

# DAILY COMMERCIAL NEWS AND CONSTRUCTION RECORD

LATEST NEWS >

Concrete | Water & Wastewater | Trade Contracting | Building Envelope | O H & S | Professional Services

October 24, 2007



TIM GRIFFITH

The 700-seat main auditorium of the Esplanade Arts and Heritage Centre in Medicine Hat, Alberta, boasts one of the highest performance sound qualities in western Canada. The project's sound

engineering firm, Toronto-based Aercoustics Engineering Ltd., was given the Schreyer Award last night in Ottawa during the Canadian Consulting Engineering Awards.

ACEC Awards

## **Toronto's Aercoustics Engineering's sound design earns Schreyer Award**

**Aercoustics Engineering created software to better model sound**

PATRICIA WILLIAMS

staff writer

Toronto's Aercoustics Engineering Ltd. has nabbed top technical kudos — the Schreyer Award — in the 2007 Canadian Consulting Engineering Awards for the acoustic design of the Esplanade Arts and Heritage Centre in Medicine Hat.

The centre's 700-seat auditorium has one of the highest performance sound qualities in Western Canada "thanks to the sophisticated analysis skills and judgment" of the acoustic engineers, the awards sponsors said.

Working on behalf of the building's architects, Diamond Schmitt Architects with Cohos Evamy, the engineers introduced two important innovations in acoustical analysis for the project.

First, they developed special "signal conditioning" software to analyze sound in a small-scale physical model of the auditorium. The software application improves on previous modelling techniques by creating representations of the sound that the engineers could listen to rather than simply relying on numbers and graphs.

Second, Aercoustics developed ways to analyze noise from the auditorium's displacement air ventilation system. Displacement ventilation systems are relatively new for performance spaces and are becoming popular.

Until this project, however, there was no recognized method of predicting or measuring their acoustical performance.

Aercoustics' analysis with displacement ventilation systems at the Esplanade Centre was later used directly to influence the noise control design of the Four Seasons Centre for the Performing Arts in Toronto, a building that is currently known as "the quietest opera house in the world." That project was also designed by Diamond Schmitt.

Co-sponsored by the Association of Canadian Engineering Companies and Canadian Consulting Engineer magazine, the awards were presented last night at a gala celebration at the Fairmont Chateau Laurier hotel in Ottawa.



GOLDER ASSOCIATES LTD.



#### HATCH ENERGY

An innovative foundation system, designed by Golder Associates Ltd., was put in place at the Vancouver Island Conference Centre (top), earning the firm a Canadian Consulting Engineering Award. Also recognized last night was Hatch Energy for its design of a Wawa embankment dam (above), one of the largest ever built in Ontario. Hatch Energy engineers also developed a new dam monitoring technique for the project.

The annual awards, launched 39 years ago, are the most important national mark of recognition for projects recently completed by consulting engineering firms.

Awards were given for innovative engineering design for four building projects, two dams, a wastewater treatment plant and a tailings pond.

In addition, three projects that involved the transfer of Canadian technology and engineering skills won in the international category.

The 11 winners were selected from 65 entries.

Awards of excellence were presented for the following projects:

- Rehabilitation of the Centre hospitalier Honoré-Mercier in Saint-Hyacinthe, Que. by DESSAU of Longueuil. The engineers completely overhauled the building envelope and mechanical systems after the hospital was found to be badly contaminated.
- Deep Soil Mixing, Ground Stabilization Foundation, Vancouver Island Conference Centre in Nanaimo, B.C. by Golder Associates Ltd. and Golder Associates Innovative Application Inc. of Burnaby. The geotechnical engineers designed an innovative foundation system so that a building could be safely constructed in unstable soils.

- Gimli Community Health Centre, Gimli, Man. by MCW/AGE Consulting Professional Engineers of Winnipeg. Taking an environmental approach, MCW/AGE designed a system that uses well water to cool and partially heat a community hospital.
- Shikwamkwa Replacement Dam, Wawa by Hatch Energy of Niagara Falls. The engineers developed new dam monitoring techniques and then designed one of the largest embankment dams built in Ontario in decades.
- Seymour Falls Dam Seismic Upgrade, North Vancouver, B.C. by Klohn Crippen Berger Ltd., Hatch Energy, Greater Vancouver Water District of Vancouver. A dam in the mountains north of Vancouver has been buttressed and strengthened to ensure the region has drinking water during an earthquake.
- Conger Marsh Wastewater Treatment Plant, MacTier, Ont. by Totten Sims Hubicki Associates (1997) Ltd. of Whitby. Great care was taken to protect endangered species before building this new plant in Ontario's cottage country.
- South Tailings Pond Wetlands, Millennium Mine, Alberta by Klohn Crippen Berger Ltd. of Calgary. The engineers designed a wetlands habitat for a tailings pond in northern Alberta.
- Yellow River Water Resources and Flood Management Optimization, China by Golder Associates Ltd. of Calgary. The engineers brought Canadian technologies to help manage one of the world's longest and most stressed river systems.
- Goodfellow EFSOP Project at Topy Industries Factory, Toyohashi City, Japan by Tenova Goodfellow of Mississauga. Tenova Goodfellow's electric arc furnace technology is helping a steelmaker in Japan cut emissions.
- Management Strategy to Reduce Hillslope Erosion and Reservoir Siltation for Watersheds, Algeria by TECSULT Inc. of Montreal. Quebec engineers came up with plans to make Algerian water reservoirs more viable over a vast area of 23,000 kilometres.

ACEC is the national association of consulting firms that provide engineering and other technology-based intellectual services. Canadian Consulting Engineer is a bi-monthly magazine for engineers in private practice. It is a division of BIG Magazines LP of Toronto.



500 Hood Rd, 4th Flr., Markham, ON. L3R 9Z3  
 Phone: 905-752-5408 | Fax: 905-752-5450  
 Toll free: 800-465-6475 | Toll free Fax: 888-396-9413  
 E-mail: [dcnonl@reedbusiness.com](mailto:dcnonl@reedbusiness.com)

© [Reed Business Information](#) a division of [Reed Elsevier Inc.](#) All rights reserved.