





LIBRARIES

FALL 2015 – VOLUME 3, ISSUE 4







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Knowledge is Power – Libraries Embrace Wood Construction

Long before Google, when people had questions, they either asked their parents or made a trip to their local library. I can remember, as a child, being amazed at the sight of rows upon rows of books and wondering how every topic could fit under one roof – but they did, and still do!

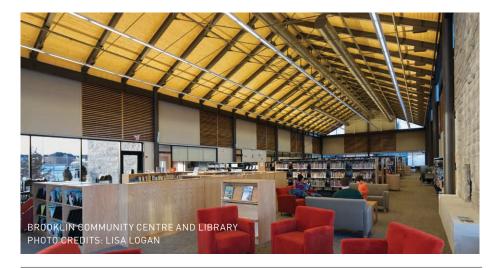
Today, libraries have morphed into a social gathering hub for communities, offering a variety of family-friendly interactive events and activities. Complementing this social shift is the use of wood, both structurally and exposed, in library construction. Apart from the suitability of housing paper books in a wooden building, wood is a building material that offers an aesthetic warmth and sense of inviting familiarity. As you will see from the examples in this magazine insert, libraries are embracing this trend and opting for wood as a building material.

As we push the boundaries of what were once thought of as the "limits" for wood construction, the wood industry will be called upon to answer questions to the unknowns. Much like libraries, we will refer to the knowledge and research from existing resources and unveil the findings of new research and technologies that have emerged to help eliminate any false pretenses for wood and its capabilities within construction. From my experience, knowledge is often the best defence that someone can have.

Next time you're at your library and about to pick up a book to either enjoy alone or with company, I would encourage you to read-up on wood as a building product and learn more about the rich history of our roots.

Florine Solorde

Etienne Lalonde



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 2015 EVENTS

OCTOBER

Oct. 14

Mid-Rise Symposium **Vaughan, ON** www.wood-works.ca/ontario/ educational-events

Oct 27

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

NOVEMBER

Nov. 12

Wood Design Awards Gala Toronto, ON www.wood-works.ca/ontario

Nov. 24

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

Nov. 24

Wood Design Luncheon Conference **Kelowna, BC** www.wood-works.ca/bc

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Nov. 26

Wood Design Luncheon Conference Victoria, BC

www.wood-works.ca/bc

DECEMBER

Dec. 4

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





Salt Spring Island Public Library

Salt Spring Island, BC

Located off the southeast coast of Vancouver Island, Salt Spring Island is the largest in British Columbia's Gulf Island chain. With a population of approximately 10,000, the island has a diverse and flourishing artistic community centered in the town of Ganges. The new 1,200-sq.m. Salt Spring Island library, completed in 2013, is located in downtown Ganges and designed to serve the changing needs of the community for decades to come.

Due to the constraints of a small site, the library was designed to occupy the minimum possible footprint. The ground floor is home to the general collection, reading areas, multi-purpose rooms and administrative areas, while the archives and associated workroom are located upstairs. The design combines advanced technology, new low carbon energy management concepts, and an efficient and welcoming design that fits into its immediate physical and broader cultural context.

The library is designed to the LEED Gold standard and incorporates a number of green strategies.



The library is constructed using a post and beam system with glulam joists and rafters, supporting the textured wood panels and tongue and groove wood roof on the second floor. The rafters project beyond the north and south walls, and their ends are visible beneath the cantilevered eaves.

On the northwest corner of the building, the library entrance is sheltered by a dramatic glulam-framed canopy whose exposed structure is supported on a single steel column.

In feature areas of the interior, the glulam post and beam connections are elegantly detailed with diagonal braces and neatly concealed steel plates. Linear wood ceilings perform an acoustic function as well as concealing services in key areas.

Exterior walls, interior partitions and shear walls are all constructed using light wood-frame construction, and the floors and roof include plywood diaphragms.

In addition to the linear ceilings, the interior features wood doors and trims, millwork and panelling. Complemented by light-colored drywall surfaces and washed by abundant natural light, the wood creates a warm and welcoming atmosphere befitting a community library. CREDIT: naturally:wood.

"The people of Salt Spring have a strong record of environmental awareness and design aesthetics, and they embraced the library design, construction, appearance and floor plan immediately after the building opened. The extensive use of wood is a major part of the building's appeal."

