



# COMMUNITY RESOURCE CENTRE

## Greenfield, Nova Scotia

Canadian  
Wood  
Council

Conseil  
canadien  
du bois



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# Building a Sustainable Future Wood in Schools

Canada's vast forests provide a diverse range of high-quality building products which can be utilized in a wide variety of building applications. Some of the positive reasons to use wood include:

- Wood is the only major building material that is renewable and Canada is recognized as a global leader in forest management, with more than 95% of its harvestable forest independently certified.
- Wood is durable and adaptable making it a building material that lasts longer and reduces environmental demands.
- Wood products used for construction do not off-gas, which ensures a high level of indoor air quality for the occupants.
- Wood products require less energy to produce and create less pollution than all other major construction materials.
- Wood is a natural insulator – which contributes to increased thermal efficiency of buildings.
- Wood sequesters carbon – when trees are converted into wood products much of the sequestered carbon is stored in those products indefinitely—which keeps it out of the atmosphere.

These facts make wood a sound environmental choice and an excellent product for the design and construction of sustainable institutional and community buildings.

*Pictured right: Todd Labrador performing a smudging ceremony at the official opening of the Greenfield Community Resource Centre and Elementary School.*

*Photo by Leanne Delong Photos*



# Greenfield Community Resource Centre and Elementary School Greenfield, Nova Scotia.

The Greenfield Community Resource Centre and Elementary School is located in a small, isolated forestry community in Nova Scotia where 16.1 % of employment is provided by the forestry sector. This forestry based community is proud of its local heritage. Indeed, in 1987 it was dubbed the “Forestry Capital of Canada” and to this day has a “Build First with Wood” policy in place for new construction. The Resource Centre, valued at \$1.3 million Canadian dollars, was built by a non-profit community group to replace an insufficient and outdated building that was over 60 years old.

This 600 m<sup>2</sup> (6500 ft<sup>2</sup>), one story building owned by the Greenfield Community Resource Centre was built to answer several needs of the community. To fulfill the educational needs of Greenfield, the building is being leased to the Department of Education for the next 20 years.

On weekdays, the building is used primarily as an Elementary School which accommodates just over 30 students. Outside of school hours

“I commend the Greenfield Community School society for presenting this unique idea to the government, nurturing the concept, and bringing the project to such a successful conclusion,” said Premier Rodney MacDonald. “What you have done here speaks to the ingenuity of Nova Scotians.”

