense of organic tactility to the interiors.

The building offers vistas of ribbed pine that girds different sections, adding depth and breathing room to a seemingly confined spatial layout. The boardroom soars above the front desk where angular design aesthetics of the interior are extended to rhombus glass-paned walls that house custom-designed woodwork and furniture. The design elements extend into the office area with trims, panels and angular configuration of workspaces.

Museums are souls of civil societies and collective repositories of our discoveries, inventions and material evidence of our heritage. They are important institutions that augment our education system, advance our knowledge, celebrate our achievements and inspire minds to discover, decode and dream beyond the mundane.

CLIENT	ARCHITECT	STRUCTURAL ENGINEER	GENERAL CONTRACTOR
County of Grande Prairie No.1	Teeple Architects	Fast + Epp	PCL Construction



Rock Garden Visitor Centre

Hamilton, ON

The Rock Garden in Hamilton, originally constructed in 1931, is one of the major venues of the Royal Botanical Gardens (RBG). In the Spring of 2016, the RBG completed a three-year, $20-million transformation of the attraction and opened a new, revitalized garden that respects the heritage, look, and feel of the original garden while celebrating the beginning of a new era.

The design was led by CS&P Architects which worked closely with Janet Rosenberg Studio on the landscape, garden design and site development. The focus of the design was to increase the public visibility and presence of the Rock Garden, improve access to all areas for guests, provide a venue for the RBG to host events year-round, introduce a more sustainable planting plan, and address significant infrastructure issues to improve the sustainability of the 80-year-old site.

The new Visitor Centre is a key element of the transformation. The building's wood roof and distinctive form evoke the trees and leaf shapes of the garden. The multi-purpose room, with its high ceiling and heavy timber roof, is a four-season venue for public activities, dining, business events, and celebrations.

The wood members for the heavy timber roof were fabricated off-site and shipped to Hamilton by train. The glulam structure took a team of four people only two weeks to erect. The shape of the roof is primarily defined by the form of the main spine down the middle structure, a beam that is 134 feet long and 4.5 feet deep at deepest point. The curve of each of the 28 secondary beams that attach to the main spine is the same for each on the top surface, however their bottom curvature varies according to their depth. The central feature column is a functional load bearing glulam wood column, which was hand cut into two halves. The only steel elements in the column are the connections to the main spine and to the floor.

From the street, the new Visitor Centre re-establishes the Rock Garden as the gateway to the cities of Hamilton and Burlington and gives the garden a new entrance and stronger presence on York Boulevard. Viewed from the garden, the building's thoughtful and site-sensitive design is evident in the overall balance of the site. The distinctive building blends effortlessly into the landscape, an integral and harmonious feature of an iconic garden.

ARCHITECT	STRUCTURAL ENGINEER	GENERAL CONTRACTOR	TIMBER SUPPLIER
CS&P Architects	WSP Canada	Ira McDonald Construction Ltd.	Timber Systems

QUEBEC

PHOTO CREDIT: DENIS DÉSILETS

Place des Citoyens

Sainte-Adèle, QC

Located in the heart of the municipality of Sainte-Adèle, Place des Citoyens is a beautiful example of a municipal building that is close to its citizens and is attuned to their needs. Serving as a gathering place and a forum for the exchange and dissemination of culture, the 4,736-sq.ft. venue is able to host a multitude of events and activities.

The idea of using a wooden structure for the building was decided on very quickly. The municipality of Sainte-Adèle developed thanks in large part to the forestry industry, so much so that this material constitutes a big part of the region's history and culture. Consequently, wood is considered an important identity material for the community. Left exposed, the glulam structure immediately creates a warm, elegant and distinct atmosphere that seduces and attracts citizens. Since its opening, the project continues to generate positive testimonials and the admiration of its visitors.

The use of glulam also offered the designers more creative flexibility, allowing them to design the roofs with curved silhouettes inspired by the profile of the neighboring Laurentian Mountains. Inside, the larger spans of the wooden structure permitted the use of fewer columns which helped to further open up the spaces within the various rooms. Since wood is an excellent insulator, the beams also continue straight through the building envelope, extending to the exterior. Covered by a wooden roof, the esplanade at the entrance acts as an all-season gathering space: in the summer, it welcomes visitors on market days and for various events; in winter, it can be used as an outdoor skating rink.

