

One of Canada's first post-secondary facilities shared by a native and non native institute, designed to reflect the cultural characteristics of the aboriginal students, and provide state of the art learning spaces required by University College of the Cariboo. The program includes classrooms, faculty offices, social spaces, labs, bookstore, cafeteria, and library. Internal "siting" of functional spaces has been with the intention of eliminating any sense of hierarchy.

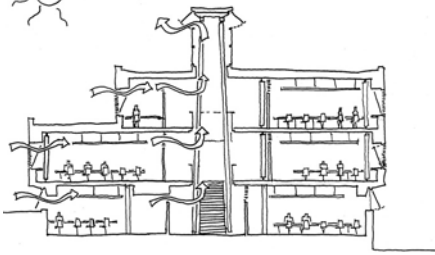
The design process involved intensive user group interaction, and numerous site visits with the native elders. The semi-circular shape is the first gesture toward the circular scheme of the master plan. This shape is meaningful and recurring native theme. A ceremonial arbour will be the focus of the space "framed" by the circle. Both the arbour and the building are oriented on the cardinal points, with the building's main entrance on the east axis, symbolizing the start of the day. The building is designed as a cold climate green building. This commitment to the "new technology" of environmental sustainability is in clear alignment with the historical aboriginal structures of the area. The building emerges from the sloping site, and evolves into a three storey building. The "inner strip" of the semicircular rooftop is plant-

ed, adding to the sense of the building growing out of the landscape and also supporting the intention of minimal disruption of the natural landscape of the undeveloped site. An area of study at the institute will be ethnobotany, the native use of indigenous plants.

Traditional native structures in this area were mainly pithouses and the trees used were small diameter local species. This building is a combination of wood and concrete with a wood column structural system, visually representing pithouse poles rising up through the interior space. A glazed ventilation stack with operable windows is a central feature of the main part of the building, and a critical element in the green design. Tensioned fabric will be used in the ventilation stack for shading. This reference to "stretched skins" is another element of aboriginal design which will also be utilized for the front entrance canopy. Exterior cladding will be horizontal wood strip siding.

A challenging and successful scheme that adheres to the rigorous budget requirements of the Ministry's value analysis process, this is the first phase of a much larger campus plan (43 acre site), and will be followed by campus housing.





NATURAL VENTILATION: user operated and sensed motorized operable windows in the ventilation atrium reduce cooling loads during spring and fall.



UNIVERSITY COLLEGE OF THE CARIBOO

NICOLA VALLEY INSTITUTE OF TECHNOLOGY

ENVIRONMENTAL CONSIDERATIONS

SUSTAINABLE SITE

- Minimized impact on the forest
- Integrated with landscape

WATER EFFICIENCY

- Planted roof will not need irrigation after second season
- Low flow toilets and urinals

ENERGY & ATMOSPHERE

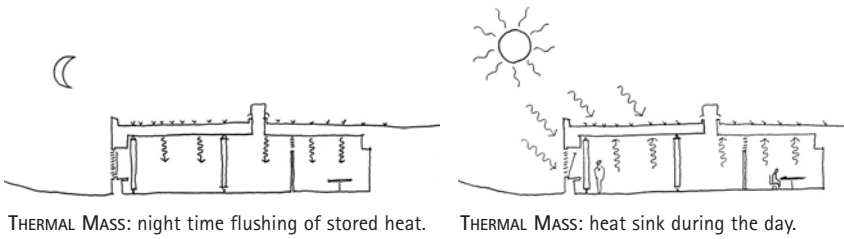
- 35% below ASHRAE 90.1
- Planted roof reduces heating and cooling loads
- Thermal mass, efficient envelope, natural ventilation and solar control strategies
- Sliding cedar sunshades reduce cooling loads and glare
- No CFC's in cooling and HVAC systems

MATERIALS & RESOURCES

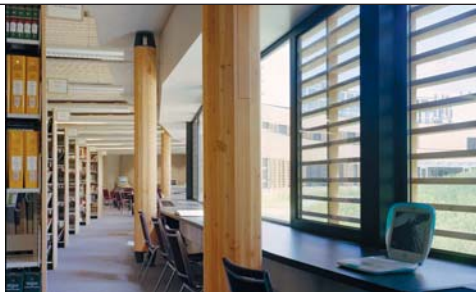
- Construction areas and storage of materials carefully managed to minimize disruption to natural vegetation
- 100% recycled steel reinforcing bars
- EcoSmart™ flyash concrete was used to reduce potential emissions
- Yellow cedar chosen for its durability and not needing a chemical preservative treatment
- Facetted glulaminate wood columns with sand casted ductile iron top and bottom supports chosen for economy in strength over concrete and sustainable qualities as a renewable resource

INDOOR ENVIRONMENTAL QUALITY

- Natural ventilation provided by user controlled operable windows, relief grilles between rooms and atrium and sensed motorized windows in the atrium
- Thermal chimney provided by atrium reduces cooling loads during the spring and fall
- 90% of all areas receive natural daylight from exterior glazing and indirect light from atrium



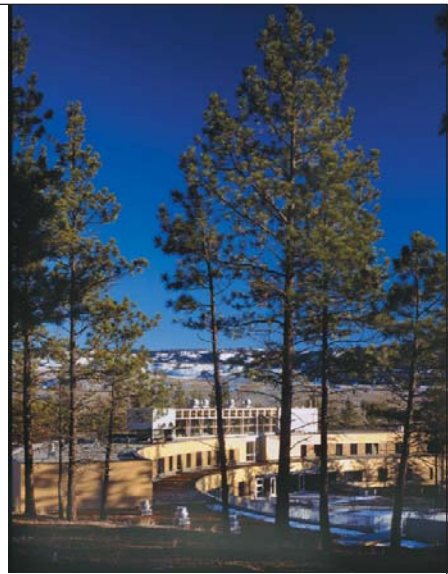
Atrium



Facetted Wood Columns



Cedar Sunshades



Green Roof & Forest Preservation



Project Nicola Valley Institute of Technology
Shared Campus with
University College of the Cariboo

Location Merritt, BC

Client Nicola Valley Institute of Technology
University College of the Cariboo

Design 1999

Construction 2000-2001

TECHNICAL

Size (gross) 4,518 sq.m. (48,632 sq.ft.)

Height 3 storeys

Parking 100 parking stalls

Cost \$7,656,000

Materials

Yellow cedar siding & sliding sunshades; PVC tilt and turn double glazed low-e glazing system; Douglas Fir glulam columns; suspended concrete slabs and shear walls.

AWARDS

Vancouver Regional Construction Association Awards of Excellence, General Contractors Award of Merit (For a project under 10 Million), 2002

North America Wood Council Award, 2002

Lieutenant Governor of BC, Medal for Excellence, 2002

International Green Building Challenge, 2002

What Makes it Green?, Exhibit, American Institute of Architects, 2001

DESIGN TEAM

Busby + Associates Architects:

P. Busby, V. Gillies, S. Gushe, R. Maas, A. Waugh, B. Wakelin, N. Webster, T. Winkler

CONSULTANTS

STRUCTURAL ENGINEER	Equilibrium Consulting Inc.
MECHANICAL ENGINEER	Keen Engineering
ELECTRICAL ENGINEER	Earth Tech Canada
CODE	Pioneer Consultants
CIVIL & LANDSCAPE	True Engineering
PHOTOGRAPHY	Busby + Associates Architects Nic Lehoux

