

DELBROOK COMMUNITY RECREATION CENTRE

LOCATION

North Vancouver, British Columbia

STRUCTURAL ENGINEER

RJC Engineers

SIZE

8,826 m²

GENERAL CONTRACTOR

Stuart Olson

COMPLETION

May 2017

**ENGINEERED WOOD
SUPPLIER**

Western Archrib

ARCHITECT

HDR | CEI

PROJECT OWNER

District of North Vancouver

PROJECT OVERVIEW

Wood provides design versatility and warmth to balance the sleek design of the Delbrook Community Recreation Centre. Communities in British Columbia value natural beauty for their public buildings, so it was expected that the project's architects would use wood to capture the essence of the site's beauty, which includes a salmon stream running through a forested area with walking trails alongside sports fields.

Three levels of recreation, cultural and mixed-use space form the community-oriented facility, which includes weight rooms, an aquatic space, gymnasium and sport courts as well as multi-purpose and arts rooms. The facility is organized along a long 'spine' running through the building. Wood and glass are featured prominently in this public area, creating an energizing and dramatic space that unifies the building and provides an important visual connection to the outdoors.

Sprung wood floor systems are used in the gymnasium and select multi-purpose rooms. Wood wall panels enhance durability while adding a warm aesthetic to the space. Specialty wall and ceiling systems address acoustic concerns in the double height main entry and spine, running the length of the community centre.

Sustainability was a key goal of the project, and the use of regional wood materials throughout the building factored into the design team's materials choice; it also met the community's budget, schedule and design expectations. Wood also provided structural benefit; by integrating wood planks as the primary structure in the roof through the spine. The designers were able to achieve relatively long spans in a shallow depth, easing the coordination of mechanical and electrical utilities within this restricted space.



Photo courtesy of Dan Schwalm

“Situated within a park surrounded by forests, streams and mountains, this building serves a community that values the outdoors. The project’s wood elements, combined with the use of glass, helped create a building that is warm and welcoming.”

Nicola Chevallier PE, Section Manager for Facilities & Special Projects,
The District of North Vancouver

WOOD USE

The main public spaces in Delbrook Community Recreation Centre were used to showcase the wood and maximize the visual impact. Double-height Douglas fir glulam timber (glulam) columns and beams frame the large public corridor, which is flanked by windows that allow daylight in. The glulam beams support Douglas fir glulam timber planks used for the long spans. The wood planks sit on top of the beams and columns, where they can be visible when visitors first walk in.

Within the reception area, an acoustic wood panel system has been incorporated as wall and ceiling elements. The system incorporates mechanical and lighting systems and reduces the ambient noise level in the double height space. Aesthetically, the wood adds warmth and contributes to the character of the space. The gymnasium has a beautiful wood floor, and plywood faced with matching wood veneer covers the walls for durability. Wood was also used for accent walls above the reception area, providing acoustical benefits.



Photo courtesy of Ed White

ESTIMATED ENVIRONMENTAL IMPACT OF WOOD USE

<p>V Volume of wood products used: 123 cubic meters</p>	<p>GHG EMISSIONS ARE EQUIVALENT TO:</p>
<p>T U.S. and Canadian forests grow this much wood in: 20 seconds</p>	<p>72 cars off the road for a year</p>
<p>C Carbon stored in the wood: 109 metric tons of CO₂</p>	<p>Energy to operate 36 homes for a year</p>
<p>CO₂ Avoided greenhouse gas emissions: 232 metric tons of CO₂</p>	<p><small>*Estimated by the Wood Carbon Calculator for Buildings, cwc.ca/carboncalculator.</small></p>
<p>✓ Total potential carbon benefit: 342 metric tons of CO₂</p>	<p><small>*CO₂ refers to CO₂ equivalent.</small></p>

FOR MORE INFORMATION

This profile is published by Forestry Innovation Investment, the Government of British Columbia’s market development agency for forest products.

For more examples of innovative wood building projects throughout British Columbia, visit:

naturallywood.com