

Canadian

Design & Construction

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VOLUME 4, ISSUE 2, SPRING 2013

Report

WINDOOR show gains momentum

**Construction claims:
Things can go wrong**

**Business development: When proposal
wins give you a false sense of security**

Atlantic Canada: Special section



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Welcome



This issue of *Canadian Design and Construction Report* includes stories about projects and initiatives from coast-to-coast, reflecting the diversity of Canada's architecture, engineering and construction industry. You can read about great wood design projects in B.C, Vulcan, Alberta's economic development, an innovative Winnipeg development, Ontario general contractors' perspectives and several Atlantic provincial stories.

Also included are observations of relevance to everyone in the industry, including guidance about risk management and Matt Handal's tell-all explaining how his worst-ever proposal succeeded.

We're continuing to enhance the publication with improved on-line distribution and a growing network of regionally-relevant websites. You can view the magazine online at www.cadcr.com (including some content not in the printed version) and, also read atlanticconstructionnews.com, covering Nova Scotia, New Brunswick, Prince Edward Island and Newfoundland, under Atlantic-Canada publisher Marilyn Munroe's guidance.

Please let us know about your own interesting projects. If you have videos, we can publish them, as well.

You can communicate with me by email at buckshon@cadcr.com or by phoning (888) 432-3555 ext 224.

We're looking forward to seeing you again soon in the summer.

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The Canadian Design and Construction Report is published bi-monthly by Mekomedia Enterprises Inc., a member of the Construction News and Report Group of Companies.

The magazine is distributed to 75,000 design and construction industry leaders across Canada. It is also available for review and downloading at the Canadian Design and Construction Report website (www.cadcr.com) or you can sign up for the electronic edition newsletter by emailing buckshon@cadcr.com.

You can receive the online magazine free. If you wish printed copies, you can request a single issue for \$15.99 or an annual subscription for \$90.00, which also provides you a free basic directory listing.

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For more information about either marketing option, please email Chase at chase@cadcr.com or phone 888-432-3555 ext 211.

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You can contact the editor, Mark Buckshon, at buckshon@cadcr.com or phone 888-432-3555 ext 224. Submissions which provide relevant information on topics of relevance to the design and construction network community are invited. Business and self-promotional profiles are encouraged to consider the editorial profile or sponsorship options outlined above.

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The Construction News and Report Group of Companies (CNRGP) focuses on news and information for the construction industry in regional and national markets both in Canada and the U.S. Services include:

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The Canadian Design and Construction Report and **The Design and Construction Report (US)** are magazines serving a cross section of the architectural, engineering and construction industry in both the U.S. and Canada. Distribution of the online edition is free to qualified readers, with video and embedded web links enhancing the reading experience. You can purchase a subscription to the printed edition by emailing buckshon@cadcr.com.

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The Construction Marketing Ideas blog and website

Constructionmarketingideas.com is the first independent website/blog dedicated to news and developments for marketing in the architectural, engineering and construction communities. Updated daily, it provides links to dozens of resources and services related to AEC marketing.

When things go **wrong**

The common issues you see in construction claims

By Scott Lowe, P.E.

There are several common issues we end up debating and that are often at the heart of a claim. These issues are:

Proper interpretation of the contract

Now, if the issue's small, ultimately the interpretation issue can often be overcome, but if it's associated with thousands, or worse, millions and millions of dollars in potential added costs, then the proper interpretation of the contract becomes a common bone of contention.

Delays

Delays are an issue in 99 percent of the claims I get involved with. It appears that it's hard for the project team to answer questions related to delays, to come up with a way of measuring the delays that everybody can agree with, and that everybody can use as a basis for resolution of their differences.

Inefficiency

Efficiency has become more and more common of an issue. When I first started evaluating claims in 1985, inefficiencies were a rare component of a contractor's claim. Now, it seems like virtually every claim I pick up has inefficiency as a significant component. If delays are hard to measure, inefficiencies are harder to measure.

I was in a mediation last week, and the mediator said if delays are hard to resolve or measure, then inefficiencies are the square of that in terms of difficulty. I'm not sure I quite agree with the square part, but I would say that inefficiencies are typically more difficult to evaluate than delays.

Acceleration

Tying those two things together, delay and inefficiency, is the issue of acceleration. If we have delays in a project, sometimes there's a need to accelerate to mitigate those delays. And often-times, that acceleration results in alleged inefficiencies. This is often the worst case in terms of sorting out the issues between the parties.

Costs

Finally, one of the things that's often very difficult to sort out in claim situations is the costs, particularly costs related to delays and inefficiencies. And I would say probably more with regards to delays than inefficiencies.

Scott Lowe is a principal of Trauner Consulting Services, Inc., a claims and scheduling consulting firm. He can be reached at scott.lowe@traunerconsulting.com.





General contractors outline hopes, dreams and visions

Ontario General Contractors Association (OGCA) president's panel

Canadian Design and Construction Report staff writer

Four construction industry leaders, reflecting companies of different size and focus, offered some advice and shared lessons learned Ontario General Contractors Association (OGCA) biennial symposium's presidents' panel.

John Aquino, president of Bondfield Construction Ltd., said a key element of success is "servant leadership."

"If you are in it for yourself, you are going to end up alone," he said. "(By) serving your clients, contractors, employees, associations, and giving back to the industry, those are the things for you to grow as a person and a company."

John Cutruzzola, president of much-smaller Inzola Construction Inc., answered a question about what advice he could give to someone just entering the construction industry.

"Be patient and recognize talent and try to develop passion," he said. "What is important to recognize is the passion. If young, many can express passion and can

overcome shortcomings. (We need) compassion, understanding, patience and the ability to recognize the talent."

Mike Reinders from Maple Reinders Constructors Ltd. said in the era of public-private partnerships (PPP) and BIM, massive \$500 million to \$2 billion-plus projects are out of reach for smaller contractors. However "as a smaller company we're delving into P3s, for example, a \$30 million project in Alberta."

"You need more financial resources, and you need letters of credit, which ties up more of your working capital and inhibits your bonding capacity," he said. "Unless you have deep pockets it is difficult to get into it."

However, Reinders said his company and other medium-sized and smaller firms can get involved in the larger projects through joint ventures. "This speaks to relationships. You can't go into joint ventures for yourself, you have to go in with (the idea) that you are going to serve this project and client, and work for the benefit of everyone in the room – just like a marriage. You have to work together and can't be in it for yourself, or it isn't going to work."

John Cutruzzola said PPP projects have resulted in a “negative impact” for his business. He said he believes the trend to large-scale activity is misguided and mis-applies contractors’ talents. “The talent of all of us in the room is to build – you are good at building and doing, and now you are being asked to be a banker, a financier, and take a huge risk at the beginning and after you have signed the contract.”

He said the restrictions of access to work to larger contractors is creating monopoly-like conditions, and “you are stifling growth and vigour and innovation and the young and new companies that have been presented this big mountain to climb is not good for the long-term of the nation.”

He said P3 costs are buried in the long-term contracts. “So far I haven’t heard anyone make a documentable detailed long-term analysis that shows a positive return on the benefit to the public purse.

But Chris Gower, representing PCL Constructors Canada Inc., disagreed with Cutruzzola’s perspective.

He said PPP projects are resulting in a greater level of collaboration, communication and partnership among stakeholders. “More contractors are mindful of the full lifecycle costs of the project” — when low maintenance costs and design quality is important, “we’ve been challenged to collaborate like never before.”

This has resulted in PCL developing expertise in finance, life cycle costs, energy modelling and other issues. These talents are helping the contractor to grow into new areas. “We’ve started a whole division for off-

site modular construction,” he said. “We’re building (mechanical) penthouses and sending them to the site and having them fully erected.” This results in reduced site labour costs and lower congestion. “You have to challenge and innovate what the customer is looking for.”

Bondfield’s John Aquino said relationships are vital – they are hard to develop and take time – and can be destroyed within minutes. “These days, most client pre-qualifications are based on client references,” he said. “The last five per cent (of the work) either maintains or breaks this client relationship.

PCL’s Chris Gower agreed. “Nothing moves faster than trust,” he said. “We often put in a bid in design-build or we have a couple of guaranteed prices from the trades” even though the drawings aren’t fully completed. “We have to trust each other, you are going to be able to finish the design and get to the end, and there is a leap of faith that comes in . . . over and over, that comes from trust, and past relationships.”

Mike Reinders was asked when he will retire, and why.

“My dad is 83 years old and he is in the office today,” Reinders said. “He doesn’t want to retire – he wants to keep going, or he will die.” However, Reinders doesn’t want to deny the opportunities for younger people to grow, so he believes he should “develop, hire and grow people that are better than me.”

He said it is important to keep life in perspective with balance between work, family, leisure, social, physical health and spirituality.

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Montreal architect selected to design new Algerian city



LEMAY Architects, based in Montreal, has won a nearly \$1 billion contract to design Bourouag, a new Algerian city. This project follows the practice's 2012 success in receiving a \$2.4 billion dollar contract for El-Menia, also in the northern African country.

LEMAY's president Louis T. Lemay said the Bourouag project's mix of residential and commercial real estate will pose an exciting challenge to the firm's architects, designers, urban designers and other experts. The architects say the engineering consulting firm Exp will be directly involved in the project once it reaches implementation.

Michel Lauzon, partner and chief creative officer, indicated that this mixed urban development will marry residential, commercial and institutional buildings in four

clusters forming a cohesive and integrated community. "These sectors will be both autonomous and interdependent, allowing for a sense of community ownership," he said. He added that this oasis city, born of the availability of a stable water supply, will be defined by the interrelation between a human settlement and the natural surroundings.

Lauzon said the new city will extend over 40 hectares and will accommodate 2,595 housing units, including 125 villas in a first cluster. A second cluster will house three primary schools, three high schools, two daycare centres, a 15,000 sq. m. sports complex, a college and a mosque.

The third cluster will have a hotel, a shopping centre and a business centre complete with a bank, a health clinic and an administrative building. The fourth cluster will be composed mostly of public spaces, including some of an institutional or commercial nature, including a public market, a rock garden, green spaces, fountains and a small water park.

Bourouag will be crisscrossed by a road network totalling 8.8 km.

Lauzon said the project is an innovative concept based on contemporary urban design theory. It includes diversity, an element of surprise and recent developments in the field of urban ecology, he said. It takes into account the unpredictable evolution of the real estate market and commuting distances, and favours active modes of transportation.

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Gold Seal certification introduces Gold Seal employer sponsorship program

Gold Seal Certification program, the leading Canadian certification program for construction management professionals, has announced the launch of the Gold Seal Employer sponsorship program.

In the past, Gold Seal certification program's sponsorship opportunities have been limited to individuals who could become Gold Seal Champions. Now, in response to requests from construction companies, the Gold Seal Certification program is enabling companies employing Gold Seal Certified (GSC) or Professional, Gold Seal Certified (PGSC) construction management professionals to promote professional development, industry awareness and continued education through the Gold Seal Employer sponsorship program, a news release reported.

"Employing Gold Seal Certified staff already says a lot about how you value professionalism and ongoing education," said Barry Brown, chair of Canadian Construction Association's Gold Seal committee. "The Gold Seal Employer sponsorship program enables construction companies to further increase their visibility and credibility with their clients, potential clients and the construction industry as a whole."

The program has an annual membership fee of \$1,000 which is re-invested into the Gold Seal Certification program. The benefits include an official sponsorship certificate, Gold Seal Employer logo, a promotional package, name inclusion on the Gold Seal website, mention in Gold Seal's communications well as a copy of the Gold Seal as an HR Strategy document.

By integrating Gold Seal into the corporate culture, a construction company can enhance the recruitment of new employees and the retention of skilled workers. "Some employers – both large and small - systematically enroll all of their construction management staff into the Gold Seal Certification program," said Stephanie Wallace, who manages the program. "For them, Gold Seal is part of the human resources (HR) strategy, part of the professional development strategy and part of the performance management process".

More information about the program is available from the Gold Seal website goldsealcertification.com/sponsorship.

Construction continues strong in Saskatchewan; mapping projects key to managing trade demands

Non-residential construction growth in Saskatchewan has been leading the country and other industries over the past decade, and that is not about to change - at least for the next couple of years.

The latest forecast of labour supply and demand, one of the final reports from the Construction Sector Council (CSC) says several large projects now underway and proposed in mining, electrical utilities, pipelines and other industries will keep the industry booming until 2015. (CSC's

forecasting responsibilities are now managed by Build-Force Canada.)

At this peak in 2015, construction employment will be more than 60 percent above historical levels.

But similar projects around the same time in other provinces create a competing demand for key trades, according to Construction Looking Forward, Saskatchewan 2013-2021. These include boilermakers, carpenters, contractors and supervisors, crane operators, insulators, ironworkers, sheet metal workers, steamfitters and pipefitters, and welders.

Construction Looking Forward also notes that several major mining projects are currently under review. If they proceed, they could increase labour demand later in the forecast period. Otherwise, demand will decrease after 2015 but will still remain at record high levels.

"Saskatchewan is part of the growing centres of resource construction across Canada. Based on the known projects, we see a peak in 2015, but it is also anticipated that resource development opportunities will continue later in the scenario period," says Doug Folk, acting president of the Saskatchewan Construction Association.

"This, combined with the estimated retirements of 7,200 skilled workers between now and 2021, and the potential draw of tradespeople to work in other parts of the country may create challenges to maintain and replace the workforce to meet future demand," Folk says..

"Industry leaders plan to keep apprenticeship training front and centre, and work on recruitment strategies to attract youth, women, Aboriginal people, and immigrants," says Terry Parker, business manager, of the Saskatchewan Provincial Building and Construction Trades Council.

The report notes that general economic conditions and population growth has raised both housing starts and overall residential investment to more than twice the levels that prevailed at the start of the last decade.

Forecast scenario data is available at www.constructionforecasts.ca. In addition to information on the supply and demand of skilled trades, the website allows for instant access to residential and non-residential construction investment data.

Bird Construction launches new website

Bird Construction has announced the launch of its new website at www.bird.ca.

"Bird is growing — simply put, we had outgrown our previous website and needed a new online channel to better showcase our position as one of Canada's leading general contractors," said Tim Talbott, Bird's president and CEO. "The design of our new website has a much different look than other construction company websites. It is heavily focused on images and is a lot of fun. I encourage everyone to check it out."

The new site features an extensive portfolio of over 300 recent projects, each showcasing a number of full-screen photographs along with a detailed description of the project., the company says.