Sensitive to the issue of sustainable development, the project team also paid particular attention to natural lighting, the building envelope's thermal performance, the mechanical equipment, and to the choice of materials. Consequently, the pine and concrete panels used for the exterior of the building were manufactured locally. Thanks to prefabrication, it was possible to erect the framework of the wooden structure in winter conditions, a significant advantage, and to eliminate the production of waste on-site.

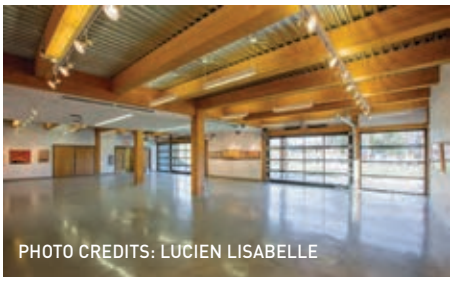


PHOTO CREDITS: LUCIEN LISABELLE

The project's many aesthetic and environmental qualities helped earn it awards in two different categories in the 2014 edition of the Cecobois Prix d'excellence awards – in the Institutional Building Less than 1000 m² and Sustainable Development categories.

CLIENT
Town of Sainte-Adèle

ARCHITECT
Atelier IDEA

STRUCTURAL ENGINEER
GUSA Experts-conseils

GENERAL CONTRACTOR
Construction Hugo Alary (CHA)

TIMBER SUPPLIERS
Goodfellow and Juste du Pin

PHOTO CREDIT: CROCKWELL PHOTOGRAPHY

Manuels River Hibernia Interpretation Centre

Manuels River, Conception Bay South, NL

The Manuels River Hibernia Interpretation Centre forms the epicenter of the "Manuels River Experience".

The Manuels River Hibernia Interpretation Centre is a non-profit public educational center located on the banks of the Manuels River, Conception Bay South, Newfoundland and Labrador. This 13,000-sq.ft. state-of-the-art interpretation center is an icon in the developing Conception Bay South area, acting as a first-class tourism destination for the study of paleontology. The center will be a destination for those seeking a unique experience and will educate students and visitors about the geology of the area and the significance of trilobite fossils that date back more than 500 million years.

As a key attraction for visitors to the community and the province, the center blends with the natural surroundings as an environmental example of excellence. Designed with progressive environmental standards in mind, the project encompasses a variety of wood species and other structural elements to form a hybrid structural system, and utilizes a geothermal heat pump system to minimize energy loads and operational costs.

The center includes classroom space that can accommodate up to 60 people, a floor of interactive exhibits, a cafe, a 52-seat theatre, a gift shop and a separate event space.

The multi-purpose room is comprised of long-span hybrid king post roof trusses constructed from glulam and steel rods. The resulting structure is stylish and chic. The glulam and steel work to their strengths, taking advantage of the high compressive strength of glulam with the high tensile strength of steel rods to create a roof truss system which blends well with the architectural design features of the building. The connections are simple seated steel to wood connections with timber rivets.

Other parts of the hybrid structural system consist of glulam beams supporting spruce wood roof decking. Even though the plan geometry of the building is complex, the implementation of random pattern spruce wood decking reduced the amount of waste during construction phase.

Wood also comprises the exterior of the building. The exterior walls utilize light wood framing with plywood sheathing, which act as shear walls that provide structural lateral resistance. Cedar shake cladding blends well with the exposed glulam fascia, timber soffits, as well as with the natural environment. The warmth of this hybrid wood structure reflects the main goal to develop an educational and learning center for all walks of life.

ARCHITECT
PHB Group (now Stantec)

STRUCTURAL ENGINEER
DBA Consulting Engineers Ltd.

GENERAL CONTRACTOR
Redwood Construction

NATIONAL PARTNERS

Canadian Wood Council / Conseil canadien du bois

Natural Resources Canada / Ressources naturelles Canada

STRUCTURLAM Intelligence In Wood

BSLC

CertainTeed SAINT-GOBAIN

StructureCraft

western archrib structural wood systems

LP BUILDING PRODUCTS

Weyerhaeuser

Guardian Structures

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