NADLEH WHUT'ENNE YAH ADMINISTRATION AND CULTURAL BUILDING

LOCATION
Fort Fraser, British Columbia

SIZE
2,500 m²

COMPLETION
October 2016

ARCHITECT
Evans Architecture and
Joe Y Wai Architect (joint venture)

STRUCTURAL ENGINEER
Equilibrium Consulting Inc.

CONSTRUCTION MANAGER
New Haven Construction Management

ENGINEERED WOOD SUPPLIER
Structurlam Products

PROJECT OWNER
Nadleh Whut'en First Nation

Project Overview

Using a collaborative process between band members and the design and construction team, the Nadleh Whut'en First Nation chose wood for their new cultural centre because they wanted the structure to serve as a reflection of who they are as a community.

From the very first conversations with the community, architects understood that members wanted wood to serve not only as the primary building element, but also to be left exposed as much as possible to visually connect the structure to the land. The project includes a large open event space and gymnasium, an administration building with council chambers, classrooms, and a health clinic, all built with wood that will last for generations. Members who took part in the planning process insisted that centre also contain a large commercial kitchen, for group events and to provide cooking facilities when the community faces power outages or other emergencies. The design for the council chambers and central lobby was based on the pit-house concept to honour the First Nation community's heritage, with soaring wood ceilings creating warm spaces.

Wood was a good structural choice for many reasons. It provided design versatility so that the centre can be modified over time, if needed. Since wood is a familiar material, local tradespeople had the skills to be involved in the construction process, and many band members were hired to participate in the year-long construction process.

Wood provides cost-effective structural performance, and since it could be left exposed in the interior, it provides warmth that people find welcoming and comfortable. As a result, the community is proud of the new home they've created.

Photo courtesy of Evans Architecture. Photographer: Martin Knowles

"Our new cultural centre was designed with wood to have a long life. With proper care, the building should be usable for at least 100 years and even longer so that it can be passed on to our great-great grandchildren."

***Chief Larry Nooski**, Nadleh Whut'en First Nation*

Wood Use

Wood was used almost exclusively throughout the post-and-beam structure, from the glulam beam framing and plywood sheathing to the decorative millwork, interior features and exterior cladding. The lobby and council chamber are dramatic, circular rooms with a vaulted glulam beam roof structure clad with cedar tongue-and-groove planks, demonstrating the resonant properties and timeless aesthetic of wood. Large Douglas fir glulam beams span the width of the assembly hall and solid wood posts add richness and warmth to the main corridors and lobby, supporting the beams above while highlighting the exposed wood structure.

To ensure the facility would be useful for at least 100 years, architects designed building enclosure systems that allow flexibility for future expansion. Dimension lumber was used to frame the interior and exterior walls and laminated strand lumber frames the floor structure. Many of the interior and exterior surfaces were clad with cedar, fir and birch planks to showcase the durability and beauty of local wood.

Photo courtesy of Evans Architecture. Photographer: Martin Knowles

The wood grain featured in this profile is Douglas fir.

Photo courtesy of Evans Architecture. Photographer: Martin Knowles

ESTIMATED ENVIRONMENTAL IMPACT OF WOOD USE

- Volume of wood products used: **871 cubic meters**
- U.S. and Canadian forests grow this much wood in: **2 minute**
- Carbon stored in the wood: **788 metric tons of CO_2**
- Avoided greenhouse gas emissions: **1661 metric tons of CO_2**
- Total potential carbon benefit: **2449 metric tons of CO_2**

GHG EMISSIONS ARE EQUIVALENT TO:

- **518** cars off the road for a year
- Energy to operate **259** homes for a year

**Estimated by the Wood Carbon Calculator for Buildings, cwc.ca/carboncalculator.*

**CO2 refers to CO2 equivalent.*

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