



Seabird Island First Nation Sustainable Housing Demonstration Project

Partnership between Canada Mortgage & Housing Corporation, Indian and Northern Affairs Canada and the Seabird Island First Nation



Situation:

Faced with a fast-growing elder and young population, and a growing need for quality, affordable housing for Aboriginals on reserve, Canada Mortgage and Housing Corporation (CMHC), Indian and Northern Affairs Canada (INAC) and the Seabird Island First Nation have developed an innovative sustainable community demonstration project in British Columbia, Canada. This project – the first of its kind to be located on reserve in Canada – incorporates some of the leading construction technologies and design principles available today including CMHC's Healthy Housing™ and FlexHousing™ principles, sustainable development and rainscreen technology while honouring traditional Aboriginal design elements that preserve the community's physical, spiritual and cultural needs.

"We wanted to develop homes that would address the challenges of First Nations' communities, particularly as many are located in remote or small communities where the costs of construction are higher, and the need for developing, durable, energy efficient and Healthy Housing are even greater," said Allan Dobie, Senior Consultant of Research and Information Transfer for CMHC's BC and Yukon Business Centre. Of the seven units being built (which include single family homes, a duplex and triplex), one will be kept as a demonstration unit for two years to showcase the benefits of building sustainable, healthy and flexible homes. "It is our hope that First Nations communities, and others involved in housing including builders and architects, will tour the demonstration home and adopt all or part of the principles used as solutions to their communities' housing needs," added Dobie.

CMHC, Canada's housing agency, hired Vancouver-based Broadway Architects, experts in sustainable architecture, to design the project. In addition to incorporating energy-saving features which can reduce overall costs over the lifetime of the home, CMHC was interested in natural and non-toxic building products including materials with little or no off-gassing and those with high recycled content. "We've seen issues with mould and maintenance on aboriginal reserves, and we wanted to address those issues right from the start," added Dobie.

Solution:

The Seabird Island homes were meticulously planned – each would take advantage of solar orientation (southern exposure) to maximize solar gain for heating, channel the windy atmosphere into wind energy, and use non-toxic resource-efficient products, among other specifications. The goal for this housing project was to create healthy, affordable, sustainable housing that would reduce operating costs over time because of high levels of energy efficiency. The project managers were also interested in using locally manufactured construction materials. When Broadway Architects learned about Johns Manville Formaldehyde-free fibre glass building insulation, they were intrigued. Specifying formaldehyde-free and low-VOC (volatile organic chemicals) materials was a priority for the architecture firm. "This product contributes to energy savings and addresses Healthy Housing – i.e. a non off-gassing, formaldehyde-free insulation," said Rob Sieniuc of Broadway Architects. Johns Manville not only is the only manufacturer to offer a full line of Formaldehyde-free fibre glass building insulation, but the insulation has the additional feature of containing an average of at least 50 percent recycled content. Furthermore, manufacturing JM Formaldehyde-free insulation contributes to a sustainable environment – with the elimination of formaldehyde, more than 100 tons of hazardous pollutants are removed from the air each year.

Results:

Building is currently underway for the Seabird Island Demonstration Project, with a grand opening tentatively scheduled for mid-October. Once complete, this project will serve as a model for other community building projects across Canada and internationally. One of the homes will serve as a demo and will be open to the public for two years. In addition to visiting the demo home, the public will have a chance to learn about the project through a documentary being filmed by Omni Films which will shown on the Aboriginal Peoples Television Network and public television. CMHC is also hosting a symposium on Sept. 15-18, 2003 for more than 300 First Nations communities to discuss building for the future. One of the highlights of the conference will include tours of the Seabird Island Demonstration Project. Broadway Architects is also planning to develop a master spec for sustainable, energy efficient buildings and residences, and use it for future projects.

"We like to take a 'sustainable development approach' with our projects," said Sieniuc. "We see that as a way of the future...I think it's only a matter of time until it will become standard practice in the industry."

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