

# WOOD DESIGN & BUILDING®

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## Boardwalks and Bridges

Wood meets the requirements of  
modern bridge construction

## The Oxbow Field Station

Students create sustainable  
refuge from salvaged wood

## California Retreat

Spiritual center embraces  
traditional joinery and heavy timber

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c o n t e n t s



**Above and on the cover:** Footbridge of Dreams, Princeton, BC, by StructureCraft Builders Inc. and Fast + Epp

PHOTO CREDIT: StructureCraft Builders, Town of Princeton, *Similkameen Spotlight*

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sustainability with cultural and vernacular aesthetics*



# Yountville Town Center & Library

Wood weaves together new buildings with existing buildings to create a place that enriches community life, combining sustainability with cultural and vernacular aesthetics



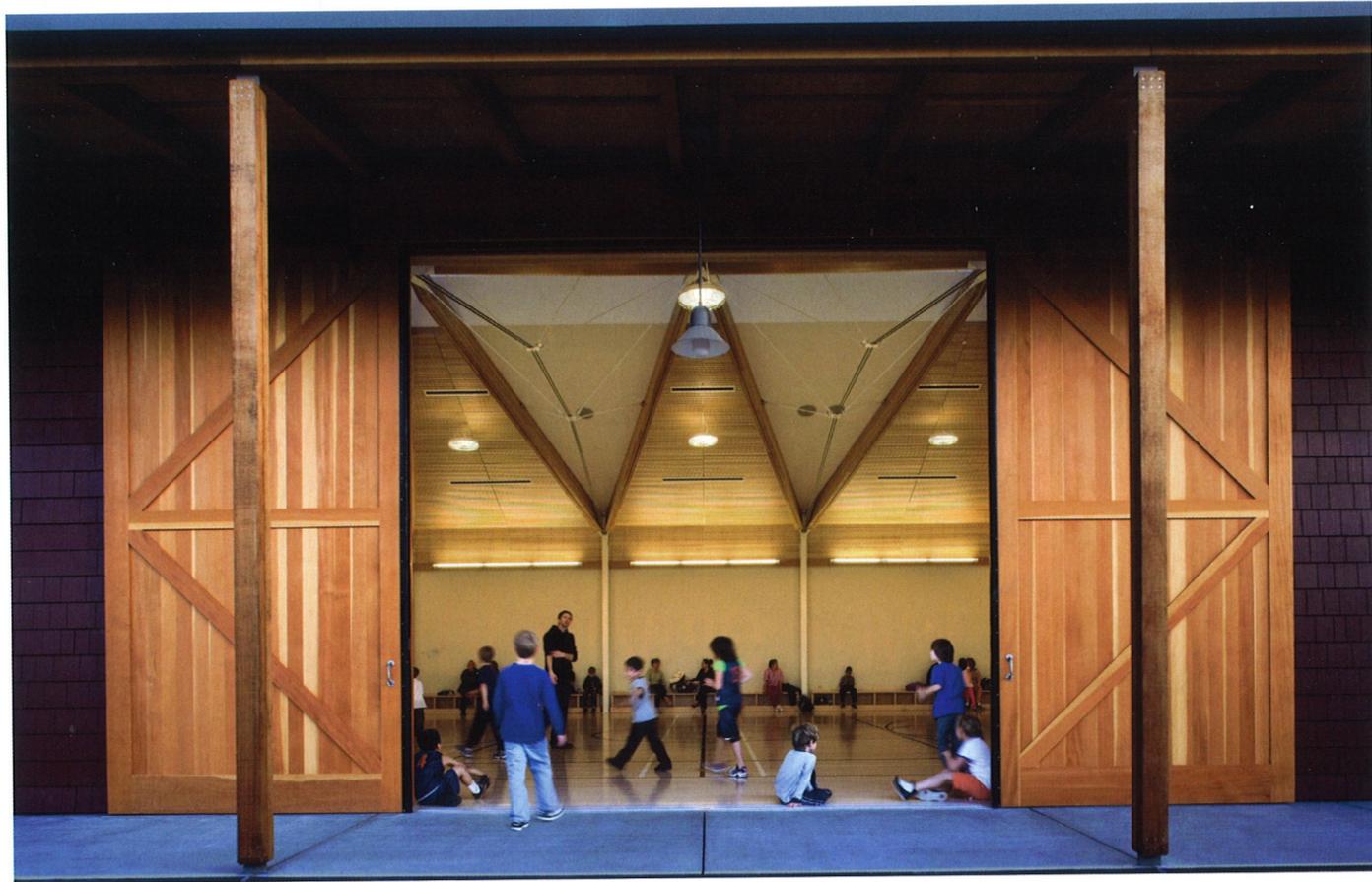
**Above:** Wood connects these buildings to the agrarian structures of the Napa Valley. Regionally harvested western red cedar was selected for porches and entrances to add warmth, minimize life-cycle impacts, and blend with the rural architectural character.

