



Whistler Public Library | Whistler, BC

Hughes Condon Marler Architects

British Columbia has adopted New Zealand's approach for public building by mandating that projects must first look at wood as the primary building component. This policy is intended to encourage the use of wood as a local renewable construction material that is both environmentally and economically sustainable.

The program brief for the Whistler Public Library was emphatic that the building design promoted the community's sustainable development ambitions in a visually apparent manner. These ambitions included durability, an open plan with minimal columns, use of wood and other local natural materials, and a connection to the surrounding mountain context. The form of the building picks up on the drama of the jagged mountain tops circling Whistler but also incorporates notions of sustainability.

At the beginning of the design process, the Coast Forest and Lumber Association (CFLA) expressed their interest in utilizing the project to highlight the use of hemlock. Due to its susceptibility to warping and bending, hemlock has limited acceptance in the B.C. marketplace, particularly for structural or framing members.

To encourage the use of hemlock in the project, the CFLA provided 6-8 m (20-26 ft) lengths of 4x12 inch hemlock members for use by the design team. The challenge for the architect and engineers was to utilize these members in a manner that satisfied the design brief while providing for heavy roof loads and minimal areas for snow dump. To address the general inconsistencies in the material, the design team develop a panel system of staggered and laminated 4x12s that were fabricated into panels (4 ft wide x 4 in deep) cut to length as required.



The laminations were vertically staggered 75 cm (3 in) which increases the effective depth of the panels to span long distances under heavy roof loading. The laminated system allows for a shallow structural zone reducing exterior cladding quantities and maximizing light and views. Architecturally, the panels also become an elegant yet robust ceiling expression that reduces acoustic reverberation and reinforces the connection between interior and exterior.



The system developed on the Whistler Public Library provides a framework for promoting the use of wood, in general, and hemlock, specifically, in larger scale projects. The 15,000 sq ft library provided a convincing test case due to the high roof loads and distance from the fabrication centre in Vancouver. Embraced by the local community, the project was a showcase of Canadian innovation during the 2010 Olympic Games in Whistler and Vancouver, thus raising the visibility and viability for wood construction within the province and beyond.

Wood materials used:

- 6 – 8 m (20-26 ft) lengths of 4x12 in hemlock members; prefabricated into 4 ft x 4 in panels (cut to length as required)
- Interior cladding
- Window casing
- Millwork

Project team:

Architect:

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