Strong Canadian real estate performance continues

Canadian commercial real estate delivered another strong performance in 2012, as measured by the REALpac /IPD Canada Annual Property Index.

The annual total return of 14.1 per cent continued Canada's strong performance. Real estate outperformed public equities (7.5%), bonds (3.0%) and inflation (0.8%). (Equities are based on the .

Total annual returns for the three years, five years, and ten years ending December, 2012 remain robust at 13.6%, 8.7% and 11.7% respectively.

Examining the four major property sectors, residential registered the only increase in total return in 2012 (16.2%, up from 11.9% in 2011). Total returns for office properties, which spiked between 2010 and 2011, pulled back only slightly in 2012 to 15.9% while industrial and retail produced lower total returns in 2012 (11.8% and 13.5% respectively) compared to 2011.

Overall, the six largest commercial property markets generated healthy total returns in 2012. Of the six largest markets, Edmonton was the only metro that saw accelerating growth in value. Calgary, Toronto, Montreal, Vancouver and Ottawa all produced healthy but lower returns in 2012 compared to 2011.

Toronto developer confirms interest in purchasing Ottawa Constuction Association property

Toronto-based Lamb Development Corp (LDC) has confirmed its interest in purchasing the Ottawa Construction Association (OCA)'s headquarters building and land by paying a substantial deposit to hold its \$4.6 million offer the association's downtown office and site.

OCA president John DeVries said Lamb has committed to a "deposit in the six figures" to hold the property for further due diligence, for seven months. He declined to specify the deposit's exact amount, other than confirming it is in the six figures (that would be greater than \$100,000 and less than \$1 million.)

LDC's website says the company was established in 2001 by condo broker Brad J. Lamb "to directly participate in the development of stylish, urban condominium projects. At that time, with over 13 years of experience in consulting, marketing, and the selling of over 80 of Toronto's most innovative and exciting projects, Mr. Lamb wanted to bring something different to the development world.

DeVries said the association decided to put its building and land on the market in late 2012 because the property, as currently configured, no longer really meets the association's requirements. "Very few people actually visit the plans room these days, and the training facilities in the basement are inadequate for our needs," he said.



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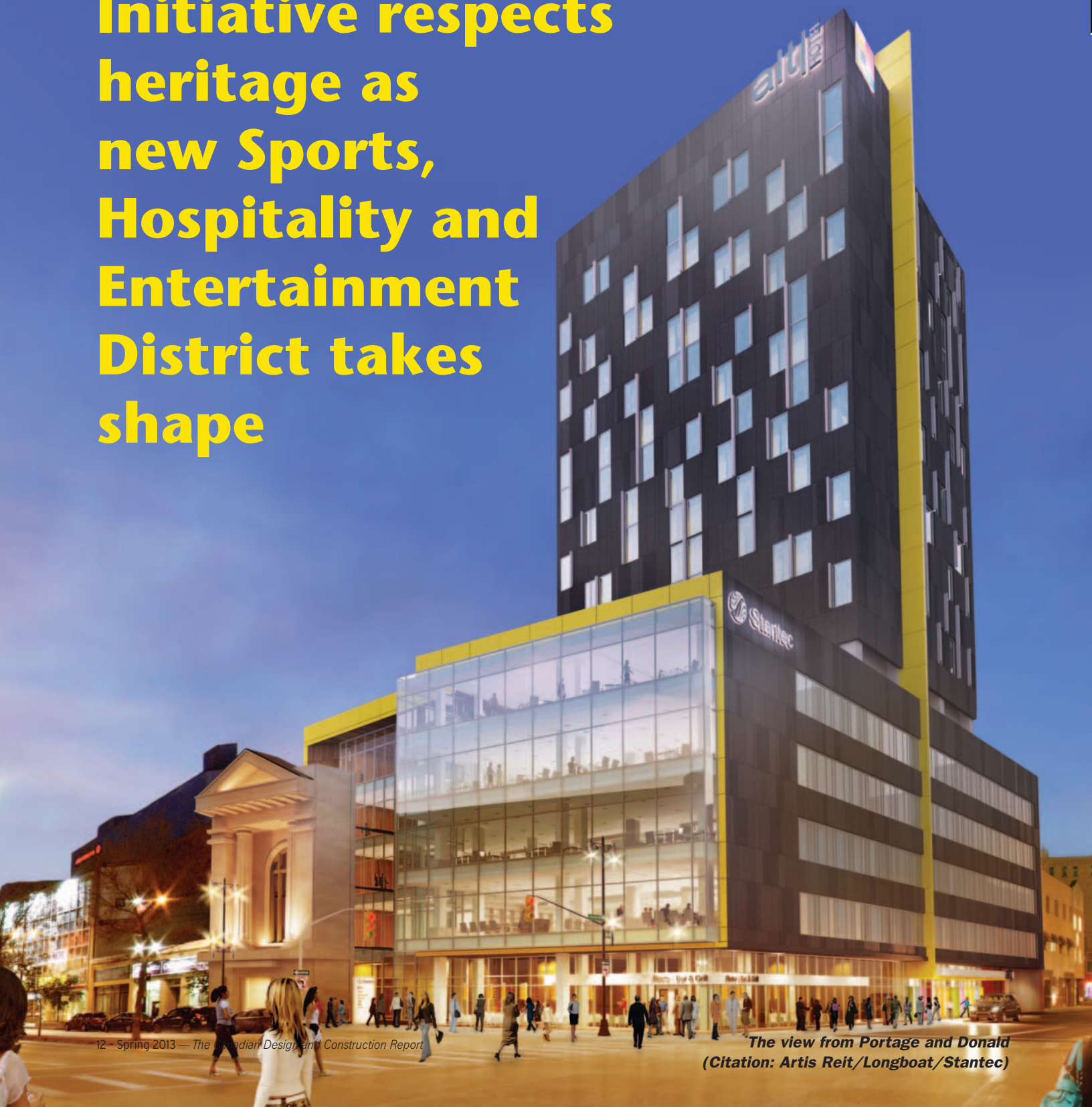
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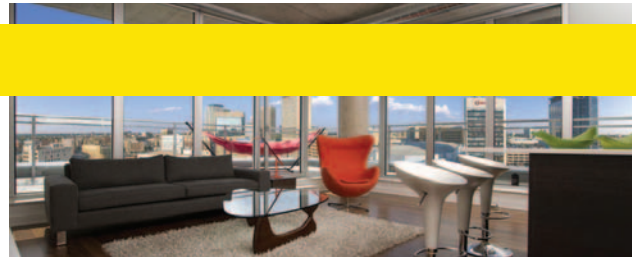
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\$75-million Centrepont project transforms downtown Winnipeg

Initiative respects heritage as new Sports, Hospitality and Entertainment District takes shape





**Interior of a Glasshouse Lofts residential unit
(Citation: Glasshouse Lofts Inc/Stantec).**

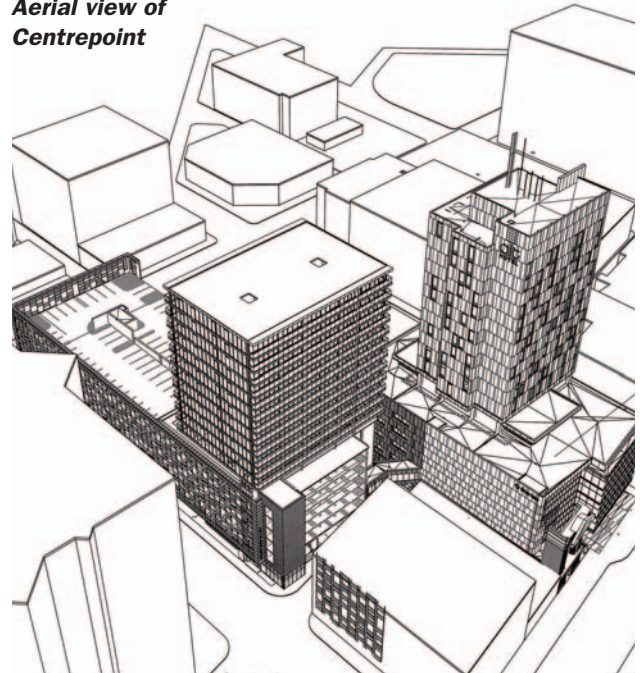
A \$75-million development is transforming Winnipeg's downtown through a multi-phase, multi-component project that will tower nearly 20 storeys, and include a hotel with more than 150 rooms, five floors of office and retail space, an adjacent residential tower and a 400-plus vehicle parkade, set in the heart of the district.

Longboat Development Corporation (LDC) and Artis REIT have jointly developed the project, which is part of the planned Sports, Hospitality and Entertainment District (SHED), and is located across from the MTS Centre (home of the Winnipeg Jets). Centrepoint is a major refurbishment that is designed to achieve LEED Silver certification, but also respects the district's heritage, maintaining the façade of the architecturally-significant Mitchell-Copp building, built in 1906, as the main entrance to the complex's office component.

LDC vice-president Scott Stephanson says the project is well underway, and work on the hotel foundation has started. "This is a very unique project and the single largest we have undertaken," he said. "We're striving for both Green Globe and LEED certification through unique aspects such as geothermal, which will be used in the hotel and may be added to the residential and parkade components as well."

Constructed of precast instead of cast-in-place concrete, Stephanson says this unique design for

**Aerial view of
Centrepoint**



Winnipeg has helped keep the trades working through the coldest months. "The pre-cast beams are done and on site ready to be used," he said. "Our general contractor, Nova-Con Projects, is local, as are most of our trades, so they are used to working with and around the cold."

Stephanson, who has been involved with other significant downtown projects, says his company understands the nuances of working downtown and, though they have done work in other parts of Western Canada, says Winnipeg is its focus. "With the complexity of this project and the central location, we try to keep the website updated with news and information so people will always know what is happening. There have been and will be scheduled street closures. It's important people who travel through, live, or work in the area know what to expect."

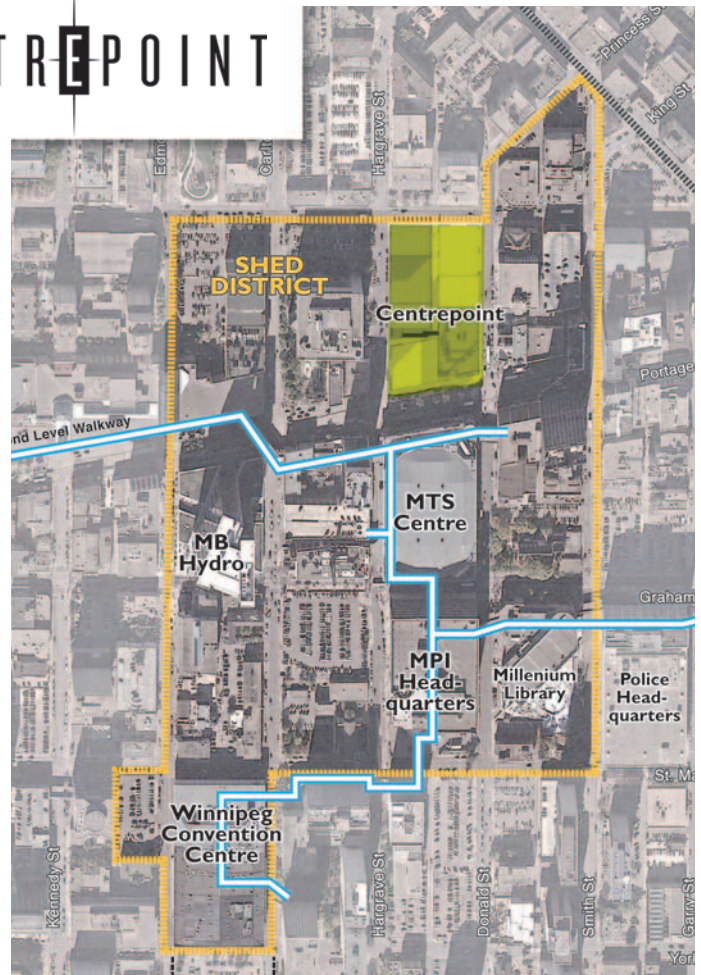
The building will house the Prairies' first ALT Hotel on the upper 12 floors, with the headquarters of Stantec's Winnipeg office occupying more than half of the available office space on another four floors. Stantec will provide architecture and engineering services to the project and, as anchor-tenant, will bring more than 250 employees to the location. Office spaces have abundant daylight, change rooms, showers and bike lockers. Retailers and restaurants will be on the main floor.

The ALT, a boutique hotel developed by Groupe Germain Hospitality, combines comfort and affordable prices through the concept of 'no frills chic': a modern design with a responsible use of resources and the elimination of what are considered superfluous details.

CentreVenture Development Corporation, an arm-length City of Winnipeg agency, has been instrumental in the project. CentreVenture is an advocate and catalyst for business investment, development and economic growth in downtown Winnipeg. Working under the guidance of a volunteer, private-sector board of directors, it develops and implements strategies to identify and capitalize on economic, physical and social development opportunities.

See www.centreventure.com.

CENTREPOINT

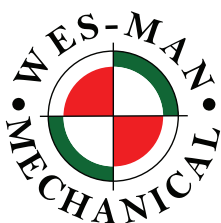


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Dundas Museum renovation enhances local history, respecting heritage and the environment



Canadian Design and Construction Report special feature

The \$1.4 million Dundas Museum Renovation near Hamilton, Ontario, will almost double the building's size and unify two distinct structures, improving accessibility and enhancing local history.

Designed by McCallum Sather Architects (MSA) and constructed by Collaborative Structures Ltd., the project has included work on the museum and on the adjacent Pirie House. The 138-year-old home acquired 40 years ago has been integrated with the museum's main building.

The building combination helped to solve the accessibility challenge. "By creating a new main and accessible entrance we were able to integrate the two buildings and add the elevator feature here," said McCallum Sather principal Drew Hauser.

"We used materials reflective of the industrial heritage of the area like heavy timber and exposed metal detailing but refined versions," he said. "We layered natural materials in the new entry which connects the two existing buildings in a light-filled gallery."

The designers needed to consider the museum's surroundings. There is a private home behind the museum which had to be respected, and there was a desire not

to copy, and therefore take away from the heritage architecture. Hauser says the designers sought to reflect the area's history and add in a subtle way to the museum.

Hauser says the museum has a large collection, not all of which is on display, so larger and less light-sensitive pieces will be moved to the atrium and will be visible from outside.

"There are beautiful gardens in the area so we have carried the traditional landscaping of the neighbourhood to the museum, creating a procession from the sidewalk to the building and created an intimate gathering space," he said.