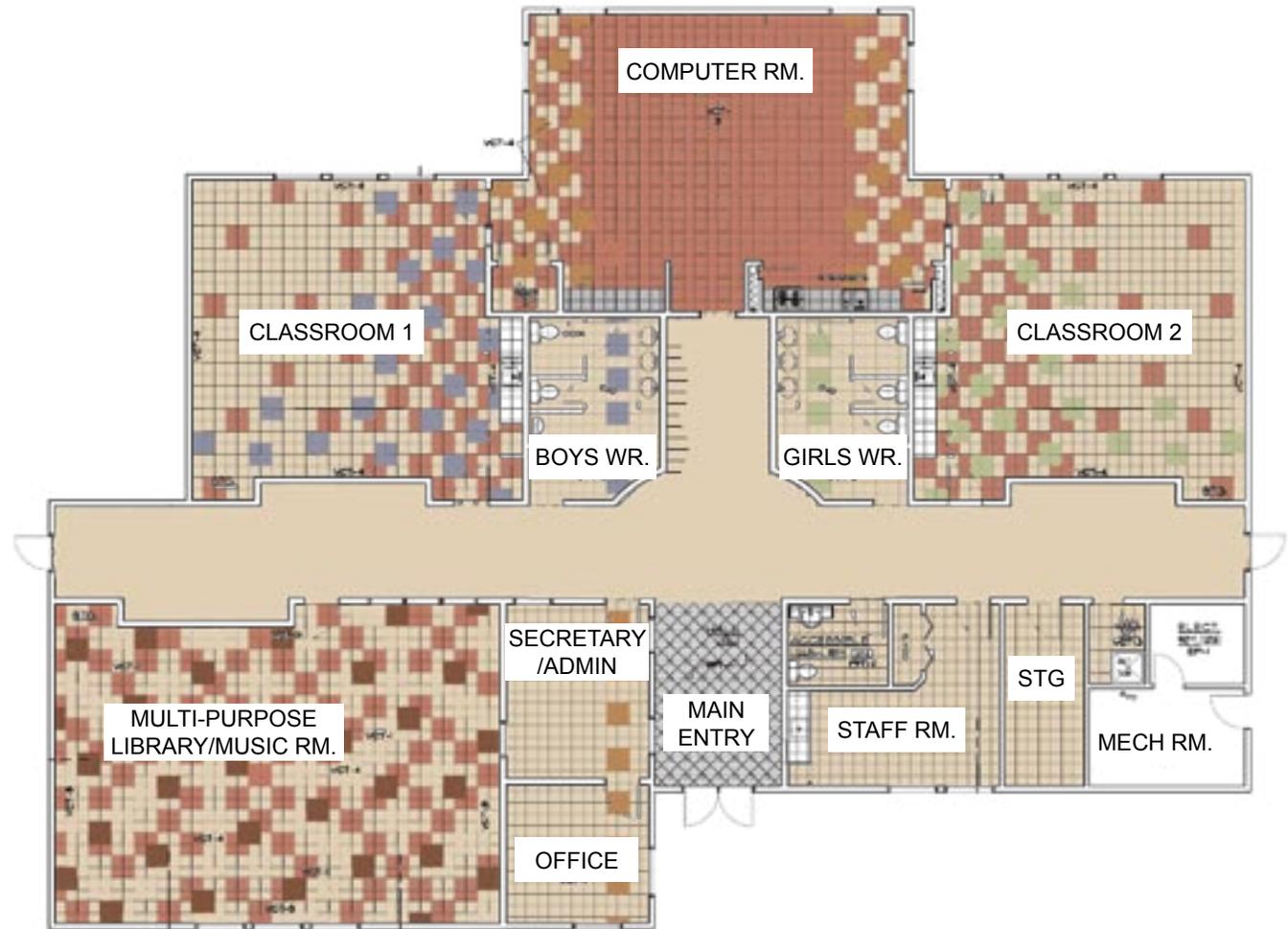
the facility functions as community library where internet access is provided to those people who might not have computers or internet access in their homes or workplaces. In addition to these uses, during the evenings, weekends, and throughout the summer months the building serves the community as an adult learning facility.

The Resource Centre has two traditional classrooms: one to accommodate students in grades one to three and the other to accommodate students in grades four to six. A third classroom serves as a computer instruction room and the large common room is used as a library and small group teaching space. Auxiliary rooms include a teachers’ lunchroom and lounge, the principal’s office and an administrative office.

Sustainable attributes of the building include: efficient lighting design provided with assistance from Conserve Nova Scotia’s “Smart Lighting Choices” program; efficient heating composed of a hydronic in-floor system; building design incorporating passive solar design techniques; and extensive use of local wood building materials and expertise.

“The innovation and collaboration of the community that has resulted in the building of this new community school is very significant,” said South Shore Regional School Board Superintendant, Nancy Pynch-Worthylake. “The South Shore Regional School Board will continue to provide equitable education to the Greenfield Students.”





Ground Floor Plan

## Building Design - Structure

Wood was provided by the local forest industry and embraced by the community and John Doucet the project Architect, both for the structural framing members, and the interior finishes. The standard wood trusses that were used provide an economical framing system for the three classrooms. Engineered wood scissor trusses provide space for a cathedral ceiling in the library which boasts an arched, clerestory window that

