



PROMOTING HEALTH & WELLNESS

WITH WOOD ARCHITECTURE

**SPECIAL
8-PAGE SUPPLEMENT**

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ABOUT US:

WOOD WORKS!

Wood *WORKS!* is a national program of the Canadian Wood Council that advocates for the adoption of wood in the building and construction sector. With the goal of transforming markets and promoting holistic built environments, this industry-led program enables innovative system integration, provides strategic market outreach, and supports the sector through training, best practices, research, networking, and direct technical support.

Contact us for support on your next project:

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Content sources:

MTA Architecture – Salvation Army Grace Village Project

Two Row Architects – Nshwaasnangong Child Card & Family Centre

Wood Design & Building awards applications:

dk Architecture – Skeetchestn Health Centre

Eric Stotts Architect – Brewery Park Boutique Suites

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Cover Image: Skeetchestn Health Centre
Architect: dk Architecture
Photography: Martin Knowles Photo/Media

Back to Our Roots

Wood and Well-being

The year 2020 will forever be synonymous with COVID-19. After experiencing the pandemic and its ripple effects, few would question the importance of health and wellness. What people may not consider is the impact that our surrounding environments have on our health. Research shows that incorporating wood and other natural elements into buildings can have a positive effect on occupants' overall health and well-being. The term for this effect is called biophilia, which refers to humanity's innate need to connect with nature.

Many industries are embracing biophilic design and its benefits. Employers are eager to create inviting spaces for their teams, hospital designs have shifted from cold and industrial-like to bright environments with wayfinding elements, and homeowners are expanding their living spaces with decks, fences, and pergolas so they can gather with friends and family outdoors.

The wellness impacts of wood extend beyond the biophilic advantages of finished spaces. Mass timber buildings also benefit workers throughout the construction process by reducing construction time, and prefabricated elements contribute to cleaner, safer building sites.

The team at the Canadian Wood Council/Wood *WORKS!* is committed to providing design and construction professionals with the tools and information needed to build with wood. We're going taller, we're getting bigger, and, from coast to coast, we're not stopping. Building with wood is the right choice, for the environment and for everyone's well-being.

Join us as we celebrate the health and wellness benefits of wood in construction throughout Canada.



Rick Jeffery
President & CEO
Canadian Wood Council

Wood *WORKS!* is a program of the Canadian Wood Council.



ALBERTA
SALVATION ARMY GRACE VILLAGE PROJECT

ARCHITECT: MTA ARCHITECTURE
IMAGES AND RENDERINGS: COURTESY OF MTA

Grace Village transitional housing project promotes health and wellness with the use of sustainable wood design, renewable energy, outdoor amenity spaces, and enhanced community support services, and supports housing targeting addiction recovery programming.

The new building will replace the services being delivered from two aging buildings that are both functionally inefficient with outdated mechanical and electrical systems. Grace Village is 78,000 sq.ft., with 175 beds. The facility is organized around a central wing that has a resident intake area and administration area, as well as counseling, education, and socialization spaces. The other two residential wings border the central wing and help to create a series of sheltered outdoor gardens and courtyard spaces.

This design of the resident wings focuses on bringing a level of respect and independence to a sector of a marginalized population. Residents are grouped in private bedroom settings with shared washrooms, common area lounges, multi-purpose rooms, computer labs, activity spaces, counseling rooms, and a large common dining room. The design also allows for multiple outdoor courtyards and community garden areas.

The building is designed to take advantage of panelized wood wall and floor construction as well as other modular

components. Using this approach, the team was able to reduce material waste, improve quality control, and expedite the construction process through the winter months.

Other design elements include glulam canopies at the entrance and rooftop patio, as well as perimeter glulam shading devices. The interior spaces use wood accents throughout to soften the spaces and create a warm, home-like environment for the residents to socialize or find a quiet area to sit and reflect.

One of the key success metrics for the Salvation Army in the design of their new building was to create a process and building typology that supports the reduction of embodied carbon and reduces overall carbon emissions to carbon neutral and net zero.

Early in the design, MTA completed an analysis of strategies to reduce carbon and make the building net zero. It was determined that a wood building, utilizing geothermal heat pumps, with a photovoltaic (PV) array would provide a significant reduction in overall carbon emissions (carbon neutral) and reduce embodied carbon as compared to a concrete and steel building of the same nature. With the addition of further PV to the building, it can achieve the future goal of being a net zero energy building.



**ATLANTIC
BREWERY PARK BOUTIQUE SUITES**

Brewery Park is Halifax's first boutique hotel with thoughtfully designed suites, each with its own personality, providing a unique guest experience in the heart of North End. The project pays homage to Halifax's rich architectural history with familiar wood details, including clapboard wood siding, traditional wood windows with dentils, and intricate corbels; contributing to the ubiquitous fabric of Halifax's character-filled North End. Carefully considered human-scale design preserves the neighborhood's appealing walkability.

NLT was used for the structural wood floor assemblies, which mimics the floor system commonly used in the area for factory construction in the 19th century. In sharp contrast to the construction practices in the 1800s, Brewery Park is

one of the best-performing commercial buildings in Canada for its size — spanning an impressive 6,000 sq.ft. Energy modeling concluded that the building will use less than half of the energy compared to other buildings of similar size. Brewery Park performs 50% better than code requirements, making it one of the most efficient buildings in Canada.