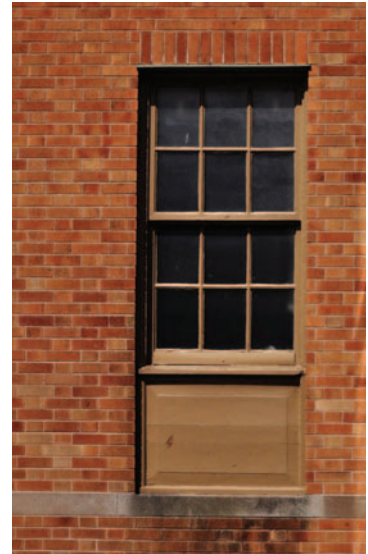
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Within the museum, walls were removed to create new open spaces. In the Pirie House, contractors used drywall to bring the building up to current standards and create new storage space.

Hauser says McCallum Sather has consistently focused on sustainability. Shading and natural light and envelope efficiencies were an important aspect of the design.

He said the architects enjoyed working with Collaborative Structures Ltd. and credits the entire design team with project's success.

"Any time you are working in an older building there are going to be surprises uncovered along the way," he

said. "The museum board had a lot of construction experience and faith in the design team. The team itself – consultants, designers and construction – were very integrated and were able to come up with timely and creative decisions which will result in something very beautiful."

The project is expected to be completed in the late spring. Once the tarps are removed after the windows are installed, the community will have its first glance at the work. "With the other projects being done in the city and all set to be completed around the same time, this is a really exciting time to be in Dundas," he said.



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Target renovation at Victoria's Hillside Centre part of larger \$72 million mall redevelopment



Canadian Design and Construction Report special feature

Through a \$1.6 billion leasehold acquisition, Target took over the leases to 189 Zellers stores from HBC in January 2011, marking the beginning of its entry into Canada. The retailer plans to open 124 as Target stores. Among the chosen locations is Hillside Centre in Victoria, where construction of the 147,000 sq. ft. store is part of a larger, \$72 million mall redevelopment.

Before each opening, the previous Zellers locations go through a remodelling, valued at \$10 million each on average. The projects generally take approximately six to nine months. In this case, work is more extensive and Target does not expect to open until sometime in 2014.

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Mike Kerr, president of Kerr Controls Inc., says his company has been involved with Hillside Centre renovations for several years. "We are involved with the mall's common areas, as well as individual stores, and are installing controls for lighting, heating, ventilation and air conditioning as well as setting up many of the background systems like generator failure alarms."

Using a building automation software, Kerr and his team will bring together the different systems, each with their own protocol, into a manageable package. Though a complex project, this is Kerr's area of expertise and not the project's biggest challenge: Working within an operating mall is.

"As an open mall we're working a lot of nights and weekends to ensure we don't interfere with the retail business," he said. "Although this isn't the largest project we've ever done, by the time it is complete, it will be the longest we have ever been on." (Kerr started work on upgrades to improve energy efficiency at the mall in 2009).

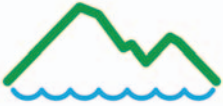
Bruce Crawshaw, civil engineering consultant with Westbrook Consulting Ltd., says one of the biggest challenges is the mall's location directly adjacent to a creek under pressure from urbanization. "Victoria's Capital Regional District has a water management plan for

Bowker Creek with guidelines to improve the quality of water flowing into it," he said. "To respond, we've set up storm water capture in two areas on the site. At the rear water will be redirected to a 300m² rain garden and at the front will be sent to a ground water recharge system for treatment prior to discharge to the creek."


Crawshaw says permeable paving materials will solve the challenge from oils or other hydrocarbons that may drip from automobiles. "The city doesn't require quite the degree of measures we've taken but our company specializes in low impact development and this will significantly improve the quality of water runoff."

Target will be one of the first retailers to apply for LEED certification for all of the stores it opens in 2013. The certification level may differ from market to market, depending on each site's circumstances. The company will focus on energy and water savings, waste reduction and recycling.

Target is known as a one-stop-shop, offering of products for the home, personal care and beauty, grocery items and seasonal products. In addition, the company has unique design partnerships with brands like Kate Young, Roots Outfitters, and Nate Berkus. The Hillside location is expected to open in 2014.




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Building goes upscale during construction – creating unique challenges for builder and trades



Canadian Design and Construction Report special feature

Edmonton will soon be home to Canada's third Renaissance hotel and the only Renaissance in the world directly linked to an airport terminal.

The Renaissance, a Marriott brand, will have 213 rooms on eight floors, including a 1,200 sq. ft. presidential suite, 11,000 sq. ft. of meeting space, a private club floor with club lounge, and the HALO (an acronym for High Altitude Low Octane) restaurant, which will serve upscale comfort food created by local celebrity chef Andrew Ihasz.

Renaissance Edmonton Airport Hotel sales director John Hollman says the Renaissance brand focuses on lifestyle. "The hotel will be trendy and modern with fresh flowers in the lobby and unique features in the rooms," he said. "Valet service at the entrance, a concierge to

help people find hidden gems within the city, and a calendar of live music and events are just some of the features that make this brand special."

The property is owned by Platinum Investments Ltd. The building had originally been slated to open as a Courtyard by Marriott but part way through construction the owners decided to change to the more upscale brand.

Michael Goldsmith, president of Goldsmith Consulting Design Associates (GCD), said the change has created some challenges, including keeping trades engaged and the question of what to do with already-manufactured supplies.

"Construction began on this in late 2011 and by August 2012 the shell was completed in less than 10 months," he said. "The changeover to Renaissance came after that."



Goldsmith said all of the hotel's finishes and case goods needed to be completely changed. Other changes included modifying bathrooms to from tubs to showers (80 per cent of suites will now have showers instead of tubs following a preference by travellers). As well, the public spaces required a complete make-over.

Goldsmith says the team is trying to use and adapt as many of the original materials as possible without starting from scratch and that all of the trades have stepped up to get the work done.

An elevated climate-controlled pedway will connect the hotel to the airport, a feature which shows the hotel's proximity and reveals another potential problem.

"We are within 250 ft. of a gate so sound is an important consideration," Goldsmith said. "The hotel is laid out so public spaces are closer to the airport and act as a buffer between the guest suites, which are located on the far side and we used customized double-paned glass, which will help minimize the airport noise."

Though the project is not seeking LEED certification, Goldsmith says energy efficiency and elements like using mostly-local materials and high efficient mechanical systems including a heat wheel recovery system would count high towards LEED consideration.

The hotel is the first Canadian building constructed with the "Girder Slab" system, selected for its speedy installation and because the system solved a key issue. "The hotel is under tight height restrictions because of its proximity to the airport," Goldsmith said. "Using traditional construction we would have only been able to build to seven storeys but with this system were able to get in eight."

Goldsmith says the integrated steel beam system, which uses hollow core planks, also allowed each floor to be constructed in 10 to 13 days without shoring and heating and hoarding in the winter, compared with the

weeks that would be required for a conventional concrete pour. "This system is a bit more expensive but when tasked with construction through the winter, it quickly becomes an affordable option."

Goldsmith describes the hotel as very modern looking and "kind of a work of art in itself." The hotel is scheduled for a soft opening late in the summer of 2013.

***Congratulations to Platinum Investments Ltd.
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CCI Group Inc. grows its national presence as one of Canada's best managed companies

Canadian Design and Construction Report special feature

Construction Control Inc. has changed its name to CCI Group Inc., reflecting the company's expanded services, wider scope and national presence. The multi-disciplinary engineering group now has offices from Montreal to Victoria and has expanded its areas of expertise.

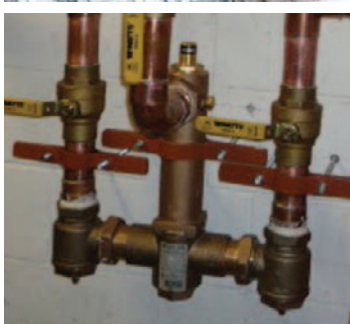
"Our company began in 1972 with a focus on quality control and inspection and testing services," said executive chair Dr. Gina Cody. "Over the past few years we've gone through incredible growth, adding services that involve us from the start of a building's construction, right through to the end of its life, including structural design, hazmat and environmental services."

Cody says the company has truly changed and the new name will draw attention to that. "We are a larger, better and more diverse company now."

CCI has grown with acquisitions including a Toronto-based structural group and a legal and forensic division. "The acquisitions we've made have all been complimentary services, or services we had done in the past but now offer a higher level of expertise in," Cody said.

"We have numerous clients who have been with us for more than 30 years," she said. "As they've grown they've asked us for new services, or asked us to be present in regions they were moving into. Our relationships with our clients have always been the key and this shows our continued commitment."

Cody says these close relationships are developed through the senior management team who make themselves accessible to clients and the company's openness to encouraging staff to have client contact. "We have a large number of staff who has been here a long time. That continuity has always been impor-



tant and continues to be through our growth. Clients appreciate knowing they can call and discuss projects with the same person they did the last time."

One of Canada's Best Managed Companies – 2012

CCI Group has been recognized as one of Canada's Best Managed Companies with annual revenues greater than \$10 million in a national program sponsored by Deloitte, CIBC, Queen's School of Business and The National Post.

Cody says CCI Group is one of the smaller companies to have won and says the recognition points to the success the company has achieved as it has grown. "This is an objective, third party measure, confirming we have done things the right way, and as planned."



For more information on CCI Group, visit ccigroupinc.ca.



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Economic development

Vulcan County's \$600 million windfall in southern Alberta



*By Jonathan Allan
Economic development officer,
Vulcan Business Development Society*

Vulcan County is a rural community settled by hard-working homesteaders at the midway point between Calgary and Lethbridge in southern Alberta. With a population of about 7,000, the county's main sources of individual income and employment are tied to the agricultural sector, oil and gas, and the civil service, though efforts are being made via the Vulcan Business Development Society (VBDS) to diversify the industrial mix of the region by encouraging and advancing progressive, high-tech ventures.

Alternative and renewable energy development represents one such area of opportunity for progressive and advanced business development. Being just east of the Rocky Mountains, Vulcan's beautiful prairie landscape is replete with wind coming down off the mountains, perfect for power generation.

Taking advantage of the inherent opportunity existent in the Vulcan area, Enbridge and EDF Energies Nouvelles will break ground this quarter on a \$600 mil-

lion wind power project near the Village of Carmangay in southern Vulcan County. A total of 166 turbines will be installed, with the capacity to harness energy for up to 140,000 homes – making it the largest wind energy project in Western Canada. Together, Enbridge and EDF purchased the Blackspring Ridge project from GreenGate Power Corp.

Construction of the project will be undertaken by EDF EN Canada, with completion set for mid-2014. The Danish company Vestas Wind Systems AS, one of the largest and highest-quality wind turbine manufacturers in the world, is supplying the generators and components to the turbines. During the peak phase of construction, it is anticipated that up to 250 people will be employed.

There are several key factors which are currently being worked out, including the construction of roads to the project site. Furthermore, an adequate supply of housing and shelter will be required for the large influx of workers coming into this sparsely populated area.

In fact, currently two unrelated housing development projects are under construction in two different areas of Vulcan County, which, if housing supplies are indeed found to be short due to the development of Blackspring Ridge, could be accelerated by the market demand for their use. Found in the Village of Milo, phase one of the Crystal Blue housing development is a \$5 million-plus project on the shores of Lake MacGregor. Construction will begin on the first of up to 100 homes by the end of this year.



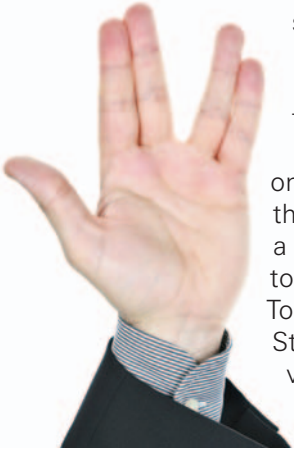
Intergalactic travel marketing precedes wind generation initiative

Vulcan's economy has been primarily agricultural (with wheat, canola and barley grown in surrounding farms), but the community between Lethbridge and Calgary also has achieved some tourism fame because

it coincidentally shares its name with the Star Trek home world of the Vulcans.

"Capitalizing on this coincidence, the town has built a *Star Trek*-themed tourist station (the Tourism and Trek Station), which provides tourist information, displays Star Trek memo-

abilia, provides unique photo opportunities, and allows visitors to participate in *The Vulcan Space Adventure virtual reality* game," Wikipedia reports. "Nearby, a replica of the starship Enterprise from *Star Trek V* has been mounted on a pedestal which includes writing from *Trek* alien languages like Klingon. The town has also created space-themed murals and signs, and hosts an annual community-wide *Star Trek* convention known as VulCON: Spock Days/Galaxyfest. This convention attracts hundreds of *Star Trek* fans from around the world."



Up to 200 homes in the Town of Vulcan will be completed as part of the Whispering Greens housing development. Construction and partnership opportunities still exist for this project.

By the time it is completed, Blackspring Ridge will act as a major economic boon to Vulcan County. With its connectedness to some of the highest bandwidth internet infrastructure in rural Canada, low cost of living, beautiful natural scenery, recreational development potential, proximity to two large urban centres, and great schools, the Vulcan County area is set for an unprecedented era of prosperity. Interested parties are invited to contact the Vulcan Business Development Society for any additional information on how to capitalize on the burgeoning growth of this beautiful area.

Jonathan Allan can be reached at (403) 485-4100 ext 148 or by email at jonathan@vulcanbusiness.ca

Alberta reports \$196 billion in major projects

Canadian Design and Construction Report staff writer

Alberta's Enterprise and Advanced Education ministry has published an Inventory of Major Projects (IMAP), outlining 765 projects throughout the province valued at more than \$196 billion.

Many of the largest projects are within the oil sands area, but there are a diversity of other initiatives, including \$56.4 billion under construction and \$24.57 billion under construction.

The government says the inventory is designed to "assist firms in identifying potential supply opportunities, as well as informing Albertans on the status of projects in the province valued at \$5 million or greater.

See the documentation online at <http://albertacanada.com/business/statistics/inventory-of-major-projects.aspx>

Status Summary Report

Status	Number of Projects	Total Value of Projects
Announced	117	\$24,573.6 Million
Completed	3	\$38.4 Million
Nearing Completion	44	\$1,694.6 Million
On Hold	10	\$9,600 Million
Proposed	350	\$104,086.1 Million
Under Construction	241	\$56,480.6 Million
Total	765	\$196,473.3 Million

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ROOFTech 2013 succeeds with expanded exhibit area and architect's educational program

Canadian Design and Construction Report staff writer

ROOFTech 2013, the Canadian Roofing Exposition, held in April at the Toronto International Centre, provided a special opportunity for roofing contractors, suppliers and manufacturers to congregate, learn, do business and build relationships. Changes implemented this year resulted in the highest attendance ever and the show sold out three times over in exhibit space.