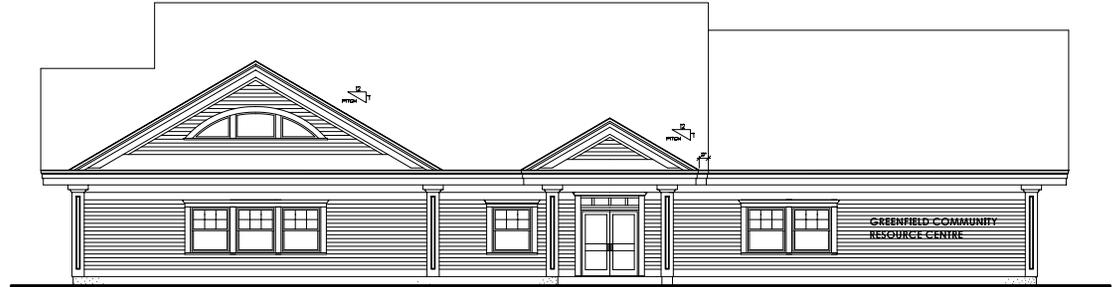
provides natural lighting throughout the day. Laminated veneer lumber wood members provide the cantilevered canopy over the front entry. Wall framing consists of 2" x 6" wood studs covered with tongue and groove wood sheathing. Interior partition walls are all 2" x 6" wood stud framing. The floor system is a 6" concrete slab-on-grade with an in-floor hydronic heating system.

# Building Design - Exterior

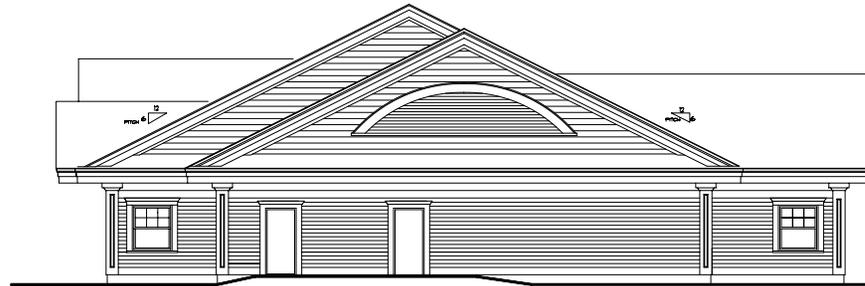
The Community Resource Centre has a welcoming curb appeal. More than a “little red schoolhouse”, it is a building that achieves its maximum potential by accommodating a variety of activities, all day and every day of the week – both inside and out.

Built to be durable and long-standing, the building envelope is clad in prefinished wood composite siding and uses asphalt shingles for the roof. Windows are aluminum clad double hung wood and wood exterior trim in a Cape Cod style. The roof is sloped to naturally accommodate heavy snow loads in the winter months and efficiently manage water runoff. Roof overhangs help protect the windows from the elements and provide passive solar gain during the winter months while helping to keep the building cool during the summer months by providing shade.

Landscape features include a school bus drop off at the front of the building in addition to staff and visitor parking. The site provides good exposure for the main entrance and easy access to the gymnasium building and church which are adjacent to the Community Resource Centre. The sizable property allows for the future development of playgrounds and a soccer field at the back of the building.



