

RONALD McDONALD HOUSE BC & YUKON

LOCATION

Vancouver, British Columbia

SIZE

6,800 m²

COMPLETION

2014

ARCHITECT

MGA | Michael Green
Architecture

STRUCTURAL ENGINEER

Equilibrium Consulting Inc.

GENERAL CONTRACTOR

ITC

**ENGINEERED WOOD
FABRICATORS**

Structurlam Products (CLT)
Weyerhaeuser (TJI)

PROJECT OWNER

Ronald McDonald House BC &
Yukon

PROJECT OVERVIEW

Ronald McDonald House BC & Yukon (RMHBC) provides a ‘home away from home’ for 73 out-of-town families whose children are receiving treatment for serious illnesses at the BC Women’s and Children’s Hospital. It replaces a much smaller 12-unit complex that occupied a heritage house in Vancouver’s Shaughnessy neighbourhood. One of the most important design ambitions was to recreate the nurturing environment and sense of community so crucial for families facing one of life’s greatest emotional challenges.

The response was to organize the program into four ‘houses’, each with its own unique identity, with graphics that represent the diverse geography of the province (Beach, Forest, Mountain, River). The houses have six units and a small common area per floor, with a shared kitchen on the ground floor. Each house shares a dining room, living room and courtyard with its neighbour. This creates an intermediate social unit that

ultimately connects to the whole complex, in which all 73 families share a common living room.

The result is a physical and social structure that offers each family concentric scales of engagement with the community that responds to their changing needs for solitude and solace, or sharing and support. Using the metaphor of concentric rings of flowers, this concept and the role of RMHBC in providing this service to the community, is described in a children’s story called ‘*Alpenglow*’, written and illustrated by the architect over the course of the project.

Abundant natural light, exposed wood finishes and built in play equipment—such as the slide that parallels the stairs between the ground and first floor levels—contribute to an atmosphere of cheerful domesticity.



Photo courtesy of Ema Peter Photography

“The health, economic, and aesthetic benefits of wood made it a natural choice for the project. The exposed wood brings a warm, comfortable character to the house, which is so important in making our families feel at home.”

**Richard Pass, CEO, Ronald McDonald House Charities
British Columbia and Yukon**

WOOD USE

The innovative use of mass timber construction in this project provides an interesting subtext to its over-riding social agenda. Designed for a 100 year service life, a cross laminated timber (CLT) vertical structure combined with a light wood floor system provided the required combination of economy, durability and aesthetics. RMHBC is the first project in North America to use this hybrid construction method in a tilt-up format.

The construction process involved laying out a series of CLT panels on the ground, each pre-fitted with ledgers to support floor joists as necessary. These panels are then tilted into place and stabilized until the horizontal structure is installed. As the material is relatively light in weight, sections up to 10 metres in length can be erected at once.

For reasons of durability, a brick veneer complemented by cedar siding in protected areas, was chosen as the primary exterior finish. The CLT panel structure has the strength, dimensional

stability and stiffness necessary to carry four storeys of masonry over the life of the building.

CLT also responded to the needs of the building program, which included long span communal spaces at ground level. Solid timber panel construction is capable of transferring loads from more closely compartmented upper storeys to widely spaced perimeter bearing walls.

The panelized construction also enabled off-site prefabrication, with panels cut to size and fitted with all required connections in the factory. This reduced construction time and effectively controlled costs.

The warm appearance of the exposed soffits of the CLT panels that span 9 metres across the communal living spaces create an important first impression on entering the building. These 9-ply panels are laid with a space between them that acts as a ceiling chase to conceal electrical conduit and sprinklers.



Photos courtesy of Ema Peter Photography

FOR MORE INFORMATION

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

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