

## 2013 Wood Design Awards - Project Fact Sheet

### Summerland RCMP Detachment Building

Location: 9101 Pineo Court, Summerland, BC

Height	Size		Completion	Construction Budget
1	16,103	1,496	2012-06	\$3,800,000
Storeys	sq ft	sq M	Date	\$ Cdn

#### Project Description:

The building's external appearance is dominated by rusty corten steel, corrugated galvalume cladding, glass curtainwall and aluminum sun shades. So why should it deserve a "wood" award?

Maybe because it emphasizes the proper and mature use of wood: it lets other, better suited materials do the dirty work outside, and uses wood as a versatile, beautiful, and sustainable structural material that requires minimal addition of primary energy and no toxic treatment on the way from the log to the product. If the right choices are made! That, and the sequestration of CO<sub>2</sub>, are the best arguments for its sustainability and why it should be preferred for these duties wherever it makes sense.

With the obvious and necessary exception of the cell block the building's structure is entirely of wood: simple stick framing for interior and exterior walls, an exposed glulam post-and-beam structure for the main structure including the long southern glass curtainwall and roof, 2x6 T&G pine decking for structural roof sheathing, a large entrance canopy, and soffits.

The beauty of the material becomes dominant when stepping under the south canopy on a sunny day and looking up to see the untreated pine decking glow in the sunlight reflected from the aluminum shading fins. That's what wood does best and that's what we should let it do.

Wood has a problem: the market is pushing processes and compounds to add to it that make it tempting to let it do things it shouldn't do and be in places it shouldn't be. Wood is too versatile for its own good. To be its best ambassador we should return to letting it be an efficient and attractive structural material and finish at once, requiring minimal processing, placed where it can remain untreated or unpainted, i.e., sheltered from the elements by roof overhangs or within the building enclosure.

But most importantly we have to create fine buildings with it. That is the Summerland RCMP Detachment's statement.

#### Special Features:

- Generous entrance canopy with "corduroy" stacked plank roof

The District of Summerland's new RCMP building is an upstanding example of energy efficiency, particularly when it comes to using natural light.

The building's configuration and placement of openings is developed for best passive solar performance in an uncompromising way. The stringent imperatives of access to daylight and proximity to views of the 'Living Building Challenge' were observed and exceeded. Every single work station is bathed in natural light with exposure to attractive landscaping through south facing exterior glazing. What little artificial lighting there is inside is compact fluorescent and many rooms have occupancy sensors. Vibrantly painted (low VOC) interior walls complement the warmth of wood and natural daylight, enhancing occupant comfort and well-being.

A strategy for natural cross ventilation by stack effect reduces the need for mechanical ventilation significantly and every workstation has access to opening windows. A high efficiency natural gas boiler and two high-efficiency natural gas water heaters were also installed.

The extremely energy-efficient HVAC system includes a strategy of harvesting heat from the neighbouring Summerland Area ice plant. Hot water is piped into the RCMP building floor and provides radiant and hot water heating. The expansive south-facing curtainwall is a composite system that uses the glu-laminated structural columns spaced at a tight 2m (6'-6"±) for providing the required wind-load support structure. This allows the energy-intensive aluminum curtainwall sections to be greatly reduced in size, thus reducing cost and environmental impact.

The innovative roof structure consist of a ventilated and insulated space that is created within the depth of the glu-lam roof beams. 2x6 T&G decking spans across the beams to form the structural roof deck. 2x4 ceiling joists span between the roof beams, and economical R28 batt insulation is placed in and above the joist spaces. A drywall ceiling and vapour barrier are installed at the underside of the joists. An acoustic treatment and finish ceiling consisting of 4-inch wide composite wood slats, 2x4 wood strapping, and acoustic insulation are applied to the underside of the structural ceiling.

#### Where the Wood Was Used:

Primary Structural System	Columns, Beams & Braces	y
	Floor Structure	
	Exterior Walls	y
	Foundation	
	Shear Walls	y
	Bearing Walls	y
	Fire Walls	
	Roof Structure (inc. columns and braces)	y
	Stairway & Elevator Shafts	
Secondary Structure	Convenience Stairs	
	Entrances & Canopies	y
	Fire Separations	y
	Enclosures for Mechanical Equipment	y

	Partitions (interior)	y
	Exterior Curtain Walls	y
	Ceilings	y
	Exterior Cladding	
	Parapets	y
	Ceiling Bulkheads	y
	Flooring	
	Doors	y
	Windows	
	Skylights	
	Trim, Paneling & Features	y
	Millwork	y
	Wall and Corner Guards	
	Other Architectural Woodwork	y
	Hard Landscaping & Structures	
	Perimeter Fencing	

#### Project Images



**Building Project Team Members:**

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