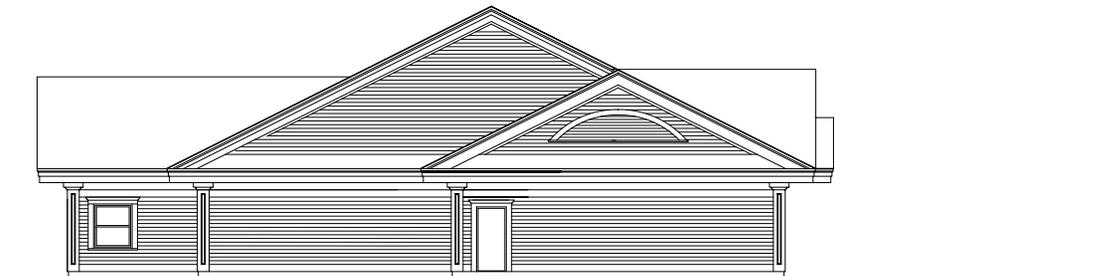
Front Elevation



Right Elevation



Rear Elevation



Left Elevation



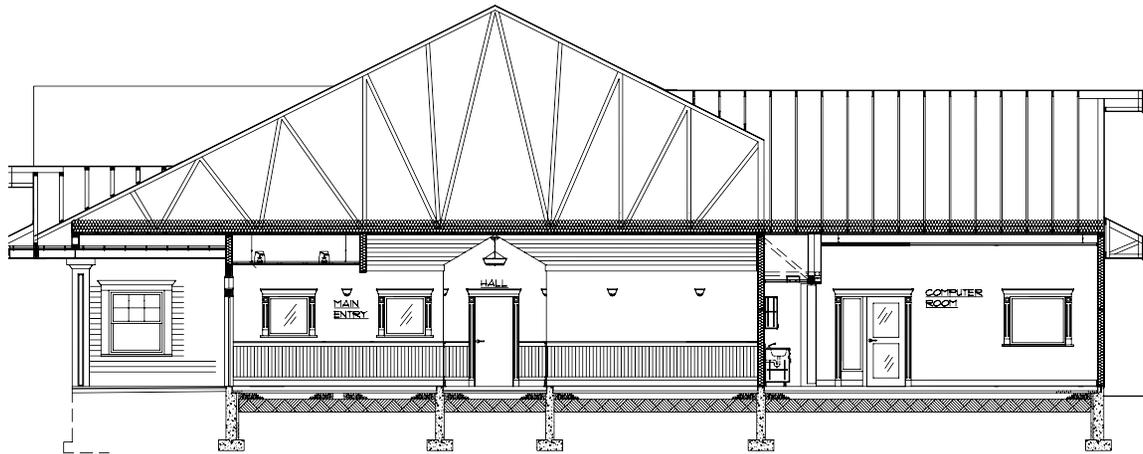
## Building Design - Interior

Traditional knotty white pine trim was used around the interior doors and windows in an arts and crafts style. White pine wainscoting was used in the halls to give the school a homey, welcoming atmosphere for the young children entering the school. Clear tongue and groove white pine was used to clad the cathedral ceilings in the main entry hall and library. The pine trim used around the interior windows and doors, as well as the tongue and groove pine used on the ceilings, was milled at the local sawmill, providing an important local element to the building. Heavy white pine doors are used wherever possible throughout the building.

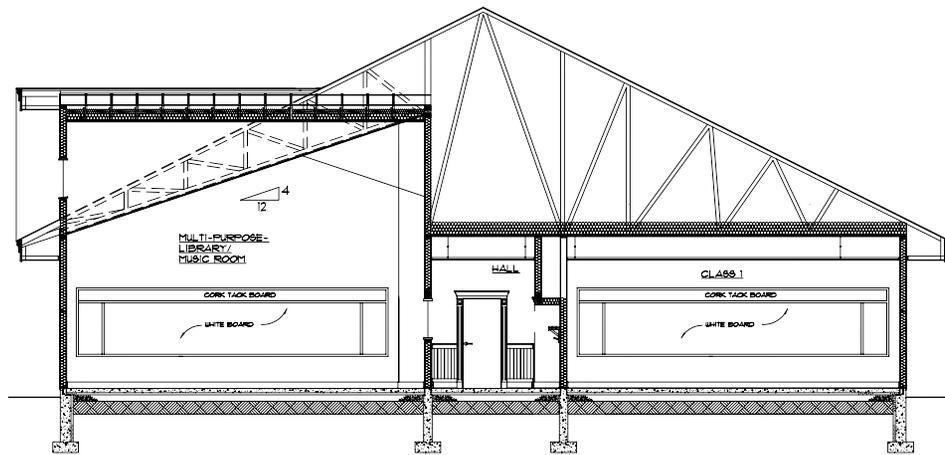
The walls and ceilings are 5/8" type X fire rated gypsum and standard gypsum board. The classroom ceilings are suspended acoustical ceiling tiles. The main entry hall floor finishes are porcelain tiles, while the remaining public spaces are colourful vinyl tiles.

Finishes include latex eggshell paint on the gypsum board walls; fire rated varnish, matte finish polyurethane on the pine trim, wainscoting and tongue and groove ceiling; and matte urethane on the plywood millwork. Millwork consists of birch plywood and plywood with laminate finish.





