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We are very pleased to have been a part of this tremendous accomplishment in helping to achieve **LEED Platinum.** Sixteen thousand square feet of concrete subfloor was coated with SUPER THERM ® Multi ~ Ceramic Insulation Coating to create a thermal break under the in floor radiant heat In addition we were honoured to have been involved with the initial formulation of the Architectural Specifications.

Windsor school first in North America to achieve LEED Platinum

$14 million Dr. David Suzuki Public School consumes 35 to 45 per cent of energy of other energy-efficient schools

STAFF WRITER
– The Ontario Construction Report Special Featu

Dr. David Suzuki Public School in Windsor is the first LEED Platinum school in North America. Open since 2010, it is meeting and exceeding performance expectations and represents vision in environmentally sustainable construction and education.

The $14-million school, a demonstration site for innovative and energy efficient technologies, resulted from the need to consolidate Princess Anne and Concord Public Schools, both of which focused on environmental education. Ontario's energy ministry supported the project.

Marko Juricic, vice-president and director of operations for contractor Mady Development Corp., says the project succeeded because of the Greater Essex County School Board's drive and vision to achieve such a high environmental sustainability level.

The 58,000 sq. ft., two-storey school on an 11.9 acre site houses more than 550 students in its 18 regular, four kindergarten and four specialty classrooms. A 2,000 sq. ft. library and 5,000 sq. ft. gymnasium further support both learning and education. "The school also features solar panels and tubes and roof-top water collection. "The

38-watt photo voltaic panels not only supply the school but feed excess back to the grid," says Juricic. "We used a white roof and added a dedicated green roof area and an outdoor classroom off the science lab."

Comprised of white Calcite gravel combined with a low-solvent based white adhesive, the white roof has improved the building's energy efficiency. Similarly white cement has been used on exterior parking surfaces and walkways and redundant gravel parking areas and laneways were removed and reseeded. "Groups of existing trees on three corners of the site were maintained and every effort was made to ensure the lowest impact of the site on the environment," says Juricic.

Walkways around the school were extended into the community to connect with public transit and provide easy access for walkers and cyclists and, where only four bicycle parking spaces were required, 28 were installed to promote more environmentally appropriate transport.

Other elements contributing to the platinum certification include light shelves and tubular day lighting devices providing deeper penetration of natural light, thermally broken hollow metal frame insulated doors, double insulated and tinted glass with low E coating, a two-storey interconnected lobby space with full height glass and curtain wall for maximum natural light and two Ciralight SunTracker Active Daylighting System dome units in the kindergarten wing.

Juricic says natural and environmentally-sensitive products helped achieve the LEED certification. "We used natural cork floor in the administrative and resources areas, polished concrete in the corridors and vestibule areas, Forest Stewardship Council (FSC) certified birch veneer core plywood, FSC certified bamboo plywood, metal stud interior wall construction and low VOC adhesives and sealants throughout."

A living wall further improves air quality in the building and provides the students with a connection to the outdoors.

Energy efficiency and water conservation are also key elements . The school uses earth tubes as part of a geothermal system and a 5kw vertical axis Skystream wind turbine, which works with the building's electrical system to power the school. "On windy days the turbine will generate electricity to the school and will redirect excess power back to the grid," says Juricic.

Juricic says the building provides students with first-hand learning opportunities "There are areas in both the floor and walls made from clear plexiglass so students can see into different areas, look at various design elements and observe what is happening."

Aesthetic additions make the space inviting and fun. A bronze sculpture, resting on a large granite rock in the foyer, shows a young boy reaching towards a frog resting at the opposite end and represents both the school's namesake and the hope these young students will someday care for and preserve the natural world. Other elements include three full-sized decorative whales, two 1.5-m. rotating acrylic globes, six landscape images and a specially-designed window looking onto a prairie scene and a Carolina forest grove.

"This aspect of making things attractive to students was used throughout the project," says Juricic. "Where bio swales are often left as ditches running through the turf, the landscape architect adjusted the shape, planted the sides with trees, shrubs and wildflower, added boulders and created what looks like a natural pond of stream."

Juricic says it is a challenge to achieve such a high LEED certification. "LEED Platinum requires 52 points and we achieved 55" with guidance and support from the LEED professional (Mark Opresnik from Opresnik Engineering Consultants) who helped to guide the project.

After a full school year, environmental impact and energy efficiency studies confirmed that the school esuses only 35 to 45 per cent of the energy of other recently-constructed energy-efficient schools.

For more information,
visit suzukipublicschool.ca.