Canadian Roofing Contractors' Association (CRCA) executive director Bob Brunet says the show, held every two years, rotates between Toronto, Vancouver and Montreal and that this year, for the first time, a venue outside the downtown core was chosen.

"This new site had better airport access, free parking, which our attendees appreciated, and for the first time, an outdoor exhibit space, which people loved," he said. "The venue was also larger than we've ever had so we were able to keep pushing the curtain wall back, expanding the space as more and more booths were added. We did our best to accommodate everyone who wanted a booth and we had more than 2,600 people attend which is our highest number to date."

continued on page 30



Tremco Roofing and Building Maintenance leads the way in promotion and delivery of green roof applications

Canadian Design and Construction Report special feature

Tremco Roofing and Building Maintenance's largest world-wide manufacturing facility has been in operation in Toronto since 1930 and is considered Canada's leader in the promotion and delivery of green roof applications.

Paul Sheehy, vice-president, sales for North America – Tremco Canada, says Tremco innovates, not only solving problems but improving performance and energy savings. "We were the first company to introduce cold process roofing solutions to the market, reducing the inherent fire risks associated with roofing and have been involved in hundreds of millions of square feet of successful applications," he said. "We also provide innovative cool roofing products that perform well above standard 'single-ply' solutions."

"More importantly, our success is supported by a unique corporate culture. In the past 16 years only one employee from our roofing team has left to seek, what they perceived, as a better opportunity outside of Tremco. I am confident that very few companies could match such an enviable record. Our people are dedicated to Tremco and our customers."

"Our role and impact in the marketplace is clear," Sheehy said. "We've been specified on more re-roofing projects at Ontario hospitals, colleges, school boards and universities than any other manufacturer and we are the go-to manufacturer when long term solutions, rather than the lowest installed cost, are the deciding factor."

Demand for green roofs is growing. Tremco Roofing has been used for one million sq. ft. of vegetative roofing throughout Ontario.

Sheehy says at least part of the company's success is due to the wide acceptance of Tremco's quality within the design community.

"We have an unparalleled history and success with sustainable roofing and cold-process systems and products," he said. "We have also been providing educational seminars for environmental excellence for fifteen years and sponsor the University of Toronto Daniel's School of Architecture's Building Ecology, Science and Technology (BEST) lecture series, which will soon begin its fifth year." Last year, BEST lectures attracted almost 800 guests, and the Ontario Association of Architects issued 502 certificates for two core learning credits.



Tremco's commitment to education extends beyond lectures and seminars. "We are extremely proud of our lead sponsorship of the University of Toronto's Green Roof Innovations Testing Laboratory (GritLab) which will, we are confident, have a profound impact on the future design of green roofing, once all of the research is completed and published," Sheehy says.

"The GritLab provides a platform for multi-disciplinary research and education by linking the fields of landscape architecture, biology, hydrology, building science and media design."

Tremco Roofing is actively involved with many charitable and environmental organizations, including Toronto's Centre for Addiction and Mental Health (CAMH), which has received all funds raised from the company's annual golf tournament. "Along with our co-sponsors we have donated more than \$500,000 to CAMH to date and we were deeply honoured when CAMH, this year, named their new Child Ambulatory Centre the Tremco Roofing Child Ambulatory Centre" Sheehy says.

The company's 400,000 plus sq. ft. Toronto manufacturing facility diverts 100 per cent of its non-hazardous waste from landfill. It also has three cooling towers to re-circulate manufacturing water processes, reducing potable water consumption from 91 million gallons to 19 million gallons per year, while saving 711,000 kWh of energy in 2010.

continued on page 29

Tremco

Continued from page 28

"Our commitment to the environment and to practicing what we preach doesn't stop there," Sheehy said. "Our corporate head office was retrofitted in 2011, taking a 40 year old building and turning it into a LEED Gold facility with only two per cent of the , recycling 98% of all original materials."

Tremco Roofing and Building Maintenance is part of the RPM Building Solution Group (RPM BSG) and "together are global sustainability leaders and who, as part of its corporate mandate, must consider people, planet and prosperity in all our business decisions," Sheehy said.

For more information, visit www.tremcoroofing.com



Rooftech

Continued from page 28

Brunet said several architects attended the show's continuing education program. Two seminars qualified for Ontario Association of Architects (OAA) credits and the Realities of Reroofing a Vegetated Roof seminar also qualified for Green Building Certification Institute (GBCI) credits.

ROOFtech committee chair Peter Serino says feedback has been incredibly positive and enthusiastic and he thanks everyone – attendees, exhibitors, presenters and organizers – for making the event such a success.

He said the Toronto experience may have planted a seed for future organizers to continue with a venue outside the core. "The outdoor demonstrations were such a hit and even though the weather didn't cooperate as well on day two, they were so well received and talked about, this is certainly something we'll want to see continue."

Brunet says ROOFtech keeps the industry strong. "Roofing has become less labour-oriented and on the commercial side, is more technology influenced," he said.

"One of the fastest growing aspects is green technologies. Shows like this give attendees the information and visual demonstrations they need to succeed and once again these elements were very popular."



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Roque Roofing: Service and expertise with a family spirit Hamilton-area business plans to expand geographic coverage elsewhere in Canada

CaDCR staff writer

Family-owned Roque Roofing has grown from a one-man operation to a 10-crew business focusing on new installation and roofing service in southern Ontario.

Operations director Danny Roque says his father Manuel established the Hamilton, Ontario business in 1980. Manuel Roque initially started with windows and doors, but soon focused on roofing.

"Dad moved into shingles and then flat roofs," he said. Since then we've partnered with schools across the province, work with retailers and other commercial organizations, and have added bio and green roofs to our areas of expertise."

The company works from Chatham to Kingston.

Roque says suppliers like Soprema have recognized the expertise of the company's eight installation crews



and two service crews. "We build our crew foremen from within the company to ensure they are trained in the way we do business," he said. "One of our foremen has been with us 30 years and we have many long-term clients. Our ability to offer that kind of knowledge and experience is one of the reasons."

Roque says the company is evolving more into the service side of the business and he hopes to continue to grow its geographic coverage to other parts of Canada.

"We're not your typical company because we're a family business," says Roque. "My dad and I are in the field and my sisters run the office so whichever part of the business you're dealing with, you're dealing with family."


Roque says that family touch includes working with clients to ensure products both meet their needs and their budgets. "We're going to recommend systems to our clients that will be effective and affordable for them now and including maintenance down the road."

The family also is committed to the community. "We donate to local schools, the church, the Red Cross. Really, any time we are asked to help we do what we can," he says.

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Welcome!

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ATLANTIC CANADA

By Marilyn Munroe
Atlantic Construction News publisher

Welcome to Atlantic Canada Construction News.

As a lifelong Maritimer, I have always been amazed at the talent, ingenuity and perseverance of our businesses and its workforce. The construction industry is an excellent example of hard work and dedication to a job well done.

Early on in my working years I learned important, essential lessons about business, commerce, marketing and advertising, and the challenges facing entrepreneurs and business owners and managers today. All in the 'Maritime way'— I throw myself into my work, encountering obstacles and hurdles, overcoming them, and then coming face-to-face with the very same challenges I help my clients overcome.

Through several job opportunities, my work has taken me from Yarmouth to Sydney, Saint John to

Moncton, Charlottetown to Summerside and all points in between. It was a privilege to have the opportunity to see all that Eastern Canada has to offer. The landscape varies from the rugged coastline to the agricultural richness of the inlands and valleys. There are also the laid back rural lifestyles that are a contrast to the bustling cities that are only a short drive away.

The construction industry is deep within my family's roots as my grandfather left Nova Scotia to work in the booming steel industry in New York City in the 1920's. I married into a family that can master building their own homes from foundation to rooftop. Now my daughter is in the steel industry and I am pretty handy with the hammer myself. We love construction!

I am very proud to be part of the new Atlantic Canada Construction News. This is an exciting time in the Maritime Provinces. We are building everything from new schools and uni-



versities, energy projects, public use building such as libraries and community centres, road and infrastructure, hotels and convention centres just to mention a few. Within these new structures we are not only drawing from the talents of local designers and architects but also from the builders that are using the newest trends in building technologies.

In the coming year, I am looking forward to working with many of the construction industry leaders as well as all the supporting businesses that make Atlantic Canada a vibrant hub of construction news and information.

Nova Scotia manufacturer celebrates 25th anniversary

PolyTech Products Ltd. builds windows to withstand costal conditions



Canadian Design and Construction Report special feature

PolyTech Products Ltd.'s European style and heavy-duty design is perfectly suited for costal construction challenges. The business is celebrating its 25th anniversary this summer.

The company's windows are manufactured in Baddeck and sold through a local retail outlet, dealer networks and a Burnside, NS sales office. Regional sales manager Reid Campbell says although the company serves all of Canada, many people choose PolyTech's products in more extreme coastal climates. "We use a heavier vinyl, steel reinforcement in our frames, and even our smaller windows have 4 mm. glass," he said. "Our hardware is multi-locking on all four sides so produces a tighter, more secure window."

Campbell says PolyTech windows carry the highest CSA ratings – C5 for wind, A3 for air tightness, and B7 for water infiltration.

Campbell says about 95 per cent of the company's work is custom-built, with orders from retail clients, builders and architects. The company also sells some stock items. "We do standard garden doors with tempered safety glass and basement windows which, because they open inward under our tilt and turn design, meet fire code regulations."

Most business arises from word-of-mouth recommendations.

Campbell says the tilt and turn, European style design – windows open in at the top for ventilation (tilt) or at the side like a door (turn) - makes a big difference in coastal environments.

With a lifetime warranty on vinyl, and 20 years on both glass and hardware, quality and in-house control are important aspects of PolyTech's manufacturing. "We produce our own extruded profiles in house for better control and so if modifications are required, we can handle them on our own."

The company is offering special pricing and is considering other special events for its 25th anniversary later this summer.

For more information on PolyTech Products Ltd., visit polytechproducts.com.

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Guildfords Group of Companies

Oldest North American insulation contractor evolves to offer diversity of construction industry services



Canadian Design and Construction Report special feature

Guildfords, North America's oldest insulation contractor, opened as a family-owned business in 1906. The business grew and expanded through decades of history and change with additional services and resources.

While the now-diversified enterprise evolved to become an Atlantic-Canada-based partnership in 2000, the Guildfords Group of Companies continues to operate within the framework of family and client-commitment. It is preparing to expand its operations to new and growing markets.

"Guildfords has a long and proud history in Maritime Canada," said business development manager Greg Brown. "Over the years we have added different specialty niches to increase our range of services and now what makes sense is to take our expertise into new markets. Our goal is to continue to grow and diversify."

With offices in St. John's, Sydney, Halifax, Port Hawkesbury area, Moncton and Saint John, Guildfords has a strong Atlantic presence but Brown says the company is already doing work in other Canadian markets and will focus more energy on bidding on projects on a national and international basis.

Brown says with a work force of 200 employees, Guildfords is well positioned for future growth, but in its own way. "We are lucky to have good people working with us, people who know our way of doing business," he said. "We have very little turnover in our staff. We have employees who have been with the company more than 40 years and several more who have been with us for more than 25 years. That means there is a strong sense of history in the company, and a strong sense of family that has been here since the beginning."

Besides common ownership, Brown says a commonality to all of the Guildfords Group's companies is quality and a commitment to safety and customer service.

The companies include:

Guildfords

North America's oldest and Atlantic Canada's largest insulation contractor provides thermal, fire and acoustical insulation services to the commercial, marine and off-shore sectors of Atlantic Canada.

Guild Contracting Specialists

Guild Contracting Specialists provides services including asbestos and lead abatement, mould and fungicidal remediation, firestopping and penetration seals, structural steel fireproofing, spray-applied polyurethane foam and special coatings applications.

Dover Insulation Contractors

Focused in New Brunswick, Dover Insulation Contractors and Dover Specialties provide insulation contracting and asbestos abatement, core drilling, fire stopping, spray applied fireproofing, and polyurethane foam services, and infectious control management services in New Brunswick.

Atlantic Flushing and Testing Inc.

Atlantic Flushing specializes in pressure testing, cleaning and flushing of piping systems in the commercial, industrial, marine and offshore sectors to improve performance and maintain safety and cleanliness for systems. Other services include alongside ship repair and structural steel fabrication.

Eastern Restoration Services Inc.

Eastern Restoration Services Inc. is a full-service restoration, renovation and specialized construction enterprise providing high-quality craftsmanship, project management, coordination and emergency response to commercial, industrial and residential clients in Atlantic Canada. Services include reconstruction, environmental remediation and renovation services through a network of locations in the Annapolis Valley, Eastern Shore and Dartmouth areas of Nova Scotia as well as Moncton, New Brunswick.



Scotia Sheet Metal Inc.

Scotia Sheet Metal Inc. provides structural steel erection, sheet metal application and metal building erection and repair services throughout Maritime Canada. Offices are located in Dartmouth, NS, the Port Hawkesbury area and Saint John, NB.

Shelburne Diesel Supplies and Services Ltd.

Shelburne Diesel Supplies and Services Ltd. is a full-service, marine-oriented diesel repair and fabrication business providing a wide range of mechanical, hydraulic and electrical repair services for the marine diesel market and other diesel-related technical support services to industrial, utility and other market segments.

MSM Construction Services Ltd.

MSM Construction Services Ltd. provides steel building erection services, sheet metal application, including building cladding and roofing systems, composite panel installation, insulation and other related services. Serving markets primarily in Northern and Western Canada, the company has the capability and resources to consider major projects on an international basis.

Metro Burner Services

Metro Burner Services provides service and installation of oil heating systems, natural gas appliance instal-

lation, service and conversion, plumbing and combustion analysis to residential and commercial clients through 24 hour service.

"Through each and every one of our companies, we are known for our quality workmanship and we deliver our services with a safety-conscious, 'best practice' approach to every project we undertake," Brown said. "We allow our long track record of success to speak for itself."

For more information about the Guildfords Group, visit guildfordsgroup.com.