Longitudinal section through classroom

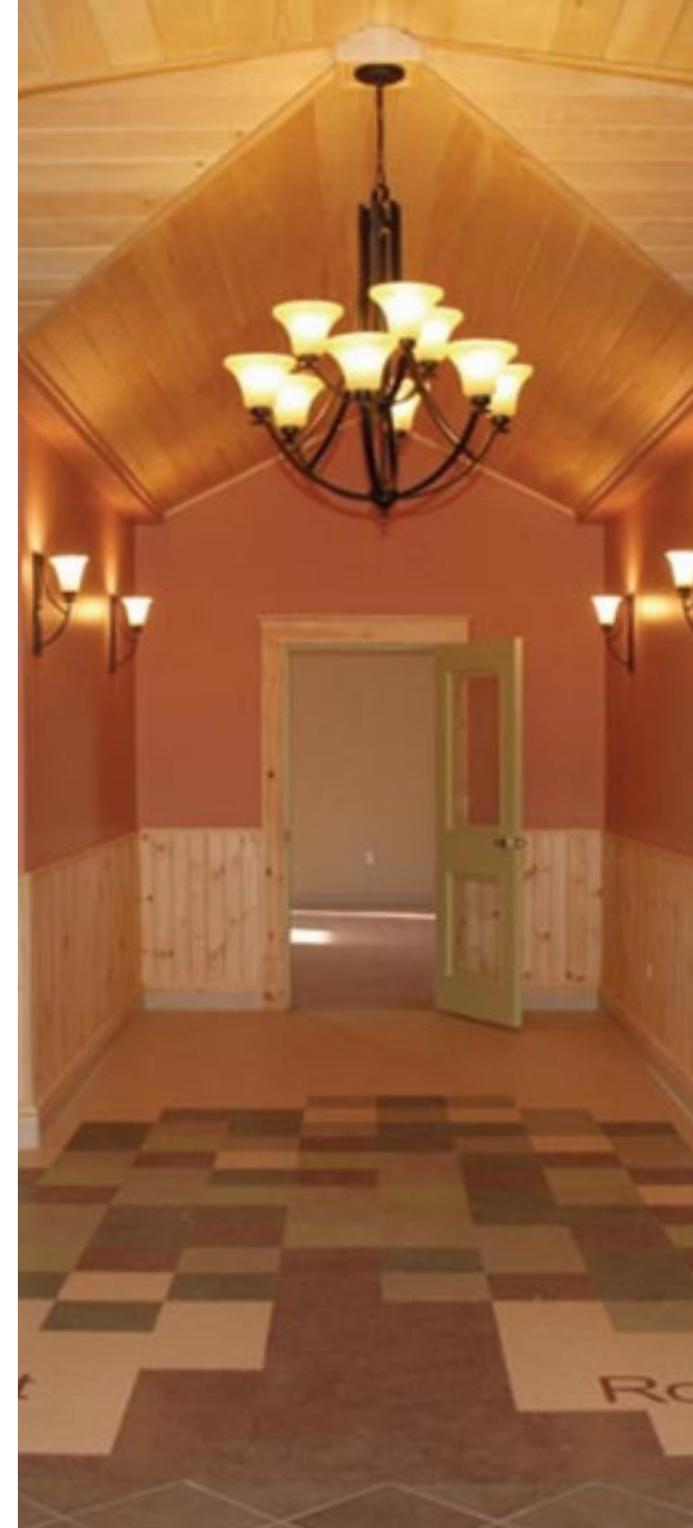


Latitudinal section through library

## Conclusion

In the Greenfield Community Resource Centre and Elementary School, wood was used to create a multi-purpose building that is functional, economical and durable. Wood creates warm and inviting spaces for the building occupants – which the community feels helps foster learning and creativity. This project included a high degree of community involvement and incorporated a

significant quantity of building materials donated by the local Forest Industry. The Greenfield Community Resource Centre and Elementary School serves as a model for forest-dependent and rural communities and municipalities to take action and to build their public buildings with locally produced forest products.



## PROJECT

Greenfield Community Centre  
Greenfield, Queens Co., NOVA SCOTIA

## ARCHITECT

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## GENERAL CONTRACTOR

Green Field Community Centre Building Committee Volunteers:  
Charles Freeman  
Richard Freeman  
Patrick Jones



## LANDSCAPE VOLUNTEER

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Greenfield, NS B0T 1E0

## PHOTOGRAPHERS

John Doucet  
Annette Freeman

## CONTENT DEVELOPMENT

Jennifer Duthie

## DESIGN SERVICES

Creative Unity Limited



[www.cwc.ca](http://www.cwc.ca)



[www.woodworks.org](http://www.woodworks.org)



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