Duncan Hepburn

Building Manager

Salt Spring Island Public Library

OWNER

Capital Regional District Victoria, BC

ARCHITECT

Chang Holovsky Architects Inc. Sidney, BC

STRUCTURAL ENGINEER

Herold Engineering Ltd. Nanaimo, BC

GENERAL CONTRACTOR

Knappett Projects Inc. Victoria, BC





Meadows Community Recreation Centre and Library

Edmonton, AB

Located in a fast-growing area of southeast Edmonton, the new Meadows Community Recreation Centre, and associated Meadows Branch Edmonton Public Library, provide year-round recreational and cultural opportunities for the surrounding neighborhoods.

Wood is used throughout as both a structural and finish material. Because wood is a renewable resource with low embodied energy, its use supports the project's sustainability goals. Different kinds of wood are used for different purposes, from glulam roof beams to maple slat finishing for the walls. Using wood allows the structure of the building to be expressed and celebrated. The programs and activities are united by the undulating roof. The warmth of the wood and its rich color and texture provide a welcoming ambiance.

The library, integrated into the community center, is approximately 15,000 sq.ft. and features an outdoor reading garden. Other library highlights include: public computer stations; a community program room; a study room; reading areas for children, teens and adults; a freshwater aquarium and fireplace; and express checkout stations.



In the library, the acoustic wall cladding is comprised of 19x19 mm vertical maple slats. Butcher block-clad millwork was used in the library, fitness center and for the main information desk.

Economic

The use of wood for the roof structure was proposed by the architects and accepted by the City of Edmonton, which had used wood in other primary recreational facilities with positive results. The cost implications of using wood were reviewed by a local cost consultant and were found to be reasonable and within budget.

Safe

In a building with more than one major occupancy, the requirements for the

most restricted major occupancy apply to the whole building. This means that the floor assemblies are fire separations with a fire-resistance rating not less than two hours. The mezzanines have a fire-resistance rating of not less than one hour, and load bearing walls, columns and arches have a fire resistance rating not less than that required for the supported assembly. The building is sprinklered throughout.

Sustainable

The carbon benefit of the wood structure in the Meadows Community Recreation Centre and library is the equivalent to taking 1,875 cars off the road for one year or, expressed differently, the energy to operate a home for 835 years.

OWNERCity of Edmonton

CH2M Hill Group2 **GLULAM SUPPLIER** Western Archrib



Toronto Public Library, Scarborough Civic Centre Branch

Toronto, ON

The recently completed Scarborough Civic Centre Branch of the Toronto Public Library is a progressive, stunning community asset that is everything a modern library should be: technologically advanced, accessible, adaptable, and welcoming to a diverse and growing group of patrons.

"We want to make great places," says Brock James of LGA Architectural Partners, a firm known for its contextually sensitive and socially minded architecture. "We are inspired by context, clues on site that inform our process-based approach."

The new library shares a block with the Scarborough Civic Centre and Albert Campbell Square, both located to the north of the library site. The south side of the block was disused because it was

challenging to negotiate; people didn't know where to go. It also sat 13 feet below the access to the square on the north side. The construction of the library and its surrounding features revitalized the south side of the site and opened up the block, drawing people in and giving them new access points to the Civic Centre and the square beyond.

"Wood played an important role in this place making exercise," says James. "The stick nature of the layerd wood structure creates continuity with the surrounding landscape while creating lovely shadows as the light changes throughout the day." The architecture devises a respectful accord between the library and the existing cityscape.

Structurally, the effortless elegance of the

building belies its complexity. "The project was geometrically complex," confirms Ethan Ghidoni of Blackwell Structural Engineers. "The glulam column clusters are articulated such that they typically support two separate roofs with varying slopes and plan curvature. They link the four roofs and behave as the lateral load resisting system in addition to supporting the gravity loads."

The new library's inspired design enables it to transcend its primary role as a community hub and breathe new life into a formerly difficult, intensely urban area. James sees the library as a "green respite from the urban context" though he is careful to explain what that means. "It's not that the library does this by separating itself from its surroundings. Libraries need to radiate influence in their area."

The Scarborough Civic Centre library does exactly that. In every direction around the extensively glazed timber structure, carefully considered entrances, walkways, gardens and courtyards create inviting zones that craft connections and encourage movement between the library and its adjacent spaces.