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Transformed Nova Scotia Power headquarters achieves Atlantic Canada's first LEED Platinum certification

\$54.3 million Halifax project reconnects Halifax's waterfront to downtown



Canadian Design and Construction Report special feature

An under-utilized power generating plant constructed in the 1940's has been transformed into Atlantic Canada's first LEED Platinum facility, reflecting the building's history. The project will reconnect Halifax's downtown to the waterfront and will serve as Nova Scotia Power's (NSPI) new corporate headquarters.

Partner with WZMH Architects Carl Blanchaer says the vision for the \$53.4 million building came during the initial bidding phase. "Nova Scotia Power was committed to a highly sustainable vision and we were able to come up with a design that achieved that, but also made a civic contribution to the city and contributed in a positive way to greater collaboration and staff interaction," he said. "We've already heard from the user that this goal has been achieved."



The 16,400 sq. m. corporate office is home to more than 600 staff.

Originally constructed of steel and concrete and resembling something like a bunker, the building had created a barrier between the city and the waterfront. Part of the idea for a civic contribution included opening up the space to renew the connection. "We added a 14 metre, six-storey atrium which acts as the heart of the building, bringing light and airiness to the space, provides a gathering place for staff, and also provides a gateway between the city and the water," explains Blanchaer.

The building has been designed to capture as much natural light as possible. A galleria six metres wide runs the length of the building, varying in height from two to five storeys, and skylights bring in even more light.

"We were able to keep several key elements of the original building to maintain a memory of what had been there," Blanchaer said. "One of these is the wonderful steel structure that is visible in the atrium and the other

is the original chimneys. We used the base of these to install skylights so they gain added function but the shape and essence of what they were originally remains."

WZMH principal Harrison Chan explains some of the other elements of the new design, which helped the building achieve its LEED Platinum certification.

"The initial design strategy from both an aesthetic and sustainability approach was to maintain the original interior steel frame structure and exterior concrete shell as much as possible," he said. "In order to maximize daylight into the building the exterior concrete walls were cut strategically to create windows on all elevations. In addition, we implemented simple but effective measures such as reflective white roofing, daylight sensors, raised flooring in the office for flexibility of function and layout, polished concrete floors, a minimal but sustainable material palette (steel, glass, and wood), and used some unique systems to achieve high energy efficiency."

Among these is a sea water cooling system, drawing





water from pipes deep in the adjacent waterway, and a chilled beam technology, originally used in Europe, integrated here with modern-day heat exchangers. This innovation “uses water passing through small pipes carrying greater capacity to cool the space via induction units located throughout the ceiling,” Chan said. “It is far more efficient and quieter than any in-ceiling fan system.”

“There is also rainwater collection and recycling for use in the building. Design estimates have the building achieving substantial energy and water savings, and

NSPI is in the process of evaluating the building’s performance.”

The building has already been honoured by the Canadian Green Building Council as the first Atlantic Canada building to receive LEED Platinum certification. It has also been recognized with the Lieutenant Governor’s Award for Excellence in Engineering, and from the Association of Registered Interior Designers of Ontario (ARIDO), Awards of Merit in two categories: Restoration and Adaptive Reuse, and Restoration and Adaptive Reuse – Sustainable.



Congratulations to NSPI on Atlantic Canada’s first LEED Platinum Certification!

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Our Atlantic office is located in Halifax, Nova Scotia with various offices across Canada serving Ontario and West

CFMS employs a team of engineers and technicians culminating many years of experience with the construction process. Whether its Total Building Commissioning, Project or Facilities Management, we select a team for each project who can deliver.

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KUBE Solutions provides cold-temperature capacity heat pumps for NSP headquarters

CaDCR special feature

The KUBE team has manufactured heat pumps for the geothermal and HVAC industries since 1995. The company's unique designs have been applied in hockey rinks, curling arenas, schools, office buildings and thermal storage facilities.

This cold-temperature concrete chilling capacity has resulted in a perfect match for the new Nova Scotia Power (NSP) headquarters, where sea water is the key source.

"NSP sought us out for the low temperature capability of our product," said Jason Pillipow, KUBE's engineering director. "In the winter, the sea water they're drawing in will be below freezing and most heat pumps aren't designed to work efficiently at low temperatures."

Pillipow said KUBE worked with the consultants creating the building systems design to provide education on limits and guidelines. KUBE also provided the basic specs to maximize the design. "This is something not many people have experience with so our input was important to supporting a design that was functional and efficient."

The project has been designed for worst-case situations. Pillipow says the system is running better than expected. "It's important to us to follow projects through their evolution, from the first design through to completion and after to ensure we have satisfied the customer."

KUBE is developing a reputation for its expertise in cutting-edge projects, including a unique double sheet arena in Fredericton, where surplus energy from ice making is being sold to an adjacent tennis club. Pillipow says the federal government is studying the model and its possible adaptation for other circumstances.



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Digicon Building Control Solutions Ltd. co-ordinates NSP building automation systems

CaDCR special feature

Digicon Building Control Solutions Ltd. has designed, built, installed and is managing the building automation systems for Nova Scotia Power's (NSP) new headquarters.

General manager Les Beal says Digicon, an Atlantic-Canada building controls systems specialist since 1990, has sought to enhance the performance and efficiency of the HVAC and electrical systems to ensure LEED certification and optimum comfort to the building occupants. When working with the new technologies there are often additional challenges in getting all of the systems co-ordinated properly, he said. "The chilled beam system the building uses is new to us and there were some challenges in optimizing the large sea water heat pumps but these have all been seasonally adjusted since NSP took occupancy of the building and everything is working as it should."

This kind of calibration is what Beal calls "true commissioning" and just one of the steps Digicon takes to ensure client satisfaction.

"I have to give credit to M&R Engineering," he said. "It was clear they did their homework in the selection of equipment for this design. It was all very precise and the testing data we are seeing now supports the design model's accuracy."

Beal also credits NSP for its willingness to plan for the long-term. "In this case the team is committed to sustainability, not just in the design, but through investing in the apparatus that will capture and record the results. It is satisfying to see the confirmation of this projects' success through the data."

CFMS provides commissioning expertise in adapting concepts and designs to real-world functions

CaDCR special feature

CFMS Consulting Inc.'s experienced engineers and technicians have provided building commissioning, project and facilities management for the past 20 years. Subsidiary CFMS Atlantic Inc. commissioned the new Nova Scotia Power (NSPI) headquarters in Halifax

President Wade Tucker and vice-president Morris Gelvan explain CFMS's role as reviewing the owner's intent and then examining engineering designs to ensure they align. At project completion, systems are tested to ensure they perform to expectations.

"In virtually every instance, even when the design basics are there, minor tweaks and adjustments are required to ensure the system is performing the best it can," Tucker said. "Our final job is to look at the installation and performance and work with engineers on this fine tuning."

Two unique systems on the NSPI project – the chilled beam system and use of sea water for heating and cooling – resulted in special commissioning challenges. In preparation, the engineering team visited Chicago to see a chilled beam system in operation.

"This is the first such system in Eastern Canada so it was important to see what it could do. Now that the success of it has been proven, we're actually involved in another project using a similar model," he says.

Tucker says CFMS engineers add value through their experience in adapting concepts and designs to real world function.

Some of the company's other recent projects include the 270,000 sq. ft. RCMP Dartmouth headquarters designed to LEED Gold specifications and the 60,000 sq. ft. Corner Brook City Hall, designed to LEED Silver.

Raising funds for IWK Health Centre

Construction Association of Nova Scotia (CANS)'s Developing Executives Group takes the lead in fundraising at annual De-Icer networking event



Canadian Design and Construction Report special feature

The Construction Association of Nova Scotia (CANS) is rooted in the history of construction in eastern Canada, beginning in 1862, when the Halifax Builder's Society and committees formed to discuss wages and working conditions. The association evolved to become CANS in 1969, and now represents more than 760 companies.

One of its many committees is the Developing Executives Group, formed in 2001 to encourage participation of members aged 35 years and under. The group has more than 600 members who participate in four special networking events each year, including a golf tournament and curling bonspiel. The developing executives' members also participate in regular CANS events, sometimes with their own focus.

The CANS De-Icer is the association's largest networking event annually and hosts nearly 1,800 people. This year's event was held April 12 at the Cunard Centre

and included a lobster/roast beef dinner, mussel bar, door prizes and a 50/50 draw organized by the Developing Executives Group to raise funds for the IWK Health Centre Foundation. The draw raised \$1,975. The group will present the cheque at the Annual IWK Telethon in early June and has plans to continue fundraising in 2013 - 14.

The IWK Health Centre has evolved through its 100 year history but has always stood at the forefront of patient-centered care in the region, today focusing on neonatal and pediatric intensive care, women's health and mental health services for children and youth.

Funds raised by the IWK Foundation support world-renowned researchers and the purchase of modernized technology and equipment. Together with donors, the IWK Foundation supported more than 16,000 inpatient visits and nearly 300,000 outpatient and emergency room visits in one year.



Downtown Halifax TD Centre renovation and expansion creates city's largest Class A space



Unique challenges for architect, contractor in combining heritage renovation and modern development

Canadian Design and Construction Report special feature

The downtown Halifax TD Centre's renovation and expansion is a unique example of heritage and modern building renovation/redevelopment in a congested downtown area.

TD Centre owner TDB Halifax Holdings Ltd. has never disclosed the exact project cost, but a company representative says the budget is larger than the \$25 million cost announced for the new Waterside Centre.

The project, which has been designed to achieve LEED Gold (core and shell) certification, will double floor space from 100,000 to 200,000 sq. ft. "When complete, the TD Centre Halifax will be the largest and newest Class A smart building in Halifax," the owner's representative said.

The project also incorporates a three-story addition to the 18-story office tower and incorporates an adjacent heritage facade.

"We're stripping back the original building to its concrete frame, adding new mechanical, electrical and communication systems, and creating a new and efficient

envelope," says Eugene Pieczonka, principal with Lydon Lynch Architects.

Design team members tried to find relevant examples to understand how similar challenges were resolved, but in the end had to use their own ingenuity as nothing comparable could be found, Pieczonka said.

"The project is located in the financial district of downtown Halifax so we have limited access and space. We're working with a heritage façade from the 19th century, an office tower from the 20th century and a comprehensive addition and renovation for the 21st century, all while allowing existing tenants to remain in the building."

He said construction manager EllisDon innovated with a strategy to take over a single lane along one of three streets facing the building for a delivery and staging area. This has reduced traffic problems, but also means everything must be delivered on a just-in-time schedule.

"The other significant co-ordination effort involves the current tenants," Pieczonka said. "We are clearing three to four floors at a time, moving tenants into temporary swing spaces so construction can move up the building and then moving them into new permanent spaces."





He said TD, who are the prime tenant, along with other tenants, have been helpful, co-operative and understanding about the inconveniences during the renovation.

The project incorporates three distinct architectural eras.

"The owner of the building purchased adjacent lots, which allowed for the expansion," Pieczonka said. "This included a heritage building, which we needed to incorporate into the design. As well, the original building, due

to its modest floor plate, has a slender proportion with an elegance we wanted to maintain within the enlarged tower design."

This created a challenge – to design the project so that the new, old and older appear to be one.

"The heritage façade informs a new infill façade as a contemporary interpretation of the original," the architect said. "The enlarged office tower is fully wrapped in a new unitized curtain-wall system with two distinct patterns to create visual interest while recreating the elegant proportions of the original tower."

Local trades are working on the project, but the curtain-wall was brought in from Ontario due to the high degree of specialization and performance the design requires.

Pieczonka says the much-larger building will consume no more energy than the current structure. It will also include a green roof and photo voltaic panels on the canopy and sun shades.

He commended the owner for their approach to the project.

"Within our firm we say great architecture is the result of great clients and that is certainly true here," he said. "They have been very supportive and as a result, we are creating a beautiful landmark for Halifax." The project is expected to be completed in the fall of 2014.

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CKG Group installs two elevators for TD Centre Halifax project

CaDCR special feature

Independent and locally owned CKG Group is proud to be partnering with building owner TDB Halifax Holdings Ltd. and EllisDon on the TD Centre Halifax project.

General manager Don Knowles says the company has always been committed to its Canadian roots, sourcing needed materials and controls from other Canadian-based companies like JRT and Global Tardif. "Being able to partner with these companies on what is the largest elevator modernization project in Nova Scotia is really significant. As a local company and an independent, this is something we are very proud of."

The Halifax-based company, which also has an operation in Moncton, will be installing two elevators to the new portion of the building and completing the modernization work to the three existing elevators. CKG also provides logistical support during construction, co-ordinating the movement of people and materials as the project progresses.

Knowles says the company's reputation for quality work and professionalism assisted its bid on the project. CKG works throughout Atlantic Canada. "We also have a solid business relationship with Compass Realty, the TD Centre's property manager, as we have been maintaining their existing elevator portfolio over the past few years," says Knowles.

"We have some mechanics with more than 40 years of elevator experience, so they possess significant and unique skill sets when it comes to maintaining and servicing this type of equipment. These skills helped keep the existing elevators working until the time came to modernization the entire building," he adds.

Knowles says CKG Elevator is involved with a significant number of high-rise buildings in Halifax, through new construction and modernization. The TD Centre is one of the more impressive of these types of projects. "We appreciate the opportunity to be part of the team that will completely modernization one of the major buildings in the Halifax business core."



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Building permits boom to record high at \$270 million

Canadian Design and Construction Report staff writer

Construction across Saskatchewan has picked up according to the latest building permit numbers released by Statistics Canada in early May. In March 2013, building permits in the province totalled \$270 million, the highest on record for the month of March.

This was a 22.6 per cent rise from March 2012, the third highest percentage increase in the nation.

"In spite of less than ideal weather conditions, Saskatchewan's construction businesses were still able to make progress," Saskatchewan economy minister Bill Boyd said in a news release. "That says a lot about the quality of the companies and the skilled workers who make up one of our economy's most important sectors."

Non-residential building permits were up by 32.7 per cent on a year-over-year basis, while residential permits were up 14.5 per cent over the same period.

On a month-over-month basis, building permits were up by 26.6 per cent between February 2013 and March 2013 on a seasonally adjusted basis.

"Saskatchewan's economy is making gains at a steady pace," Boyd said. "It's the growth in residential and non-residential projects that's making the difference, and that's creating jobs and impacting overall economic growth."

\$95 million hospital for Moose Jaw

Construction has started on a new \$95 million hospital for Moose Jaw. The project is expected to be completed by December, 2014.

Lean methodology is fully integrated into the design, functioning and culture of the facility, the provincial government says in a news release. "The design and care model of the new regional hospital will allow health care services to come to patients in single rooms, rather than requiring patients to travel throughout the facility. This will result in more convenient services for patients, operational efficiencies and improvements in safety."

