AUDAIN ART MUSEUM

LOCATION
Whistler, British Columbia

SIZE
5,203 m^2

COMPLETION
2016

ARCHITECT
Patkau Architects

STRUCTURAL ENGINEER
Equilibrium Consulting, Inc.

CONSTRUCTION MANAGER
Axiom Builders

WOOD SUPPLIER/FABRICATORS
BC Passive House
Whistler Forest Products

PROJECT OWNER
Audain Art Museum

Project Overview

The Audain Art Museum, housing Michael Audain's personal collection, provides a visual history of British Columbia from the late 18th century to the present. The galleries display a collection of works that includes historic Indigenous masks, as well as works by some of Canada's internationally-regarded contemporary artists.

As the museum sits among a heavily forested site, the use of wood for both structure and finish was a natural choice. The museum's design molds its public spaces and galleries into a linear form within the surrounding forest. The structure is elevated one full storey above the ground and crowned with a steeply sloped panelized wood roof containing offices, art storage and temporary exhibition galleries. The steep roof helps shed snow and provides thermal protection.

The building encircles a reclaimed forest meadow, creating a public pedestrian link from Whistler Village through the museum and across to Fitzsimmons Creek Park. Inside the museum, visitors proceed along a glazed walkway overlooking the meadow below, before gaining access into the galleries.

The form and character of the building is deliberately restrained, providing a quiet backdrop to the surrounding natural landscape. The exterior is clad with dark metal, designed to recede into the shadows of the surrounding forest. At entryways and other openings, the dark metal is overlaid by a luminous wood casing. Public spaces in the interior, which are also visible from the exterior, use the same wood as interior finish, providing visitors with a warm, calm aesthetic.

Photo courtesy of James Dow

"The use of wood within our public spaces allows the visitor to feel immersed within Whistler's natural, forested surroundings. It was with intention that wood was used to create this sense of serenity and harmony with the environment."

***Justine Nichol**, Marketing and Communications Manager*
Audain Art Museum

Wood Use

The roof structure was built using prefabricated engineered wood panels, 2.4 metres wide and up to 16.5 metres long. Laminated strand lumber (LSL) was used for sheathing and parallel strand lumber (PSL) for the rafters of the panel. Waterproofing membrane was applied to the wood roof panels during shop fabrication to allow rapid enclosure of the steel structure in all types of weather conditions once the panels arrived at the jobsite and were lifted into place.

The wood soffit and exterior cladding are of clear vertical grain (CVG) western hemlock, treated with a clear fire-retardant and a semi-transparent stain. Inside, the walls and ceilings are also clad with tongue-and-groove CVG western hemlock.

Plywood was used to sheathe the non-structural walls, and durable white oak engineered wood planks were used on the floors. Contractors used clear, finished maple and painted, medium density fibreboard (MDF) for the interior millwork.

The museum walls and floors were constructed using a structural steel frame. Both the steel frame and the prefabricated engineered wood roof panels were designed using advanced 3D computer-aided design (CAD) modeling to ensure coordination between the structure and the interior and exterior envelopes. This was intentionally designed to protect artwork in this beautiful but challenging site located within the floodplain of Fitzsimmons Creek.

Photo courtesy of James Dow

ESTIMATED ENVIRONMENTAL IMPACT OF WOOD USE

- Volume of wood products used: **664 cubic meters**
- U.S. and Canadian forests grow this much wood in: **2 minutes**
- Carbon stored in the wood: **697 metric tons of CO_2**
- Avoided greenhouse gas emissions: **1480 metric tons of CO_2**
- Total potential carbon benefit: **2177 metric tons of CO_2**

GHG EMISSIONS ARE EQUIVALENT TO:

- **460** cars off the road for a year
- Energy to operate **230** 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

The wood grain featured in this profile is western red cedar.