ARCHITECT

LGA Architectural Partners and Phillip H. Carter Architect

STRUCTURAL ENGINEER

Blackwell Structural Engineers

GENERAL CONTRACTOR Aquicon Construction

TIMBER SUPPLIER
Nordic Structures



Jonquière Public Library

Saguenay, QC

Located in Saguenay, in the Saguenay-Lac-Saint-Jean region, this two-floor, 25,833-sq.ft. multifunctional cultural center is part of a broader plan to revitalize the city's Jonquière borough, particularly along Saint-Dominique Street where the library is situated. Representing an investment of more than \$10 million, the building houses the library itself as well as a cafe lounge, a high-tech multipurpose room, a large conference room, and four meeting rooms equipped with electronic whiteboards, available for use by local neighborhood groups, sociocultural organizations and businesses. Wood was used extensively for the structural and architectural elements of this municipal building, complementing the contemporary look of the structure which serves as a flagship project for the borough.

In addition to being derived from a renewable resource, wood is an important identity material for the region as it is closely connected to the area's economic development. In fact, wanting the building to be prestigious, it was the mayor of Saguenay who insisted that wood be

used for the structure. Enhanced by large windows and a multitude of skylights, the glulam structure helps to create a warm, welcoming atmosphere inside. Wood was also used for several design elements, including the built-in furniture, the interior doors, wall coverings, and oak hand railings. Beneath drop ceilings, natural cedar planks were used because of the pleasant smell cedar emits.

Beyond its aesthetic qualities, wood also contributes to the acoustic comfort within the building. In the central area, the walls are finished

with panels covered by a wood veneer featuring sound absorbing grooves. Wood fiber acoustic panels are also suspended from the ceiling, further minimizing the echo effect.

Wood is equally very present on the exterior of the building. The glulam decking, cantilevered over the entrance





and over several windows, is supported by beams also made of glue-laminated wood. Natural cedar siding covers the soffits as well as curtain walls that are sheltered from the elements. The warm color of the wood contrasts with the rest of the exterior facing which consists of white aluminium panels, charcoal-gray masonry blocks, and cast concrete panels.





Kennebecasis Public Library

Quispamsis, NB

A community facility shared by the ever-expanding towns of Quispamsis and Rothesay, the Kennebecasis Public Library (KPL) had significantly outgrown the existing facility. It was time to recreate the library. A proposal call was issued and the Board of Trustees commissioned the Saint John-based Richard & Co. Architecture to design its renovation and expansion.

The needs analysis and program for the library defined the size, character and relative distribution of library areas and spaces. Information to be considered included the number of books for fiction, non-fiction, teens, children, etc. The number of computers was identified, as were the number and types of study areas, meeting rooms, and office and support areas.

The building designed for the community incorporated the renovation of the existing 7,000-sq.ft. library linked to a new, 14,000-sq.ft., two-storey addition. Structural steel in combination with structural wood supports provides a voluminous space. Large, wood-clad windows provide an indoor/outdoor connection that creates a bright and welcoming interior space. Clapboard siding in combination with face brick responds to the residential setting of this institutional building.

The mechanical, electrical and structural design for this building required the integration of new state-of-the-art engineering systems within the renovated area of the original library. The KPL is a complex building that included in-floor heating, radiant ceiling panels,

air to air systems, a sprinkler system and an associated cistern, lighting responsive to daylight and solar hot water heating. The creation

of structural openings within the existing walls required coordination with mechanical, electrical and architectural requirements. Communication and security considerations were incorporated.

A primary objective of the Board of Trustees and the partnering towns was that the design of the new Kennebecasis Public Library demonstrates both sustainability and responsiveness to the environment. The design team introduced a variety of sustainable measures resulting in a demonstrated efficiency in energy consumption and an attention to design detail relative to site characteristics. The Kennebecasis Public Library was the first New Brunswick building to be awarded five Green Globes, which is a building environmental design and management tool.

An attention to accessibility was accomplished through the provision of pathways, materials, textures and colors that were responsive to the needs of those in wheelchairs as well as those with sight issues.



ARCHITECT Richard & Co. Architecture

NATIONAL PARTNERS



Conseil canadien du bois



Natural Resourc

Ressources naturelles Canada















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