

For Immediate Release

Homesol Building Solutions certifies Canada's first Passive House built by Vert Design's Chris Straka

Official Passive House Institute Certification for Ottawa duplex proves that a 90% reduction in energy consumption is possible in harsh Canadian climate with locally sourced technology

OTTAWA - January 25th, 2011 – Despite skepticism about building to the Passive House standard in Canada, Homesol Building Solutions Inc. has proven otherwise by certifying a cost-effective urban duplex by Ottawa's Vert Design Inc. Using standards set by the Passive House Institute, Homesol has given Canada's first Passive House Certification to a residential home built in the world's fourth-coldest capital city (after Ulaanbaatar, Mongolia; Astana, Kazakhstan and Moscow, Russia).

When he started designing his home in Ottawa's New Edinburgh district, Chris Straka, Principal of Vert Design, was told it likely wouldn't be possible to build a Passive House in Ottawa's cold climate unless he imported expensive European technology. Straka then shelved the Passive House objective. He built his house using conventional building materials sourced from North America, as well as his experience honed by consulting on 35 residential green building projects since starting his company in 2006. Though his intention was not to build a Passive House, when he called in Homesol's President Ross Elliott to evaluate the duplex's energy efficiency, both men were astounded to learn that the home also met the Passive House Institute's strict energy efficiency standard.

According to the Passive House Institute, homes built to the Passive House standard are six to eight times more airtight than a new conventional residence and overall use 90% less energy for heating and cooling than conventionally built houses.

Straka's three-storey, 1,650 sq. ft. per side duplex was carefully designed from the top down, including a 1200 sq. ft. green roof with 12 inches of soil for a vegetable garden, radiant heat floors, a geo-thermal heating system, a high efficiency heat recovery ventilation system, plus a cistern for rainwater collection. A solar power system will be installed in the spring, and – as much as possible – the house is designed to accommodate future technologies. Detailed plans, drawings and descriptions for Straka's home are on his Web site at:

<http://www.vertdesign.ca/projects/rideau.htm>.

“My goal was to build a building I could be proud of, not necessarily to build a Passive House,” says Straka. “I knew that a very high performing building could be created using Canadian materials and mechanical systems. You don't need to look overseas to satisfy the demands of a North American climate. I focused my attention on the building's envelope, using triple-glazed windows, a combination of foam

insulations, and I sealed the house carefully to avoid thermal bridges that would transfer energy across the outer walls. All of this plus a south-facing rear wall of windows overlooking the Rideau River, keeps the cold out while inviting heat inside.” As it turns out, Straka’s subterranean heat pump system is barely needed because the house is so efficient.

Straka says it costs about 10% more per square foot to build this passive house than a conventional house, but the energy savings are significant enough that any additional up-front costs can be recovered in 6 to 10 years. “Any custom home in Ottawa will cost about \$225 a square foot to build. For \$250 a square foot, you can have the ultimate in energy efficiency.”

According to Elliott, Straka’s certification achievement is an important milestone. “Several other houses are underway across the country, so this landmark certification will pave the way for the expansion and legitimacy of Passive House construction in Canada,” said Elliott, “Chris Straka has proven it can be done.”

It is being done elsewhere in the world. Passive or low energy houses are quickly becoming a European standard. All new buildings in the European Union must be nearly zero energy buildings by 2020 and member states will set intermediate targets for 2015. “Nearly Zero Energy Buildings” are similar to Passive Houses in that they require only a very small amount of energy input. By 2018, all new public buildings in the EU will also be Nearly Zero Energy. Canadian-born celebrity homebuilder Mike Holmes calls Passive House “an up-and-coming design standard.”

About Homesol Building Solutions Inc.

Driven by a personal and professional commitment to sustainability, Homesol Building Solutions Inc. is Eastern Ontario’s leading provider of environmental and energy efficient building consulting services for contractors and homeowners. Founded by Ross Elliott in 1999, Homesol and its team’s passion for low-carbon living has established the company as the real deal in the world of residential energy efficiency. With over 30 years experience as an energy evaluator, green rater, contractor, consultant and designer, Ross qualified as an energy auditor in 1980. He is a certifier for R2000, ENERGY STAR®, LEED, and the Passive House Institute U.S. Ross was awarded EnerQuality Evaluator of the Year in 2007.

www.homesolbuildingsolutions.com

About Vert Design Inc.

VERT design is a planning and architectural design firm that turns spaces into living places. VERT design’s collective studio of multidisciplinary professionals creates buildings, landscapes and communities of a human scale toward a sustainable future. VERT design offers a knowledge base and skill set that is rooted in the allied environmental design disciplines. Its associates have a unique collection of expertise in the fields of environmental planning & design, architecture, parks & protected areas, agriculture, experiential education and capacity building. www.vertdesign.ca

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