**Opposite:** The large multiuse room is day-lit by a ridge skylight and supported by unique wood and cable trusses.



*In 1998 the Town of Yountville embarked on a master planning process that envisioned a new sustainably designed center located in the middle of town where Yountville residents could meet, learn, play and celebrate. Through successful community participation and perseverance, construction began in 2008.*





The Yountville Town Center project saw the development of a new 10,000-sq-ft. multi-purpose facility, the renovation of an existing community hall, and the addition of a sheriff's substation adjacent post office. These three civic buildings frame a new Yountville Town Square.

The new building houses a branch library, multi-purpose room, teen center, plus meeting and program spaces. The residents of Yountville wanted to reduce the town center's carbon footprint and be a local model for sustainable development. A number of green features were integrated: a ground source heating and cooling system, a 38 KW photovoltaic array, low-flow plumbing fixtures, environmentally preferred building materials, efficient lighting and daylighting, natural ventilation, water-conserving landscape, and an innovative subsurface irrigation system.

Building materials were selected to minimize life-cycle impacts, blend with the rural architectural character, and provide light and airy interiors free of formaldehyde and VOCs. To add warmth to areas where people come into the building, regionally harvested western red cedar was selected for porches and entrances. Slatted wood ceilings are locally sourced white fir. Over 70 per cent of the wood is certified FSC.

Exteriors blend with the town's rural character, while inside the spaces are light and airy. Barn doors extend the multipurpose room onto the adjacent barbecue patio. The large multiuse room is day-lit by a ridge skylight and supported by unique wood and cable trusses.

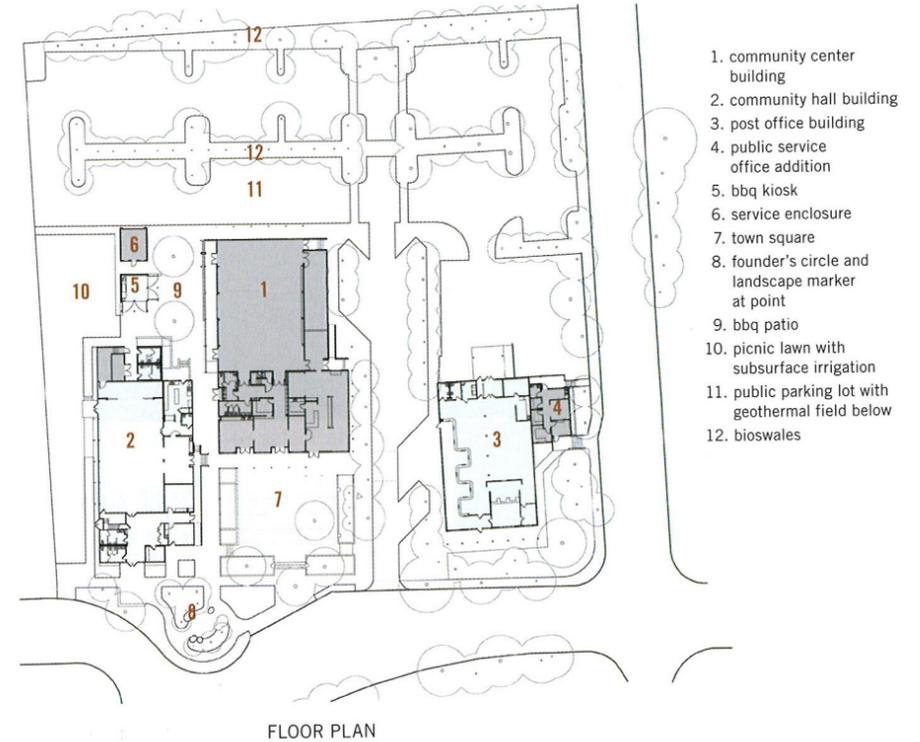
The design of the cabled roof trusses makes very efficient use of materials by taking advantage of properties inherent to each. The wood glulam members take the compression and bending loads, the steel cables take the tension forces, and the welded steel plates provide the connections. No special construction was required in the assembly. The trusses are made of standard lumber (in the form of paired glulams), steel cable, and steel plates and connected with 1/4-in. self-tapping screws. The trusses were tensioned in one morning on the site by the steel fabricators. The unique design creates a beautiful, light and soaring space designed to host a wide array of events and activities, from after-school programs to community celebrations.

Wood was specified because it is a renewable resource. The small-sawn FSC lumber and laminated wood glulam beams were an obvious choice for their greater availability, minimal expense, and lower environmental impact. Because the new community center building was designed to dimensions estab-

lished by the existing community hall, wood framing was preferred over light gauge metal framing because wood is easier to work with in nonstandard lengths.

The exterior wood selections – western red cedar, Alaskan yellow cedar, and redwood – and most of the interior wood selections – Douglas fir and white fir – are all regionally sourced and selected for the warmth and beauty they will provide over the lifetime of the building. Interior finish materials were selected for their durability, low maintenance, and non-toxic, low VOC, formaldehyde-free composition. Over 75 per cent of framing and finish wood materials are FSC certified from sustainably-managed forests.

Wood connects the Yountville Town Center to the agrarian buildings of the Napa Valley, combining cultural and vernacular aesthetics, affordable sustainability, and locally familiar construction methodology. 



FLOOR PLAN



Above: Exteriors blend with the town's rural character, while inside the spaces are light and airy. Opposite: Barn doors extend the multipurpose room onto the adjacent barbecue patio.

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