Two thousand lengths of 14-foot pine — locally sourced from an independent mill on the south shore of Nova Scotia — provided structural support, fire separation, and an amazing ceiling with exposed wood elements. Nearly 250,000 fasteners connected the NLT decks. NLT provided the aesthetics and warmth of exposed wood construction, the one-hour required fire rating, the soundproofing between floors, and the structural component.

ARCHITECT: ERIC STOTTS ARCHITECT
PHOTOGRAPHY: WOOD WORKS! ATLANTIC



BRITISH COLUMBIA
SKEETCHESTN HEALTH CENTRE

The Skeetchestn Health Centre is a multifunctional health clinic for visiting health professionals. Located 50 km west of Kamloops, the facility is managed by the Q'wemtsin Health Society and provides treatment spaces for both health administration staff and visiting health professionals.

The building is a wood frame structure built on a concrete slab foundation. Wood was chosen as the building material due to its contextual properties and to pay homage to construction materials used by local First Nations for generations. Local community members were trained in wood construction and employed as part of the construction of the building.

At the front of the building is a covered drop-off area with a sloped V-shaped glulam column supporting a large overhang with vertical grain (VG) fir soffit. The sloped V-shaped glulam column and recessed beams accentuate the dramatic wood canopy and ceiling inside the building. The central interior walls have VG Douglas fir slats with 19 mm spacing and are also spaced off the wall to provide sound absorption. The natural warm wood finish creates an open and airy public room for the community.

ARCHITECT: DK ARCHITECTURE
PHOTOGRAPHY: MARTIN KNOWLES PHOTO/MEDIA





ONTARIO NSHWAASNANGONG CHILD CARE & FAMILY CENTRE

The Indigenous-led Nshwaasnangong Child Care & Family Centre supports children and families in London and across Southwestern Ontario. The Centre provides early childhood services as well as cultural and language programming, including land-based learning and traditional ceremonies, in a healthy, welcoming environment.

The central interior spaces are flooded with daylight, a design goal that was accomplished with a ring of clerestory windows. Sunbeams shine through the clerestory and change their position as the sun travels across the sky. The change of seasons and time of day have an impact on how the central spaces are experienced and help the children to understand the cyclical nature of an Indigenous worldview.

It was also important to surround the children with natural and non-toxic materials. CLT was selected as the primary building material for this reason; it is a natural, renewable, sustainable material that uses

environmentally-friendly adhesives that do not emit VOCs. It was also valued for its warmth, ability to capture carbon, and production benefits which makes efficient use of our wood resources. CLT was selected as a contemporary material that exemplifies many Indigenous values.

Efforts were taken to keep the wood exposed, expressing the structure so that the children could see and understand how Nshwaasnangong is put together, much like the interior of a traditional longhouse, wigwam, or bighouse. The structure was also set as low as practical to be "kid sized" to avoid any feeling of being cavernous.

Not surprisingly, the design has been likened to animal forms. Nicknames given by those involved with the project include the Turtle, the Beetle, the Whale, and the Butterfly; demonstrating how the design conveys a natural sensibility that celebrates and engages the imaginative nature of children.

ARCHITECT: TWO ROW ARCHITECTS
PHOTOGRAPHY: TOM ARBAN



QUÉBEC SIÈGE SOCIAL DE CREAFORM

By setting up the new head office in Lévis, Creaform wanted to offer a dynamic and warm working environment for its employees. From the onset, Creaform opted for an integrated design process that included close collaboration from future occupants to ensure the new headquarters combined functionality with comfort.

An open floor plan promotes collaboration and socialization amongst employees. Located in the Innoparc sector of Lévis, employees have access to bike paths in place of pedestrian walkways, which encourages them to move actively and safely. The building's ecological attributes are in line with Innoparc's vision to create an innovative park that honors the principles of sustainable development and mobility. The building's layout was carefully designed so as to respect a number of surrounding green spaces, which optimizes contact with nature and provides an abundance of natural light.

While the initial concept called for a steel structure, the client opted instead for wood for its sustainability benefits and warmer aesthetic. This is evidenced by a generous supply of natural light and the impressive wood structure and exposed glulam wood ceiling.

Wooden architectural panels are used in the large central circulation axis that crosses the building. This configuration promotes collaboration between the different teams. Due to their triangular shape and layout, the wall panels create patterns reminiscent of 3D models obtained by scanning objects using Creaform equipment, echoing the innovative character of the company. Wooden work niches, furnished with banquettes and small tables, also invigorate the space and invite people to sit and socialize.

The president of Creaform, Fanny Truchon, has also noticed a direct impact on her employees. "We see a difference at the cultural level and lifestyle," she says. The building has become more of a living environment than an office, and it is believed that wood contributes a lot to this. It's not uncommon, she says, for people to stay longer after its office hours or on weekends to work out or participate in some social activity. "People have really appropriated this living space."

ARCHITECT: SCOARCHITECTURE
PHOTOGRAPHY: STÉPHANE GROLEAU



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