In conjunction with the Lean methodology, the hospital planning phase also incorporated demographic population modelling and forecasting to ensure the facility will meet the needs of a growing city and surrounding area in the years to come, the news release said.

The provincial government is contributing 80 per cent toward the total project cost. Local funding covers the remaining 20 per cent. The Moose Jaw Health Foundation will work in partnership with the health region, the Ministry of Health, and health care professionals to equip and furnish the new regional hospital.



Devenney Group Architects, Boldt Company, Graham Construction, Stantec Architecture Ltd., Stantec Consulting Ltd. along with Black & McDonald are working together, start to finish on the new facility.

Saskatchewan Merit contractors recognize award winners

The Merit Contractors Association of Saskatchewan recently recognized several members for excellence at its annual awards program.

Winners included:

Field Employee of the Year: Cody Diggins, Bexson Construction, Lloydminster

Project Manager of the Year: Chad Leverick, Alliance Energy, Saskatoon

Worksite Innovation Award: Brent Schaan, Peter Crushing & Hauling, Whitewood; Dennis Turcotte, Allan Construction, Saskatoon

Community Builder Award: Ronald McDonald House Charity, Saskatoon

Outstanding Site Supervisor Award: Sheldon Ponto, Bexson Construction, Lloydminster

Outstanding Office Employee Award: Teresa D'Arcy, Alliance Energy, Regina

Trade Excellence Award: Rick Bond, Quorex Construction, Saskatoon

Leadership and Mentoring Award: Ian Knibbs, Coram Construction, Regina

MERIT Employer of the Year: Coram Construction, Regina

Wood WORKS! British Columbia Wood Design Awards

Photos courtesy: Wood WORKS! BC

Winning architects, structural engineers and project teams enthrall and inspire at 2013 BC Wood Design Awards

Canadian Design and Construction Report special feature

Coastal BC swept the 2013 Wood WORKS! BC Wood Design Awards, with projects of the winning architects and structural engineers located in and around Vancouver and the Gulf Islands, including three University of BC (UBC) campus projects.

More than 350 design and building professionals, including architects, engineers, project teams, industry sponsors and guests gathered in March to honour the nominees and winners of the 2013 Wood WORKS! BC Wood Design Awards. The ninth annual awards evening in Vancouver recognized leadership and innovation in wood use while being an opportunity to publicly salute and celebrate continued excellence in the building and design community, a WoodWORKS! BC news release said.

There were 98 nominations in 12 categories for the 2013 awards from all over the province, as well as some national and international submissions, including one by a BC architect for a project located in Tajikistan and another in the Yukon.

"We are truly amazed by both the structural and architectural uses of wood; we are seeing innovation beyond anything we could have imagined a decade ago," said Wood WORKS! BC executive director Mary Tracey. "Builders and designers have always embraced wood for its beauty and sustainability, and now with technological advances in wood products, they are recognizing it as a building material that offers them opportunities to create distinctive and expressive projects because of its remarkable versatility, flexibility and cost-effectiveness. The project teams are exploring wood's





potential and advancing the science and art of wood design and building which are the goals of our awards program.”

The panel of five judges included Henry Hawthorn, Architect (retired); Tom Guenther, chair - civil engineering department, Okanagan College; Douglas MacLeod, chair - RAIC Centre for Architecture, Athabasca University; Thomas Tannert, associate chair - wood building design and construction, UBC; and Dwight Yochim, executive director - Truck Loggers Association.

The Wood Champion Award was presented to Vancouver-based structural consulting engineering firm Equilibrium Consulting. Its principals, Eric Karsh and Robert Malczyk were chosen for their work on such projects as the City of North Vancouver civic centre renovation and Prince George Airport. Founded in 1998, this firm has been successfully involved in more than 800 projects world-wide, including many award-winning designs.

The BC architect who nominated Equilibrium wrote: “As architects that are fascinated by structure, we ask a lot of them in pushing the limits of wood technology. They always deliver for us and have helped us create

some very unique technical solutions. Their ability to resource solutions from Europe and adapt them to Canada has been exemplary for improving the wood design industry as a whole.”

Equilibrium co-founder and principal Eric Karsh also received the Engineer Award for his commercial, residential and institutional projects. His showcase project, North Vancouver’s civic centre renovation, “was deemed to demonstrate a highly-innovative use of wood and the jury appreciated his ability to push the envelope on the design,” the BC WOODWorks! news release said.

“For many years, this engineer has chosen not to take the easy route, and has encouraged and supported advances in wood design,” his award nomination said. As a leader in the field of timber engineering, Eric Karsh is the engineer of record for numerous award-winning projects, including the Earth Sciences Building at UBC and North Carolina’s Raleigh-Durham Airport.

In addition to finding solutions for large scale commercial projects, Karsh has been actively promoting solid wood construction as a viable alternative to con-

crete, and as an answer to going taller with wood, the news release said "He is also co-author of the widely publicized 'Tall Wood' report (co-authored with BC architect Michael Green, principal at Michael Green Architecture, formerly principal at mgb Architecture and Design), which introduces a structural concept to build timber high-rises of 30 storeys or more, even in high seismic zones such as Vancouver.

Meanwhile, Kimberley Smith and Bo Helliwell of Helliwell + Smith Blue Sky Architecture, West Vancouver, received the Architect Award.

"The principals of this firm acknowledge it has taken decades of practice to understand the economy and versatility of both conventional wood frame, and timber post and beam construction," the WOOD Works! news release said. "The appreciation for wood is evident in their designs which encompass residential, multi-family and commercial projects. They continue to experiment with exposed timber frame structures and new wood products, as well as traditional wood products - in-turn developing an architecture that is expressive, economical and lasting. The ingenious use of organic, flowing spaces in their designs suggest that wood is a malleable material, not confined to straight lines and right angles. Their award-winning work has been widely published and exhibited locally and internationally."

Vancouver-based Peter Busby and Jim Huffman of Perkins + Will received the Wood Innovation award for the VanDusen Botanical Garden Visitor Centre. "This remarkable Vancouver project creates a harmonious balance between architecture and landscape, and features extensive wood products, including a complex panelized roof structure," the news release says. "With wood as the primary building material, the wood provided an added environmental benefit - it sequesters enough carbon for the project to achieve carbon neutrality. The jury applauded the structural expression of the roof, calling it highly-dramatic and very innovative. It is the first building in Canada to register for the Living Building Challenge, the most stringent measurement of sustainability in the built environment.

WOOD Works! says in its announcement that the Green Building Award winner demonstrates a significant contribution to improving the overall environmental performance of any building. "The 2013 award went to Vancouver-based Peter Busby of Perkins + Will for his project, the Centre for Interactive Research on Sustainability (CIRS) at UBC in Vancouver," the release says. "The jury noted that the elegant and extensive use of wood resulted in an impressive sustainable building. The project is designed to be the most sustainable building in North America. More than a building, CIRS is a research tool that demonstrates the possibilities in sustainable design and construction,

serving as a catalyst for change."

Other awards include:

- **Residential Wood Design:** Kimberley Smith, Helliwell + Smith Blue Sky Architecture - Solar Crest, Sidney Island, BC;
- **Multi-Unit Residential Wood Design:** Oliver Lang, LWPAC Lang Wilson Practice in Architecture Culture - Monad, Vancouver, BC;
- **Commercial Wood Design:** McFarland Marceau Architects Ltd. - Bioenergy Research and Demonstration Facility, Vancouver, BC;
- **Interior Beauty Design:** Andreas Kaminski, aka architecture + design inc. - Queen of Peace Monastery, Squamish Valley, BC
- **Institutional Wood Design - Small:** Graham D. Fligg, Merrick Architecture - Borowski Sakumoto Fligg Ltd. - Klahoose First Nation New Relationship Centre, Cortes Island, BC;
- **Institutional Wood Design - Large:** Jana Foit, Perkins + Will - Earth Sciences Building, Vancouver, BC; and
- **Western Red Cedar:** Pam Chilton, Zimba Design - The Urban Longhouse, North Vancouver, BC.

Honourable mentions were presented to two noteworthy projects and their designer/project team: Kinsol Trestle Rehabilitation Project, Cowichan Valley, BC, (Gord Macdonald, Macdonald & Lawrence Timber Frame Ltd.), which is one of the largest wood structures in the world, and in the words of the jury, truly outstanding from an engineering perspective; and the Pallas Residence in Revelstoke, BC, (Keith Starling, Take To Heart), which was noted as "an exemplary example of a truly green building," the WOOD Works! News release said. "Constructed of solid-wood-wall panels and assembled with wood screws, the result is a highly-efficient building with little impact to the environment."

"Wood WORKS! BC congratulates both nominees and winners for their achievements and we thank them for enthralling and inspiring us with their distinguished projects," Tracey said.

Wood WORKS! is a national industry-led initiative of the Canadian Wood Council, with a goal to support innovation and provide leadership on the use of wood and wood products. Through workshops, seminars and case studies, Wood WORKS! BC provides education, training and technical expertise to building and design professionals involved with commercial, institutional and industrial construction projects throughout the province.

WOOD CHAMPION

Equilibrium Consulting, Vancouver

Equilibrium Consulting has influenced a large portfolio of wood projects with a wide range of BC architects. The nomination noted that the firm has also made a commitment to innovative design that few in the world can compete with.

The nominator, an architect, noted that Equilibrium always delivers and has helped create some very unique technical solutions. Noteworthy projects include City of North Vancouver Civic Centre renovation; Prince George Airport and Ronald McDonald House of BC (under construction).

Work like City of North Vancouver Civic Centre renovation introduces a new system of panelized roof and floor construction, and work on the case for tall wood building are examples where Equilibrium's work has changed the culture of wood forever, according to the nomination.



ENGINEER

Eric Karsh, Equilibrium Consulting, Vancouver

Eric Karsh is the co-founder and principal of one of BC's leading structural engineering consulting firms, Equilibrium Consulting, and he is recognized as a leader in the field of timber engineering. The 2013 Engineer Award recipient is the engineer of record for numerous award-winning projects, including the Earth Sciences Building at UBC, the Raleigh Durham Airport and the Prince George Airport.

In addition to finding solutions for large scale commercial projects, he has been actively promoting solid wood construction as a viable alternative to concrete, and as an answer to going taller with wood.

He is also co-author of the widely publicized "Tall Wood" report, which introduces a structural concept to build timber high-rises of 30 storeys or more, even in high seismic zones such as Vancouver. "The Tall Wood report broke ground beyond any other engineer and architect's work in the world to date and has since transformed the conversation of possibility," stated the nomination.

ARCHITECT

Kimberley Smith and Bo Helliwell, Helliwell + Smith Blue Sky Architecture, West Vancouver

Helliwell and Smith - Blue Sky Architecture has used wood both as structural and finishing material in a practice that has developed over 38 years. The firm has embraced wood as a natural building material that connects buildings to the surrounding landscape. Both Kimberley Smith and Bo Helliwell have developed an organic approach to west coast modern design, blending site-specific organic forms with open flowing spaces, created from wood frame structures and surface treatments.

The firm has used wood and timber construction to meet the challenges involved in creating beautiful and economical structures in remote locations. The challenges of location and difficult terrain necessitate the use of materials that can be shipped, handled and erected by available technology. Wood construction meets these needs.



WOOD INNOVATION

**Peter Busby and Jim Huffman, Perkins+Will,
VanDusen Botanical Garden Visitor Centre, Vancouver**

The VanDusen Botanical Garden's new 1,765 sq. m. Visitor Centre is designed to create a harmonious balance between architecture and landscape, from a visual and ecological perspective. Inspired by the organic forms of a native orchid, the Visitor Centre is organized into undulating green roof 'petals' that appear to float above curving rammed earth and concrete walls.

Situated on the garden's prominent southeast corner, the dynamic single-storey structure transforms the site's entrance to heighten public awareness of the garden and the importance of nature. It houses a café, library, volunteer facilities, garden shop, offices, and flexible classroom/rental spaces.

Five types of wood were used in the project, including FSC-certified wood as the main structural element; on-site salvaged wood, reclaimed from previous structures in the garden; off-site salvaged wood for a variety of millwork items; reclaimed wood that was milled from trees cut down on site during the construction of the project for a variety of elements; and fallen wood from yew trees for the feature door handles.



GREEN BUILDING

Peter Busby, Perkins+Will, Centre for Interactive Research on Sustainability, Vancouver



Located at the University of British Columbia (UBC), the Centre for Interactive Research on Sustainability (CIRS) is designed to be the most sustainable building in North America. CIRS houses 200 researchers from private, public, and non-government organization sectors, who work together to advance innovation in sustainable technology and building practices, and to create a springboard for their widespread implementation.

The 5,675 sq. m. 'living lab' is organized into two four-storey wings, linked by an atrium, and includes academic offices, meeting rooms, 'social condenser' spaces, and a day-lit 450-seat auditorium. During the design of CIRS, both the ecological and human health impacts of the project's

building materials, as well as the visual and tactile expression of the materials, were considered along with cost, durability, and maintenance requirements. In response, wood, one of the most sustainable materials in the world, was chosen as the primary building material.

Designed to exceed LEED Platinum status and registered with the Living Building Challenge, CIRS was designed to be 'net positive' in seven different ways: Net-positive energy; structural carbon neutrality; operational carbon; net-zero water; turning passive occupants into active inhabitants; promoting health and productivity; and promoting happiness.

RESIDENTIAL WOOD DESIGN

Kimberley Smith, Helliwell + Smith Blue Sky Architecture, Solar Crest, Sidney Island

Embracing a rugged rocky ridge on a remote island in Juan de Fuca Strait, Solar Crest is a completely off-grid home and garden. In section and plan, it combines a studied geometric formality with organic and sensuous elements that merge with its surrounding landscape of rounded glaciated granite.

The building is off all energy grids and is oriented to maximize solar gain. Twenty-six solar photovoltaic panels power the home and five cisterns collect rainwater from roof surfaces for all domestic and landscape uses and for fire-fighting. The inclusion of alternative energy systems enable the home to be situated in a stunningly beautiful, remote landscape completely free of organized energy grids and dependent only on the natural cycles surrounding it.



MULTI-UNIT RESIDENTIAL WOOD DESIGN

**Oliver Lang, LWPAC Lang Wilson Practice in
Architecture Culture Monad, Vancouver**

A prototype for the sustainable METROPOLIS OF CHANGE, the Monad project has been designed and developed to serve as an urban infill prototype. It addresses the inherent contradiction of our time: The need for broad sustainability, or to endure and evolve in an ecological and meaningful way, in a world of rapid change and tremendous urban growth and transformation.

