KEY-OH LODGE

LOCATION
Burns Lake, British Columbia

SIZE
2,181 m^2

COMPLETION
2017

ARCHITECT
Boni Madison Architects

STRUCTURAL ENGINEER
Canstruct Engineering Group

CONSTRUCTION MANAGER / MODULE FABRICATER/ INSTALLER
Metric Modular

WOOD SUPPLIER / FABRICATOR
Western Archrib
Louisiana Pacific
Weyerhaeuser

PROJECT OWNER
Burns Lake Band

Project Overview

Burns Lake is a close-knit community with a rich Indigenous heritage. Located midway between the coast and Prince George, more than 4,000 vehicles travel through this town each day—many with people looking for accommodations. The wood-framed Key-oh Lodge, owned and operated by the Burns Lake First Nation, provides a warm and comfortable place for visitors to rest as well as support employment for Band members. Since it opened in 2017, the popular lodge has experienced a high occupancy rate.

Wood features prominently in the structure. Guests enter this 42-room, two-storey structure through a soaring lobby with a heavy-timber-framed vestibule and canopy. Beautiful wood carvings welcome visitors into the entry; the carvings represent the community's main families. The spacious lobby also serves as a cultural discovery space, with historical artifacts and community art pieces on display.

While the lobby was framed onsite, affordability and speed of construction led the Band to use prefabricated wood modules for the lodge rooms. Prefabrication allowed them to compress the project timeline and avoid winter site work to remain on schedule and within budget.

Construction of the lodge has had a positive impact on local employment. When it was constructed, more than 50 percent of the labourers were hired from the local community.

Photo courtesy of Metric Modular

"Construction of the Key-oh Lodge brought many benefits to the Burns Lake community. Wood was harvested from our forests and milled by our local sawmill. The beautiful timber-framed lobby gives us a place to showcase the work of many local artists, and the use of wood throughout the project reinforces our commitment to sustainability."

***Chief Dan George**, Burns Lake Band*

Wood Use

Key-oh Lodge was built with 30 prefabricated wood-framed modules. Prefabrication reduced the project timeline significantly, allowing the Band to get the lodge operational more quickly. It took just seven months from production to occupancy, and overall construction including sitework was completed in just over a year. The module fabricator, Metric Modular, was also able to help the Burns Lake Band find financing and a hotel operator. Metric Modular used wood from nearby pine beetle-affected forests for their framing lumber.

The wood was sourced from a local mill run by the Burns Lake Band. Although beetle infestation kills the tree, the strength and integrity of the wood itself is not affected, which means the wood still performs as needed.

The modules were also constructed using laminated veneer lumber (LVL) and wood trusses for the roof structure. The lobby area was framed on site using LVL, laminated strand lumber (LSL) and heavy timber wood trusses; they also used solid tongue-and-groove pine decking for the ceiling. Plywood sheathing was used throughout.

This hotel was designed with sustainability in mind. The prefabrication process increased airtightness which improved energy efficiency of the structure.

Design flexibility was also important. The hotel was constructed and sited so that it can be expanded in the future. The wood framing provides the ability to integrate an additional wing into the existing structure some day.

The wood grain featured in this profile is western hemlock.

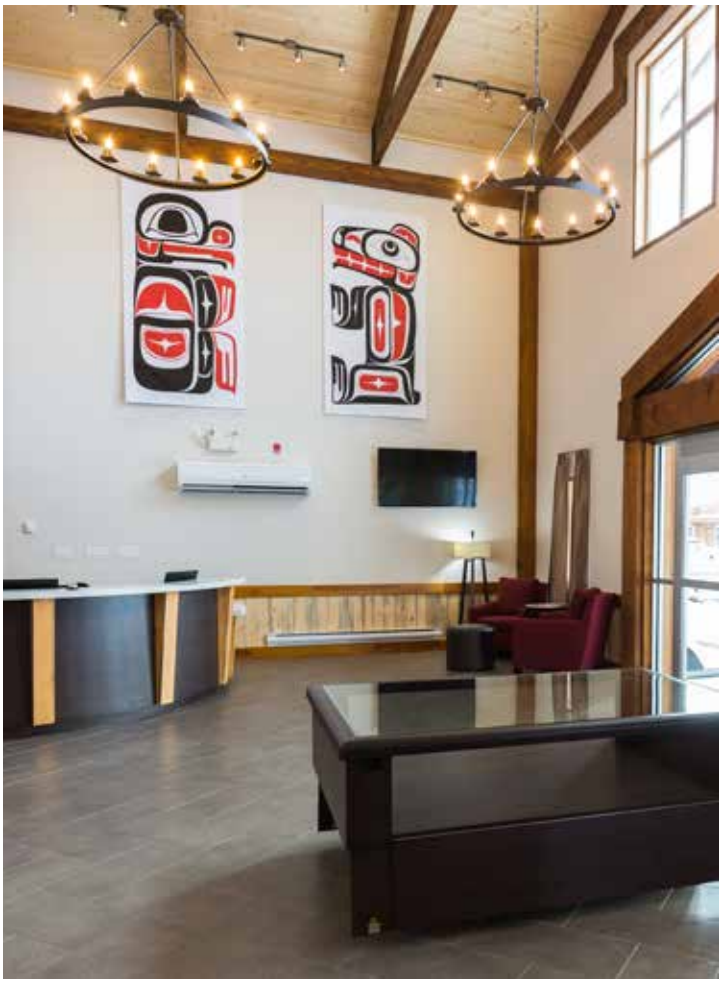

Photo courtesy of Metric Modular

ESTIMATED ENVIRONMENTAL IMPACT OF WOOD USE

- Volume of wood products used: **404 cubic meters**
- U.S. and Canadian forests grow this much wood in: **1 minute**
- Carbon stored in the wood: **343 metric tons of CO_2**
- Avoided greenhouse gas emissions: **729 metric tons of CO_2**
- Total potential carbon benefit: **1072 metric tons of CO_2**

GHG EMISSIONS ARE EQUIVALENT TO:

- **227** cars off the road for a year
- Energy to operate **113** 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