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Ops Talk

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**School Plant Officials
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INSIDE: SOLARWALL SYSTEMS MAKING SCHOOLS' FUTURES BRIGHT

LEED® COMES TO A RURAL B.C. SCHOOL

by Tom Philp



Artistic rendering of Crawford Bay School, courtesy of Killick, Metz, Bowen, Rose Architects

Crawford Bay Elementary/Secondary School has been a focal point of its namesake community since 1946. Through various additions and extensions over the decades, the school came to accommodate the full spectrum of British Columbia public education, Kindergarten to Grade 12 under, essentially, one roof. But 60 years of continuous use took its toll on the facility; and the layout of the building limited the amount of educational and technical advances which could be incorporated for the benefit of Crawford Bay's children, and the community itself.

Among the options considered were refurbishing and upgrading the existing facility; bussing kids either 50 kms to the west (including a 40-minute ferry ride across Kootenay Lake) to Nelson, or 75 kms south to Creston; or build a new school. In 2003, B.C.'s Ministry of Education gave the green light to build a new K-12 school at Crawford Bay.

"This was rated as one of the worst school buildings in B.C.," says Witmar Abele, the KMBR architect assigned to the Crawford Bay project. "But we're targeting a LEED® Gold certification here, so this school should be one of the best when it is completed."

LEED® (Leadership in Energy and Environmental Design) is the cornerstone of this 2,675 square meter school. Administered by the Green Building Council of Canada, LEED® projects are rated on a multitude of building and design factors, from energy and water usage to the overall environmental and human impacts a project creates. LEED® principles are important to Abele, as they are to Larry Brown, Director of Operations for Kootenay Lake School District #8.

Abele, who actually graduated here in the mid-1970s, designed



the new \$12.7 million school to accommodate up to 200 students across all grades, incorporating sustainable and energy-efficient technologies wherever possible. A horizontal loop, geothermal heating/cooling system has been included, with components buried beneath the school's playing field; lots of energy efficient glazing permits light to reach the innermost corners of classrooms, helping to promote learning; natural ventilation is accomplished by fixing operable clerestory windows high on inside walls, creating a thermal chimney effect when lower, outside-wall windows are opened; and lumber harvested and milled locally is used extensively throughout the building, providing not only a more natural environment, but also a boost to the Crawford Bay economy.

"All of this will be done entirely within the allocated funding envelope," Abele says. "Green design principles have been integrated from the beginning, (creating) an energy efficient, healthy indoor learning environment that respects the surrounding

ecosphere of Crawford Bay."

Community support, beyond the Ministry funding, will enable the inclusion of a further 2,000 sq. ft. of useable space for a Child Care Centre, weight room, and multi-purpose areas. As Abele points out, social justice is a key factor in building design, and included here.

Brown says the complete buy-in by area residents, a cost-sharing partnership with the Regional District for certain green-build aspects of the project, and additional funding through Community Connections have helped to soften the project "bumps" caused by labour shortages in a "hot" B.C. market, and escalating material prices.

"We have tremendous support for this project," Brown says. "We (are building) what we hope will be the first LEED® Gold certified public school in British Columbia."

The new Crawford Bay Elementary/Secondary School is scheduled to open in September, 2008.



The trench for Crawford Bay School's geothermal cables bisects the playing field

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