The built project is in many ways a first of its kind and demonstrates innovative spatial logics and construction systems that create highly sustainable and adaptable urban infill solutions in order to make city living a more desirable alternative to commuting and unsustainably large single family homes. The project presents innovation by creating multi-storey, prefabricated, engineered wood-frame modules and building systems for parallel construction and resource management for mixed-use residential buildings.



COMMERCIAL WOOD DESIGN

**McFarland Marceau Architects Ltd.,
Bioenergy Research and Demonstration Facility, Vancouver**

The Bioenergy Research and Demonstration Facility (BRDF) is a 1,950 sq. m. heavy timber-framed cogeneration project on the UBC Vancouver campus. In collaboration with Nexterra and General Electric, UBC commissioned this combined heat and power (CHP) plant to supply the campus grid with clean, renewable heat and power through biomass gasification. The CHP plant will produce two megawatts of electricity (enough to power 1,500 homes) and 8 per cent of the UBC base steam power load by using syngas extracted from wood chips and municipal wood trimmings. UBC greenhouse gas emissions will be reduced by 4,500

tonnes annually with 12 per cent of the campus natural gas heating demand displaced. The BRDF is the first cogeneration plant of its kind in North America that produces heat and power for a university campus. Funding partners included NRCan, the Province of BC, FP Innovations, BC Bioenergy Network and Sustainable Development Technologies Canada.



INTERIOR BEAUTY DESIGN

**Andreas Kaminski, aka architecture + design inc.,
Queen of Peace Monastery, Squamish Valley**

The use of wood, both structurally and as a finish material, provides warmth and character to the interior spaces throughout the Queen of Peace Monastery, described as a place of quiet contemplation for an order of 19 Dominican nuns located in Squamish Valley, BC. The building comprises a multitude of unique spaces to support the nuns' monastic lives. These spaces include places for worship such as the Chapel and Meditation Room, along with residential, administrative, workshop and study areas.

Mindful of a limited construction budget, the use of wood elsewhere in the building is strategic and designed for maximum effect. The refectory and community rooms are finished with exposed rafters and wood ceiling accentuating the significance of these social gathering spaces. The refectory is furnished simply with custom wood linear tables in keeping with monastic tradition.



INSTITUTIONAL WOOD DESIGN: SMALL

**Graham D. Fligg, Merrick Architecture - Borowski Sakumoto Fligg Ltd.,
Klahoose First Nation New Relationship Centre, Cortes Island**

The Klahoose First Nation commissioned the design and construction of a new facility to house their current and growing health care, administrative and community-based functions. The nation has a large population dispersed across BC with the main reserve located on Cortes Island, on the shores of Squirrel Cove.

The construction of the Klahoose Multi-Centre was financed by the nation's extensive economic developments. They had outgrown their existing aging facilities and had a desire to create an accessible and welcoming place for the Klahoose people, and the local island community, that would establish a permanent home for the nation's various cultural, economic and development ventures.

Locally available wood resources owned by the Klahoose First Nation and milled on site at the nation's milling operations influenced material selection and detail development throughout the building. An extensive use of Western red cedar as interior and exterior finishes is a reflection of the local ecosystem and a connection to the community's input in the project.



INSTITUTIONAL WOOD DESIGN: LARGE

Jana Foit, Perkins+Will, Earth Sciences Building, Vancouver

The Earth Sciences Building (ESB) is located on UBC's Vancouver campus and is designed to enhance the growing links between each department, providing valuable opportunities for shared learning and collaboration.



WESTERN RED CEDAR

**Pam Chilton, Zimba Design,
The Urban Longhouse,
North Vancouver**

Western red cedar and the associated finishes were chosen for this project to reflect the design concept of The Urban Longhouse and to embrace the clients' West Coast upbringing.

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WINDOOR show gains momentum

Fenestration Canada addresses energy-savings and building code changes with education and information dissemination



SKIP MACLEAN,
Fenestration Canada's first vice-president

Canadian Design and Construction Report staff writer

The national association for Canada's window and door industry is at the forefront of education and information-sharing as new provincial building codes and voluntary programs raise energy efficiency standards to the highest levels in history.

Skip MacLean of TruTech Doors, Fenestration Canada's first vice-president, says the association looks forward to continued enthusiasm at the national WINDOOR 2013 show and conference in November in Toronto.

"The enthusiasm is certainly there so we want to keep that momentum going, set programs sooner and advertise earlier."

MacLean says a members' poll indicates a strong interest on the industry's technical aspects so the show will continue its strong focus on education, code dissemination and energy savings and marketing programs such as Energy Star.

The association's annual general meeting takes place May 30 in St. Johns, Newfoundland.

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Robert Rivard selected as Fenestration Canada's new executive director

Canadian Design and Construction Report staff writer.

After an extensive process aimed at finding an alternative solution to its existing management structure under the Wood Management Council, Fenestration Canada recently announced the appointment of Robert H. Rivard as its new executive director.

The association's board of directors mandated its executive committee to find an individual who could lead Fenestration Canada as the Canadian national trade association for the window and door industry.

Rivard is a fluently bilingual professional with more than twenty years' experience managing national trade associations and more than seven years' project management experience with the sector council program funded by Human Resources and Skills Development Canada.

"We are very pleased to have Robert as our new director and we very much look forward to working with him," Fenestration Canada president Yvan Houle said in a news release. "He was most recently involved with us as the

manager, association services on a part-time basis under the previous management firm. His passion and dedication to the betterment of our industry will help move the association to new levels in providing services to our membership and advocating on behalf of the industry."

"Having him focus his entire attention to our requirements in administrative issues, marketing of the association, membership promotion and retention services, government relations and the Win-Door trade show on a full-time basis will be of tremendous benefit to members who will now have a "go-to" person for all of their needs."

Fenestration Canada represents and supports all aspects of the window and door manufacturing industry, including formulating and promoting high standards of quality in manufacturing, design, marketing, distribution, sales and application types of window and door products.



momentum

Continued from page 47

Building codes are evolving to make what had been advanced voluntary energy efficiency levels mandatory, while voluntary programs such as Energy Star have raised their minimums to new, higher levels. The concept of "Net Zero" — buildings able to produce as much energy as they consume (combining effective insulation with thermal and solar energy generation) — is now a realistic vision. However, the building codes are complex, setting out many variables and conditions related to the heat loss through window and doors — creating both challenges and opportunities for manufacturers and distributors.

This has created a rapidly-growing demand for information and insights, new products and innovations — resulting in increasing WINDOOR exhibit space interest. MacLean says

sales are higher so far this year than at this time in 2012.

He says one of his focuses moving forward will be growing and diversifying Fenestration Canada's membership, with fees structured to support fabricators and the inclusion of regional and sister associations at the national board level.

MacLean says while there is a strong regional interest in the industry now, in the broader sense national codes affect everyone and he hopes to see more regional members involved at the national level.

"There are new changes to the building code in Canada now that are just months away from becoming reality," he said. "We've done a lot of education already and will continue to provide members with information to help them better understand codes and the impact these changes will have on their business."

He says Fenestration Canada's

technical advisor, Jeff Baker, and his committee have been involved from the beginning, working with government to ensure the changes make sense. The new codes will result in better products and better monitoring, but will take time and money and require some adaptations.

"While most of our members are aware of the changes, there is still education to be provided to the wider fenestration community, including architects, specifiers and government officials," he said. "We need to make sure that all the stakeholders understand and apply the codes properly."

"Fenestration Canada is a valuable source of information for anyone working in the window and door industry," MacLean said. "The benefits of membership are untold, opening doors and making the work of doing business a lot easier."

For more information, visit fenestrationcanada.ca.

Polysulphide enhances insulated glass windows: Fenzi North America

Canadian Design and Construction Report special feature

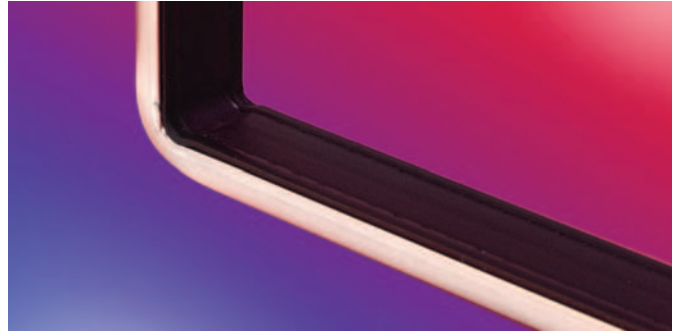
Fenzi North America is keeping ahead of higher energy efficiency expectations in window and door components by advocating the use of polysulphide in insulated glass (IG) windows.

The global company headquartered in Italy, with a Toronto office to oversee North American operations, provides sealants, aluminum and warmedge steel spacers and desiccants for the flat glass processing industry.

General manager David Devenish says there is a lot of talk in the industry about energy-efficient windows and the growing trend for energy ratings and gas retention. "Five years ago there were no requirements for this," he said. "Now there are requirements for the initial concentration and an after cycling requirement. Once new changes are put into place over the next few years, Fenzi will be in an enhanced market position because the systems we use already support and meet those requirements."

Fenzi believes that insulated glass (IG) windows can be enhanced with polysulphide. "It is widely known and agreed upon by industry experts, that window insulated glass units made with polysulphide retain argon gas at a higher rate than silicone sealant made IG's," says Devenish.

"AEC (aecdaily.com) has created an 'Architects Technical Training Course' to better understand the function of sealants in insulated glass and the long term advantages. Thus far we have had upwards of 1,000 architects and interested parties throughout the U.S. and Canada



take the course, which is exciting from our perspective."

This course can be viewed at www.fenzi-na.com/architects-education.html.

The online course gives an overview of characteristics of insulating glass sealants and the importance of long-term thermal performance, structural durability and longevity of insulating glass units. The advantages to using a polysulphide sealant versus a silicone sealant in insulated glass requirements will show these energy savings with better long-term gas retention.

"The city of San Francisco recently introduced a program for building owners to monitor their energy usage over a five year period," says Devenish. "Doing so, the window efficiency will be at the forefront – and argon gas retention will have a strong impact for maintaining efficient windows. I think you are starting to see all these buildings (with LEED status) be monitored and the building owners want assurances they perform as specified."

For more information about Fenzi, visit fenzi-na.com.



Architects Technical On-line Training Course

Selecting Insulating Glass Sealants for Durability and Energy Efficiency provides an overview of the characteristics insulating glass (IG) sealants must provide to ensure long-term thermal performance, structural durability and longevity of insulating glass units (IGUs).

This is an AIA course and is absolutely free and offered on an online platform making it easier for professionals to get their learning units at their own pace.

For more information visit: www.fenzi-na.com/architects-education.html



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Novatech Group innovates with products and designs to grow internationally successful business from Quebec headquarters

Canadian Design and Construction Report special feature

Canadian-owned Novatech Group has successfully manufactured steel and fibreglass entrance doors, patio doors, decorative and commodity doorglass, and retractable screens since 1982. The business now employs more than 500 with more than 495,000 sq. ft. of factory and distribution space – and it is continuing to develop innovative products and designs to meet market demands.

Marketing project officer Frédéric Boucher describes Novatech as a vertically integrated company with several subsidiaries, offering glass transformation, custom-made entrance doors, patio doors and PVC extrusion.



Novatech's Design Collection features five contemporary steel doors with specific glass and contemporary frames to match. The new line reflects a trend towards more contemporary designs. Also this year Novatech added a full line of fibreglass doors, both smooth finish and with a wood grain look, as alternatives to more costly and harder to maintain wood.

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Novatech, always at the forefront, is launching a new Design Collection of steel entrance doors. **Dare to give your home the modern look!**

Novatech

www.novatechgroup.com



CSA Group introduces certification standards in co-operation with stakeholders



Canadian Design and Construction Report special feature

Canada's pre-eminent standards development organization, the CSA Group works with business, regulators, government and industry to develop standards, codes and related products. CSA Group has published more than 3,000 standards and codes over its almost 100 year history. Today, CSA Group is developing new standards for the window and door industry.

Glenn Tubrett, CSA Group's director, global business for plumbing and construction, says standards' changes are equally driven from stakeholders (including manufacturers and regulators) and field-related issues.

"Manufacturers are always looking to change standards to meet new technologies and materials and regulators are looking to push performance levels," he said. "These, balanced with issues identified in the field create our consensus-based recommendations for new standards."

CSA Group is currently working on two key projects which will impact the window and door industry: New standards for balcony guards and the FIT (Fenestration Installation Technician) program.

"There were several incidents involving balcony glass

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Novatech Group

Continued from page 50

The company's steel doors are prefinished white so they can be used as is or easily painted to match any décor. A full range of decorative doorglass including stained glass, Thermacrystal, silkscreen, v-groove, and thermoformed, allows customers to fully personalize their look.

The expanded Novatech Patio Doors division features a full range of patio doors including the Element, a hybrid aluminum and PVC patio door. The company anticipates adding the new and improved Imagine all PVC patio door with its contemporary look soon. All doors are available in a painted in-house version. There is also a big trend with non-standard products which Novatech embraces fully with multi-panels, big openings, sidelites and toplites.

The company has introduced an online design centre (www.thousandsofdoors.com). "Customers can take a photo of their own homes, upload it to the design centre and then try out different elements they are considering," Boucher said. "Once they've made a decision they can print a summary of their personalized entrance door and take it to a retailer to get exactly what they want."

Novatech conducts annual customer surveys to see what people want and then analyzes the responses to make decision about how to proceed. "We also do a road show across Canada to show retailers our designs and get feedback from them," Boucher said.

The company also strives to meet the demands of architects, contractors and governments. "We conduct laboratory testing in house to ensure we are meeting Energy Star ratings, building codes, and that we can meet other certification specs. Our research and development focus is strong to ensure better product, durability and variety, along with meeting the other requirements," he added.

The business, founded by Quebec entrepreneur Raymond Ouellette, is based in Ste-Julie, Quebec and uses its distribution centres in Toronto and Calgary and manufacturing plants in Ste-Julie, St-Agapit, Beauceville and Kelowna to serve the Canadian and American market. Novatech has also expanded to include Novatech Europe, based out of France and serving the European market.

For more information, visit novatechgroup.com.



CSA Group

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that made the news and Ontario called for an expert panel, of which CSA Group was a member," says Tubrett. "We're in the midst of developing the new standards now and expect the guidelines to be published in 2014."

Tubrett says the new balcony guard standards will be developed through a consensus process. The technical requirements will be developed by a committee created through a balanced matrix of industry, regulators, science & academia, labor, consumers groups and other interested parties and will be reviewed by a technical department.

"Industry will have a chance to have their say through the committee members and the resulting document will be available for a public review," he said.

The new standards will be initially voluntary. Tubrett says CSA Group will work to educate regulators and promote it with the national model building code. "It normally takes one or two cycles to get something like this into the national code but there has been so much attention on this issue we expect the provinces will pick it up on their own ahead of this."

CSA Group is also contributing to the FIT program, a personnel certification program for installers of windows, doors and skylights in residential buildings under three stories.

FIT includes an experience prerequisite and a final examination, in addition to a training course.

The program is also voluntary. Tubrett says that CSA Group will work to educate manufacturers and large project companies about the program's benefits both as a reference and certification tool.

"So much of the efficiency of a door or window is based on a quality installation," he said. "It benefits everyone to make sure it is done right."

For more information on CSA Group, visit csagroup.org.

Ostaco innovates and thrives with new window, entry and patio door products

Employees' passion and commitment at root of company's success



Canadian Design and Construction Report special feature

From its beginnings in the early 1980s, Ostaco has grown to be a key industry innovator, never forgetting that its success is based on its employees' contributions.

The Concord, Ontario manufacturer and distributor of windows and entry and patio doors develops new products each year to serve growing markets throughout Canada and around the world.

Ostaco recently introduced a new triple-glazed Enersense window, designed to 2014 EnergyStar codes. "We're known for coming out with new products ahead of the industry and have a full time staff of engineers on staff versed in building code and EnergyStar to support our efforts in this area," says president John Martini. "We know we were right on in our thinking when we launched these products because the demand is there and growing."

The Enersense window is a true triple pane window (every pane contains insulating Argon gas) designed for energy efficiency. It also filters out harmful UV light, provides superior soundproofing qualities and is backed by Ostaco's limited lifetime warranty. "It has 1-3/8 overall glass thickness and the hardware is custom designed to handle the extra weight of the triple glazed glass, something most other manufacturers do not have," he said.

Martini says many Ostaco employees have been with the company a decade or more. "That people come here to work and stay shows they share a commitment and passion in what we do, that we succeed in showing them our appreciation, and that they have opportunities here to grow."

Martini says the company believes in hiring from within, allowing staff first crack at career and job advancement opportunities. As well, for the past five years, employees and key clients share in a week-long vacation. "This vacation has become part of our culture and allows our staff and clients an opportunity to receive thanks for being part of our company community and to continue to evolve the relationships they establish through the business."

Community relationships are also enhanced through the company's monthly donation support to the YMCA Strong Kids Program.

"The YMCA program is about giving kids a chance to grow up healthy and happy, and to be productive adults," he said. "Whether it is supporting a kid who wants to go to camp or take part in sports, or supporting safe, quality childcare, these programs have a direct impact on the communities they work in and we're proud to be a supporter."

For more information visit ostaco.com.

Compression-Seal Technology (CST) resists air, noise and water infiltration for thermal and acoustical performance

Special to the Canadian Design and Construction Report

Architects, engineers, builders, and manufacturers are witnessing the transformation of the building landscape, as critical modifications to energy standards and codes are put in place through both federal and voluntary initiatives.

The window and door systems of a decade ago don't meet today's codes and as fenestration plays a more important role in the building envelope, windows and doors must meet tougher standards, and not only for high performance buildings.

"In today's building climate, owners increasingly expect architects, engineers and even builders in some



Installation example of compression-seal tilt-turn designs in a commercial project.



Compression-seal technology in the tilt-turn design: A tilt or turn operation provides both ventilation and egress while glass and insulated panel options provide added versatility. This system can meet high wind-load, high-rise and hurricane-impact requirements. The frame depth is ideal for insulated concrete form (ICF) construction. Available configurations include tilt-turn windows, and atrium, French, sliding and tilt-turn doors.

cases to identify and specify a window system that will achieve a higher set of energy performance criteria," said James Clavel, national sales director for REHAU in Canada. "It can be daunting for even the most knowledgeable designer, especially with the sheer number of options in the market."

Owners look to architects to know which fenestration solutions are available in the market, which can adequately deliver on or exceed the stricter minimum performance specifications, and which are worth the investment. This requires in-depth knowledge of the technologies and materials that constitute an intelligently designed window system.

"Materials are the easy part," Clavel says. "PVC (vinyl) is a natural choice for its insulating properties, especially over aluminum. Beyond this, it's the performance enhancing elements of a window design that should be given serious consideration when choosing the type of system to specify."

What is Compression-Seal Technology (CST)?

CST is a special gasket compressed between the operable sash and frame of a window or door, which seals the joint by resisting air, noise and water infiltration for thermal and acoustical performance.

Under pressure, this gasket tightly seals the space between the sash (movable) and frame (stationary) components of a window or door system to resist air, noise and water infiltration. This exponentially raises the thermal and acoustical performance of the window or door.

Pressure is applied to the gasket through the use of hardware. The hardware is positioned on both the sash and frame so the gasket is compressed, like a garden hose in a vise.



Not all compression-seal designs perform alike – it's all in the hardware

The key factor in a compression-seal profile design is the type and amount of hardware applied. Multi-point locking is the most effective method of creating consistent pressure all around the sash and frame. The hardware is positioned on both the sash and frame so the gasket is compressed. With continuous and adequate pressure on the gasket, fairly equal contact between the sash and frame can be established and maintained.

In fact, with multi-point locking, some windows with compression seals can be so effective they require pressure equalization – allowing air into the system at higher performance levels so any water that enters the system is capable of draining at an adequate rate. The bonus of multi-point locking is the added security against forced entry.

“Very simply, knowledge is power,” Clavel added. “Having a good understanding of compression-seal technology, how it works and what it offers to the entire project in the way of overall energy performance, is a definite advantage for an architect or engineer.”

Construction
Automotive
Industry



SEALING IN SUSTAINABILITY COMMERCIAL WINDOW AND DOOR DESIGNS



Curb-appeal is important, but don't overlook performance when choosing windows. REHAU tilt-turn and casement compression-seal window and door designs deliver on today's aim of providing energy-efficient, green building solutions.

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Therma-Tru Doors extends Canadian market presence with innovative fibreglass doors that can withstand extreme climate conditions

Canadian Design and Construction Report special feature

A presence in the U.S. for 50 years, Therma-Tru® Doors changed the market 30 years ago with the development of the first fibreglass entry door. Now, the manufacturer has expanded to serve Canada with unique styles and accessories.

"We started in 1962 as Lakeshore Industries as a manufacturer of paneling, evolved into steel doors and then in 1983 launched the first line of fibreglass doors known as Fiber-Classic®," said product management director Derek Fielding.

The company patented technology to manufacture smooth finish fibreglass doors in 1999.

"We offer select door styles with a smooth finish that are pre-finished white so they can stand alone, but we know people want to paint them and make them part of their exterior décor and our technology allows this to be done easily," he says.

Noting that Therma-Tru's fibreglass doors perform as well as steel, are Energy Star rated and are designed and engineered to prevent thermal bowing, the move to serving the Canadian market, with its extreme weather conditions, was a given.

While some door manufacturers only warrant the door, Therma-Tru is unique in offering a limited lifetime warranty for the full system, including the fibreglass slab, glass, hinges and hardware. "With our doors you get a true lifetime warranty on the whole door system, not just parts," says Fielding.

Fielding says a variety of design and styles, developed through research and consultation with consumer and



focus groups ensures Therma-Tru is meeting market demands. "Our goal is to convert people from wood and steel to fibreglass so we want to be sure we have the variety and the options homeowners and designers are looking for."

The company produces a complete line of standard, premium, and fire, STC (sound transmission class) and impact-rated products. The company's premium line includes five unique Classic-Craft® collections with what it says are authentic details, realistic wood grains and crisp embossments that are deeper than standard fibreglass doors. "These door collections also feature solid hardwood square edges for a more authentic look and they are heavier so the door feels and swings like wood," says Fielding. The doors are rated as a 'Consumers Digest Best Buy,' he said.

An extensive decorative glass collection allows homeowners to further customize their look and a sidelite feature (vented sidelites, set on hinges to open for air or additional light access) make systems even more personal. "We launch something new every year," says Fielding. "Some options, like our flush-glazed glass built directly into our doors, rather than inset as a separate piece, offer a premium aesthetic and become more than just trending styles."

Therma-Tru uses a program called Picture Perfect™ 2.0 Virtual Designer to allow design and builder clients to work with homeowners, selecting from the many product offerings, to choose the option that best suits them.

For more information, visit www.thermatru.ca.



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THERMA-TRU®
DOORS

Truth Hardware innovates with operating hardware engineered solutions for doors and windows

CaDCR special feature

Truth Hardware, North America's leading designer and manufacturer of quality operating hardware for doors and windows, traces its origins to the early 1900s and its focus on window hardware to the late 1950s. The company is headquartered in Owatonna, MN, but has always done extensive business in the Canadian market.

Marketing support manager Matt Kottke says Truth tries to turn the challenges the industry faces into opportunities. "Whether it be the codes and test requirements surrounding the new larger, heavier, more robust energy efficient window systems, or simply the economy as a whole - Truth Hardware is in a position to work with our customers to help them develop engineered solutions to meet these challenges, pass these codes, expand their product offering and increase their market share," he says.

Kottke adds that Truth works closely with customers who are constantly pushing the envelope on what their window and door systems can do.

He points to some of the new products Truth has recently introduced, including a high performance case-hinge allowing manufacturers to build window sashes upwards of 140 pounds, a combination sash lock and tilt latch, and a multi-point locking system for swinging patio doors with the deadbolt above the handle for easier access. "New windows codes suggest mechanisms to limit window openings but with a built-in ability to release in an emergency," Kottke says. "There was an option on the market for sliding windows but not for hinged so our development of that helped clients and filled a market gap."

Kottke says Truth develops innovative solutions through time and research spent delving into the client's needs. "Once we understand the needs we can look at the marketplace, see what works and what doesn't, what is missing, and develop new solutions."

Understanding it is often building code changes that



drive client needs Truth is positioned to find solutions to meet those changing needs. "We have the most extensive group of product specialists and design engineers," he said. "Our clients look to us early in their design stages to use our knowledge and ensure we will have products there to support them."

While Kottke says one-on-one client consultation is the best and most effective support, a newly designed website has recently been launched which provides additional resources, including videos, a full technical product catalog, and a customer portal for online ordering and order tracking.

"We are more than just a manufacturer of quality hardware," says Kottke. "We are a strategic partner to our customers by supplying engineered solutions to meet their needs. Being reliable and responsive are two of the main characteristics that help set Truth apart from our counterparts."

With security, energy efficiency, and product durability at the forefront of everyone's mind, Kottke says Truth Hardware continues to meet and exceed the expectations of its customers with quality products that are reliable and aesthetically pleasing in their design, function and finish.

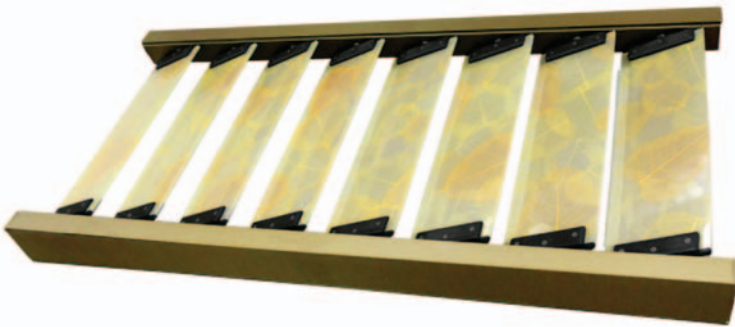
For more information, visit truth.com.



Bella Fleur teams with Truth Hardware to develop skylight-like louver window systems

CaDCR special feature

In 2012 Bella Fleur (a multi-award winner in the categories of glass/glazing and green building) approached Truth Hardware with an idea to create an operable overhead and vertical louver window system. Truth's engineers teamed with Bella Fleur and created complete skylight-like louver window systems that could be used in outdoor settings like pergolas or deck enclosures.



"Using Bella Fleur and Truth Hardware designed and engineered products, these panels easily open and close, creating an enhanced experience for the homeowner," says Kottke. "Interest is even growing in the light commercial market where these unique systems are being considered for patios, restaurants and bistros."

The design uses Bella Fleur's EnsoGlass – the first non-laminated, sold-core architectural glass panel encapsulating natural materials. At half the weight and 100 times the strength of conventional glass, Kottke says this is an advancement in glass technology.

For more information on Bella Fleur, visit bellafleur.com.

Peace Of Mind... SafeGard™ Window Opening Control Device (WOCD)

Safety and security are of utmost importance for homeowners, especially those with small children. Truth Hardware has developed an engineered solution which meets ASTM F2090-10, the new industry guideline enacted to address the issues of accidental falls and egress opening.

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R-Value 9.09*

*Centre of glass using LoE-366/LoE-366 #4/LoE-181 #6 *Data was calculated using the Window 5.2 computer program

- 1 Nail fin groove
- 2 5 5/8" jamb depth
- 3 Interior locking reinforcement groove
- 4 Tape glazed; more secure
- 5 Interior 90 degree joints (wood look)
- 6 Bulb seal; better memory
- 7 Cellular PVC/wood cladding; better insulation
- 8 Internal vinyl walls are 90% thicker
- 9 Steel reinforced; more support
- 10 Multi chamber system
- 11 1 3/8" overall glass thickness; best energy performance
- 12 Argon filled; guaranteed 90% fill rate (we can prove it)
- 13 Foam filled; better R value on frame
- 14 Groove for snap in brickmould
- 15 Comes standard with magnetic screen

INTERIOR AVAILABLE IN:



Enersense; A Closer Look.

The Enersense from Ostaco is a "true triple pane" window that has a 1 3/8" triple pane glass pack, guaranteed 90% argon fill rate and two polyurethane foam filled chambers. The result, 2014 energy code windows available for your home today!

Furthermore, Ostaco's Enersense window comes standard with custom designed hardware to support the added weight (up to 185lbs) of a 1 3/8" triple pane glass pack as well as a heavier, thicker, stronger frame. The Enersense window is engineered to withstand the test of time and in turn is backed by a limited lifetime warranty.

As for esthetics, the options are vast! Choose from an array of shapes, sizes, custom colours and wood or cellular PVC interior finishes to compliment the style of your home.

Visit www.ostaco.com for more information.

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WINDOWS & DOORS

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